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Does Clinical Supervision Improve Job Satisfaction for Qualified Nurses in Primary Health Care in Jeddah, Saudi Arabia?

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List of Acronyms and Abbreviations

Abbreviation / Term	Definition
CS	Clinical Supervision
JS	Job Satisfaction
DOH	Department of Health
KSA, SA	Kingdom of Saudi Arabia, Saudi Arabia
MOH	Ministry of Health
MOHE	Ministry of Health Education
MODA	Ministry of Defence and Aviation
NMC	Nursing and Midwifery Council
MSQ	Minnesota Satisfaction Questionnaire
PDSA	Plan, Do, Study, Act
PHC	Primary Health Care
RN	Registered Nurse
UK	United Kingdom
UKCC	United Kingdom Central Council for Nursing, Midwifery and Health Visiting
USA	United States of America
WHO	World Health Organisation
ANOVA	Analysis of Variance
ANCOVA	Analysis of Covariance
BSc	Bachelor of Science in Nursing
MSc	Master of Science in Nursing
PhD	Doctor of Philosophy
MRQP	Makkah Regional Quality Programme
CBAHI	Central Board of Accreditation for Healthcare Institution
JCI	Joint Commission International

Abstract

Background: Clinical supervision has been widely used as a tool to improve nurses' job satisfaction and competence through shared experiences and reflection. This study, which examined job satisfaction before and after a clinical supervision intervention in Primary Health Care (PHC) organisations in Saudi Arabia (SA), is the first of its kind in this particular context.

Research Question: Does clinical supervision improve job satisfaction for qualified nurses in Primary Health Care in Jeddah, Saudi Arabia?

Methodology: A mixed-methods approach was used to explore participants' perceptions of job satisfaction before and after a clinical supervision intervention. The design and execution occurred within the 'Plan, Do, Study, and Act' (PDSA) quality improvement framework cycle.

Methods: Quantitative data were collected using a quasi-experimental design, where a non-equivalent pre-test and post-test control group was used to determine whether clinical supervision could improve nurses' job satisfaction in six selected PHC centres in Jeddah, SA. Subsequently, 91 nurses in the pre-test group and 78 nurses in the post-test group completed the Minnesota Satisfaction Questionnaire (MSQ). The external moderators provided supervision-training sessions, followed by six months of implementation after the pre-test, which was only provided for the intervention group, who become the supervisors and supervisees. Following the post-test process for both groups, semi-structured interviews were conducted with six participants from the intervention group only.

Analysis and Results: Quantitative data was analysed via SPSS (version 22). The analysis of variance (ANOVA) and analysis of covariance (ANCOVA) statistical tests were utilised to equate and compare the two groups. Qualitative data were analysed using both NVivo software (version 11) and a manual process. Both methods' findings were integrated to inform the study findings. Quantitative findings reported that the intervention group developed more positive job satisfaction than the non-intervention group. Qualitatively, a number of participants showed improved job satisfaction after six months of the clinical supervision intervention.

Supported by both quantitative and qualitative data, the findings of this study indicate that, in this context, clinical supervision may boost job satisfaction among qualified PHC nurses as job satisfaction improved after a six-month intervention.

Glossary of Terms

- **Back Translation Techniques**

  This technique employs a bilingual translator to convert English text into Arabic and then another bilingual translator is employed to translate the Arabic into English. This process repeats until the original and translated versions are reconciled.

- **Baseline Test** *(pre-test)*

  The baseline test is an analysis of the condition prior to an intervention, which can be assessed or compared against the intervention's progress.

- **Burnout**

  Job-related burnout is a common psychological syndrome that occurs in reaction to prolonged emotional exhaustion, job stress, depersonalisation, and a lack of personal accomplishments.

- **Clinical Supervision** (CS)

  This is a framework or systematic method to allow continuous professional development through an exchange of knowledge and experience between practicing professionals. The supervisor and supervisee hold monthly sessions, lasting 1–2 hours, whether one-to-one or as group or peer supervision, and meeting in or outside workplace (*Researcher's definition, adopted from* Butterworth, & Faugier, 2013).

- **Clinical Supervisor**

  This denotes a nurse, either internal to the primary health care sector or external to the primary health care organisation, who is a trained supervisor who leads and facilitates the supervision sessions. This supervisor is assigned to provide supervision based on the organisation's allocation, or as chosen by supervisees.

- **Central Board for Accreditation of Healthcare Institutions** (CBAHI)

  The CBAHI is a Saudi national primary health care accreditation standard, which is assembled into chapters around key services and functions common to all primary health care centres. This aims to improve the services of the healthcare sector in Saudi Arabia and establish a primary health care infrastructure.

- **Interpretivism** *(constructivism)*

  Constructivism refers to knowledge created by people through interaction with their environment or constructed between the researcher and participants.

- **Content Analysis**

  This is an analytical method for qualitative study that examines the experiences of a specific subject by summarising, describing, and interpreting the collected data within themes.

- **Epistemology**

  This is the relationship the researcher has with the research; it is the theory of how knowledge is gathered or how the new things are discovered, whether through objective measures (outsider's view) or subjective measures (insider's view).

- **Health Friends**

  This is a selective committee for the primary health care centre, consisting of influential community members in the catchment area, including primary health care centre members, who are knowledgeable about social norms and the community's potential. This committee aims to interface between primary health care centres and the communities they serve.

- **Intervention Group**

  In a quasi-experimental research design, this is the group of participants/subjects who receive the intervention; they are exposed to the independent variable. They are also known as an experimental, or treatment, group.

- **Internal Validity**

  This is the extent to which the researcher ensures that changes (if any) in the study result from the variable under study rather than from other reasons.

- **Job Satisfaction**

  Job satisfaction is the degree to which an individual feels satisfied with his/her job, which, in turn, can lead to a better performance. Job satisfaction in nursing research involves all work variables desired by employees, such as pay, leadership support, supervisor satisfaction, and professional development. Low job satisfaction is linked to high turnover, stress and burnout.

- **Joint Commission International Accreditation** (JCI)

  This is an international accreditor of healthcare organisations. They aim to improve the safety and quality of care in the international community by providing education, consultation, and service evaluation.

- **Methodology**

  This is a philosophical approach that explains how knowledge is discovered, and is driven by the researcher's ontological and epistemological beliefs.

- **Methods**

  These are the techniques for data collection, such as interviews or a questionnaire.

- **Ministry of Health** *(in Saudi Arabia)*

  The Ministry of Health is the lead government agency that provides national health services. They are accountable for strategic planning, policy design, and health supervision programmes and activities within Saudi Arabia.

- **Minnesota Satisfaction Questionnaire (MSQ)** *(Short Form)*

  The short form, MSQ, is a measurement of job satisfaction that was developed in 1967 by Weiss, Dawis, England and Lofquist. It includes 20 items relevant to job circumstances; the respondent selects their level of satisfaction from the 5-point Likert Scale, where 1= very dissatisfied and 5 = very satisfied.

- **Non-equivalence Control Group**

  This is one of the strongest quasi-experimental designs, where intervention and non-intervention groups are selected in order to be as similar as possible. However, it cannot be assured that groups are equivalent, as there is no random assignment, and this can bias the result.

- **Non-intervention Group**

  In a quasi-experimental research design, this is a group of participants/subjects who do not receive the intervention given to the intervention group, for the sake of comparison. Participants from the non-interventional group are not randomly assigned, as would be true of non-intervention group participants in an experimental design study. This is also called a control, or a comparison group.

- **Ontology**

  This is the researcher's perspective or beliefs about the nature of reality, whether it is one reality that is context-free, or multiple mental constructions of reality that are bound by context.

- **Positivism**

  This refers to knowledge that is obtained through direct observation and measures of a phenomenon.

- **Pragmatism**

  Pragma is a Greek word that means action or practice. Pragmatism is a problem-orientated philosophy emphasising social harmony as the focus for inquiry, and clarifying ideas produced by groups rather than individuals. Thus, it is best employed for mixed-methods research, which enables both a wide and complex understanding of a phenomenon.

- **Primary Health Care** (PHC)

  PHC is the first preventive health service and was established by the World Health Organisation (WHO). Based on the Alma-Ata declaration in 1978, the primary health care approach focuses on eight elements: health education; maternity care; child care; adequate supply of safe water; sanitation and promotion of proper nutrition; immunisation of children against communicable diseases; dressing and treatment of common diseases and injuries; pharmacy services and referrals.

- **Problem Solving Strategy** *(FOCUS-PDSA)*

  This is a systematic method enabling the respondent to improve a process by finding the problem (Focus), organising the team to make improvements (Organise), clarifying and analysing possible causes (Clarify), understanding the source of process variations (Understand), and selecting appropriate solutions or changes (Select). The next step plans to test this solution/change (Plan) by implementing it (Do), studying and evaluating the change (Study), and acting to maintain improvement (Act).

- **Qualified Nurse (QN)** *(in Saudi Arabia)*

  A QN is a new or experienced nurse with an academic degree from a recognised programme in nursing, such as a diploma, bachelor's or higher-level degree. They

are registered in health speciality professions and have a licence to practice nursing. A QN is also expected to be competent in all circumstances and situations.

- **Quality Improvement Cycle** *(PDSA)*

  The quality improvement cycle is a repetitive four-stage model for continuous quality improvement. It involves developing a plan to test a change 'Plan', carrying out the test 'Do', observing and learning from the consequences 'Study', and acting based on new results 'Act', or redesigning the solution by returning to the 'Plan' step, if needed.

- **Reflection** *(in clinical supervision)*

  Reflection is a developmental and formal procedure to generate knowledge to increase individual awareness of experiences by exploring everyday situations or issues and evaluating the experiences.

- **Saudisation Policy**

  This is a policy developed to replace much of the expatriate workforce with Saudi national workers.

- **Stress**

  Stress refers to work-related tension, worry, and frustration; it results when workplace factors strain or negatively stimulates employees.

- **Supervisee**

  A practitioner nurse who needs support and guidance; he/she is supervised by another qualified practitioner to develop their professional skills and knowledge through reflection.

Chapter 1

Introductory Chapter
(**Plan** Stage)

1.1 Introduction

This chapter provides an overview of the thesis; it begins with a background context that builds the case for the study and includes the professional experience of the researcher, the job satisfaction of qualified nurses in Saudi Arabia (SA), and the impact of clinical supervision. A research contribution will be outlined, and a statement of the problem and justification for the study location, will be explained. The underpinning conceptual framework of this study will also be illustrated, which uses a 'Plan, Do, Study, Act' (PDSA) quality improvement framework, as it will be discussed in more detail in Chapter 6, section 6.4. This study is the first to use the PDSA framework within a clinical supervision research context, (it has previously been applied as a quality improvement technique). This introductory chapter will form part of the 'Plan' stage, representing the first step in this quality improvement framework; furthermore, the 'Plan' stage will continue until the end of Chapter 7 and will include all research preparation procedures. The other steps of the framework, namely 'Do, Study, and Act', will be addressed in Chapters 8, 9 and 10. Finally, the aim, research question and objectives of the research will be stated, along with an overview of the subsequent chapters.

1.2 Background

Job satisfaction is one of the most persistent challenges for the nursing workforce in SA (Mitchell, 2009), particularly in the Primary Health Care (PHC) sector (Almalki, FitzGerald, & Clark, 2012). Job satisfaction for nurses is linked to several positive outcomes (Murrells, Clinton, & Robinson, 2005), including greater organisational commitment (Al-Aameri, 2000), better job performance, higher-quality nursing care (Almalki, 2012), less work-related stress (Yousef, 2002), reduced burnout (Mitchell, 2009), and greater patient satisfaction (Mrayyan, 2006). It is suggested that PHC nurses may become frustrated with their careers or leave their work if job satisfaction is challenged (Coomber & Barriball, 2007). In an attempt to improve such issues, a clinical supervision project was introduced in several countries that included, amongst others, the United Kingdom (UK) (Bishop, 2007; Davey, Desousa, Robinson, & Murrells, 2006), Finland (Hyrkäs, 2002), the United States of America (USA) (Borders, 2014), and Australia (Mills, Francis, & Bonner, 2005). Nevertheless, although clinical

supervision has been an important research area in the global nursing context (Driscoll, 2007), there is currently little to no research about clinical supervision in PHC sectors in SA, which suggests underutilisation. It is believed that this study will be the first in SA to introduce clinical supervision in the PHC setting.

My interest in the study topic emerged when I completed my first Master's programme in 'Quality Management in Healthcare' in Egypt in 2009. During this study I worked as a quality organiser within the PHC setting in the Jeddah city of SA, and, over my career, I have participated in different projects to improve the health services in PHC sectors. This has included writing policy and procedures for a number of clinics that address PHC indicators and joining a health accreditation programme. I have extensive clinical and administrative experience in the PHC sector. My job as a quality organiser taught me how to identify weak and strong points when developing nursing practice in PHC centres, and how to use different quality tools for problem-solving, such as flowcharts (Soković, Jovanović, Krivokapić, & Vujović, 2009), cause and effect (Mach & Guaqueta, 2001), and Pareto charts (Department of Trade and Industry, 2010). Furthermore, the previous successful adoption of the PDSA cycle (Taylor et al., 2013) for training PHC nurses in an attempt to drive improvements, has led to the use of the framework in this thesis. In 2010, I participated in the health accreditation programme for PHC centres in the Makkah region in SA, where I applied the PDSA framework with qualified team members, which led to the success of each step in this challenging project.

During my leadership role in the PHC setting, I became increasingly aware of nurses' serious concerns and limitations in PHC centres; this included a lack of knowledge, poor performances, the inability to make decisions, and low self-esteem. As an organiser in the quality department, one of my main responsibilities was to identify new approaches or supportive mechanisms that improved nurses' training, skills and knowledge by engaging different models of supervision. However, Izumi (2012) suggests that encouraging nurses to participate regularly in different quality management projects and to learn to solve their clinical problems is insufficient to effect substantial change. As a quality organiser, I have been persuaded by the notion of active support, such as encouraging staff to use evidence-based practice and writing policy and procedures that assist nurses to achieve high performances and improve their level of job satisfaction.

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My interest in clinical supervision developed further during my second master's programme in 2014, at the University of Salford, UK, when I carried out a number of literature reviews for my modules and examined several studies related to the improvement of nursing practice, attitudes, knowledge and skills, through a term of 'clinical supervision'. Although several authors (Brown & Bourne, 1995; Hawkins, Shohet, Ryde, & Wilmot, 2012; Butterworth & Faugier, 2013) have offered definitions for 'clinical supervision', as a researcher, I have found that the most appropriate interpretation combines a consideration of the needs of registered nurses (RNs) and the goals of the PHC organisation. For example, this definition is offered by the Department of Health [DOH] (1993, p. 15), which described clinical supervision as;

> "… *a formal process of professional support and learning, which enables individual practitioners to develop knowledge and competence, assume responsibility for their own practice and enhance consumer protection and safety of care in complex clinical situations."*

Similarly, Fowler (1996a) defined clinical supervision as a process of professional support and learning, which enables nurses to exchange skills and knowledge through regular scheduled discussions with experienced practitioners. Fowler's definition has been used as a basis for two studies focusing on clinical supervision among nurses (Brunero & Stein-Parbury, 2008; Fowler, 1996a).

In my master's dissertation, entitled 'A Systematic Review of Research Evidence Related to Clinical Supervision for Nurses', I proposed a case study (Al-Madani, 2014). Considering that clinical supervision in Jeddah was not a familiar concept for PHC professionals generally nor the nursing workforce specifically, further evidence of its applications was sought in the PHC centres of the region. Moreover, I found that all the selected studies within my systematic review acknowledged the use of clinical supervision and found it a useful and interesting approach. This was attributed to its effectiveness and potential for addressing clinical practice challenges among nurses, such as burnout, a lack of knowledge and skills, and issues with staff relationships.

Thus, for this dissertation, I explored published literature regarding the improvement of nursing practices, nurses' levels of confidence and decision-making abilities, and nurses' skills and knowledge. I also reviewed studies related to job satisfaction that considered nursing retention (Taylor & Harrison, 2010), reflective practice (Clouder & Sellars, 2004), nursing support, decision-making, and skills and knowledge (Brunero

& Stein-Parbury, 2008), which revealed that implementing clinical supervision for nurses is essential to understand and address their concerns (Butterworth, Bell, Jackson, & Pajnkihar, 2008). For example, a study conducted by Schroffel (1999) in the State of California examined the relationship between job satisfaction, and the frequency and style of clinical supervision among $n = 84$ (49% response rate) mental health nurses, and found a positive relationship between job satisfaction and clinical supervision. The study identified that over one half of the respondents (57%) reported higher job satisfaction on receiving insight-oriented supervision sessions, which matched the supervisee's preferred style. Several other benefits were suggested from participation in clinical supervision, such as increased confidence and self-awareness, improved problem-solving and coping skills, and decreased burnout and isolation (Butterworth et al., 1997; Marrow, Hollyoake, Hamer, & Kenrick, 2002; Watson, Macdonald, & Brown, 2013). Furthermore, Taylor and Harrison (2010) also indicated that 88% of nurses in western Australian public mental health services stated that they had learned a new skill in their practice area.

Clinical supervision projects within Europe and the USA are comparatively well-reported and indicate the effectiveness of clinical supervision in enhancing job satisfaction amongst other related factors (Hyrkäs, 2005). However, the concept of clinical supervision is, to date, relatively unknown amongst healthcare providers within the PHC sectors in Jeddah, and this may be due to several factors; firstly, that conventional supervision is already in practice, and/or secondly, that management are resistant to change, or thirdly, that a lack of information exists about this mechanism. Thus, there has been little scholarly research examining clinical supervision and its impact on job satisfaction in the Middle East, particularly within PHC organisations in SA. Hence, this study will address this gap by using a non-equivalent pre- and post-test control group design that will be applied within a PDSA quality improvement cycle. My previous experiences have provided the knowledge, skills, and abilities to investigate an essential aspect of the nursing profession and to carry out more in-depth explorations and justifications to pursue this topic.

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1.3 Research Contributions

This study could add a significant understanding of clinical supervision for the healthcare workforce in SA, including the knowledge of, training for, and experience of clinical supervision, which may positively influence job satisfaction. In particular, this study aims to provide the following contributions, which are based on the identified gaps in the literature;

- For the first time, the PDSA as a quality improvement tool will be applied in the current study context of clinical supervision, where the 'Actions' from one cycle become a 'Plan' for the next new cycle, and thus forms a continuous process.
- The research will contribute to the existing small body of literature that explores the relationship between job satisfaction and clinical supervision.
- For the first time, clinical supervision will be applied to PHC centres in SA to explore its impact on job satisfaction, which could inform future supervisory policy and practice development for nurses in SA.
- Using a mixed method approach in this study, which only a few researchers have undertaken within a clinical supervision context, will also add to the existing small body of knowledge.

1.4 Statement of the Problem

The job satisfaction of nurses has been a global challenge for healthcare organisations (Zangaro & Soeken, 2007) , especially in PHC settings. However, there has also been a growing awareness and rapid acceptance of clinical supervision as a tool to influence their job satisfaction by promoting effective practice and developing autonomy (Abou-hashish, 2010). In particular, literature has emerged in the last 15 years on nurses' job satisfaction in PHC in SA, which suggests that there is a significant decrease in the level of job satisfaction. Nurses' job satisfaction has been recognised as a crucial indicator of good performance, characterised by knowledgeable and skilful staff, quality care, and patient satisfaction (Zaghloul, Al-Hussaini, & Al-Bassam, 2008). In addition, job satisfaction has been positively linked with low rates of burnout and less work stress (Flanagan & Flanagan, 2002; Kalliath & Morris, 2002a). Furthermore, Redfern, Hannan, Norman, and Martin (2002) argued that healthcare organisations could face serious challenges due to nurses' job dissatisfaction, which could lead to

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high rates of turnover, staff shortages, and a lower quality of service care for patients. Other studies have documented the significant positive impact of implementing clinical supervision on nurses' job satisfaction, particularly with regard to adverse outcomes, such as burnout (Edwards et al., 2006), stress (Wallbank & Hatton, 2011), and quality care (Hyrkäs & Paunonen-Ilmonen, 2001).

Several studies have been undertaken to address issues associated with job satisfaction (Al-Hussami, 2008; Coomber & Barriball, 2007; Murrells et al., 2005), and a number have argued the importance of clinical supervision in addressing these challenges. However, to provide useful and effective supervision for both supervisees and supervisors, several factors needed to be considered (Hyrkäs, 2005), such as, amongst others, the supervisor's qualifications, the supervisory relationship, and the model of clinical supervision. Significantly, delivering ineffective clinical supervision leads to increased job dissatisfaction, while the provision of high-quality supervision decreases burnout. Similarly, Lennox, Skinner and Foureur (2008) noted that providing efficient clinical supervision can lead to an improvement in skills, the reinforcement of reflective practice and an increase in job satisfaction. Therefore, it is suggested that supervisors have adequate training and their own clinical supervision framework in order to gain the maximum benefit possible from this support mechanism (Hyrkäs, 2005; Willson, Fawcett, & Whyte, 2001).

Furthermore, Butterworth et al. (2008) suggests that effective clinical supervision enables the transfer of skills and knowledge between the supervisor and supervisees, which could improve the quality of care services for patients. In summary, while there are existing studies that implement, measure and evaluate the impact of clinical supervision programmes on job satisfaction, there is a dearth of evidence that focuses on this approach in SA and specifically in PHC sector. Furthermore, there is also a lack of published research about clinical supervision among nurses in SA.

Nevertheless, according to a statement by the United Kingdom Central Council (UKCC) for Nursing, Midwifery, and Health Visiting in 1996, clinical supervision can play an increasingly important role in safeguarding standards of clinical care (Edwards et al., 2006; Playle & Mullarkey, 1998). Later, the renamed Nursing and Midwifery Council [NMC] (2010) asserted that every registered nurse should have access to clinical supervision, and acknowledged that this process could maintain and improve

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standards of patient care through the clinical governance framework. Therefore, this research, which assesses the perception of nurses in different healthcare settings through systematic review, implements clinical supervision, and examines its effect on job satisfaction, and other factors, will address this void in scholarly literature, and provide a clear picture of these issues among PHC nurses in SA.

1.5 Justification of Study's Location

The majority of existing studies exploring clinical supervision among nurses have been centred on hospital-based research in European countries. Therefore, there is a need to conduct further studies into clinical supervision and its effect on job satisfaction in different healthcare settings, including PHC facilities in SA. There are currently 2,281 PHC centres across SA, which represent an increase from 2,094 in 2010 and an even greater increase from 1,986 centres in 2008. The current number of centres is expected to double within the upcoming years (Central Department of Statistics and Information [CDSI], 2015). However, the city of Jeddah has reduced the number of PHC centres (Figure 1-1) (Ministry of Health [MOH], 2015) in order to make changes to their geographical locations, establish new centres based on local and international standards, and focus more on the quality of the environment and services provided to patients. This study was undertaken in the city of Jeddah in SA, where I am from.

| 2009 | 89 PHC | 2010 | 93 PHC | 2011 | 93 PHC | 2012 | 108 PHC | 2013 | 108 PHC | 2014 | 88 PHC | 2015 | 88 PHC |

Figure 1-1: Number of PHC centres in Jeddah, Saudi Arabia from 2009-2015
(Source: CDSI, 2015; MOH, 2015)

Jeddah is the major urban centre of western SA and is close to the Red Sea (Figure 1-2); moreover, it is the largest city in Makkah Province and the second largest city in the SA, after the capital city of Riyadh (Murad, 2008; World Health Organisation [WHO], 2006). Currently, the population in Jeddah (i.e. Saudi and non-Saudi) is approximately four million people, with two million Saudi nationals and two million non-Saudi residents (MOH, 2015). According to the Saudi Health Statistics Annual Book (2015), Jeddah has 88 PHC centres in eight geographic sectors. Of the 88 centres, 39 (i.e. in six sectors) are located inside the Jeddah city boundaries, and the other 24 centres are not yet operational; furthermore, the remaining 25 PHC centres (i.e. in two sectors) are located outside the Jeddah city boundaries (MOH, 2015).

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Figure 1-2: Jeddah city, Saud Arabia

A few studies conducted in the main cities of SA have indicated that PHC nurses have low job satisfaction (Almalki et al., 2012). One descriptive cross-sectional study (Al Juhani & Kishk, 2006) was conducted in the PHC sectors in Al-Madinah Al-Munawwara city in SA to assess the job satisfaction level among PHC nurses. The study found that a significant number of qualified nurses (67.1%) still expressed low job satisfaction despite an increase in the PHC nursing workforce and investment in the PHC organisation. This nursing workforce was highly dissatisfied due to the workload and lack of professional opportunity (Al Juhani & Kishk, 2006). Similarly, a cross-sectional survey conducted in a PHC sector in the Jizan region examined the relationship between the quality of work life and turnover among Saudi and non-Saudi nurses ($n = 508$, with a response rate of 87%), and found that 40% of nurses were dissatisfied with their work (Almalki et al., 2012).

Studies conducted in SA related to nurses' job satisfaction mainly concentrated on a job satisfaction evaluation (Al-Doghaither & Saeed, 2000), and its relationship with burnout (Mitchell, 2009), turnover (Almalki, 2012), and job performance (Al-Ahmadi, 2009), instead of supportive mechanisms, and clinical practice support, which is the basis of clinical supervision. Moreover, Falender and Shafranske (2004) suggested that clinical supervision could support nurses to act as leaders and encourage them to deliver the best quality care to patients. The era of transition into PHC in SA (which was purely curative of existing health problems and is now moving towards preventive and curative care) (Almalki, FitzGerald, & Clark, 2011a), may particularly witness an increasing number of frustrated nurses, who, facing work pressures and demographic changes, like the population growth, longer life expectancies, and increasing numbers of critically ill

patients, may deliver a substandard quality of care to their patients, and may even leave their jobs (Lamadah & Sayed, 2014). Although staff turnover is a major concern for managers of healthcare facilities, to date there are no published statistics regarding these critical issues for nurses (Almalki, FitzGerald, & Clark, 2011b), and anecdotal evidence suggests that nurses are not staying in the same workplace for long periods of time, which increases the vacancy rate (Ministry of Health [MOH], 2013). Thus, there is a need to conduct this study to utilise clinical supervision among nurses within PHC in Jeddah, and determine whether the application of this mechanism will improve job satisfaction in the Saudi health system, especially in the PHC sector, which has a high level of job dissatisfaction amongst the nursing profession (Almalki et al., 2012).

1.6 Conceptual Framework

A conceptual framework is the researcher's map, which provides a theoretical overview of the research project and displays how the research problem will be addressed within the planned timeframe (Appendix 1: Gantt Chart). Leshem and Trafford (2007) referred to a conceptual framework as a research journey that highlights theories, expectations, and assumptions about the nature of the data collected along the way. Thus, the quality improvement cycle, referred to as PDSA will be utilised as the conceptual framework that guides this work and defines the boundaries of the researcher's ideas about the study; it organises and supports ideas by utilising a 'Plan, Do, Study, and Act' steps (Peabody, Taguiwalo, Robalino, & Frenk, 2006; Taylor et al., 2013). According to Speroff and O'Conor (2004), applying the PDSA quality improvement cycle is vital in a quasi-experimental study because it tracks and measures the changes in patterns (if any exist), over the time-period of the study, which means that it functions as a project guide rather than simply a conceptual framework. This PDSA cycle (Peabody et al., 2006; Speroff & O'Connor, 2004) was applied to the research design to distinguish the project planning, implementation, and evaluation strategies within the study. These steps are illustrated in Figure 1-3, and each of these four stages will be highlighted based on the study objectives.

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1.7 Aim, Research Question, and Objectives

The following section will explore the study's aim, research question, and objectives using the PDSA framework, which will be presented as the research process and discussed in sections 1.7.3 and 1.8. Furthermore, the research sub-questions and null hypothesis for each question will be discussed in section 9.2.3.

1.7.1 Aim

The aim is to determine whether the utilisation of clinical supervision will improve the job satisfaction of PHC nurses.

1.7.2 Research question

Does clinical supervision improve the job satisfaction of qualified nurses in primary health care in Jeddah, Saudi Arabia?

1.7.3 Research objectives *(based on PDSA)*

The research objectives are designed using the PDSA framework to provide the study with consistency and structure.

- *'Plan' Objective*

  To critically evaluate the extent of evidence of clinical supervision as a means of enhancing nurses' job satisfaction by utilising systematic literature search strategies and establishing the outcomes of clinical supervision for nurses.

- *'Do' Objective*

  To embed clinical supervision strategies within a sample of PHC centres (i.e. the intervention group) within Jeddah, SA, promoting staff development and education as a form of clinical supervision.

- *'Study' Objective*

  To determine the contribution of clinical supervision as a means of enhancing job satisfaction through the administration of a job satisfaction scale, pre- and post-tests, and clinical supervision within the intervention group of PHC centres, this will be compared to a control group of PHC centres where there is no clinical supervision (i.e. no intervention).

- *'Act' Objective*

  To integrate the mixed methods study findings and develop recommendations for a clinical supervision strategy within the wider PHC sector in the Jeddah city.

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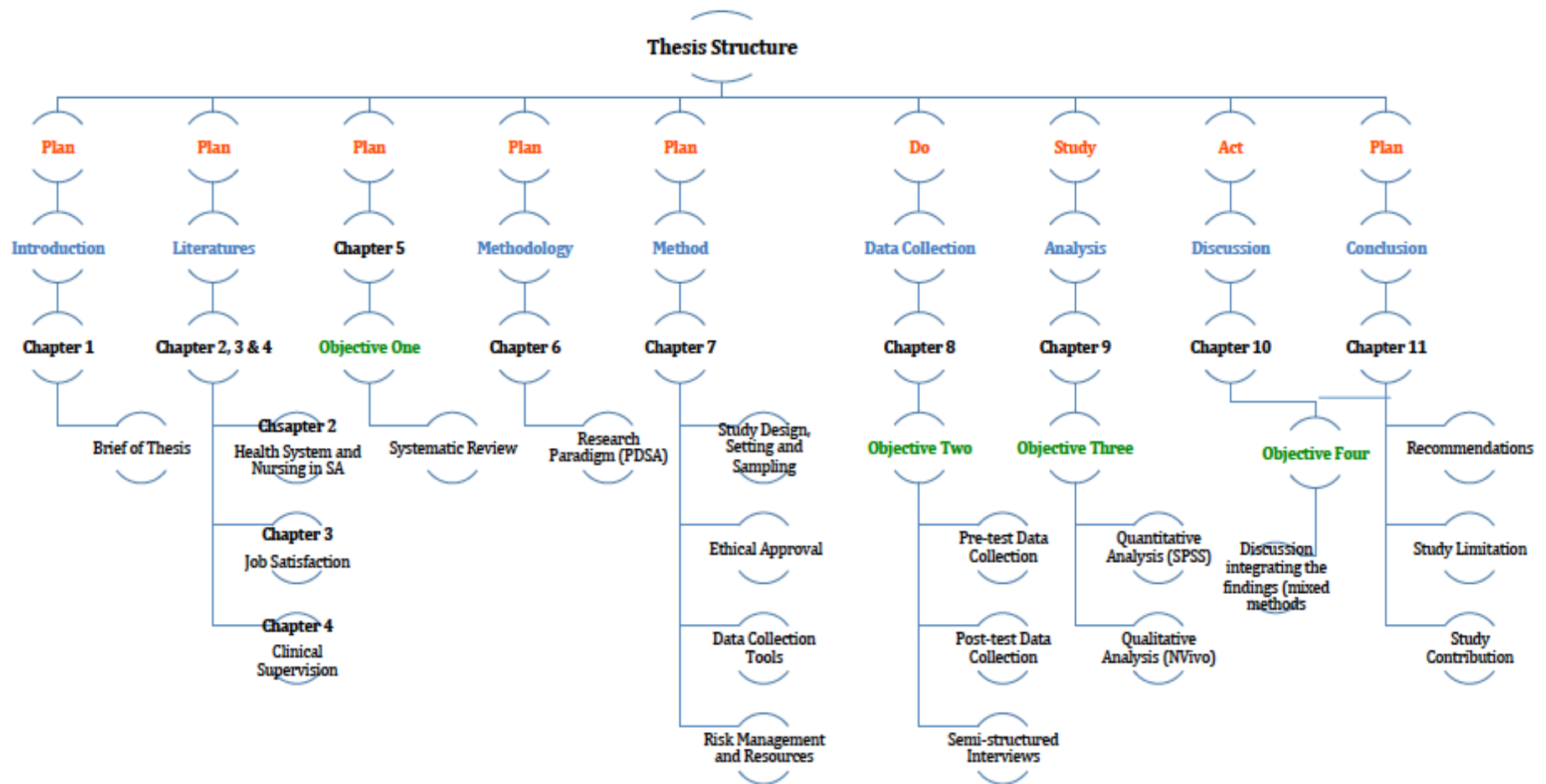
Figure 1-3: Thesis Structure

1.8 Overview of the Thesis

This section represents an overview of the structure of subsequent chapters within the research thesis, as described in Table 1.1. Although a thesis overview is generally explained as text, this outline is designed as a table that follows the PDSA framework. The 'Plan' stage takes a large portion of the study, including the preparation, which is documented in Chapters 1 to 7.

Table 1.1: Overview of the thesis

Chapter 1	Chapter 2	Chapter 3	Chapter 4	Chapter 5	Chapter 6
Plan Stage					
Outlines the general introduction to the topic and builds the case for the study; represents an overview of the research background and provides a statement of the problem, the justification for choosing SA and the aim and objectives of the study; presents a summary of the research design and the conceptual framework.	Provides an overview of the Saudi health system including the national context of SA, the structure and available healthcare services, the quality management efforts, current challenges, and nursing services in PHC.	Illustrates the job satisfaction context, job satisfaction theories, factors affecting job satisfaction in SA, job satisfaction internationally and locally in hospitals and PHC sectors among nurses, and previous studies' findings for job satisfaction and dissatisfaction in SA.	Explores and critiques clinical supervision within nursing; investigates its origins; discusses different models; establishes a new clinical supervision framework for nurses in PHC centres in Jeddah, SA.	Elucidates the first research objective based on the Plan, Do, Study, and Act, commencing with the **PLAN**; the chapter presents a systematic review of literature related to clinical supervision and its impact on different outcomes.	Explaining the methodological framework by signifying the research paradigm, which includes the ontology (the study of being), epistemology (how to gather the knowledge, using the Plan, Do, Study and Act framework), and the methodology of the study (approaches to acquire knowledge).

Chapter 7	Chapter 8	Chapter 9	Chapter 10	Chapter 11
Plan Stage	*Do Stage*	*Study Stage*	*Act Stage*	*Plan Stage*
Details the proposed method by continuing the 'Plan' stage through outlining the quasi-experimental (pre- and post-tests, non-equivalent control group) design and rationale, study settings, sampling recruitment, and ethical approval; explains the data collection tools utilised in the study (e.g. Minnesota Satisfaction Questionnaire) and the semi-structured interview.	Explains the **DO** stage, which illustrates the technical part of the data collection, by describing the MSQ and semi-structured interview process.	Features the **STUDY** stage by analysing the difference between the intervention and non-intervention group at the baseline test (pre-test) by using Statistics Products and Solutions Services (SPSS). Includes a comparison post-test for both groups after six months to measure the differences (if any) on job satisfaction and outlines the participants' responses by utilising manual and NVivo software, interpretation and coding.	Outlines the **ACT** stage that discusses the main findings from the mixed methods.	Provides conclusions and recommendations for future research, including any limitations and subsequent plans for further PDSA cycles, to monitor job satisfaction improvement as post-doctoral work (as considered in the 'Plan' stage).

1.9 Summary

This chapter has outlined the basis for the thesis by introducing the motivation behind the study, which is based on my professional background, the study problem, the justification for the geographic selection, the aim and objectives of the study, and its contributions to knowledge in this field. The PDSA framework has been outlined and the structure of the thesis described according to the framework. For each chapter, I will indicate the particular stage of the framework in use. A description of the Saudi health system, including the PHC sector and the nursing profession, will be provided in more detail in the following chapter.

Plan stage

Act

Plan

Chapter 2

Study

Do
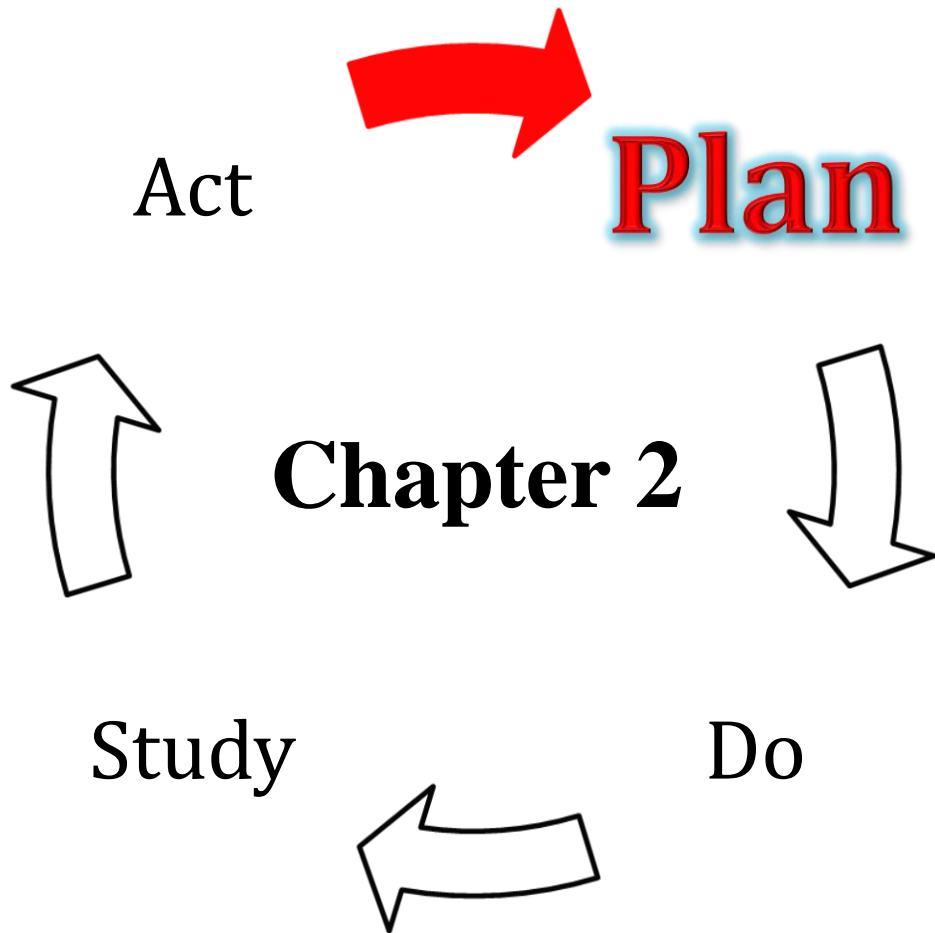
Healthcare System in Saudi Arabia
(**Plan** Stage)

2.1 Introduction

The previous chapter presented an introduction to, and brief summary of, the thesis. This chapter explains the geographical, economic, and nursing context to enable the reader to understand the nature and characteristics of the health system and nursing practice in SA. The chapter is considered under the initial ('Plan') stage of the PDSA, quality improvement cycle, and first illustrates the history of healthcare development in SA, which includes Saudi demographics and an overview of the structure of the health services through a brief description of the national context. This is followed by a description of the public healthcare system in SA, with particular focus on the PHC sector, and includes nursing services and their development. Furthermore, quality management and accreditation in the health sector within SA will be described.

2.2 Historical Health Development in SA

In 1925, King Abdul-Aziz issued a royal decree establishing the first public health department in Makah Al-Mukarrama, the holiest city in the regional of Islam in SA (Alharthi, Alenad, Baitalmal, & Alkhurashi, 1999; Almalki et al., 2011a). At that time, initiating this first public health department represented an important step towards the provision of free curative health services. The department was responsible for sponsoring and monitoring the healthcare of both the population and pilgrims (i.e. Muslim visitors for the Haj ritual) by establishing a number of hospitals and dispensaries. However, the Saudi government had insufficient funds to provide advanced healthcare; therefore, traditional medicine, including the use of herbals, remedies, honey and massage, was the only available option for most people. Almalki et al. (2011a) stated that the rates of epidemic diseases, like polio, diphtheria (DPT), and tuberculosis (TB), were high between 1925 and 1929. However, by the late 1930s, crude oil had been discovered in the Kingdom of Saudi Arabia (KSA) (Anderson, 2014), and the country became the largest processor and exporter of oil in the world. This development caused a marked positive impact on the nation, which occurred alongside the Kingdom's rapid social and economic development (CDSI, 2015).

In 1950, the MOH was established by royal decree, which was a crucial advance in health development in SA as it spurred the construction of several public hospitals and

health centres (Tumulty, 2001). Thus, the MOH became (and remains) responsible for the control of healthcare and hospitals in both the public and private sectors, and divided the services into primary, secondary and tertiary levels. Furthermore, in 1960, the government introduced a five-year development plan, which was responsible for improving the Saudi healthcare system (Mufti, 2000).

In other countries around the world there are challenges to providing high quality care, and this includes those faced by the health services in the UK (Kirk et al., 2003), the USA (Schuster, McGlynn, & Brook, 1998), and the United Arab Emirates (Margolis, Carter, Dunn, & Reed, 2003). One example includes the provision of preventive healthcare and health education for obese people to help them maintain good health (Ham, Dixon, & Brooke, 2012). Likewise, SA has also encountered challenges due to the increasing demand on health services, rising costs, and public pressure for better services. From 1970 to 1980, the demand for healthcare services increased in SA, and this was attributed to several factors, including a raise in maternal and child morbidity, and increased rates of communicable diseases, such as malaria, tuberculosis, leprosy, and leishmaniasis (Almalki et al., 2011a). These challenges were met with the rapid economic development of that period, which led to the expansion and development of the healthcare service sector (Al-Yousuf, Akerele, & Al-Mazrou, 2002). Since the 1980s, the PHC approach has been popularised through the WHO, and today it has become an important aspect of health organisation in SA, resulting in the control and prevention of the aforementioned factors through the administration of disease control activities, and the establishment of maternal and child healthcare centres.

More recently, modern healthcare in SA has become a 'welfare system' in that it provides free healthcare services for all Saudi citizens (Albejaidi, 2010) through the MOH (Jehanzeb, Rasheed, & Rasheed, 2013). Accordingly, between 2006 and 2015, the overall immunisation usage rates increased across the Kingdom, from 95% to more than 97%, which included the vaccines for: DPT (diphtheria), BCG (Bacille Calmette-Guerin for tuberculosis), oral polio virus (OPV), measles, mumps and rubella (MMR), and pneumococcal conjugate (PCV) (MOH, 2015). As a result, in recent decades, the health services and health outcomes of Saudi residents have significantly improved; an example of this includes the morbidity indicator rate per 100,000 people, which, in 2015, was recorded as 0.00 for poliomyelitis, 0.03 for whooping cough, 0.6 for measles, 0.002 for neonatal tetanus, and 7.95 for pulmonary TB (MOH, 2015). Furthermore, in

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2014, the infant mortality rate among Saudis was 7.4 per 10,000 live births, which is 83% less than the regional rate of 44%, and 80% less than the global rate of 37%; moreover, the maternal mortality rate per 100,000 live births was recorded as 12 (MOH, 2015). However, Almalki et al. (2011a) argued that many challenges persist, including a shortage of health professionals, limited funds for resources, a lack of job satisfaction amongst nurses, poor accessibility to some healthcare services for some patients, and the lack of a public health information system.

2.3 Saudi Demographics

The current population of the Kingdom of SA has increased rapidly since the discovery of oil in the late 1930s. A prediction from 2013 estimated that the total population in SA was expected to reach 28.3 million by 2016 (El-Jardali et al., 2013). However, based upon data from the CDSI (2015), the current estimate is around 31.5 million, comprising 21.1 million people from SA, and 10.4 million non-Saudi. According to Alreshidi (2015) the majority of the population in SA speak Arabic, and around 98% living in the country are Muslims. Based on the World Fact Book (2014) the median age of the population is 26.4 years, and the total population growth rate per year is 1.87%. The Saudi Health Statistic Annual Book noted that healthcare resources have been increased to match the needs of the population (CDSI, 2015), as shown in Table 2.1 and Figures 2-1:

Table 2.1: Total number of health organisations in SA, in 2015 (Source: MOH, 2015)

Health Sectors	Total number of health facilities	Total number of beds
Saudi Arabia	The total number of hospitals in SA is 462 with an increase of 9 hospitals in comparison with their numbers in 2014.	The total number of hospital beds is 69,394, with the rate of beds per 10,000 people equal to 22,01
MOH (hospitals + PHC centres)	There are 274 MOH hospitals.	41,297 beds; the rate of beds per 10,000 people is 13.1.
	There are 2,282 PHC centres.	The average patient load at each health centre is equal to 13,813.
Other governmental agencies	There are 43 hospitals in other governmental agencies.	The number of hospital beds is 11,449.
Private sectors	There are 145 hospitals in private sector.	The number of hospital beds is 16,648.
	Number of specialised private polyclinics is 2,670.	----

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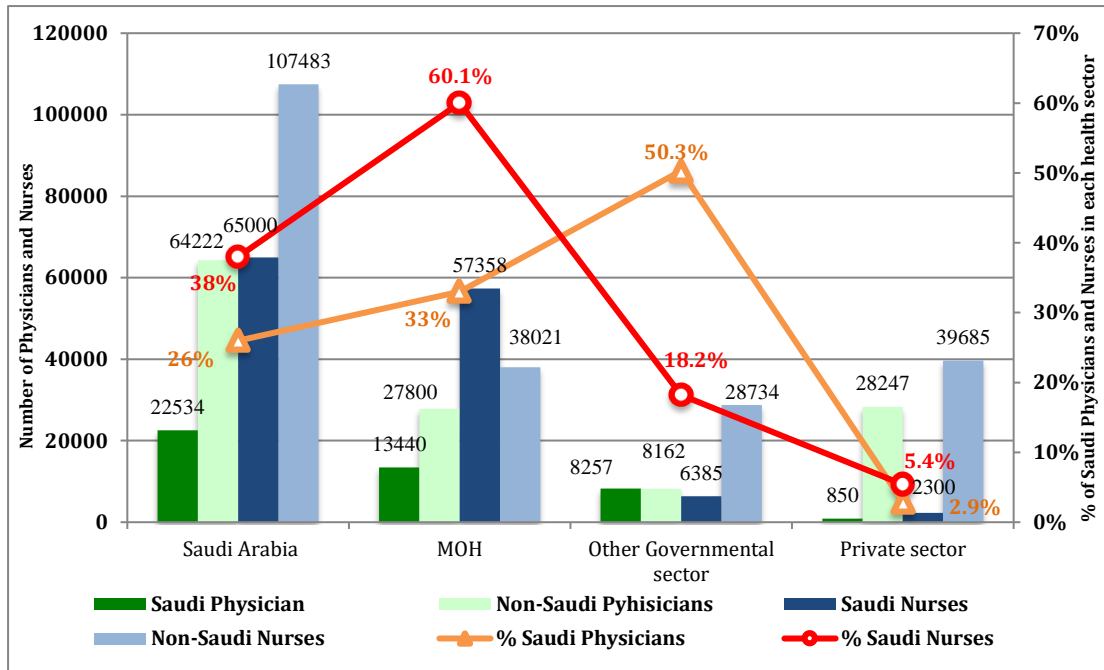
Figure 2-1: Total number and percentages of physicians and nurses working in healthcare sectors, SA in 2015 (Source: MOH, 2015)

2.4 Overview of the Structure of Health Services

Health services in SA are divided into government and private sectors (Almalki et al., 2011a) (Figure 2-2). In the government sector, the MOH delivers health services through PHC centres and hospitals within large cities and small towns throughout the country (MOH, 2015). The MOH comprises 60% of the total health services in SA, while the remaining 40% is provided by the other governmental agencies and the private sector (Aldossary, While, & Barriball, 2008; Almalki et al., 2011a; Almalki, 2012). However, other government agencies (43 hospitals) provide health services that are independent of the MOH, using annual budgetary allocations (Walston, Al-Harbi, & Al-Omar, 2008). These agencies including; the Ministry of High Education hospitals, the Ministry of Defence and Aviation [MODA], the Saudi Arabian National Guard, the school health unit of the Ministry of Education, and the Red Crescent Society. In particular, government funding is allocated through annual budgets to each ministry and programme, although additional funding may sometimes be allocated by a royal decree for special health programmes and projects.

These agencies directly administer their own health facilities and employ their own medical workforce; for instance, the Medical Services of the General Department manage hospitals under MODA. Al-Yousuf et al. (2002) emphasised that some of these

government agencies provide health facilities through specialist hospitals, which are designed to serve a defined population, such as their workers and family members. Furthermore, the MOH is responsible for extending services to communities lacking health services (Albejaidi, 2010). However, during crises and emergencies, all of these health agencies deliver healthcare services to all residents. In severe cases, some of these agencies also offer specialised health services to a community, such as cancer care and treatment.
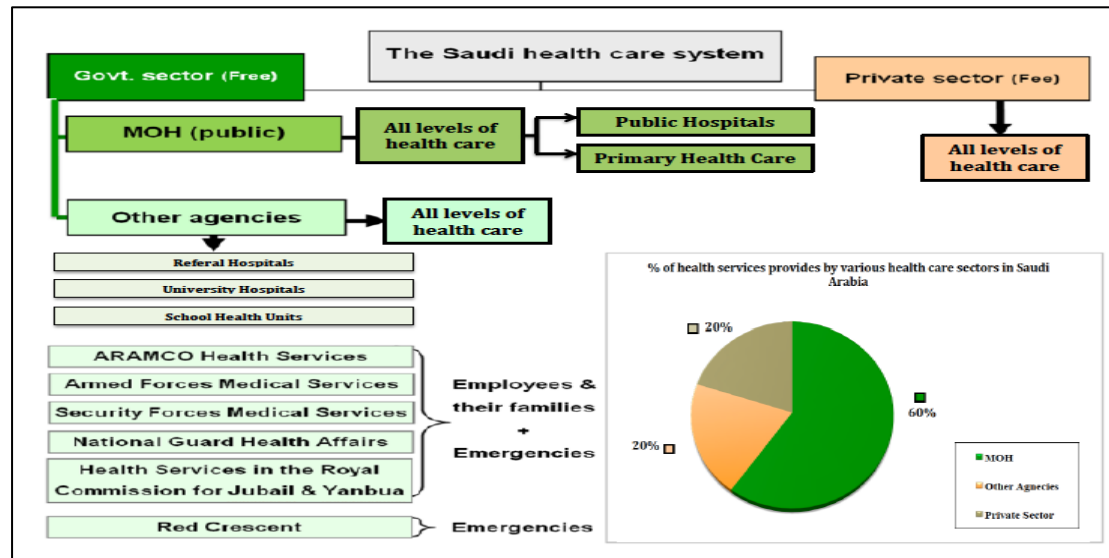
Figure 2-2: Organisation structure of the healthcare sectors in SA
(Source: Almalki, 2012)

The private healthcare sector provides services for free via private companies and individual practitioners. These facilities can be found throughout SA, but are particularly concentrated in urban centres within 145 hospitals, which have a total of 16,648 beds, 2,670 polyclinics, 7,322 pharmacies, physiotherapy centres and medical laboratories (Almalki et al., 2011a; CDSI, 2015). Despite the existence of multidisciplinary healthcare providers, who deliver advanced healthcare by improving public education and increasing community awareness, their communication channels are unclear, which is due to a lack of resources and results in the duplication of efforts (Almalki et al., 2011a). To overcome this and deliver comprehensive healthcare to the population, a royal decree was issued in 2002 for the establishment of the Council of Health Services, when the objective was to develop a policy that coordinated all healthcare sectors in SA. The Council of Health Services, which is headed by the MOH with representatives from both the public and private sectors, aims for significant improvements in this area.

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2.5 The Public (MOH) Healthcare System in SA

During recent decades, SA has significantly improved the kingdom's health services (Walston et al., 2008). Whilst the MOH retains responsibility for all three functioning systems, the Saudi government has sponsored developments at all three health service levels: primary (i.e. healthcare centres), secondary (i.e. general hospitals) or tertiary (i.e. specialist hospitals). This thesis will only focus on the first health service level (Figure 2-3), which represents the context of this study. A number of hospitals and dispensaries were established to deliver healthcare to the population (Saudis and non-Saudis) and Muslim pilgrims, whilst the public health department, which was initiated in 1925, sponsors these organisations.
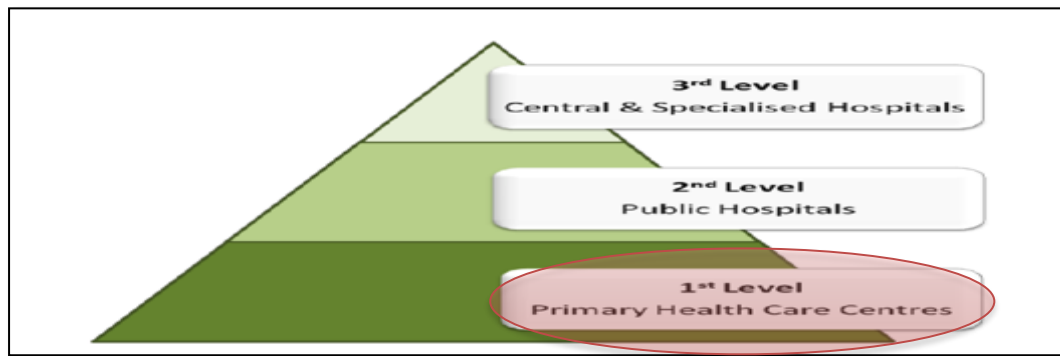
Figure 2-3: Level of the MOH services in SA (Source: Almalki et al., 2011a)

The MOH is responsible for all matters pertaining to health in SA, which entails planning, managing, policy formulating, supervising, and evaluating health services (WHO, 2006). As well as monitoring the delivery of health services to patients in the private sector (Al-Yousuf et al., 2002), the MOH is responsible for advising other government agencies on methods to achieve the Saudi government's health objectives (Mufti, 2000).

The first health service level provided by the MOH is the PHC sector (Walston et al., 2008). This level delivers primary care in the form of preventive and curative services; whilst, cases that require advanced care are referred to public hospitals which represent the secondary level, and risky and complex cases are transferred to specialised hospitals, which provide the tertiary level of healthcare (Almalki et al., 2012). Based on the Saudi constitution, all workers within the public sector, whether Saudi or non-Saudi, receive full and free healthcare services (Aldossary et al., 2008; Jannadi, Alshammari, Khan, & Hussain, 2008). To administer and monitor these health services,

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20 regional Directorate-generals of health affairs were established, which are supervised by the MOH (Walston et al., 2008). However, a number of public hospitals and PHC sectors are included under each health directorate region, and each PHC sector supervises a number of PHC centres based on the catchment area.

These 20 Directorate-generals are responsible to the Deputy Minister of Health for Executive Affairs, and accountable for the implementation of plans, policies, procedures, and MOH programmes. In addition to supervising and monitoring each organisation's services, and coordinating with other government agencies (Al-Yousuf et al., 2002), each of the Directorate-generals supervise a number of health provinces through provincial health directorates, and each of these provincial health directorates supervise a number of general hospitals and PHC centres (WHO, 2006) (see Figure 2-4).
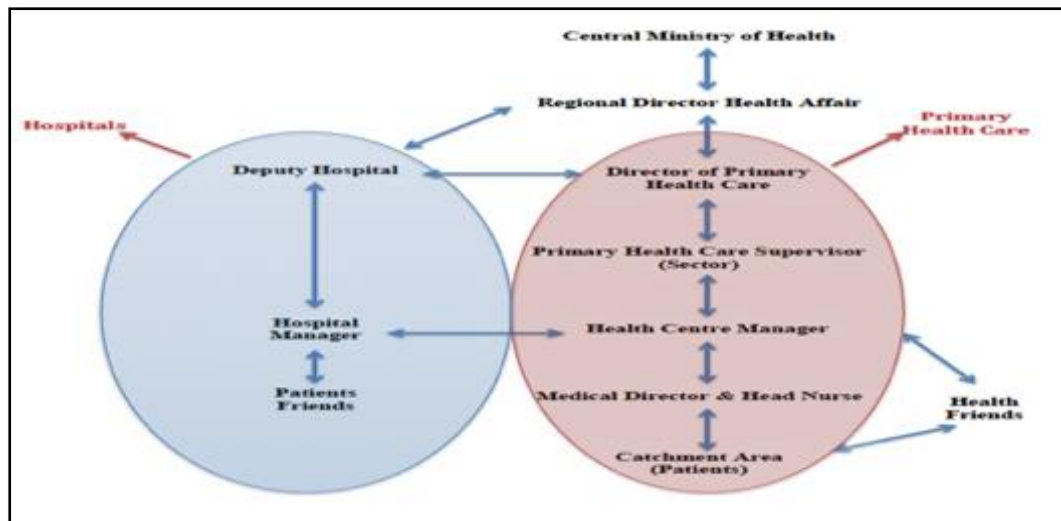
Figure 2-4: Hierarchy structure of interactions between the MOH and the health services (public hospital and PHC centre) in SA (Source: Almalki, 2012)

Each PHC centre covers a circular catchment area with a radius extending two kilometres wide (Murad, 2011). In addition, each PHC centre has responsibility for developing a committee by engaging 'Health Friends' within their catchment area, which encourages community members to help develop health activities (Al-Yousuf et al., 2002). This committee is also known as 'community participation'; however, it is not a new strategy as it was part of a 19th Century public health movement within North America and the UK (Rifkin & Walt, 1986) that gained great attention in the 1970s and was recommended by the Alma-Ata declaration (Muhondwa, 1986; World Health Organisation [WHO] & United Nations Children's Fund [UNICEF], 1978).

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In particular, community participation includes knowledgeable PHC representatives and educated members from the community, such as teachers, local mayors, community leaders, responsible government employees, and the general public, who collectively aim to enhance public engagement and involvement (Almalki et al., 2011a). Furthermore, community participation is a wide-ranging concept that covers consultation to decision-making (Bakhashwain, 1995). According to Al-Mazrou, Al-Shehri and Rao (1990), community involvement should encourage the improvement of services at PHC centres and thus enable healthcare professionals to provide high quality care for patients. This involvement generates communication between two core populations, namely members from the community and the PHC sectors; it addresses this by discussing patients' needs, plans to improve health services, and key challenges (Almalki et al., 2011a).

2.6 The History of the Development of PHC in SA

Although it attracted widespread interest after World War II (Mansour & Al-Osimy, 1996), the concept of PHC was first developed in 1920 in England, and a few years later, it became prominent in the USA, and in 1947, the Health Survey and Planning Commission in India issued a report demanding PHC centres for the entire Indian population (Murthy, 2011). Furthermore, in 1978, the ill health indicator was increased in several less developed countries, and thus an international conference was held at Alma-Ata in Kazakhstan (Walsh & Warren, 1980; WHO & UNICEF, 1978), to express the need for urgent actions by all governments to promote the health of all peoples across of the world. Consequently, the WHO issued a declaration to adopt the PHC approach with the aim of achieving health for the community by the year 2000 (Hall & Taylor, 2003; Walley et al., 2008; WHO & UNICEF, 1978).

According to the WHO and UNICEF (1978), the main objective of the PHC programme is to deliver curative and preventive integrated health services to promote the overall well being of the community. In 1978, the WHO emphasised the importance of providing free public healthcare services for disease prevention by focusing on different elements, such as health education for the population. In the same year, SA became one of the first countries in the Middle East to adopt the PHC approach (Shi, Macinko, Starfield, Politzer, & Xu, 2005), and according to Almalki et al. (2011a), PHC centres were established in 1980 by ministerial decree. These PHC centres in SA represent the

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first level of community contact with health services (Almalki et al., 2011b; Littlewood & Yousuf, 2000); PHC focuses on caring for public rather than treating particular diseases and supply preventive and curative care for patients and deliver essential services. Thus, it is their mission to offer simple, free, and accessible paths to care, regardless of the patient's condition.

According to Al-Mazrou and Salem (2004) the PHC approach in SA originally included eight elements of service delivery;

1. Providing education and preventive actions to the population regarding health problems;
2. Delivering immunisation programmes to prevent communicable diseases;
3. Supplying safe water and basic sanitation;
4. Promoting proper nutrition;
5. Providing maternal and well-baby services;
6. Controlling of endemic diseases;
7. Treating wounds and injuries; and
8. Providing of essential drugs.

However, in 1989, a referral system was also added as one of the basic elements of PHC; this ensures that risky cases who need more advanced care, such as delivery or complex surgical intervention, are referred from a PHC centre to a hospital. This addition was based on a strategy to reduce the number of visits to outpatient clinics in hospitals (Al-Yousuf et al., 2002; Khoja, Al Shehri, Abdul Aziz, & Aziz, 1997). Furthermore, PHC centres have performed a number of activities to control diseases such as tuberculosis and malaria, through health promotion programmes.

In 2008, the MOH saw an increase in the government's budget allocation by 6.2%, and in 2015 it received a further 7.25% increase (MOH, 2015). Moreover, the MOH has initiated a number of contemporary projects aimed at developing public hospitals in general, and the PHC sector in particular. For example, from 2010, through a project led by King Abdullah Ibn Abdul-Aziz, the MOH aimed to develop existing centres and launch 2,000 new and advanced PHC centres in the different regions of SA (Almalki, 2012; Almalki et al., 2011b). In 2012, further PHC centres across SA were initiated by the MOH; moreover, according to the SA Health Statistics Annual Book, the largest growth in the numbers of PHC centres was noted between 2009 and 2013 in both

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Jeddah (35%) and Makkah (21%) (MOH, 2013).

The 8.9% increase in PHC centres between 2004 and 2009 influenced improvements in the indicators within some areas, which included immunisations, and maternal and child healthcare. Additionally, the country saw a decrease in vaccine-preventable diseases, including the eradication of poliomyelitis, which occurred at a national level through the communication of PHC campaigns within public places (CDSI, 2015). According to the CDSI (2015), the MOH in SA manages a large number of PHC centres (Figure 2-5), which delivers services by physicians, who serve at a rate of 3.1 per 10,000 people, and nurses, who serve at a rate of 5.9 per 10,000 people. In 2015, 48% of patients visiting MOH facilities attended PHC centres, which totals more than 50 million PHC visits, and Saudis made 88.9% of all visits (MOH, 2015).

To stabilise future PHC services, an on-going review and assessment of all programmes executed in PHC centres is needed (Starfield, Shi, & Macinko, 2005). In order to review and assess these programmes, morbidity patterns should be considered important indicators. Observing and controlling morbidity implies a shift from infectious disorders, such as malaria and tuberculosis (World Health Organisation [WHO], 2013), to non-infectious disorders, such as diabetes, hypertension, and chronic heart disease. This shift also necessitates an emphasis on PHC programmes and workshops that promote lifestyle improvements, balanced diets, and health-awareness (Shi et al., 2003; WHO, 2013).
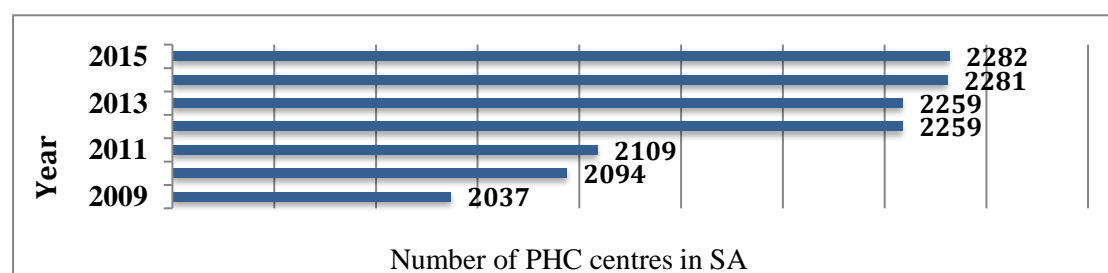
Figure 2-5: Trend of the number of PHC centres in SA from 2009 to 2015
(Source: MOH, 2015)

Despite the large number of healthcare practitioners working in hospitals and PHC centres, nurses comprise a significant proportion of the staff. Given their prevalence, an understanding of nursing practice in SA is required; therefore, the following section provides an overview and in-depth understanding of nursing within the Saudi health system.

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2.7 Nursing in SA

This section illustrates the history of nursing, education, and the accreditation requirements for nursing practice. It also describes nursing regulations and cultural influences, as well as their role in PHC in SA.

2.7.1 Nursing history in SA

Historically, nursing services have developed from the need to provide care and support for sick and injured people, and 'Florence Nightingale' is generally acknowledged as the founder of modern nursing (Mohammed, 2016). However, in the Arabian Peninsula, little is documented about the pre-Islamic period with regard to nursing (Almalki, 2012). It is believed that this function was provided by Muslim women, and in particular, during the time of the Prophet Mohammed in the 7th Century, a group of women provided care and served the Muslim armies during periods of war. These women were recognised for the care they offered to sick and injured people (Mohammed, 2016).

Muslims generally acknowledge that the nursing profession is a noble role in Islam, and recognise 'Rufaidah Al-Aslamiyah' as the first Muslim nurse in the 7th Century Islamic era (Aldossary et al., 2008; Mohammed, 2016). Indeed, before the emergence of modern nursing within the western world, Jan (1996) and Lovering (2012) state that, Rufaidah was the first nursing role model and healthcare leader in SA. She developed nursing practice and delivered care to injured soldiers at the battle of Al-Ahzab in Al-Madinah Al-Munawarah, in SA (El-Sanabary, 1993). Rufaidah learnt this profession from her father, Saad Al-Aslamiyah, who was a physician in Al-Madinah Al-Munnawarah (Aldossary et al., 2008; El-Haddad, 2006). According to the Julian calendar, at some point between 601-700, Rufaidah founded a nursing school for women, where she addressed women's social issues, developed a nursing code and professional ethics, and encouraged women's education (Hussain, 1981). A number of women trained by Rufaidah continued her work after her death (Al-Thagafi, 2006), and since these beginnings, nursing practice today has become more widely acknowledged by Saudis.

However, during this era (7th Century), the care delivered by physicians was also mostly nursing-oriented (Miller-Rosser, Chapman, & Francis, 2006). Indeed, Rahman (2004) noted that several medical pioneers, such as Abo Alhasan Altebry, Abo Baker Alrazi,

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and Abo Algasem Alzahrawi, were also interested in nursing and nursing education. Volunteers delivered simple procedures for patients to provide them with emotional support and physical care, which was within through basic dispensaries and early hospitals. Thus, the profession was established in SA, and the preparation of new nurses followed, through their observation of experienced nurses and by 'on-the-job' training. This continued until 1954, when the MOH was created, and the construction of healthcare centres and public hospitals began. However, the growth and development of healthcare facilities in SA required the reinforcement of the role of nursing and nurse training (Tumulty, 2001).

In the past, the nurse in SA had been known as 'Asiyah', and a group of nurses were called 'Al Asiyat' (Mohammed, 2016). Tumulty (2001) notes that these two Arabic terms emanate from the verb 'aasa', which means 'supporting and caring for sick and wounded people' (Al-Thagafi, 2006). Today, these terms are not used, and instead a female nurse is called 'momarredhah' and a male nurse is known as a 'momarredh'. Both of these two terms refer to the word 'Marradh', which comes from the Arabic verb meaning 'treat sick people' (Al-Osimy, 1994; Almalki et al., 2011b). Hence, the development of these terminologies has supported the awareness of nursing practice among Arabic health community.

2.7.2 Nursing education in SA

The development of modern nursing education in SA occurred over a 60-year period that started in 1958 when the Saudi Arabian MOH cooperated with the WHO to establish a programme of health education by initiating the first boys' health institute in SA. A one-year programme started by admitting fifteen male students with primary school certificate-level education (Aldossary et al., 2008; Almalki et al., 2011b; Mebrouk, 2008; Tumulty, 2001). Moreover, in 1961, both Riyadh and Jeddah opened schools providing two-year nursing programmes for females, and in 1964, a group of 13 Saudi female nurses graduated from these schools (Alhusaini, 2006). In 1967, the Saudi MOH established the 'Department of Health Education and Training,' which became responsible for supervising the health and nursing schools, including the institutes. Furthermore, in 1976, in Riyadh, the Bachelor of Science in Nursing (BSc) programme within the Nursing College at King Saud University was established; this programme is currently part of the Faculty of Medicine and Allied Sciences.

A year later, in the city of Jeddah, a BSc programme in nursing was established at King Abdul-Aziz University, initially enrolling six female Saudi students. The admission requirements for the programme included 12 years of primary, intermediate and secondary education. Moreover, in 1979, junior nursing schools and institutes were also developed, which limited admissions to applicants who had completed up to ninth grade, and undertaken intermediate school preparation. At this stage, the length of study was extended to three years, to enable students to cover extended syllabus (Aldossary et al., 2008; Al-Osimy, 1994; Mebrouk, 2008; Miller-Rosser et al., 2006). In 1982, the first group of nurses in SA graduated from these schools, and further nursing schools and health institutes opened across several regions throughout the country, which, by 1992, saw the establishment of 48 health institutes and nursing education programmes (Almalki et al., 2011a; Mebrouk, 2008).

In 1987, another nursing collage was established in Dammam in SA, at the King Faisal University, and a Master of Science (MSc) programme in nursing was established in Riyadh (Tumulty, 2001). However, until recently, all university nursing programmes had been exclusively limited to female students, due to the belief that nursing was more suitable to women than men; this reflected a commonly held stereotype of nursing practice (El-Sanabary, 1993). The WHO also noted that nursing, as a profession, was most likely to be led by women (Bozionelos, 2009; WHO, 2006). Moreover, although some male nursing departments currently exist, they are limited and most tend to have only been established since 2004; this includes, for instance, programmes at King Khalid University in Abha, and Jazan University (Abu-Zinadah, 2004).

A further shift occurred in 1993 when several health education and nursing institutes were upgraded to become either post-secondary health institutes or junior colleges. These institutions also subsequently increased the entry registration requirements so that applicants from high schools needed to have completed 12th grade study (Abu-Zinadah, 2004). During 2008, the administration of all health institutes and junior colleges were transferred from the MOH to the Ministry of Health Education [MOHE]. According to Almalki (2012), the MOHE has the appropriate academic experience, financial resources, and educational facilities to improve the quality of nursing education. This move also allows the MOH to focus more on its primary role in providing good quality of healthcare for the Saudi population.

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In 1995, Abu-Zinadah (2004) noted that a Doctor of Philosophy (PhD) in Nursing programme was established in Jeddah at King Abdul-Aziz University in collaboration with British universities to promote and develop nursing career advancements, particularly amongst nurses who were not able to travel abroad. Furthermore, to facilitate opportunities for Saudi nurses to study overseas, a PhD scholarship programme was established in 1996 (Aldossary et al., 2008), and international scholarship programmes across all education levels - BSc, MSc and PhD - are now supported. These are offered by the MOH and other large health organisation agencies, such as King Faisal Specialist Hospital and Research Centre [KFSHRC] and the National Guard Health Affairs, in order to meet the growing need for Saudi nurses. Presently, several nursing students are sponsored by the MOH and other health agencies in several countries worldwide (Alhusaini, 2006; Almalki, 2012); their funding indicates that the MOH intends to promote and develop nursing skills and knowledge by preparing highly educated, competent, and qualified local nurses who can lead the profession in SA.

2.7.3 Accreditation of nursing certificates in SA

In 2008, the Saudi Commission for Health Specialists [SCFHS] published classifications for the health certificate accreditation system in SA. This stipulated that nurses who have graduated from health institutes and junior colleges should hold a diploma and be classified as technical nurses and senior technical nurses, respectively. Moreover, nurses who have graduated from a college of nursing with a BSc degree are classified as specialists, and those who graduate with an MSc or PhD in nursing are classified as senior specialists. Finally, nurses with PhDs and three years of clinical nursing experience are recognised as nursing consultants.

2.7.4 Nursing regulation

The Scientific Nursing Board (SNB) was established by the SCFHS in 2002 (Miller-Rosser et al., 2006), and according to Alghamdi and Urden (2016, p. 97);

> *"...the SNB plays a major role in evaluating and equalising the professional certificates as a registration authority or a licencing board."*

Accordingly, it achieved improvements in nursing practice by focusing on three main objectives; professional development, accreditation, and regeneration. Professional

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development emphasises the needs to understand and identify the scope of an issue, set standards of education, ethics, and practice, determine responsibility within systems, and manage and support nursing research. Furthermore, accreditation is a process of assessing, evaluating, and approving educational programs, institutions and training centres, as well as qualifications from outside SA. Finally, regeneration involves the process of renewing licences for nursing institutions and professionals (Abu-Zinadah, 2005).

In 2003, the Saudi Nursing Society was established at King Abdul-Aziz University in Jeddah. The goal of the society is to develop nurses' scientific thought by offering best practice, improving theoretical and clinical performance, and exchanging research findings with other nurses and related societies. This society includes Saudi nurses from different health sectors, such as the MOHE, the MOH, and the National Guard Health Affairs, who are highly educated, qualified, and experienced (Almalki, 2012).

Currently, it is compulsory for all Saudi and non-Saudi nurses to be registered with the SNB and to attend a series of continuing education programs in order to renew their registration every three to five years (Abu-Zinadah, 2005). However, in rural areas, particularly where PHC centres operate, nurses still lack access to these programs. Moreover, the SNB functions under the direction of the SCFHS, which limits its role, responsibilities, and influence (Almalki et al., 2011b). Considering these challenges, there is arguably a need to grant authority and greater independence to empower nurses in the future.

2.7.5 Nursing workforce and cultural influences in SA

Although SA has achieved a remarkable accomplishment in establishing, developing and supporting nursing education, practice, and a workforce, there remain a number of challenges, with the most notable being the local nursing shortage. This growing shortage manifests in both the government and private sectors and has led to an increased demand for expatriate nurses; therefore, most of the Saudi nursing workforce comprises of expatriates (Almalki et al., 2011b). These expatriate nurses have been recruited from different countries (Aboul-Enein, 2002; Aldossary et al., 2008), with most of the MOH facility workforce coming from India and the Philippines (Tumulty, 2001), and a number have also been recruited from North America, the UK, Australia, South Africa, Malaysia, and other Middle Eastern countries (Aboul-Enein, 2002).

However, during the 1990 Gulf War, expatriate nurses and other healthcare professionals, such as physicians, left the healthcare system in SA, due to reduced security amongst the workforce. This led to an increase in the rate of turnover of healthcare providers and a collapse in the healthcare sector in SA (Aboul-Enein, 2002; Al Hosis, Plummer, & O'Connor, 2012; Almalki, 2012). In addition, a study conducted by El-Sanabary (1993) argued that, in 1990, the dependency on, and increasing number of, expatriate nurses, who then comprised up to 76% of the total nursing workforce in SA, created barriers between patients and nurses due to their differing religions, cultures, languages and values. These challenges and barriers saw an increased demand to attract Saudi nationals into the nursing profession, who could communicate more effectively with patients and their families, which would also reflect on their quality of care (El-Gilany & Al-Wehady, 2001). Consequently, the monarchy of SA issued a royal decree in 1992, to implement a 'Saudisation' policy across all sectors, which sought to minimise the large number and escalating salaries of expatriates in the workforce, and to encourage the Saudi national workforce to fill key positions, particularly in the health sector (Almalki, 2012; Khaliq, 2012; Miller-Rosser et al., 2006; Tumulty, 2001).

Following the issue of this decree, the Shura council (a consultative body in SA) dictated that, by 2007, 70% of the workforce in most sectors would have to be Saudi (McNeese-Smith, 2000); however, there were no clear statement regarding the required targets for the Saudi health workforce, particularly for nurses within the PHC sector. Thus, although the policy of 'Saudisation' had been unofficially in practice for several years, it was only adopted officially in the 2004 development plan (Khaliq, 2012). Nevertheless, a study conducted by Jehanzeb et al. (2013, p. 82) suggests that;

> *"...the private sector in SA must appoint workers with proper knowledge, skill, capabilities and training, while Saudi workers are not currently suitable to fulfil the requirements of the current local labour market, but they can be developed as efficient workers by providing them appropriate training."*

Thus, at the time of the Decree, the Saudi workforce needed to be educated or trained in all areas of employment to replace existing expatriate workers. Healthcare in SA was one of the largest sectors to apply the policy, and the MOH specifically targeted nurse recruitment. The nursing target of the Saudi fifth Development Plan (1990-1995) stated that there should be one nurse per 225 inhabitants; thus, to achieve this target, 5880 new nurses required training annually (Al-Mahmoud, Mullen, & Spurgeon, 2012).

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The percentage of local nurses is still low in some health organisations, especially in the private sector, where they comprise only 5.4% of the total workforce (Almalki et al., 2011a; MOH, 2015; Lamadah & Sayed, 2014). The MOH remains focused on attracting and retaining qualified Saudi health services workers in all professions, but particularly in the nursing field (Almalki et al., 2011a), which constitutes about 60.1% (see Figure 2-1) of the total health services workforce. This percentage suggest that the trend of Saudi nurses working in the MOH is increasing year by year, which is illustrated in Table 2.2. According to the MOH (2013, 2015), between 2010 and 2015, there was a marked increase in the proportion of Saudi nurses in relation to the total nurses employed at the MOH. This rate increased from 48.7% in 2010 to 60.1% in 2015.

Table 2.2: Trend of Saudi nurses working at MOH, from 2010-2015
(Source: MOH, 2013, 2015)

Years	2010	2011	2012	2013	2014	2015
Total number of nurses in MOH	75.978	77.946	82.948	83.862	91.854	95.379
Percentages' of Saudi nurses in MOH	48.7%	52%	55.3%	57.8%	59.6%	60.1%

However, the number of Saudi and expatriate nurses is not evenly distributed across all SA cities; for example, in Riyadh, 53.3% of the nursing population are Saudi, while in Jeddah, 60.7% are Saudi (MOH, 2015). Moreover, the Saudi Health Statistical Annual Book for 2015 reports these percentages are significantly higher than those found in other health sectors in SA where the percentage of expatriate nurses in other government agencies is 81.8%, while, in the private sector, 94.5% are expatriates.

Furthermore, expatriate nurses face several challenges due to the cultural differences with their patients, and these can affect their work performance and advancement (Tumulty, 2001). However, their own cultural backgrounds provide nurses with the most comprehensive and holistic viewpoints for caring for and understanding the patient population (Halligan, 2006). Thus, nurses need to take into account some specific care practices, such as understanding the patient culture, promoting care involvement, and offering support. The health organisations' policies and philosophies, whether in government or the private sector, need to reflect the cultural practices of modesty, gender segregation, communication, language, and spirituality.

Challenges created by cultural preferences might manifest as gender segregation in hospital rooms, as a male patient could dislike being cared for by a female nurse, and similarly a female patient might object to the presence of male care providers in the

room. Another challenge for nurses in providing culturally competent care for patients is the language barrier. While Arabic is the national language of SA, English is used for understanding, and to avoid the need to navigate language diversity among patients who dwell in SA for temporary periods. Some health sectors provide courses for nurses so that language differences do not impede their ability to provide urgent treatment to patients. In spite of the fact that most Saudi Arabian patients speak Arabic as a first language, most non-Saudi trained nurses interact with patients in English. Moreover, in some hospitals and PHC sectors, the expatriate nurse's first language is not Arabic (Aldossary et al., 2008), which creates a considerable barrier between the nurse and patient and can increase patient dissatisfaction (Al-Ahmadi & Roland, 2005). However, nurses who are not fluent in either English nor Arabic, can still understand a patient's complaint (Gerrish, Chau, Sobowale, & Birks, 2004) by asking for help from either an interpreter assigned from the health organisation, or in an exceptional circumstance a family member of the patient (Squires, 2009). Moreover, they can develop their language skill through attending educational sessions for non-Arabic speakers, and expedite their learning by focusing on the most frequently used Arabic terms and words (Badruddin & Arif, 2017). Therefore, nurses need to use a variety of communication methods. NMC (2010) informed by an understanding of cultural differences in order to provide competent care (Aldossary et al., 2008; El-Gilany & Al-Wehady, 2001).

Nursing in all health sectors needs to be well-equipped to meet the needs of patients. Hayes, Bonner and Douglas (2013) argue that a vital element in providing effective care for patients is a deep understanding of the patient's culture and values. The beliefs and practices of patients from different cultures may have positive outcomes on their health in ways that are not immediately clear to healthcare professionals and policy-makers. This may lead to misunderstandings and intercultural misconceptions (Halligan, 2006). Thus, one of the crucial accountabilities of nursing management is to continually assess nursing staff to determine whether they have the appropriate knowledge and skills. Managers can provide supportive mechanisms that enable nurses to deal with the emotional labour related to ethical situations whilst caring for their patients, and this could include the use of supportive clinical supervision, which may positively influence nurses' emotional management and perhaps reduce burnout (MacLaren, Stenhouse, & Ritchie, 2016). Furthermore, Al-Ahmadi (2009) and Halligan (2006) suggested that, due to differences in the cultural and psychosocial forms of

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expression of patients and nurses (particularly in SA), an effective supervision system needs to be implemented that facilitates the processes of reflection. This could help nurses to understand their own cultural barriers and stereotypes, and explore their own ethnocentricity, whilst allowing them to respond more effectively to the patient, and thus improve care.

2.7.6 Nursing in PHC in SA

Many factors, including a shortage of nurses, high staff turnover, poor performance, a gap between theory and practice, burnout, and excessive workloads, have become worldwide concerns in the nursing profession (Farsi, Dehghan-Nayeri, Negarandeh, & Broomand, 2010). These factors impact on the quality of healthcare in both developing and developed countries, regardless of whether the care is provided by government or private organisations. In view of these stresses, Lamadah and Sayed (2014) found that SA, like many other countries (Lu, While, & Barriball, 2005), is seriously concerned with nursing employment, the provision of high-quality services, and the retention of nursing staff. This is particularly important as job satisfaction is generally the most frequently cited factor linked to nursing turnover, burnout, stress and a lack of performance (Alsaqri, 2014; Lu et al., 2005).

Nurses, and specifically those who work in PHC centres in SA, play a major role in influencing a patient's health behaviours (Mitchell, 2009). In this respect, nurses have a crucial role in generating awareness related to illness in the Saudi community, which can thus aid prevention and enable people to live confidently with long-term, non-infectious conditions. Moreover, the PHC centres train nurses to enhance their professional skills (Khan et al., 2012).

The number of female nurses in SA, particularly in the PHC sector has risen by 5% in the last five years (Figure 2-6), and there has been a noticeable increase in the number of female (66%) to male (34%) nurses which currently represents a 2:1 ratio. However, the percentage of female nurses in the Jeddah region is (71%) and male nurses comprise (29%), which represents an approximate 3:1 ratio (Table 2.3). Furthermore, the percentage of Saudi nurses working in the PHC sector has increased by approximately 8% from 2011 (77.5%) to 2015 (85.3%) (Figure 2-6) (MOH, 2015). In this study's setting, the Saudi nursing workforce constitutes 91.1% (Table 2.3), which suggests a successful implementation of the 'Saudisation' policy. Despite the fact that the size of

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the Saudi nursing workforce has noticeably increased in the PHC sector, and particularly in Jeddah city, the staffing of PHC centres still depend on nursing expatriates who are currently employed from different countries. Whilst the majority of nurses are trained by the MOH in SA, and although nurses in general are well-equipped with professional skills, they are still considered less skilled in contrast to those from the western countries (Schoenwald, Sheidow, & Chapman, 2009). Thus, to improve the knowledge and skill of these nurses, there is a need to establish a quality management system that leads to improvements in the management and organisation of health services, as well as in the professional development of PHC staff.
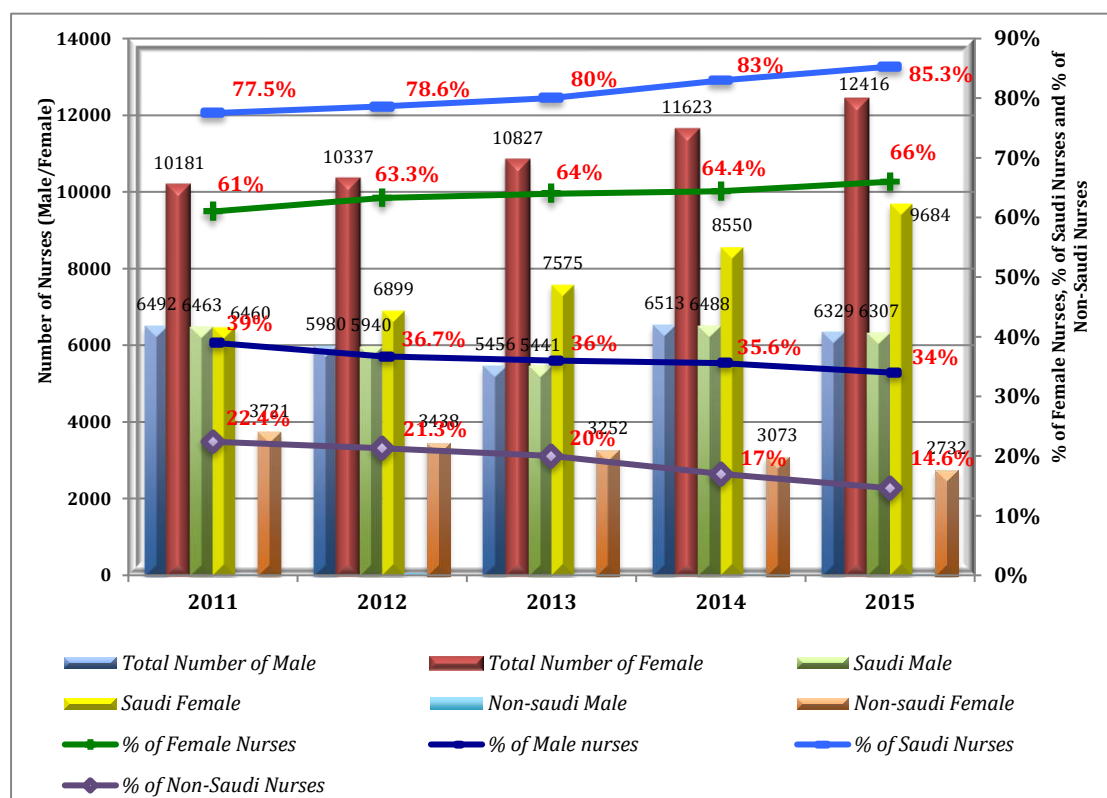
Figure 2-6: Number and percentage of nurses (male/female) and (Saudi/non-Saudi) working in the PHC sector in SA, from 2011 to 2015

Table 2.3: Number and percentage of nurses (male/female) and (Saudi/non-Saudi) working in the PHC sector in Jeddah in 2015 (Source: MOH, 2015)

Nurses in PHC at Jeddah	Total Number		% Of Female nurses	Saudi		% Of Saudi	Non-Saudi		% Of Non-Saudi	Total
	M	F		M	F		M	F		
	388	949	71%	388	831	91.1%	0	118	9.8%	1,337

2.8 Quality Management and Accreditation in the Health Sector within SA

Since the 1970s, SA has focused on improving the quality of health services across the country by introducing Total Quality Management (TQM) in different local and private sector health organisations. Since this change, the quality of the health system has improved in both the public and private sectors; this was achieved by increasing both the number of health organisations, including hospitals and PHC centres, and the number of health practitioners. Indeed, SA was one of the first Arab countries to implement quality assurance programmes in the healthcare sector, and in 1984, the MOH started to carry out activities to improve health services. In 1987, a central committee was formed to monitor, analyse, and provide feedback to the MOH on all quality programmes conducted throughout SA health organisations; this addressed the effectiveness of resource utilisation, and of patient treatment (Almasabi, 2013).

All health organisations, including hospitals and PHC centres in SA, have since been focusing on improving their healthcare programmes by establishing specific standards and developing strategies for efficient patient care, as directed by the WHO. However, quality promotion has been an integral part of PHC programmes in SA for a number of years. For example, in 1993, the National Committee on Quality Assurance (NCQA) for PHC guidelines was established by the MOH under the supervision of the WHO. This programme addresses the nine key elements (previously discussed in section 2.6) of PHC with the aim of achieving higher quality in the healthcare system through the application of quality assurance programmes in the sector and the provision of guidance in developing patient care services. To improve the services provided by the MOH, a Saudi committee was established in 1994 by the American Saudi Co-operation (Almasabi, 2013). In 1995, several programmes were also launched to prepare regional supervisors to become key contributors to the PHC quality improvement efforts, which also included treatment protocols, and staff training (Al-Assaf, 2001).

Accordingly, the Saudi committee selected four hospitals from various regions of the country and delivered workshops and training programmes for the essential departments in these hospitals and PHC centres to develop the standards that would enable employees to perform efficiently. At the end of this programme, the committee developed ten standards, which took into account services related to the use of medical resources, such as infection control, blood banks, and pharmacies. Moreover, according

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to these standards, it was recognised that patients were customers of these health services, whether in hospital or the PHC sector, and, therefore, needed protection in every way. For healthcare providers, safety had to be considered at every level. Thus, the efficient implementation of a quality assurance programme and the setting of efficient standards covering all aspects and criteria are now recommended at all healthcare levels in SA.

When the Makkah Regional Quality Programme [MRQP] was established in 2000 to improve health services under the supervision of Prince Abdul-Majeed, SA became the first Arab country to implement an accreditation programme (Al-awa et al., 2012). Furthermore, in 2005 and following the success of the MRQP, the Central Board of Accreditation for Healthcare Institutions [CBAHI] was formed to serve as a national accreditation programme. This was based on the Health Service Council recommendation to recognise government and private health services provision (Almasabi, 2013).

The national CBAHI standards are the result of collaborative efforts of an expert team selected from various healthcare sectors around the Kingdom, including the MOH, the private sector, the National Guard Health Services, the King Faisal Specialist Hospital, and the Saudi Commission for Health Specialties, among others. The MOH implemented these standards in a number of hospitals, and, in 2006, the CBAHI standards manual was approved. Thus, in late 2011, the Health Service Council in SA announced that all hospitals and PHC centres, whether governmental or private, must obtain national CBAHI accreditation based on policy (No.8/58 dated 4/12/2011) (Almasabi, 2013). However, a limited number of hospitals $n=57$ (21%) have been accredited by CBAHI so far, and many others are still in the middle of this process (MOH, 2015). Furthermore, some private and governmental hospitals, including PHC centres, have obtained accreditation from different international bodies, whilst 47 (10%) hospitals and seven (0.3%) PHC centres have obtained accreditation from the Joint Commission International (JCI), and six hospitals have been accredited by the Canadian Council on Health Services Accreditation [CCHSA] (Almasabi, 2013).

2.9 Summary

This chapter has provided an overview of the healthcare system and the development of the nursing profession in SA. The attention to Saudi health services by the Saudi government has expanded considerably in recent years, and the development has included all health service sectors, both governmental and private. As a result, health outcomes have improved noticeably for the Saudi population, compared to those recorded a few decades ago. Moreover, PHC organisations have reformed their services by adopting a quality improvement approach. However, health services still face many challenges that need to be managed, including the professional development of health providers, the MOH's multiple roles, and national and international accreditation. Therefore, the MOH and other related sectors need to address these challenges to continue to improve the status of the Saudi health system, and this can be achieved by coordinating their efforts to put the new strategies and health programmes into practice, as the new strategy has considered some of the key challenges of the current health service.

Clear plans and effective regulations are needed to ensure the success of the health services improvement strategy to enable the provision of high quality care services. Furthermore, the nursing profession's key advancements and challenges in SA have been outlined, including the role of the nursing profession in the Islamic era, the development of education programmes, nursing regulations, and cultural influence in SA. The development of the nursing profession highlighted that educational policy has improved, despite several challenges, such as cultural differences (gender segregation) among expatriate nurses, and language barriers. Having provided an overview of the health system and nursing development in SA, the following chapter provides an in-depth discussion of job satisfaction from a local and international perspective and explores the factors that may influence nurses' job satisfaction.

Plan stage

Act

Plan

Chapter 3

Study

Do
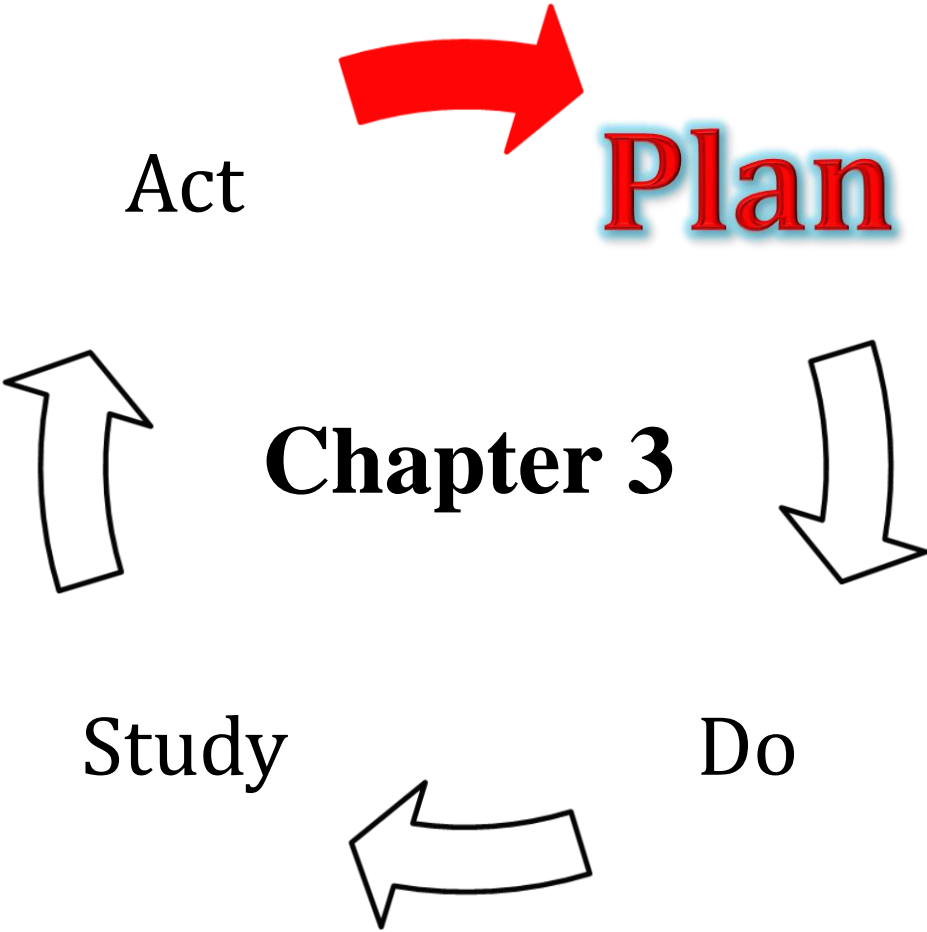
Job Satisfaction
(**Plan** Stage)

3.1 Introduction

The previous chapter discussed the healthcare system, rules and regulations, and the role of nursing in SA, while this chapter will discuss the concept of job satisfaction in general, with specific attention to the nursing discipline in particular. It also provides a brief perspective of some important factors that can affect job satisfaction. The purpose of this chapter is to critically discuss studies related to nurses' job satisfaction, as well as to highlight the link between job satisfaction and other factors, including clinical supervision. This chapter will be considered under the 'Plan' stage of the PDSA quality improvement cycle and will be divided into three main sections. The first section will explore, the meaning of the term 'job satisfaction' along with several prominent job satisfaction theories, including the Herzberg motivator-hygiene theory. The second section provides a discussion of nurses' job satisfaction globally, including the factors that may influence their satisfaction levels, whilst clinical supervision will be briefly highlighted as one of the contributing factors. Finally, the chapter discusses nurses' job satisfaction locally to provide the context for nurses in SA.

3.2 Job Satisfaction

Job satisfaction has been widely studied, and has a long history of research (Bekru, Cherie, & Anjulo, 2017; Gilles, Mayer, Courvoisier, & Peytremann-Bridevaux, 2017; Jackson-Malik, 2005; Jackson, 2005; Liu, Aungsuroch, & Yunibhand, 2016; Prosen & Piskar, 2015). In 1924, Elton Mayo and his colleagues first conducted job satisfaction research at the Western Electronic Company in Massachusetts in the USA and produced the now famous Hawthorn studies. The main drive of the Hawthorn studies was to discover the effects of observation on employee output (Saari & Judge, 2004). Job satisfaction has become a crucial concept within nursing workforce research in recent years influenced by the increased demand for quality care, the shortage of staff and insufficient resources (Abualrub & Alghamdi, 2012; Al-Hussami, 2008; Alshmemri, 2014; Lu et al., 2005; Mrayyan, 2006; Murrells et al., 2005; Zaghloul et al., 2008). Researchers vary in their definitions of the term, which are based on their specific study and personal experiences. However, some researchers commonly describe job satisfaction as an individual's positive affective attitude towards their work (Herzberg, 2008; Miller, 2007).

McCloskey and McCain (1987) defined job satisfaction as the degree to which workers enjoy and appreciate their jobs. Whereas McNeese-Smith (1996, 1998) merely stated that job satisfaction is an employee's feelings toward their job. Cumbey and Alexander (1998) considered job satisfaction as a worker's affective feeling, based on the interaction between their own values and the expectations of the job environment and organisation, and Adams and Bond (2000) suggested it is the level of positive affect towards a job or its related factors. Although most of these definitions relate to the employee, other definitions include interactions with the workplace. Another definition referred to job satisfaction as an outcome of the interaction between the employee to their work environment and their job (Al-Ahmadi, 2002). However, Brooks and Anderson (2004) conceptualised it simply as an 'employee's likes and dislikes, whilst Wilson, Squires, Widger, Cranley and Tourangeau (2008) stated that job satisfaction is the degree to which an employee's needs are currently accomplished. In contrast, Tourangeau, Hall, Doran and Petch (2006) identified job satisfaction as an employee's persistent positive and negative attitudes and feelings towards their work and organisation. Ultimately, according to Saari and Judge (2004), the term job satisfaction was identified as a positive attitude towards one's job resulting from an assessment of its characteristics. Thus, as several terms have been utilised to explain job satisfaction throughout the literature, including 'job satisfaction' and 'job attitudes' (Bjørk, Samdal, Hansen, Tørstad, & Hamilton, 2007), this illustrates the ambiguous interpretation in the literature.

According to Alshmemri (2014), in order to assess the attitudes and perceptions of employees, several aspects of job satisfaction and the factors that can affect the quality of nursing care and productivity need to be considered. These factors include: the job environment (Bégat, Ellefsen, & Severinsson, 2005), leadership (Abualrub & Alghamdi, 2012), clinical supervision (Schroffel, 1999), professional development (Atefi, Lim Abdullah, Wong, & Mazlom, 2015), staff shortages (Zarea, Negarandeh, Dehghan-Nayeri, & Rezaei-Adaryani, 2009), and organisational practices (Hayes, Bonner, & Pryor, 2010; Lu et al., 2005). Similarly, Kettle (2002) and Mrayyan (2006) identify significant demographic variables (such as age, gender, education, and experience), the characteristics of the job (including status, autonomy, and pay), and the organisation's environmental factors (such as the degree of professionalisation, supervision, and interpersonal relationships).

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3.3 Job Satisfaction Theories

Considering that job satisfaction impacts every employee across the globe, it is unsurprising that it has received a great deal of research attention, resulting in a large quantity of related definitions, theories, and measures. Although the literature provides both a better understanding of the concept, and a resource for measuring satisfaction in different situations, caution needs to be applied to avoid the adoption of ill-fitting theories and measurements, which can harm the healthcare providers' understanding of job satisfaction. It is also important for healthcare providers to be aware of how job satisfaction impacts a worker's health and productivity (Eeckelaert et al., 2012).

Job satisfaction theories have a strong overlap with theories explaining human motivation. The most prominent theories in this area include Maslow's needs hierarchy theory, Herzberg's motivator-hygiene theory, the Job Characteristics Model, and the dispositional approach (Alshmemri, 2014). However, for the purpose of this study, Herzberg's theory will be examined due to its direct connection with the data collection tool, namely the Minnesota Satisfaction Questionnaire (MSQ). This tool will be utilised in this study to measure job satisfaction pre-and post-tests, to help evaluate clinical supervision interventions (Bishop, 2007).

3.3.1 Herzberg's motivator-hygiene theory

Herzberg's theory is one of the most significant content theories related to job satisfaction (Dion, 2006), and several authors note that it is the most effective needs satisfaction model used by healthcare organisations (Cahill, 2011; Timmreck, 2001). Herzberg's two-factor theory has also been widely used by researchers evaluating nursing job satisfaction (e.g., Best & Thurston, 2004; Hegney, Plank, & Parker, 2006; Jones, 2011; Kacel, Millar, & Norris, 2005; Lephalala, Ehlers, & Oosthuizen, 2008; McGlynn, Griffin, Donahue, & Fitzpatrick, 2012; Mitchell, 2009; Rambur, McIntosh, Palumbo, & Reinier, 2005; Russell & Gelder, 2008). In 1959, Herzberg, Mausner and Snyderman (2011) suggested a two-factor motivational theory for identifying the factors affecting, or influencing, job satisfaction. The main hypothesis of Herzberg's theory was that certain factors lead to positive attitudes towards work, and other factors lead to negative attitudes. At its heart, the two-factor theory developed by Herzberg et al. differentiates between motivation and hygiene factors, or intrinsic and extrinsic

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factors; motivation factors were described as intrinsic to the job, and hygiene factors as extrinsic.

According to their data, the factors that affect job satisfaction are divided into two sets of categories. The first category is associated with 'the need for growth or self-actualisation' and is known as 'the motivation factors'; this includes achievement, recognition, the work itself, responsibility, advancement, and the possibility for growth (Herzberg, 2008; Herzberg et al., 2011). The second category relates to 'the need to avoid unpleasantness, and is known as 'hygiene factors'. According to Herzberg et al. (2011) motivation factors operate only to improve job satisfaction, whereas hygiene factors work to reduce job dissatisfaction. Motivation factors are related to employee attitudes, while hygiene factors encompass the 'doing' of the job (Herzberg et al., 2011; Stello, 2011). Hygiene factors include: company policies and administration, relationships with supervisors, interpersonal relations, working conditions, and salary (Herzberg, 2008). When the hygiene factors deteriorate to a level below that which the employee considers acceptable, job dissatisfaction emerges. However, the reverse does not hold true. When a job context can be characterised as optimal, an employee will not be dissatisfied, but neither will employers observe much evidence of a positive attitude. According to Herzberg (2008) and Herzberg et al. (2011), it is primarily, the 'motivators' that bring about this kind of increase in job satisfaction.

According to Hancer and George (2003), the intrinsic factors related to the content of the job consider personal psychological needs satisfaction, which includes work achievement, recognition, and responsibility. In comparison, extrinsic factors relate to the work environment, including supervision, salary, and organisation policy, which, if deficient, might cause dissatisfaction with the job. According to Herzberg et al., these extrinsic factors, also known as hygiene factors, are not directly related to job satisfaction, therefore they do not directly improve performance (Hersey, Blanchard, & Johnson, 2012).

Herzberg's is the most common used theory to investigate job satisfaction, and it is included in this chapter for several reasons. The hygiene (extrinsic) and motivation (intrinsic) factors correlate with the Minnesota Satisfaction Questionnaire (MSQ), which is developed specifically according to Herzberg's theory. This will be discussed further in section 7.6.1.1, as it will be used in the quantitative phase to explore the

factors that influence job satisfaction and to identify the level of job satisfaction among nurses working in PHC in Jeddah. In order to identify the motivating factors for PHC nurses, the Herzberg's theory is also utilised in this study through the MSQ to assess the effects of leadership style, the nature of the work itself, the possibility for growth, the influence of policy and administration, and the effect of salary in PHC nursing. The MSQ questionnaire was developed in two forms by Weiss, Dawis, England and Lofquist in (1967), namely the short and the long form MSQ. However, for the purpose of this study the short form MSQ will be utilised. The MSQ is useful as it was designed to parallel a companion measure of actual satisfaction to vocational needs with a reinforcement measure of the potential satisfaction of the individual.

3.4 Job Satisfaction Among Nurses

Nurses constitute the largest group of health care professionals, and they play a crucial role in providing quality patient care (Al-Aameri, 2000; Chan, Tam, Lung, Wong, & Chau, 2013). Nurses are capable of solving problems in the healthcare sector (Al-Aameri, 2000). However, it is known that their job satisfaction impacts patients' care delivery. An early study conducted by the University of Minnesota (Nahm, 1940) in the USA related to nurses' job satisfaction; it identified some factors that were determinants of job satisfaction, such as supervisory relationships, enjoyment at work, development opportunities, and family and social relationships. Studies related to job satisfaction among nurses have since been conducted in different countries, including:

- The USA (Andrews & Dziegielewski, 2005),
- Canada (Penz, Stewart, D'Arcy, & Morgan, 2008; Wilson et al., 2008),
- The UK (Coomber & Barriball, 2007; Murrells, Robinson, & Griffiths, 2009; Redfern et al., 2002),
- Australia and New Zealand (Hayes et al., 2013; Hegney et al., 2006; Jackson, 2005; Kalliath & Morris, 2002b; Skinner, Madison, & Humphries, 2012),
- Korea and China (Hwang et al., 2009; Lu, While, & Barriball, 2007; Seo, Ko, & Price, 2004),
- Pakistan (Bahalkani et al., 2011; Bushra, Usman, & Naveed, 2011),
- Kuwait (Al-Enezi, Chowdhury, Shah, & Al-Otabi, 2009), and
- Jordan (Abu Raddaha et al., 2012; Mrayyan, 2006).

Collectively, these studies investigate and identify several factors that contribute to job

satisfaction among nurses worldwide. In conclusion, these studies showed strong similarities in their results and factors, despite the fact that they were conducted in a variety of countries, with a range of cultural backgrounds. Examples of these common results and factors include: the environmental and structural factors (Boyle et al., 2006; Campbell et al., 2004; Penz et al., 2008; Seo et al., 2004), and the intent to leave and turnover (Abu Raddaha et al., 2012; Andrews & Dziegielewski, 2005; Coomber & Barriball, 2007; Han, Trinkoff & Gurses, 2015; Miller, 2007), whilst intrinsic factors include professional growth and achievement, and extrinsic factors include: the salary, working hours and staffing (Al-Enezi et al., 2009; Cahill, 2011; Hegney et al., 2006; Kacel et al., 2005; Mrayyan, 2006), professional growth opportunities (Al-Enezi et al., 2009; Bahalkani et al., 2011; Kovner, Brewer, Yow-Wu, Cheng, & Suzuki, 2006; McGlynn et al., 2012), supervisor support and leadership (Bushra et al., 2011; Kovner et al., 2006; Zangaro & Johantgen, 2009), decision making, (Campbell et al., 2004; Wilson et al., 2008), staff relationships or team dynamics (Jackson, 2005; Kovner et al., 2006; Murrells et al., 2009), burnout and stress (Hayes et al., 2013; Kalliath & Morris, 2002b; Lu et al., 2005; Redfern et al., 2002; Skinner et al., 2012), and the demographic charactristics, such as age, education, nationality and marital status (Al-Enezi et al., 2009; Hwang et al., 2009; Lu et al., 2007).

Most of the above were summarised in a study by Aiken et al. (2001) who conducted research with 43,329 nurses in 711 adult acute care hospitals in five countries, including the USA, Canada, Scotland, the UK, and Germany. Aiken et al. (2001) found that across all countries, burnout and a decreasing quality of care are the main reasons for nursing job dissatisfaction. Furthermore, this result is also influenced by the type of nursing role, the geographical location, years of experience, and age (Coomber & Barriball, 2007). Thus, it is important for nursing administrators and managers in public and private sectors to measure the level of job satisfaction within the nursing workforce by examining the factors that might improve satisfaction, and to plan staff retention strategies (Mrayyan, 2006).

The nursing workforce is understood to be the healthcare provider who spends the most effort and time with patients. Improving their satisfaction is essential as it increases the quality of services provided to patients, raises patient satisfaction, enhances organisational commitment, improves nurses' productivity, and increases their efficiency and retention (Abualrub & Alghamdi, 2012; Lu et al., 2005). Moreover, as

nurses' satisfaction increases, the delivery of high-quality services to patients usually improves, and job productivity and organisational commitment tends to be enhanced (Al-Aameri, 2000; Al-Hussami, 2008; Ingersoll et al., 2002). However, when nurses' satisfaction decreases, negative attitudes toward their jobs become evident, patient satisfaction is reduced, staff leave, and a shortage in the nursing workforce is created (Choong, Lau, Kuek, & Lee, 2012). The same authors note that poor quality services may be provided under these circumstances, which may mean that the patient stays in hospital for an extended period, thus increasing healthcare costs.

Aiken et al. (2001) ranked nurses' job dissatisfaction from highest to lowest in the five countries in their study. Nurses in the USA exhibited the highest level of job dissatisfaction, with 41% of respondents dissatisfied with their present job. This was followed by Scotland at 38%, the UK at 36%, Canada at 33%, and Germany at 17% (Lu et al., 2005). Various geographic regions in SA have contributed to several studies that examined nurses' job satisfaction in both public and private sectors. These studies covered a number of related variables, including leadership style, organisational commitment, hospital performance, general job satisfaction, burnout, and intention to stay (Abualrub & Alghamdi, 2012; Al-Aameri, 2000; Al-Ahmadi, 2002; Al-Ahmadi, 2009; Al-Dossary, Vail, & Macfarlane, 2012; El-Gilany & Al-Wehady, 2001; Mitchell, 2009; Omer, 2005; Zaghloul et al., 2008). According to the findings of these studies, the most prominent factors that lead to job dissatisfaction were: staff shortages, organisational commitments, recognition, supervision, payment, social attitudes, administration, and hospital policies.

Within their study, Aiken et al. (2001) disseminated self-administered questionnaires to a sample of the nursing workforce. These questionnaires addressed a variety of issues related to nurses' perceptions of their working environments, their job satisfaction, career plans, and feelings toward job burnout. The response rates for the recruited sample ranged from 42% to 53% (USA-13,471; Canada-17,450; England-5,006; Scotland-4,721; Germany-2,681). The USA showed the highest job dissatisfaction amongst its workforce. In comparison, nurses in Germany showed most satisfaction with the advancement opportunities (61%), whilst the nursing workforce in Canada was found to be most satisfied with their salaries (69%) (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002; Hayes et al., 2010). Aiken et al. (2002) identified shared characteristics across nations in the weaknesses of the work environment and the quality of care,

emphasising the shortage of nurses and their dissatisfaction with their work. Therefore, the authors advocated the creation of new employee policies to represent the needs of the nursing workforce.

3.4.1 Factors affecting job satisfaction

Several studies have focused on the factors affecting nurses' job satisfaction, whether globally or locally, and particularly for those in SA (Abo-Znadh & Carty, 1998; Al-Dossary et al., 2012; Al-Hussami, 2008; Applebaum, Fowler, Fiedler, Osinubi, & Robson, 2010; Delobelle et al., 2011; Lee & Cummings, 2008; Lu et al., 2005; Mitchell, 2009; Sabanciogullari & Dogan, 2015; Zaghloul et al., 2008). According to Alshmemri, (2014), in order to determine the attitudes and awareness of nurses towards their achievements in relation to their level of job satisfaction, several aspects of job satisfaction and the factors that can affect the quality of nursing care and productivity need to be considered. These factors have been studied by other researchers and include: the job environment (Applebaum et al., 2010; Mitchell, 2009), leadership style (Abualrub & Alghamdi, 2012; Zaghloul et al., 2008), supervision (Brunero & Stein-Parbury, 2008), professional development (Pillay, 2009), and pay and rewards (Al-Dossary et al., 2012; Delobelle et al., 2011), as well as staff shortages and practices of the organisation (Hayes et al., 2010; Lu et al., 2005).

Furthermore, organisational support (Al-Hussami, 2008), empowering nurses in decision making (Lee & Cummings, 2008), the intention to leave (Sabanciogullari & Dogan, 2015), and demographic variables, such as the age, experience and nationality (Abo-Znadh & Carty, 1998; Curtis & Glacken, 2014), are also considered important to job satisfaction. Since job satisfaction is a global concept determined by several factors (Haijuan, Yongpin, & Bibo, 2006; Sabanciogullari & Dogan, 2015) these can be categorised into three groups: extrinsic, intrinsic, and individual characteristics. Furthermore, work related-stress (Al Hosis, Mersal, & Keshk, 2013), burnout (Hamaideh, 2011), turnover (Coomber & Barriball, 2007), and clinical supervision (Butterworth, Carson, Jeacock, White, & Clements, 1999) will also be discussed in this section as the most prominent factors that can influence nurses' job satisfaction:

3.4.1.1 Extrinsic factors

Extrinsic factors are generated outside of the individual and are generally regarded as the primary sources of job dissatisfaction (Herzberg et al., 2011). Salary is seen as the

most important motivator that influences job satisfaction for many employees. According to Maslow's (1943) motivation theory, salary is considered a basic need for employees, and several studies identified it as an important factor for nurses' job satisfaction (Coomber & Barriball, 2007; Cowin, 2002; Delobelle et al., 2011; Fang, 2001). Another extrinsic factor considered relevant to nurses' job satisfaction is workload, such as the working hours per week and the number of other workers in a shift. A high workload can generate pressure for nurses and is directly related to job burnout (Maslach, Schaufeli & Leiter, 2001), and dissatisfaction (e.g., Dolan, Van Ameringen, Corbin, & Arsenault, 1992; Lee, Song, Cho, Lee, & Daly, 2003; Schaefer & Moos, 1993). A third extrinsic factor is the value of interpersonal relationships formed at work; a good relationship with people at work, including co-workers and supervisors, increases an individual's investment to stay at work, which results in increased job satisfaction (Yang et al., 2012). A study conducted by Mansfield, Yu, McCool, Vicary, and Packard (1989) with 1000 randomly selected nurses from a large eastern Pennsylvania state hospital in the USA, revealed that nurses who developed good relationships with their colleagues showed high job satisfaction. Similarly, a study conducted in South Korea by Lee et al. (2003) indicated that interpersonal relationships are one of the most frequently cited reasons for job satisfaction among Korean nurses. Thus, for nurses, their relationships with other health services professionals, including doctors, supervisors, and peers, markedly affects their job satisfaction (Adams & Bond, 2000).

3.4.1.2 Intrinsic factors

Intrinsic factors are also known as 'motivators' or 'core variables'; they are endo-genetic elements of a job (Herzberg et al., 2011), and include achievement, which is a feeling of accomplishment. Achievement can be realised by simply finishing a task or solving a problem, but it is one of the main goals that people want from their jobs. Employees who show a strong orientation toward achievement may work for long hours, be hard workers, and accept work challenges (Baylor, 2010). A second intrinsic factor that influences job satisfaction is responsibility and autonomy, which is the extent of an employee's independence and freedom to plan the steps of their work and methods (Chiu & Chen, 2005). Employees with a high autonomy are trusted by managers, and they will tend to trust managers, which increases their satisfaction with their jobs (Hackman & Oldham, 1976).

Plan stage

Additionally, a study conducted by Kivimäki, Voutilainen and Koskinen (1995) found that job satisfaction is related to the levels of job responsibility and autonomy; they noted that nurses who occupy highly responsible positions at work reported significantly higher job satisfaction. A third intrinsic factor influencing job satisfaction is individual or professional growth, which denotes the development and potential for advancement in the future (Herzberg et al., 2011). Herzberg, Mausner and Snyderman (1959) argued that supporting employees by allowing them to pursue further education could make them more valuable and more fulfilled professionally. Positive relationships between the growth factor and job satisfaction were revealed in several studies (Boothby & Clements, 2002; Liou, Shi, & Tseng, 1997; Muller-smith, 2011), which found that, if the workplace offered employees an opportunity to become skilled in more than one area, employees' job satisfaction would increase, leading to a more satisfied workplace and a strong sense of accomplishment.

3.4.1.3 Individual characteristics

Demographic characteristics are one of the sources of variation in job satisfaction (Metle, 2002). Several demographic variables associated with nurses' job satisfaction have been studied, including age, qualification level, gender, and tenure. For example, nurses in different age groups demonstrate diverse views towards job satisfaction, which reflect their experience (Duchscher & Cowin, 2004; Tourangeau & Cranley, 2006). Moreover, nurses with different qualification levels have diverse knowledge and viewpoints, which impacts their job satisfaction (Ganzach, 2003). Interestingly, job satisfaction tends to be gender-based, as men value extrinsic factors more, such as salary, and women are more likely to seek intrinsic factors, such as job security (Beutel & Marini, 1995; Moyes, Williams, & Koch, 2006). Furthermore, an employee's tenure, or their number of years of experience, can also influence their job satisfaction, and nurses' job satisfaction can be influenced by their tenure through their different experience (Tzeng, 2002).

3.4.1.4 Job-related stress

Work-related stress was divided into four dimensions by Laschinger (2004), who demonstrated that stress increases when conflict, or inconsistent job responsibility, is present (Fenlason & Beehr, 1994; Kalliath & Morris, 2002b). Similarly, ambiguity regarding job commitment, a workload that reflects an increased degree of demand, and

resource insufficiency contribute to work-related stress. Finally, a lack of staff performance, or the inability of staff to perform their jobs, creates stress in the workplace. Nevertheless, increases in the level of job satisfaction might result from a low level of work-related stress (Sousa-Poza & Sousa-Poza, 2003); indeed, a meta-analysis of 31 studies carried out among nurses showed that there was a strong correlation between job stress and job satisfaction (Zangaro & Soeken, 2007). Among the most common theories of stress is the Job-Demands-Control-Support Model, which specifies both the workload and emotional demands that an employee faces within the workplace as sources of stress (Al Juhani & Kishk, 2006).

Furthermore, it is more likely that stress and job satisfaction are related because they are preceded by similar factors; for example, little support at work, discrimination, staffing issues, and poor workload planning all contribute to greater job stress and increased job dissatisfaction. Indeed, Hayes et al. (2006) found a strong correlation between job satisfaction and stress, whilst Lu et al. (2005) argued that stress continues to have a significant impact on the level of nurses' job dissatisfaction and turnover rates. Furthermore, Coomber and Barriball (2007) concluded that, due to stress, nurses had a high rate of turnover and reported low job satisfaction. In SA, work-related stress was found to have a significant impact on nurses' job satisfaction and increased their rate of turnover (Alasmari & Douglas, 2012); however, there are few published studies examining the prevalence of stress and job satisfaction among nurses (Salam et al., 2014), particularly in PHC sector.

Several factors can affect job stress levels, such as workload, family demands, communication, management, organisational structure, and climate (Al-Aameri, 2003; Al-Omar, 2003). Al-Aameri (2003) specifically focused on sources of job stress for nurses in PHC centres in Riyadh, and identified the following influences: climate, organisational structure, the nursing job, and the managerial role. Also, Al-Makhaita, Sabra and Hafez (2014) investigated the prevalence of job-related stress among nurses working in PHC centres ($n = 637$) and the Medical Tower Complex (MTC) ($n = 493$) in Dammam, Eastern SA. The data were collected via a self-administered questionnaire, which contained 31 job related stress questions and included the nurses' socio-demographics and job characteristics. The study found a high prevalence of job-related stress among nurses working in PHC centres (43.1%) and the MTC hospital (46.2%). Al-Makhaita et al. (2014) found that job-related stress occurs when the job-based

demands of employees are raised, which, if not handled properly, can become distress. Thus, the study recommended the investigation of stress management and the development of an interventional programme to identify and relieve sources of stress though training and the initiation of better work conditions for nurses working in PHC and hospital settings in SA.

3.4.1.5 Job-related burnout

Burnout is a psychological experience, which is considered one of the main reasons for job dissatisfaction (Maslach et al., 2001). According to Allen and Mellor (2002) burnout is considered to have a range of symptoms, such as work-related exhaustion, work-related fatigue, cynicism resulting from indifference to work in general, and reduced professional efficacy, which includes both the social and non-social aspects of work-related accomplishments. The nursing profession is considered to be one of the most stressful occupations, with a high rate of 'burnout syndrome', and this is due to prolonged exposure to chronic job stressors (Tremolada et al., 2015). Nurses' burnout results in several negative elements that influence job satisfaction, like decreased energy, sleep disorders, negative attitudes in relationships with colleagues, decreased work quality, a sense of hopelessness, and increased turnover (Hamaideh, 2011). Moreover, other significant studies revealed that job dissatisfaction results in burnout (e.g. Hamaideh, 2011; Lee et al., 2003; Piko, 2006), whilst Dolan (1987) stated that burnout was related to the work environment, which influenced job satisfaction.

A Jordanian study of 181 mental health nurses (Hamaideh, 2011) measured levels of burnout using the 'Maslach Burnout Inventory' (Maslach & Jackson, 1986). This study revealed the strong relationship between burnout and job satisfaction and found that nurses were in the high burnout category. Similarly, Piko (2006) conducted a study with a sample of Hungarian healthcare staff to investigate the interrelationships among burnout, role conflict, and job satisfaction; this study found that emotional exhaustion/burnout was strongly related to job dissatisfaction. Lee et al. (2003) suggested that it is essential to develop effective managerial strategies, such as clear job descriptions, to enhance nurses' cognitive empathy and to explore their shift preferences in order to reduce the level of burnout and increase job satisfaction. Moreover, in their study of 586 Canadian and 263 Jordanian registered nurses,

ArmstrongStassen, AlMa'Aitah, Cameron and Horsburgh (1994) found that the level of burnout could predict the future intentions of nurses to leave the workplace or stay.

3.4.1.6 Turnover

The turnover of nursing staff is one of the major factors correlated with job satisfaction (Coomber & Barriball, 2007). Turnover occurs when the employee's experience becomes unsatisfactory, causing a move out of the organisation. Job dissatisfaction is the most significant factor in high rates of turnover, as noted by the positive relationship documented in several studies (e.g. Coomber & Barriball, 2007; Hayes et al., 2006; Larrabee et al., 2003; Miller, 2008). Furthermore, a few studies also found a negative correlation between both job satisfaction and turnover (e.g. Mobley, 1977; Susskind, Borchgrevink, Kacmar, & Brymer, 2000).

Miller (2008) examined the relationship between job satisfaction and turnover among hospice nurses, and identified a low response rate, which was attributed to the high turnover resulting from job dissatisfaction. The study found a significant relationship between the three sources of job satisfaction (extrinsic, intrinsic, general) and the intent to leave. A meta-analytical review was undertaken by Hayes et al. (2006), which illustrated that the employees who intended to leave had higher job dissatisfaction than those who intended to stay. Consequently, it is suggested that addressing the antecedent factors affecting employees' job satisfaction may reduce turnover. Similarly, a study conducted by Coomber and Barriball (2007) to explore the impact of job satisfaction on the turnover of hospital nurses found that the factors related to the job environment are the major sources of turnover, and could be more likely to lead to job dissatisfaction than the demographic factors. These studies indicate that both predictors (intent to leave and job satisfaction) emphasise the need to explore and address the influencing factors.

3.4.1.7 Clinical supervision

Clinical supervision is widely discussed in the nursing profession as a means of supporting nurses in order to avoid work-related burnout and stress, and improve performance, which, in turn, improves job satisfaction (Abou-hashish, 2010). Thus, there is a growing awareness of the need to implement and measure the effect of clinical supervision on nurses' job satisfaction (Kilminster, Cottrell, Grant, & Jolly, 2007). However, there are different definitions, modes, and models of clinical supervision, which will be discussed in detail in Chapter 4. The effect of clinical supervision on

various factors, including job satisfaction, will be analysed in more detail in the systematic review in Chapter 5.

3.5 Job Satisfaction Among Nurses in SA

The concept of job satisfaction is essential within the nursing workforce. It is important for nursing administrators to realise nurses' requirements for satisfaction, so that they can maintain improvements in the quality of care that could also lead to improvements in patient satisfaction and nurse retention (Al-Ahmadi, 2009). According to Omer (2005), cultural diversity is a reality for most health organisations in SA; thus, organisations need to adopt effective human resource strategies that aim to improve the commitment and retention of qualified employees, and build a high-performance organisational culture based on empowerment, open communication, and an appreciation of the impact of national culture on work attitudes. Al-Ahmadi's (2002) study examined the level of job satisfaction among 360 Saudi nurses and identified moderate job satisfaction. Several negative and positive factors were related to this finding, including working conditions, job development, recognition, salary, and the technical aspects of supervision.

Similarly, Zaghloul et al. (2008) indicated that Saudi nurses (n=499) were most satisfied with salary, work environment, and promotions, but dissatisfied with the employee evaluation system, bonuses, and the recognition of their achievements. Moreover, 17% of the nurses studied were intending to leave, while more than half of the nurses did not say whether they intended to leave. However, El-Gilany and Al-Wehady (2001) found that more than 92% of female Saudi nurses (n=233) were satisfied with their responsibilities and nursing roles, as well as with their workplace. On the other hand, a lack of job satisfaction in the nursing profession may result in an increased level of job turnover, particularly amongst expatriate nurses, which could aggravate SA's problems with the shortage of nursing staff. Several studies have examined the job satisfaction level among nurses from the perspective of expatriate nurses within primary, secondary, or tertiary care hospitals. They found a number of related variables that increased job dissatisfaction, such as organisational commitment, recruitment and retention barriers, leadership, staff performance, intention to stay, and the work environment (Abo-Znadh & Carty, 1998; Al-Aameri, 2000; Al-Ahmadi, 2009; Al-Dossary et al., 2012; El-Gilany & Al-Wehady, 2001; Mitchell, 2009; Omer,

2005; Zaghloul et al., 2008).

Evidence suggests that, within SA, job satisfaction among nurses in PHC does not differ much from the level of job satisfaction found in hospitals (El-Gilany & Al-Wehady, 2001). Nevertheless, the organisation of PHC services has improved over recent years, as most centres are now reasonably staffed, whilst approximately 90% have records systems, disease registers, and follow-up systems, and 74% have clinics for the management of chronic illnesses (El-Gilany, 2000). However, studies still point to several organisational obstacles including poor information systems, staff turnover, a lack of clinical knowledge, stressful work conditions, the overload of physicians, poor technology, and a shortage of resources (Dashash & Mukhtar, 2003). Furthermore, there is a particular shortage of health educators, as only 8% of centres are adequately staffed for health education (Young & Ward, 2001).

3.6 Summary

This chapter has provided the concept, definition, and theory of job satisfaction within the nursing workforce. The variables related to job satisfaction on a global scale, as well as variables relevant to local nursing workforces in SA, were introduced. Additionally, intrinsic and extrinsic motivations based on Herzberg's motivator-hygiene theory were linked to job satisfaction. Relevant factors were also identified from a variety of studies that link job satisfaction to individual characteristics.

The extrinsic, or hygiene, factors are recognised to be the primary sources of job dissatisfaction, and include salary, workload, and interpersonal relationships; these directly affect nurses' attitudes toward their jobs. The intrinsic factors, called 'motivators', include achievement, responsibility, and professional growth. In comparison, the demographic factors, such as age, gender, qualification, and tenure, can also influence job satisfaction. By contrast, the absence of the intrinsic factors, which are more closely related with the work itself, does not necessarily lead to dissatisfaction among employees, although the presence of these factors could be a motivational force that may help to improve job satisfaction. Conversely, the presence of extrinsic factors, which centre on working conditions, may not necessarily lead to job satisfaction, but their absence could cause dissatisfaction.

It was noted that nurses' job satisfaction has a positive relationship with job-related stress, burnout, and turnover, which are also identified as key reasons for job

dissatisfaction. Moreover, clinical supervision was also considered to be one of the factors that can positively or negatively influence job satisfaction. The next chapter will further define and explore the clinical supervision context within nursing. There will also be a detailed exploration of the hybrid framework and techniques for providing clinical supervision for PHC nurses in Jeddah.

Act

Plan

Chapter 4

Study

Do
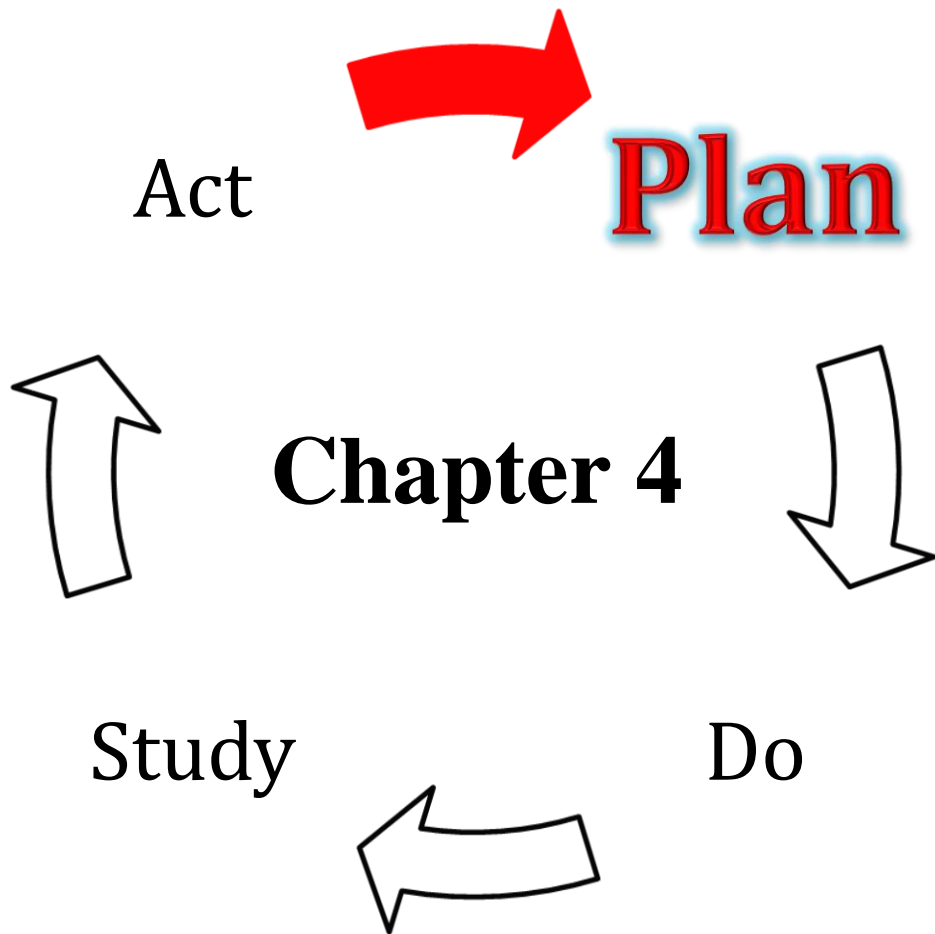
Clinical Supervision
(**Plan** Stage)

4.1 Introduction

The previous chapter explored job satisfaction among nurses, both nationally and internationally, and highlighted the factors that may have a positive or negative influence, including a brief overview of the concept of clinical supervision. Accordingly, this chapter will introduce and critically discuss studies related to clinical supervision within the nursing context and examine its influence on nurses. This chapter also forms part of the PDSA framework's 'Plan' stage and will firstly, illustrate the concept of clinical supervision in contrast to other supportive mechanisms in the clinical learning environment, such as preceptorship and mentorship. Secondly, it will discuss in detail the history and definitions of clinical supervision, after which, the chapter will clarify its role for nurses by exploring its emergence internationally and outlining its purpose. The chapter will also address and clarify the terms 'model' and 'framework' in relation to clinical supervision in this study. Accordingly, certain clinical supervision models will be explored to develop a new hybrid supervision framework suitable for nurses working in PHC in SA. This hybrid framework will then be discussed in more detail in Chapter 8. Finally, the different modes of clinical supervision will be highlighted to support its implementation.

4.2 Models of Supportive Mechanisms for the Clinical Learning Environment

Today, nurses constitute one of the most vital parts of the health organisation, and play a primary role in providing health support and preventive care for patients in PHC settings (Aldossary et al., 2008). Accordingly, nurses need to be kept up-to-date on professional standards and expectations; this can be accomplished by establishing an effective clinical learning environment and through the provision of assistance and support throughout their careers, whether as a student (Cummins, 2009), or a qualified nurse (Teasdale, Brocklehurst, & Thom, 2001). In this regard, some studies (Bégat, Ellefsen, & Severinsson, 2005; Saarikoski & Leino-Kilpi, 2002) have acknowledged this need for professional development as an important aspect of 'supervision'. Thus, supervision could include different forms of strategic support (described in Table 4.1), and manifest in forms such as preceptorship, mentorship, and clinical supervision (Mills et al., 2005). Such approaches have already attracted the attention of researchers, educators and the practice community (Butterworth et al., 2008).

Table 4.1: The similarities and differences between supportive mechanisms
(Source: Bond & Holland, 2011)

	Preceptorship	Mentorship	Clinical Supervision
Definition	Preceptorship is a relationship in which an experienced nurse assists nursing students or newly graduated nurses (McCarty & Higgins, 2003) to develop their practice via facilitating their transition from a theoretical into a practicing nursing role (Mills et al., 2005).	Mentorship is a relationship in which an experienced nurse guides and counsels a qualified nurse, by assisting in their personal career progression, development and academic achievement to address their problems (Mills et al., 2005).	Clinical supervision is a relationship in which an experienced nurse provides professional support, guidance and advanced clinical practice for qualified nurses through reflective practice, to enable them to provide high quality care (Cummins, 2009).
Utilisation	Mainly utilised in the clinical domain	Utilised in all professional nursing areas, especially in the academic arena.	Utilised in all areas of the nursing profession.
Supervisee	Student nurse, newly graduated nurses	Newly qualified nurse or experienced qualified nurse entering a new field.	Any qualified nurse
Period of time	During the first 6-12 months of clinical practice.	Throughout training, especially in a practical placement	Throughout the entire career
Setting	Can only undertake within the work setting and within working hours.	Undertake within the working setting but can be taken both with work and non-work hours.	Preferably undertaken away from working setting but can also be taken within the working setting.
Assessment Function	Preceptor may report to the supervisee's manager.	Mentor often has a part to play in the assessment of practical work	No assessment function; clinical supervisor does not report to anyone unless there is evidence of unsafe or unethical practice.
Size of Group	Facilitated in large groups	Facilitated in large groups	Facilitated in small groups

Nursing literature first addressed the concept of preceptorship in the mid-1970s to address transition difficulties among newly qualified nurses (Firtko, Stewart, & Knox, 2005). According to Lennox et al. (2008), preceptorship in nursing is conducted within a hospital setting and establishes a short-term commitment for specific purposes between the preceptor and a newly qualified nurse (preceptee). However, a preceptor is an individual who serves as a role model and support figure for nurses, and is responsible for teaching and advising in the workplace (Baxter, 2007). Similarly, McCarty and Higgins (2003) state that preceptorship is a reflective approach that supports newly graduated nurses in their transition from theory to practice in the work environment. The reflective approach in preceptorship refers to the first year of

practice, or newly engaged staff, who need to be supported by an allocated preceptor to develop the clinical knowledge and skills required to achieve the transition into a new clinical environment (Lennox et al., 2008). Thus, a preceptorship develops nurses' confidence in their practice by assisting students to become well prepared for, and to engage in, their new nursing role (Corlett, Palfreyman, Staines, & Marr, 2003; Cummins, 2009).

In comparison, the term mentorship has been described as a type of personal development and career progression that forms a relationship between an experienced professional and a novice in the same field, where the experienced professional has committed to providing guidance and career advice to the novice that goes beyond academic achievement (Butterworth, 1992). Pellatt (1984) suggested that a mentorship approach to nursing was applied by Florence Nightingale in late 1854, who was recognised for her pioneering work in nursing. At the time, Nightingale worked to transform nursing into an educated profession (Malpas, 2006); thus, she played a vital role in nurse mentorship. In this capacity, she trained 38 nurses during the Crimean war, teaching them how to control fever, diarrhoea, and infectious diseases, such as malaria and cholera, by guiding them to keep patients well-fed, warm, and clean (Gill & Gill, 2005). Nightingale's spirit of teaching individuals and groups to advance their knowledge has supported both the development of nursing education and the profession in general.

Nevertheless, Cummins (2009) states that, although mentorship in its current form appeared in the 1980s as a general orientation toward learning in a clinical environment, it was not fully embraced until the 1990s. Since that time, the mentor has become an experienced and professional supportive individual, who listens to, develops, and supports learning in the mentee. Understanding the mentee's needs is essential for success in this relationship; however, according to Anforth (1992), it is difficult to choose an appropriate individual to support mentees' interests. Nevertheless, it is argued that mentorship became attractive to nurses due to its focus on the learner's need and its aim to built confidence rather than assess competence (Lennox et al., 2008).

Clinical supervision is another strategic support, which also appeared during the 1990s (in the same decade as mentorship). Similar to a preceptorship, clinical supervision is a reflective practice that provides professional support and guidance for nurses (Mills

et al., 2005). Clinical supervision is also similar to mentoring, as both relationships depend on the development of a strong sense of exchange and responsibility, and they both proceed over an extended period of time. Crucially, clinical supervision sessions differ from mentoring in that clinical supervision sessions are preferably held away from the work setting and may be facilitated in small groups (Mills et al., 2005). Furthermore, clinical supervision is different from a preceptorship in that it enables the supervisees' to select their supervisor; furthermore, Butterworth (1992) and Butterworth and Faugier (2013) argue that it is much broader and more generous in its intentions. Thus, clinical supervision has always been denoted as a kind of umbrella for other existing support models (Hyrkäs, Koivula, & Paunonen, 1999), and will be discussed in more detail in the next section, as a supportive mechanism within the practice of nursing.

4.3 History and Concept of Clinical Supervision

Whilst several studies have highlighted the processes of different support mechanisms, particularly mentorship and preceptorship, there is also a persistent view that clinical supervision is widespread and has become an essential part of nursing practice as it is now applied in different nursing domains (Lindgren, Brulin, Holmlund, & Athlin, 2005). During the 1990s, there were strong expectations that supervision would enhance the transition of theory to practice and that qualified nurses would benefit from utilising a formal structure of supervision (Smith & Russell, 1991) that would support them in clinical settings and help them become more advanced or independent practitioners (Butterworth, Bishop, & Carson, 1996). In addition, due to increased pressure on nurses in healthcare organisations globally, some authors identified the need for more accessible support mechanisms and proposed the implementation of clinical supervision (Lyth, 2000). Clinical supervision first appeared in the UK as an essential aspect of professional practice in the 20th Century, when the United Kingdom Central Council (UKCC) for Nursing, Midwifery, and Health Visiting (1996) emphasised and developed a policy related to the potential for innovation in nursing.

Nevertheless, clinical supervision is not a new notion for health professionals; it has been used as a means of delivering professional support and learning in a variety of professional settings, including mental health (Sloan, 2006), midwifery (Thomas, 2005), social work (Morton-Cooper & Palmer, 2000), and psychotherapy (Hawkins &

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Shohet, 2000). However, clinical supervision was conducted according to each setting's particular established bodies of theory and practice (Powell & Brodsky, 2004). For instance, clinical supervision was first introduced in the field of psychotherapy, counselling (Hawkins & Shohet, 2000), and social work (Brown & Bourne, 1995) as a response to the insufficient time that mental healthcare workers had to develop in-depth relationships with clients and carry out traditional casework; due to these challenges, practitioners experienced increased stress and struggled with the complexity of the work. From this basis, the trend expanded toward different professional fields in health organisations until the end of 1980s (Hyrkäs, Appelqvist-Schmidlechner, & Haataja, 2006). These fields included nursing, psychology, psychiatry, and general practice education, where the aim was not only to improve the quality of the actual service provided (Cruz, 2011), but also to improve job satisfaction (Hyrkäs et al., 2006), the morale and well-being of the workforce responsible for delivering the services. Different definitions of clinical supervision are thus based on each profession and will be illustrated in the next section.

4.3.1 Definitions of clinical supervision

Clinical supervision has been presented and practiced in many dimensions within clinical setting, depending on the policy guiding its practice in a particular location. Whilst there is considerable literature on clinical supervision related to many healthcare professions (see Table 4.2), there is little specifically related to nursing. Thus, several studies were conducted to identify clinical supervision practices in nursing after 1990, and these studies concluded that it is a valuable and complete form of support that focuses on the work itself (Berg, Hansson, & Hallberg, 1994; Berggren & Severinsson, 2000; Butterworth, 1992; Butterworth et al., 1996; Fowler, 1996a; Saarikoski & Leino-Kilpi, 2002; Teasdale et al., 2001; Titchen & Binnie, 1995).

Table 4.2: Varying definitions of clinical supervision in different professions

Profession	Author/Year	Definitions of CS
Social Work	(Brown & Bourne, 1995, p. 9)	*"Clinical supervision is the primary means by which an agency designated supervisor enables staff, individually, and collectively; and ensures standards of practice."*
Counselling and Psychotherapy	(Hawkins et al., 2012, p. 60)	*"Clinical supervision is a joint endeavour in which a practitioner with the help a supervisor, attends to their clients, themselves as part of their practitioner relationships and the wider systematic context."*
Midwifery	(Ralston, 2005)	Supervision is an ideal reflective learning system through which a midwife can gain experience and learn from the day-to-day incidents encountered. It is more advanced than a controlling and punitive process and a more supportive and partnering relationship, which empowers midwives.
Mental health	(Scaife, 2001)	Supervision is part of the overall training of mental health professionals that deals with modifying their actual in-therapy behaviour.
Some nursing specialties	(Butterworth & Faugier, 2013)	Clinical supervision is an exchange between practicing professionals to enable the development of professional skills.

A number of key developments occurred to influence the adoption of clinical supervision in the UK. In 1992, Tony Butterworth, Emeritus Professor of Community Nursing at the University of Lincoln in the UK, who became a qualified mental health nurse in 1965 (Yegdich & Cushing, 1998), argued that some formal support mechanisms should be implemented for nurses. Moreover, in 1993, the DOH for England and Wales issued the policy document 'A Vision for the Future', which highlighted aspects of safe consumer care and acknowledged the importance of professional support and learning (Williamson & Dodds, 1999). Furthermore, in 1996, the UKCC set out its initial position on clinical supervision and published definitive guidance for nursing and health visiting professions (Kleiser & Cox, 2008). Other professions' use of clinical supervision, such as psychotherapy, later influenced its application in nursing practice, where the aim was to improve nursing performances and models of supervision (Hawkins et al., 2012; Hawkins & Shohet, 2000).

Nevertheless, between 1992 and 1999, various definitions of clinical supervision existed in nursing literature, although, the most appropriate still remains uncertain (Lyth, 2000). Academics and clinicians have redefined the term 'clinical supervision' to meet many professional and educational aims, which have also been added to the congested meanings of the term (Buus & Gonge, 2009). However, some definitions of clinical supervision will be presented from relevant literature to establish a suitable

definition for the PHC setting in SA. For example, White and Roche (2006, p. 214) assert that clinical supervision is;

> *"... a process that seeks to create an environment in which participants have an opportunity to evaluate, reflect and develop their own clinical practice and provide a support system for one another"*

Furthermore, Cummins (2009) agreed this definition, which he considered appropriate for the context of his study concerning the 'transition period of the newly graduate nurses' which addressed the problems of recruitment and retention in the context of transition. Johns and Butcher (1993) identified clinical supervision as a sharing of experience between practitioners through reflective practice. This definition was supported by Williamson and Dodds (1999) who asserted that this concept is the most effective tool for professional learning and development; Bond and Holland (2011) describe clinical supervision as routine, protected time meant to enable in-depth reflection on practice. Similarly, Bishop (2007) states that clinical supervision is intended for individual empowerment and stresses the need for professional development. In particular, during clinical supervision, nurses employ the processes of reflection to identify and meet their needs for professional development (Brunero & Stein-Parbury, 2008).

Although many authors have sought to explain clinical supervision, two definitions (Butterworth, 1992; Fowler, 1996a) are appropriate for the processes in my chosen workplace in PHC in Jeddah. Butterworth (1992) described clinical supervision as a discussion between practising professionals that empowers individuals to develop their professional skills, whilst Fowler (1996a) later defined it as a professional support and learning process for nurses that enables them to develop their practice by spending regular time in discussion with experienced and knowledgeable colleagues. These two definitions cover the three core functions essential for success in any improvement process for nurses: leadership support, development of practice through learning and education, and reflection between two or more people through discussions about professional issues.

Perhaps the reason for the variation in the definitions is due to the historical establishment of clinical supervision in psychiatric nursing within the latter half of the 20th Century. At this time, numerous new ideas regarding practice and education were

united within inherited institutional practices (Kelly, Long, & McKenna, 2001) in the wake of nurses' increased professional autonomy (Butterworth, 1992), and with widespread and growing concern for the strain associated with interacting with individuals who are mentally distressed. Thus, the growing practice of clinical supervision in psychiatric nursing remodelled the standard dominant practices of 'super-vision' (Deery, 2003), and subsumed many new institutional and professional problems; therefore, reflection, education, and the re-creation of ideas lead to increases in knowledge and improved performances. Based on the above characterisations, a more comprehensive definition within the context of the PHC sector in SA is required (see section 8.2.2).

During the 1980s and 1990s, clinical supervision was a common approach, particularly in the UK, with most nurses applying 'Proctor's Model' (further described in section 4.8.1). This was a period when health service providers were responsible for ensuring that clinical supervision was available to individual practitioners. After the 1990s, clinical supervision was simply recommended rather than mandated as a component of practice in the UK (Edwards et al., 2006). However, it has been highlighted as a possible strategy to complement and enhance existing support models, such as preceptorship or mentorship, and to address the present challenges of recruitment and retention of graduate nurses within the current healthcare system (Cummins, 2009). Currently, supervision is already an essential part of clinical practice, and, in some settings, it is utilised as a standard accreditation requirement. However, it is not surprising that much of the current (and mainly UK-based) literature regarding the development of clinical supervision has been based on professional regulations where supervision has already become an integral part of clinical practice and often a mandatory accreditation requirement (Driscoll, 2007). However, this is not the case in Saudi Arabia, the context of the study, where clinical supervision is not a mandated activity.

4.4 The International Emergence of Clinical Supervision

Early accounts of clinical supervision and its advantages for nursing initially appeared in nursing literature 31 years ago (Butterworth et al., 1996). Since then, clinical supervision has become increasingly popular as the main supportive mechanism for nurses. Despite this growth, most of these studies do not share a common understanding of the factors and framework needed for successful clinical supervision, which could

therefore create ambiguity for nurses. Nevertheless, the concept and goal of clinical supervision is similar to nursing practice.

A significant amount of the literature concerning clinical supervision in nursing originates from the UK. In the UK in the 1990s, clinical supervision was endorsed by the DOH alongside many nursing academics and nursing professional bodies who recommended it as an integral part of practice for all nurses (Davey et al., 2006). The impetus for engaging in clinical supervision was due to the increased emphasis on professional accountability and educational reforms for nursing in the UK (Baxter, 2007). As a result, clinical supervision in the UK (as in the Scandinavian countries, Sweden, Norway, and Denmark) is generally defined as a supportive exchange of knowledge and experience between one or more clinical professionals which empowers them to develop their professional skills (Butterworth, 1992; Cutcliffe, Butterworth, & Proctor, 2001; Teasdale et al., 2001).

Similarly, literature originating in Finland identifies clinical supervision as the systematic actions after vocational education that are aimed at developing practitioners' professional knowledge and skills, as well as supporting their professional practice (Hyrkäs & Paunonen-Ilmonen, 2001). In Finland, the history of clinical supervision has extended over six decades (Koivu, 2013), beginning in the late 1950s with trained psychoanalysts describing the first clinical supervision experiments. By the 1960s, healthcare professionals and psychiatric hospitals widely used clinical supervision, and different kinds of trials were carried out in the 1970s, such as the Balint groups for health centre physicians (Paunonen & Hyrkäs, 2001). During the 1980s, clinical supervision was implemented throughout the entire healthcare field (Koivu, 2013; Paunonen & Hyrkäs, 2001).

Conversely, in Australia, the trend toward clinical supervision for nurses has been slow to gain momentum and recognition (Mills et al., 2005). A possible reason for this may be the 1997 recommendation by the Australian Health Ministers' Advisory Council for formal and informal clinical supervision for mental health nurses only (Winstanley & White, 2003). In contrast, clinical supervision literature in Canada and New Zealand is written with an orientation to the supervision of nursing students during their period of clinical placement (Mills et al., 2005). Moreover, in the USA, the term clinical

supervision is broadly used to indicate support and guidance for nursing students prior to professional registration (Cummins, 2009).

4.5 The Purpose of Clinical Supervision

According to Brunero and Stein-Parbury (2008) the main purpose of clinical supervision is to improve practice so that it enables nurses to discuss and provide feedback to their supervisors in an effort to increase their understanding of clinical issues. Brunero and Stein-Parbury (2008) also argue that clinical supervision allows nurses to discuss patient care in a supportive environment and should therefore be focused on the nurse-patient interaction. The primary foundation of clinical supervision is reflection, which addresses areas for further improvement and deepens understanding through the opportunity to consider clinical experiences. Several definitions of reflection can be found, such as that by Boud, Keogh, and Wlaker (1985, p. 43) who define it as:

> *"An important human activity in which people recapture their experience, think about it, mull over and evaluate it. It is this working with experience that is important in learning."*

Similarly, Moon (2004) states that reflection is a form of thinking that is used to achieve predicted outcomes. The reflection process is applied to complicated situations or ideas that need a solution through the further processing of knowledge. These definitions emphasise the purposeful critical analysis of knowledge and experience, to achieve deeper understanding (Mann, Gordon, & MacLeod, 2009). Thus, reflection in clinical supervision is a process of critically reviewing an incident or ideas in order to change, adapt or learn. Kilminster and Jolly (2000, p. 831) argue that;

> *"... reflection has a central place in supervision in order to examine any experience to identify its essential features."*

However, in some cases a total dependence on reflection in clinical supervision may not be appropriate; for example, novice supervisees tend to need more direction in balance with reflection (Fowler & Chevannes, 1998). Reflection is mainly relevant to professional development in a practice-based discipline, such as nursing. Hence, nursing knowledge is the most important element in experience, and learning through experience is important to the practice of professional nursing. In this sense, clinical supervision serves a peer-educative function (Brunero & Stein-Parbury, 2008).

Clinical supervision provides nurses with an opportunity to consider, reflect, evaluate, learn and improve upon patient care issues and to develop consistent approaches toward patients and their families. Moreover, some empirical studies related to nursing highlight clinical supervision as a delivery system for high-quality nursing care as well as a positive influence on patient safety (Bartle, 2000; Davey et al., 2006; Edwards et al., 2005). According to Butterworth et al. (2008), clinical supervision provides an opportunity for nurses to display active support for each other as professional colleagues. By sharing and seeking to understand one another's experiences, they come to realise that they are 'not alone' in their feelings and perceptions, which provides reassurance and validation (Brunero & Stein-Parbury, 2008). In addition, Wood (2004) and Marrow et al. (2002) have argued that clinical supervision enables nurses to better manage the changing nature of healthcare delivery, which involves the increased emphasis on clinical governance, a movement toward community-based care (Magnusson, Lutzen, & Severinsson, 2002), and the decentralisation of decision-making (Hyrkäs, Koivula, Lehti, & Paunonen-Ilmonen, 2003). Furthermore, in documentary evidence, the Royal College of Nursing [RCN] (2003) indicates that clinical supervision is crucial for the framework of clinical governance in order to improve professional development. Consequently, Butterworth et al. (1996) and Cummins (2009) assert that the nurses who have engaged in clinical supervision have increased feelings of support and personal well-being.

4.6 The Debate Between the Term Model and Framework of Clinical Supervision

A variety of formats have been used to deliver clinical supervision and, often, the more engaging strategies have been informed by previous research. Once an organisation has decided to train staff for a supervisory role and engage in clinical supervision, implementation is often a lengthy process (White & Roche, 2006). However, to reduce any confusion, it is necessary to clarify the meanings of the common terms, 'model' and 'framework', which are used to address the clinical supervision styles, before exploring the different ways that organisations approach clinical supervision. Most studies related to clinical supervision use the term 'model' whilst the reminder use the term 'framework'. However, both terms reflect the same concepts (Fowler, 1996b; Kilminster et al., 2007; Kilminster & Jolly, 2000; Milne, Aylott, Fitzpatrick, & Ellis, 2008). According to Ballon and Waller-Vintar (2008) both terms indicate the provision of principles to guide the clinical supervision approach through its various stages.

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Nevertheless, Stanovich (1988) states that the term 'model' provides a way to conceptualise the approach, and is defined as a descriptive tool that can help the individual to understand their thinking about how things are potentially interrelated. Accordingly, Freeman (2006) uses the term 'model' to refer to the ways in which theory and philosophy inform the work. While, the term 'framework' is used to guide the individual and show how to build the structure and components that might be needed to accomplish the whole processes (Ziemba, 2015). Ziemba, who is the Professor of Management at the Institute of Business Information Systems in the University of Katowice, defined the term 'model' as it tends to be more prescriptive, specific and with a narrow scope, such as a tool. Ziemba defined the term 'framework' as a description, showing relevant concepts and how they relate to each other.

Thus, I have found that the term 'framework' is more comprehensive and applicable to the new clinical supervision method that I developed for this study. This will be discussed in section 8.3.1.2 and, due to its structure, classified as a 'hybrid supervision framework'. Moreover, the term framework considers the relationship between each contributing stage. However, to reduce the confusion for the reader, the term 'model' will be used for the different clinical supervision methods, as cited under section 4.8.

4.7 Overview of Clinical Supervision Models

According to Fowler (1996a) in 1996, clinical supervision was likely to become an important part of practice, and, thus, the nursing profession needed to establish a comprehensive concept of the important elements of clinical supervision and develop appropriate models for its implementation. Similarly, Kilminster and Jolly (2000, p. 829) stated that;

> *"Counselling, psychotherapy, social work, and nursing sources contain most discussion of models and theoretical approaches to supervision, however the content and style of supervision will be affected by whatever model is adopted."*

Despite this, there have been a number of clinical supervision models described in the nursing literature (Fowler, 1996a; Kilminster & Jolly, 2000; Severinsson & Kamaker, 1999; Sloan & Watson, 2002). Several authors examined their effectiveness in practice (Bowles & Young, 1999; Jones, 1998; Rogers & Topping-Morris, 1997; Uys, Minnaar, Simpson, & Reid, 2005), and identified the fundamental qualities that were common to each model and necessary for effective practice. Accordingly, there was no conclusive

evidence that a particular model was better than the others as each model, whether adopted (Bowles & Young, 1999) or developed (Rogers & Topping-Morris, 1997), depended on the practice context or participants' needs. Although most of these models demonstrated their effectiveness in developing practice, they required more attention, including the introduction of measures of effectiveness in supervision training.

A supervision model is a theoretical structure that can assist in the delivery of clinical supervision. This structure can highlight important steps of the supervisory process, significant functions of supervision, responsibilities for both supervisor and supervisee, and suggestions for areas that may need attention (Sloan & Watson, 2002). To underpin the models, several used the theoretical base of learning and teaching pedagogy, whilst others used the theoretical base of psychotherapy (Deery, 2003, 2005). This created a confusing picture when I was developing a suitable framework for this study. However, most of the definitions related to clinical supervision commonly depict the dynamic nature of the interaction between the supervisor and the supervisee. Later studies further developed the clinical supervision framework by adding their preferred environmental characteristics, such as support, location and safety (Butterworth et al., 1997; Butterworth et al., 1999), whilst other studies connected clinical supervision to reflective practice for continuing professional development (Rolfe, 1990; RCN, 2003). According to Sloan (1999) all clinical supervision definitions seemed to embed the development of professional knowledge, skills, and support. However, Gilmore (2001) argued that models of clinical supervision primarily considered quality assurance and an educational and supportive function. According to Fowler (1996a, p. 385);

> *"… there is no one specific model of clinical supervision that will suit the needs of the great variety of clinical situations, as an attempt to impose one model that works well in one area on a different area has many disadvantages."*

Every field or professional has their own personal model, or developed framework, or reflective model, which are designs, ideas, and concepts that are utilised to help and guide the employee to learn. Nevertheless, a common understanding is that, as people become more knowledgeable within their profession, they can adapt to workplace challenges by being flexible and creative.
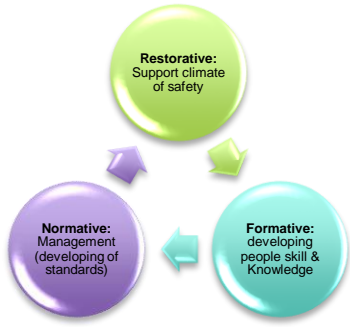
4.8 The Development of the Hybrid Supervision Framework

The main goal of the Scientific Nursing Board (SNB) formed by the Saudi Committee for Health Speciality [SCFHS] in 2002 (Miller-Rosser et al. 2006) was professional development which focused on nursing practice, setting nursing standards, strengthening the supervisory approach, and supporting nursing research. It also aimed to facilitate the development of PHC services by improving staff knowledge and skills, and raising the quality of healthcare services (Almalki et al., 2011a). Thus, a new hybrid framework was established for this study, that included certain clinical supervision models, namely the interactive model (Proctor, 1987), the practice-centred six-stage model (Nicklin, 1997), and problem-orientated supervision (Rogers & Topping-Morris, 1997) (Table 4.3). These have been chosen as starting points to determine the most appropriate design for adoption in the hybrid framework and for implementation in a PHC context. However, these three clinical supervision models have previously been established and modified based on different nurses' needs.

The rationale for the models chosen for the hybrid framework is as follows:
- Appropriate general ideas in these models regarding the supervisor and supervisees,
- Ease of understanding;
- Suits the context and supports a problem-solving design;
- Seems more familiar to PHC nurses in the Jeddah city;
- Most commonly used in studies;
- Ease of implementation, and;
- Focus on a quality improvement method (PDSA).

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Table 4.3: Clinical supervision models (Source: Deery, 2003)

Model	Features	Comments
Interactive model, Proctor (1987) UK	Three interactive functions	Hybrid 1
Problem-oriented supervision (Rogers& Topping-Morris, 1997)	Addresses two main areas: 1. Problems the supervisee is having with the nurse-client relationship; and 2. Organisational difficulties. The main tools used are problem-oriented strategies, such as defining the problem and brainstorming solutions.	Hybrid 2
Practice-centred, six-stage (Nicklin, 1997) UK	1. Objective practice analysis 2. Problem identification 3. Setting 4. Planning 5. Implementation 6. Evaluation	Hybrid 3

Farrington (1995) states that, clinical supervision grows the supervisor's competence and experiences, as it is expected to help the supervisor and supervisee develop their own ways of working and personal models. The three clinical supervision models cited above have been the most addressed and employed in practice in the past, whilst each of these will be expounded below in more detail. Some of these chosen clinical supervision models are commonly and currently used in nursing, such as that by Proctor (1987), whilst the other two might be less common. However, this study develops the criteria to establish a hybrid framework that will be utilised for an emerging clinical supervision programme in PHC centres. It will achieve this by integrating the above three clinical supervision models into the problem-solving strategy in terms of FOCUS-PDSA.

4.8.1 Interactive model, (Proctor, 1987)

Proctor (1987) proposed a three-function interactive model that is broadly accepted and generally found to be a beneficial way of delivering supervision within nursing (Bowles & Young, 1999; Lyth, 2000). This interactive model focuses on organisation, continuous learning and self-care (Butterworth et al., 1996). The Proctor model has

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become one of the most widely implemented and comprehensive supervision models throughout continental Europe and the UK, which is largely due to its validity. This model consists of three functions (White & Roche, 2006); firstly, the normative function focuses on the responsibilities of management to promote organisational policies and procedures, to contribute to a clinical audit, and develop standards. Secondly, the formative function focuses on educational and learning, with the intent of developing people's skills and knowledge through evidence-base practice. Lastly, the restorative function focuses on support, which enables staff to understand the safety environment and manage the emotional stress of their practice.

According to Kleiser and Cox (2008), the *normative function* is concerned with the organisational aspects of maintaining standards of practice and quality control. The supervisor ensures that the needs of the supervisees are met within a clearly outlined framework of professional and ethical practice by giving advice designed to promote high-quality care and to reduce risk (Teasdale et al., 2001). In particular, the normative aspect of clinical supervision enables consistency in the approach to patient care, in that it follows 'norms' or standards of practice, as well as improving staff morale and organisational effectiveness (Brunero & Stein-Parbury, 2008). National guidelines for quality assurance in SA were established in 1993 (Albejaidi, 2010), which covered the aforementioned nine main elements of the PHC organisation (Al-Ahmadi & Roland, 2005). In spite of these guidelines, nurses still suffer from a lack of satisfaction with their work, which can lead to patient dissatisfaction with the provided service (Al Juhani & Kishk, 2006; Almalki et al., 2012).

Furthermore, in 1995, the Supporting Supervision Program was launched in the UK to prepare key individuals (e.g., regional supervisors) to participate in quality improvement efforts in PHC. In addition, new approaches to staff training and other quality improvement measures were also implemented. In this way, the normative function built a sense of supervision and control that provided guidance toward bureaucratic goals (Lipsky, 2010).

In comparison, the *formative function* in Proctor's model is an educational activity (Brunero & Stein-Parbury, 2008) that addresses the educational and professional development needs of the supervisee (Kleiser & Cox, 2008). Teasdale et al. (2001) state that this function is concerned with helping nurses to update their knowledge base and

to develop their skills. It would most likely be accomplished through exploration and reflection on the supervisee's work with patients. Nursing education was developed and provided through the MOH in SA (Aldossary et al., 2008; Miller-Rosser et al., 2006) although today, the majority of nurses working in PHC sectors hold diplomas or degrees showing their nursing qualifications (Abu-Zinadah, 2006; Al-Madani, 2015). Whether they graduated from health institutes or junior colleges, a few will have earned a Bachelor of Science in Nursing, with a small number of nurses holding a Master of Science in Nursing (Aldossary et al., 2008).

In 2006, Abu-Zinadah (2006) found that 97% of Saudi nurses in PHC held diplomas in nursing, 3% held a bachelor's degree, whilst $n = 28$ held a master's degree, and $n = 7$ held doctorates. Based on the 2015 Nursing Statistical Data sheet concerning PHC organisations in the Jeddah city, the number of nurses holding diplomas was 983 whilst 45 nurses held bachelor's degrees, and three held masters' degrees. In this regard, PHC nurses could be able to promote reflection as a formative function, whilst the supervisee, and specially the supervisor, needs to develop their professional capacities by using research and implementing evidence-based elements into their practice; this leads to efforts to generate knowledge and advance nursing science.

The *restorative function* of this model refers to the provision of personal support that enables the supervisee to cope better with the pressures of their work (Teasdale et al., 2001), and to debrief after critical incidents (Deery, 2005). The restorative function permits intimate therapeutic work and promotes support for supervisees through peer feedback (Brunero & Stein-Parbury, 2008). However, the culture of the health organisation where nurses work is believed to have less importance on the quality of relationships between nursing staff than their dealings with the administrative dimensions of their work (Lipsky, 2010).

Although these three functions are presented separately, they are interconnected and overlap in practice (Brunero & Stein-Parbury, 2008). Hence, I perceived and realised one important aspect of these functions, namely that the selected, or allocated, supervisor for PHC nurses needs to be sufficiently knowledgeable about the quality control system to be able to address all three functions properly and effectively. This is particularly important with the normative function, which includes the maintenance of service standards (Kleiser & Cox, 2008).

However, it is argued that the credibility of any research using Proctor's model is in doubt, and this owes to the degree of unavoidable overlap between these three functions (Fowler & Chevannes, 1998) (see Figure 4-1). Butterworth et al. (1997) suggest that Proctor's model is commonly accepted within nursing. However, it does not mirror the current climate of change within the PHC system, and I have found that this model seems rather idealistic. Nevertheless, it identifies the three main functions for professional development, including support, quality assessment, and learning, and it also provides the supervisor with a structure on which to plan the purpose of clinical supervision (Fowler, 1996a).
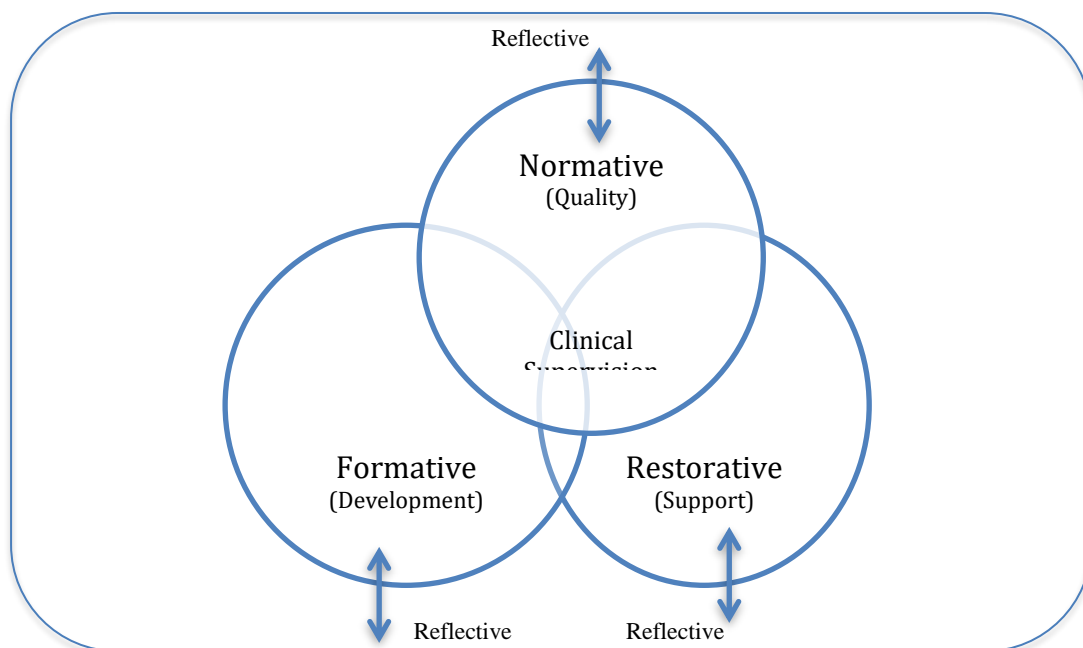
Figure 4-1: Reflective practice and clinical supervision

4.8.2 Practice-centred, six-stage (Nicklin, 1997)

This model has been developed with regard to the nursing profession in the UK. The practice-centred, six stage model is adapted from Proctor's supervision model, and is additionally divided into managerial, educational and supportive aspects (Sloan, 1999). The managerial aspects, which are similar to the normative function in Proctor's model, includes quality assurance and clinical standards, whilst the educational aspects, like Proctor's formative function, address issues, such as learning and professional development. Furthermore, 'individual personal services' address the element of emotional support. Prior to engaging in this clinical supervision cycle, problem situations need to be explored, including, for instance, challenging working

relationships or inappropriate workload management. This approach follows similar steps utilised in the problem-solving strategy tool (FOCUS-PDSA). In the first stage of this cycle, certain difficulties may be encountered with group dynamics when nurses are asked to reflect on their relationships with their colleagues, which requires them to brainstorm supportive skills, which they may not have much practice with.

Once this first stage has been addressed, the problem areas and objectives will have been clarified. The objectives, which verify the obligations of the organisation, expectations, patients, and the professional individual (Nicklin, 1997), will be formed. However, it is common for values held by entry-level workers to clash with the values of the organisation (Lipsky, 2010). Despite this conflict, the difficulties of implementing a realistic and agreed action plan for nurses, and an evaluation of the outcomes due to a clash of values between staff, managers, and the organisation should not deter management from implementing aspects of this model to improve the quality of care. Thus, I was interested in integrating this model into the hybrid framework of clinical supervision for PHC nurses.

4.8.3 Problem-orientated supervision (Rogers & Topping-Morris, 1997)

This problem-orientated supervision model proposed by Rogers & Topping-Morris (1997), would have encountered the same difficulties as the six-stage supervision model (Nicklin, 1997). This model also follows some similar steps as the problem-solving strategy tool; however, the developing and using process of the hybrid supervision framework will be discussed in section 8.3.1.2. This model requires focusing, a definition of the problem, and a brainstorming technique should be applied with a qualified team, before the other steps of this method are tracked and fulfilled. Therefore, this model was also merged to develop the hybrid framework of clinical supervision for PHC nurses.

4.9 Modes/Techniques of Clinical Supervision

Freeman (2006) uses the term 'mode' to refer to the particular practice of the clinical supervision process itself. Thus, I have used the term 'mode' for this section, as it seems suitable to address the practical operationalisation of the process of clinical supervision. The supervisor and supervisees are matched, either by assignment or by choice. Several authors described the various modes of clinical supervision, which range from one-to-one/individual supervision to group or peer supervision (McSherry, Kell, & Pearce,

2002; Winstanley & White, 2003) (see Table 4.4). Individual supervision is private, between one supervisor and one supervisee (Rolfe, Freshwater, & Jasper, 2001), whilst a group session involves one supervisor who leads sessions with a number of supervisees (Hawkins & Shohet, 2000). Alternatively, peer supervision is usually undertaken by a group of supervisees without a facilitator (Bond & Holland, 2011).

Table 4.4: Clinical supervision modes

Modes (Techniques)	One-to-one	Group session	Peer session
How	• One supervisor assigned or selected by one supervisee	• One supervisor assigned or selected by several supervisees together	• Group of supervisees without a facilitator
Advantages	• Preferred for supervisees who are just starting to undertake clinical supervision. • Preferred for those who find working in groups threatening. • Gives each supervisee more time and attention. • Provides the opportunity for the supervisor and supervisee to develop continuity and intimacy within their relationship, which may then enhance the professional development of the supervisee.	• Attractive alternative to individual supervision if there is insufficient time, a lack of resources, or a shortage of supervisors. • Provides an opportunity to explore and learn more about group dynamics and group processes.	• Encourages reciprocity amongst equals through collaboration.
Disadvantages	• Less experienced practitioners may feel that they do not have enough experience upon which to draw in clinical supervision and may find this mode threatening.	• Less likely to mirror the individual work of the participants and how they engage with their clients. • Preoccupation with group dynamics and less time allocated to each member of the group.	• Members of the group may be unaware of some of the group dynamics that are at play. • Supervisees may be restricted by a lack of facilitation skills.

Individual Supervision (IS); is the most common mode, and it may also be helpful for participants who need more attention, who have a shy personality, or who have already taken part in clinical supervision. Butterworth et al. (2008) recommended that the IS mode offered the greatest potential for professional development. In comparison, Group Supervision (GS) is the most popular approach for clinical supervision, and is known as a form of 'learning from each other' (Driscoll, 2007). Driscoll (2007) argued that, although the GS mode followed developmental stages by sharing learning methods between the members, it could be more complicated than IS if the group dynamics were not considered. Finally, Peer Supervision (PS) fosters confidence and is suitable for

staff experienced in clinical supervision; this mode may include a group of multi-disciplinary professionals. The role of the supervisor in this group may be rotational, with the participants offering mutual support by way of sharing the responsibility for the sessions rather than simply receiving information from one supervisor (Agnew, Vaught, Getz, & Fortune, 2000). However, Waskett (2010) found that if one-to-one supervision is the mode of choice of supervisees, then approximately 17% of the eligible staff need to be trained; in contrast, if group supervision is specified, only 4% need to be trained. Moreover, the dedicated time sessions can vary from 15 minutes to 2 hours and can be held within or away from the workplace. A contract agreement, which normally remains confidential, regarding the timing and content of the sessions is often established and signed by supervisor and supervisee (White & Roche, 2006).

4.10 Summary

This chapter provided an overview and history of clinical supervision within the practice of nursing. The range of definitions from different countries have been discussed in detail, and demonstrate that clinical supervision includes the exchange of support, the improvement of knowledge and skills, and the provision of guidance for nursing students. The chapter also outlined the three different modes of clinical supervision, including individual, group, and peer supervision, and described the ways in which supervisor and supervisees are matched. Furthermore, three clinical supervision frameworks e.g. the interactive (Proctor, 1987), practice-centred six-stage (Nicklin, 1997), and problem-orientated supervision models (Rogers & Topping-Morris, 1997), have been adopted for this study to establish a new clinical supervision hybrid framework, which suits PHC nurses in SA. The three selected clinical supervision frameworks have been integrated under the quality improvement framework of FOCUS-PDSA, which is considered a problem solving strategy tool. This hybrid supervision framework will be discussed in more detail in Chapter 8. The next chapter will outline the first research objective through discussing the systematic review that shows the influence and impact of clinical supervision on nurses' job satisfaction and on other outcomes, such as job-related burnout and stress.

Plan stage

Act

Plan

Chapter 5

Study

Do
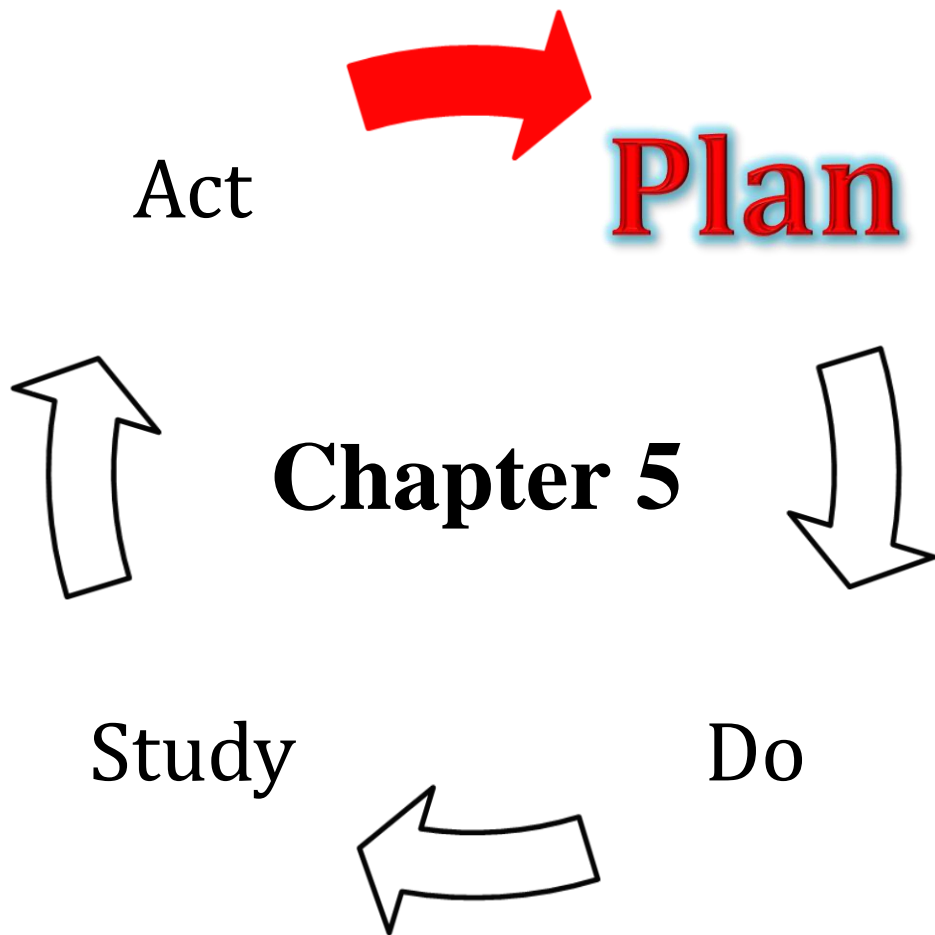
Systematic Review of Clinical Supervision Effect on Job Satisfaction and Other Outcomes (Plan Stage)

5.1 Introduction

The previous chapter addressed the concept of clinical supervision, including its effects and modes, and explored particular clinical supervision models, which were merged to develop a hybrid framework for use in this study. The current chapter presents a systematic review (SR), based on the 'Plan' stage of the PDSA framework, which explores literature that examines the effects of clinical supervision on job satisfaction and other outcomes, such as burnout, stress, and the quality of care. The SR was addressed as the first research objective (see section 1.7.3), which was to critically evaluate the evidence relating to clinical supervision as a means of enhancing nurses' job satisfaction. The search strategies used in the SR are described, and the previous outcomes of clinical supervision for nurses are discussed. Based on the PDSA framework, the remaining three research objectives are addressed in Chapters 8, 9, 10, and 11.

5.2 Systematic Review

The SR assesses, classifies, and discusses the findings of all relevant previous studies, and it is anticipated that its conclusions could help healthcare organisations to take appropriate decisions to improve or develop health care systems (Parahoo, 2014). The Cochrane Database for Systematic Reviews, and the Centre for Reviews and Dissemination are sources of previous research and can be used to search for studies on clinical supervision. Internationally acknowledged as offering gold standard evidence for clinical practice, the Cochrane database also provides a guide for the conduct of SRs (Furlan, Pennick, Bombardier, & Tulder, 2009). However, this database is not appropriate because it is aimed at studies that review randomised controlled trials, evaluate procedures, gather information on the interventional strategies used in clinical trials, analyse diagnostic tests, and explore rigorous guidelines to draw conclusive results, all of which are beyond the scope of this research. Hence, the Centre for Review and Dissemination (CRD) (2009) was chosen for this SR because it presents a clear framework for decision-making based on the rigorous consideration of evidence. Moreover, the CRD protocols are widely used to execute SRs especially in the UK (Higgins & Green, 2011). According to Bryman (2012, p. 34), the CRD offers;

> *"… practical guidance provided through adopting this high standard approach for undertaking SRs in order to evaluate the health-related interventions evidence."*

In this study, the CRD protocol for quantitative and qualitative studies was employed because of its simple design, which both facilitates the SR and ensures that the evaluation of the evidence related to clinical supervision meets high standards. Furthermore, the CRD is easy to follow by researchers who are new to SRs, or who have some experience and need to learn more about the SR process (CRD, 2009). I also chose the CRD approach because it fitted with my previous professional role as an employee assigned to address quality within a structured framework. According to the CRD (2009), a specific search question is formulated, and relevant studies are then checked, selected, assessed and synthesised to answer the question (Tacconelli, 2010). Thus, the CRD approach was used in this study to gather evidence concerning the effectiveness of clinical supervision and to illustrate its role in nursing practice and in improving health outcomes. Moreover, the SR was conducted to add to the knowledge base regarding the quality of current evidence about clinical supervision and its effects on job satisfaction and other outcomes. Thus, it will specifically enable the researcher to identify the outcomes of clinical supervision, which could help to change or increase the level of job satisfaction of PHC nurses in SA. The previous literature search has not revealed any previous study on clinical supervision and its effects on job satisfaction in the Gulf countries.

5.2.1 Review aim, question and inclusion criteria

5.2.1.1 Review aim

The aim of this SR was to gather, critically appraise, and synthesise existing evidence of clinical supervision and its impact on job satisfaction and other outcomes affected by the intervention.

5.2.1.2 Search question

Based on the CRD (2009), in conducting the SR, the researcher formulates an appropriate search question according to the 'PICOS' format, which stands for; P – means the population, for whom the question should be expressive, and identify the issue; I – denotes the intervention or causal factor; C – compares with another intervention (if relevant); O – signifies key outcomes and participants; whilst S – represents the study designs used in each work (Akobeng, 2005; Beecroft, Rees, &

Booth, 2010; Harris, Quatman, Manring, Siston, & Flanigan, 2014; Perestelo-Perez, 2013; Santos, Pimenta, & Nobre, 2007; Thabane, Thomas, Ye, & Paul, 2009). Needleman (2002) stated that the PICOS format is valuable in identifying relevant literature and helping to ensure the development of the search questions. The format is also applied to refine the search question in order to define or control the inclusion criteria applied in selecting studies for the review. In this SR, the search question was: ***What is the impact of clinical supervision (I) on job satisfaction, burnout, stress, decision making, and quality of care (O) amongst registered nurses (P), across different methodologies (S)?*** However, according to Beecroft et al. (2010), it is not necessary to identify each element in the PICOS format; thus, in this SR, the 'C' element was not used because no comparative approach was identified in relation to nurses' clinical supervision in health organisations. Table 5.1 demonstrates how the PICOS format was applied to formulate the search question.

Table 5.1: PICOS Format[1]

P - population/problem	Qualified nurses / registered nurses, primary care nurses/ nurse managers
I - intervention	Clinical supervision, mentorship
C – comparison	No comparison
O – outcome	job satisfaction, reduce burnout and stress, improve quality care, and enable decision making
S- study design	Randomised controlled trial (RCT), quasi-experiment, survey, qualitative and mixed methods studies

5.2.1.3 Defining the inclusion criteria

In SRs' the inclusion criteria must be defined (Table 5.2), in order to establish and define the boundaries of the review question (Parahoo, 2014). Synonyms of all components were identified. For example, because some authors used mentorship and clinical supervision interchangeably, mentorship was added as an intervention search term so that the results would be comprehensive, and the risk of missing important information would be minimised. This approach was applied to ensure that the SR would include all previous relevant studies (Egger, Davey-Smith, & Altman, 2008). In using an iterative approach, the previous outcomes of clinical supervision were added

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[1] An iterative approach was used to add some outcome terms that were identified in the search results (Grant, 2004)

as search terms, such as burnout, quality of care, and stress reduction. To facilitate the search of different databases, terms in the Medical Subject Headings (MeSH) index were also used.

Table 5.2: Inclusion and Exclusion Criteria

Criteria	Inclusion criteria	Exclusion criteria
Date of publication	• Reviews published from (2000-2015); 15 years were considered a sufficient timeframe to include key papers and recent research.	——————
Focus of Studies	• Studies focussing on the effectiveness of clinical supervision or on identifying outcomes for nurses, patients', or organisations relating to the clinical supervision of qualified nurses or nurse managers. • Studies on other health care providers were included if qualified nurses were included in the sample	• Other health care providers with non-nursing professionals
Types of studies	• All types of study and evaluation researches, (e.g. qualitative, quantitative, mixed methods, and evaluation studies)	• Research only in abstract form • Descriptive articles • Opinion articles
Language	• Studies written in English	——————

5.2.2 Brief discussion of the studies

Geographical location of the studies (n=13)

A total of 13 studies were identified from seven different countries (Table 5.3); the search and selection process is illustrated in Figure 5-1. Four of these studies were conducted in the UK at mental health and tertiary care hospitals, and a PHC organisation. Two studies were carried out in hospitals in Australia, four studies were conducted in hospitals in Finland, one in hospitals in Norway one in a hospital in Denmark, and one in South Africa at tertiary care hospitals and a PHC organisation. In these 13 studies, the researchers recruited registered nursing staff and nurse managers from mental health facilities and tertiary care units. The study conducted in Finland

recruited mental and psychiatric nurses, whilst one study in the UK and one in Denmark included nurse managers. Notably, no studies in SA were found.

Table 5.3: Geographical Location of the Studies

Location	UK	Australia	Norway	Finland	South Africa	Denmark
Number of studies	4	2	1	4	1	1

Aims of the selected studies

Although the aims of the studies varied, they could be categorised according to themes; six of the studies focussed on the implementation of clinical supervision to enhance aspects of clinical practice (Alleyne & Jumaa, 2007; Cross, Moore, & Ockerby, 2010; Heaven, Clegg, & Maguire, 2006; Hyrkäs, Appelqvist-Schmidlechner, & Kivimäki, 2005; Lister & Crisp, 2005; White & Winstanley, 2010). The remaining seven studies focused on the benefits of implementing clinical supervision and its effects on job dissatisfaction, stress, and burnout among nurses (Bégat et al., 2005; Edwards et al., 2006; Gonge & Buus, 2011; Hyrkäs, 2005; Hyrkäs et al., 2006; Koivu et al., 2012; Uys, Minnaar, Reid, & Naidoo, 2004).

5.2.3 Methodological quality

According to the CRD (2009), regardless of the study design, the quality of the evidence found in the SR should be formally assessed. Furthermore, including the research design in the inclusion criteria will help to ensure that relevant data are gathered from good quality studies (Tacconelli, 2010), which will help to avoid the assumption that all study designs are equally well-conducted. The distribution of the studies according to their designs is shown in Table 5.4, which shows the three main approaches - qualitative quantitative, and mixed methods.

Table 5.4: Study Design

Mixed methods	Quantitative			Qualitative
RCT	RCT	Quasi-experimental	Survey	
1	1	1	6	4

Of the 13 studies selected for this SR, one used mixed methods with an RCT, and eight used a quantitative design; furthermore, of these eight, one was an RCT, one was quasi-experimental, and six were surveys. However, because the studies were distributed according to their study designs, the two RCTs were placed in the same category (see

Table 5.5), although one used a mixed methods approach. The remaining four studies used qualitative methods.

5.2.4 Language restriction

The review was limited to publications in the English language, which may be construed as a language bias (Harris et al., 2014; Wright, Brand, Dunn, & Spindler, 2007). However, most Gulf health publications that are related to physicians and nurses are published in English rather than Arabic.

5.2.5 Search terms

The search terms were applied to extract relevant information from different databases, which included; the Cumulative Index to Nursing and Allied Health Literature (CINAHL), Medline Ovid, Academic Search Premier, Cochrane Database of Systematic Reviews (CDSR), EbscoHost, British Nursing Index, and the CRD. Further details about the strategy used to search the databases are provided in Appendix 2 (a, b, and c). In this study, the key terms used in the literature search included the following; clinical supervision, mentorship, primary health care, public health care, community health care, nurses, and qualified nurse. The outcome terms included job satisfaction, work satisfaction, burnout, stress, decision-making, quality care, patient safety, and well-being. Other terms were added as they were identified in the literature. To link these search terms, Boolean operators (AND, OR) were used to expand the scope of the research and thus increase the number of results (Cooper, Hedges, & Valentine, 2009).

5.2.6 Identifying a search strategy

According to Cooper et al. (2009) and Needleman (2002), the search strategy helps in finding all relevant research evidence to include in a SR. The search begins with the CDSR and the Database of Abstracts of Reviews of Effects (DARE). Both databases provide overviews of the published findings and critical appraisals of SRs regarding the relevant topic; moreover, the CDSR includes the full texts of SRs carried out by Cochrane collaborators. In the current SR, neither CDSR nor DARE yielded existing results related to clinical supervision. Moreover, the search of other websites, such as the NIHR Health Technology Assessment (NIHR-HTA), did not yield results related to clinical supervision.

Plan stage

Study selection

By using the CRD's protocol to select the research for inclusion in the SR, 13 studies relevant to the objectives were retrieved. The selection process is shown in Figure 5-1.
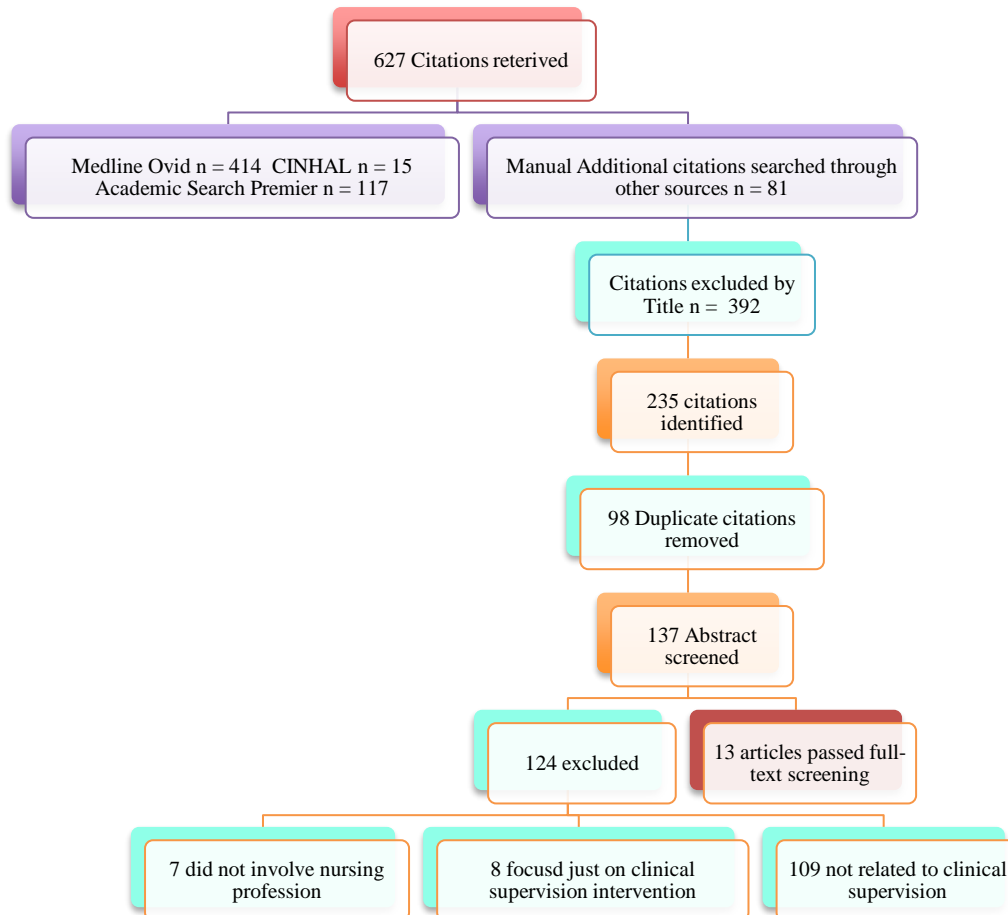
Figure 5-1: Flow chart of the selection process

5.2.7 Data extraction

According to the CRD (2009) protocol, the information about the selected studies should be outlined on a data extraction sheet (i.e. the data synthesise), which is shown in Table 5.5. This outline facilitates the development of a review matrix and the management of the data (Higgins & Deeks, 2008). Included on the data extraction sheet are the studies' characteristics, aims, designs, sample sizes, and other relevant information.

Table 5.5: Data Synthesis

Name of Author/Year/Place	Title of the Study	Aim of the Study	Study Design	Sample Size and Population	Data Collection Method	Results
RCT (two studies)						
Heaven et al. (2006) **UK**	Transfer of communication skills training from workshop to workplace: The impact of CS	To examine and explore the potential of training and receiving CS in improving the skill, knowledge, and attitude among specialised nurses in clinical practice.	RCT (pre-test and post-test control group)	$n = 61$ clinical nurse specialists randomly allocated to the intervention ($n = 29$) and non-intervention group ($n = 32$)	Open questionnaire used (simulated patient, negotiation, and psychological exploration)	Intervention group who trained and then received CS at workplace responded more effectively and improved their communication skill and exploration of cues regarding patient concern.
White and Winstanley (2010) **Australia**	A RCT of CS: selected findings from a novel Australian attempt to establish the evidence base for causal relationships with quality of care and patient outcomes, as an informed development	Explored the implementation of a CS process in sessions to ascertain the causal relationships with the quality of care and better patient outcomes among mental health nursing practice development.	RCT (pre-test and post-test control group) included mixed methods	At the baseline: the intervention group ($n = 139$) of community mental health nurses, ($n = 24$ trainee clinical supervisors who attended 4 days of a CS course) + ($n = 115$ supervisees) (patient $n = 82$) (unit staff $n = 43$) from nine sites of tertiary care hospitals while a control group ($n = 71$) community mental health nurse and (patient $n = 88$), (unit staff $n = 11$) were selected through randomised sampling for over 12 months. However, of the 24-trainees supervisor, 17 (71%) were female, two trainees of clinical supervisor withdrew upon completion of CS course.	Qualitative tool: semi-structured interviews were conducted with a senior nursing manager and other nursing staff who were not directly involved with the study ($n = 17$). Furthermore, personal diaries were given to 24 trainees ($n = 139$) monthly basis and the data were recorded through thematic content analysis

Quantitative tool:
1. For mental health nurses (at the baseline and after 12 months): General Health Questionnaire, Manchester Clinical Supervision Scale (MCSS), Maslach Burnout Inventory (MBI), Short Form Health Survey, Nursing Work Index, and Mental Health Problems Perceptions Questionnaires. | 1. Quantitative findings showed that all participants agreed that taking part in a CS course and training to become supervisors at their workplace had a positive effect.

2. Analysis of qualitative interviews data from 17 non-involved participants showed nine themes; these themes mapped onto five themes that occurred from the analysis of 139 CS trainee diary accounts. |

					2. For patients (at the baseline, and after six and 12 months): Service Attachment Questionnaire and Psychiatric Care Satisfaction Questionnaire 3. For unit staff (on a six-monthly basis) the perception of Unit Quality was measured.	
Quasi-experimental study (one study)						
Koivu et al. (2012) **Finland**	Does CS promote medical–surgical nurses' well-being at work? A quasi-experimental four-year follow-up study	To explore the effects of CS on the development of medical/surgical nurses, their job satisfaction, burnout, and stress at work over a four-year period	Quasi-experimental (pre-test and post-test control group) (quantitative method)	$n = 166/318$ (52%) nurses participated as the experimental group; $n = 84$ (50.9%) and 82 as a control group (51 nurses from medical and 115 from surgical wards) Divided into three groups: Group received effective CS $n = 41$, the group was unsatisfied with CS $n = 43$, the group did not receive CS $n = 82$. 50% (84/166) of participants received the complete intervention.	1. Nordic Questionnaire for Psychological and Social Factors at Work (QPSNordic) 2. General Health Questionnaire (GHQ-12) 3. Maslach Burnout Inventory–General Survey (MBI–GS) 4. Self-rated Health 5. MCSS	Quality of work, control of decisions, and professional efficacy increased significantly for the group who received effective CS. The perception of support from leadership improved, while the burnout and job demand remained the same (unchanged) among nurses ($n = 41$). However, these results were not found among the nurses who perceived their CS as less effective ($n = 43$), or who did not attend CS ($n = 82$).
Survey studies (six studies: one descriptive correlation survey, three cross-sectional surveys, one descriptive survey, one quantitative survey)						
Bégat et al. (2005) **Norway**	Nurses' satisfaction with their work environment and the outcomes of clinical nursing supervision on nurses' experiences of well-being	To examine nurses' satisfaction with their psychosocial job milieu, their moral compassion and differences in outcomes of nursing CS in relation to nurses' well-being through a systematic comparison (supervised and unsupervised nurses)	Quantitative Survey (Descriptive correlation study)	Nurses at hospital ward from two hospitals in Norway were selected as a convenient sample ($n = 71$) with a low response rate (47%: 71/150).	1. Demographics questionnaire 2. Work Environment questionnaire 3. Moral Sensitivity Questionnaire	A significant correlation between 'collaboration and good communication', 'relationship with colleagues', 'job motivation', 'professional development' and 'providing high quality care' ($p < 0.05$). The result showed a positive effect on nurses' insight into clinical well-being and mild significant differences were

						found between supervised and non-supervised groups.
Edwards et al. (2006) **UK**	Clinical supervision and burnout: the influence of clinical supervision for community mental health nurses	To determine the degree to which CS might influence levels of burnout in community mental health nurses in Wales	Quantitative Cross-sectional Survey	n = 260 community mental health nurses (CMHN), within all 11 NHS trusts within Wales, were recruited by a convenience sampling method. The response rate was low (32%: 260/817).	1. MBI 2. MCSS	189 (73%) community mental health nurses experienced CS in their current jobs and were in favour of its continuation, and 105 (40%) experienced CS in their previous postings. The final result found positive changes in job satisfaction, nurse burnout and effective CS
Gonge and Buus (2011) **Denmark**	Model for investigating the benefits of CS in psychiatric nursing: A survey study	To examine a model for investigating the potential benefits of CS	Quantitative Cross-sectional survey	n =136 Psychiatric nursing staff members in nine general psychiatric wards and at four community mental health centres at the Danish Psychiatric University Hospital. The response rate seems moderately high (57%: 136/239)	1. Demographic background 2. MCSS 3. MBI, Short Form-36 4. Coping Styles Questionnaire (CSQ) 5. Copenhagen Psychosocial Questionnaire (COPSOQ) scales.	The Multivariate Analyses indicated a certain association between individual and workplace factors in relation to CS effectiveness, and it showed some positive effectiveness and benefits such as, less 'stress' (-0.03), higher 'job satisfaction' (0.03), more 'vitality' (0.04), less 'emotional exhaustion' (-0.03), and reduced 'depersonalisation' (-0.03).
Hyrkäs (2005) **Finland**	Clinical supervision, burnout, and job satisfaction among mental health and psychiatric nurses in Finland	To evaluate the CS, and its effect on the level of burnout and job satisfaction experienced by psychiatric nurses in Finland	Quantitative Cross-sectional survey	569 of psychiatric nurses from 14 sites in Tampere University Hospital in Finland were recruited; the response rate seems high, while 77% (n = 439) of the respondents were female, and 22% (n = 130) male.	1. Demographic background 2. MCSS 3. MBI 4. Minnesota Job Satisfaction Scale (MJSS)	CS beneficial for mental health nurses in terms of job satisfaction and burnout. The supervisor had greater job satisfaction and improved scores on personal accomplishment; it was also found that efficient CS was associated with low burnout, and inefficient CS increases job dissatisfaction.

Hyrkäs et al., 2006) **Finland**	Efficacy of clinical supervision: influence on job satisfaction, burnout and quality of care	To establish how supervisees' backgrounds and the surrounding infrastructure of CS predict its efficacy among Finnish nursing staff, their job satisfaction, burnout and perceptions quality of care.	Quantitative Survey	n = 799 nurses were conveniently identified from 12 regional, central, and university hospitals. The response rate was high 62%, while 83% (n = 662) of the participants were female, and 17% (n = 136) were male. The majority of respondents (77%) had prior experience of CS.	1. Demographic background 2. MCSS 3. MBI 4. MJSS 5. Good Nursing Care Questionnaire	The findings showed significant differences among supervisees regarding their experiences of CS. However, nurses who had more than 10 years of work experience perceived more benefits from CS as compared to those who were new to the profession.
Uys et al. (2004) **South Africa**	The perceptions of nurses, based in a district health system in KwaZulu-Natal, of their supervision, self-esteem, and job satisfaction.	To examine the perceptions of nurses in PHC and a hospital system in KwaZulu-Natal about their perceptions of CS, self-esteem and job satisfaction.	Quantitative descriptive survey	n = 319 nurses participated from two health districts, n = 248 nurses from Ugu district, and n = 71 from Uthukela district. Whilst 17% of the nurses work in PHC settings, 60% worked in a district hospital and 23% within regional hospitals; moreover, 23 of the respondents were men (7%). However, 67 questionnaires were returned from Ugu (15%) and from Uthukela (6%) therefore the response rate was very low.	1. Supervision questionnaire 2. Job Satisfaction questionnaire 3. Self-esteem questionnaires	53% of nurses perceived that positive clinical supervision increases the self-esteem scores by 83% and the average job satisfaction score to 60%.
Four Qualitative studies (one action research and three exploratory study)						
Alleyne and Jumaa (2007) **UK**	Building the capacity for evidence-based clinical nursing leadership: the role of executive co-coaching and group clinical supervision for quality patient services.	To facilitate PHC nurses to link leadership and management with CS to improve nurses' performance and their quality care services.	Qualitative collaborative action research case study	Six district Nurses Team Leaders with two doctorate level registered nurses	Multi-method data collection tools utilised, including questionnaires, interviews and group discussion	CS intervention among clinical district nursing leadership significantly influenced the quality of services to patients and developed actionable knowledge for PHC nurses through managing and leading teams effectively

Cross et al. (2010) **Australia**	Clinical supervision of general nurses in a busy medical ward of a teaching hospital	To reduce nurse managers' high stress, depersonalisation, and burnout that leading to job dissatisfaction	Qualitative exploratory study	Six associate nurse unit managers from a busy medical ward of a tertiary teaching hospital were assigned in this study, while four (66%) of the supervisees attended the focus group.	Focus group interview	Sharing experiences in CS sessions between nurses and them feeling that they are not alone with their problems reduced their psychological distress and raised nurses' confidence in sharing their issues.
Hyrkäs et al. (2005) **Finland**	First-line managers' views of the long-term effects of CS: how does clinical supervision support and develop leadership in health care?	To explain how nurse managers, perceive the future effects of CS one year after its cessation.	Qualitative exploratory study	$n = 32$ nursing managers in hospitals responded at the beginning of the CS intervention. After one year the number of participants reduced to $n = 11$ who were selected by purposive sampling.	Empathy based stories though writing essays	Nursing managerial and leadership qualities enhanced via CS by integrating the actionable education and knowledge needed for effective managerial and leadership roles in nursing management.
Lister and Crisp (2005) **UK**	Clinical Supervision in child protection for community nurses	To explore PHC nurses' perceptions, experiences, and understanding of CS in child protection	Qualitative exploratory study	$n = 99$ purposive sample identified by the trust in the community setting including all those directly involved with child protection and those who might consider child protection knowledge.	Focus group interview	Regular engagement in CS is greater. Important to develop skills and knowledge of child protection: CS was recommended for inclusion in the community nurses' job description.

Note: CS refers to Clinical Supervision

Plan stage

5.2.8 Quality assessment

Quality assessment (QA) is essential to define the value of the evidence to determine whether it should be used in practice. According to Polit and Beck (2013), using critical appraisal tools to examine the evidence enables researchers to apply their knowledge in practice. In an SR, the quality of evidence is evaluated, and the findings are summarised, but it cannot be assumed that all SRs are equally valuable; regardless of the study design, not all reviews are the same (CRD, 2009). Thus, they need to be critically appraised (Thomas, Ciliska, Dobbins, & Micucci, 2004).

Hierarchy of Evidence:

Although controversial as discussed by Facchiano and Snyder (2012), a hierarchy of evidence is often used for medical and health interventions. The quality of the evidence (research findings) is classified according to this hierarchy based on the weight given to research designs used to generate the results of interest (Craig & Smyth, 2007). The Joanna Briggs Institute for Evidence-Based Nursing and Midwifery recommendations were used in this study to identify evidence based on its methodological characteristics (The Joanna Briggs Institute, 2002). Accordingly, Table 5.6 illustrates the best quality of evidence, which is derived from systematic reviews (level I), to qualitative design (level VI).

Table 5.6: Levels of evidence by Joanna Briggs Institute

Level	Description
I	Evidence taken from a systematic review of all good quality and relevant RCTs.
II	Evidence taken from at least one appropriately designed RCT.
III	Evidence taken from well-designed controlled trials, not randomised.
IV	Evidence taken from comparative studies such as cohort studies, case control studies from more than one research group or centre.
V	Evidence taken from single descriptive or qualitative studies.
VI	Evidence taken from opinion of respected authorities, based on clinical experience, or reports of expert committees.

In this SR, the critical appraisal tool developed by Hawker, Payne, Kerr, Hardey and Powell (2002) was used to identify the results of rigorous studies, which could be applied in clinical practice. This tool was used because it is applicable to quantitative studies such as RCTs, quasi-experimental and qualitative studies. Further, a clear score would inform the reader about general quality of a given study and assign it to a continuum of quality. According to Hawker et al's (2002) tool, quality assessment is based on various factors, with each factor assigned a score, from 1, indicating very poor to 4, indicating good quality (see Appendix 3). Each included study was given a total score, which according to Hawker et al (2002) is categorized as follows: very poor (0-10 points), poor (11-20 points), fair (21-30 points) and good (31-40 points) (see Table 5.7).

Table 5.7: Level of evidence and quality of the included studies

No	Study	Level of Evidence	Quality Score / 36
1	(Heaven et al., 2006)	II	33 (Good)
2	(White & Winstanley, 2010)	II	34 (Good)
3	(Koivu et al., 2012)	III	34 (Good)
4	(Bégat et al., 2005)	IV	30 (Fair)
5	(Edwards et al., 2006)	IV	34 (Good)
6	(Gonge & Buus, 2011)	IV	30 (Fair)
7	(Hyrkäs, 2005)	IV	31 (Good)
8	(Hyrkäs et al., 2006)	IV	33 (Good)
9	(Uys et al., 2004)	IV	29 (Fair)
10	(Alleyne & Jumaa, 2007)	V	26 (Fair)
11	(Cross et al., 2010)	V	33 (Good)
12	(Hyrkäs et al., 2005)	V	28 (Fair)
13	(Lister & Crisp, 2005)	V	30 (Fair)

5.2.8.1 Appraisal of the quantitative studies

RCT/Randomised Control Trial *(two studies)*

Heaven et al. (2006) and White and Winstanley (2010) undertook RCTs related to clinical supervision and its effects on nurses. This section presents the appraisal of these studies. According to Jadad and Enkin (2008), the quality of RCTs is indicated by the inclusion of several important factors, such as high response rates, a strong study design, and blinded samples. Heaven et al. (2006) used some, but not all, of these criteria. For example, the study was conducted in the North West of England, and the findings showed a response rate of 37% (78/206) amongst a sample of community clinical nurse specialists in the following departments: lung and colorectal, psychotherapy, clinical, hospital, and community palliative care. Finally, 61 (response rate = 30%) of the specialist nurses recruited were allocated randomly and divided into two groups: an intervention group with clinical supervision ($n = 29$) and a control group with no clinical supervision ($n = 32$). White and Winstanley (2010) conducted an RCT study in which 139 mental health nursing staff were recruited from nine participating locations in public and private inpatient and community settings across the state of Queensland in Australia. Across six of the sites, 71 mental health nurses were assigned to the control group, which did not participate in a clinical supervision arrangement. For the intervention group, 24 participants were recruited from three administrative areas, which comprised five trainees from the Northern region, seven from the Central area, and 12 from the Southern area of the Queensland health system.

Heaven et al. (2006) applied a pre-test and post-test control group design, which is considered suitable for studies that use an equivalent control group and a randomised allocation process. The nurses' communication skills with the patient were assessed in three intervals: firstly, prior to the training and intervention, which was the baseline; secondly, after the intervention, or post-test, and finally, three months after the post-test, or follow-up. The results were used to repeat measures and compare the means of the two groups. Similarly, White and Winstanley (2010) used a pre- and post-test control group design. Both the intervention and the control groups were allocated randomly, which helped to reduce potential bias; however, the randomisation process was not clearly reported in this study (White & Winstanley, 2010).

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In the study by Heaven et al. (2006), the experimental and control groups were examined to determine equality in relation to training effects and demographic characteristics. No differences were found between either group in relation to the baseline performances with real patients or in simulated assessments at the beginning and end of the training course. However, a difference was found in the demographic data of both groups; the communication skills training was received for longer in the control group prior to the study. Furthermore, because randomised allocation was used, both the experimental and control groups were balanced at the baseline test (pre-test) with respect to the confounding variables,[2] such as age, sex, and education level. The confounder variables were controlled in the analysis through stratification in order to obtain equal numbers in the pre-test, post-test, and the follow-up interviews. Similarly, in White and Winstanley's (2010) study, no statistically significant differences were found at the baseline test in the demographic data between the mental health nurses in the intervention and control groups. In addition, no significant differences were shown by any of the research instruments during the 12 months of the data collection for the nurses in the control group.

Using a blinded sample can help to reduce bias, and in RCTs it is a sign of quality (Parahoo, 2014). The purpose of blinding is to protect against detection bias, which means that the participants in the sample are not aware of the intervention or the group to which they have been assigned. However, it is not always possible to blind the sample from the intervention, and neither Heaven et al. (2006) nor White and Winstanley (2010) used this technique. Nevertheless, some studies used an active intervention, which involved the participants (Karanicolas, Farrokhyar, & Bhandari, 2010), although, if the study has two or more allocation groups, the researcher needs to ensure that both groups, excepting the intervention group, are treated as equally as possible.

In White and Winstanley's (2010) study, both quantitative and qualitative data collection methods were utilised. Specifically, three levels of quantitative data were collected; for mental health nurses (General Health Questionnaire, Manchester Clinical Supervision Scale, Maslach Burnout, Short Form Health Survey, Nursing Work Index

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[2] The confounder variable is known as a third variable or an extraneous influence that the researcher failed to control or eliminate, which damages the internal validity of an experiment and changes the effect of dependent (e.g. job satisfaction) and independent (e.g. clinical supervision) variables.

and Mental Health Problem Perceptions Questionnaire); for patients (Service Attachment Questionnaire and Psychiatric Care Satisfaction Questionnaire); and for unit staff (perception of unit quality). The qualitative method used semi-structured interviews that were conducted with 17 senior nursing managers and other clinical staff who were not directly involved with the RCT. Heaven et al.'s (2006) findings indicated improved communication skills in the intervention group nurses who were trained in clinical supervision; furthermore, White and Winstanley (2010) reported the positive effects of clinical supervision on the nurses' practice.

Heaven et al. (2006) utilised the simulated patients' assessment open questionnaire prior to and after the clinical supervision training. Interviews were conducted using the Medical Interview Aural Rating Scale (Heaven & Green, 2001) to assess the nurses' ability to apply the knowledge and skills gained in training as well as their responsiveness to patient cues and concerns. These skill sets are linked to clinical supervision training. The content analysis was conducted using a qualitative coding framework. Moreover, 45 tapes of interviews with real patients were stratified, randomly selected, and coded independently to confirm the reliability based on the Kappa statistic (0.5), which was obtained by coding the content, and based on the agreement (0.67) of the patient or nurse who expressed the concern.

Heaven et al. (2006) provided clear information about their power calculation in terms of the outcome assessment, which indicated a statistically significant improvement in the nurses' responses to cues (p=0.001). The power calculation indicated the improvement in the nurses' ability to facilitate the disclosure of cues (p = 0.007). In contrast, White and Winstanley (2010) did not report the power calculation and confidence intervals with respect to their results. Moreover, they restricted the application of their findings to Australian hospitals and clinical settings. White and Winstanley (2010) also stated that, although their results might be applicable elsewhere in Australia, they cautioned against their generalisation to other countries and populations, such as SA, where cultural and geographical factors could change the outcomes.

Both Heaven et al. (2006) and White and Winstanley (2010) described the number of and reasons for withdrawals. For instance, in Heaven et al. (2006) the majority of the 128 nurses withdrew from the clinical supervision intervention for reasons, such as; job

commitment, pressure at work, and health issues. After the initial sample was recruited (78/206, 37.9%), 17 withdrew from the study. Fifteen withdrew before the baseline test commenced because of illness and workload, and two withdrew before finishing the clinical supervision intervention because of health issues. Therefore, the final sample included 61 participants. In White and Winstanley's study, two trainees withdrew from the trial after they completed the clinical supervision course because they resigned from Queensland Health; one nurse joined a pharmaceutical company, and the other nurse moved to another state. The remaining 22 participants continued their commitment to the end of the final data collection stage. Immediately afterward, two trainees moved; one resigned, and the other became a part-time employee. Although Heaven et al. (2006) reported a poor response rate, this sample was likely to be representative of the target population. The nurses who were involved in this study were found to have the baseline skills. Therefore, the sample could be deemed representative, and did not affect the generalisability of the findings.

Both Heaven et al. (2006) and White and Winstanley (2010) described and assessed their clinical supervision intervention, integrity, and allocation. White and Winstanley (2010) reported that less than 60% (23%: 22/24+71=95) of participants received the complete intervention, which strengthened the credibility of their research. Furthermore, their ordinal data were analysed using SPSS V16, and the descriptive statistics established the demographic characteristics of the participants, whilst the results of the univariate and bivariate tests were analysed to reveal any differences between both groups at the baseline. The Mann-Whitney U-test was applied to examine the differences between the groups, and a chi-square test was applied to identify the differences within the groups. However, Heaven et al. (2006) utilised SPSS V9 and STATA V6 and exploratory parametric multilevel modelling, which allowed the use of all patient data. Both Heaven et al. (2006) and White and Winstanley's (2010) studies are considered useful in clinical research in establishing a cause and effect relationship.

Quasi-experimental *(one study)*
Koivu et al. (2012) used a quasi-experimental design to explore the effects of clinical supervision on the development of nurses' well-being in the workplace. According to Portney and Watkins (2009), this is similar to an experimental design, although no random assignment or control group is required. This design is usually utilised when it is not possible to use a randomised sample to ascertain the efficacy of the intervention

prior to an evaluation of its effects. The quasi-experimental design may have no control group, and this can threaten the internal validity, which ensures that any changes in the dependent variable were caused by the independent variable or other factors (Parahoo, 2014). This design often involves non-equivalent groups that may differ in certain variables, which leads to a reduction in the degree of control over several variables, such as history, testing, instrumentation effects, maturation and attrition.

Koivu et al. (2012) recruited 166 from 318 (52%) volunteer nurses within the medical and surgical units at Kuopio University Hospital in Finland; 51 were from five medical units and 115 were from nine surgical units. The sample was divided into an intervention group ($n = 84$) and a comparison group ($n = 82$). This division indicates that the participants in the study were representative of the target population, although less than 60% of the recruited individuals agreed to participate in the clinical supervision intervention. In using a multi-group design and based on non-equivalent pre and post-test control groups, the subjects in both groups tend to be similar in many respects. However, the study had less control over the selection and allocation (internal validity) in ascertaining their equivalence (Parahoo, 2014). To control and reduce the confounding factors, such as secure confidentiality, the males who worked in the clinical supervision intervention unit were excluded because of their small numbers ($n = 3$). Koivu et al. (2012), collected baseline data in 2003 from all medical and surgical employees in the university hospital. However, at this stage, it was not known who would attend the clinical supervision programme. Koivu et al. (2012) used five internally recognised questionnaire tools, whose reliability and validity had been tested in the Finnish population. These tools included: the Nordic Questionnaire for Psychological and Social Factors at Work (QPSNordic); Self-Rated Health (SRH); the Maslach Burnout Inventory–General Survey (MBI–GS); the General Health Questionnaire (GHQ-12); and the Manchester Clinical Supervision Scale (MCSS). Most of these scales had fair internal consistency (Cronbach's alpha $\sim > 0.7$), although in some scales, such as QPSNordic, it was weak because of the low number of items. At the baseline test, no significant differences were found in the socio-demographic backgrounds of the three study groups. However, during the follow-up stage, two assistant nurses in the third study group gained the registered nurse qualification. The difference between group one and group three was statistically significant ($p = 0.021$), as both groups were registered nurses.

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The most significant threat to internal validity in all longitudinal studies is also attrition or drop-out, which may lead to erroneous or inadequate conclusions. In Koivu et al.'s (2012) study, participant drop-out was analysed because it was caused by the unavailability of staff nurses, some of whom were non-tenured registered nurses. The younger members of staff were not retained because of changes to work schedules and job aspirations. Nevertheless, Koivu et al. assessed the intervention integrity at the end of the study, which showed that, regardless of its efficacy, less than 60% of the participants received the complete clinical supervision intervention, which strengthened the credibility of their research.

Koivu et al. (2012) utilised SPSS V17.0 to analyse the data, and both the dependent and independent variables were measured twice during the four-year interval. The chi-square test was used to measure the differences between the groups, and the standard deviation and mean values were used to describe the continuous data. The ANOVA test was applied to measure the differences between the groups, and the non-parametric test was used because the QPSNordic scores and the MBI scales were not normally distributed. The Wilcoxon signed rank test was used to measure the ordinal data and the significance of the changes within the groups from the baseline to the follow-up. As this study was conducted in a large Finnish University Hospital, the findings cannot be generalised to other health organisations or any other countries. Moreover, the study's results applied only to nurses who provided direct patient care and worked in a medical-surgical ward. Finally, because a random sample was not used, it was impossible to avoid selection bias in this study.

Quantitative studies *(six surveys)*

Six studies were based on quantitative surveys (Bégat et al., 2005; Edwards et al., 2006; Gonge & Buus, 2011; Hyrkäs, 2005; Hyrkäs et al., 2006; Uys et al., 2004). According to Marczyk, DeMatteo, and Festinger (2010), survey studies are usually conducted to determine relationships between the characteristics of participants and their reported opinions. They help to explore the effects of clinical supervision on a variety of work-related factors, and are generally applied to obtain a wide range of data from a large representative population in order to identify and analyse the inter-relationships between and within particular variables (Parahoo, 2014; Rea & Parker, 2014). Of the six survey studies, four clearly stated their research issues and aims (Bégat et al., 2005;

Edwards et al., 2006; Hyrkäs et al., 2006; Uys et al., 2004), whilst the remaining, two did not (Gonge & Buus, 2011; Hyrkäs, 2005).

The sample selection method was clearly described in all six studies, which is important as this is a vital step in the research process, and should be elaborated thoroughly (Marczyk et al., 2010). In addition, each study used a range of sampling methods in accordance with the nature of the study. Gonge and Buus (2011), Hyrkäs (2005), and Hyrkäs et al. (2006) reported moderately higher response rates, all of which were over 60%. In Gonge and Buus (2011), the participants comprised 136 psychiatric nursing staff members in nine general psychiatric wards and four community mental health centres at the Danish Psychiatric University Hospital. The response rate was moderately high (60%: 145/239), although, nine questionnaires were excluded because of inadequate information, which reduced the sample to 136 participants. Similarly, Hyrkäs (2005) selected a large number of mental health and psychiatric nurses ($n =$ 569) from 14 sites at Tampere University Hospital in Finland, which comprised females ($n = 439$) and males ($n = 130$); however, the response rate was not mentioned in this study. In the study by Hyrkäs et al. (2006), 799 Finnish nursing staff responded from central and university hospitals in 12 regions across Finland, and the response rate was high at 62%. The findings from Hyrkäs (2005), Hyrkäs et al. (2006), and Gonge & Buus (2011) indicated statistically significant relationships among the respondents' backgrounds, the clinical infrastructure, and the clinical supervision. In addition, the relevance of clinical supervision was positively linked to job satisfaction, burnout, and good nursing assessments.

In contrast, the remaining three studies reported low response rates; although Bégat et al. (2005) selected 71 registered nurses from two hospitals in Norway in order to obtain as large a number of participants as possible, the response rate was only 47% (71/150). Considering that several on-going research projects were being conducted in this Norwegian Hospital, the low response rate could indicate that the potential sample population was overstretched (Edwards et al., 2006). In Edwards et al.'s study, 260 community mental health nurses from all 11 NHS trusts responded to a survey; however, the response rate was also low (32%: 260/817). Furthermore, Uys et al. (2004) did not comment on the response rate achieved in their study, which was very low (11%). This sample recruitment comprised 2,918 nurses in the Ugu and Uthukela

districts; however, only 319 nurses participated, comprising 248 in the Ugu district, and 71 in the Uthukela district. Moreover, 67 questionnaires were returned without a reason.

According to Parahoo (2014), in a survey design the data collection tool is usually a questionnaire. Moreover, the validity and reliability must be tested each time the instrument is used. Most of the studies considered in this review demonstrated the validity of the questionnaire they employed. In addition to the questionnaire, a range of other tools may also be applied. Edwards et al. (2006), Gonge and Buus (2011), Hyrkäs (2005) and Hyrkäs et al. (2006) identified their demographic data and used the MCSS to measure the effectiveness of clinical supervision. In addition, Edwards et al. (2006), Hyrkäs (2005), and Hyrkäs et al. (2006), used the MBI to measure the level of burnout in participants. Gonge & Buus (2011) collected data from different populations at various stages in their study. However, Hyrkäs (2005) utilised the Minnesota Satisfaction Questionnaire (MSQ) to measure job satisfaction, while Hyrkäs et al. (2006) used the same tools (Hyrkäs, 2005) with the addition of the Good Nursing Care Questionnaire, which measured the quality of the work. The internal consistency of all these questionnaires was established and tested.

In contrast, Bégat et al. (2005) and Uys et al. (2004) used different measurement tools. Bégat et al. (2005) collected data by utilising three questionnaires that related to nurses' satisfaction with their work environment: the Moral Sensitivity Questionnaire requested demographic data; the Work Environment Questionnaire (WEQ) requested information on job commitment, job stress, job motivation and job expectation; and the Moral Sensitivity Questionnaire (MSQ) was designed to investigate moral motivation through building a trusting relationship with the patient. Content validity and reliability were established by the WEQ and MSQ questionnaires, and the Alpha coefficient of the results of the WEQ and the MSQ were 0.19 and 0.73, respectively. Uys et al. (2004) used a supervision scale, a Job Satisfaction Scale, and a Self-esteem scale. The internal consistency of both the supervision and self-esteem questionnaires were tested to determine Cronbach's Alpha coefficient (supervision scale = 0.8996, self-esteem = 0.65). These tools are widely accepted for the measurement of clinical supervision factors, including burnout, job satisfaction, and so forth.

The results of Edwards et al. (2006), Gonge and Buus (2011), and Hyrkäs (2005) must be interpreted with caution. These survey studies generated a picture of clinical

supervision and what it achieved. The effects of clinical supervision on several outcomes, such as health, stress, and burnout, were examined in cross-sectional survey data. Edwards et al. (2006) used non-parametric tests because the total scores of MCSS and MBI were not normally distributed. These tests measured the differences between groups. Bégat et al. (2005), Gonge and Buus (2011), and Hyrkäs et al. (2006) used descriptive statistics to provide the means and standard deviations that described continuous data. Bégat et al. (2005) used the Spearman rank correlation coefficient to measure the correlation between factors, and the p-value was statistically significant ($p < 0.05$). Gonge and Buus's (2011) study on clinical supervision in psychiatric nursing identified the positive effects of clinical supervision. Uys et al. (2004) used the Pearson chi-square test to measure the differences between the two health districts. Overall, the SR found that these studies had varying levels of quality; for example, in Bégat et al. (2005), Hyrkäs et al. (2006), and Uys et al. (2004), data were missing, the validity was poorly reported, and their results were biased.

5.2.8.2 Appraisal of qualitative studies *(four studies)*

Four studies used qualitative methods (Alleyne & Jumaa, 2007; Cross et al., 2010; Hyrkäs et al., 2005; Lister & Crisp, 2005); according to Parahoo (2014) these methods usually promote communication between the researcher and the participants. Instead of trying to avoid or reduce bias, qualitative methods deliberately aim to explore personal behaviours and attitudes. In any research method, the abstract provides a clear description and information about the study, including the key issues and events. Alleyne and Jumaa (2007) offered a succinct abstract of the purpose and methods of their study, which included the results of their research, the background of the study, and an overview of the study's details (Maxwell, 2012). Hyrkäs et al. (2005) provided a concise description of clinical supervision and the consequences of reflecting on and sharing experience in nursing education, whilst Cross et al. (2010) and Lister and Crisp (2005) did not present an adequate overview of their research, although both abstracts stated clear purposes, described the methods, and summarised the main findings.

According to Srivastava and Thomson (2009) it is vital to build an ethical framework for the research to protect the participants from harm. However, Alleyne and Jumaa (2007) and Lister and Crisp (2005) did not consider any ethical issues in their studies. In contrast, a cross-sectional study conducted by Cross et al. (2010) offered a concise

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ethical overview that was accepted by the hospital's Human Research Ethics Committee. In addition, these studies described the confidentiality agreement between the researchers and the participants (i.e. the clinical supervision contract), which was signed by both parties. However, although Hyrkäs et al. (2005) received permission from the head nurse at the Finnish University hospital, they did not request permission from the hospital's ethics board.

According to Wade (2004), the data collection is an essential part of the research process. Data are collected from the participants' responses to questions, which are analysed to generate the final results. Accordingly, qualitative research usually relies on interviews to collect a wide range data from individuals, groups, and focus groups (Parahoo, 2014). In the focus group interview, the researcher interacts with the group of participants, or the participants interact among themselves to explore and clarify their views. Focus group interviews help the researcher and participants to explore and understand a particular phenomenon from different perspectives. However, this method of data collection has disadvantages: some participants might stifle opposing or resistant voices in the discussion and other participants may remain passive. Cross et al. (2010) and Lister and Crisp (2005) used focus groups to interview their participants, whilst Alleyne and Jumaa (2007) used multiple data collection tools, such as questionnaires, interviews, and one-to-one consultation. Moreover, Hyrkäs et al. (2005) utilised the 'empathy based story' method by referring to written short essays by the participants and then analysing these stories through categorising the responses into themes.

In the SR, the assessment of qualitative studies showed varying results. In Alleyne and Jumaa's (2007) the QA identified the severity of the problem in the sample, as the study was not indicated in the number of participants who replied to the questionnaire. Cross et al.'s (2010) study was designed for specific groups of assistant nurse unit managers in a busy medical ward. However, neither the participants nor the data collection were described adequately, which affected the credibility of the research results. However, Hyrkäs et al. (2005) used the 'empathy-based story' method (Eskola, 1998) as an appropriate tool for the evaluation of the opinions of front-line managers regarding the long-term effects of clinical supervision. The narrative responses were evaluated in a self-administered questionnaire, which could have affected the results of this study.

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5.2.8.3 The sample method *(n=13 studies)*

Of the 13 studies, four studies involved clinical nurse specialist and registered nurses, participants from the PHC and hospital sector; two studies involved medical and surgical nurses, four studies involved nurse managers, and four studies involved mental health nurses. As shown in Table 5.8, seven studies (Alleyne & Jumaa, 2007; Hyrkäs et al., 2005; Hyrkäs, 2005; Hyrkäs et al., 2006; Koivu et al., 2012; Lister & Crisp, 2005; Uys et al., 2004), used purposive sampling methods, where the participants were selected according to their experience in relation to the purpose of the study (Kothari, 2004). In all the above studies, the samples were selected based on their experience.

Table 5.8: Sample Method

Sampling	Convenience	Purposive	Random
Number of studies	4	7	2

In contrast, Heaven et al. (2006) and White and Winstanley (2010) used randomised sampling, also known as probability sampling, which was appropriate to their research designs. To limit the potential for bias, both studies used randomised samples, which guaranteed that every participant would have an equal chance of selection. However, the remaining four studies (Bégat et al. 2005, Cross et al. 2010, Edwards et al., 2006, and Gonge and Buus 2011) used convenience sampling to recruit participants. Although this is considered the weakest form of sampling, these studies adopted it as it followed a non-probability sampling technique (Parahoo, 2014) in which participants are recruited according to their accessibility and proximity to the researchers.

5.2.9 Data synthesis *(synthesis of findings)*

This section aims to contextualise the SR conducted in this chapter. The results are collated, summarised, and tabulated in a methodologically robust way according to thematic components. In the synthesis, the findings are categorised into four distinct themes; 1) the importance of implementing clinical supervision, and the three sub-themes of professional development, reflective practice, and managerial and leadership qualities; 2) culture and resistance to change and the management model; 3) the effects of clinical supervision on job outcomes; and 4) clinical supervision and its long-term effects.

Theme 1: *Importance of implementing clinical supervision (in general)*

Among the selected studies, the importance of implementing clinical supervision was supported as a means of professional development (Alleyne & Jumaa, 2007; Heaven et al., 2006; White & Winstanley, 2010), professional efficacy, reflective practice (Cross et al., 2010; Koivu et al., 2012) and the enhancement of managerial and leadership qualities (Alleyne & Jumaa, 2007; Hyrkäs et al., 2005; Hyrkäs et al., 2006; Koivu et al., 2012).

Sub-theme 1.1: *Professional development*

The importance of clinical supervision in professional development and the improvement of patient care outcomes were illustrated by White and Winstanley (2010). They highlighted the importance of support and additional training for mental health nurses, which resulted in improved patient care. White and Winstanley used SPSS to analyse descriptive data (i.e. demographic characteristics), and applied univariate and bivariate statistics to analyse the results of both the control and experimental groups. More specifically, they utilised the chi-squared test and cross tabulation to ascertain the dependency and distributions of variables, and applied the Mann-Whitney test to compare differences between the experimental and control groups. However, despite their detailed descriptive statistical analysis, the relevant statistical data were limited which impacted on the interpretation of the study findings. Although 139 participants were tested at the baseline, and there was only one withdrawal, the study should have conducted a power calculation to justify the adequacy of the sample size. However, White and Winstanley (2010) showed that the implementation of effective clinical supervision in the nursing field provided an opportunity to discuss and develop nurses' learning. Thus, the interaction with experienced colleagues positively influenced the quality of patient care, and enabled nurses to hold discussions with, and give feedback to, their co-workers, which potentially increased their appreciation of their clinical practice.

Heaven et al.'s (2006) RCT study included 61 clinical nurse specialists that were randomly allocated to an intervention group ($n = 29$) and a control group ($n = 32$). Open questionnaires were used to ascertain the potential for improving skills, knowledge, and attitudes among nurses through training and clinical supervision. The results of the Wilcoxon analysis indicated an increase from 5.33 at the baseline to 7.0

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at post intervention (z = -2.369, p = 0.018), which supported the efficacy of clinical supervision in improving knowledge and skills among nurses.

Alleyne and Jumaa (2007) provided additional significant evidence that the implementation of clinical supervision provided nurses with real opportunities to enhance their professional development through sharing their feelings about job-related stress in their clinical practice with supervisors. The study was conducted with the aim of facilitating the ability of PHC nurses to link clinical supervision with leadership and management. The study employed a qualitative action research method. Although the study was not an RCT, it used a multi-method data collection that included questionnaires, interviews, and group discussion; using this combined methodology strengthened its design and findings, which indicated that clinical supervision allowed nurses to acquire specific support from their individual work experiences. Furthermore, both Alleyne and Jumaa (2007) and White and Winstanley (2010) concluded that clinical supervision enabled nurses to feel supported and assured that they were not alone in their clinical practice. Both studies showed the beneficial effects on nurses in implementing the clinical supervision approach. The studies also provided evidence that professionally stressful events could be managed, and empathy could be conveyed though clinical supervision (Koivu et al., 2012).

Sub-theme 1.2: Reflective practice

According to Clouder and Sellers (2004, p. 2);

> *"… encouraging the use of reflective practice through clinical supervision, as a means of ensuring quality of provision in nursing, is now well-embedded, not only in policy but also in practice."*

In the context of learning, reflection refers to recapturing and reflecting on experiences, which leads to new understandings (Boud et al., 1985); indeed, evidence of reflective practice was found in the studies by Alleyne and Jumaa (2007), Cross et al. (2010) and Koivu et al. (2012). According to Pearce, Phillips, Dawson, and Leggat (2013), reflection on practice is commonly used to explore the meanings of behaviour and emotional reactions in practice, and to increase the clinician's cognitions. Thus, Alleyne and Jumaa (2007) asserted that, to reflect and develop nurses' skills and performance and to strengthen their self-esteem, it is crucial to provide an on-going learning environment for their clinical practice.

After performing a group clinical supervision comprising six associate nurse managers, Cross et al. (2010) found that clinical supervision enabled them to share their issues and feelings of work-related stress with other supervisees in a safe environment, which encouraged the development of reflective practice. Koivu et al. (2012) concluded that, in their study, reflective practice among nurses in clinical supervision led to an increase in professional efficacy and a decrease in psychological distress, which had positive effects on the mental health of these nurses. Therefore, arguably the potential for reflective practice should be extended to all clinical staff, in order to improve and develop their practice.

Sub-theme 1.3: Managerial and leadership qualities

The findings of the SR indicate that clinical supervision enables health professionals to identify assistance requirements as well as provide emotional help and collegial support. Hyrkäs et al. (2005), Hyrkäs et al. (2006), and White and Winstanley (2010) identified that clinical supervision enhanced nursing management and leadership by integrating actionable education and knowledge, which are required for effective nursing. According to Schofield and Grant (2013), through sharing views, emotions, and experiences regarding patient care and the delivery of services, clinical supervision tended to provide a space for the relief of staff stress which could help to address high burnout rates. Alleyne and Jumaa (2007) indicated that the clinical supervision intervention among clinical district nursing leaders significantly influenced the quality of services delivered to their patients and provided actionable knowledge to PHC nurses through the effective management and leadership of their teams.

Koivu et al. (2012) concluded that support from superiors improved the fairness of leadership for nurses who received effective clinical supervision. Consequently, from the perspective of nursing management, nurses who were encouraged to practice clinical supervision through taking personal responsibility felt empowered and improved their practice. In addition, these nurses showed confidence in constructing an individual care plan and improving their knowledge of patient care.

Theme 2: Cultural resistance to change and the change management model

Clinical supervision has become a main support system for nursing, notably in several countries, and some nurses are excited about the notion of implementing clinical supervision in their organisation (Koivu, Saarinen, & Hyrkäs, 2011). Nevertheless, in

their UK study with community nurses involved with child protection care, Lister and Crisp (2005) found that some nurses resisted, or experienced significant apprehension or a decline in confidence from taking part in clinical supervision. There could be several reasons for such resistance, such as: the lack of common understanding about the nature of clinical supervision between members of the nursing staff (Buus & Gonge, 2009); the lack of perception that clinical supervision is 'real work' (Kenny & Allenby, 2013); or the unwillingness (a lack of willingness to take the time for CS) to prioritise clinical supervision over patient services (Lister & Crisp, 2005). However, the concept of change in clinical practice includes the support and professional well-being of clinical staff through clinical supervision. Gonge and Buus (2011) found that the application of a change management model to clinical practice helped the change process and the culture of an organisation (Cameron & Green, 2009), thereby enabling improved care delivery through clinical supervision.

Furthermore, Gonge and Buus (2011) observed that, through the implementation of a change management model, the mental and emotional perspectives of clinical staff shifted in relation to performance, moreover, they also maintained this new perspective (Grol, Wensing, Eccles, & Davis, 2013). Edwards et al. (2006) concluded that an essential objective for change management is to control and regulate the changed culture by applying strategies under organisational direction, and to provide support to overcome resistance, enhance staff engagement, and thus, enable a productive transformation (Kerzner, 2013). According to Gilmore (2001) state that to manage and control any resistance to change among medium- and lower-level nurses, the health care organisation needs to include clinical supervision in its business plan and agenda because it is a key supportive mechanism that facilitates the creation of an appropriate environment. Hence, clinical supervision should be included in nurses' job descriptions and the nursing manager should allocate appropriate support and times (Lister & Crisp, 2005).

Theme 3: *The effects of clinical supervision on depersonalisation, burnout, distress, job satisfaction, and patient satisfaction*
Previous studies (Bégat et al., 2005; Cross et al., 2010; Edwards et al., 2006; Hyrkäs, 2005; Hyrkäs et al., 2006; Koivu et al., 2012; Uys et al., 2004) examined the effects of clinical supervision (as a supportive mechanism) on the reduction of job dissatisfaction, burnout, the provision of stress relief, and the improvement of care quality. As well as

promoting professional accountability and knowledge development, evidence suggests that clinical supervision enables high job satisfaction, reduces burnout (Edwards et al., 2006; Hyrkäs, 2005; Hyrkäs et al., 2006), provides stress relief (Koivu et al., 2012; Uys et al., 2004), address depersonalisation (Cross et al., 2010), and improves patient satisfaction (White & Winstanley, 2010). However, it is not possible to generalise the findings in most of these studies to all nurses as it is not certain that the study samples were representative of all nurses (Brunero & Stein-Parbury, 2008).

Hyrkäs (2005) and Hyrkäs et al. (2006) observed that burnout and job satisfaction were measures of the interruptions and disagreements regarding professional practice. Hyrkäs (2005) utilised standardised instruments, such as the MCSS, the MBI and MJSS, and found that addressing clinical supervision with supervisors led to increased job satisfaction and improved scores on de-personalisation subscale measurements. Hyrkäs indicated that introducing efficient clinical supervision among nurses increased their job satisfaction whereas inefficient clinical supervision increased their burnout. In contrast, a South African study conducted by Uys et al. (2004) used the Rosenberg Self-Esteem Scale (RSE) and the Measure of Job Satisfaction (MJS), which were developed and tested in the UK to measure nurses' perceptions of their clinical supervision. Although Uys et al. (2004) found weak supervision at the PHC level, the nurse participants were most satisfied with their personal contributions to work, and least satisfied with their pay and prospects.

Awa, Plaumann, and Walter (2010) state that stress and burnout were not necessarily associated with negative attitudes and behaviours. However, Alacacioglu, Yavuzsen, Dirioz, Oztop and Yilmaz (2009) found that all healthcare professionals experienced anxiety and stress at some stage in their professional life, although burnout could be overcome amongst those who entered their careers enthusiastically with very high expectations and objectives, which sometimes could lead to depression. Moreover, Uys et al. (2004) argued that depressed employees are usually overcome by work exhaustion, and professionals suffering from burnout presented their complaints in a disappointed and aggrieved manner. Burnout in nursing is usually indicated by feelings of cynicism, detachment from the job, and the development of defensive behaviours in response to co-workers, superiors and the workplace, which are caused by the lack of reciprocity between the input by nurses and their output to patients in the workplace

(Leiter & Maslach, 2009). Moreover, depression in nurses was also caused by the lack of reciprocity in their private lives (Edwards et al., 2006).

Koivu et al. (2012) and Bégat et al. (2005) examined the effects of clinical supervision on nurses' well-being at work, including burnout, stress and job satisfaction. Koivu et al. (2012) demonstrated that workplace management could develop a learning culture by implementing clinical supervision that facilitated periodic meetings and team building strategies to enhance nursing communication to provide support and recognition. Similarly, Bégat et al. (2005) found that nurses' experiences of well-being in their psychosocial work environment included the following; job stress and anxiety, relationships with colleagues, job motivation and collaboration, effective communication, and professional development (Bégat & Severinsson, 2006). However, the findings showed that Norwegian nurses considered 'job motivation and engagement' factors more influential than their well-being in a work situation, which was moderately related to illness and feelings of not being in control.

In order to reduce or prevent emotional exhaustion, organisations should provide facilities and support that facilitate the achievement of optimum health in their employees (Colff & Rothmann, 2014). Working conditions should be the focus of organisational management in order to enhance job satisfaction, as evidence shows that high levels of emotional exhaustion and depersonalisation lead to job dissatisfaction. Conversely, effective collaboration and teamwork among nurses and other care professionals through clinical supervision sessions enhance job satisfaction (Bégat et al., 2005). These findings are supported by Cross et al.'s (2010) observation that sharing experiences in clinical supervision sessions among nurses and enabling them to feel that they are not alone in their problems reduced their psychological distress and raised their confidence in sharing their issues. Nevertheless, some research findings are contradictory; for example, Teasdale et al. (2001) argued that clinical supervision did not protect general nurses from encountering burnout. However, Edwards et al. (2006) investigated burnout in community mental health nurses, and found that effective clinical supervision reduced burnout, increased job satisfaction, and enhanced patient care through improving staff development opportunities. A further analysis of the responses to the MCSS and the MBI found that set times for clinical supervision sessions led to an increase in emotional exhaustion and depersonalisation. In contrast,

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being able to readily support and hold discussions with supervisors could reduce the levels of burnout and depersonalisation (Khani, Jaafarpour, & Jamshidbeigi, 2008).

Theme 4: *Clinical supervision long-term and frequency effect*

Although six studies reflected on the effects of the duration and frequency of clinical supervision (Edwards et al., 2006; Gonge & Buus, 2011; Heaven et al., 2006; Hyrkäs et al., 2005; Hyrkäs, 2005; Lister & Crisp, 2005), there is inadequate evidence in the literature to indicate a 'gold standard' for the amount of time and frequency for effective clinical supervision. Gonge and Buss (2011) tested a model to measure the effects and benefits of clinical supervision, which included the influences of individual and workplace factors. The number of sessions attended by nurses working in a psychiatric ward and at a mental health centre over a six months period was associated with four of the seven MCSS subscales as well as with the total score. As measured by the MCSS, this finding reflected those of previous studies which suggested that a higher frequency of attendance at sessions was associated with greater effectiveness (Edwards et al., 2006; Hyrkäs, 2005).

Similarly, Lister and Crisp (2005) suggested that regular attendance at clinical supervision sessions, which ideally should be at least every four to six weeks over six months or one year, was important in achieving any positive effect. Hyrkäs et al. (2005) reported the findings of a study on the views of front-line nurse managers on the long-term effects of clinical supervision and noted that clinical supervision had positive long-term effects on both practice and self-development. Moreover, Hyrkäs (2005) found that short durations of clinical supervision negatively affected the supervision sessions, although Edwards et al.'s (2006) found that clinical supervision was the most effective when it continued for at least 45 minutes per month.

In contrast, Heaven et al. (2006) and Hyrkäs et al. (2006) suggested that practising supervision for less than one year provided insufficient time to integrate skills with the adoption of a new clinical approach. Moreover, Cheater and Hale (2001) argued that the effects only began to become visible at the end of the study period when the attitudes towards clinical supervision started to change. However, Edwards et al. (2006) explored the factors that increased the effectiveness of clinical supervision. Based on their findings, they recommended that managerial and individual times needed to be allocated through the coordination of monthly clinical supervision meetings for at least

one hour to address learning and development.

5.2.10 Discussion of the findings of the systematic review

This section provides an in-depth discussion of the findings of the SR, which showed that the outcomes of interest were measured in all studies included in the review. In this regard, the majority of the 13 studies demonstrated that clinical supervision could improve the following; job satisfaction (7 of 13 studies), burnout (6 of 13 studies), stress (4 of 13 studies), and quality of care (3 of 13 studies). However, one of six studies reviewed found no significant reduction in burnout amongst nurses who had ineffective clinical supervision. Based on the SR, clinical supervision could either positively or negatively affects job satisfaction and other outcomes. For example, implementing clinical supervision for nurses could lead to high job satisfaction, reduced stress levels, and lower incidents of burnout. Despite its significant role in controlling such outcomes, clinical supervision in the PHC sector in SA was not addressed in this literature; this may be due to presence of conventional supervision, resistance to change amongst management, or a lack of information about this mechanism. Hence, based on the findings of the SR conducted in this chapter, there is a gap in the research in this area. Based on this gap, there is a significant basis for studying the implementation of clinical supervision in SA.

Clinical supervision was identified in the SR as a method for improving professional expertise in clinical nursing practice. The SR found that the expertise of nurses who received clinical supervision throughout their training and beyond, were found to be professionally enhanced compared to nurses who did not receive any supervision (Heaven et al., 2006; Koivu et al., 2012). Hence, the implementation of clinical supervision in SA could lead to significant outcomes, particularly with regard to PHC nurses.

Heaven et al. (2006) provided evidence of improved communication skills as well as a quicker exploration of cues regarding patients' concerns in nurses trained in clinical supervision. This evidence implies that PHC nurses could achieve higher levels of communication in dealing with patients after they have received training in clinical supervision. Other evidence by Koivu et al. (2012) indicates that those who received a clinical supervision intervention experienced a significant increase in the quality of their work, their professional efficacy, and their decision-making. Furthermore, the

perception of support from leadership increased although burnout and demand remained the same. In comparison with their counterparts Mann et al. (2009), demonstrated that nurses who received clinical supervision experienced less burnout and more job satisfaction through reflection and discussion. Based on the findings of these studies, clinical supervision could provide a new approach to the clinical practice of PHC nurses in SA.

Cross et al. (2010) found that nurses who practised under a formalised framework of clinical supervision without any restrictions or fear of disruption experienced low burnout and high job satisfaction. Moreover, the findings of Alleyne and Jumaa (2007), showed an enhanced quality of service, and actionable nursing practice knowledge as a result of receiving a clinical supervision intervention. Furthermore, the evidence indicates the benefits of a clinical supervision intervention. Nurses who experienced a lack of supervision in their practice were found to suffer from psychological distress (Koivu et al, 2012; Cross et al., 2010), disturbance, and stress (Bégat et al, 2005). Symptoms of anxiety (Heaven et al, 2006) occurred more frequently in nurses compared to those who received clinical supervision in their initial days of practice.

The SR indicated that better quality clinical supervision influenced better quality outcomes (Alleyne & Jumaa, 2007; Cross et al., 2010; Edwards et al., 2006; Gonge & Buus, 2011; Hyrkäs, 2005; Hyrkäs et al., 2006; Koivu et al., 2012). Effective supervision was positively associated with improved care delivery. Moreover, effective supervision was provided by well-trained supervisors, and enabled by leadership support, and the presence of a framework of clinical supervision. It was also observed that nurses who received training and guidance in their clinical practice were likely to sustain continuity in their jobs and professional well-being (Alleyne & Jumaa, 2007). The modes of clinical supervision, such as one-to-one, peer, or group supervision, also benefitted nursing staff but were dependent on the supervisees' individual needs or the organisation's provision.

In addition, the SR found that clinical supervision enabled nurses to take advantage of creative opportunities and allowed them to study and understand the complexities of individual patient cases. The ongoing provision of clinical supervision also helped nurses to realise that they were not alone in experiencing problems they faced for the

first time in their clinical practice (Cross et al, 2010), and that clinical supervision helped them to solve problems in work situations (Alleyne et al. 2007).

The implementation of a clinical supervision framework for nurses was also related to their perceptions, and empathy sharing and validation in managing stressful professional events. Clinical supervision allowed nurses to utilise and incorporate adequate and suitable responses to critical situations, particularly in mental health facilities (Edwards et al., 2006; Gonge & Buus, 2011; Hyrkäs, 2005), and those involving distressed patients (Koivu et al, 2012). Furthermore, clinical supervision reduced anxiety and stress, and enabled nurses to overcome depression caused by workload, helping them to manage their distress (Bégat et al., 2005; Maplethorpe et al., 2014). Moreover, clinical supervision not only increased nurses' confidence in solving complicated medical issues but also prepared them to face the challenges in their everyday professional lives.

The SR also identified weaknesses, such as undefined and small sample sizes (Alleyne & Jumaa, 2007; Bégat et al., 2005; Edwards et al., 2006; Hyrkäs, 2005); the absence or limited ability to generalise findings (Cross et al., 2010; Koivu et al, 2012; White & Winstanley, 2010); an overly long data collection period, which probably led to missed data caused by the fluctuations in the subjects' attention (Hyrkäs et al., 2006), and self-reported questionnaires, which influenced the study's validity and biased the final results (Gonge & Buus, 2011; Hyrkäs et al., 2005). Other weaknesses included limited sources (Uys et al., 2004), and long periods of supervision (Heaven et al, 2006).

The aim of clinical supervision is to develop the abilities of health care practitioners and to strengthen the responses of clinical staff in cases of emergency (Mann et al. 2009). All the studies examined in this SR illustrated that clinical supervision in the nursing profession needs to address many key issues that are related to patients' well-being and safety (White & Winstanley, 2010).

5.3 Summary

The SR conducted in this chapter provided evidence of the benefits, implementation, and effects of clinical supervision on job satisfaction and other outcomes. The results of previous relevant studies were collated, summarised, and tabulated in a methodologically robust way, and the thematic components were identified. The SR was based on the CRD guidelines, which are preferable for use in health research, and based on the findings that clinical supervision is associated with training and instilling knowledge in nurses to assist them in improving and refining their clinical practice by reflection through periodic discussions. The findings indicate that, through regular, effective clinical supervision with experienced colleagues, nurses can expand their learning. Clinical supervision progressively enables nurses to provide feedback to co-workers, thereby helping them to improve their understanding of clinical patients.

In conclusion, this SR found that clinical supervision has positive effects on nurses' job satisfaction and other outcomes, such as burnout, stress, and the quality of care, whilst, in contrast, nurses who did not participate in clinical supervision showed no improvement in their knowledge or practice. Furthermore, nurses who did not receive effective clinical supervision reported less or no effect from clinical supervision on their practice or knowledge. Thus, the first research objective, which was based on the 'Plan' phase in the PDSA framework, was achieved in this chapter. The next chapter will explain the research methodology used to explore each philosophical paradigm, including the underpinning ontology and epistemology, as well as their application to this study.

Act

Plan

Chapter 6

Study

Do
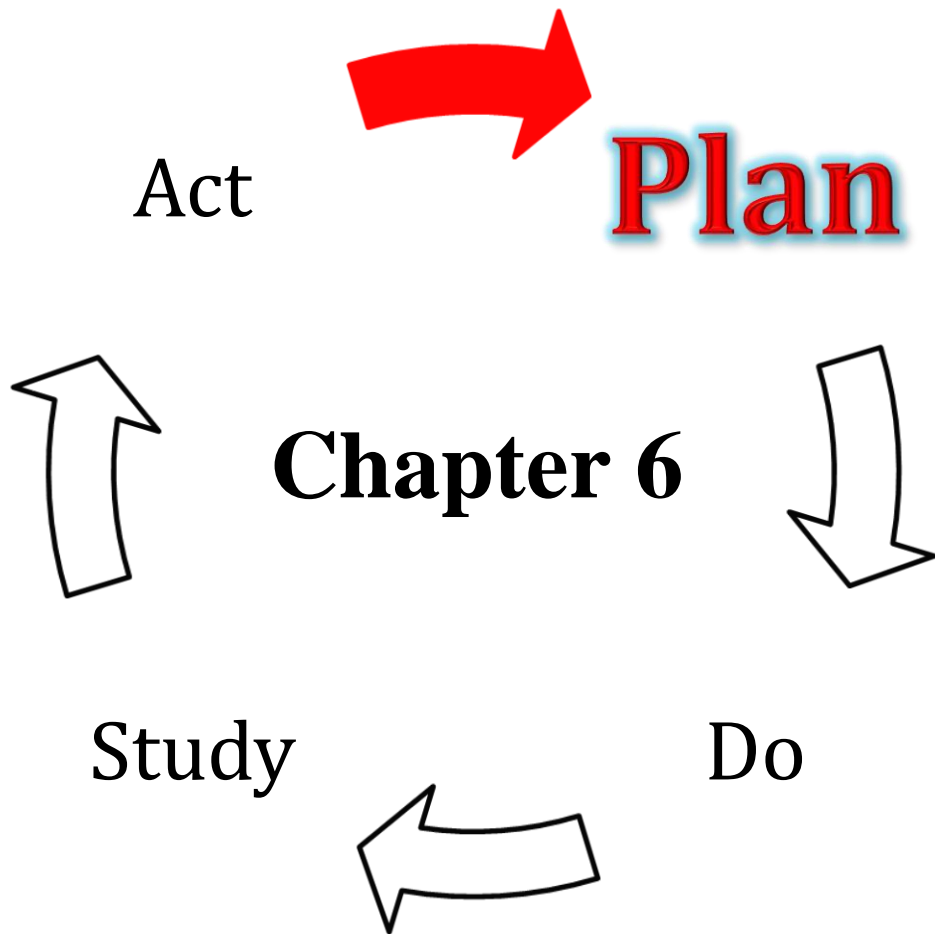
Methodology
(**Plan** Stage)

6.1 Introduction

By conducting a systematic review, the last chapter achieved the first study objective, which is to evaluate the evidence for clinical supervision as a means of enhancing nurses' job satisfaction and other outcomes. This chapter will illustrate the research paradigms that will be applied in this study: firstly, an overview of the research paradigms will be illustrated; secondly, the research philosophy will be outlined, and each assumed paradigm will be systematically described, from ontology through to epistemology and methodology. In the study's ontology, the assumption is that both objective and subjective measurements are necessary to discover the nature of existence. Furthermore, the study's epistemology is shaped by a 'pragmatism' assumption, which will be also discussed. Finally, the methodological approach will be described; this will explore the knowledge that is acquired, the way in which this informs the findings, and how it justifies the rationale for the methodological choices. In addition, the overarching PDSA framework, Plan, Do, Study and Act, will be discussed at the end of the chapter as the conceptual framework for the study.

6.2 The Research Paradigm Overview

This section considers the reason for formulating and articulating the meaning of the research paradigm before exploring the ontological, epistemological and methodological philosophies that underpin the current study. Understanding and outlining these philosophical issues help to develop an understanding about, and knowledge of, the research topic. It can assist in selecting of the study design, the method of data collection and how this data is interpreted; it also helps to determine how the research questions are answered. Finally, having a clear understanding of the philosophical debates helps the researcher to investigate the research question and objectives in the future using a different study design to explore and identify different perspectives (O'Gorman & Macintosh, 2014).

The research paradigm is a set of assumptions that guides the conduct of the research (Sobh & Perry, 2006). Hall (2013) and Lor (2011) elaborate further on the definition by stating that a paradigm is a theory or values and a basic belief system that guides the researcher ontologically, epistemologically and methodologically, in terms of their

choices of research methods. These paradigms generate a holistic picture of how the researcher views knowledge, their relationship with this knowledge, and the strategies they use to reveal the truth (Guba, 1990). If the researcher does not use an appropriate rationale related to the research and it's underpinned by philosophical arguments justifications, then the quality of the study could be affected (Easterby-Smith, Thorpe, Lowe, & Jackson, 2008).

According to Scotland (2012), a research paradigm is a set of beliefs and assumptions consisting of ontology and epistemology, which allows the researcher to take decisions, evaluate findings, and offer criticism. Similarly, Guba and Lincoln (1994, p. 105) defined a paradigm as;

> *"… an essential belief system that guides the researcher, not only in their choices of a method but also ontologically and epistemologically in fundamental ways."*

They emphasised that the consideration of paradigms should precede any consideration of methods. Moreover, several writers (Easterby-Smith et al., 2008; Gray, 2013; Guba & Lincoln, 1994; Lor, 2011; Pickard, 2013; Saunders, Lewis, & Thornhill, 2009) have recommended that the ontology, epistemology, methodology and methods form the main four assumptions in the hierarchy of a research paradigm. However, these are not discrete, but rather integral to the exploration and understanding of a study specifically, and research generally. From this perspective, I will highlight the philosophical paradigm of the study in this chapter.

6.3 The Research Philosophy *(Iceberg)*

In representing the evolutionary paradigm process, some studies have tried to illustrate the philosophical assumptions of research by using metaphors, such as an iceberg (Lor, 2011), tree roots (Easterby-Smith et al., 2008) or a traditional hierarchical structure (Pickard, 2013). I found that using models or metaphors to illustrate the research philosophy helped to explore concepts and enabled me to understand the structure and plan for my study. Furthermore, Lor (2011) found that using a metaphor, to represent research philosophy is helpful in illustrating the relationship between ontology, epistemology, methodology and methods. As I found the iceberg a useful metaphor for thinking about the relationship between each term in the research paradigm, I will also adopt this to discuss the philosophical assumptions in this study (Figure 6-1). Thus, the

iceberg starts with the invisible, deepest submerged part and moves through the submerged part, and then to the section above the water line through to the tip of the iceberg. Moreover, icebergs have a particularly amazing characteristic, in that, because of the difference in the density of ice and seawater, only around 10% of their mass is visible above the sea surface, although they are very difficult to see below the water (James, 2015). This metaphor helps to articulate the step-by-step approach used to explain the theoretical constructions in this study; at the same time, it enables the inclusion of the PDSA framework, which underpins the structure of this study, and will be discussed in more detail in section 6.4. However, the parts of the iceberg currently under discussion only reflect only the first 'Plan', stage of the PDSA framework; this covers the study design, setting, sampling, ethical approval and data collection tools.
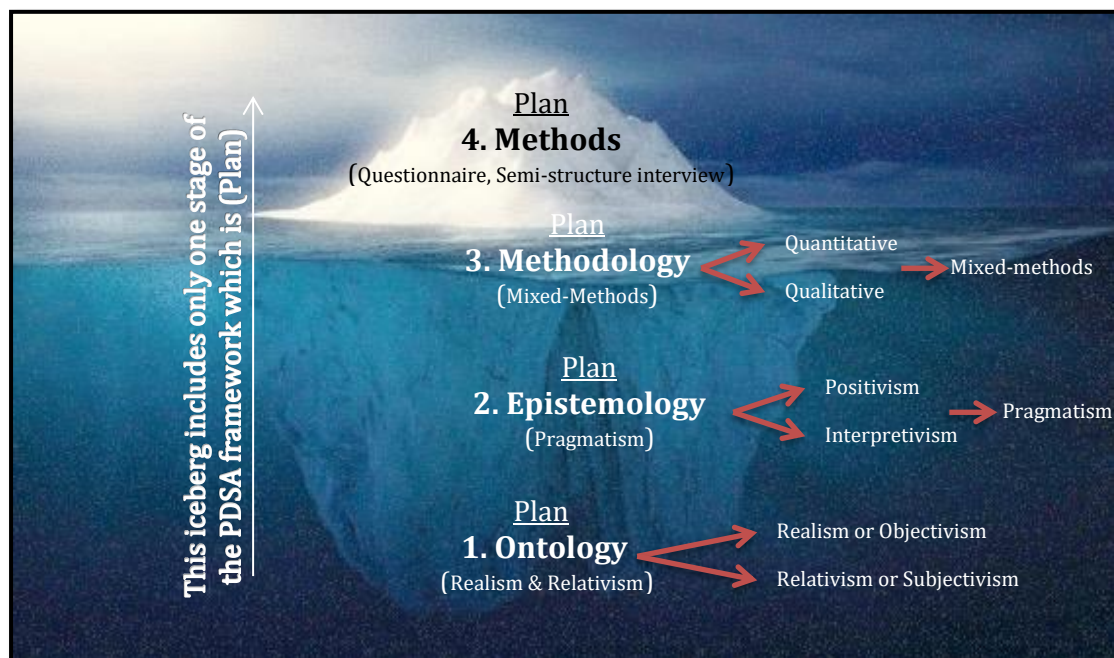
Figure 6-1: Iceberg Model representing the four research dimensions (Source: Lor, 2011)

In the iceberg metaphor, the first (deep) and second (underwater) parts of the iceberg relate to the ontology and epistemology of the study, which can be seen below the surface. These are the key assumptions concerning what is an appropriate object for the study (i.e. the ontological dimension), and what steps are necessary to gather the knowledge (i.e. the epistemological dimension). The much smaller part of the iceberg just above the water line (i.e. the methodology) represent the logical set of discussions, debates, decisions and choices, as to why a particular approach is selected over others. At this level, it is possible to make choices regarding the study design and method, and

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to determine the study approach, whether qualitative or quantitative. The last part is the very tip of the iceberg and concerns the preparation procedures; these are also considered under the 'Plan' stage (i.e. the method - see Chapter 7), before the data collection techniques commence in the 'Do' stage (see Chapter 8). I addressed these assumptions in the current study, in light of the methodological decisions identified by other researchers, e.g. Guba & Lincoln (1994), Johnson & Onwuegbuzie (2004), and Morgan (2007).

The iceberg metaphor offers a clear and structured approach, which ensures that the researcher can identify and justify each of the choices made during the research design process. Although these assumptions (i.e. ontology, epistemology, methodology and method) are all linked and interrelated, they are not fixed, and will differ based on each study design (O'Gorman & MacIntosh, 2014; Lor, 2011). In particular, the ontological assumption informs the epistemological assumption, which subsequently informs methodology, and these all influence the choice of methods. On this basis, it is essential for researchers to understand, recognise and justify the overlapping assumptions and choices that represent their research design (Polit & Beck, 2004). Moreover, according to Polit and Beck (2004), the researcher needs to be aware of the key targets when choosing a suitable paradigm for the research design. Accordingly, the subsequent sections will present a step-by-step discussion of all research paradigms that will be applied in this study.

6.3.1 First part of the iceberg *(ontology)*

Ontology, which forms the base of the iceberg, is a belief about reality where different kinds of research are founded on differing beliefs about what researchers think truth is (Sobh & Perry, 2006). Thus, ontology explains the researcher's assumptions regarding the nature of reality. The philosophy of reality is divided into two approaches, namely realism, or '*objectivism',* and relativism, or '*subjectivism'* (Guba & Lincoln, 1994). An understanding of the basics of realism and relativism can logically influence a study's epistemology and methodology, and lead to the selection of the most appropriate paradigm. However, there is considerable scope for confusion due to the overlap and complexity associated with understanding ontological and epistemological assumptions (McEvoy & Richards, 2006). Thus, the ontological assumption for this research will be addressed in more general terms below, by considering realism,

relativism, and the role of critical realism as a philosophical perspective in a mixed-methods approach.

In a realist approach, the research should be conducted in an objective way in order to test a theory; in adopting an objective stance, it is understood that the researcher does not influence the data that is gathered, and the distance between the researcher and the study setting can help to reduce any impact of bias (Sobh & Perry, 2006). In this approach, the researcher is believed to have an 'etic', or outsider's, view, which means they keeps some distance from the research and provide a description of society that identifies a single reality or a valid knowledge. Realism is thus a belief in one truth that can be fully captured independent of human perception and thinking (Lor, 2011). A realist truth is to be revealed by objective measurement; additionally, once the truth is discovered, the results can be generalised to other situations.

In an objective way a deductive quantitative approach aligned, where the reality of generating hypothesis is preferable; for example, this could mean determining the relationship between two concepts based on statistics. Broom and Willis (2007) stated that the deductive approach involves the researcher testing an existing theory or hypothesis. A hypothesis might be, for instance, that nurses who experience less job satisfaction and receive clinical supervision for six months will report no significant difference in job satisfaction than those who do not receive the intervention. Accordingly, the study would aim to prove or disprove the hypothesis; however, once the research findings, or the relationship between the two concepts (e.g. supportive mechanism and job satisfaction) is established, it can be generalised to other sectors.

Conversely, relativism holds that truth is discovered by a researcher's involvement using an 'emic' or 'insider's view' of the research. This approach is also known as subjectivism, which supports the idea of multiple realities and a need for the researcher to 'get inside' and look at reality from different perspectives (Saunders et al., 2009). Reality is constructed in context through communication with subjects/participants, via an inductive qualitative approach. In this approach, the researcher has to understand the context, diverse cultures and different people (Bracken, 2010). As this study sought to understand participants' views, I realised that it required depth in order to connect with people's insights into, and experiences of, clinical supervision; therefore, it also required an inductive approach.

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According to the arguments above, identifying with either the objectivist or subjectivist position will influence every single decision that is made within a study (O'Gorman & MacIntosh, 2012). For example, if the study is founded on an objective ontology, it tends to be driven by a positivist epistemological approach (see section 6.3.2), and this might be aligned with a quantitative methodology; however, if a study is based on a subjective ontology, it tends to be driven by an interpretivist epistemological approach (see section 6.3.2), which is naturally aligned with a qualitative methodology. However, instead of opting for one ontological approach, this study will adopt both objective and subjective ontologies.

At the beginning of this research journey, I decided to conduct the study objectively. Many researchers try to avoid this approach, because of the requirement to use statistics to analyse data and the need to apply complicated mathematics in order to understand and draw inferences (Sukamolson, 2007). Nevertheless, I believe in an objective approach for several reasons; firstly, as a quality organiser in a PHC organisation, and I had almost five years of experience in entering numerical data into a statistical analysis programme. Moreover, as I was familiar to some of the participants in that organisation, this could have given rise to the risk of perceived coercion. Initially, I thought having an outsider's view would enable me to gather comprehensive and sufficient data without the need to interact, or communicate directly, with participants. My interest was also piqued after reviewing studies that reflected upon the importance of quantitative methods (Muijs, 2007; Sukamolson, 2007) and this validated my understanding that numerical data was more efficient than to contextual data. However, in understanding the research purpose, I recognised a need to understand the participants and the barriers to the implementation of a clinical supervision programme. On further reflection, and to gain a deeper understanding of the research problem, I decided to use both an insider perspective, associated with realism or objectivism, and an outsider perspective associated with relativism or subjectivism.

To recognise the ontological philosophy for this study, it was necessary to use a paradigm that did not limit the range of topics for research and that could accommodate both quantitative and qualitative approaches (Hall, 2013). Hence, I pondered on the adoption of a realist perspective as an ontological paradigm for mixed methods. Although realism is usually associated with objectivism (i.e. quantitative approach), it is by no means confined only to this position. Researchers have proposed several terms

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for such versions of realism, including experiential realism (Lakoff, 1987), scientific realism (Pawson & Tilley, 1997), emergent realism (Henry, Julens & Mark, 1998) and critical realism (Archer, Bhaskar, Collier, Lawson, & Norrie 1998, 2013; Bhaskar, 2010). These authors recommended adopting a realist perspective when combining quantitative and qualitative methods. However, the term *critical realism* is used more broadly as an ontological position in different areas of social science and it is considered the most compatible paradigm for mixed methods (Brown & Brignall, 2007; Lipscomb, 2008; Mingers, 2006; Sayer, 2000; Stickley, 2006).

Critical realism focuses on explanations rather than simply looking for and describing events as they occur; in this approach, researchers explore beneath the surface to look for causation and explanation. Thus, critical realism recognises not only the role of an organisation, but also that of a structure; it acknowledges both facts existing within people and facts that are contextual. This interaction between the organisation and structure and this responsiveness to real complexity define critical realism as an explanatory approach. While this is a complex concept, occurrences are shaped not only by the actions of individual organisations but also by the context.

Initially, I found critical realism to be partially applicable for this study since it seems to be congruent with the PDSA framework. This is because both critical realism and the PDSA represent the construction of the study; they are in-depth, and both aim for continuous improvement. Thus, a critical realist study can treat both quantitative and qualitative methods as equally valid and useful, as it is compatible with both methods. As such, critical realism can help to amalgamate the two approaches into a more reasonable combination, and encourage equal cooperation between quantitative and qualitative methods, which is helpful in accessing the usefulness of both. Furthermore, through the complete interaction and involvement of the organisation, it helps to create reality rather than reflect or describe it. In this sense, I believe that the term *critical realism* more appropriately describes action research studies; therefore, I decided that both realism and relativism are better ontological assumptions for this research due to the above justifications. The next section will illustrate how knowledge is acquired by exploring the epistemological assumptions of the study.

6.3.2 Second part of the iceberg (*epistemology)*

Epistemology expresses the relationship between the researcher and the research; in other words, it is the theory of understanding reality (i.e. knowledge). An epistemology is more philosophical in nature than a methodology. Thus, the epistemological understanding of a design deals with the *why* of a study and may involve debate and discussion. Based on the ontological position, the study could conduct mixed-methods research; however, this section focuses on the paradigms involved in an integrated approach.

According to Hall (2013), there are three commonly agreed paradigms: post-positivism, constructivism, and pragmatism. Of these, only pragmatism is seen as compatible with a mixed-methods approach because it offers alternative worldviews, such as positivism and interpretivism, and focuses on the problem for investigation and the results of the research (Feilzer, 2010). For more clarification and justification, positivism and interpretivism will be discussed within the context of a mixed-methods study. This section will also explain the reason for adopting each of these paradigms epistemologically by highlighting the limitations of each approach

At the beginning of this research journey, the main reason for conducting the study was to address a knowledge gap in relation to poor job satisfaction in SA (as I had the previous notion of less job satisfaction among PHC nurses, high job turnover rate). A further explanation I looked for a contributing factor that might improve job satisfaction within the PHC sector in SA, such as clinical supervision, and I understood via my initial research knowledge and experience that this would require quantitative data, tangibles, variables and observations. Therefore, I chose a '*positivist'* approach, which involves the quantitative measuring theoretical numbers to explore and understand a phenomenon. Based on my quality management experience, I was more interested in numbers and had not been aware of the need for a more structural approach; this preference was influenced by the nature of my work as an auditor and evaluator. However, when dealing with the universal concept of job satisfaction, I encountered several questions measuring different aspects of satisfaction and the impact of clinical supervision that went beyond numbers.

After reflecting on the importance of participants' involvement in addressing the relationship between clinical supervision and different outcomes (e.g. Berg & Hallberg,

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1999; Hyrkäs & Paunonen-Ilmonen, 2001; Willson et al., 2001), I realised that the study also needed a more in-depth approach to fully explore whether clinical supervision had any effect on job satisfaction. Hence, my view of the study changed from purely epistemologically quantitative to mixed methods, through adopting an '*interpretivist*' approach, which refers to a method of inquiry in social science that recognises the need to involve subjective human experience in the process of understanding reality. Furthermore, I realised that criticism and arguments are central to the progress of philosophy and research, as there is no right or wrong approach (Holden & Lynch, 2004); rather, each study is shaped by its purpose and the researcher's experience and knowledge. I believed that these perceptions would provide a valuable source of information on job satisfaction and clinical supervision perceptions, which could provide more detailed qualitative data.

Based on the research questions and the purpose of the study, the underpinning epistemology cannot be considered as either positivist or interpretivist. Indeed, like a substantial amount of other social research, this study's methods include two basic approaches: positivism and interpretivism (Niehaves, 2007). Positivist research studies are based on empiricism, which tend to use quantitative methods, while interpretivism tends to emerge from a qualitative humanistic approach (Tuli, 2011). Nevertheless, both have limitations; for example, positivist studies tend to adopt structured questionnaires, such as surveys, and investigate statistical trends, since these tend to have a good reliability and are generally considered representative. Moreover, positivist research tends to look for relationships or correlations between two or more variables; thus, it is known as a comparative approach (Parahoo, 2014). Nevertheless, findings from positivist studies can lack depth; therefore, a positivist study may fail to fully acknowledge contextual influences. Conversely, interpretivism seeks an in-depth understanding of a subject, but the results may lack broadness and generalisability. Additionally, the researcher's interpretations are subject to bias, and thus, the generalisation of the findings is limited, which is often due to the small number of participants involved. However, despite the limitations of these methods, both generate valuable information, and their results are comparable (Armitage, 2007)

Whilst positivism involves quantitative research and interpretivism tends to adopt qualitative research, neither is particularly suitable for mixed methods. Instead, the pragmatist paradigm is considered preferable for a mixed-methods approach, which

comprises both qualitative and quantitative methods (Johnson & Onwuegbuzie, 2004). By using both quantitative and qualitative methods and focusing on what works, pragmatism has garnered considerable support in mixed-methods research (Feilzer, 2010; Johnson & Onwuegbuzie, 2004; Maxcy, 2003; Mertens, 2014; Morgan, 2007). According to Feilzer (2010), pragmatism is concerned with solving practical problems in the real world, rather than on assumptions about the nature of knowledge. However, to ensure rigour, the applicability of a mixed-methods approach has to be determined before the research process is undertaken.

As a researcher, I believe and understand truth as an empirical, evolving reality where different positions can be considered in a variety of ways. Thus, I rejected the option to select between two paradigms for this study (e.g. positivism or interpretivism) because I felt it was important to select a paradigm that would enable my interest in change and improvement. I believe that understanding this world requires openness to different ideas, approaches and explanations, and these opportunities are more readily accessible in a pragmatic approach. Moreover, I found that this view fits with the PDSA framework, because both approaches (i.e. pragmatism and the PDSA cycle) investigate problems broadly, deeply and allow facilitate change.

6.3.3 Third part of the iceberg *(methodology)*

The methodology depicted in the third part of the iceberg metaphor, is a systematic way of gathering knowledge based on a particular research philosophy. A methodology can be based on the interrelationship between the ontological and epistemological beliefs, but is more practical than the epistemology (Hull, 2013). Whilst, Patton (2015) claimed that methodology is neither linked nor dependent on epistemology, Hull (2013) argued that this can only make sense if, for example, the experiment mandates an observational method without specifying the method. Furthermore, the information gathered is interpreted using a research method in which epistemology plays a role. For example, if the epistemological assumption were aligned with interpretivism, it would be unlikely to administer a survey and analyse the data using analytical software, such as SPSS, as its methodology. Accordingly, epistemology and methodology are linked, although the epistemology guides the type of data considered worth collecting and means of interpretation.

According to Denscombe (2008), the mixed methods approach has emerged as a third

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major research paradigm for social research, and combines two major research methods in one empirical project (Johnson, Onwuegbuzie, & Turner, 2007). Mixed-method studies can be preferable to a single method or a methodological investigation design for several reasons (Lipscomb, 2008). For example, such studies incorporate and develop a distinct set of ideas and practices, which mark the approach as a feasible alternative paradigm. However, these advantages may be squandered if the study fails to consider and justify the theoretic decisions. A combination of quantitative and qualitative approaches in mixed-methods research can serve two key purposes. Firstly, it can assure good scientific practice by improving the validity of the methods and findings through discovering and controlling threats to validity arising from the use of either qualitative or quantitative methods. Alternatively, it can be applied to obtain a deeper understanding and a complete picture of the phenomenon by correlating complementary qualitative and quantitative findings.

Maxwell and Mittapalli (2010) noted that the main argument for combining quantitative and qualitative traditions is their complementarity in mixed-methods as they have different strengths and limitations. Combining these traditions enables the researcher to draw deeper conclusions, which may not sometimes be possible if using either method alone. This argument assumed that both traditions represent different ontological, epistemological, methodological paradigms, based on their relative value assumptions. As there is a widespread view among proponents of mixed-methods research that the most appropriate philosophical partner for a quantitative approach is positivism and postpositivism, while the partner for a qualitative approach is constructivism or interpretivism (Teddlie & Tashakkori, 2009), this would seem to highlight a philosophical problem within mixed-methods research. Postpositivism and constructivism differ on major issues regarding the nature of knowledge gathering in social research (Johnson et al., 2007); hence, researchers have raised the term *paradigm war* (Johnson & Onwuegbuzie, 2004; Maxwell & Mittapalli, 2010) to indicate the philosophical differences or disagreements between qualitative and quantitative approaches.

In comparison, methodological pragmatists, such as McEvoy & Richards (2006), Patton (2015), and Tashakkori & Teddlie, (1998), have claimed that the disagreement between postpositivism and constructivism is not fundamental, and that research methods are not limited to certain philosophical paradigms. They have claimed that

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methods can be merged based on their practical usefulness and that the paradigmatic war can be ignored. This view has gained acceptance within the mixed-methods research community, as pragmatism has been promoted as the most suitable philosophical paradigm for such research (Maxcy, 2003; Maxwell & Mittapalli, 2010; Tashakkori & Teddlie, 2003). Accordingly, I believe that the appropriate use of both quantitative and qualitative methods in the social sciences can help in achieving study goals more effectively than the use of either qualitative or quantitative methods alone. The following sections (6.3.3.1, 6.3.3.2, and 6.3.3.3) will elucidate the type and the rationale of the selected research methodology for this study.

6.3.3.1 Quantitative approach

Quantitative methods seek to explain phenomena and/or to address a question; for example, whether a relationship exists between variables (Parahoo, 2006). According to Teddlie and Tashakkori (2009) the quantitative method is simply defined as techniques for collecting, analysing, interpreting and presenting numerical data. This approach is suited to this study's research topic, which is to measure whether clinical supervision could improve the job satisfaction of PHC nurses in the Jeddah city. Thus, the goal of this research is to identify the statistical relationships between dependent and independent variables to generalise the findings to other settings.

In quantitative research, sampling techniques are designed to choose participants in a way that eliminates potential sources of bias. Questionnaires, structured interviews, systematic reviews and statistical analysis are associated with quantitative data collection approaches (Polit & Beck, 2013). The philosophical traditions associated with quantitative methods are: (a) finding a tangible reality (i.e. ontology), (b) establishing reality though deductive empirical research (i.e. epistemology), (c) testing a hypothesis (i.e. methodology), and (d) analysing reliability including verification and falsification (i.e. methods) (McEvoy & Richards, 2006). Therefore, the quantitative approach is suggested for this study due to its strengths, which include, enabling the researcher to compare results accurately; developing reliable descriptions; and testing theories that explain how the causal mechanism activates in certain conditions (Mingers, 2006).

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6.3.3.2 Qualitative approach

Qualitative methods are inductive explorations of a reality, which assume that perception and behaviour can only be understood from participants' perspectives (Parahoo, 2006). The qualitative approach delivers tools to study certain phenomena within their context; if the process is applied correctly, the method becomes valuable for health science research (Baxter & Jack, 2008). According to Taylor, Bodgan and DeVault (2015) qualitative methods are simply defined as the techniques linked to data gathering, interpretation, analysis and the presentation of narrative information. I chose this method to complement the quantitative methods in providing rich descriptions of phenomena and describing the event by moving the inquiry toward with more meaningful explanations. As qualitative approaches are based on non-numerical data, linked with the interpretivism paradigm (as explained in sections 6.3.1 and 6.3.2), this places greater emphasis on constructing and understanding the world (Blaikie, 2000).

The qualitative method usually deals with small-scale but intense data, as it allows for the descriptions of many truths, an understanding of the variables and experiences of different people in different settings, and the development, rather than testing, of a theory. However, the researcher and participants' interactions are an essential part of the research process (Morgan, 1998). The sample is selected using a purposive, or theoretical approach, which is based on the type of inquiry. Methods associated with the interpretivist paradigm include, focus groups, structured interviews and textual analysis (McEvoy & Richards, 2006). Accordingly, the philosophical traditions are (a) to discover intangible reality (ontology), (b) to understand that reality is constructed through social interaction and understanding, being inductive in nature (epistemology), (c) to conduct in-depth fieldwork (methodology), and (d) to validate and interpret data and findings (methods) (McEvoy & Richards, 2006).

Qualitative methods are usually criticised because of their interactions between the researcher and participants (Parahoo, 2014). Simple misunderstandings from text data, whether written or spoken, could affect the interpretation of information: hence, in this study, interaction between the researcher and the participants were limited in order to reduce bias. Therefore, qualitative data is sensitive, and it is crucial to understand the language of participants in order to interpret the gathered information. Another common criticism of qualitative methods is that the study results may not be

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generalisable due to the small sample size. However, this approach is justifiable if the main research question requires the perceptions of a certain 'subgroup' of the population; since this subgroup is special (i.e. those who engaged with clinical supervision sessions) this specialness becomes the focus of the research (Hancock, Ockleford, & Windridge, 2009).

6.3.3.3 The purposes of mixed methods research

Using a mixed methods approach is preferable for this research since the quantitative approach is an appropriate means of testing the effect or impact of the clinical supervision intervention on job satisfaction, while a qualitative approach adds an in-depth understanding of the phenomenon (Pope & Mays, 1995) through participants' perceptions of job satisfaction and the implementation of clinical supervision. According to Downward and Mearman (2007) the mixed-methods approach is in-depth in nature, which refers to the combination of deduction and induction, and it is defined as an interaction between the theory and the data. However, the range of quantitative and qualitative approaches and the decision as to which follows the other depends on the research question (Creswell, 2009).

As a mixed-methods approach reveals the diversity of knowledge gained through both quantitative and qualitative approaches (Morgan, 1998; Kinn & Curzio, 2005), this allows the researcher to define and address a broader range of issues that may emerge during the research. It helps to create a widespread picture comprising information from complementary data (Maxwell & Mittapalli, 2010). The mixed-methods approach is also applied to improve the accuracy of data gathered. It is used to minimise or eliminate the bias that may occur in qualitative methods alone. Mixed-methods research is also used to support sampling; for example, a questionnaire may be distributed to screen proposed participants for inclusion in interviews (Denscombe, 2008). In summary, I believe that the mixed-methods approach can make a vital contribution to this study by involving a broader perspective than either method alone.

6.4 Framework of the Study *(quality improvement framework of PDSA)*

This section presents the conceptual framework of the study, which comprises the implementation of a quality improvement technique, namely Plan, Do, Study, and Act (PDSA) (Speroff & O'Connor, 2004; Taylor et al., 2013). The following paragraphs will discuss the history of the PDSA and the main reasons for using this Quality Improvement (QI) technique to frame the study. In the healthcare context, Riley et al. (2010) defined QI as an implementation of improvement techniques to enhance a process with an outlined beginning and end, through utilising an identified quality improvement framework. Similarly, Rudes, Viglione and Porter (2013) stated that process improvement in quality management is an approach that helps any organisation to identify and resolve incompetent processes through the application of a QI technique. Thus, QI includes the utilisation of process techniques for the analysis, design, and on-going implementation of healthcare processes to achieve measurable improvements in clinical outcomes (Riley et al., 2010).

Pioneers have initiated other improvement designs that have also contributed to the quality movement in the healthcare sector. For example, Ernest Codman was the first American physician to follow patient progress through focusing on the outcome measurement to improve healthcare in hospitals (Harolds, 2015; Salive, Mayfield, & Weissman, 1990). However, Donabedian (1966) focused on the three domains of structure, process and outcome in healthcare, and Juran was a quality control consultant who emphasised customer satisfaction and the Pareto principle. This principle represents the most common reasons that lead to process failure, particularly on the baseline data period (Juran, 1975).

However, the PDSA framework (Peabody et al., 2006; Speroff & O'Connor, 2004) is a rapid improvement cycle in healthcare (Varkey, Reller, & Resar, 2007). Originating from the work of Walter Shewhart in 1939 and further developed by Edwards Deming, the PDSA cycle is a process for evaluating changes after an intervention (Rudes et al., 2013). Shewhart and Deming were important quality pioneers who strove to bring current PDSA scientific methods to 20th Century industries. In 1939, Shewhart (Moen & Norman, 2010) introduced the concept of the three straight-line processes; these constituted a dynamic scientific process of acquiring knowledge, through specification, production and inspection. These were linked, respectively, to hypothesising,

implementing the experiment, and testing the hypothesis. Shewhart was Deming's mentor and was known as the godfather of statistical quality control; he taught him how to apply the statistical process to measure variation (Best & Neuhauser, 2005; Moen & Norman, 2010).

In turn, Deming, known as the father of quality management, was an American electrical engineer, statistician and quality management consultant. He is considered one of the most important pioneers in the quality movement within the healthcare sector (Harolds, 2015; Madu, 2012). In 1982, Deming presented a new development from Shewhart's cycle by modifying the concept to create the 'Deming Wheel'; this focused on the generation of new organisational knowledge (Best & Neuhauser, 2005; Deming, 1982), and was further developed in 1993 to become what is now known as the PDSA cycle (Moen & Norman, 2010).

According to the Institute for Healthcare Improvement (IHI) in the USA, the PDSA framework involves: (a) the development of a plan to monitor the difference by forming a hypothesis for improvement (i.e. Plan); (b) the creation and implementation of a study protocol to collect the data (i.e. Do); (c) the observation and analysis of the data (i.e. Study); and (d) the adoption or rejection of the change, or a further run through the cycle and the development of recommendations based on the findings (i.e. Act) (Institute for Healthcare improvment [IHI], 2016; Speroff & O'Connor, 2004).

The PDSA process is commonly used in management (Hwang, Wen, & Chen, 2010), business (Shewhart, 1939), and more recently in a criminal justice setting (Rudes et al., 2013). According to Langley et al. (2009), it is still unfamiliar in most of healthcare settings because new ideas are often initiated without sufficient testing. However, Berwick (1998) described the PDSA process in a healthcare context as recommended by the Joint Commission International (JCI) accreditation standards. Similarly, Varkey et al. (2007) recommended the use of this approach for rapid improvement in a healthcare setting.

Thus, I chose the PDSA as a research framework in this study for several reasons. Firstly, from my prior experience as a quality improvement design, I knew that it would enable the continuation of the improvement process at the post-doctoral level. Secondly, the PDSA is a systematic approach that could be adapted to reflect the design of a research methodology and used to guide a researcher structurally through the

research process. Thirdly, it demonstrates a functional relationship between process changes and variations in outcomes (Speroff & O'Connor, 2004). Fourthly, it tests the idea of a new intervention by temporarily trialling a change and evaluating its influence (Langley et al., 2009). Fifthly, the PDSA provides the opportunity to grasp whether the anticipated change will work. Sixthly, it is a powerful tool for learning which ideas work, and which do not. Finally, it is safer and more efficient to test changes (improvements) on a small scale before implementing such changes across the board (Rudes et al., 2013). The small-scale testing of new ideas (or trying something out before it is operational) helps to lower the barriers to change, which also leads to a reduction in the resistance to change (National Health System [NHS], 2008). According to Varkey et al. (2007, p.736)

> "… the PDSA involves a trial and learning approach in which a suggested solution and hypothesis testing for improvement are carried out on a small scale before applying the solution to the whole organisation"

Today, with growing concern for quality in healthcare and the demand to improve care, QI has become an organisational mandate in the healthcare sector, particularly in SA. According to the WHO, PHC centres have been concentrating on improving their healthcare programmes. Furthermore, based on my experience as a quality organiser in a PHC setting in Jeddah, there was increasing interest in accreditation programmes in SA, which was one of the first Arab countries to apply for accreditation (Al-Awa et al., 2012). In late 2010, four PHC centres in the Makkah region accepted the challenge to meet the requirements of the Joint Commission International (JCI) for the accreditation of healthcare organisations in order to enhance the quality of the health system in PHC organisations. One of these four selected PHC centres was from the city of Jeddah. Additionally, I was one of the 11 members who were assigned from different PHC sectors to form the main team responsible for handling this project over a two-year period (from 2010 to 2012). In 2012, all four PHC centres were successful in obtaining their JCI Accreditation Certificates (MOH, 2013). The credit for this achievement goes to the qualified PHC teams for using QI tools, such as cause and effect, process maps, the Donabedian model and PDSA techniques. I am proud to have had the opportunity to be part of this experiment, which adopted the use a QI framework to follow particular steps to accomplish the required objectives.

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The overall purpose of applying the PDSA within the research design is to distinguish between project planning, implementation and evaluation strategies. Utilising the framework in this study helps to address and evaluate clinical supervision as a new concept in SA, and to determine whether a clinical supervision intervention can improve job satisfaction. Therefore, the PDSA framework is a collaborative approach that includes all levels of the experiment's organisation in the change process (Rudes et al., 2013). A QI project is not challenging if it is implemented by a person who is knowledgeable and well-trained in the quality improvement methods and techniques (Riley, 2016). Even though I selected the PDSA framework before I decided on the research paradigm, it now appears to be entirely consistent with the pragmatic structure. In particular, the four stages of the PDSA cycle present a pragmatic scientific method for testing changes in a complex system by formulating a hypothesis (i.e. plan stage), collecting data to test this hypothesis (i.e. do stage), then analysing and interpreting the results and making inferences to iterate the hypothesis (i.e. study and the act stages). The cycle could be continuous to improve the process or resolve the problem again (i.e. a new PDSA cycle) (Taylor et al., 2013). However, in the current study, through developing recommendations and conducting future research the new 'Plan' stage will be initiated.

6.5 Summary

This chapter presented a detailed account of the research philosophy, strategy and methodology according to which the study will be conducted. I often felt puzzled as I noticed some arguments and ambiguity in the literature regarding the philosophy of study paradigms. Furthermore, I felt totally lost due to the conflicting ideas, and the overlap between my previous professional experience as a quality organiser and the new knowledge that I gained as a PhD candidate. Usually, when conducting research, most researchers simply follow the process of their own tradition without dwelling on more fundamental issues. Historically, paradigms may have been applied to certain topics and strategies, yet O'Gorman and MacIntosh (2014) stated that it is wise to pay attention to the innovation that can be found in a mixed-methods approach. Hence, I believe that it is crucial to understand these arguments because research issues often need eclectic designs that draw from two or more traditions.

In this study, the paradigms play a critical role in underpinning the research; as such,

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the choice of an appropriate paradigm is a necessary step to justify the use of mixed methods. Thus, using the iceberg metaphor to elaborate the methodology chapter helped to systematically and structurally shapes the research paradigm. The research paradigm and approach have been clearly stated, starting with the ontology and epistemology and moving on to the methodology, and finally, the methods (these will be further discussed in Chapter 7). This research embraces both positivism (i.e., an outsider view) and interpretivism (i.e., an insider view), utilising a mixture of quantitative and qualitative tools. I have explained and justified both approaches in detail in this chapter, highlighting the overlap between ontological, and epistemological assumptions. However, some confusion arose due to my dual role as a researcher and quality organiser; additionally, the risk of bias was also increased because I was familiar with the study setting.

Both realism and relativism were suggested as ontological paradigms for this study, because they reflect rather than create reality. I preferred to use both outsider and insider views to add more in-depth to the study and to allow the PHC nurses to take part in solving their own problems through taking decisions regarding the effect of clinical supervision. Moreover, realist and relativist paradigms have been widely applied in evaluation programmes as well as other research areas, such as social studies. This implies that, with further development, it could provide a much-needed paradigm for mixed-methods research. However, using interpretivism in the post-test phase to understand the clinical supervision intervention and its role in improving the PHC nurses' job satisfaction may help to create reality. Therefore, epistemologically, pragmatism offers the most justifiable approach for mixed-methods research. Furthermore, the pragmatic view has been proposed because it fits with the PDSA, which aims to plan and discuss the solution to improve the problem through organisational involvement. This chapter shows how the PDSA framework is an important technique to assist the systematic design of the research study. The PDSA explains how to test a change by trying it, monitoring the results and then learning from those findings. The main purpose of quality improvement research through a framework such as the PDSA is to build a rational relationship between the system changes and the variation in outcomes. More clarification regarding the use of the PDSA will be provided in the methods chapter, which will also justify the choice of this quality improvement concept for the study.

In this study, the methodology subheading is presented as the third part of the iceberg image, which is considered as the mixed-methods approach. Both quantitative and qualitative methods are used in this study to fill the gap and solve the problem. The use of mixed-methods is an attempt to balance the strengths and weaknesses of the study by increasing the generalisability of results, understanding the problem and validating the results using the study hypothesis. From this perspective, I believe that a mixed-methods approach helps to produce strong evidence; furthermore, the qualitative methods aim to increase the understanding of clinical supervision intervention barriers and the impact on PHC nurses' job satisfaction in way that quantitative methods alone cannot. Thus, the use of mixed-methods in this study was understood as essential in shedding light on the success of the clinical supervision intervention and in enabling a better understanding and deeper insight into the context, adding richness to the data.

Finally, I realised that designing the research paradigm is not an easy step to consider in the methodology chapter. The research paradigm needs to be tailored cautiously according to the research question and purpose. It is crucial to understand the paradigm to enable the researcher to defend the selections and designs as the most suitable for their study. The next chapter will discuss the methods, which highlight the study setting, sampling, study design and how the study data will be conducted by demonstrating the data collection tools that were utilised in this study.

Act

Plan

Chapter 7

Study

Do
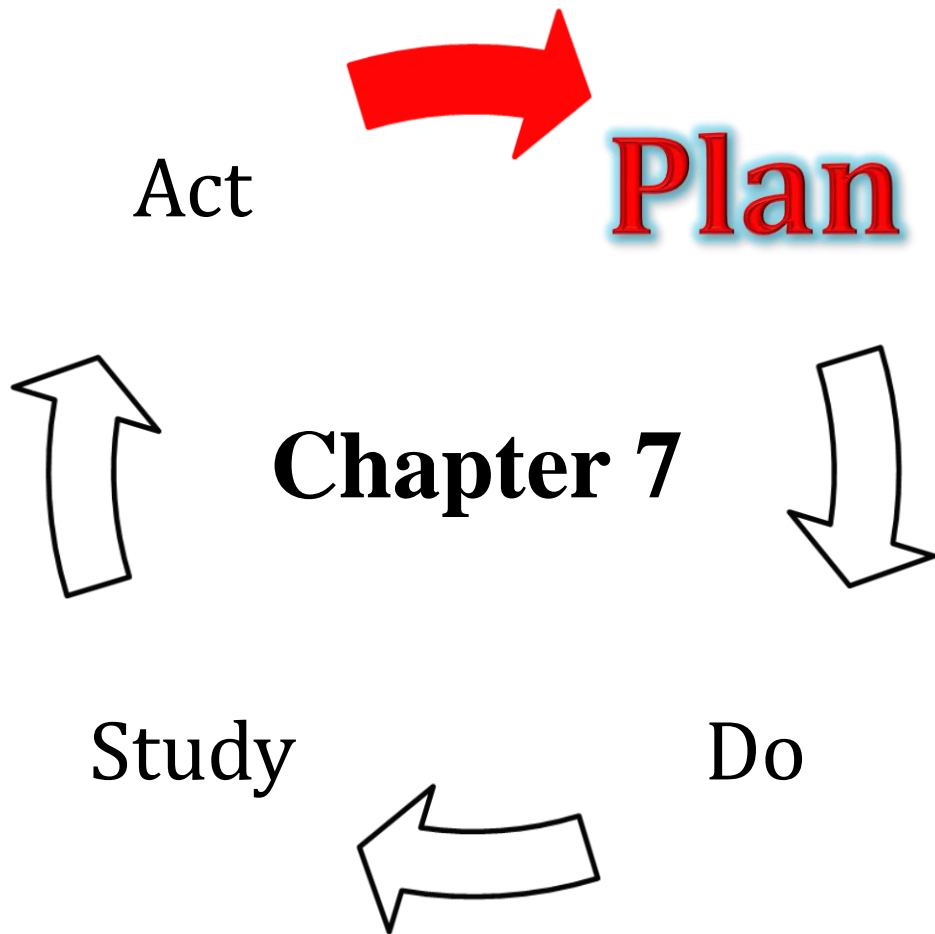
| **Method** |
| (**Plan** Stage) |

7.1 Introduction

Whilst the previous chapter explored both the research paradigm and the PDSA framework applied in this study, this chapter forms a further part of the 'Plan' stage of the PDSA framework. In continuing the iceberg metaphor from the previous chapter, the methods section presents the tip of the iceberg, which is the final part of the research paradigm and highlights how the study will be conducted. Accordingly, this chapter explains the research methods employed and the procedures addressed before the data collection, such as the selection of the study design and the identification of the study setting and sampling, including the determination of the recruitment methods and study groups. Although this chapter introduces and rationalises the choice of data collection tools, which were the Minnesota Satisfaction Questionnaire (MSQ) and the semi-structured interview, details of the data gathering process will be explained in Chapter 8. The ethical approval processes and data protection issues are also explained, whilst the clinical supervision risk management techniques, the timescales, and resource management are highlighted at the end of this chapter.

7.2 Study Design and Rationale

Baxter and Jack (2008) stated that, once a research question and the research boundaries (i.e. ontology, epistemology and methodology) are determined, the study design must be considered. The study design entails the arrangement of the data collection and analysis in a manner that is seen as an actualisation of logic through a set of procedures that enhance the data validity for the given research problem (Kothari, 2004). According to Parahoo (2014), the study design denotes the plan, structure and execution of the research with a view to maximising the validity of the findings; it represents not only the actions taken to collect the data but also the beliefs of the researcher and the logic of the enquiry. The choice of research design influences the overall validity of the research-based conclusions; however, including an intervention in the study design increases its internal validity (Stone-Romero, 2004).

The design also applies the underlying philosophical assumptions of the study to the research design and data collection. Yin (2003) argues that a study design could colloquially be called an action plan for 'getting from here to there', where 'here' may

be defined as the initial set of questions to be answered, and 'there' is a set of conclusions. As a 'here' and 'there' comparison is the central focus of this study (Polit & Beck, 2004), a baseline could be established to correlate levels before and after the intervention.

The design chosen for this study was a quasi-experiment with a pre-test and post-test non-equivalent control group design (Figure 7-1). This uses the MSQ questionnaire, which is best suited to generate the quantitative data required and meet the objectives of this study. According to Portney and Watkins (2009, 279);

> *"The quasi-experimental design enables the researcher to suggest causal relationships between variables and describe the pattern of change"*

A quasi-experimental design was chosen because this method provides an opportunity to measure observations, differences and changes before and after the intervention (Parahoo, 2014). A pre-test/post-test design determines whether knowledge improves after the implementation of an intervention (Speroff & O'Connor, 2004).
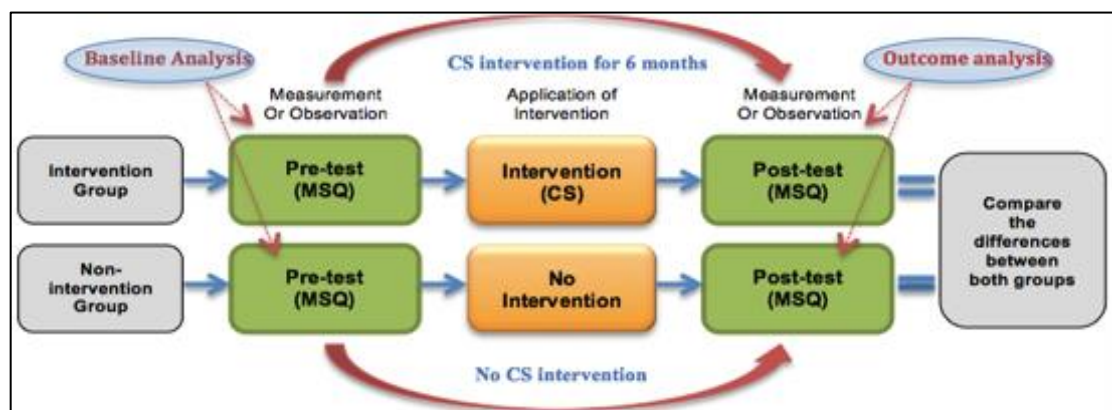
Figure 7-1: Quasi-experimental design (non-equivalent control group pre-test and post-test)

The study design is validated by relevant literature; for example, Butterworth et al. (1997) and Nicklin (1997) particularly recommended a quasi-experimental design to evaluate the impact of clinical supervision on nursing staff. As discussed in Chapter 5, one study conducted by Koivu et al. (2012) has used a quasi-experimental design to explore the effects of clinical supervision on the development of nurses' well-being at work over a four-year period. However, their study design involved a natural experiment with nurses who were newly trained as clinical supervisors and beginning to practise on medical and surgical wards at a Finnish university hospital. In contrast,

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the current study evaluated the before and after job satisfaction level, which was a dependent variable, for two groups; one group received a six-month clinical supervision intervention, which was an independent variable. While the six-month time limit for the study was determined by the length of the PhD programme, the timeframe has been validated by other studies, which have indicated that a minimum of 6-12 months of clinical supervision is required for targeted improvement (Cross et al., 2010; Edwards et al., 2006; Gonge & Buus, 2011; Hyrkäs, 2005; Hyrkäs et al., 2006).

In a true experiment, subjects are assigned randomly to intervention or non-intervention groups; this assumes that an independent variable caused the observed outcomes because the two groups should not differ from each other, particularly at the start of the experiment. In a quasi-experiment, the non-intervention and intervention groups are non-equivalent (assignment to the groups is not by randomisation), as the intervention is administered to only one group. Therefore, statistical control is required for as many of these differences as possible. However, the lack of randomisation in a quasi-experimental design could increase the risk of selection bias (Tacconelli, 2010). Moreover, quasi-experimental study designs do not have a high degree of control over variables, such as age, gender, qualifications, experience, or the dependent variable (Parahoo, 2006), which could impact on the internal validity of the study. However, Mark and Reichardt (2009) and Salazar, Crosby, and DiClemente (2015) have stated that using a quasi-experimental pre– and post-test non-equivalent control group design controls the most common threats to internal validity, with the exception of sampling bias and attrition. Bias was reduced in this study by using inclusion and exclusion criteria for the locations in the current study (see section 7.3.1).

The non-equivalent design was also chosen because this study introduces a new intervention, namely clinical supervision, to PHC nurses in Jeddah, in order to establish a link between this intervention and job satisfaction. Thus, it was not feasible to randomise the sample into two groups within the same setting. To test the effectiveness of the new supervision mechanism for a group of PHC nurses, comparison data were gathered from nurses in a similar PHC organisation who were exposed to standard procedures, such as regular inspection supervision, rather than to the innovation. The pre- and post-testing of both control and intervention groups strengthened the design by controlling threats related to testing, history and instrumentation effects (Harris et al., 2006).

7.3 Study Setting

Determining the study setting is a preparatory research step that comprises part of the 'Plan' stage of the PDSA framework. The choice of PHC centres in SA as a setting for this study was justified in section 1.4, and the key selection criteria for the PHC centres are discussed in the following section.

7.3.1 Locations

Six PHC sectors cover the entire population of Jeddah city; the North, Northwest, Middle, Northeast, Southeast and Southwest sectors. Each sector contains seven to ten PHC centres, depending on the location and population size. The quasi-experimental pre- and post-tests were conducted in six PHC centres to assure coverage of all sectors; this involved one centre in each sector across Jeddah city (Figure 7-2). The final PHC centres were chosen based on the following key inclusion criteria:

- Geography (one PHC centre from each sector);
- A minimum number of 17 qualified nursing staff from each centre (based on the power calculation in section 7.4);
- Accessible by public transport to enable easy researcher access (no construction work in that area).

The two furthest PHC centre locations were about 20 miles apart. The six PHC centres were divided into intervention and non-intervention groups. The allocation of these PHC centres to either group was based on the feasibility of the conduct of the research, which was determined by accessibility and other practical concerns. The three PHC centres that were most accessible to the researcher were assigned to the intervention group. The intervention group centres implemented clinical supervision within the working practices of the qualified PHC nurses; the centres assigned to the non-intervention group did not receive clinical supervision. The latter participated in post-testing through the collection and submission of outcomes data only, and all data were collected between March and October 2016.
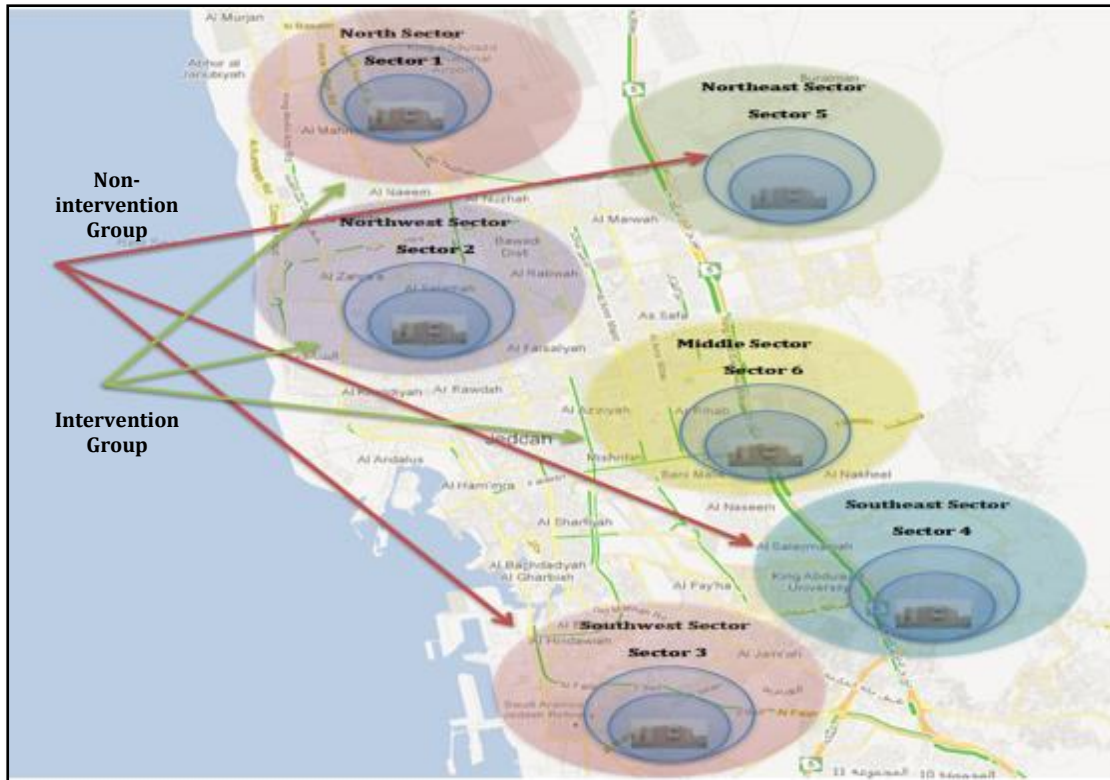
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Figure 7-2: The six PHC centres identified for intervention and non-intervention groups in the Jeddah, SA

7.4 Study Sampling

A sample design is part of the 'Plan' stage of the PDSA framework (Röhrig, du Prel, Wachtlin, Kwiecien, & Blettner, 2010) and is determined prior to the subject recruitment or data collection (Kothari, 2004). The design can use probability or non-probability samples (Doherty, 1994). In probability sampling, the researcher knows whether the sample is representative of the population as each element has a known probability of being included (Tansey, 2007). In comparison, a non-probability technique selects samples based on some element of the researcher's judgment rather than randomly; this technique includes convenience, purposive and quota sampling (Kothari, 2004).

A non-probability purposive sampling method was used to select the study locations. According to Tansey (2007), purposive sampling requires judgment, as it uses criteria based on the purpose of the study and the researcher's knowledge of the population. In this study, the PHC centres were meant to represent the characteristics of the population, and the key inclusion criteria discussed in section 7.3.1 was used and the power calculations discussed in the next paragraph were applied. From each centre, a convenience sample of volunteers (Saks & Allsop, 2012) was allocated into groups.

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Convenience, or availability, sampling uses the most readily available participants until the required sample size is reached (Tansey, 2007). The primary advantage of this method lies in the ease of recruitment; there are no strict selection rules, and the sample can be drawn in whatever way is easiest for the researcher. However, a major weakness of this method arises when no specific criteria are used for the selection of participants: thus, it is impossible to determine how representative the sample is of the general population and other study samples.

In order to ensure reliable and adequate numbers of recruited participants, research protocols must determine the minimum sample population (Campbell, Julious, & Altman, 1995). The current study used three different calculation procedures to ensure that the minimum sample population was recruited. The first method involved the use of a power calculation suggested by Campbell et al. (1995). In a clinical supervision study conducted by Hyrkäs et al. (2006), a beta (β) value of 0.2 provided a power of ($1 - \beta$) = 1 - 0.2 = 0.8 (80%), with an alpha value of $\alpha = 0.05$, a standard deviation of 8.8 and a standard difference of 6.73. The 'd' value, where d = expected difference/standard deviation, can be calculated as 6.73/8.8 = 0.76. The plot of power (P) versus 'd' is shown in Appendix 4a. This method suggests a minimum population of 33 for each group. A second method used Lehr's formula to compare the calculated sample number using the power calculations. In this calculation, $m = 16/d^2$; therefore, $m = 16/0.76^2$, which recommended 29 participants per group. The third approach used sample size calculator software (Raosoft, 2009), which calculated a minimum sample of 31 in each group, as shown in Appendix 4b. The largest estimate of these three similar calculations was used, indicating a minimum sample size of 33 participants in each group.

The sample size calculation was adopted to increase the probability that effects of the intervention would be statistically significant. This sample size calculation was deemed suitable for the study design and the statistical analysis methods. Moreover, the power calculation assures that the sample size is valid from both scientific and organisational points of view in terms of the sample availability and data management. If the number of participants within the six purposively selected PHC centres had been below the Campbell sample size calculation (Campbell et al., 1995), which is 33 for each group, statistical analysis may have been adversely influenced. According to Röhrig et al. (2010), sample size planning must include procedures for dealing with an inadequate sample size, as well as missing values or participants who leave the study. Hence, for

this study, a contingency plan was designed to collect additional data (which used the same inclusion criteria - see section 7.3.1) from three further PHC centres in Jeddah if the collected sample size was insufficient.

7.4.1 Participant recruitment

For the current study, participant recruitment was carried out in two phases; the initial phase involved the recruitment of participants from the six PHC centres, and recruitment of external moderators for training the participants in clinical supervision (see section 7.4.1.1). In the second phase, participants were recruited to provide in-depth information in semi-structured interviews (see section 7.4.1.2).

7.4.1.1 Initial recruitment

Selecting PHC centres:

Sampling technique was described in section 7.3.1. A recruitment invitation flyer (Appendix 5) was designed to increase the response rate of participants from each centre.

Dividing participants or centres:

The exact number of participants in each group is determined in section 9.2.1.

External moderators (trainers or clinical supervisors):

To introduce the clinical supervision programme in each PHC centre, qualified clinical supervisors or trainers needed to train the participants. The researcher was previously known to some participants as a quality organiser and lacked the expertise to facilitate this training. This was problematic as Brunero and Lamont (2012) highly recommended that training is provided by external moderators who are not part of the study setting. Moreover, Lynch and Happell (2008) and O'Riordan (2001) also suggested that using external moderators could reduce negative perceptions and views in any organisation, due to sensitive relationships between co-workers. Thus, to assure good quality research, and avoid negative views, or risk of coercion, bias and individual sensitivity among the PHC organisations' employees, external moderators were assigned to introduce clinical supervision and to train the intervention group.

The following inclusion criteria were determined to recruit external moderators who would adopt the role of clinical supervisors for one month:

- Experienced nurses;

- Already undertaking mentorship or supervision roles in a hospital and/or a university in the Jeddah city;

- Highly educated, i.e. holding a PhD or MSc in Nursing;

- Not line managers within a PHC organisation; working in different sectors, such as hospitals and/or universities;

- Do not have any special requirements (i.e. transportation, salary, specific time for training)

The intention was to recruit three moderators using the above criteria, in order to assign one moderator per centre; the final recruitment number for these moderators is discussed in more detail in section 8.2.1. Once recruited, moderators had a number of responsibilities, including one hour of involvement with the introduction meeting, and supporting the researcher by providing general information about clinical supervision to the nurses interested in volunteering for the study (see section 8.2.2). Under the researcher's direction, they were also responsible for the design of the clinical supervision training programme. The most important responsibility of these external moderators was to provide a two-day training programme for each participant in the intervention group during April 2016 (see section 8.3.1). The aim of this training programme was to ensure that participants could implement the clinical supervision programme for the following six months. Further moderator responsibilities included: the division of participants into supervisors and supervisees, and the documentation and progress reporting of each session. These are discussed in the training process section, 8.3.1.3.

7.4.1.2 Second phase of recruitment

Participants undertaking semi-structured interviews:

Following the clinical supervision and completion of the second MSQ questionnaire, it was determined that a maximum of six participants from the initial intervention group should provide further information through semi-structured interviews. The rationale for the interview structure and the suggested number of participants are provided in sections 7.6.2, and 8.5 respectively. These participants were recruited through their returned consent forms, which elicited agreement to be interviewed on their job satisfaction and whether clinical supervision influenced this or any other outcomes, such as stress, burnout, knowledge and skills. The following section addresses ethical concerns regarding the elicitation of this agreement.

7.5 Ethical Considerations

Ethics form a set of moral standards about the appropriate conduct towards experimental settings and respondents (Parahoo, 2006). Obtaining ethical approval is an essential stage of this research, whether obtained from the Research Ethics Committee (REC) or the Institutional Review Board (IRB) (Gajjar, 2013). Both bodies have a mission to ensure participants' rights and to guarantee that the study poses no potential harm. Often, ethical research issues are handled by an information letter, consent form and the terms of anonymity and confidentiality (Parahoo, 2006). For this study, ethical approval was obtained and independently provided in writing prior to the commencement from the following:

- Health Research Ethics Approval Panel, University of Salford (No: HSCR 15-97; see Appendix 6);
- MOH, SA (Appendix 7);
- Following ethical approval from the MOH, a confirmation letter was sent to the General Director and Nursing Director of the PHC organisation in the Jeddah city.

In addition, consent was obtained from the following:

- Participants in the selected PHC centres;
- The external moderators;

After approval was secured from the MOH, confirmation was sought from the PHC sector in Jeddah and from external moderators via invitation letters, information sheets and consent forms (Appendices 8, 9, 10a, 10b, 11a, 11b, 12a, 12b, 13a, 13b and 14 a-e), as discussed in the following sections. The information sheet was sent to the nurses before commencing the study, clearly explained the implications of the research, and their right to withdraw at any stage of the study. After prospective participants had been given an opportunity to read and understand the purpose of the intervention and to ask questions and clarify any points, they were asked to sign a consent form.

7.5.1 General Director and Nursing Director of PHC administration

PHC nursing policy in the Jeddah city mandates that nurses are not allowed to study or participate in other activities without prior permission from the Nursing Director of the PHC administration, or the head nurse in each centre. Therefore, permission to conduct the study in the selected centres was requested from the General Director and the Nursing Director of PHC administration in the Jeddah city. These approval letters from the directors enabled the PHC nurses to participate in the study (Appendices 8 and 9). The letter to the Nursing Director included the purpose, objectives and plan of the study and was supported by the participants' invitation letter, reply slip and the information sheet that explained the study's purpose and benefits and the assured confidentiality, (see Appendices 10a, 10b, 11a, 11b, 12a and 12b for ethics-related documents).

The General Director and the PHC Nursing Director provided their consent for the study by sending ethical approval from the MOH, the invitation letter, the information sheet and the reply slip to the Research Department in the PHC organisation, which granted written permission to the researcher (Appendix 8). This permission letter was given to administrative managers in each purposively chosen PHC centre. The invitation letters, information sheets and reply slips were distributed across the six PHC centres at the beginning of March 2016 by the head nurses from each centre, who, in turn, distributed the letters to all PHC nursing staff who might participate in the study. The head nurses, however, had no access to individual participants' responses to the MSQ questionnaire or the interview data, although measures were put in place by the researcher, with support from head nurses, to ensure that participants' work demands were met whilst they engaged in the study. The process outlined above is the expected and established communication pathway for all matters relating to PHC services in SA.

7.5.2 Participants' consent

Permission from the nurses in the two groups was considered a matter of operational ethics. The information sheet for the participants in both groups explained the purpose and process of the study and assured confidentiality. Participants were informed that demographic data and job satisfaction evaluation scores were grouped before reporting, so that individual supervisees, supervisors, and centres were remained anonymous. Further confidentiality was guaranteed by the response method; although both intervention and non-intervention groups were invited to take part in the study by the

head nurse of each PHC centre, those who wanted to participate were required to post their reply slip within 7-15 days directly to the researcher, in a sealed collection box placed in each PHC centre (Appendices 10a, 10b, 11a, 11b, 12a and 12b). In order to maximise the response rate, participants who had not responded within the required time were sent reminder letters by the researcher (Polit & Beck, 2004). Participants who had not responded in this time were identified by checking the nursing staff lists (i.e. the master list) (see section 7.5.3) that was given to the researcher by the head nurses from each selected centre so that the head nurses were not aware of the nurses who had responded. The non-intervention group was asked to complete the consent form (Appendix 13b) and the MSQ questionnaire (Appendix 15) and return both items to the researcher via the sealed collection box in their centres by the middle of March 2016.

7.5.2.1 Consent from the intervention group

The potential intervention group participants ($n = 43$) who would be trained and received clinical supervision, were invited to attend a voluntary explanatory one-hour explanatory introduction meeting about the study, after the researcher established verbal permission from the head nurse in each centre. Following introductory meeting, which was held in the middle of March 2016, participants were given the consent form (Appendix 13a) and the MSQ questionnaire (Appendix 15). Those interested in participating were asked to return both items to the researcher the following day via the same collection box.

7.5.2.2 Consent from external moderators

A written invitation was sent to external moderators (see section 8.2.1), to participate by training the intervention group. These letters (Appendix 14a) were sent through the researcher's email with an attached reply slip (Appendix 14b), an information sheet that included an explanation about how to participate in the study (Appendix 14c) and the consent form (Appendix 14d). They were asked to send the reply slip directly to the researcher within 7-15 days via email; for more detail see Appendices 14a, b, c, and d.

7.5.3 Key ethical principles for data protection

The data in this study were anonymised, and the research and ethical governance strategies of the University of Salford were adhered to. To meet the anonymity requirements of this study, the selected six PHC centres were coded. The three PHC centres selected to form the non-intervention group were coded as centres A1, A2 and A3, whilst the three that formed the intervention group were coded as centres B1, B2 and B3. Confidentiality was safeguarded at all times when linking the pre-test and post-test data, as each participant was assigned an anonymous participant code. A 'master list', which included the participant's name, email address and telephone number, was only made accessible to the researcher for the purpose of assigning codes and updating the coding system if a participant withdrew from the study.

The coding involved the assignation of random numbers ranging, from 1001 to 'n', on pieces of paper. Each participant was asked to choose one numbered piece of paper and asked to copy the number onto the back of the first page of the MSQ questionnaire. The participants were asked not to identify themselves by name on the MSQ, and the completed questionnaires were coded sequentially, beginning with the intervention group and continuing to the non-intervention group. Although, according to the International Training and Education Centre for Health (I-TECH; 2008), matching pre- and post-test responses for each participant enables the study of both individual and group knowledge changes, the linking of pre-test and post-test data, was avoided in the interest of data protection.

Data collected from the questionnaires and interview recordings were stored separately in a password-protected file on a password-protected personal computer (PC); the data were also backed up on the University's password-protected shared drive. Thus, all collected information was stored in accordance with the United Kingdom's Data Protection Act (1998) and was only accessible to the researcher and the PhD supervision team. Other techniques employed for data protection included:

- The using of age categories instead of date of birth (DOB) to reduce participant identification;
- The anonymising and coding of all the data collected, such as questionnaires, interview recordings and transcripts;

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- The storage of audio recordings in a locked filing cabinet to which only the researcher had access.

Furthermore, the researcher did not travel with both the master list and the collected primary data at the same time. Only the questionnaire data were transported and stored on a password-protected PC, while the participants' coding systems were kept on the University of Salford shared drive. If transcripts and data for analysis had to be transported, they were stored in a password-protected PC file.

In accordance with the Data Protection Act 1998, confidentiality was maintained at all times; the researcher did not divulge any information to managers or other individuals about the staff who participated or their comments during the study. The researcher discussed data with the doctoral supervision team without identifying details, and reports were written to maintain participant confidentiality; these measures were made explicit on the participants' information sheets. Moreover, the data will be destroyed once they are no longer required, which will be five years after the thesis submission; this period enables access to data for the purposes of dissemination, in accordance with the Data protection act (1998).

7.6 Data Collection Tools

This study used a self-reported questionnaire from all participants working in the six selected PHC centres; however, semi-structured interviews were only conducted with nurses who had received clinical supervision for at least three of the six months available. Both data collection methods utilised in this study are described in sections 7.6.1 and 7.6.2, whilst the data collection period occurred between March and October 2016.

7.6.1 Quantitative data collection

A structured questionnaire is a quantitative technique for data collection (Parahoo, 2006), as it contains only closed questions. This kind of questionnaire is also known as a self-report, or self-administered, questionnaire (Polit & Beck, 2004); participants complete the tool by themselves and the data are entered directly into a computer. This standardised written form helps to reduce the potential bias resulting from interaction with participants.

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7.6.1.1 Minnesota satisfaction questionnaire (MSQ)

According to Abubakar and Musa (2015) and Martins and Proenca (2012), several scales have been developed to assess job satisfaction; the most popular measures are the Minnesota Satisfaction Questionnaire (MSQ) (Weiss et al., 1967), the Job Descriptive Index (Smith, Kendall, & Hulin, 1969) and the Job Satisfaction Survey (Spector, 1985, 1997). Permission to use the copyrighted MSQ was obtained from the originating authors (see Appendices 15 and 16). The MSQ developed in 1967 at the University of Minnesota by Weiss et al. (1967), is based on Herzberg's theory (Carson, 1998) (section 3.3.1); it concentrates on the internal job factors that motivate and encourage employees to take part in planning, doing and evaluating their work, as well as to make changes and improvements to the organisation's services (Coomber & Barriball, 2007).

The MSQ was chosen for this study because of its proven validity and reliability in both America (Koelbel, Fuller, & Misener, 1991) and Britain (Waite, Oliver, Carson, & Fagin, 1996). According to Babbie (2007), validity and reliability are the most important criteria for research instruments, where *validity* is the extent to which measurements relate to the topic under investigation, and r*eliability* refers to the degree to which the instrument produces stable and consistent results (Scott & Mazhindu, 2014). Waite et al. (1996) state that the MSQ scale has established both good reliability (r = 0.58) and validity. Therefore, the MSQ is a well-known instrument and is stable over time (Martins & Proenca, 2012). It has been widely used in a variety of other studies, including those by Connolly and Viswesvaran (2000), Hyrkäs (2005), and Hyrkäs et al. (2006). It has also been used in a Saudi Arabian healthcare setting (Al-Ahmadi, 2002) and in a non-healthcare setting, where it has been translated into Arabic by Ben-Bakr, Al-Shammari, Jefri and Prasad (1994). Carson (1998) recommended using the MSQ with studies that consider the impact of clinical supervision on job satisfaction. Accordingly, Hyrkäs (2005) and Hyrkäs et al. (2006) have used the MSQ to evaluate the efficacy of clinical supervision on job satisfaction among Finnish nursing staff. Hyrkäs (2005) specifically used the tool to evaluate the impact of clinical supervision and to assess the level of job satisfaction among mental health and psychiatric healthcare professionals. Previous studies have generated excellent alpha coefficient values, ranging from 0.85 to 0.91 (Ben-Bakr et al., 1994; Saleh, Darawad, & Al-Hussami, 2014).

The MSQ scale consists of 20 items, which are rated on a 5-point Likert scale that ranges from: 1 = very dissatisfied with my job; 2 = dissatisfied with my job; 3 = can't decide; 4 = satisfied with my job, and 5 = very satisfied with my job (Martins & Proenca, 2012). The MSQ package for the current study includes two sections. Section one consists of demographic information and is composed of five items (i.e. nationality, age, gender, experience and level of education). In section two, content validity is investigated utilising intrinsic, extrinsic and general factors (Green, 2000; Weiss et al., 1967). The 20 items in the MSQ are divided into these three subscales:

- o Twelve items were related to intrinsic subscales, such as satisfaction with the opportunity to use abilities, and feelings of accomplishment from the job.
- o Two items were related to the general subscale, such as satisfaction with working conditions.
- o Six items were related to the extrinsic subscale, such as satisfaction with pay and supervision.

Having obtained written permission to adopt and utilise the MSQ questionnaire from the authors, the questionnaire was translated from English into Arabic using back translation techniques, in accordance with international guidelines for translational studies (Sousa & Rojjanasrirat, 2011; Wild et al., 2005). This translation technique was applied to ensure the reliability of the adaptation and to safeguard the cross-cultural validity of the research instrument (Maneesriwongul & Dixon, 2004). The back-translation process involved multiple steps. In *step 1*, the MSQ was translated from English into the target language, Arabic, by a certified professional translator in SA. In *step 2*, the researcher compared the original and translated versions of the MSQ and looked for any word discrepancies. In *step 3*, another certified translator who was also fluent in both English and Arabic translated the initial version of the Arabic MSQ back into English; this translator was blinded to the original version of the MSQ. In *step 4*, two experts with doctorates in nursing reviewed the back-translated version to evaluate the items and the similarity of instruction with the original English version. The translation was revised several times until the verbal equivalence of the Arabic and English versions was assured (Abubakar & Musa, 2015; Ben-Bakr et al., 1994). After this process, a pilot study was conducted with a small group ($n = 5$) of postgraduate

nurses, where discussion and reflection around the scale fine-tuned some of the vocabulary (Martins & Proenca, 2012).

7.6.2 Qualitative data collection

Interviewing is one of the most popular qualitative data collection methods (Schiller & Spies, 2006). An interview enables the researcher to involve the interviewee in either a face-to-face or a remote conversation while gathering information relevant to the study (Portney & Watkins, 2009). According to Edwards and Holland (2013), different kinds of interview can be utilised to collect data, such as structured, semi-structured and unstructured, or sometimes focus groups. Castillo-Montoya (2016) and Mathers, Fox and Hunn (1998) have argued that a structured interview has a rigorous set of questions that do not allow one to divert, while both a semi-structured interview and a focus group are open, allowing new ideas to emerge through what the interviewee says. The focus group and semi-structured processes are most commonly used, as they offer a comfortable, conversational, non-judgmental environment for people to share information (Longhurst, 2003).

A focus group is an in-depth group interview with participants who are selected on the basis that they will have something to say on a certain topic (Rabiee, 2004). This technique is unique in that large amounts of data are generated based on the homogeneity of the group. Kitzinger (1995) has stated that group dynamics are a distinct feature of focus-group interviews, where the social interaction can provide deeper and richer data than the individual interview. Some researchers recommend using focus groups when participants are comfortable talking to each other (Rabiee, 2004; Tanielian et al., 2008). However, this technique does not employ a clear agenda (Longhurst, 2003) and is conducted informally (Portney & Watkins, 2009) which could mean that interviewees explore a subject from too many angles and at insufficient depth.

For several reasons, for the purposes of this study, a focus group is less appropriate than a semi-structured interview. Firstly, group dynamics may promote a misleading, pre-determined emphasis that not all group members may share; this can discourage certain people from participating (Tanielian et al., 2008). Secondly, due to cultural restrictions, trust concerns and lower confidence, some participants may not feel free to discuss sensitive issues in front of others. However, semi-structured interviews provide a

chance for participants to explore issues that they feel are important (Longhurst, 2003). Finally, transcribing a single interview as soon as possible after the interview is much easier than transcribing a focus group, which have a number of speakers and require each speaker to be identified. Thus, the semi-structured interview was considered preferable as the second data collection tool for this study. The following paragraphs describe this method and its rationale in more detail.

A semi-structured interview is a research method frequently used in the social sciences, as it uses a framework to explore particular themes or responses (Parahoo, 2014). The specific topic that the interviewer explores is usually thought out well in advance of the interview. Although semi-structured interviews are widely used as a single reality in qualitative research (Gill, Stewart, Treasure, & Chadwick, 2008; Parahoo, 2014), in the current study they enhance quantitative data. Semi-structured interviews are considered a useful tool for participants to express their experiences and thoughts (Barriball & While, 1994; Winstanley & White, 2003). Moreover, this method is preferable to a focus group, for several reasons; for example, it provides the opportunity to explore the perceptions and opinions of individual participants regarding complex issues without the complexities associated with group dynamics (Barriball & While, 1994).

The use of semi-structured interviews to gather information on the impact of clinical supervision is also supported by other studies (Bradshaw, Butterworth, & Mairs, 2007; White & Winstanley, 2010). According to Creswell (2009), semi-structured interviews provide valuable information from the context of participants' experiences, whilst interviews are also used to reduce some of the potential criticisms of the research methodology (Alleyne & Jumaa, 2007). Schiller and Spies (2006) has stated that a semi-structured interview maximises the opportunity for participants to tell their stories in a way that also ensures that the researcher gathers data relevant to the study. In this study, semi-structured interviews elicited stories from participants who had attended clinical supervision sessions in the selected PHC centres and who had completed the post-test.

To ensure the interviews were efficient and valuable, an 'interview schedule' (Appendix 17) was prepared, and used as a guide rather than the means to dictate the interview (Barriball & While, 1994; Rowley, 2012). A semi-structured interview guide or interview schedule is beneficial for interviewers, who can informally group questions

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that could be asked in similar ways for different participants. The interview schedule guides the interviewer's focus to the topics at hand without constraining them to a particular format. This freedom enables interviewers to design their questions according to the interview context and the people they are interviewing. In the current study, interview questions concerned PHC nurses' experiences with the clinical supervision intervention, and whether this had improved their job satisfaction.

The following guidelines were considered in the design of the interview schedule:

- The questions should not restrict or inhibit the interviewee from answering due to lack of knowledge or experience (Barriball & While, 1994; Parahoo, 2014).

- Leading questions and closed questions eliciting *yes* or *no* answers should be avoided (Whiting, 2008), since the interviewer's expectations can affect the informant's response. For example, asking the participant 'Don't you agree that the intervention of clinical supervision has improved your job satisfaction level?' encourages a certain response. The questions used in this study were phrased openly, for example: 'What are your initial thoughts and feelings about the clinical supervision approach?' and 'How do you think your job satisfaction could be improved?'

- The questions were designed to elicit the participant's experiences and opinions, as has been strongly recommended by Mathers et al. (1998).

- Difficult or unclear words that the interviewee might not understand were avoided in the interview.

- The first question in the interview was designed to be general and easy for the informants to answer (Gill et al., 2008); 'What is your current job satisfaction level; how do you feel at your work? Please provide an example'. This encouraged informants to open up and feel confident, comfortable and relaxed.

- The interviews were not anticipated to last more than 20-30 minutes. According to Gill et al. (2008), interviews are usually time–consuming for both the interviewee and the interviewer, and it is recommended that they should not exceed 40-60 minutes. In addition, it is important to ensure that key issues have been addressed in the minimum time necessary to deal with the topic (Whiting, 2008). It can be difficult to establish a relationship in too short a time, but taking more than one hour could lead to irrelevant points and a loss of attention

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between both parties. Thus, the current study's interviews were conducted at mutually agreed times in a confidential setting.

A well-planned and well-conducted semi-structured interview is the outcome of rigorous preparation (Whiting, 2008). The development of an interview schedule, administration of the interview and interpretation of the answers requires careful consideration and preparation (Mathers et al., 1998). The qualitative data generation process from these interviews is described in section 8.5. Interpreting open questions generated from semi-structured interviews is more problematic than interpreting closed questions, as the data needs to be transcribed before the diverse responses from the participants can be compared.

7.7 Management of Risk, Timescale and Resources

According to Turner (2007), it is crucial to plan, monitor and control the timeframe, resource management, risk analysis and auditing processes to achieve the research objectives. Therefore, before commencing the clinical supervision training and implementation, risks must be analysed, the timeframe has to be determined, and the resource management must be discussed as these may all impact on the outcomes of a research project (Li & Lambert, 2008). The auditing process to monitor the success of the clinical supervision intervention is illustrated in Chapter 8.

7.7.1 Risk analysis for clinical supervision implementation

Risk factors need to be considered when planning and managing any project (Turner, 2007); leaving these factors unaddressed can hinder the mission and goals of the project (Kuo, Yin, & Li, 2008). Thus, this study addresses the risk factors associated with implementing clinical supervision under the PDSA framework; this also directs the management of the project. A matrix that identifies each risk with a brief description of the factors that can decrease or increase over time should be considered (Morgan & Lynn, 2009; Vose, 2008). In this study, each potential risk was weighted according to a validated risk scoring system, which ranged from 1-25 (see Appendix 18). Scored risks associated with participants and the current study appears in Table 7.1. For example, one of the key risks was 'insufficient participants interested in the study'; this was scored as a high risk, where the *probability of occurrence* = 4 which was multiplied by the *impact of risk* = 4, thus creating a score of 16, which indicated a high risk. Because the entire study was dedicated to providing nurses with professional assistance

and encouragement, it was important to keep them highly motivated. Mitigating this high-risk score required an effective introduction meeting, a training programme designed to meet participants' requirements, and a contingency plan to meet recruitment shortfalls. Other risks related to the participant and the researcher, and considered likely to impact the study are illustrated in Table. 7.1

Table 7.1: Analysis of the likely risks for the participants and researcher
(Source: Akintoye & MacLeod, 1997; Vose, 2008)

Risk	Score (P x I)	Controls	Score (P x I)
Participants-related risks			
Staff nurses in the intervention group (IG) at the selected PHC centres may not all know about the study or how to participate in the study, as they may not have received the invitation letters.	8 Medium 2 x 4	Hanging the invitation flyer, including an explanation of the study's scope and objective, in the selected six PHC centres to invite nurses to participate in the study.	2 Very low 2 x 1
External moderators may have insufficient knowledge/experience to train the intervention group to implement clinical supervision.	15 High 3 x 5	Search for and select skilful and qualified members interested in changing and solving the issue. Researcher to organise an introduction meeting to speak with potential participants before they enrol in any activities.	4 Low 2 x 2
Nurses from the IG may have insufficient interest to participate in the project activities, particularly in training sessions.	16 High 4 x 4	Invite all nurses in the IG to attend the introduction meeting to explain clinical supervision, address effective practice and share different stories from worldwide implementations of this approach that have impacted nurses' job satisfaction.	3 Low 3 x 1
		Designing a contingency plan extending to three more PHC centres in Jeddah, using the same key criteria.	
IG nurses may be absent from training sessions (TSs) due to issues such as an inconvenient timing, transportation difficulties and workload issues.	12 High 3 x 4	Provide both morning and afternoon sessions to meet a wide range of participants' needs. Ease transportation for everyone by holding the TSs in participants' own centres. Sustain their interest in participation. Ask for the head nurses' assistance in mitigating workloads by guaranteeing coverage while nurses attend a session.	6 Medium 2 x 3
Researcher related risks			
Researcher may be unable to accomplish the study in the proposed timeframe.	15 High 5 x 3	Audit each step of the project's action plan to avoid exceeding the timescale.	6 Medium 3 x 2
Researcher may be unable to acquire adequate resources, such as internet, computers, and printers.	8 Medium 4 x 2	List resources needed during this step. Arrange the setting in each centre with the head nurse's assistance to include these resources.	5 Medium 1 x 5
Risk Scoring System Key: • P = '*Probability of occurrence*' of each risk is scored as: 1 = rare (0-10%), 2 = unlikely (11-33%), 3 = possible (34-67%), 4 = likely (68-89%), 5 = almost certain (90-100%). • I = '*Impact*' of each risk is scored as: 1 = very low, 2 = low, 3 = medium, 4 = high, 5 = very high. • Multiply the *probability of occurrence* x *impact* for each risk (1-25)..			

7.7.2 Planning time frame for the clinical supervision intervention

A timescale demonstrates that the researcher has carefully considered how long different tasks in a study might take (Turner, 2007). Both the training and clinical supervision intervention were planned for completion within a year, during which the clinical supervision implementation was expected to take longer than the other tasks. Table 7.2 presents the task outlines and the estimated duration of these processes.

Table 7.2: Gantt chart for putting clinical supervision into practice in 2016

N	Task	Assign to	Start	End	J	F	M	A	M	J	J	A	S	O
1	**Establish training sessions**:													
1.1	Permission from the University of Salford	Ethical committee	01/01	29/01	▓									
1.2	Permission from the study setting (PHC)	MOH	05/01	29/01	▓									
1.3	Setting and sampling selection	Researcher	01/01	15/02	▓	▓								
1.4	Recruiting external moderators	Researcher	01/01	15/02	▓	▓								
1.5	Preparing Training Contents	Researcher + moderators	20/02	20/03		▓								
1.6	Pre-test for the non-intervention group	Researcher	02/03	16/03			▓							
1.7	Introduction session for the intervention group regarding clinical supervision	Researcher + moderators	10/03	15/03			▓							
1.8	Pre-test for the intervention group	Researcher	15/03	20/03			▓							
1.9	Training sessions for the intervention group only	Moderators	01/04	29/04				▓						
2	**Implement clinical supervision in three PHC intervention centres for six months**													
2.1	Allocate the trained participants for six months	Researcher	15/4	28/09				▓	▓	▓	▓	▓	▓	
2.2	Determine the number of participants who attended sessions for three to six months as eligible for the post-test	Researcher	20/09	30/09									▓	
2.3	Post-test for both intervention and non-intervention groups.	Researcher	03/10	14/10										▓
2.4	Conduct semi-structured interviews with a few participants from the intervention group	Researcher	05/10	14/10										▓

7.7.3 Resource management

Any organisation requires financial material and human resources to execute a practice (Turner, 2007), and this study was funded by the MOH, in SA. The head nurses from each IG centre gave valuable support for regular training needs, such as the provision of flipcharts, a projector and a convenient learning environment in a quiet room. The study also required assistance from external moderators to act as clinical supervisors to train participants in the intervention group. Table 7.3 outlines the regular, anticipated expenses incurred while undertaking this study:

Table 7.3: Project resource management

Resources	Cost in British Pounds
Phone and internet charges	300
Refreshments (e.g. food and coffee)	100
Library services (books)	100
Stationary	40
Photocopying and binding training documents	40
Computer software/printing/ink cartridges	200
Miscellaneous	100
Total	880

7.8 Summary

While the PDSA research framework is clearly delineated, there are strong interrelationships between the 'Plan' and the 'Do' stages. For example, parts of this method chapter may have been considered under the 'Do' stage because they discuss actions for collecting the data. However, these were determined as part of the 'Plan' stage because they included preparatory steps that needed addressing before the collection of data, such as determining the study setting, selecting sampling methods, and obtaining ethical approval.

This chapter has discussed the methods utilised in this study. A quasi-experimental, non-equivalent, pre- and post-test design was used to address clinical supervision among PHC nurses in Jeddah and to explore whether it could improve their job satisfaction. This design is the paradigm for illustrating such functional relationships; indeed, the quasi-experimental design enables the researcher to determine the causal relationships between variables and describe the pattern of change. Moreover, a power calculation determined the sample size. The six PHC centres were chosen purposively based on key criteria and were divided into intervention and non-intervention groups. Convenience sampling was then used to engage the available participants until the required sample size was achieved. External moderators were invited to join this study to train the PHC nurses to be clinical supervisors and supervisees in the following six months, although the exact number of moderators is discussed in the next chapter. Quantitative and qualitative data collection tools, namely the MSQ and semi-structured interviews were chosen for use in this study; the process of implementing these tools is discussed in Chapter 8. Thus, the next chapter addresses the 'Do' stage via the data collection processes.

Plan stage

Act   Plan

Chapter 8

Study   Do
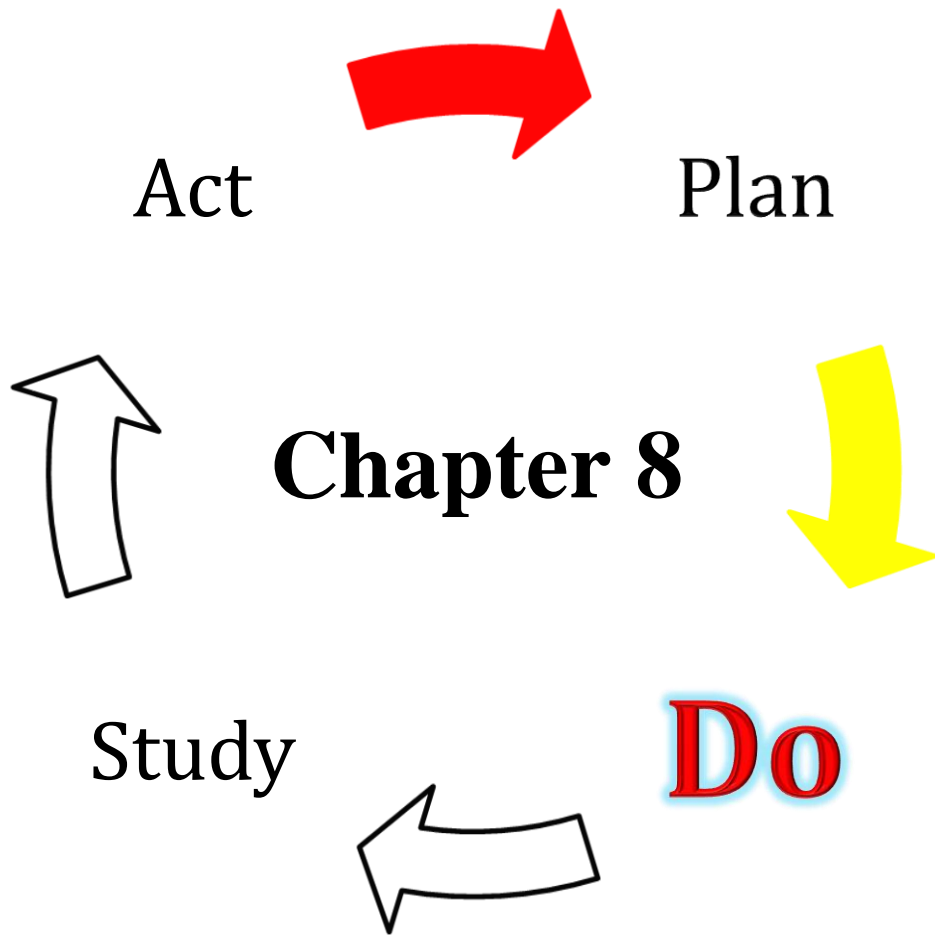
Data Collection
(**Do** Stage)

8.1 Introduction

The previous chapter discussed the preparation required before beginning the data collection process. This chapter explains the data collection processes for the MSQ and semi-structured interviews, and is therefore, part of the second stage ('Do') of the PDSA framework. MSQ data were collected through the three steps of the quasi-experiment. In Step I, the MSQ was distributed as a pre-test for both the intervention and non-intervention groups before the clinical supervision intervention. In Step II, the clinical supervision training programme was prepared and implemented among the intervention group for six months, thus achieving the 'Do' research objective described in section 1.7.3. Finally, Step III used the MSQ to gather post-test data for both the intervention and non-intervention groups. Qualitative data were generated through semi-structured interviews conducted with selected participants from the intervention group. The content of the qualitative data is considered in this chapter, although the data analysis details are discussed in Chapter 9.

8.2 Step I: Pre-test Process

After validating the measurement tool, the data (see Figure 8-1) was collected using the quasi-experimental steps discussed in Chapter 7 (Figure 7-1). The pre-test was conducted before any other data were collected, to determine the participants' knowledge or status regarding the issue. In this first step, the pre-test process was conducted for both the intervention ($n = 43$) and non-intervention ($n = 48$) groups; further details of which are provided in section 9.2.1. Some processes related to the intervention group were conducted prior to the pre-test (section 8.2.3); for example, choosing the number of external moderators assigned for the training (section 8.2.1), and introducing the concept of clinical supervision (section 8.2.2).
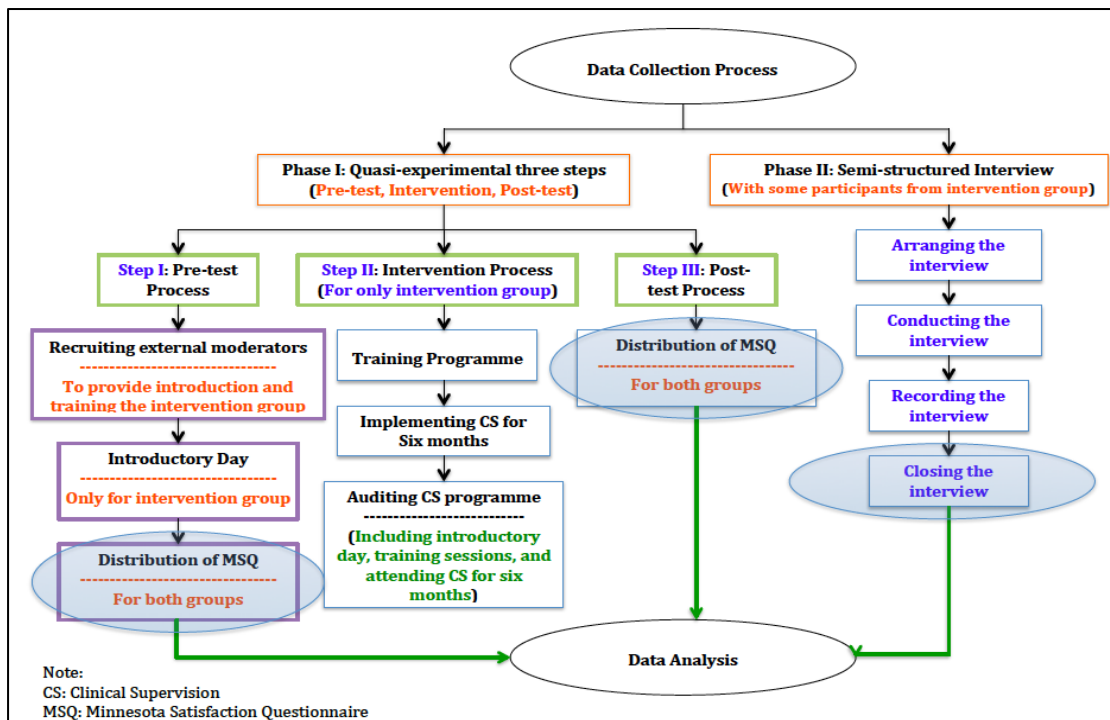
Figure 8-1: Data collection processes

8.2.1 External moderators' preparation for the intervention

Five of seven moderators were identified to train the participants in the intervention group; however, only two met the inclusion criteria discussed in section 7.4.1. These two external moderators had no special conditions or financial demands (e.g. training fees, transportation or specific time away from work to provide training). Both moderators were registered nurses and qualified teachers in the health professions and had several years' experience training nurses in clinical work, including regular supervision duties and leadership. Moreover, both had received theoretical training in mentorship and clinical supervision; one moderator had an MSc in quality in healthcare, and a PhD in Nursing, and was working in a private university in Jeddah. The other moderator had an MSc in nursing administration and was working in the government hospital sector. The moderators' backgrounds were meant to effectively facilitate the supervision sessions.

To limit their involvement, neither moderator was permitted to inspect or evaluate the training programme or become involved in either the pre- or post-test. Both moderators reviewed and developed the training content and documents related to clinical supervision under the researcher's instructions using their personal experiences in clinical supervision training. They supported the researcher during a one-hour

introductory meeting on clinical supervision and provided training sessions for the intervention group; this was held over two days for each group to enable the participants to attend in their own workplace. Moreover, they were also responsible for providing a progress report to the researcher on each training session, and for submitting all training-related documents to the researcher at the end of the sessions.

8.2.2 Introduction day for the intervention group

According to Clifton (2002), increasing the awareness of clinical supervision among staff before the implementation and through an introductory meeting is crucial for the success of a clinical supervision programme (Brunero & Lamont, 2012). Research has shown that introducing clinical supervision programmes through introductory meeting could have a favourable impact on nurses' attitudes toward the approach and their subsequent confidence in their knowledge and skills in the supervision process (Hancox, Lynch, Happell, & Sehastiana, 2004; McKeown & Thompson, 2001).

The first meeting between the researcher, participants and external moderators were held in the three PHC intervention centres. The initial plan was to hold the introductory meeting in a training centre in the middle of the city. However, the head nurses in the three intervention centres, who showed interest in the study, suggested that the meetings were conducted in the three PHC intervention centres instead. This mitigated issue of staff shortages and transportation difficulties caused by road construction in the city of Jeddah. These introductory meetings between the researcher, participants and moderators lasted between 90 and 120 minutes and were intended to accomplish three objectives: (a) to introduce the researcher and external moderators to the attendees, (b) to provide general information about the study, and (c) to promote an understanding of clinical supervision processes so that potential participants could decide whether they wished to participate.

The introductory meeting was a master class in clinical supervision practice, professional accountability and practice autonomy (Bishop, 2007). In this meeting, the attendees were introduced to the clinical supervision definition for the first time, based on the definitions in section 4.3.1, I developed my own definition by adapting those from Butterworth (1992) and Fowler (1996b), which identified clinical supervision as a systematic framework that allows nurses to continue their professional development through an exchange of knowledge and experience, between practising professionals

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by forming monthly meetings lasting for one to two hours, consisting of one-to-one, group, or peer supervision. Additionally, the meeting outlined the rationale for introducing the clinical supervision framework to the healthcare setting, namely to encourage policy development to influence the implementation of clinical supervision (Docherty, 1999). A quiet room, projector and refreshments were arranged in each PHC centre. With the head nurses' assistance, the nurses in each centre were divided by the researcher into small groups to enable each individual to attend and to guarantee the coverage of staff duties during the meeting.

PHC nurses joined the introductory meeting primarily to obtain information on the clinical supervision process and to be empowered to attend the clinical supervision training sessions. During this meeting, the nurses were also required to state their current role and skill level. In the meeting, nurses were invited by moderators to discuss their future nursing goals, to highlight how clinical supervision might be used to attain their goals, and to inspire them about clinical supervision and the training programme.

8.2.3 Pre-test quantitative data collection method (MSQ)

The participants in both the non-intervention and intervention centres were asked to complete the MSQ questionnaire and consent form before engaging with the programme. Sufficient time was given to both groups to consider the questionnaire, as discussed in the section on research ethics (section 7.5). Interested nurses were asked to place responses in a sealed envelope in the designated box in each centre over three weeks in March 2016. The intervention group attended the introductory meeting during this time. Each participant received a parcel containing a cover letter in Arabic explaining the study, a demographic information sheet, the purpose of the study, and a set of MSQ questionnaires attached to the consent form. The allocated numbers and reasons for participant attrition in both the intervention and non-intervention groups are discussed in the results section in Chapter 9.

8.3 Step II: Implementation of Clinical Supervision for the Intervention Group

The second step in the quasi-experimental design, considered the core of the study, which comprised several processes to implement the clinical supervision intervention for the intervention group. Some of these processes were discussed under the 'Plan' stage, such as analysing the implementation risks for clinical supervision, planning the timeframe for implementation, and assessing the required resources based on the PDSA

framework (section 7.8). However, this intervention consisted of two parts: the training process and subsequent six months of clinical supervision. The first part was the training programme, which was arranged by the researcher, and reviewed and implemented by the external moderators. The researcher approached some of the participants to be trained as clinical supervisors, and others as supervisees (section 8.3.1). The second part of the intervention consisted of a six-months period that implemented clinical supervision by the trained participants (section 8.3.2). An audit of the intervention was conducted after the clinical supervision programme concluded (section 8.3.3).

8.3.1 Clinical supervision training programme

This section tracks the processes undertaken at the intervention centres to facilitate the clinical supervision training with the intervention group prior to the implementation of clinical supervision. In the UK, the National Health System Service advises that anyone who enrols in clinical supervision projects must understand the concept and be appropriately trained (NHS, 2008; Beech, 2013). According to Cowe and Wilkes (1998) and Spence, Cantrell, Christie and Samet (2002), holding training sessions prior to the implementation of clinical supervision assists nurses' understanding of a new practice approach, which in turn better enables them to undertake on-going clinical supervision. In this context, Willson et al. (2001) found that before practising as clinical supervisors and in order to maximise their performances it was important for nurses who wished to be clinical supervisors to have adequate training and their own clinical supervision experience. Severinsson (2001) suggested that learning adequate supervisory skills and processes is essential for trained supervisees and new supervisors, as it enables them to understand the moral responsibilities, knowledge and skills that are transferred between supervisors and supervisees.

Hancox et al. (2004) reported that the participants in their four-day clinical supervision training programme had positive attitudes toward both attending the training and gaining new knowledge. These attitudes enabled them to be more reflective and confident in sharing new ideas and skills in their practice and in building relationships, whether with supervisors or supervisees. The intervention group in this study was similarly invited to attend clinical supervision training sessions. These events explained the function and purpose of clinical supervision and how it could be delivered

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effectively. They also provided valuable information for both the individual and organisation on legal and ethical considerations, models, and implementation directions. The content, hybrid supervision framework and key processes of the clinical supervision training programme are discussed in sections 8.3.1.1, 8.3.1.2 and 8.3.1.3

8.3.1.1 Programme content

The content of the training programme was tailored to meet participants' needs and was based on relevant literature (NHS, 2008). The content of the training programme was designed to enable each participant to attend a two-day, intensive course on group clinical supervision, led by an external moderator. The external moderators and researcher reviewed all elements of the training programme, including the number of trainees in each group, the outline of teaching sessions, and the documents and time schedules. The workshop was based on practical clinical supervision sessions with direct feedback; moreover, to clarify the contents of the sessions, training documents were created. Information appeared in a variety of forms, such as diagrams and visual materials that articulated the clinical supervision concept.

Altogether, the preparation, development, and application of the training programme took four months, from January to April 2016. The training content was prepared up until the middle of March 2016, and the intervention group was trained by the beginning of April 2016. The programme highlighted and discussed the purpose of clinical supervision, which is to explore the feelings evoked in the provision of care and to make the nurses aware of, and able to discuss, their psychological reactions to issues in care delivery (Brunero & Stein-Parbury, 2008; Care Quality Commission, 2013). To accomplish this goal, the content of the clinical supervision training programme was comprehensive and intensive. It included:

- Schedules for either the morning or afternoon sessions;
- Definitions of clinical supervision;
- Benefits of clinical supervision;
- Models and modes of clinical supervision;
- The clinical supervision form (hybrid supervision framework);
- The roles and essential skills of nurses as supervisors (e.g. problem solving, quality improvement, communication, coaching, and stress management);
- Responsibilities of the supervisee;

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- Ethics and confidentiality expectations in clinical supervision; and

- Documents related to the clinical supervision training programme, such as a clinical supervision contract, attendance sheet, a supervisor's report for each session, a supervisee's report for each session and a supervisee's sessions records.

The participants were trained for the position of either clinical supervisor or supervisee (section 8.3.1.3). Later, in the supervision sessions, scenarios from actual practice were used, including issues or problems related to daily activities and the services participants provided to PHC patients. The moderators integrated research on nursing-related clinical supervision into the discussions and encouraged the group members to delve into their experiences to demonstrate clinical supervision's utility as a developmental tool. The workshop concluded with a summary of the discussion and learning and was followed with time for questions and answers from all participants. Key issues that emerged from the discussion regarding the purpose of clinical supervision in the PHC sector were: the barriers to conducting clinical supervision in a PHC setting, and PHC nurses' experiences with supportive mechanisms.

8.3.1.2 The hybrid supervision framework

A new clinical supervision framework is proposed in this study to offer practical guidelines, based on sound theoretical principles, on the ways in which knowledge and experience can be built into a formalised system of clinical supervision. According to Fowler (1996a) the new supervision model allows for the adaptation of the framework to meet individual needs, regardless of the field in which it is employed. In the current study, the new hybrid clinical supervision framework (Figure 8-2), integrates features of several clinical supervision models, and is a 'quality improvement tool' that matches PHC nurses' needs and supports clinical problem-solving strategy (Redick, 1999). This clinical supervision framework combines the interactive model (Proctor, 1987), problem-orientated supervision (Rogers & Topping-Morris, 1997) and the practice-centred six-stage model (Nicklin, 1997). These models are redesigned and integrated into the FOCUS-PDSA method thereby establishing a unique hybrid framework for clinical supervision that reflects the needs of the PHC organisation and their staff. It contains the essential steps for a systematic approach to clinical process problem-solving (Redick, 1999). The two models devised by Rogers & Topping-Morris (1997)

and Nicklin (1997) were integrated, with steps added, each of which refers to a stage in the FOCUS-PDSA method. The Proctor (1987) model was also integrated to help to identify the problem before commencing the FOCUS-PDSA steps, which needs to be followed in sequence to accomplish the clinical supervision session.
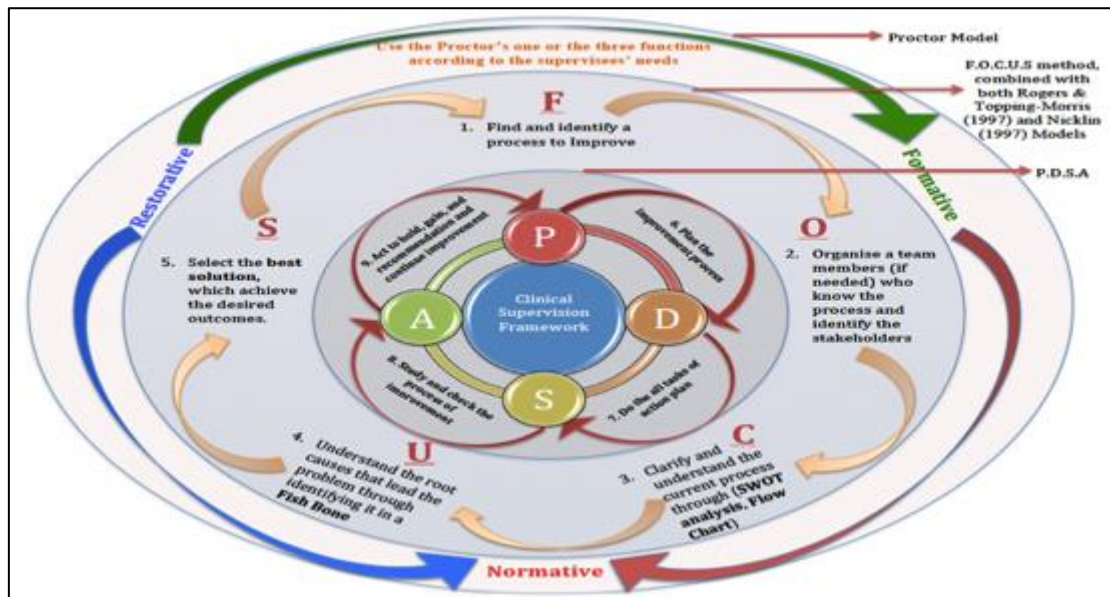
Figure 8-2: Hybrid framework for clinical supervision

This hybrid supervision model frames the supervision process as 'problem-solving steps' or a 'project journey', in which the supervisor and the supervisee 'walk together'. This process acknowledges that, to help solve a problem, the supervisee may need to involve other members in the organisation with a direct or indirect relationship to the issue.

Since its introduction, the PDSA concept has undergone several revisions; for example, in the 1980s, the Hospital Corporation of America (HCA) created the FOCUS-PDSA by adding FOCUS to the PDSA cycle. FOCUS is an acronym that means to *find* the problem or process, *organise* a team, *clarify* the current process, *understand* the root causes and *select* the best solution. This systematic method has been used in various settings and features a nine-step improvement process intended to help achieve higher quality results in less time (Marquis, 2009; Zadinsky, Humulock, & Reedy, 2000). According to Walton (1988), FOCUS-PDSA is a systematic framework used for improving organisational performance by taking a full life-cycle approach and making process changes to maximise opportunities for success. The FOCUS-PDSA process structures the steps for quality improvement and provides an opportunity for nurses

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with clinical problems to be viewed as innovators and project managers (Eisenberg & Painter, 2002). This method also creates an appropriate context for the PDSA model (Comley & DeMeyer, 2001), which is also the conceptual framework for this thesis (section 6.4).

According to Lyth (2000), clinical supervision models can be divided into three types: models focusing on the supervisory relationship, models describing role functions, and models developing supervisory processes. In this study, the hybrid framework mirrors aspects of the supervisory relationship. The process of programme setting, and participant training is illustrated in section 8.3.1.3, whilst the next paragraphs elucidate each step of the hybrid supervision framework. Nevertheless, each step in this hybrid framework follows the activities and tasks necessary to complete the cycle. In the clinical supervision context, the supervisor first encourages the supervisee to determine the problem and the clinical ramifications of the issue. Then, the supervisee organises a team, if needed, to clarify the problem, to understand its root causes, and to select a suitable solution. The supervisee then implements an action plan based on the results of data analysis.

The depth of each step in this framework can vary and be interspersed with several challenges, such as a lack of knowledge, ineffective team members (if a team exists), conflict within the team, and an inability to utilise quality tools, such as a fishbone diagram or a flow chart. The supervisor guides, empowers and supports the supervisee to work in a systematic way and in unison with any team members. The supervisor ensures that each step is completed and followed before the next step. They also ensure that the supervisee listens, understands and acts on guidance: however, the supervisee is ultimately responsible for successfully accomplishing each step in this systematic method. This method teaches the supervisee to be self-aware, confident, and responsible, and to develop the relationship skills necessary to oversee a systematic problems-solving process. The supervisee holds some responsibility for the progress of the clinical supervision sessions and is thus accountable for their clinical practice.

The systematic nature of the FOCUS-PDSA framework is an improvement over Proctor's (1987) model, although this process still recalls his formative, restorative and normative aspects (Appendix 19 provides more understanding on the process of this framework). Supervisees move in and out of the phases of Proctor's model according

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to what they learn or experience in their clinical practice. Obstacles and barriers are seen in this process as a necessary challenge for the supervisee to improve their problem-solving skills. However, upon completing one cycle of this model, it may be evident that some solutions do not work as well as planned, which leads to a change in practice or a return to the planning stage to identify new solutions to the challenges (Moule, Evans, & Pollard, 2013). Thus, it is essential to create a learning culture that allows a supervisee to observe and reflect on what is and is not working and to then attempt a new solution until an improvement is observed.

The hybrid supervision framework in this study, allows for each clinical supervision session to be unique and for supervisees to develop different perspectives and their own learning goals within sessions. Deery (2005) conducted an action research project exploring midwives' views of clinical supervision; drawing on her own framework, she argued that the process of learning, and the reassessment of learning and skills are ongoing processes that encourage supervisees to pursue ongoing professional development.

8.3.1.3 Key processes for clinical supervision training

The following steps were established as key processes for the clinical supervision training sessions:

- *Permission*: The three head nurses granted verbal permissions to hold the training sessions in their intervention centres.
- *Setting for clinical supervision sessions*: Prior notice was given to the three head nurses as to when the training sessions would take place for each group to allow staff coverage where necessary, and thus avoid compromising patient care.
- *Role of the researcher during training sessions:* The researcher organised and facilitated quality assurance for each training session.
- *Supervisor allocation:* Consenting participants ($n = 43$) were allocated to nine groups based on the master list and coding system (section 7.5.1), resulting in each group consisting of four or five participants. During the first day of training, each group was asked by their moderator to select one of the most experienced participants to receive training as a supervisor and to provide clinical supervision in their centres over the next six months. Each group chose one person for training as a supervisor ($n = 9$ out of 43).

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- *Supervisee allocation:* Group members not selected as supervisors were designated as supervisees for the intervention ($n = 34$ out of 43).

- *Role of external moderators*: Two external moderators acted as clinical supervisors to train the participants. One external moderator ran six groups, and the second moderator ran the remaining three; this division was based on the geographical distribution of centres. Criteria for the moderators and their roles are discussed in sections 7.4.1 and 8.2.1.

- *Session timings*: Each group was scheduled at a specified time for two days in April 2016. Five groups ($n = 23$) attended the morning training sessions between 08:30 am and 11:40 am, and the remaining four groups ($n = 20$) attended afternoon sessions between 01:00 pm and 04:10 pm.

- *Clinical supervision model utilised in the training session*: Participants used the hybrid supervision framework (Appendix 19) in their training sessions as the main form of intervention.

- *Training related documents*: The clinical supervision documents discussed in section 8.3.1.1, including the hybrid supervision framework form, were distributed to all group members prior to the start of the sessions.

- *Mode of supervision*: The group supervision (GS) mode, a reflective method, was chosen for this training for several reasons; it is the most frequently tested, practical method, it is favoured by other organisations (Edward et al., 2006; Jones, 2003) and it is considered to be the most suitable and appropriate method in terms of time and financial implications (Chilvers & Ramsey, 2009). GS examines critical incidents and draws meaning from the clinical events and experiences of each individual in the group.

- *Ending the session*: Upon completion of each training session, moderators submitted to the researcher a concise summary of the feedback of the training session, along with participants' attendance sheets, for quality assurance (see section 8.3.3). All trained participants were assigned as supervisors and supervisees in their PHC centres for six months, as described in the next section.

8.3.2 Implementation of clinical supervision

Clinical supervision was implemented after the training programme in the three selected PHC intervention centres, in accordance with the second research objective, namely to prepare participants to undertake and deliver clinical supervision for six months. The following steps were organised for the six-month clinical supervision implementation:

- *Assigning trained clinical supervisors and supervisees for six months:* following the training sessions, the participants expressed a preference to remain in the same groups and positions as during the training, whether as supervisors (n = 9) or supervisees (n = 34). Each assigned group consisted of four or five participants, one of whom became a supervisor. Participants preferred to remain in their training groups due to the trust, understanding and comfortable relationships that had formed amongst group members during training sessions (see Appendix 20 for details of the grouping system used for monthly clinical supervision sessions).

- *Session timings*: The GS was held from April to September 2016, and the supervision groups agreed to meet once a month for two hours, for up to 12 hours in total (see Table 8.1).

- *Clinical supervision-related documents*: Supervision groups decided that their self-selected supervisors were responsible for work on supervision-related documents with their teams. Supervisors were to provide monthly attendance sheets in sealed envelopes to their head nurses, who handed over these envelopes to the researcher at the end of the six-month period.

Table 8.1: Duration of clinical supervision sessions over six months
(Source: Hyrkäs et al., 2005)

Intervention	2016 (Spring) April-June	2016 (Summer) July-Sep	Total
Group Supervision	2 x 60 Minutes x 3 = 6 hours	2 x 60 Minutes x 3 = 6 hours	2 x 60 Minutes x 6 = 12 hours
Total	360 Minutes	360 Minutes	720 Minutes

8.3.3 Auditing the clinical supervision programme

The auditing process plays a key role in controlling the quality of the research process and increasing the project's chances of success (Turner, 2007). Auditing monitors whether all tasks are accomplished in accordance with the action plan and timeframe, while also focusing on quality. Several studies have stated that an auditing process that

monitors a project's steps also supports the intervention (Benjamin, 2008; International Standards Organization [ISO], 2002; Rycroft-Malone et al., 2003). This step had two main procedures to audit; establishing training sessions for PHC nurses and delivering clinical supervision sessions for six months.

In order to minimise any variability, each clinical supervision training session adopted the same agenda and timetable for all sessions. Although this study did not aim to measure the effectiveness of a clinical supervision training programme or the sessions provided to the PHC nurses, all tasks and training processes were monitored before, during and after the training sessions to ascertain proper sequencing and to assure the accurate running of each step based on the action plan and PDSA framework. All training sessions held by the external moderators were, therefore, observed and monitored by the researcher as the quality organiser. At the end of the two-day training session for each group, the researcher sat with each external moderator to summarise actions, progress and comments for each group, utilising the action plan and clinical supervision-related documents, as cited in section 8.3.1.3.

However, feedback from the training sessions or from the implementation of clinical supervision were not intended as data-gathering steps, nor intended to meet the aim of this study. Moreover, ascertaining the quality assurance and progress of the programme over the six-month period, whether by discussing this with participants or by getting feedback about participants' difficulties, could have placed the study at risk of coercion. Bias was therefore reduced, and quality assured by asking the supervision groups to keep only a monthly attendance sheet with their head nurses for each session for up to six months. After six months, the researcher collected these sheets to count the number of participants who attended the required minimum three clinical supervision sessions and who would, thus, be eligible for involvement in the third step of the data collection process, namely the post-test. This information could later support the data for the study by highlighting any reason for change in job satisfaction.

8.4 Step III: Post-test Process

The post-test was conducted for both the non-intervention and intervention groups after six months of clinical supervision delivery for the intervention group. Based on the attended number of supervision sessions attended by the intervention group, the recruited sample at the post-test level comprised of the intervention ($n = 38$) and non-

intervention ($n = 40$) groups; further detail is discussed in section 9.2.1. The allocated numbers for both groups and the numbers of, and reasons for, participant dropout (i.e. attrition) will be discussed in section 9.2.

The participants received the same parcel that was distributed in the pre-test and were asked to follow the same process in placing the MSQ questionnaire in a sealed envelope (section 7.6.1.1); the post-test data was then collected by the researcher over a two-week period that began on 3 October 2016. Results were then analysed as to whether the clinical supervision intervention improved job satisfaction, and the intervention and non-intervention group findings were compared to identify any differences. This post-test enabled the participants to reflect on where they thought they were before the intervention in light of what they had learned (Mezoff, 1981).

8.5 Qualitative Data Collection Method (Semi-structured Interview)

The second data collection method supports the information gathered from the MSQ; face-to-face, semi-structured interviews were conducted after the post-test with participants from the intervention group. I conducted interviews over a two-week period from 5th October 2016, in parallel with the collection of quantitative post-test data. Following the recruitment process, six participants were identified (see section 9.3.1) to participate in semi-structured interviews. This number was determined by the:

- Limited timeframe of the researcher as a PhD candidate;
- Willingness of participants to talk about clinical supervision;
- Availability of interviewees over October-November 2016;
- Representativeness of participants who undertook clinical supervision (section 9.3.1; Table 9.21) to maximise the potential richness of the data (DiCicco-Bloom & Crabtree, 2006), and enable the transferability of the results to other contexts (Ghaffari, Dehghan-Nayeri, & Shali, 2015).

8.5.1 Arranging the interviews

To arrange the interviews, each interviewee received a phone call from the researcher to explain the setting, purpose and what was involved. The interview question guidelines were used in the semi-structured interview schedule, as explained in section 7.6.2, and participants' anonymity and confidentiality were protected to avoid repercussions, as discussed in section 7.5.1 (outlined in Appendix 13a). Once ethical issues and the voluntary participation in the interview were reaffirmed, the exact date,

time, and place of the interviews were arranged. Each interviewee attended the session on a separate day in a PHC centre; moreover, each interview was completed in one session. Although Whiting (2008) has argued that quiet environments do not necessarily affect the interview process, Cozad (1989) and King and Horrocks (2010) recommended a quiet environment to make the interviewee feel more comfortable during the interview. The interviews were held during the afternoon, which was the most convenient time to avoid interruption for all interviewees and located in the education room in each IG centre.

8.5.2 Conducting the interviews

According to Qu and Dumay (2011), before commencing an interview, it is important to build trust by establishing rapport and understanding with interviewees, allowing them to talk freely. Accordingly, to 'break the ice', the interviews started informally; in the first two minutes, I expressed appreciation for the interviewee's participation, and again explained the reason for the interview, the aim of the study and the confidentiality of the data. The interviewees were asked whether they had any questions before starting the process. I took body language into account as an indication of the interviewee's interest in talking.

The interview process introduced the research project and gathered descriptive data about the interviewees, such as their role in the PHC centre, and their age, gender, and tenure in PHC (section 9.3.1). I then asked factual questions related to the interviewees' current job satisfaction and the influence of clinical supervision on their job satisfaction (section 7.6.2). The interview moved from easy general questions to more specific questions that led to a deeper participant understanding of clinical supervision. Probing questions, such as 'Can you give an example to support what you have just said?' were asked of interviewees who gave unclear or incomplete answers. The answers given were frequently summarised and reviewed during the session to check for accuracy. According to Bricki and Green (2007) and Qu and Dumay (2011), while conducting interviews, it is necessary for the interviewer to adopt a non-judgmental attitude. Accordingly, as an interviewer I tried: to be neutral; to refrain from offering any opinions or information during the interview session; to avoid any influence on the responses of interviewees; to lend a sympathetic ear in encouraging participants to

elaborate on their answers without expressing approval or disapproval; to help them feel secure about the confidentiality, and to show an interest in their story.

8.5.3 Non-verbal behaviours

When conducting interviews, an interviewee's non-verbal behaviours are considered important information (Mathers et al., 1998). Non-verbal behaviours, particularly those done unconsciously, may indicate that there is more information to come from the interviewee. Therefore, each respondent's behaviours, such as smiling or thinking and sighing, were monitored during the interview (Gill et al., 2008). Silence was also very useful, as additional information could be volunteered when the interviewees were given time to reflect (King & Horrocks, 2010).

8.5.4 Language considerations

The interviews were conducted in Arabic, which was the interviewees' first language. However, the PhD study is written in English and all data collection tools were translated into Arabic (forward translation techniques) to assure the validity and reliability of the data (see section 9.3.2), which directly related to the quality of the recording (see section 8.5.5), and to meet the needs of participants and were translated into English for the integration into the thesis. In addition, the NVIVO software for analysis only recognizes English.

8.5.5 Recording of the data

According to DiCicco-Bloom and Crabtree (2006), there are two ways to document interview sessions: taking notes or using recordings. Although recording was the preferred option in this study, both note-taking and recording were used to get the best data through capturing, practically every word and non-verbal behaviour. The recorder enabled me to capture everything that was said during the interview without the distraction of having to take comprehensive notes; recordings could be replayed at a later date for easier transcription and greater reporting accuracy. Recording the interviews encouraged the flow of the discussion because I could focus purely on the interviewee's responses. According to Mathers et al. (1998), interviewees may feel interrupted in their response if the interviewer suddenly starts taking notes, as they may wonder why their words were of particular interest.

Recording also reduced the risk of bias (King & Horrocks, 2010) and interviewer error (Barriball & While, 1994). This contrasts with pure note taking where an interviewer is more likely to just note the comments that are particularly interesting to them. Recording provided the opportunity to note and record the interviewee's non-verbal behaviour, which is essential for an accurate and full transcription (King & Horrocks, 2010). Thus, I paid attention to non-verbal cues during the interview (see section 8.6). The main points covered in each interview were summarised and the transcript typed immediately after each interview. Notes supplemented the interview recordings as a backup if the interviewee refused to allow the recording or the recording equipment malfunctioned.

King and Horrocks (2010) recommended checking the quality of a recording before conducting any interviews. A small, good quality audio recorder was used to record all interviews for this study; the timing alarm for each interview was fixed and each interviewee was warned that it automatically reset after 30 minutes. In this study, recording and note-taking allowed me, as a researcher, to capture the whole interview, as any cues or information that I originally missed could be recognised by listening to the recording and checking the notes. These methods enabled the capture of a complete set of data for analysis.

8.5.6 Closing the interview

Closing the interview is the most difficult step, as it is the final opportunity to listen to any remarks and queries that an interviewee may have. It is recommended to end the interview on a positive note and with an expression of appreciation of the interviewee's participation (Clarke, 2006). In this study, the value of the interviewee's contribution was acknowledged, as they were the first to share their stories regarding the clinical supervision implemented in PHC centres in SA. The interviewees reported enjoyment from, and good experiences of, their clinical supervision.

8.6 Content Analysis of Qualitative Data

The qualitative data collected through semi-structured interviews were analysed using content analysis (Joffe & Yardley, 2004). Transcription analysis is generally considered under the 'Study' stage of the PDSA framework; however, key conventions of non-verbal communication require identification before transcription (Oliver, Serovich, & Mason, 2005), thus, content analysis is considered in this chapter and discussed in more

detail in section 9.3.3. *Content analysis,* is defined as a subjective interpretation of the content of text data to make valid inferences by systematically coding and identifying themes (Weber, 1990). Content analysis was first used in qualitative research in the USA during the 20th Century (Elo & Kyngäs, 2008; Hsieh & Shannon, 2005). It is similar to the thematic analysis; indeed, the boundaries between the two are not clearly specified (Vaismoradi, Turunen, & Bondas, 2013). Nevertheless, in this study, I picked the content analysis because it is systematic and uses a descriptive approach in coding the data. It also conducts exploratory work into unknown phenomena, involves more interpretation than thematic analysis, and has the potential to identify themes based on the frequency of their occurrence (Vaismoradi et al., 2013).

A content analysis of qualitative data can be applied manually or by computer; this study utilised both techniques, and the advantages and disadvantages for both appear in Table 8.2. Initially, I searched widely in the literature to determine which method was preferable for analysing qualitative data and found that some writers believe that software programmes create distance between the researcher and the data, inhibiting their understanding of interviewees' opinions. In contrast, literature also claims that the uniqueness of individual experiences in relation to the phenomena under exploration is lost in software, but maintained in the manual method (Braine, 2010; Kelle, 1997; Webb, 1999). On the other hand, Morgan (2016) has suggested that software could organise both large and small scale datasets and that the process is not very different from the manual method but based on the original procedures for hand coding, which means that it does not analyse the data for the researcher. Although, Morgan (2016) argued that the software method was preferable, he asserted that a careful reading of the data is the priority in qualitative analysis, whether using manual or software methods, and that reading data on a screen is not that different from reading on paper. Similarly, Miles and Huberman (1994) recommended an organised approach to analysis to enable researchers to manage the contextual data generated from huge amounts of transcripts, protocols and field notes, while preventing data overload.

Based on these factors, it was initially determined that the qualitative data would be analysed manually. Later, due to my curiosity for novelty, I experimented with both the manual process and NVivo software to analyse the textual data, and I encountered challenges when using both techniques. For example, after acquiring a basic

Do stage

understanding of, and experience with, NVivo, which mainly focused on the coding system, the data felt more like a quantitative analysis, and it became unwieldy for me, which could be attributed to my lack of experience, which led to less than satisfactory procedures. Nevertheless, conventional content analysis can also be overwhelming and time-consuming (Hsieh & Shannon, 2005), where using 'cut and paste' techniques are the method of choice for organising, storing and retrieving data (Bowling, 2014).

Table 8.2: A comparison of manual and NVivo 11 techniques

NVivo 11 method	Manual method
• Useful for analysis of qualitative data	• Useful for analysis of qualitative data
• Focus on the coding system rather than bonding with the data	• Focuses on the bonding between the researcher and data
• Easy to manage with a high number of interviews	• Easy to manage with a small number of interviews
• Highlights codes directly from the screen	• Requires pens, papers and colours to code the data
• Easy to search and sort specific words or phrases in the text promptly	• Takes time to search specific words or phrases in the text
• Costly	• Free
• Difficulty in determining the nuances of meaning of a text	• Extracts deep and subtle meaning to understand the experiences or opinions of the interviewee
• Initially, time-consuming for a novice researcher	• Time-consuming, but preferable for researchers unfamiliar with software tools
• Instant access to source data files, e.g. creating transcripts more efficiently	• Messy to arrange the data files initially
• Detects relationships between codes more effectively	• Messy and time-intensive to arrange the relationships between codes
• May not help the researcher substantially with analytical thinking	• Analytical thinking skill resides in the researcher's mind
• Still does not support automatic coding	• The researcher is the tool

Conventional content analysis was continued in order to apply the intuitive aspects of analysis (Parahoo, 2006) alongside NVivo which enabled flexibility and pragmatism in developing and extending the knowledge of participants' experiences of clinical supervision. Analysis focused on the communicative characteristics of language with the contextual meaning of the text, thus adhering to the naturalistic paradigm. In particular, the conventional content analysis method was chosen to interpret meaning from the text content; in this method, coding categories result directly from the text data

(Hsieh & Shannon, 2005). This method of analysis provided an opportunity to study the data in depth, rather than look for word occurrences and frequencies.

The qualitative analysis process used in this study involved preparing, organising and reporting (Elo & Kyngäs, 2008), as illustrated in Table 8.3, whilst the NVivo software processes for data analysis are discussed in section 9.3.3. The manifest and latent content are described in this section to highlight the trustworthiness and conformability of the content analysis, which should be completed before the transcription process (Roberts, 2007). According to Braine (2010), the *manifest content* may be defined as elements that are present and directly identifiable, such as depression, tolerance, social dysfunction and the capacity for self-control over mood. Conversely, the *latent content* constitutes the deeper meaning that is not directly observable, such as silence, laughs, and sighs (Elo & Kyngäs, 2008; Joffe & Yardley, 2004). This paralinguistic and non-verbal information enriches our understanding and creates meaning.

This study borrowed conventions from the *conversation analysis*[3] tradition (Gumperz & Berenz, 1993) to develop a basic key for bonding non-verbal conduct with context and to analyse social interactions during the interviews. Some basic keys for the conventions chosen were;

- A silence with a pause of more than 0.5 of a second is referred to by three dots *(...)*;
- Indications to slim down a long quote are referred to by six dots *(......)*;
- Thinking is denoted by *(umm),* and laughing as *(laughing);*
- A high volume in speech is indicated with the use of uppercases X and emphasis is shown through the use of uppercase at the beginning of the word.

Additionally, key conventions used in the transcription are outlined in Appendix 21, whilst the transcription process and the NVivo content analysis are discussed in sections 9.3.2 and 9.3.3.

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[3] Conversation analysis is an approach that studies social interaction and aims to describe the completeness of speech, in order to ascertain in transcription that talk is like writing (Roberts, 2007).

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Table 8.3: Manual analysis process for qualitative data
(Source: Elo & Kyngäs, 2008; McCain, 1988)

Steps	Process
Preparation phase	• Transcribe verbatim by listening to the recordings several times. • Identify latent content by noticing non-verbal cues (e.g., silence, sighs, laughter). • Strive to make sense of the data as a whole.
Organising phase	• Select the unit of analysis without editing: a code, word, or phrase that directly relates to the study variables, such as: 'code: *group clinical supervision enhanced our relationship*. • Identify the important idea or fact from each phrase without interpreting the idea, such as: 'the main idea: *type of clinical supervision*, the phrase: *enhanced relationship*. • Develop categories or themes from similar clusters of ideas by interpreting the data, such as: 'category: *factors that influence effective clinical supervision*, phrases: nurses stated, "*I found group clinical supervision very helpful/In the future I would prefer to choose one-to-one supervision/I did not find this type very useful*".
Reporting phase	• Describe the meaning of the categories or themes by the results. For example, the content of the theme (*factors that influence effective clinical supervision*) is described through subcategories or sub-themes (e.g. *type of clinical supervision, setting, length and frequency of clinical supervision sessions*). • Provide a description of the context, selection and characteristics of participants, to facilitate transferability (see section 9.3.1, Table 9.21). • Use authentic citations to increase the trustworthiness of the research and to tell readers from where and what kinds of original data categories are formulated.

8.7 Summary

This chapter focused on three stages of data collection: pre-test, post-test and semi-structured interviews. It discussed the procedures before, during and after the clinical supervision training and implementation programme, which lasted six months between the pre- and post-test. The main tool used to train the participants in the intervention group was the problem-solving strategy FOCUS-PDSA. This problem-solving framework improves quality in the workplace, so if nurses in this study targeted a problem that had not been sufficiently addressed during the clinical supervision sessions, possibly due to process complexity, an organised team could generate other opportunities for improvements.

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Both manual and NVivo software analysis techniques were utilised in this study; the NVivo programme is discussed in brief in this chapter. Manual analysis offered a better understanding and a kind of bonding between the researcher and the data over other available analysis tools; however, the NVivo 11 software techniques were also useful to learn. Although performed sequentially, some obstacles were met during the pre-tests, post-tests and interviews, such as overlapping activities during the entry of the pre-test data and arranging for the training programme at the same time, as well as entering the post-test data and interview data in different software programmes at the same time. The second objective of the study was accomplished with the introduction of clinical supervision among PHC nurses in Jeddah, SA. The following chapter analyses the quantitative and qualitative data using SPSS and NVivo software packages, respectively. It also provides a detailed description of the sample sizes for both the intervention and non-intervention groups, for the quantitative data and the interviews.

Do stage

Act

Plan

Chapter 9

Study

Do

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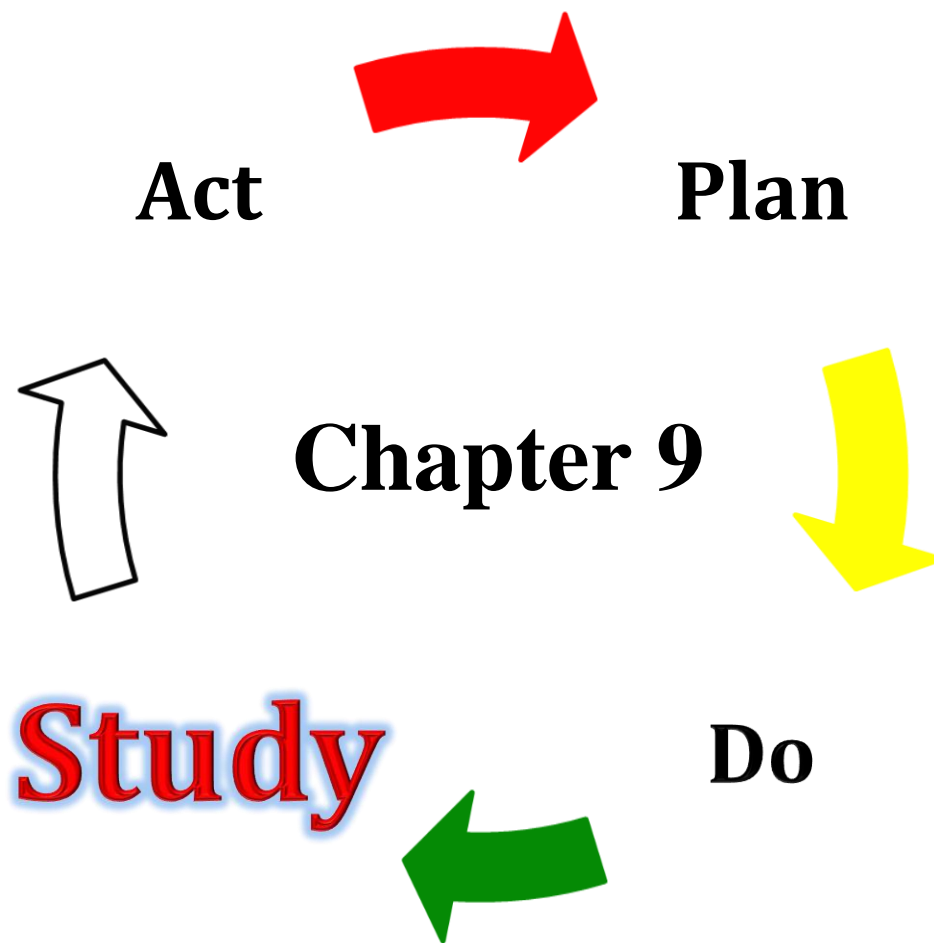
Data Analysis
(**Study** Stage)

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9.1 Introduction

The last chapter explained the data collection procedures including the pre-test and post-test for both groups, and the semi-structured interviews carried out with a small number of participants from the intervention group. Consequently, this chapter will illuminate the analytic processes of both the quantitative and qualitative data. Both data sets were analysed separately, however, to maintain the integrity of mixed method approach, data were merged by following convergence, complementary and divergence techniques, which are discussed in chapter 10. The chapter outlines the third stage of the PDSA framework namely, the 'Study' stage and concludes with a discussion of the third research objective (see section 1.7.3), which determines the contribution of clinical supervision as a means of enhancing job satisfaction.

The chapter analyses the quantitative data through comparing the pre- and post-test data for both groups; this was analysed using the Statistical Package for Social Sciences (SPSS version-22.0) software. The quantitative data analysis is explained in three steps, namely, descriptive, inferential statistics and hypothesis testing. Descriptive data introduced the participants' distribution and their demographic data, which also involved measures of mean, and standard deviation for each item of the MSQ questionnaire. Of the 107 questionnaires distributed to six PHC centres, $n = 91$ (85%) completed the pre-test, and $n = 78$ (86 %) completed the post-test. Inferential statistics (i.e. pre-screened data), which included the Analysis of variance (ANOVA), were used to determine whether there were any differences in the pre-test between both groups, across the intrinsic, extrinsic and general job satisfaction subscales. Finally, utilising the Analysis of Covariance (ANCOVA) to answer the research question enabled the hypothesis testing.

The results from the quantitative analysis will be followed by the results from the semi-structured interviews, carried out with $n = 6$ participants from the intervention group. This phase used manual content analysis (discussed in section 8.6), and NVivo 11 software programme to assist with the data management and analysis, which determined the differences in job satisfaction through identifying emergent themes as a means of qualitative analysis.

9.2 Quantitative Data Analysis *(pre- and post-tests)*

Quantitative responses were gathered pre- and post-test from participants in both the intervention and non-intervention groups, whilst data from the MSQ were also entered in SPSS (v 22.0) for both stages. Table 9.1 illustrates the three quantitative data analysis steps:

Table 9.1: Stages of quantitative data analysis

Steps of analysis		Analysis test deployed	Rationale
A	Description of the data Responses to the 20-items of the MSQ questionnaire	• Descriptive tests: ○ Frequency counts ○ Cross tabulations ○ Arithmetic mean ○ Standard deviation and ○ Normal distribution For both pre-test and post-test.	• The arithmetic mean/mean used to measure the average answer of each question for both the pre- and post-tests. • Standard deviation [SD] used to measure the variances between the answers by indicating the average deviation values from the mean. • The frequency counts summarise the groupings of data and show the occurrences of values within a particular group or interval. • Cross tabs examine and display the relationship between two variables. • The normal distribution shows whether the data are normal distributed, based on the cell curve when plotting them on a graph results in an image that is bell-shaped and symmetrical.
B	Inferential status tests on pre-screened data	• ANOVA test ○ Levene's test ○ Shapiro Wilk	• ANOVA test was performed to compare and determine if there are statistically significant differences between the intervention and the non-intervention group in the pre-test, through measuring the variance from the mean for each group. • Levene's test was utilised to test the homogeneity of ANOVA assumptions. • Shapiro-Wilk was used to test the normality assumption of the ANOVA.
C	Hypothesis-testing results	• ANCOVA ○ F.test ○ Partial eta square η^2	• ANCOVA performed to answer the research question (more information in section 9.2.3). • F-test: evaluates differences between groups • Partial eta square η^2 was conducted to determine the effect size of the clinical supervision intervention based on the Cohen scale, which refers to effect sizes as small ($\eta^2 = 0.2$), medium ($\eta^2 = 0.5$), and large ($\eta^2 = 0.8$). The η^2 is used when the objective is to know whether an intervention or experimental manipulation has an effect greater than zero, or (when it is obvious an effect exists) how big the effect is.

9.2.1 Descriptive statistics

The description of data were used to present: the distribution of participants (see Table 9.2); the sample recruitment and attrition rates in pre-test (see Table 9.3) and post-test (see Table 9.4); the participants' demographic information (see Table 9.6), and

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responses to the 20-items of MSQ questionnaire (Arithmetic mean/Mean and standard deviation/SD) for both groups in the pre- and post-tests (see Figures 9-1 and 9-2).

Table 9.2: Distribution of participants

Sample	Number of participants in Intervention Group (%)	Number of participants in Non-Intervention (%)	Total Number (%)
Pre-test	$n = 43$ (47%)	$n = 48$ (53%)	$n = 91$ (100%)
Post-test	$n = 38$ (48.7%)	$n = 40$ (51.3%)	$n = 78$ (100%)

Table 9.2 displays the number of participants in the two groups in the pre and post-tests. The size of the intervention group reduced to $n = 38$ (48.7%) participants and the non-intervention group reduced to $n = 40$ (51.3%) in post-test. However, the percentages of participants were approximately similar for both the intervention and non-intervention groups in the pre and post-test.

Response and attrition rates in pre-test:

Table 9.3: Sample recruitment and attrition rate in the pre-test

Sample $n = 107$	Initial target population and the attrition rates *(who received the invitation letters)*	Attrition rate after attending the introduction meeting and prior to the baseline test *(one-hour introduction meeting)* $n = 99$	Attrition rate after the MSQ and before the clinical supervision training sessions *(Baseline test)* $n = 96$	Total attrition rate
Pre-test *(Baseline test)*	$n = 99$ (92%)	$n = 96$ (97%)	$n = 91$ (95%)	
Attrition rate	$n = 8$ (8%)	$n = 3$ (3%)	$n = 5$ (5%)	
Attrition reasons	• $n = 6$ (75%) did not respond • $n = 2$ (25%) lack of interest	• $n = 1$ (33.3%) due to pregnancy • $n = 1$ (33.3%) lack of interest • $n = 1$ (33.3%) due to pressure of work	• $n = 2$ (40%) have study sponsorship commitment • $n = 1$ (20%) due to pressure at work • $n = 2$ (40%) had no reason given	*$n = 16$ (15%)*

Table 9.3 describes the initial target population and the attrition rate of participants before and after attending the introductory meeting, as well as before attending the clinical supervision training sessions.

Participants undertaking clinical supervision

The participants in the intervention group ($n = 43$) were divided into nine groups for clinical supervision training and for the implementation of the six-month intervention.

Response and attrition rates in post-test

Table 9.4: Sample recruitment and attrition rate in the post-test

Sample $n = 91$	Recruitment and the attrition rate	Recruitment and the attrition rate during clinical supervision intervention *(6 month)* $n = 88$	Total attrition rate
Post-test	88 (97%)	78 (89%)	
Attrition rate	$n = 3$ (3%)	$n = 10$ (11%)	
Attrition reasons	• $n = 3$ (3%) were moved to another centres	• $n = 4$ (40%) did not respond • $n = 3$ (30%%) due to workload • $n = 1$ (10%) not interested • $n = 2$ (20%) attended only one clinical supervision session (not eligible)	$n = 13$ (14%)

After the six-months clinical supervision intervention, the post-test group comprised of participants who had completed the MSQ questionnaires in the pre-test (March 2016), and (amongst the intervention group) had undertaken at least three clinical supervision sessions during the intervention period (April-September 2016). Thus, the staff profile in each PHC centre at the time of the post-test (October 2016) was reviewed to determine the number of participants who were still at the centre. Based on Table 9.4, of the $n = 91$ participants who had completed the pre-test survey, $n = 88$ (97%) were still working in the selected PHC centres in Oct 2016, however, the number of participants reduced, thus $n = 78$ (89%) nurses comprised the recruitment sample for the post-test.

It is noticeable that two participants from the intervention group were not eligible for inclusion in the study, as they did not attend the appropriate training that set out the criteria of the study (see section 8.3.3). This is supported by Edwards et al. (2006) and Fothergill and Lipp (2014) who recommended that the nurses should be trained and experience at least six supervision sessions to report effective clinical supervision. Thus, the number of participants in the intervention group who attended the required number of supervision sessions, either as a supervisor or supervisee, was $n = 38$

(48.7%). These supervisors or supervisees in the intervention group were drawn from different units within the PHC centres, as shown in Table 9.5.

Table 9.5: Working area of participants in the intervention group and their role in the clinical supervision intervention

Unit in PHC	Supervisors	Supervisees
Immunisation clinic	2	8
Maternity & child clinic	0	6
Non-communicable disease clinic	1	5
Dressing	0	4
Nursing education	3	0
General clinic	0	6
Nursing quality organiser	3	0
Total number of participants	9	29

Demographic statistics

Table 9.6: Summary of demographic information for the intervention and non-intervention groups at the pre- and post-tests level

Demographics	Pre-test		Total (In each category) %	Post-test		Total (In each category) %
	Intervention n (%)	Non-intervention n (%)		Intervention n (%)	Non-intervention n (%)	
Nationality Saudi	43 (100%)	48 (100%)	91 (100%)	38 (100%)	40 (100%)	78 (100%)
Gender Male	5 (11.60%)	6 (12.50%)	11 (12.8%)	4 (10.53%)	4 (12.50%)	8 (10.2%)
Female	38 (88.40%)	42 (50%)	80 (87.9%)	34 (89.47%)	36 (87.50%)	70 (89.7%)
Education Diploma	39 (90.7%)	42 (87.5%)	81 (89.0%)	34 (89.5%)	34 (85%)	68 (87.1%)
Bachelor	4 (9.3%)	6 (12.5%)	10 (11%)	4 (10.5%)	6 (15%)	10 (12.8%)
Master	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Age Group 20-29 years	9 (20.9%)	15 (31.3%)	24 (26.3%)	9 (23.7%)	14 (35%)	23 (29.4%)
30-39 years	28 (65.1%)	27 (56.3%)	55 (60.4%)	24 (63.2%)	23 (57.5)	47 (60.2%)
40-49 years	5 (11.6%)	6 (12.5%)	11 (12.0%)	4 (10.5%)	3 (7.5%)	7 (8.9%)
50-59 years	1 (2.3%)	0 (0.0%)	1 (1.0%)	1 (2.6%)	0 (0.0%)	1 (1.28%)
Experience < 1-year	2 (4.7%)	2 (4.2%)	4 (4.39%)	2 (5.3%)	2 (5.0%)	4 (5.1%)
1-2 years	1 (2.3%)	3 (6.3%)	4 (4.39%)	1 (2.6%)	2 (5.0%)	3 (3.8%)
3-5 year	11 (25.6%)	10 (20.8%)	21 (23.0%)	9 (23.7%)	10 (25.0%)	19 (24.3%)
> 5 years	29 (67.4%)	33 (68.8%)	62 (68.1%)	26 (68.4%)	26 (65.0%)	52 (66.6%)
Total in each group %	43 (100%)	48 (100%)	**91 (100%)**	38 (100%)	40 (100%)	**78 (100%)**

In Table 9.6, it is remarkable that all participants (*n* = 78, or 100%) are Saudi nationals. The gender distribution between the two groups was found as expected with a predominance of female nurses in both groups. Table 9.6 also displays the level of post-secondary education of the groups in the pre- and post-tests. The majority of nurses' in both the intervention and non-intervention groups held diplomas in nursing. It is also

noted that none of the participants in either group had attained a Master's degree. The majority of participants in the pre-test, for both intervention group ($n = 28$, or 65.1%) and the non-intervention group ($n = 27$, or 56.3%), were aged 30 to 39 years. Whereas, in the post-test, the intervention group totalled $n = 24$ (63.2%) and the non-intervention group totalled $n = 23$ (57.5%) participants. Only one participant in the 50-59 years category participated in the supervision intervention research programme, which represented 2.3% in the pre-test and 2.6% in the post-test. Furthermore, it is noticeable that there were no participants aged 60 years and over in both groups. Also, the table illustrates the working years categories of the two groups for both the pre- and post-tests. In both pre-test groups, the number of participants who had more than five years of experience were $n = 29$ (67.4%) in the intervention group, and $n = 33$ (68.8%) in the non-intervention group. In comparison, the post-test participants totalled $n = 26$ (68.4%) and $n = 26$ (65%) in the intervention and the non-intervention groups respectively.

Table 9.7: Nurses' educational level by age category in both groups

Age	Pre-test								Post-test							
	Intervention				Non-intervention				Intervention				Non-intervention			
	Dip	Percentage	BSc	Percentage	Dip	Percentage	BSc	Percentage	Dip	Percentage	BSc	Percentage	Dip	Percentage	BSc	Percentage
20-29 years	9	20.9	0	0	12	25	3	6.3	9	23.7	0	0	11	27.5	3	7.5
30-39 years	25	58.1	3	7	24	50	3	6.3	21	55.3	3	7.9	20	50	3	7.5
40-49 years	4	9.3	1	2.3	6	12.5	0	0	3	7.9	1	2.6	3	7.5	0	0
50-59 years	1	2.3	0	0	0	0	0	0	1	2.6	0	0	0	0	0	0
Total/ Percentage	39	90.7	4	9.3	42	87.5	6	12.5	34	89.2	4	10.4	34	85	6	15

Table 9.7 illustrates the educational level according to the age groups in the pre and post-test. It illustrates that the 30-39 years age group, contained the highest number of nurses who held diploma degrees in both the pre and post-test for both the intervention and non-intervention groups, $n = 25$ (58.1%), $n = 24$ (50%), $n = 21$ (55.3%), $n = 20$ (50%), respectively.

Study stage
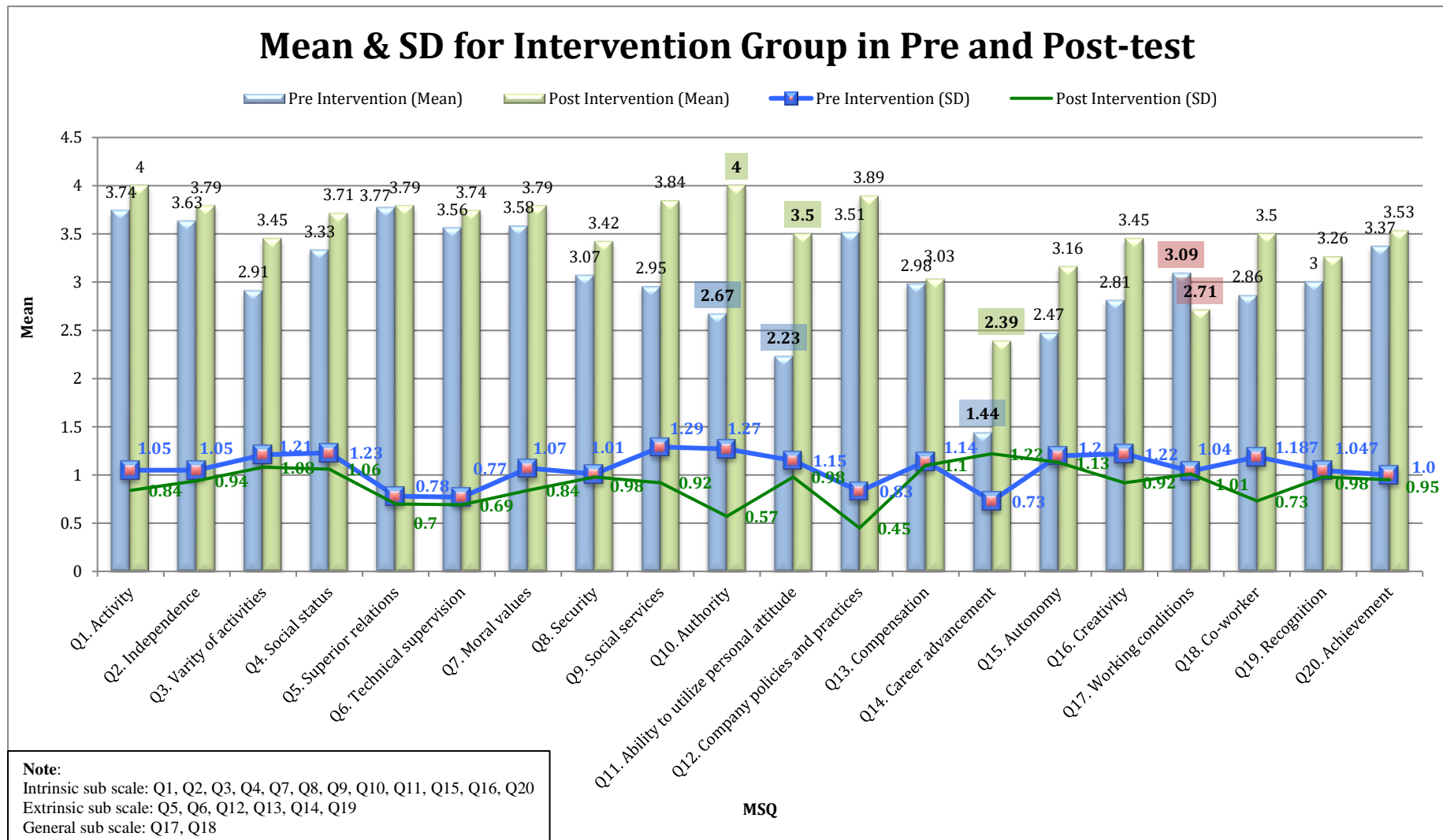
Figure 9-1: Mean & SD of the MSQ (20-item) for intervention group in pre- and post-test
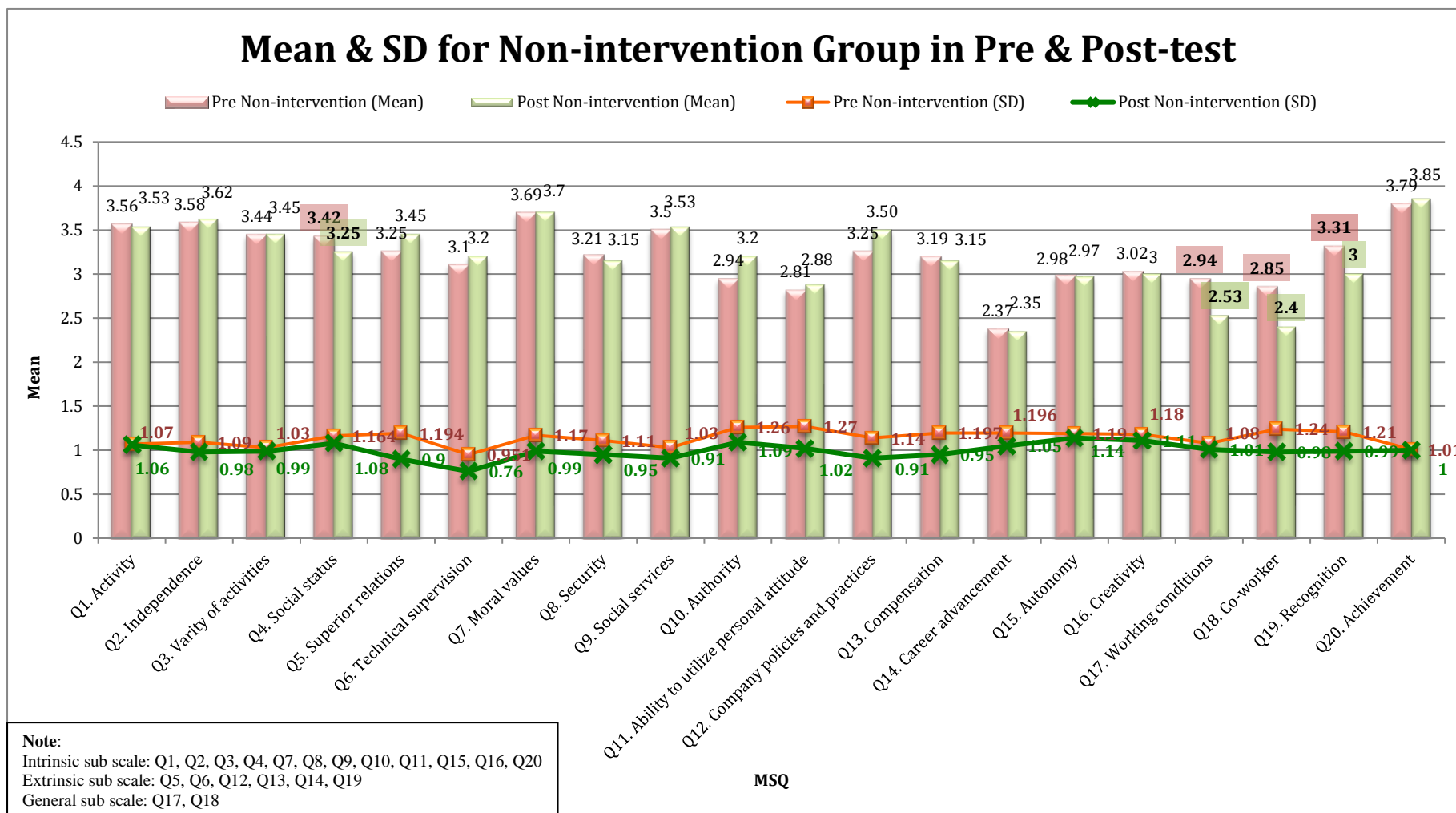
Figure 9-2: Mean & SD of the MSQ (20-items) for non-intervention group in pre- and post-test

Figures 9-1 and 9-2 illustrate the MSQ descriptive statistical data: Figure 9-1 shows the difference before and after the clinical supervision intervention for the intervention group. Figure 9-1 provides a clear message that there is a remarkable improvement on majority of the MSQ questions with some improvements greater than others, which might be statistically significant. There was very slightly improvement observed between the pre- and post-test results in questions 5 (3.77,3.79) and 13 (2.98, 3.03). The most noticeable improvement between the pre- and post-test was found in the outcomes to questions 10 (2.67, 4), 11 (2.23,3.5), and 14 (1.44, 2.39) in the subscale. However, for question number 17, there was deterioration in relation to working conditions, with a pre-test mean of 3.09 and a post-test mean of 2.71.

In comparison, the non-intervention group in Figure 9-2 did not show a significant difference, as most of the responses to the MSQ questions before and after the clinical supervision intervention appeared similar. Furthermore, four questions, namely 4 (3.42, 3.25), 17 (2.94, 2.53), 18 (2.85, 2.4), and 19 (3.31, 3), decreased between the pre-test and post-test. In summary, there was an improvement in the score mean in all except one question in the intervention group, although no remarkable changes were identified for the non-intervention group between the pre- and post-tests.

9.2.2 Inferential statistical tests in pre-screened data

The pre-screened data were subjected to several statistical tests to determine the robustness of the assumptions in relation to the differences between the intervention and non-intervention groups at the baseline test (i.e. pre-test). The T-test (Koivu et al., 2011; Portney & Watkins, 2009), or a parametric test, such as ANOVA (Park, 2009; Walde, 2015), can be used for inferential statistical testing in pre-screened data. The T-test compares the means of one or two independent groups in order to determine whether there is statistical evidence that the associated population means are significantly different. However, a T-test does not allow for the comparison of more than two groups (Portney & Watkins, 2009). The ANOVA, in contrast, has more independence and can be used for a comparison between two groups or more, enabling a measurement of variance from the mean for each group. Thus, in this study, the ANOVA was preferred option over the T-test, and the level of significance was 0.05 (Polit & Beck, 2004) for the three subscales (i.e. intrinsic, extrinsic and general job satisfaction) to ensure that both groups were equivalent.

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The ANOVA was performed to determine whether there were statistically significant differences between the intervention and the non-intervention groups at the pre-test. The ANCOVA was also performed to test the assumptions of the data, including the normality of distribution and the homogeneity of variance (Parahoo, 2006, 2014) at the pre-test level. When these assumptions are met, the analysis can adjust the group dependent variable (DV) means for differences caused by the covariate. Table 9.8 reveals the comparison between the two groups.

Table 9.8: The mean and SD of the intervention and non-intervention groups in the intrinsic, extrinsic and general pre-test subscales

MSQ Subscale	Groups	N	Mean	SD
Intrinsic	Intervention	43	3.06	0.69
	Non-intervention	48	3.32	0.68
Extrinsic	Intervention	43	3.04	0.51
	Non-intervention	48	3.08	0.54
General	Intervention	43	2.98	0.89
	Non-intervention	48	2.89	0.90

The mean in the three subscales for both groups were approximately similar. Furthermore, the participants' opinions (i.e. the variance between the answers) in the three subscales were also broadly similar in both groups. This indicates that there were broadly no differences between the two groups in the pre-test. However, the mean in the intrinsic subscale for the non-intervention group (at 3.32) was slightly higher than that of the intervention group (at 3.06) and than other extrinsic and general subscales for both groups. Furthermore, the variance between the answers in the general subscale for the non-intervention group was (at 0.90) slightly higher than the intervention group (at 0.89), and than the other subscales (i.e. intrinsic and extrinsic subscales) for both groups.

Two assumptions are required to conduct the ANOVA test, namely, homogeneity and normality (Park, 2009). According to Campbell et al. (1995), if the variances are not apparent then a formal test is required. Thus, to test the homogeneity of variance between the two groups, the Brown-Forsythe test and Levene's test were used, as both are less sensitive to departures from normality. The Brown-Forsythe test is the F statistic resulting from a one-way ANOVA on the absolute departures from the median. Furthermore, the Levene test, which is more powerful and the most common, was used to verify this assumption as it uses the mean instead of the median and is applied with

modern statistical software, such as SPSS (Carroll & Schneider, 1985; Gastwirth, Gel, & Miao, 2009).

Levene's test is calculated by diverging the data for each group from the group mean and then comparing the absolute values presented as an F statistic. In comparison, the ANOVA is used to compare the absolute values. If the p value (i.e. the *level of significance or probability of chance occurrence*) is greater than or equal to the critical amount or level of probability (0.05) (Parahoo, 2014), then the variance between the groups is equal. If this is not the case, then the assumption of homogeneity is violated and it is better to conduct a non-parametric equivalent of the analysis, which is suitable when the data are not normally distributed (Portney & Watkins, 2009). Table 9.9 displays the results of Levene's statistics for the three subscales:

Table 9.9: Levene's test of equality of error variance by group

Subscale	Groups	Levene Statistic F	df1	df2	Sig
Intrinsic	Intervention	0.121	1	89	0.729
	Non-intervention				
Extrinsic	Intervention	0.045	1	89	0.83
	Non-intervention				
General	Intervention	0.000	1	89	0.992
	Non-intervention				
Keys: - Sig refers to significant - Between group estimate, df1 = k – 1 (k refers to the number of groups), - Within group estimate, df2 = n – k (n is the total number of the sample) (Salkind, 2010), - df1 = 2 – 1 = 1, while, df2 = 91 – 2 = 89.					

Since the significance of the three subscales were greater than 0.05, homogeneity is assumed. However, the ANOVA needs two degrees of freedom (df), which are approximations of the sample or group size. To explore the distribution of a sample, several methods could be used to assess whether the data are normally distributed:

- Graphically utilising cumulative frequency plots or probability plots.
- Numerically testing the normality assumption as the parametric ANOVA, such as the Shapiro-Wilk W test.

In this study, the Shapiro-Wilk test was applied, which uses the null hypothesis principle to test whether a sample came from a normally distributed population. If the significance is greater than or equal to 0.05, the variance between the groups is equal, otherwise the ANOVA assumption of normality is violated. Table 9.10 displays the results of the Shapiro-Wilk statistics for the three subscales:

Table 9.10: Shapiro-Wilk normality test

Subscale	Groups	Shapiro-Wilk	df	Sig.
Intrinsic	Intervention	0.957	43	0.106
	Non-intervention	0.984	48	0.871
Extrinsic	Intervention	0.950	43	0.061
	Non-intervention	0.956	48	0.067
General	Intervention	0.969	43	0.259
	Non-intervention	0.955	48	0.063

Since the significance of the three subscales were greater than 0.05, normality was assumed. Moreover, as the assumptions of homogeneity and normality were met, the ANOVA test was performed to determine the equivalence of the intervention and non-intervention in the pre-test.

Testing the differences between the mean of the intrinsic subscale:

Table 9.11: One-Way ANOVA for the comparison of variance between the groups regarding the intrinsic subscale of the MSQ

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.583	1	1.583	3.406	0.068
Within Groups	41.364	89	0.465		
Total	42.947	90			

Table 9.11 indicated the one-way ANOVA for any statistically significant differences between the means of the intervention and non-intervention groups regarding the intrinsic subscale (12 questions). The results show that F (1,89) = 3.406, p = 0.068 > 0.05; therefore, there were no statistically significant differences between the groups so the two means are approximately the same, which indicates that the participants' opinions were the same regarding the intrinsic variable.

Testing the differences between the mean of the extrinsic subscale:

Table 9.12: One-Way ANOVA for the comparison of variance between the groups regarding the extrinsic subscale of the MSQ

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.031	1	0.031	0.114	0.737
Within Groups	24.56	89	0.276		
Total	25.59	90			

Table 9.12 indicated the one-way ANOVA for any statistically significant differences between the means of the intervention and non-intervention groups regarding the extrinsic subscale (six questions). The results show that F (1,89) = 0.114, p = 0.737 > 0.05; thus, there were no statistically significant differences between the groups, so the

two means are broadly the same, which indicates that the participants' opinions were the same regarding the extrinsic variable.

Testing the differences between the mean of the General subscale:

Table 9.13: One-Way ANOVA for the comparison of variance between the groups regarding the general subscale of the MSQ

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.148	1	0.148	0.182	0.670
Within Groups	72.456	89	0.814		
Total	72.604	90			

Table 9.13 indicated the one-way ANOVA for any statistically significant differences between the means of the intervention and non-intervention groups regarding the general subscale (two questions). The results show that F (1.89) = 0.182, p = 0.670 > 0.05; therefore, there were no statistically significant differences between the groups, so the two means are broadly the same, which indicates that the participants' opinions were the same regarding the general variable. Therefore, the assumptions of the ANCOVA (normality and homogenates) were met and the model can be applied.

9.2.3 Hypothesis testing (compare/contrast the differences between both groups)

The parametric test, a one-way ANCOVA (Logan, 2010), was performed to answer the research question as to whether clinical supervision improved PHC nurses' job satisfaction. Furthermore, the ANCOVA identifies the demographic data category (i.e. gender, age, experience and education) that is associated with positive overall job satisfaction in the post-test intervention group. The ANCOVA was performed to determine whether the differences between the groups' means in the post-test was a result of the intervention, and at the same time to remove the effects of some of the post-test antecedent variables, called the covariates (baseline scores). The ANCOVA allows for the removal of the covariates from the list of possible explanations of variance in the DV (e.g. job satisfaction), which provides an objective method to test for any statistically significant differences between groups.

Partial eta square η^2 (Polit & Beck, 2004) was conducted in this study to determine the effect size of the clinical supervision intervention based on the Cohen scale. Effect sizes are the most important outcome of empirical studies (Lakens, 2013), as they are used when the objective is to know whether an intervention or experimental manipulation has an effect greater than zero, or, when it is obvious an effect exists,

how big the effect is. This test is useful for presenting the magnitude of the reported effects in a standardised metric, which can be understood regardless of the scale that was used to measure the dependent variable. Cohen is used to describe the standardised mean difference of an effect. A commonly used interpretation is to refer to effect sizes as small (η^2 = ranges from 0.0 to 0.20), medium (η^2 = ranges from 0.21 to 0.50), and large (η^2 = any value above 0.50) based on benchmarks suggested by Cohen (1988) and Salkind (2010). Therefore, a partial eta square (η^2) was conducted to determine the effect size of the clinical supervision intervention.

In this section, hypotheses 1, 2 and 3 are analysed in relation to the main study question, 'does clinical supervision improved PHC nurses' job satisfaction?'. This is followed by hypotheses 4-7 that focus on how each demographic category was affected by the impact of clinical supervision; moreover, these have been added to support the in-depth qualitative data that will be discussed in section 9.3.

Research question

Does Clinical Supervision improve Job Satisfaction for qualified nurses in Primary Health Care in Jeddah, Saudi Arabia?

Sub-questions and null hypotheses 1-7

Q1: *Does clinical supervision develop more positive intrinsic job satisfaction in the intervention group than the non-intervention group?*

A one-way covariance (ANCOVA) between-groups analysis was conducted to determine whether there was a statistically significant difference between the mean intrinsic job satisfaction among the intervention and non-intervention groups at a level of significance (P value 0.05). The mean of the pre-test responses served as a covariate. The independent variable was the two (intervention and non-intervention) groups, whereas the dependent variable was the mean of the post-test responses from both the intervention and non-intervention groups regarding their intrinsic job satisfaction.

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Null hypothesis supporting question 1:

H0: There are no statistically significant differences between the intervention and non-intervention groups regarding the intrinsic job satisfaction, at the level of significance of 0.05 (P value).

Table 9.14: One-way ANCOVA for a comparison between groups regarding the intrinsic job satisfaction in the MSQ

Group	Pre-test			Post-test			F	P value	η^2
	n	Mean	SD	n	Mean	SD			
Intervention	43	3.06	0.69	38	3.64	0.54	62.63	0.000	0.45
Non-intervention	48	3.32	0.68	40	3.34	0.58			

Table 9.14 shows a statistically significant difference between groups at α = 0.05, F (1,75) = 62.63, p = 0.000, so the null hypothesis was rejected as the intervention group had a significantly higher post–test mean compared to the pre-test mean. To interpret the Cohen partial η^2 = 0.45, a size of 0.45 is a medium effect, indicating that 45% of the variance in the post-test can be explained by the intervention. Therefore, the intervention group developed more positive intrinsic job satisfaction than the non-intervention group.

Q2: *Does clinical supervision develop more positive extrinsic job satisfaction in the intervention group than the non-intervention group?*

A one-way covariance (ANCOVA) between-groups analysis was conducted to determine whether there was a statistically significant difference between the mean extrinsic job satisfaction among the intervention and non-intervention groups at a level of significance (P value 0.05). The mean of the pre-test responses served as a covariate. The independent variable was the two (intervention and non-intervention) groups, whereas the dependent variable was the mean of the post-test responses from both the intervention and non-intervention groups regarding the extrinsic job satisfaction.

Null Hypothesis supporting question 2:

H0: There are no statistically significant differences between the intervention and non-intervention groups regarding the extrinsic job satisfaction, at the level of significance of 0.05 (P value).

Study stage

Table 9.15: One-way ANCOVA for a comparison between groups regarding the extrinsic job satisfaction in the MSQ

Group	Pre-test			Post-test			F	P value	η^2
	n	Mean	SD	n	Mean	SD			
Intervention	43	3.04	0.51	38	3.35	0.49	12.94	0.001	0.147
Non-intervention	48	3.08	0.54	40	3.11	0.56			

Table 9.15 indicates there was a statistically significant difference between the groups at α=0.05, F (1,75) =12.94, p = 0.001, so the null hypothesis was rejected, as the intervention group had a significantly higher post-test mean than the non-intervention group. To interpret the Cohen partial η^2= 0.147, the size of 0.147 is a small effect, indicating that 14.7% of the variance in the post-test can be explained by the intervention. Therefore, the intervention group developed more positive extrinsic job satisfaction than the non-intervention group.

Q3*: Does clinical supervision improve general job satisfaction in the intervention group compared with the non-intervention group?*

A covariance (ANCOVA), one-way, between-groups analysis was conducted to determine whether there was a statistically significant difference between the mean general job satisfaction among the intervention and non-intervention groups at a level of significance (P value 0.05). The mean of the pre-test responses served as a covariate. The independent variable was the two (intervention and non-intervention) groups, whereas the dependent variable was the mean of the post-test responses from both the intervention and non-intervention groups regarding the general job satisfaction.

Null Hypothesis supporting question 3:

H0: There are no statistically significant differences between the intervention and non-intervention groups regarding their general job satisfaction, at the level of significance of 0.05 (P value).

Table 9.16: One-way ANCOVA for comparison between groups regarding the general job satisfaction in the MSQ

Group	Pre-test			Post-test			F	P value	η^2
	n	Mean	SD	n	Mean	SD			
Intervention	43	2.98	0.89	38	3.10	0.74	14.47	0.000	0.16
Non-intervention	48	2.90	0.90	40	2.46	0.86			

Table 9.16 indicates there was a statistically significant difference between groups at α = 0.05, F (1,75) = 14.47, p = 0.000, so the null hypothesis was rejected which means that the intervention group had a significantly higher post-test mean than the non-intervention group. To interpret the Cohen partial $\eta^2 = 0.16$, the size of 0.16 is a small effect, indicating that 16% of the variance in the post-test can be explained by the intervention. Therefore, the intervention group developed more positive general job satisfaction than the non-intervention group.

Q4: *Which gender category of the intervention group developed more positive overall job satisfaction in the MSQ questionnaire scores?*

The one-way ANCOVA model was performed for each separate gender category to determine whether there was a statistically significant difference, at a 0.05 level of significance (P value), between the mean of each category in the pre- and post-tests of the intervention group. Moreover, the effect size has been calculated using a partial Eta square η^2 of the clinical supervision intervention. The dependent variable was the post-test, whereas the mean of the pre-test responses served as a covariate.

Null Hypothesis supporting question 4:

H0: There were no statistically significant differences between the means of the gender categories in the intervention group regarding their overall job satisfaction, at a 0.05 (P value) level of significance.

Table 9.17: One-way ANCOVA for comparison between the gender categories regarding the overall job satisfaction

Intervention	Pre-test			Post-test			F	P value	η^2
	n	Mean	SD	n	Mean	SD			
Male	5	3.29	0. 57	4	3.77	0.23	295.68	0.003	0.99
Female	38	3.02	0.57	34	3.46	0.49	70.008	0.000	0.69

Table 9.17 illustrates a statistically significant difference between the mean score in the post-test of the male category at P = 0.05, $F_{male}(1, 2) = 295.68$, P = 0.003, and female category, $F_{female}(1, 32) = 70.008$, P = 0.000. Thus, the null hypothesis was rejected; however, the males and females had higher means in the post-test compared to the pre-test. To interpret, the Cohen partial $\eta^2 = 0.99$ for male and 0.69 for female, the size of 0.99 is greater than 0.69, indicating that 99% of the variance in the post-test can be

explained as male and 69% of the variance in the post-test can be explained as female. Therefore, the males developed more positive overall job satisfaction than the females.

Q5: *Which age category of the intervention group developed more positive overall job satisfaction in the MSQ questionnaire scores?*

A one-way ANCOVA model has been performed for each age category to determine whether there was a statistically significant difference, at a 0.05 level of significance (P value), between the mean of each category in the pre- and post-tests of the intervention group. Moreover, the effect size has been calculated using a partial Eta square η^2 of the clinical supervision intervention. The dependent variable was the post-test, whereas the mean of the pre-test responses served as a covariate. The age categories were: 20-29 years, 30-39 years, 40-49 years and 50-59 years, although the researcher combined the number of participants from the 40-49 and 50-59 age groups because the latter category contained only one participant.

Null Hypothesis supporting question 5:

H0: There were no statistically significant differences between the means of the age categories in the intervention group regarding the overall job satisfaction at the level of significance of 0.05 (P value).

Table 9.18: One-way ANCOVA for comparison between the age categories regarding the overall job satisfaction

Intervention	Pre-test			Post-test			F	P value	η^2
	n	Mean	SD	n	Mean	SD			
20-29 years	9	2.95	0.50	9	3.31	0.41	5.04	0.60	0.42
30-39 years	28	2.97	0.50	24	3.44	0.42	71.145	0.000	0.76
40-49 years +50-59 years	6	3.56	0.78	5	4.08	0.55	4.21	0.133	0.58

Table 9.18 displays no statistically significant difference between the pre- and post-tests mean scores of the 20-29 years age category at P = 0.05, $F_{20-29\ years}\ (1, 7) = 5.04$, p = 0.60 > 0.05. Therefore, the null hypothesis was accepted for this category. This indicates that the participants in the 20-29 years age category did not develop positive overall job satisfaction in the post-test. In comparison, the mean scores in the pre- and post-tests for the 30-39 age category were: $F_{30-39\ years}\ (1, 22) = 71.145$, p = 0.000. Thus, the null hypothesis was rejected. This indicates that participants in the 30-39 years age category achieved higher mean in the post-test than pre-test. To interpret, the

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Cohen partial $\eta^2 = 0.76$ for the 30-39 years age category indicates a large effect size (0.76), which signifies that 76% of the variance in the post-test can be explained by the 30-39 years age category. In comparison, for the last two age categories (40-49 years + 50-59 years), F (1, 3) = 4.21, p = 0.133 > 0.05. Therefore, the mean of this age group did not expose a statistical significance between the post and pre-tests. To sum up, with an effect size of 76%, the only age range that developed positive overall job satisfaction was the 30-39 years age category within the intervention group.

Q6: *Which experience category of the intervention group developed more positive overall job satisfaction in the MSQ questionnaire scores?*

A one-way ANCOVA model has been performed for each experience category to determine whether there was a statistically significant difference, at a 0.05 level of significance (P value), between the mean of each category in the pre and post-tests of the intervention group. Moreover, the effect size using the partial Eta square η^2 of the clinical supervision intervention has been calculated. The dependent variable was post-test, whereas the pre-test means responses served as a covariate. The experience categories were: less than 1 year + 1-2 years, 3-5 years, and more than 5 years, although the researcher combined the number of participants from the <1 year and 1-2 years, as the latter category contained only one participant.

Null Hypothesis supporting question 6:

H0: There were no statistically significant differences between the means of the experience categories in the intervention group regarding their overall job satisfaction, at the level of significance of 0.05 (P value).

Table 9.19: One-way ANCOVA for comparison between the experience categories regarding the overall job satisfaction

Intervention	Pre-test			Post-test			F	P value	η^2
	n	Mean	SD	n	Mean	SD			
< 1 year + 1-2 years	3	3.08	0.37	3	3.42	0.94	2.94	0.336	0.75
3-5 years	11	2.96	0.46	9	3.43	0.29	16.53	0.005	0.70
> 5 years	29	3.08	0.63	26	3.53	0.49	98.64	0.000	0.80

Table 9.19 displays no statistically significant differences between the pre- and post-tests mean scores of the < 1 years + 1-2 years' experience categories, at α = 0.05, $F_{\text{less than 1 year} + 1-2\,\text{years}}$ (1, 1) = 2.94, p = 0.336 > 0.05. Therefore, the null

hypothesis was accepted for these categories. This indicates that the participants in < 1 year + 1-2 years experience categories did not develop positive overall job satisfaction in the post-test. In comparison, the mean scores in the pre- and post-tests for the 3-5 years experience category were: $F_{3-5\,years}\,(1,\,7) = 16.53$, p = 0.005. Thus, the null hypothesis was rejected. This indicates that participants the 3-5 years experience category achieved a higher mean in the post-test than the pre-test. To interpret, the Cohen partial $\eta^2 = 0.70$ for 3-5 years experience category indicates a large effect size (0.70) indicating that 70% of the variance in the post-test can be explained by this this experience category. In addition, > 5 years of experience category was F (1, 26) = 98.64, p = 0.000, which led to a rejection of the null hypothesis. Therefore, the mean of this experience group showed a statistical significance between the pre- and post-tests. To interpret the Cohen partial $\eta^2 = 0.80$ for the > 5-years' experience category, it is a high effect size (0.80), indicating that 80% of the variance in the post-test can be explained by this experience category. In summary, the two experience categories that developed positive overall job satisfaction were 3-5 years and > 5 years amongst the intervention group, with effect sizes of 70% and 80% respectively.

Q7: *Which educational level category of the intervention group developed more positive overall job satisfaction in the MSQ questionnaire scores?*

A one-way ANCOVA model A one-way ANCOVA model had been performed for each education level category (Diploma and Bachelor) to determine whether there were any statistically significant differences, at a 0.05 level of significance (P value), between the mean of each category in the pre- and post-tests of the intervention group. Moreover, the effect size has been calculated using a partial Eta square η^2 of the clinical supervision intervention. The dependent variable was post-test, whereas the mean of the pre-test responses served as a covariate.

Null Hypothesis supporting question 7:

H0: There were no statistically significant differences between means of the education level categories in the intervention regarding the overall job satisfaction, at the level of significance of 0.05 (P value).

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Table 9.20: One-way ANCOVA for comparison between the education
categories regarding the overall job satisfaction

Intervention	Pre-test			Post-test			F	P value	η^2
	n	Mean	SD	n	Mean	SD			
Diploma	39	2.99	0.57	34	3.43	0.46	74.73	0.000	0.70
Bachelor	4	3.60	0.12	4	4.04	0.30	0.07	0.816	0.03

Table 9.20 displays a statistically significant difference between the pre- and post-test means scores of participants who hold a diploma as a qualification, at p = 0.05, $F_{Diploma}$ (1, 32) = 74.73, p = 0.000. Therefore, the null hypothesis was rejected, and the mean of the diploma in the intervention group developed positive overall job satisfaction in the post-test. To interpret, the Cohen partial η^2 = 0.70 for the diploma qualification category showed a large effect size (0.70) indicating that 70% of the variance in the post-test can be explained by the diploma qualification. In comparison, the mean scores in the pre- and post-tests for the bachelors were: $F_{Bachelor}$ (1, 2) = 0.07, p = 0.816 > 0.05. Thus, the null hypothesis was accepted, which means that the differences of the mean that appear between the pre- and post-tests were not statistically significant in the bachelor category. To summarise, the only qualification category in the intervention group that developed positive overall job satisfaction as a result of the clinical supervision intervention was the diploma with an effect size of 70%.

9.3 Qualitative Data Analysis (semi-structured interviews)

The analysis of the semi-structured interview data was followed sequentially after the post-test quantitative data analysis, as it helped to generate an emerging understanding of the research question and develop a deeper understanding of the concept of job satisfaction and clinical supervision among PHC nurses in Jeddah. This section will present the demographic characteristics of the recruited interviewees (see section 9.3.1), and the subsequent analysis will comprise three steps that explore the themes that emerged from the data. First, the recorded semi-structured interviews data were transcribed verbatim (Bryman & Burgess, 1994), which provided a textual record of each interview (Mathers et al., 1998) (see section 9.3.2). Second, the systematic content analysis was demonstrated through identifying all the main concepts that arose in the interviews. Aside from the manual process, the advanced qualitative data analysis software NVivo 'v.11' (DiCicco-Bloom & Crabtree, 2006; Richards, 1999) was used to assist with the coding, data storage, and theme development (see section 9.3.3).

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Finally, the developed and emergent themes will be illustrated in section 9.3.4.

9.3.1 Interview recruitment

A small number (*n* = 6) of interviewees were recruited from the intervention group, including two supervisors and four supervisees, who consented to the semi-structured interviews conducted by the researcher. In order to meet the anonymity requirements of this study, a coding system was used where participants were identified by one capital letter, which was based on their full name e.g. R, L, A, H, G, M. Their demographic data are provided in Table 9.21.

Table 9.21: Demographical information of interviewees

Participants	PHC centre	Gender		Age Group		Experience			Qualification	
		Male	Female	Age 20-29	Age 30-39	< 2 years	3-5 years	> 5 years	Dip	BSc
R = Supervisor	B1	0	1	0	1	0	0	1	0	1
L = Supervisee	B1	0	1	1	0	0	1	0	1	0
A = Supervisee	B2	1	0	0	1	0	0	1	1	0
H = Supervisee	B2	0	1	1	0	1	0	0	1	0
G = Supervisor	B3	0	1	0	1	0	1	0	0	1
M = Supervisee	B3	1	0	0	1	0	0	1	1	0
Total		2	4	2	4	1	2	3	4	2

9.3.2 Interview transcription

Transcription refers to copying audio-recorded interviews into text (Mathers et al., 1998). I uploaded the audio recordings into my computer to enable easy listening, transcription and analysis. The transcription of each interview was more challenging than I had expected, as each transcript was read, and notes were made in the margin concerning the main points of interest. During the transcription, I faced a number of issues; for example, I was surprised by some of phrases that I used but was not consciously aware of during the interview. Also, because some interviewees spoke in run-on sentences, I believed that the insertion of a silence or comma would not change the meaning of an entire sentence; therefore, I used some basic conventions keys for non-verbal communication, as discussed in section 8.6 and shown in Appendix 21.

To increase the trustworthiness of the transcription, the recording was played back several times. Furthermore, to increase the validity, or credibility, within the naturalistic paradigm of trustworthiness, the full transcripts were returned to each interviewee, known as a 'member check' (Lincoln & Guba, 1985; Manning, 1997), for verification

in terms of the accuracy and validity. However, Giorgi (1985) argued that the 'member check' process for verification should not be followed because it related to the analysis process, which is the responsibility of the researcher, and not the interviewees. Furthermore, Colaizzi (1978) recommended the return of the transcripts to interviewees as the final step of the analysis to confirm what has been written in light of their comments. Similarly, Braine (2010) supported my decision regarding the 'member check' method, as she stated that involving participants through this method to ensure the correct meaning of what has been said by these participants increases the trustworthiness of the data.

I also listened to the audio recording while reading the transcriptions to ensure accuracy during the interpretation. This process was complicated and required further exploration, which consumed an inordinate amount of time, as each script took 2-5 days to review and finalise. This is consistent with the view of Whiting (2008, p. 38) who stated that;

> *"… reviewing the accuracy of a transcript is a very painstaking process and researchers should never underestimate the amount of time that it can take."*

Also, one of the most difficult aspects was double-checking for the translation of these transcripts; I transcribed the interview data into Arabic to ensure that nothing was missing, and then all the data were translated back into English by a professional translation office in Jeddah (see Appendix 22). Despite using forward translation techniques from Arabic to English, several words were reviewed and reworded to capture the spoken words accurately in textual form, whilst the structure of some sentences, omissions, or mistaken words were also corrected. This ensured the quality of the translation, and that the results obtained were accurate and reflected real cross cultural differences or similarities in the phenomena being measured (Maneesriwongul & Dixon, 2004).

9.3.3 Content analysis *(NVivo)*

The content analysis of a semi-structured interview concerns the assignation of labels to significant information collected from participants; after assigning labels, codes or nodes under categories or themes, the researcher is able to categorise all the significant data. After this coding, the significant data were sorted and grouped around similarities, or clustered around underlying concepts that represent a group of codes. Thus, when all

transcripts were completed, the content analysis was carried out to systematically identify the common themes and categories; this was undertaken both manually and using NVivo (v.11.). The use of NVivo facilitated the analysis and saved time by systematising the procedures; it also permitted flexibility in revising the analysis processes (DiCicco-Bloom & Crabtree, 2006). NVivo has tools to link ideas in different ways (Welsh, 2002) through standard processes, such as creating and importing documents, exploring the data with queries (i.e. text search and word frequency) (see Figure 9-3). Using NVivo software with traditional or conventional content analysis helped me double-check the code scheme and thus increased the validity and reliability of the data analysis. The process followed for the qualitative data analysis by NVivo is described in Table 9.22.

Figure 9-3: Word frequency

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Table 9.22: Qualitative analysis process by NVivo

Steps	Processes
1	• Created a new project to input the data and inserted a project name 'semi-structured interview data analysis'.
2	• Imported each script (i.e. all six transcriptions) from the word processor to NVivo in a 'source file' area (Richards, 1999), which is also known as a rich text record or 'navigation view' as it has all the tabs and information imported for analysis.
3	• Explored the information by using a query to search specific text and word frequencies in each transcript in order to understand the data (Bazeley & Jackson, 2013). This step is not part of the analysis, but rather part of the process for knowing the data collected, as it provided a better understanding of the words used and how each interviewee responded to each question in the context of the overall study aim. • Used the 'word frequency' icon to search for the words most commonly used by each interviewee in their transcriptions; this provided information about the words used and the frequency of use. Synonyms were also selected as a word frequency criterion to enable a choice from all the related terms, such as talking, speaking and communicating. The greatest word frequencies were displayed in the 'word cloud' seen in Figure 9-3; thus, a more wide-ranging search criteria meant more words summarised in term of frequency. • Described the most frequently used words by text; for example, most of the interviewees used 'clinical supervision' as a word, as discussed, its benefits, and others talked about its impact on job satisfaction. This step provided a greater understanding of the data, which helped to label the themes or nodes.
4	• Regrouped the data based on each interview question by 'out coding', to identify the perception of interviewees in terms of the impact of clinical supervision on job satisfaction. This meant looking for information relevant to this perception that enabled the researcher to develop a code. In particular, to simplify all data, each interviewee response was grouped in an area in one draft based on the interview question. For example, question number one displayed all six interviewee responses that only considered this question.
5	• Created nodes: these nodes were developed as containers or themes where each node contained a range of relevant coded information as a category or sub-category. These nodes were created by the following two processes: first, *labelling* the node, and second, *describing* and defining the node (Coffey & Atkinson, 1996). All information was coded, highlighted and dropped into the related node or theme and in the related category or sub-category (if available). For example, any information or factors that referred to the positive or negative influence on job satisfaction was highlighted and dropped in the relevant developed category as a 'node: factors influence job satisfaction < sub categories: factors influence positively, and factors influence negatively'. This step is also known as theming data where sentences are used to describe or capture the meaning of an aspect of data (Saldana, 2016).
6	• Used the 'node classification' to organise cases and characteristics which connected participants' demographic information to their interview responses. For example, in this study, the 'node classification' was created according to each participant code number given during the interview; this subsequently created the 'attributes' for each participant, such as the gender, age, qualification, and number of years' experience.
7	• The analysis used the query and explore functions to analyse the data, such as: 'query < matrix coding < add all participants in rows box < add the node or sub category' in the column box to check the perception of each participant regarding the 'node < run query < table' in conveying the perception of each participant.

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9.3.4 Developing the emergent themes

This section provides a unique insight into the experience of clinical supervision practice and the impact on the job satisfaction for nurses working in PHC centres in the city of Jeddah. This insight is derived from the textual data collected in this study, each transcript was analysed for emergent themes, which were developed into short statements that described the interviewees' current job satisfaction and experiences of clinical supervision. To avoid any changes in the essence of meaning, the statements used interviewees' own words as much as possible. Thus, five themes were generated based on these responses and on the word, frequency shown in Figure 9-3. This supporting the quantitative findings regarding the impact of clinical supervision on job satisfaction and included: participants' views on their current job satisfaction; factors influencing their job satisfaction; their general perceptions on clinical supervision practice; the factors influencing effective clinical supervision; the impact of clinical supervision on burnout, stress, and knowledge and skill.

The findings (see Table 9.23) also illustrate the emergent process of describing each theme. Furthermore, the summary of each theme illustrated in Appendix 23 displays the examples of the meaning units, condensed meanings, and subthemes for five emergent themes, whilst the quotations represent the views expressed across the six interviewees. The presenting themes are not placed in any priority or orders but are rather detailed as they appeared in the interviews. However, the appearance of the theme in Table 9.23 may be indicative of an order of significance that I might have sub-consciously assigned.

Table 9.23: Summary of the developing themes and codes from the content analysis

N	Initial Themes	Code
1	Participants' views toward current job satisfaction	• Feel confident • Moderately stable • Feel better and confident • Workload
2	Impact of factors on job satisfaction	• Local and international health accreditation standards • Policy and procedures • Work environment • Solving problems • Quality management tools • Good relationship with staff, manager • Team member • Understanding • Respect • Structure of the building • Workload • Moderately satisfied • Enhanced staff relationship • Changed in thought and way of thinking
3	General views about clinical supervision approach	• Complete framework • Support nurses • Develop knowledge and competence • Discuss freely • Reflective process • Confidence
4	Providing effective clinical supervision	• Quality improvement framework • Sign contract • Time of session • Quiet environment • Monthly meeting • Longer frequency • Experience • Qualified supervisor • Well trained • Deal with situation • Cooperate, good listener • Able to solve the problem • Talented • Teamwork • Conflict • Enhanced relationship • Group clinical supervision very useful • Group dynamic • Life-long learning • Accomplished framework
5	The impact of clinical supervision on *burnout, stress and knowledge and skill*	• Think widely and seriously about different nursing issues • Interact with different kind of issues • Increased knowledge • Improved skill • Sharing ideas and solutions • Learnt different things • Level of stress and burnout • Sort different ideas

Theme 1: Interviewees' perceptions of their current job satisfaction

The current study findings showed that most of the interviewees ($n = 5$) had positive views with regard to their job satisfaction:

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"...now I feel moderately stable in my current job..." (Interviewee R)

"...I am completely satisfied...feeling better and more confident in my job and the services that I provide to the patients." (Interviewee A)

"I feel moderately satisfied..." (Interviewee L)

"...generally, I am satisfied with my work." (Interviewee G)

"...I feel more confident and...pleased at my work these days."

(Interviewee M)

However, only one of the interviewees expressed their dissatisfaction with their job.

"I am not satisfied with my work..." (Interviewee H)

These six interviewees highlighted several reasons for their positive and negative views regarding their job satisfaction that were considered in the five sub-themes deliberated under the following 'factors influencing job satisfaction' theme.

Theme 2: Factors influencing job satisfaction

In the current study, the interviewees noted several factors that influenced their job satisfaction; Interviewee A outlines some of these factors in the following statement:

> *"I think implementing health standards for providing quality services to the patient, and ... good relationship with colleagues and ... attending clinical supervision for continuing professional development, could improve the job satisfaction as it did to me." (Interviewee A)*

The 'factors that influence job satisfaction' are considered under the following five sub-themes:

Sub-theme 2.1: Quality management

The majority of interviewees stated that the quality management approach was one of the most important reasons for their satisfaction. Interviewee R is a nursing quality organiser in the B1 PHC centre, and in this study, the interviewee adopted the role of a supervisor in the six-month clinical supervision group sessions. They considered the quality management approach one of the reasons for their job satisfaction.

> *"... I am feeling good at my work because there are several positive changes occurring in our health system, as I think ... the quality management becomes an essential requirement to improve our job satisfaction ...... I have played a quality organiser role and tried to*

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address several projects ...... participated in the patient and job satisfaction projects ... and other projects ... for achieving the accreditation requirements and all these made me feel more confident than before." (Interviewee R)

Similarly, Interviewee A stated the importance of quality improvement tools in improving job satisfaction:

"... I think the quality improvement tools also helps to improve the satisfaction levels because ... it guides the individual to find out and identify the ... exact place of the problem ... and then to study and choose a solution, and finally ... it [quality improvement tools] measures the issue to determine whether there is any change or not. Otherwise, it keeps searching for the proper solution for this problem."
                                                                    (Interviewee A)

Both interviewees G and M work as staff nurses in the B3 PHC centre: G works in nursing education and M works in the non-communicable disease's clinic. They adopted the supervisor and supervisee's roles in the clinical supervision sessions. They also considered the quality improvement approach one of the reasons that led to positive changes in their work environment, which positively influenced their job satisfaction.

"... the work environment of the centre is good (smiling)...the centre is considering the quality improvement approach which intends to improve the health services, and ... developing skill and knowledge for employees and ... solving problems.' (Interviewee G)

"... umm, I think many positive changes emerged in the last few months in the centre due to the health centres' attention and direction to apply the quality improvement approach ...' (Interviewee M)

Also, two interviewees', L from B1 and A from B2 PHC centres, were satisfied with their jobs as there were reviewed policies and procedures in their centres. The policies and procedures are considered under Herzberg's 'hygiene factors', which relate to the context of the work (Herzberg, 1968). The policies and procedures variable correlates with a reduction in the level of job dissatisfaction as it refers to the conditions surrounding the workplace (Alshmemri, 2014).

"... I feel moderately satisfied ... because from few months, I am noticing ... some changes in the maternity and child clinic related policies and procedures, as at now I have a right to review these policies

and procedures with a qualified group from the primary health organisation, and I have to inform the quality department if there is a need to make any umm changes for any process according to the evidence-base." (Interviewee L)

"... I am also satisfied with the updated policy and procedures ..."
(Interviewee A)

Sub-theme 2.2: Interpersonal relationships (with manager, head nurse, and staff)

This study found that job satisfaction was influenced by staff interpersonal relationships; all participants referred to the importance of their professional relationships with respect to their satisfaction at work. These relationships included those with other staff, head nurses, and centre managers.

"... feeling satisfied in this period, because I also created good relationships with some of my colleagues in the centre ... and my head nurse has become more collaborative (smiling) and understanding than two years ago (Laughing). Now she always supports me and helps me to solve my maternity and childcare clinic related issues ..."
(Interviewee L)

"... umm I am also satisfied with the ... relationship with people here at work, whether with my manager, with head nurse or with other colleagues." (Interviewee A)

Also, interviewees' A, G, and R stated their reasons for their caring and interest in creating good interpersonal relationships at work.

"I think a good interpersonal relationship and the professional development are the most important ways to improve job satisfaction, as these encourage every nurse to share his or her ideas freely and ... get support to make change and improvement, whether in a nursing attitude level or in the nursing process." (Interviewee A)

"... I always believe in co-workers relationship, and therefore I always try to communicate with all nurses in the centre ... whether they need to know any specific information related to; for example, infection control, diabetics, hypertension, or ... any other professional related issues, and this makes my relationship with most of them very good, and makes me feel happy at my work.' (Interviewee G)

"... I feel satisfied because most of the staff attitudes have changed ... and they have become more friendly to me than before, and my head nurse and the manager have more understanding between themselves."
(Interviewee M)

Furthermore, one of the interviewees refers to the importance of good interpersonal relationships with leaders and staff in the centre for her commitment and engagement at work.

> *"... I think umm if I had a head nurse and manager support, and ... a good relationship with my colleagues, as I have now, then it will have definitely influenced me to work harder and loved my work as I feel now, also I think allowing me to develop my knowledge and skills, and ... participating in decision making ...... lead to an increase in my job satisfaction level" (Interviewee R)*

One of the younger interviewees stated that whenever she is treated well by staff members and her head nurse she feels good and satisfied.

> *"... sometimes, which is very rare (Laughing), when my head nurse and some of my senior colleagues are in good mood and satisfied with my work and behaving with me humbly, I feel very good, which also reflects on my performance and leads me to make the patient happy and satisfied with the services they receive."* (Interviewee H)

Sub-theme 2.3: Workload and work environment

Interviewee H was not generally satisfied with her job, and mentioned several different reasons for this, such as the workload, shortage of staff and other issues related to the work environment.

> *"I am not satisfied with my work, as I am working in a vaccination clinic and, due to workload, I cannot join any training sessions except those offered inside the centre (sigh). There are several other reasons, such as the environment at work is so messy ... there is a shortage of staff, and ... the structure of the building is so old ..." (Interviewee H)*

Similarly, Interviewee L referred to the significant relationship between their job satisfaction and the work environment; specifically, they considered the importance of professional relationships, and the need for a safe and understanding environment.

> *"I think umm ... the job satisfaction ... is very important to any nurse ... and therefore, it is important to create a positive work environment surrounding each employee in the centre, particularly with nurses, because we always have lots of responsibilities and (sigh) huge work to do, and ... I think that it could be possible only if there is understanding environment, including umm respect and support from the manager, and head nurse, and also respect among the staff." (Interviewee L)*

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Sub-theme 2.4: Clinical supervision

Clinical supervision was considered one of the most influential factors for job satisfaction in this study. One of the interviewees, who work in the quality-nursing department, also strongly asserted that clinical supervision influenced her job satisfaction and indicated that CS aimed to improve the quality of health services.

> *"...when I have heard about the clinical supervision process and ... how it aims to support nurses by using various quality improvement approaches, I decided to take part (smiling) because I believe in this kind of supervision focusing on ... improving the quality of work and ... attitudes of employees toward their jobs. I really found it effective and it has influenced my job satisfaction." (Interviewee R)*

Also, Interviewee R stated that:

> *"... according to my work experience, which is now almost ten years in primary care as a registered nurse and quality nursing organiser, I found group clinical supervision very effective and useful for improving job satisfaction ..."*

Similarly, Interviewee A referred to clinical supervision as one of the positive factors that led to an improvement in his job satisfaction.

> *"... it [clinical supervision] enhanced my learning skill and ... developed my professional thinking ... by allowing me to communicate with different nursing backgrounds, every month ... in one team, and ... discussed about different problems and topics, umm then make a plan together to solve it by using different quality tools, I think it has created a kind of new supportive environment surrounding us, and that's made me feel satisfied with my current job." (Interviewee A)*

Also, Interviewee A said:

> *"... I really found the clinical supervision programme an appropriate approach for improving job satisfaction as it helped me to reflect on and challenge my own practice in a safe and confidential environment."*

Furthermore, one of the interviewees found this approach very supportive, although he argued for a change to the term 'clinical supervision' because he felt that the meaning did not reflect the intention or the purpose of this supportive approach;

> *"Honestly, in the beginning I thought it [clinical supervision] like any other supervision programme which was just checking and evaluating the employee's work, if it was done properly or not ... it sounds like*

somebody watching over you ... but it was really different ... I think it should be named as a supportive session or... a learning session or ... as professional development sessions, rather than clinical supervision." (Interviewee M)

In comparison, a younger interviewee responded very negatively to the use of clinical supervision in improving her job satisfaction.

"I don't know if it [clinical supervision] could help to improve job satisfaction; for myself I found it completely useless and unsupportive."
(Interviewee H)

Theme 3: General perceptions of clinical supervision practice

In this study, most interviewees who practised supervision for six months showed an overall positive disposition toward the clinical supervision intervention.

"... I found this approach to form a complete framework or ... umm undertaking to support nurses and determine their weaknesses and strong points; then it works to improve on these weaknesses and develop their strengths by, for example ... increasing their knowledge and enhancing staff relationships and ... solving problems by using different quality tools." (Interviewee R)

Also, Interviewee R said:

"... clinical supervision is the only approach that enables nurses to discuss freely and safely about patient care, and ... (knocking on door) and about...their other professional issues."

Some of the interviewees tried to define the clinical supervision concept based on their own understanding of the clinical supervision process.

"I think clinical supervision is a clinical reflective process which provides support to employees, not on evaluation processes or ... judging the individual or ... observing employee's mistakes ..."
(Interviewee A)

"... clinical supervision is a learning practice umm which undertakes to improve the quality of health care services (wiping runny nose) *and ... to improve the nurses' knowledge and skill.' (Interviewee G)*

One of the interviewees showed her interest in attending the supervision due the feelings of safety and confidence she experienced during her sessions.

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> *"It was a great opportunity and enjoyable to take part in the clinical supervision programme … this approach has given me (ringing phone) … given me a sense of confidence and responsibility towards my job …"*
> *(Interviewee L)*

Although all definitions varied, in essence they conveyed a similar meaning, which is that clinical supervision is focused on the provision of empathetic support to improve performances, knowledge and the facilitation of reflective practice. This process seeks to create an environment in which participants have an opportunity to evaluate, reflect on and develop their own clinical practice with confidence and provide a support system for one another (Winstanley & White, 2003).

Theme 4: Factors influencing effective clinical supervision

The interviewees in this study identified seven factors that highlighted the key features and mechanics of effective clinical supervision. These are exemplified in the following five sub-themes: supervision framework, setting, length and frequency of sessions, qualified supervisors, supervisory relationship, and mode of clinical supervision. Moreover, Interviewee R summarised and listed some of these factors as key considerations when applying effective clinical supervision.

> *"… clinical supervision needs to be prepared well before commencing, like … qualified team, expert and … supportive supervisor umm (coughing), and arranging other facilities … like a suitable place and … enough time to provide an effective session." (Interviewee R)*

Sub-theme 4.1: The experience of clinical supervision framework (model)

The current study developed a hybrid framework based on the PDSA quality improvement cycle, which is particularly familiar to nurses working in the PHC sector in Jeddah. Interviewee A noticed this as an advantage in his practise supervision framework.

> *"… I think this approach [clinical supervision form] is designed based on the quality improvement framework, which is great, because we all (knocking on door) have some experience with quality tools being used to solve problems, which enables us to use this form efficiently."*
> *(Interviewee A)*

Also, as a supervisor, Interviewee R encouraged her group to use this form of clinical supervision, although she did not use it with all nurses' issues.

> *"I gave the supervision sessions for my group based on the clinical supervision form, which was very well structured, and ... it helped me and my colleagues to work together and understand our problems ... and how to sort our ideas ... to find out the proper solution for the problems; the form [was] designed to identify and solve any problem, however sometimes we were not following all the steps of this form, especially when we were dealing with simple issues which were sorted out in one setting." (Interviewee R)*

To help systematically implement clinical supervision, interviewees also used several documents, including the clinical supervision form regarding the commitment of supervision. Interviewees G and M indicated their satisfaction with the documents that were used in the supervision sessions, namely the clinical supervision contract that they signed prior to the start of the intervention as a commitment to their group supervision sessions.

> *"It [clinical supervision related documents] provided me a feeling of ... a protection and responsibility toward my group (coughing) especially when I signed the clinical supervision contract at the first meeting for keeping confidentiality between the supervisees and me as a supervisor." (Interviewee G)*

> *"... it became like an exciting activity for me, which was ran every month based on our contract, and ... which asked my full of commitment, and that's encouraged me to ... to prepare any significant topic related to non-communicable diseases and discuss it freely with my group ... with keeping confidentiality and ... of course the privacy of each session." (Interviewee M)*

Sub-theme 4.2: Setting, length, and frequency of sessions

Although most of the interviewees felt excited about their participation in the supervision sessions, they were not satisfied with the timing and the frequency. Thus, majority of interviewees responded negatively with regard to the length (i.e. period) of each session, and the appropriate place requirements.

> *"... in the advanced level [the fourth month of supervision] of clinical supervision sessions, it became difficult to finish the session in just under one and a half hours, and ... I needed more time to handle each member's issues umm and ... a quiet environment in which to hold the session, which also became difficult due to the centre engaging in the international accreditation programme." (Interviewee R)*

> *"The biggest problem we faced in the last two or three sessions was the shortage of time ... which was not enough for everyone in the group to discuss their problems in detail..." (Interviewee M)*

Accordingly, Interviewee G, who adopted the role of a supervisor, suggested a frequency and length of session to enable the group to cover all members' issues in one setting, and to solve longer-lasting issues in a more appropriate timeframe.

> *"The programme was so good as a supportive method, but I think ... it would be better if the sessions run every two weeks instead of four weeks, or ... the timing of each session should be extended to three or four hours, because sometimes we had problems which needed to solve in a project steps and that took time, and for that we needed to meet continuously and in frequent intervals." (Interviewee G)*

Furthermore, another factor that appeared to impede effective clinical supervision in this study is the environment, such as a lack of suitable accommodation. Interviewee G referred to this issue:

> *"... sometimes we had a setting problem, because we had only one meeting room in the centre which is always busy ... due to the preparations for quality improvement projects or for joint commotion accreditation preparation, so I suggested to arrange a formal room for our monthly meeting, and I recommended to meet outside work in the training centre, because they always have an empty rooms, but the head nurse rejected our request (sigh), because they have a shortage of staff, and if we had met outside the centre it would take time to return back from the training centre to our work place after finishing the session."*
>
> *(Interviewee G)*

Moreover, interviewees reported that clinical supervision should be conducted over a long period of time (i.e. one year) to enable a change in their environment, knowledge and quality of work. However, Interviewee L expressed a positive experience over the six-month period of supervision:

> *"... in the first three months, I felt that this programme is not very helpful for nurses but after spending six months with the group I found it very supportive and ... useful for solving problems." (Interviewee L)*

Similarly, Interviewee R denoted that this positive perception regarding the clinical supervision programme might not be matched or confirmed by other staff members, particularly at the beginning, but that this could change with the passage of time.

> *"... it is not necessary that the same positive reaction emerged also by other staff members toward implementing this supervision programme, because I believe to get a positive response from some participants toward a new project it needs time to experience this project ... may be for one year or more than one year ..." (Interviewee R)*

Also, both Interviewees R and A explained how a positive view toward clinical supervision might be established.

> *"... I think clinical supervision might take a long time with others, so the employee might be convinced ... how much it is important for staff support (coughing) and for their professional development, because I think it depends on each individual's experience; for example, I practised this programme continuously for six months ... and tried to solve some issues related to my colleagues, hence today I can grasp this improvement, which is not necessary the same things happened with my other colleagues." (Interviewee R)*

> *"... I think we still need more time and experience in clinical supervision to feel ... completely satisfied regarding the work environment and ... services provided to the patient." (Interviewee A)*

Sub-theme 4.3: Qualified supervisor

Some interviewees discussed the importance of a competent and qualified supervisor in providing effective supervision. Interviewee R explained how, as an assigned supervisor, she felt sufficiently competent to deal with group conflicts due to her quality management skills.

> *"In the beginning of the clinical supervision sessions, it was difficult to control the group dynamics ... because each member in the group had come from ... a different background umm, and they had different experiences as qualified nurses, and also, umm, there were different age groups (smiling) ... which sometimes led to a big generation gap between these colleagues. However, after a short period ... and due to my quality management experience ... I applied TEAM-BUILDING strategies by using the four-phases includes forming, storming, norming, and reforming for creating a dynamic group, and that assisted the team members with interacting and communicating effectively ..."*
> *(Interviewee R)*

Also, this interviewee recommended that the supervisor should be well-trained and as well supported as a supervisee:

> *"...I think for the one who would like to be a clinical supervisor like me*

(Laughing) must be trained well first to deal with different situations, also I think … it is important for me even as a supervisor to join the monthly supervision sessions like my colleagues to get the same support that would be given to other supervisees." (Interviewee R)

It has been found that, the introduction of a clinical supervision program and the implementation of training for qualified nurses by external moderators had a positive impact on the attitude of PHC nurses toward clinical supervision, and their subsequent confidence in their knowledge and skills.

"… to make these supervision sessions more efficient and more supportive, I think we need more qualified supervisors … such as the external supervisor who trained us during the clinical supervision workshop sessions, of course with all my respect to my current supervisor in the centre." (Interviewee L)

However, for one of the youngest interviewees (H), the importance of having a qualified supervisor was important, as she criticised the way her supervisor ran the sessions and the impact on her engagement:

"Yes, I like the concept of this programme but honestly, I did not feel comfortable to continue all the six sessions with that group, especially with the supervisor who was not qualified enough to run the session properly. Although I chose her to be my supervisor, we both did not feel comfortable with each other. She was always focussing just on the complicated problems or the problems that she likes, and whenever I tried to present my issues related to the vaccination clinic, she did not give any concern, and she always was saying that "we don't have time to discuss a minor issues or easy problems, we need to discuss and work on the priorities or essential problems" (Laughing)." (Interviewee H)

In contrast, Interviewee M, acknowledged his supervisor's support as a way of increasing their supervisees' knowledge, and the suggestion to use social media technology, such as WhatsApp, to communicate with the group and access support from their supervisor outside their monthly session.

"… my supervisor is so talented and active (smiling); recently she has suggested and created a group of clinical supervision in the social media "WhatsApp"… to enable us to … discuss the problems in the day we can not meet due to busy work, or … in case if there is no empty room for a meeting … every month she is bringing new ideas and new information according to each member's problem in the group … so every month I am gaining new information about my field, as she

encouraging me to read in different evidence-based to update my knowledge ..." (*Interviewee M*)

The two interviewees, who adopted the supervisory role in the study, not only suggested the continuation of clinical supervision, but also wished to make it compulsory for all nurses working in the PHC sector.

> *"I recommend this programme [clinical supervision] for all nurses, and I am sure that if the nursing director and all head nurses in these centres [primary health care organisation] came to know and ... understood this approach [clinical supervision], they will be going to adopt it formally in their centres; I wish they [nursing director department] allow to make it compulsory for all nurses..."* (*Interviewee R*)

> *"... I hope if this programme becomes ... a formal and compulsory requirement for health care nurses, I will try to keep continue with my group because we all feel good when we meet at the end of the month to discuss updates, and our head-nurse is also happy with this and support us."* (*Interviewee G*)

Also, Interviewee A referred to the future implementation of clinical supervision, and indicated that he would like to develop his knowledge and skill by becoming trained as a supervisor:

> *"... I wish if I could develop my knowledge and skill deeply and ... strongly then I could apply to be an official clinical supervisor in the future (Laughing), whether if it implemented formally ... or even informally, otherwise ... it would be difficult to play the role of effective supervisor without training."* (*Interviewee A*)

The feedback from R, G, and A illustrated that, if supervisees expressed an interest in, and received effective clinical supervision, this influenced their wish to informally continue clinical supervision sessions. However, Interviewee H referred to the importance of both the reflective process and a qualified supervisor in the successful conduct of supervisory sessions and suggested it would otherwise be a useless and unsupportive group.

> *"I remember when I had attended the introduction and training session with the external moderator, it [supervision sessions] was looking very supportive supervision, but when I had implemented practically with my colleagues in the centre (sigh) I found it [supervision sessions] useless. Honestly all sessions that I had attended were just like a time wasting where everyone was only complaining and storytelling without*

> *receiving any useful response, or instruction or…solution from the supervisor." (Interviewee H)*

Therefore, Interviewee H indicated a preference that future clinical supervisory sessions were lead by an external moderator, following her previous positive experience with the external moderator during the training;

> *"… I was so happy during the two days of training sessions when the external moderator trained us … I felt a kind of trust and … comfortable toward her attitude when she was working with us during the session, as she was not familiar to us and also was so qualified … friendly, and talented, therefore I would like in the future to attend this supervision with the external supervisor.' (Interviewee H)*

Sub-theme 4.4: Supervisory relationship

Some the interviewees in the study acknowledged that the use of clinical supervision enhanced their relationships with either the supervisor or supervisees in the group. One of the interviewees appreciated the respect and talent of her group members as a supervisor.

> *"… clinical supervision could be effective for the primary care centre if it is implemented properly. For example, … in my case I found my group members were very understanding … respecting each other and … very talented (smiling). All members were familiar with the quality improvement concept, which helped make the sessions run easily."*
>
> *(Interviewee R)*

Similarly, two of the interviewees appreciated their relationships with their group members during the six months of supervision, whether with the supervisor or supervisees.

> *"I remember when I met my colleagues in the group clinical supervision for the first time during the training session (smiling), we did not even knew each other well, although we were working in the same place for [a] long time (Laughing), so in the first and second months of the supervision sessions, there were a kind of … conflict between our ideas and information … maybe because we all had no previous experience in this kind of session, even if we were trained for it before … but by the passage of time and having a previous good relationship with my supervisor, our relationship in the group improved, and now we all can understand each other's point of view." (Interviewee A)*

Also, Interviewee A said:

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"... I think I was so lucky to have multiple-talented and knowledgeable colleagues in my group during the six months, who respected each other's views, specially my supervisor."

"... I felt comfortable to talk about specific issues with the assigned female supervisor, as she was so understanding, active and cooperative." (Interviewee M)

Moreover, Interviewee H, who referred earlier to having an unqualified supervisor, also stated that her unsuccessful relationships with other supervisory colleagues, was due to a lack of respect amongst some of them during the session.

"... some of my senior colleagues in the group [group clinical supervision session] were not respecting my ideas and taking me seriously (sigh), may be due to the age gaps between us as I said before, specially between me and my supervisor, and ... they all were not interested to cooperate or listen to my issues during my turn (sigh), therefore after the fourth session I decided to not attend any session again with this group." (Interviewee H)

Sub-theme 4.5: Mode of clinical supervision (group clinical supervision)

The study found that the majority of interviewees preferred 'group clinical supervision'.

"Personally, I found it [group supervision] very beneficial because it was the first time when I sat with my colleagues in the centre to talk about a variety of topics ...... this involvement has encouraged me and my other group members to build ... a kind of ... a strong professional relationship between us in the centre." (Interviewee A)

"... I think it [group supervision] was useful because we all had no previous experience in clinical supervision, and this group supervision helped me to enhance my relationship with the staff and developed my ways of thinking through discussing and sharing several problems with others in a group setting." (Interviewee L)

"The group supervision provided me with the opportunity to ... reflect on and review my practice, and ... to think about multiple disciplines, through discussing each member's cases in depth and modifying our practices. I think ... it is ... a comprehensive method for ... acquiring new knowledge and ... skills by sharing several ideas and ... different views in one group." (Interviewee M)

The following supervisor's and supervisees' feedback suggested using the group of supervision in PHC centres to share different ideas and experiences, and described their sessions as challenging, enjoyable and exciting.

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> *"… actually, I was lucky to have a skilful group and … most of my colleagues were familiar with the quality improvement techniques, so…we all enjoyed by sharing our experiences (smiling) and skills through this approach …" (Interviewee R)*

> *"It [group supervision] was very useful, although there was huge conflict of ideas between some members, as they fought and quarrelled several times (Laughter). I found this group supervision very exciting and challenging especially when I was discussing different member's issues and … when I was helping each member to design her problem's solution with … with involving other members' in the group by using clinical supervision form…so the whole programme was very advanced, and … it was a perfect rehearsal for using a quality improving tools to solve problems, and … I think all of us enjoyed this experience."*
>
> *(Interviewee G)*

However, one of the interviewees disclosed complete dissatisfaction with the group supervision that she received.

> *"… the group members were not decent with me … and they were always making the session very complicated; therefore, I decided that if this programme will be initiated formally in the future, I would prefer to attend the session alone with the qualified supervisor."*
>
> *(Interviewee H)*

Also, Interviewee H said:

> *"… I was not happy with the group, and I did not feel trusted and … I was not confident toward the supervisor and the other colleagues in this group when I was discussing and criticising some issues related to the leadership styles or … when critiquing some colleagues' mistakes in our centre".*

Although Interviewee L showed her satisfaction with the group supervision that she attended, she preferred and recommended one-to-one supervision sessions in the future.

> *"… in the future I would prefer to choose one-to-one supervision because … sometimes during the sessions when I had a serious issue I could not discuss it in detail within a group due to time for discussion, and … also some of the group members were not quite interested to solve some kinds of problems … for example problems related to my maternity and childcare related documents." (Interviewee L)*

In comparison, both male supervisees several times disclosed their appreciation of and the benefits received from group supervision.

> *"Personally I found this type of supervision as a ... a complete professional sharing ideas and ... understanding process, as well as it helps to stimulate the staff relationship by giving every one in the group an equal chance ... to present his problems, I think group supervision is the most appropriate type for me ... because it offers ... a comprehensive plan of sharing ... discussing and solving problems as a professional team by using a clinical supervision form."*
>
> *(Interviewee A)*

> *"... honestly, I feel this group supervision helped me to explore some of my personal and emotional reactions towards my work in a confidential setting, so I think this supervision ... made me feel better and confident and also improved my relationship with some of my colleagues in the centre." (Interviewee M)*

Also, the commitment of the group is important in ensuring a positive outcome from the supervision sessions. One of the interviewees referred to this by considering the clinical supervision contract in her interview:

> *"Despite having a shortage of time, and ... workload, and having different experiences and ... different ways of thinking, we were meeting every month, as decided in the contract, and were working together to find out the solutions for, every month, related problems as an effective group." (Interviewee G)*

Theme 5: Impact of clinical supervision on burnout, stress, and knowledge and skill

In this study, interviewees gave mixed views regarding the impact of clinical supervision on stress, burnout, knowledge and skill. The majority of interviewees agreed that clinical supervision had a positive impact on their knowledge and skill.

> *"... clinical supervision definitely could help to improve nurses' skills and knowledge, as it did for me." (Interviewee L)*

Also, Interviewee L said:

> *"I am working in the maternity and child care clinic as a registered nurse since three and a half years, and I have not got enough chance to work in other clinics ...... but since I joined the clinical supervision sessions ... every month I got the opportunity to interact with different kind of issues related to different clinics, and that I think increased my*

knowledge and improved my performance, and also changed my way of thinking, as I feel."

"... It definitely improved my knowledge during these six months of intervention, despite the long intervals between each session."

(Interviewee G)

"... according to my personal experience as a staff nurse for almost ten years now, I never had enough time to read or to develop my skill in the centre...... but in these six sessions, whether meeting as a group or through the WhatsApp, I have acquired new knowledge and learnt different things about the different nursing experiences; for example, the nurses working in the maternity and childcare have a different experience than me. They have to learn enough about the infection control rather than other workers in the centre ... but after implementing clinical supervision I updated my knowledge regarding infection control ..." (Interviewee M)

"... I think it could be very useful particularly for improving and developing the knowledge and skill ..." (Interviewee R)

"... clinical supervision is a complete supportive and sharing system, which certainly could help to...acquire new knowledge and skill..."

(Interviewee A)

However, one of the interviewees found clinical supervision less useful in developing their knowledge and skill, which she attributed to having had an unqualified supervisor and an ineffective group.

"I did not find it useful enough for acquiring knowledge and skill because all the members and even the supervisor did not have any new or ... correct information regard several issues." (Interviewee H)

Some supervisees asked for more time for clinical supervision to grasp any improvement in their work-related burnout or stress.

"... it could take a time for burnout and stress to improve, depending on the individual's level of stress and burnout, but I think both could be reduced if clinical supervision was implemented for long time."

(Interviewee R)

"... as an experienced nurse I think it is not easy to be free from burnout and stress in a short time. I think we need more time to practice clinical supervision to enable to solve other long-lasting problems like burnout and stress." (Interviewee A)

However, some supervisees found clinical supervision less useful for stress and burnout;

> *"I don't think that clinical supervision could help to reduce burnout, because, during the four sessions, I became so tense, confused, and stressed due to my workload; in addition, I was not happy with my group supervision as well." (Interviewee H)*

> *"I still have burnout, and … I always feel stressed in my job. I think clinical supervision leads to increase the burnout and stress, especially for supervisors, because, as a supervisor, I always need to be updated, and be prepared for my next session and … communicate with each member to remind them about the next appointment and discuss with them about their previous problems and so on, in addition to my real job responsibilities as a nursing educator." (Interviewee G)*

9.4 Summary

This chapter has focused on the analysis of the quantitative data using descriptive and the inferential statistics, and the content analysis of the semi-structured interviews. The findings of the quantitative data, from hypotheses 1-3, indicates that the intervention group has developed more positive job satisfaction in the three subscales of the MSQ (i.e. intrinsic, extrinsic and general) than the non-intervention group. This was because the mean of the intervention group is higher than the non-intervention, and these results were statistically significant at a level of 0.05. Moreover, the results also showed different levels of positive effect from clinical supervision, namely, 45%, which is a middle effect, and 14% and 16%, which are small effects. This generally means that clinical supervision improved the job satisfaction of the intervention group. In addition, the effect size and the significant differences between the mean groups of the intervention group in the pre- and post-tests have determined which categories (i.e. hypotheses 4-7) from the demographic data have been more affected by clinical supervision. The results were as follows:

- Gender: in the post-test, the male category developed more positive overall job satisfaction with a higher effect size from clinical supervision (99%) than the female category (69%).
- Age: with an effect size of 76%, the 30-39 years category was the only age range to develop positive overall job satisfaction in the post-test. In comparison, the remaining categories did not illustrate any statistical differences in the pre-post test.

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- Experience: the effect sizes of the 3-5 years and 'more than 5-year' categories were 70%, and 80%. In contrast, the categories for less than 1–year and 1-2 years did not show any statistical difference in the pre-post test.

- Education: with a 70% effect size, only the diploma category developed positive overall job satisfaction. Moreover, the bachelors did not show any statistical difference in the pre and post-test.

The final sections of this chapter have discussed the qualitative data analysis and provided an account of how I arrived at the five themes from the interviewees that describe PHC nurses' experiences of clinical supervision. I have attempted to provide a clear account of the transcription process, its dilemmas and the rationale for the decisions that I took. The emergent themes have been presented as qualitative findings, and each theme has been described, providing extracts from the transcriptions to validate these findings. The next chapter will provide a discussion of the mixed methods findings to address the research question.

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Chapter 10

Study

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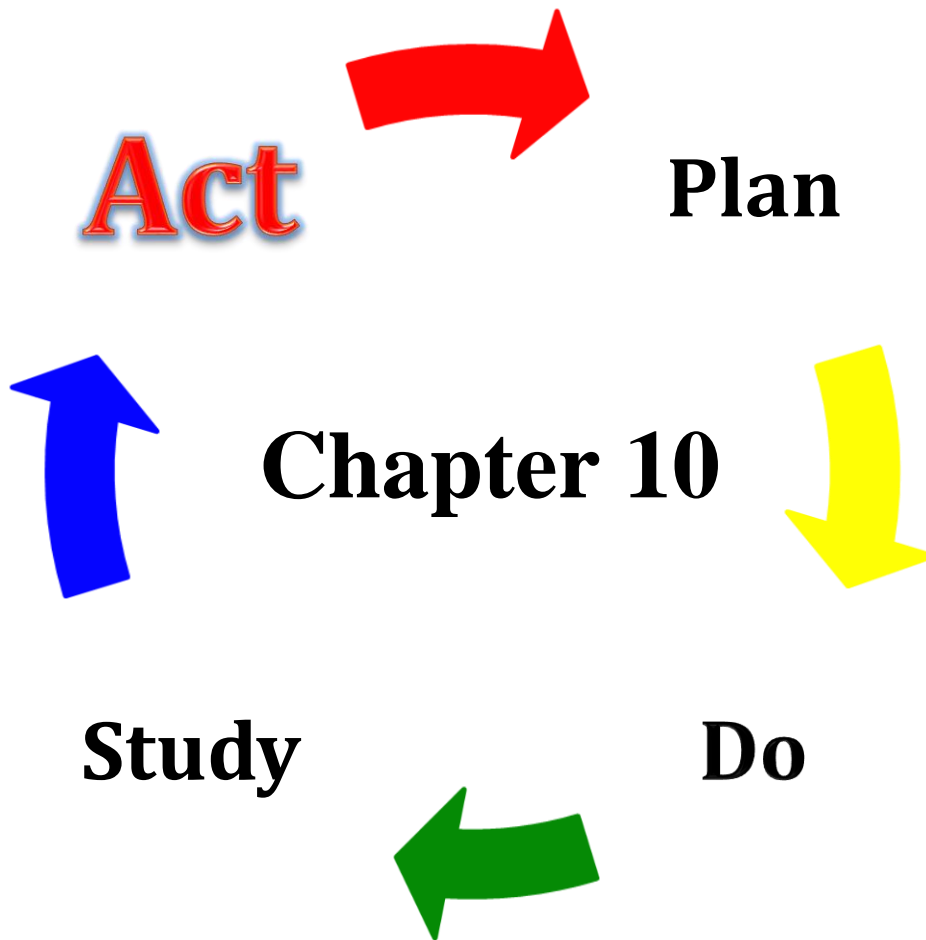
Discussion of Findings (**Act** Stage)	

10.1 Introduction

The previous chapter presented an analysis of the data obtained from both the quantitative and qualitative elements of the research study. This chapter presents an interpretation of the findings by discussing how they address the research question, and how they relate to the findings in a wider context, based on extant literature and an exploration of the ramifications of the study's outcomes for the setting. This chapter also presents the final 'Act' stage of the PDSA framework, which addresses the fourth and last research objective. This objective aims to integrate the mixed methods findings, leading to the identification of new research areas and the recommendations for a clinical supervision strategy within the PHC sector in the city of Jeddah. In keeping with mixed method approach, quantitative and qualitative data were merged side by side by using convergence, complementary and divergence techniques (Creswell, Klassen, Clark & Smith, 2011; Halpin, Terry & Curzio, 2017; Kinn & Curzio, 2005).

The three main findings that emerged from the data analysis that are discussed in this chapter; firstly, the effect of clinical supervision on job satisfaction; secondly, the possible relationships between the demographic variables and clinical supervision; thirdly, the key elements of effective clinical supervision and its impact on some outcomes linked to job satisfaction, such as burnout, stress, skill and knowledge.

10.2 Effect of Clinical Supervision on Job Satisfaction in PHC Centres in SA

Both quantitative and qualitative results indicated that clinical supervision had improved job satisfaction among PHC nurses in Jeddah city. In particular, clinical supervision was reported to influence job satisfaction on all three subscales of the MSQ (quantitative method) in the intervention group, who attended the supervision sessions. Moreover, the results of the semi-structured interviews were congruent with the findings of the MSQ in relation to the perception of job satisfaction, as the majority of interviewees provided positive responses according to themes one (PHC nurses' job satisfaction), two (factors influencing job satisfaction), and three (general views about clinical supervision).

These findings are consistent with those of an unpublished thesis by Abou-hashish (2010) that investigated the effect of a clinical supervision training programme for first-

line nurse managers (n = 37) on the quality of care and job satisfaction in Egypt. Abou-hashish used a quasi-experimental design, the results of which were indicative of significant improvement and identified a positive correlation between nurses' perception of clinical supervision provided by first-line nurse managers and their job satisfaction. The findings were probably comparable because both studies were conducted in similar environment, namely Arab countries; they used the same study design and had an approximately similar sample size (n = 38) for the clinical supervision intervention.

The findings of this study are also consistent with an earlier study by Hyrkäs (2005) in which the majority of participants were female (77%), the age range was similar (23-60 years), and the experience of the participants was also comparable (56.6% had > 10 years of job experience). By also using the same (MSQ) questionnaire, Hyrkäs found that intrinsic job satisfaction was higher (93.2%) than external satisfaction (41.8%) and identified a significantly higher overall level of job satisfaction among the majority of the participants (83.3%). Compared to the findings of this study, the intrinsic subscale had a medium effect size (45%) in the thesis, but it must be noted that the sample size in Hyrkäs's study was bigger than in this research. In general, both Hyrkäs's and the current study revealed positive relationships between nurses' evaluations of the effectiveness of clinical supervision and their intrinsic, extrinsic and general job satisfaction.

The small effect size observed for the extrinsic (14%) and general (16%) subscales in the current study (see Tables 9.15 and 9.16), may be attributable to the fact that the clinical supervision intervention was implemented for the first time in the PHC sector in SA. The small effect of the intervention was also supported by Cohen (1988), who noted that the effect sizes are likely to be small in any new areas of a research inquiry. Furthermore, a medium effect should only be estimated when the effect is so substantial that it can be easily detected (Polit & Beck, 2004).

10.3 Relationships between the Demographic Variables and Clinical Supervision

Demographic characteristics are frequently used in nursing research as predictors of job satisfaction (Mrayyan, 2006), and may also be influenced by clinical supervision (Bradshaw et al., 2007). Although the demographic characteristics were not required as variables of interest in this study, it was important to look at the relationships between

clinical supervision and demographic variables in order to add more depth to the study. Thus, this study found an approximate consensus between the quantitative and qualitative findings that the demographic variables of age, gender, qualification, and overall experience in the nursing profession, were influenced by clinical supervision, which in turn helped to explain the improvement in job satisfaction amongst the PHC nurses.

However, the *nationality* variable was the only factor that was not predictive of job satisfaction in this study; this is because the participants in both the intervention and non-intervention groups were all Saudi nationals. This occurred by chance as the researcher did not specifically choose Saudi nationals but was possibly related to the 'Saudization' policy of 1992, which intended to boost the workforce with Saudi nurses and reduce the emphasis on expatriate labour. This finding is supported by several writers, for example, Aldossary et al., (2008); Alghamdi & Urden, (2016); Al Juhani & Kishk, (2006); Almalki, (2012); Jannadi et al., (2008); Miller-Rosser et al., (2006); MOH, (2015); Tumulty, (2001), who found an increased number of Saudi nurses in the MOH, in SA, and particularly in the PHC sector; the current number of PHC nurses in Jeddah, is 1337, of whom the majority, at 1219 (91.1%), are Saudi nationals (MOH, 2015) (see section 2.6.6, Table 2.3).

Nurses' gender and its implications for clinical supervision:

In this study, *gender* differences were explored in relation to the perception of job satisfaction and clinical supervision. There was consensus between the qualitative and quantitative findings, which depicted two major outcomes; first that the female nurses comprised the largest proportion of the study population, and second that the male nurses tended to be more satisfied with their job and more highly influenced by clinical supervision than females. The quantitative findings showed a predominance of female nurses in both groups, (males, 10.53%; females, 89.47%). This was supplemented by the qualitative study, which also reported a lower number of males than females (two males of a total of six participated in the interviews). This finding is supported by the MOH (2015) (as discussed in section 2.3), which reported that, of the 95,379 nurses in the Saudi MOH, the majority (70,907 or 74.3%) are female. This trend is particularly prevalent in the PHC sector (Alshmemri, 2014), where males only comprise 34% of the total RN population (MOH, 2015). Moreover, in Jeddah city, males comprise only 29%

of the nurse population (MOH, 2015). This trend is understandable, as the nursing profession is usually female-dominated (Alboliteeh, 2015). Globally, throughout the Twentieth Century, the nursing profession has been considered a female-dominated profession for cultural and economic reasons (Alboliteeh, 2015; Gaber & Mostafa, 2013).

The quantitative study reported additional differences between male and female participants in the intervention group regarding the overall job satisfaction reported in the post-test results. The male participants had slightly higher job satisfaction than female counterparts. However, this difference may not be considered as substantially significant differences. Further studies that represent male nurses are required. Moreover, a higher effect size was observed in the males than in the females with regard to their positive overall job satisfaction in the post-test results. These findings are supported by the qualitative findings, which showed a higher job satisfaction with a higher effect size of clinical supervision among male interviewees than female. This result was surprising, as it is not consistent with earlier studies (Hyrkäs, 2005; Hyrkäs et al., 2006), which concluded that gender and supervision experience were predictors of the highest clinical supervision evaluation scores. However, Hyrkäs et al. (2006) found that female supervisees (mean, 144.42) had more positive evaluations of clinical supervision than their male colleagues (mean, 139.52; P < 0.001). In Hyrkäs (2005), study comprising 77% females and 22% males, the findings indicated that the female supervisees provided a higher mean score (142.9) than the males (138.2), suggesting that female supervisees had more positive evaluations of clinical supervision than their male colleagues.

The higher job satisfaction reported by male nurses in this study could be explained by the small proportion of males participating in the study, which could have allowed the supervisors to better meet their needs (Wong, Wong, & Ishiyama, 2013). This is supported by Miller-Rosser et al. (2006) who found that the number of Saudi female nurses is markedly increasing in SA, as a result of which male nurses may feel highly satisfied with their job on account of their minority status in the field. Furthermore, clinical supervision may have had a bigger effect on males in the current study, because female supervisors ran the supervision sessions on an almost one to one ratio; therefore, both male interviewees found their female supervisors more supportive, understanding

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and encouraging for deeper exploration. Moorhouse and Carr (2002, p. 46) offered one possible explanation for this;

> *"... the way supervisors interact with supervisees and supervisees interact with patients does not conform to the gender stereotypic conversational behaviour in which males are directive and females affiliative"*

This study's finding is also consistent with those of Hindes and Andrews (2011) who reviewed empirical research from 1996 to 2010 to explore the effects of gender on supervisory relationships. They found that, in a system where females were supervisors and males were supervisees, the supervisees engaged in frequent collaborative and supportive behaviours because the female supervisors were extremely supportive and collaborative. However, in a system where males were supervisors, they rated female supervisees more negatively. Therefore, supervisors should be well trained and qualified to monitor their supervisory relationships for any possible gender effects and be aware of how these factors can affect their supervisees individually and in a group situation. Consequently, it is important to provide supervisory training that encompasses both genders in order to increase supervisors' awareness of how male and female supervisees behave, interact, and respond differently within supervisory relationships (Hindes & Andrews, 2011).

With reference to the study's qualitative data, another possible explanatory factor for the higher job satisfaction and higher influence of clinical supervision among males could be the length of their work experience. The study involved two males in the interview, and they each had more than five years work experience. This is comparable with the study of Gonge and Buus (2011), which showed that staff with more 'years of experience' found, to a significantly higher degree, that clinical supervision allowed them to express 'personal issues'. More information regarding the work experience factor will be discussed section 10.4.3; however, the reasons underlying these findings need to be explored in depth in future studies

Nurses' age and its implication to clinical supervision:

In the current study, there was consensus between the findings of both the quantitative and qualitative methods for the different *age groups*. Although different age categories were identified, none of the study participants were aged 60 years or more. The retirement age for government workers in SA was previously 60 years (Alotaibi,

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Paliadelis, & Valenzuela, 2016; Fasano-Filho & Goyal, 2004). However, based on health conditions and the need for public social care provision, the Shoura Council decided to increase the retirement age of male employees to 62 years; nevertheless, the retirement age is still 55 years for females, although in Europe, and particularly the UK the retirement age is the same for males and females, which is 65 years. The study results demonstrate an interaction between age and gender namely that the older and more experienced participants were male, and the majority of females were aged between 20 and 55 years. This trend could influence job satisfaction, as the males become more experienced, knowledgeable and skilful than females by virtue of their later retirement age.

Job satisfaction differed somewhat across the age groups: however, the 30–39 age group showed higher job satisfaction and were more affected by clinical supervision than the other age groups; thus, null hypothesis 5 was rejected. These quantitative findings were supported by the qualitative data, despite the small number of interviewees. The interviewees fell into the 20–29 years and 30–39 years age groups respectively. The 30–39 years age group had positive responses about job satisfaction and clinical supervision. This is supported by Hyrkäs et al. (2006), who found that the supervisees' ages were a statistically significant predictor of their evaluation of the efficacy of clinical supervision, and were also a predictor of their job satisfaction and level of burnout. However, Hyrkäs et al. found the 41–50 years age group reported lower extrinsic job satisfaction, which was 0.5 times more likely in this group (OR 0.464, P = 0.004) than in the youngest group of supervisees (i.e. <30 years). The youngest age group had higher extrinsic job satisfaction than any other age group, possibly due to their greater need for clinical supervision support, which could be attributed to their relative lack of experience.

Bradshaw et al. (2007) found that their intervention group of mental health nurses attending a psychosocial intervention education programme was highly affected by clinical supervision because the group included older nurses (older or senior nurses in their study referred to participants aged 30-39) with a higher mean score of 36.6 (SD = 4.1) and higher qualifications than the control group 31.8 (SD = 4.6). Therefore, the experimental group achieved a significantly greater reduction in positive psychotic symptoms than the control group. These findings coincide with the current study's

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results, according to which older or senior nurses (i.e. aged 30–39 years) in the intervention group had higher mean scores for job satisfaction than the youngest or junior ones (i.e. 20–29 years). This is probably because senior nurses can better adjust at work, enjoy greater rewards, and face fewer conflicts between their professional and personal lives. Moreover, it could also be attributable to the fact that the majority of the sample (63%) are from the 30-39 age group. The lower level of satisfaction among the youngest nurses (20–29 years) could be explained by job-related stress, staffing shortages during their daily work, less support from leaders, a 'messy' work environment, and a low level of involvement in decision-making (Liu et al., 2012; Price & Mueller, 1981). Other possible reasons could be related to group size as 20-29-year olds accounted for 24% of the population studied.

Rambur et al. (2005) stated that chronological age is important because older nurses have been found to be more involved in an organisation, and have a lower tendency to leave than younger nurses, as job satisfaction and organisational commitment increase with age (McNeese-Smith, 2000). However, in the current study, the 40-49 and 50-59 age groups showed similar results to the youngest group (20-29 years), which also were less satisfied than the 30-39 age group category. This finding is consistent with research conducted by McNeese-Smith (2000) which examined job stage, demographic characteristics, time on the job, job satisfaction and organisational commitment among 412 randomly selected registered nurses from three hospitals. The study found job disengagement, or emotional separation, among nurses aged over 40 years, who reported lower job satisfaction than younger nurses. This finding could be explained by staff burnout in the over 40 age group, high turnover (McNeese-Smith, 2000), demanding physical conditions, such as chronic diseases and hormone imbalances in many female nurses, and the introduction of new technologies, such as electronic charting or programmes (Wargo-sugleris, 2015). The findings of this study cannot be directly compared with those of McNeese-Smith (2000) because of the small number of participants in the 40–49 years and 50–59 years age group, which totalled five (13%).

Work experience and its implication to clinical supervision:

Similar to the age and gender related findings; there was also consensus between the quantitative and qualitative data about the effect of *work experiences*. This study

reported positive overall job satisfaction among participants with 3-5 years and > 5 years of experience (p = 0.005 and p = 0.000, respectively) with high effect size of clinical supervision. This quantitative finding is supplemented by the current study's qualitative data, which also revealed that experienced interviewees (i.e., those with 3-5 years and >5 years of experience) had highly positive reflections regarding their job satisfaction and the clinical supervision intervention, compared to the younger interviewees, who had <2 years of experience. Thus, the majority of the nursing workforce in PHC centres is mature and experienced. This may also indicate that newly graduated nurses prefer to experience acute care in hospitals rather than PHC centres (Al Rabea, 1994), because they may find hospitals more exciting than PHC centres or may want to consolidate their newly acquired knowledge and learn further skills, which is more likely within a hospital context. However, the finding is not surprising because this trend has been observed internationally (Aiken, Clarke, Cheung, Sloane, & Silber, 2003; Happell, 1999; McHugh & Lake, 2010).

This study's findings are consistent with those of a descriptive, cross-sectional study conducted by Sirola-Karvine and Hyrkäs (2008), which aimed to increase knowledge and understanding of administrative clinical supervision among first line nursing managers within different specialities in a health care organisation in Finland. The one-way analysis of variance (ANOVA) showed significant differences in the evaluations according to nurses' work experiences. Sirola-Karvine and Hyrkäs found that supervisees with more work experience scored the importance and value of clinical supervision highly. Thus, based on these findings, it can be concluded that clinical supervision is beneficial for senior nurses. The studies by Hyrkäs et al. (2005) and Hyrkäs et al. (2003) concentrated on nurse managers' perceptions of clinical supervision in a peer supervision programme. In both these studies, more experienced nurses perceived the benefits of clinical supervision as personal development, increased self-esteem, self-knowledge and improved coping. This is consistent with the current study's finding, which also used the ANOVA and ANCOVA tests and found significant differences in the evaluations according to nurses' work experiences, indicating that experienced nurses highly scored job satisfaction and the value of clinical supervision.

This study's findings pertaining to high job satisfaction among experienced nurses (> 5 years, and 3-5 years) could be explained by Almalki et al. (2012) and Alshmemri (2014), who stated that nurses with more work experience are generally more satisfied

at work because they may have good personal relationships with other staff and leaders, better problem-solving skills and better self-management skills for most personal and professional issues at work that lead them to achieve a high job satisfaction. However, nurses with fewer years of experience (<1 year and 1-2 years) were less satisfied, perhaps due to the lack of support from their leaders and supervisors or due to their minority status in the current study ($n = 3$, 7.9%).

Educational qualification of nurses and its implication to clinical supervision:

In this study, there was an incomplete consensus between the quantitative and qualitative findings with regard to *educational qualifications*. None of the participants had a master's degree which is unremarkable because the majority of the nursing workforce in SA is still only educated to diploma level (Al Madani, 2015; WHO, 2006) and few possess bachelor's degrees. Therefore, the lower number of bachelor-educated nurses in PHC centres was also noticeable in this study. Nevertheless, the MOH is currently improving nurses' professional development, and in 2010 stipulated a bachelor's degree as the minimum educational requirement for entry to the nursing profession, which should be completed within five years (Alamri, 2011; Aldossary et al., 2008; AlMadani, 2015; Lamadah & Sayed, 2014). Similarly, the majority of participants (87.1%) in this study have diplomas (89.5% in the intervention group), and this is supported by the latest statistics in the Health Statistic Annual Book (MOH, 2014) which identified that 67% of Saudi nurses graduated with diplomas from Health Institutes, whilst 30% graduated from bachelor programmes, and very few graduates hold a master's degree (Aldossary et al., 2008).

The smaller number of staff with bachelor's and master's degrees in the PHC centres may be attributed to a preference amongst those with higher educational qualifications to join the hospitals or nursing administrative departments rather than PHC centres. According to Al Rabea (1994), and Littlewood and Yousuf (2000), 90% of the international community of nurses in the Eastern Mediterranean Region are hospital based. Nurses with higher degrees (BSc and MSc) prefer to work in hospitals or become lecturers at the universities (Al Mutair, 2015).

The findings of the quantitative study indicate that nurses with a diploma developed positive overall job satisfaction in the post-test results compared to those with bachelor's degrees, with high effect size of clinical supervision. This could be explained

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due to their lower level of knowledge and hence they require more support through clinical supervision. This result is consistent with the findings of Hyrkäs et al. (2006) who found that nursing staff, especially those with a nursing diploma, who work part-time and 24-hour rotating shifts, can benefit from clinical supervision. However, nursing staff need to be encouraged to start working in both supervisor and supervisee roles because of the positive effects that supervision has on job satisfaction and quality of care. Furthermore, a study conducted in the UK by Davey et al. (2006) reported similar findings from a large-scale nationally representative sample of diplomat nurses who undertook clinical supervision for 18 months. The study confirmed that investment in clinical supervision sessions is a key strategy in retaining nurses and ensuring high job satisfaction.

The quantitative findings and the evidence from the literature confirm that nurses with a diploma at PHC centres were more influenced by clinical supervision than those who have a bachelor's degree. The minority of nurses with a bachelor's degree in the intervention group could explain this, as discussed in Chapter 9 (Figure 9-3). In contrast, the qualitative data in this study revealed that those interviewees with both a diploma and bachelor's degree had similar job satisfaction, and only one supervisee with a diploma reported job dissatisfaction. The limited number of interviewees, and the majority with greater work experience (>5 years) could explain this difference between the quantitative and qualitative findings, which are consistent with the findings of Sirola-Karvine and Hyrkäs (2008). In summary, this indicates that there are many diploma-level nurses employed in PHC sector, and this has implications for future nursing workforce planning and development in SA. In light of this, the impact of other qualifications, such as bachelor's and master's degrees, should be investigated in the future research.

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10.4 Effectiveness of the Supervision Sessions

This study identified some factors that may have positively influenced the efficacy of supervision and contributed to the observed increase in job satisfaction among PHC nurses. These include, but are not limited to, a hybrid clinical supervision framework, well-trained supervisors, and the supervisory relationship. Although the effectiveness of clinical supervision was not statistically analysed in this study, the qualitative data revealed some key factors related to effective supervision (section 10.3) that could also be reflected in some items of the MSQ, which considered one of the preferred tools for measuring the efficacy of clinical supervision. However, some negative responses were also noted in relation to the effectiveness of the supervision sessions, which included limited time and a less-qualified supervisor. Accordingly, the association between these supervision related factors and the effectiveness of the intervention are discussed below, and possible explanations are given based on the qualitative findings.

One of the main themes in the qualitative data for this study that may have influenced the effectiveness of clinical supervision in improving job satisfaction is *time*. This factor may explain the small effect of clinical supervision on the 'working condition' item in the general subscale (16%) of the MSQ. The qualitative findings revealed that the 'time factor', was the most common factor that influenced the effectiveness of clinical supervision, and which negatively captured by majority of interviewees'. This finding is consistent with the literature, which shows that the place, time and frequency, (monthly sessions are usually offered) are crucial elements of clinical supervision. For example, Openshaw (2012) reported that clinical supervision requires specific preparation for each session, such as arranging a suitable place in advance, the setting itself, and a specific number of hours for meeting each month. However, it is noted that clinical supervision that does not account for the possibility that these requirements could have a negative influence on the process. Hyrkäs et al. (2006) reported that finding time for clinical supervision was a predictor for job satisfaction. Hyrkäs et al found that participants who had time for clinical supervision were more likely to score positively on the extrinsic (P = 0.015), and intrinsic subscales (P = 0.016), and on total job satisfaction' (P = 0.016).

The current study also reported that supervision requires planning and preparation in order to maximise a session, which may help both supervisors and supervisees in

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learning time management skills and in ensuring that each supervisee has sufficient time to discuss their issue. In the study by Edwards et al. (2006), experts suggested that supervision sessions should be undertaken over a long period in order to be effective. Moreover, other sources recommend a minimum duration of at least 45 minutes every four weeks (Butterworth et al., 1997; Nicklin 1997; Winstanley & White, 2003). However, Winstanley (2000) suggests a specific duration of clinical supervision for each health organisation; for example, one hour for hospital nursing staff and more than one hour for community-based staff. Similarly, some interviewees in the current study requested that longer sessions (i.e. more than one hour) are planned for the future, as this would give them enough time to reflect on their learning experiences and skills. This response is compatible with that of Edwards et al. (2006) who found that CMHNs more positively evaluated clinical supervision when their participation occurred in monthly supervision sessions that lasted for more than an hour.

The qualitative data of the current study also indicated the importance of the surrounding environment for successful supervision sessions. According to White and Winstanley (2006), an appropriate setting for supervision plays an important role in its success, especially if the session is held outside the workplace. Thus, despite the desire of some of the interviewees to attend supervision sessions outside their centres, all the sessions for the current study were held within the confines of the participant's workplace. Furthermore, interviews with the supervisors revealed that they were unable to conduct sessions outside the PHC centres due to workload, staff shortages and transportation difficulties. This qualitative finding is consistent with that of Edwards et al. (2006) who found that the perceived quality of supervision was higher for nurses who conducted the sessions away from the workplace, where they felt more supported.

The qualitative data also revealed that the duration of supervision for a period of six months was important in perceiving changes in the PHC nurses' environment, knowledge and quality of work. Some sources recommend more than one year of supervision to facilitate any change (National Council for the Professional Development of Nursing and Midwifery, 2004; Spence et al., 2002); this is supported by the majority of responses in the qualitative data of this study. According to Hyrkäs et al. (2005), first-line nurse managers reported positive effects and coping skills after two years of clinical supervision; this finding lends support for the long-term positive effect of supervision in providing a broader perspective on work and in building self-

development and self-knowledge. Furthermore, other researchers have suggested that, to measure the effectiveness of clinical supervision sessions, nurses must undertake a minimum of six or more sessions (Edwards et al., 2006; Winstanley, 2000). Edwards et al. (2006) utilised the MCSS and showed significant differences between the effects of sessions conducted 'at least monthly' and those held 'every 2-3 months', ($Z = -2.405$, $P = 0.016$). This supports this study's qualitative data, which found that interviewees who attended six supervision sessions reported higher job satisfaction and were highly influenced by clinical supervision; this contrasted with the interviewee who attended less than six sessions. The frequency of clinical supervision sessions is also highlighted by Rolfe et al. (2001) who recommended that all qualified nursing staff undergo more than one hour of clinical supervision every six to eight weeks. In brief, clinical supervision should be held regularly to discuss issues related to supervisees' problems and development. However, the number of meetings, whether formal or informal, is dependent on each individual's needs, problems, and strengths or weaknesses (Marrow, Macauley, & Crumbie, 1997).

Another possible factor that may have positively influenced the effectiveness of clinical supervision in the current study is the use of the *hybrid clinical supervision framework*. This factor can be identified in the 'use the creative method at work' item of the intrinsic MSQ subscale. The majority of interviewees expressed their satisfaction with the hybrid supervision framework, which was based on PHC nurses' needs and their experiences with quality improvement tools, particularly the FOCUS-PDSA method (section 8.3.1.2). This hybrid supervision framework resonates with the recommendation of the Royal College of Nursing (2003) that each organisation should select or develop a suitable model of clinical supervision based on staff needs.

The interviewees in the current study expressed their satisfaction with the hybrid supervision framework used in their supervision sessions; this indicated the importance of the 'type of supervision' as one of the main factors for successful supervision, which some participants referred to as a systematic creative learning process. However, this finding is not supported by Edwards et al. (2006), who found no significant differences in the total evaluation scores for the 'type of supervision', suggesting that the type of supervision had no effect on the success of clinical supervision. This could be explained by using a model that did not meet the participants' or organisation's needs. The current study's qualitative data is congruent with those of Fowler (1996a), who suggested that

the clinical supervision model should reflect the process of the relationship between supervisor and supervisees, and should demonstrate the function of clinical supervision as providing effective sessions, by designing a model that accounts for supervisees' needs.

In addition to the hybrid supervision framework, the current study's qualitative data also revealed the importance of using other supervision-related documents during the clinical supervision sessions, such as a signed contract/agreement of supervision between the supervisor and supervisee and a supervision session (report) completed by each supervisee after each session. These may also have an influence on the success of clinical supervision. For example, signing the contract/agreement which explicitly and more readily addresses issues like confidentiality, the length and frequency of sessions, and the role and responsibility of each participant, whether supervisor or supervisee, encourages individuals to share with confidence, and explore, clarify and learn from their own thinking, feelings and perspectives regarding their practice. It may also grant them a sense of responsibility and commitment toward each session attended, and enable the supervisee to challenge their professional practice in an open and honest manner. This is consistent with Bowles and Young (1999) who argue that, for effective clinical supervision, and in addition to a suitable clinical supervision model, there is some evidence for the importance of using formal documents, such an agreement/contract, between the supervisor and supervisee.

Another key factor that may have influenced the effectiveness of clinical supervision in the current study is the involvement of *well-trained supervisors*. This factor may be comparable to the 'technical supervision' item of the extrinsic MSQ subscale. In this context, the study's qualitative data may not support the quantitative findings, which showed that clinical supervision had a small effect on the extrinsic subscale (14%). However, this may not represent a significant divergence or conflict between the two methods, given the small number of interviewees who participated. In the current study, the qualitative data generally reported positive responses regarding the supervisors who were chosen by their colleagues at the PHC centres and trained by the external moderators. The majority of interviewees pointed to the importance of having a skilled supervisor who should be able to manage the sessions properly; indeed, some interviewees attributed the success of their supervision sessions to the calibre of their supervisor.

The literature shows that having qualified, well-trained and experienced supervisors is a crucial factor in providing effective clinical supervision. This study's qualitative data concurs with the findings of Bégat and Severinsson (2006) who indicate that it is important to have a supervisor who positively influences the supervisee with regard to how he or she transforms knowledge and experience to provide care for the patient. The supervisor facilitates growth in the supervisee, both educationally and personally, while providing essential support to the supervisee's developing clinical autonomy (Winstanley & White, 2003). Thus, having well-trained, experienced supervisors is the minimum requirement to reduce problems and promote effective clinical supervision (Kilminster et al., 2007). Indeed the qualitative data for this study are congruent with several literature reviews (Abou-hashish, 2010; Hancox, Lynch, Happell, & Sehastiana, 2004) that recommend providing appropriate and supportive supervision and adequate education for supervisors; furthermore, they state that it is important for supervisors to have particular skills, such as creativity, time management, self-knowledge, emotional balance and communication skills, to provide experimental supervision before they begin supervisory work.

The current study's qualitative data are congruent with that of Spence et al. (2002), who recommend that for effective supervision, the supervisor should exhibit several attributes such as previous clinical experience, training in supervision, adequate knowledge and ability to handle challenging practices. Supervisors who do not have these attributes could have a negative influence on the supervisee's commitment to undertake clinical supervision. Thus, a few negative responses pertained to the clinical supervisors in relation to the inability of newly trained PHC nurse supervisors to apply the principles, elements, and processes of clinical supervision, which reflected on supervisee's job satisfaction. Moreover, the current study revealed the desire of some interviewees to attend supervision sessions conducted by external moderators in the future, as they felt that their existing supervisor lacked knowledge and experience. Similarly, Abou-hashish (2010) found that introducing a clinical supervision programme and training for qualified nurses by external moderators had a favourable impact on nurses' attitudes toward clinical supervision and subsequent confidence in becoming involved in the process.

In the current study, supervisees were given an opportunity to select their supervisor, and this increased the chances of the supervision being effective. The current study's

qualitative data are consistent with those of Wilkin (1992), who suggested that the essential factors for choosing a supervision partner seem to be shared trust and feeling comfortable in each other's presence. The qualitative data are also supported by Edwards et al. (2006) in that nurses who selected their supervisors showed higher scores for the subscales that measured the level of trust and rapport with the supervisor, and this was attributed to the perception that they felt supported and able to discuss their deficiencies and confidential issues. This indicates that the opportunity to select their supervisor enhanced the quality of the supervisory relationship. Thus, in this study, the qualitative data have also identified that the *supervisory relationship* is considered as one of the important influential factors that may have influenced the clinical supervision sessions, which contributed to the perceived increase in the job satisfaction of the PHC nurses.

This factor may represent the 'human relation supervision' and 'co-worker' items in both the extrinsic and general subscales of the MSQ. In this context, the highly positive responses of the interviewees with regard to this relationship factor, whether between the supervisor and supervisees or between the supervisees themselves, do not support the quantitative findings, which showed a small effect on both the extrinsic and general subscales. However, this may not represent a significant divergence or conflict between the findings of the two methods, as the number of interviewees that participated in the qualitative study (n = 6), was very small. Alternatively, the other extrinsic and general items in the MSQ may have affected the 'co-worker' and 'human relation supervision' items.

The positive responses to the supervisory relationship by the majority of interviewees is consistent with the report of Kilminster et al. (2007) who asserted that the supervisory relationship strongly influences the success and effectiveness of supervision sessions. In supervisor-nurse relationships, the social reciprocity of resources, support and participation in decision making, trust and respect are the expected outcomes of an effective relationship (Mueller & Lee, 2002). Some studies recognise that the relationship between the supervisor and supervisee is key to effective supervision (Hyrkäs, 2005; Spence et al., 2002). Other findings have shown that group dynamics play a significant role in supervision, as these can help to enhance or inhibit the growth of the relationship between group members depending on whether group rapport is good. The supervisor and supervisee need to understand that, in order to form

Act stage

an effective relationship, any new group must experience the five stages of group development, which include: forming, storming, norming and performing (Gersick, 1988). In the forming of relationships between group members, the team must navigate through conflicting ideas, because this signifies the beginning of the development of the relationship, as explained by some interviewees in qualitative study.

During a formal supervision session if the supervision broke down, due to disruption or feeling of discomfort, or lack of productivity, then the supervisee should be offered the opportunity to move to another group (Power, 2007). However, in the current study it was not possible for the supervisee to change groups due to shortage of supervisors and practicality of moving to another geographical locations coupled with the limited study timeframe. This may influence the attrition rate and the sample size of the study. Although the general responses regarding supervisory relationships were positive, one supervisee revealed her discomfort with her supervisor in the current study, as she complained during the interview that the supervisor was not supportive, good listener to her issues and sufficiently trustworthy, which resulted in her losing interest and motivation to continue after four sessions. This finding is supported by Abou-hashish (2010) who described the importance of the supervisory relationship in clinical supervision and states that the overall effectiveness of supervision improves as the level of trust, respect and support from the supervisor increases; this leads to greater confidence and the ability to discuss sensitive work or confidential issues. Clinical supervisors must respect supervisees' needs and support them in the best possible way, which includes; showing respect, commitment and empathy. The current study data are also supported by Spence et al. (2002) who proposed that specific criteria, such as effective communication skills, should be considered when selecting supervisors, as the inability to support staff could impact the effectiveness of the intervention, and lead to supervisees losing interest and the will to complete their supervision sessions.

According to the findings of the current study, *group supervision* can also be perceived as a one positive influential factor to help increase job satisfaction. The majority of interviewees preferred to use group supervision, even in the future, over other methods, such as one-to-one or peer supervision, because they found it more useful in increasing their knowledge and enhancing their relationships. This is congruent with the work of Wilson (1999), who found that sharing knowledge and experience, and improving working relationships through group supervision could enhance reflection on practice.

Act stage

Similarly, this study also shows that some knowledgeable and skilful group members enhanced their reflection on practice and made the session more valuable. The qualitative data is also supported by Bond and Holland (2011), who stated that the group dynamic can be exciting and stimulating if all group members are highly committed and skilled.

Although the majority of interviewees found the group sessions to be more effective, this finding does not concur with several studies, which favour one-to-one and peer supervision (Edwards et al., 2006; Hyrkäs et al., 2005; Hyrkäs et al., 2003). Although some supervisees also recommended one-to-one sessions, some of the reasons cited involved situations with a poor group, with poor knowledge, possible threats to confidentiality, and insufficient time to discuss individual issues in detail. The qualitative data are also compatible with the findings of Bond and Holland (2011) who discovered that the main disadvantages of group supervision are that time is limited per supervisee and disclosure to others may be frightening. Similarly, Turner et al. (2005) discussed group clinical supervision information and educational needs and found that several nurses were unsure about confidentiality issues and how information would be used. This lack of confidentiality in supervision could lead to some nurses feeling threatened and reluctant to undertake clinical supervision (Jones, 2000). Therefore, the importance of assigning nurses to group clinical supervision with a qualified supervisor, and supportive group members who understand how to use group supervision in a safe and confident environment cannot be underestimated.

In summary, both the quantitative and qualitative data of this study show positive insights into the potential value of clinical supervision overall. In addition, the qualitative results showed that the participants were able to use effective clinical supervision as a tool for 'reflection on action' to improve their job satisfaction. However, there was only limited evidence to show that the interviewees had a clear understanding of the ways in which the skills acquired during clinical supervision might be transferred to a clinical context.

Impact of clinical supervision on burnout, stress, knowledge and skill

In addition to the findings discussed above, the qualitative study also generated some in-depth data, such as the impact of clinical supervision on burnout, stress, and knowledge and skill. The studies so far have inconsistent views regarding the impact

of clinical supervision on stress (Bishop, 1998; Edwards et al., 2005; Williamson & Dodds, 1999), burnout (Edwards et al., 2006), and knowledge and skill (Hyrkäs et al., 2005), indeed, whilst some views were positive (Butterworth & Faugier, 2013; Sloan, 2006), others were negative (Berg & Hallberg, 1999; Hallberg, 1994), particularly with regard to stress and burnout. This is consistent with the current study's qualitative data, which also showed negative views; suggesting that, for some interviewees, the level of burnout and stress remained the same as before the intervention. It is therefore recommended that the supervision intervention be implemented for a longer time period (i.e. more than six months) to influence any improvement in work-related burnout and stress (see section 9.3.4, theme 5).

In this context, Edwards et al.'s (2006) findings were comparable with the current study, although a different scale was used (i.e. MBI). For their study, 166 community mental health nurses completed the 'MBI' after six or more sessions of clinical supervision, and the results showed a significant positive trend toward the depersonalisation subscale (P = 0.003), which meant that, if clinical supervision was implemented for a longer time period, it could reduce the level of burnout. Similarly, Hyrkäs et al. (2006) found that participants who had time for clinical supervision were more likely to record lower than median scores on the depersonalisation scale (P = 0.001). In comparison, some negative responses were also gathered in the current study, as one supervisee described clinical supervision as useless and that it did not improve stress or burnout; others reported that their level of stress and burnout increased during the supervision sessions. This study's qualitative data resonates with the results of a study conducted by Hyrkäs, Appelqvist-Schmidlechner and Paunonen-Ilmonen (2002) which concluded that some nurses felt that participating in clinical supervision would increase their stress levels.

The qualitative findings also revealed the positive impact of clinical supervision on knowledge and skill development among PHC nurses. This is similar to the findings of Edwards et al. (2006) who reported that clinical supervision enabled nurse practitioners to develop their knowledge and competence. Similarly, Hyrkäs et al. (2005) described the long-term effects of a clinical supervision intervention one year after its termination; after three years, the intervention had positive effects on their job satisfaction, self-knowledge and communication skills. Within the current study, a negative reflection from a supervisee with a diploma stated that clinical supervision was useless for

developing knowledge and skills because the group sessions provided few opportunities and insufficient time to reflect on her knowledge. This is congruent with the findings of Davey et al. (2006), who found that the diploma nurses assigned to the programme as supervisees complained that they were not given the opportunity to reflect on their experience and knowledge in their supervision session. Therefore, these nurses recommended that the programme should provide them with the opportunity to develop their skill through reflection on their practice. Many factors could have contributed to the negative response on the opportunity to develop knowledge and skill through clinical supervision; for example, unqualified supervisors, less experience at work and low attendance within the six-month programme were found to be significantly associated with negative experiences related to 'trust/rapport' and 'supervisor advice and support'.

10.5 Summary

This chapter discussed the last quality improvement stage in the PDSA cycle, called the 'Act' stage, and accomplished the final research objective. The chapter discussed the integrated findings from the quantitative and qualitative methods and provided a clear picture as to how clinical supervision has been implemented in nursing in the PHC sector in SA and highlighted the role of effective supervision sessions in improving job satisfaction. In addition, the qualitative data showed that clinical supervision is beneficial for the acquisition of knowledge and skill amongst PHC nurses, and necessary for the nursing profession. However, this study's findings indicate that burnout and stress could only be improved if supervision is provided for a longer time period, and that several variables influenced the supervisees' positive perception of clinical supervision, such as; the type and model of supervision, the characteristics of the supervisors, and the time and frequency of sessions. These findings confirm that clinical supervision could improve certain outcomes, other than job satisfaction, if it is implemented effectively. The next chapter will discuss the final conclusion of the research and continue to work towards achieving the final research objective, namely by using the PDSA strategy for continuous improvement and the development of change. Finally, the next chapter will conclude with key findings and illustrate future research implications, study limitations and study contributions, thus starting a new PDSA cycle.

Act

Plan

Chapter 11

Study

Do
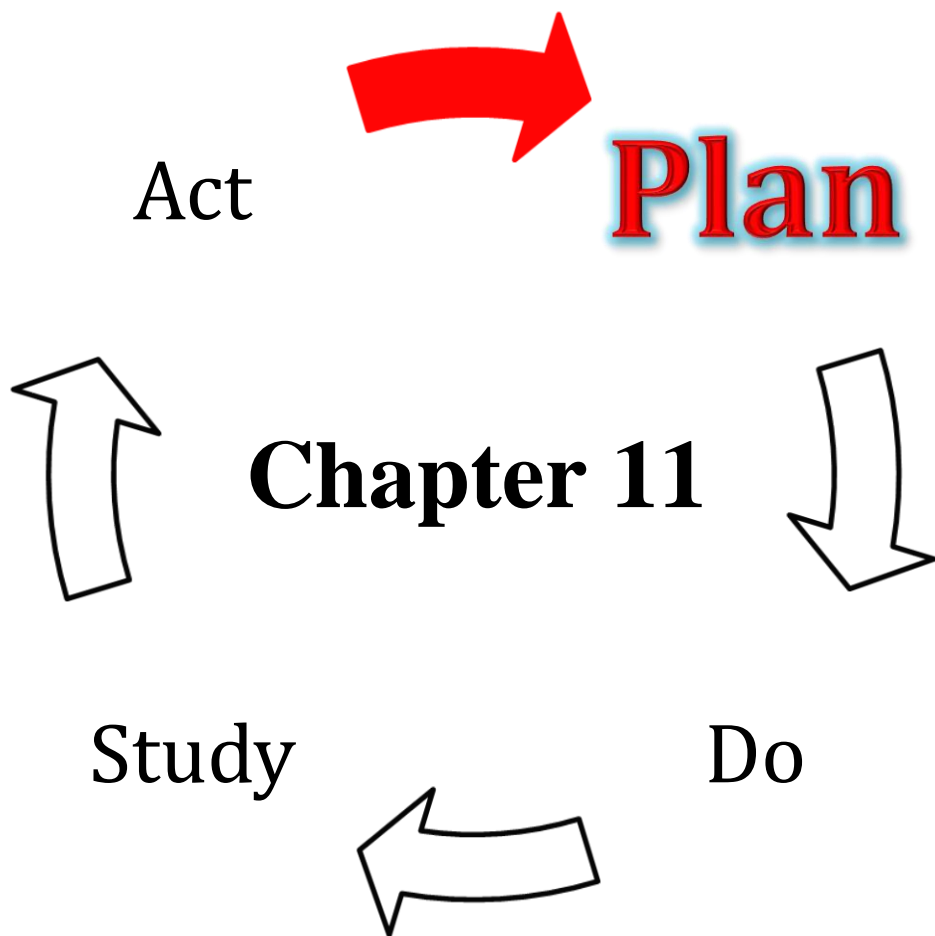
Conclusion and Recommendations
(**Plan** Stage)

11.1 Introduction

The previous chapter presented the 'Act' stage of the PDSA cycle and discussed how clinical supervision improved PHC nurses' job satisfaction in SA. Using a new PDSA cycle, this chapter identifies possible avenues for future research as the study returns to the 'Plan' stage to develop key messages for further research and practice development in the context of clinical supervision and job satisfaction in the PHC sector in SA. This chapter presents the key findings of the thesis and identifies the study limitations including areas for future practice and research. The dissemination plan and the study's contribution to the existing body of knowledge are presented at the end of this chapter.

11.2 Key Findings of the Thesis

This research, the first of its kind in SA, sheds new light on whether clinical supervision can improve PHC nurses' job satisfaction in Jeddah. The study findings were obtained with a quasi-experimental, non-equivalent pre- and post-tests control group design that used the MSQ questionnaire before and after a six-months clinical supervision intervention. This was followed by semi-structured interviews to illuminate the findings of the initial quantitative study. Key findings from this thesis are outlined below.

Key finding (1): The PDSA framework is a useful tool and has implications for structuring research and implementing clinical supervision practice in the PHC sector:

This study identified a new use for the PDSA cycle, which is to support innovative practice development in PHC in SA. The PDSA framework shaped the study into a cyclical four-stage process: Plan, Do, Study, and Act, and this use of the framework is unique in guiding the research and identifying a pragmatic approach to the planning, execution and implementation of research in clinical practice. Moving from 'Action' to 'Plan' could set a new pace for clinical practice improvement in PHC in SA. It might also indicate a paradigm shift for research projects in clinical settings, as no previous study has utilised the PDSA framework to guide a systematic research process, to explore and achieve the research objectives. Furthermore, the problem-solving FOCUS-PDSA strategy was adopted to develop the hybrid framework for clinical

supervision. Thus, the PDSA cycle was also employed as a quality improvement tool to manage organisational improvements, and individual and group learning processes.

The format was very useful in guiding me to consistently and systematically monitor the research steps. I also found the PDSA framework a valuable tool for creating a learning culture in relation to my research and clinical supervision. A major implication of this framework is that the variations on the cycle can be repeated until the desired impact or outcome is achieved. Although I had used the PDSA cycle in smaller and simpler projects during my clinical practice, I developed a new skill in working with this framework to shape my future research and practice. For example, I learnt how to implement the PDSA process at the research level, plan multiple PDSA cycles to test ideas, and capture learning to demonstrate the improvement journey.

I found it useful to link the research objectives with the PDSA cycle that it focused my research goals. For example, in the '*Plan' objective*, clinical supervision was identified as a means of enhancing nurses' job satisfaction and other outcomes through the critical evaluation of clinical supervision interventions. Studies on clinical supervision have been carried out in different countries and cultural contexts, with varying sample sizes and different methods of implementation, and some of these studies indicate a correlation between clinical supervision and job satisfaction. By critically analysing the literature through a SR, I was able to achieve the 'Plan' objective, and understood how clinical supervision could be implemented effectively among PHC nurses.

The *'Do' objective* tested whether clinical supervision could improve PHC nurses' job satisfaction. This phase entailed the training of PHC nurses (as either supervisors or supervisees) by external moderators, after which supervision sessions were held over a six-month period. As a quality organiser and researcher, I found this objective one of the greatest sources of learning and development. This objective included several tasks that were interdependent and sequential. For instance, I simultaneously prepared training-related documents, arranged a training programme, found external moderators and developed a hybrid supervision framework. Thus, on reaching this objective, I had become adept at multi-tasking.

The *'Study' objective* examined whether clinical supervision improved job satisfaction by evaluating and analysing the quantitative data. This stage used both ANOVA and ANCOVA statistical tests, and these tests ascertained that the job satisfaction

improvement resulted from the clinical supervision intervention. The qualitative data provided further in-depth information regarding Saudi PHC nurses' job satisfaction after the clinical supervision intervention. In carrying out this third objective, I learnt new skills for analysing mixed methods data (and particularly qualitative data) by using both NVivo software and a manual process.

In the *'Act' objective*, the mixed methods findings were integrated, and the next steps identified to inform a new PDSA cycle for future practice and research. This study contributed to the body of knowledge on enhancing job satisfaction; this final objective confirmed that clinical supervision could improve PHC nurses' job satisfaction in SA.

Applying the FOCUS-PDSA problem-solving strategy in the hybrid supervision framework facilitated the intervention by identifying and solving participants' issues easily and systematically. Furthermore, using the PDSA steps in the supervision process encouraged participants to share and learn the process and follow their supervision sessions to achieve their targets. I found that using the PDSA cycle, both in the research framework and as part of the hybrid supervision framework, strengthened the clinical supervision intervention, and may have influenced job satisfaction among the PHC nurses.

Key finding (2): The mixed methods approach and its implications for this research

At times during my PhD programme I felt angst and lacked confidence, which was due to my limited experience in using mixed methods, and particularly the qualitative approach. However, time and reflection facilitated my clarity of understanding. Discussions with supervisors and wider reading opened me to the opportunities afforded by adopting multiple lenses over a single approach to address my research question. I was also influenced by my role as a quality organiser; thus, I adopted the mixed methods approach. I was initially reluctant to use this approach because I lacked experience in using qualitative methods, but in the end, combining both, rather than one method, strengthened the outcomes. This has undoubtedly given me greater knowledge and understanding of both perspectives. Qualitative methods made the findings more robust and enabled effective testing of the intervention by adding participants' views to the data gathered from the questionnaire. Thus, where appropriate, I intend to use the mixed methods approach in future research to evaluate the effectiveness of clinical supervision, which, as a focus, fell outside the parameters of this study.

Key finding (3): The implications for using clinical supervision as a support mechanism for PHC nurses in SA

This study proposed that, through knowledge sharing and practice-reflection with experienced colleagues, clinical supervision is a systematic process to focus on the provision of professional support and learning for practicing PHC nurses in SA. In this study, clinical supervision was a supportive mechanism that helped PHC nurses to improve their clinical performance, which, in turn, improved their job satisfaction. This study created a supportive learning environment by establishing an effective supervision process in which supervisee PHC nurses analysed, reflected upon and developed their own clinical practice with their colleagues (i.e. supervisors). They built a mutual support system, improving the job satisfaction of both supervisors and supervisees.

Introducing clinical supervision in the PHC sector in SA has possible direct personal and professional implications for nurses, as it can support nurses and promote increased personal confidence and self-value, which can enhance job satisfaction. The current study identified a positive perception of the potential value of clinical supervision. Participants were able to use effective clinical supervision as a tool for 'reflection on action' to improve their job satisfaction. Clinical supervision also affected PHC nurses' interpersonal relationships, improving relations among staff through sessions spent reflecting, sharing and supporting each other. Thus, a major implication was that nurses who experienced clinical supervision after six sessions had increased personal and professional knowledge and skills.

Despite these benefits, clinical supervision is still a novel initiative in PHC nurses' practice in SA and potentially beyond the inexorable organisational demands of modern health provision. For example, the increased workload of nurses in SA due to other national assignments can reduce the time available for training and workshops in clinical supervision. In addition, there was only limited evidence that the interviewees clearly understood the ways in which the skills acquired during clinical supervision might be transferred to a clinical context. Therefore, PHC nurses need to understand the complex underpinnings of clinical supervision and maximise the benefits that are to be gained from an environment in which there are opportunities to reflect upon practice.

Plan stage

The impact of clinical supervision on both job-related burnout and stress was not a key requirement of this study; therefore, they were not discussed in depth. However, the majority of interviewees, as indicated by qualitative data, would require more than six months of clinical supervision to affect an improvement in both these impacts. The study reported that the longer periods of clinical supervision for PHC nurses increased the likelihood that nurses would be able to manage burnout and stresses. This, in turn, might reduce their job dissatisfaction and increase job satisfaction. Thus, some findings, such as the impact of clinical supervision on demographic variables, burnout, stress, knowledge and skill, warrant further investigation, as the current study's findings on these topics are inconclusive. Nevertheless, such findings could inspire future research.

11.3 Study Limitations and Areas for Future Practice and Research

This study showed that clinical supervision provided: the opportunity to share work experiences with colleagues; support; improved quality in communication; the development of trust, and an increased possibility of participation in work, which led to a perceived improvement in job satisfaction. However, several limitations have been identified; some stem from the researcher's personal limitations whilst others are based on the research strategy. The researcher conducted this type of study for the first time, and thus had limited experience in this approach to research. Nevertheless, future studies conducted by the researcher will significantly help to overcome such limitations. The limitations associated with the research strategy can be exemplified in the participant recruitment bias where the intention was to recruit *all* nurses working in the selected PHC centres, whether Saudi or international. However, by chance, only Saudi nurses participated. Thus, given that the nursing workforce is internationally composed, consideration of non-Saudi nurses in a similar study, or a study that incorporates nurses from national and international backgrounds, could address some of the challenges arising from cultural differences, and are areas for future research.

Another limitation on the research strategy was the time allocated for the clinical supervision intervention, which was delineated by the confines of the study. The six-month supervision intervention period received positive reports from PHC nurses, but this relatively short period of time might be insufficient to achieve the expected effects. Furthermore, a longer timeframe may reveal additional and or different longitudinal outcomes from clinical supervision. Thus, the time factor may have had more of an

influence than this study has shown. The study suggests the development of a policy for regular supervision sessions of longer duration (i.e. one year) with each individual session lasting one to two hours. This could better support PHC nurses in SA and improve their job satisfaction, as continuous supervision helps to alleviate the negative aspects of the supervisee and supervisor coordination, such as loss of motivation to attend supervision sessions, conflicts of ideas, and misunderstandings (Wong et al., 2013).

Due to the quasi-experimental design (which is considered one of the most rigorous study designs), the findings of this study offer strong evidence for clinical supervision. Although this research used a causation comparison group and pre- and post-test design with quantitative and qualitative data, it may be criticized for not interviewing the PHC nurses as part of the baseline test. The key elements of effective clinical supervision should be understood and measured to quantify their effects from the perspectives of supervisees. A mixed methods approach was used to gain in-depth information and investigate the relationship between clinical supervision and job satisfaction. However, the current study focused on measuring job satisfaction after the clinical supervision intervention by using the MSQ rather than measuring the effectiveness of the supervisory intervention per session. This poses a limitation in the generation and collection of rich data; therefore, many factors still are not fully explained in this study. I feel however, as though I only scratched the surface when answering the current research question; thus, further research is required to develop a greater understanding of clinical supervision intervention. For example, future research could consider factors affecting the quality and effectiveness of the clinical supervision of PHC nurses, by using a validated research instrument, namely the Manchester Clinical Supervision Scale (MCSS) (Winstanley, 2000). This is needed to evaluate the short and long-term outcomes of clinical supervision. Future work should also identify factors that could affect a nurse's ability to provide quality nursing care and the role of supervisors in enhancing the quality of nursing care.

This study discussed clinical supervision as a mechanism for PHC nurses to improve their clinical performances, which, in turn, improves their job satisfaction. However, the value of supporting young PHC nurses in SA compared to an older nursing workforce, (such as in the UK), could also be useful in improving job satisfaction. This suggests that job satisfaction efforts should perhaps focus on younger workers, who

may be because they are less experienced with clinical practice and need more support. It may be that any form of mentorship or other supportive supervision may have the same effect on improving job satisfaction in SA. This is a potential area for further research, in perhaps comparing mentorship with clinical supervision.

Gender may be another angle to consider further. This study had a predominantly female population, but all males in the small sample were highly satisfied with, and influenced by, clinical supervision. Thus, while this study's presumptions were justified in the discussion chapter, a study examining male nurses in SA to identify why their job satisfaction differs from those of females' is worthy of future exploration.

The educational level of the nurses (i.e. diploma and bachelor's degrees) was found to be a key factor influencing the findings; the study's quantitative data identified that nurses holding diplomas were more satisfied and more highly influenced by clinical supervision than nurses holding bachelor's degrees. Nevertheless, the qualitative data showed no significant difference between the diploma and bachelor holders. Further research could explore the effect of education in more detail through focus group interviews between nurses with bachelors and those with diplomas.

A final point for consideration is the potential impact of the recruitment of participants to the clinical supervision intervention, as only 38 nurses in three PHC centres attended the supervision sessions and completed the post-test MSQ questionnaire. Nevertheless, although this number is small, it is compatible with the principles of the study's PDSA framework. PDSA promotes small-scale tests of interventions, as the certainty of success when testing change is not guaranteed (Taylor et al., 2013). A smaller population size allows the change (i.e. clinical supervision) to be adapted according to feedback, whilst it also minimises risk and facilitates rapid change and learning. Although, it is difficult to determine whether this small-scale sample affects the generalisability of the findings, this study showed that participating nurses appeared to have similar baseline skills to those reported by Bégat et al. (2005) and Heaven et al. (2006).

Choosing to undertake the study in health centres in one region (Jeddah) may be interpreted by some as a selection bias (Polit & Beck, 2013). Although there was clear justification for undertaking the study in this city, it is possible that other geographical locations may hold different characteristics; for example, the demographic profile may

be different and thus generate different results. Thus, this study's findings can only be generalised to the PHC sector in Jeddah, and caution must be exercised in generalising these findings to the wider nursing population in other regions of SA, whether in PHC or at governmental hospitals.

11.4 Research Contributions and Dissemination Plan

This study provides a snapshot of clinical supervision as a nursing intervention, which may help to improve PHC nurses' job satisfaction in SA. It also explores various supervision approaches for PHC organisations and builds on knowledge from previous international research (Cross et al., 2010; Edwards et al., 2006; Hyrkäs, 2005; Hyrkäs et al., 2006; Koivu et al., 2012). Moreover, the study contributes to the literature, and to my personal knowledge and practice as a researcher and as a quality organiser.

- This study contributes to the literature on clinical supervision in SA, which is very limited, and illustrates how it can be used as a supportive and educational mechanism for nurses in PHC centres.

- A comprehensive set of recommendations could help in PHC policy development in SA, by establishing the relationship between clinical supervision and job satisfaction.

- Adopting mixed methods in this study provided robust findings, which could not have been achieved if only a quantitative approach was used.

In addition, other contributions that I offer, as a researcher and a quality organiser, are:

- The use of the PDSA quality improvement cycle as a research framework: this supported systematic reporting and increased transparency around the research issues encountered and how they were resolved. There is the potential for its future application in my role as a quality organiser, and the possibility to share it with other staff at PHC centres.

- A new hybrid framework for clinical supervision intervention and training: this was achieved by using the FOCUS-PDSA problem-solving method, and by modifying Proctor's (1987) model. The findings support this hybrid supervision framework as a viable means for effective supervision.

It is expected that the study findings will be disseminated in the following ways:

Plan stage

Dissemination at the local level:

- A copy of the study findings will be sent to the Saudi MOH to raise awareness of the importance of clinical supervision as a basis for improving PHC nurses' job satisfaction. This could provide a strong basis for the development of policy that introduces clinical supervision to PHC in SA.

- A brief seminar will be organised with the nursing directors of PHC organisation in Jeddah and other cities in SA to highlight the main findings and consider how the results can be developed into an action plan for practice in other PHC centres.

Dissemination at the national level:

- The results of the study will be presented at national conferences.

- One implication of this study is the use of a hybrid supervision framework to implement clinical supervision, and to ensure that clinical supervision is embedded to increase nurses' job satisfaction and retention in PHC centres in SA.

Dissemination at the international level:

- The study findings will be available on the University of Salford's website.

- A journal publication entitled, 'Does clinical supervision improve job satisfaction for PHC nurses in SA?' will be submitted to professional, peer-reviewed national and international journals, such as the *Primary Healthcare Journal* and the *British Journal of Nursing.*

- The publication of an article from this study entitled, 'A Systematic Review of Research Evidence Related to Clinical Supervision for Nurses' will help to identify the role of clinical supervision as support for nurses; this could be published in, for example, the *Journal of Advanced Nursing.*

11.5 Summary

This chapter revealed that clinical supervision improved PHC nurses' job satisfaction in the Jeddah city of SA. The key findings were highlighted, such as the suitability of the PDSA framework as a path for research and its implications for practice, as well as the use of mixed methods and the impact of clinical supervision on job satisfaction among PHC nurses in Jeddah in SA. The study achieved four research objectives based on the PDSA stages, and this chapter signposts a new 'Plan' stage as a foundation for

future research that continues the improvements in SA and addresses the study's limitations. Further research is needed to examine whether the improvement in job satisfaction and variables identified in this study are associated with clinical supervision outcomes in similar PHC populations.

Plan stage

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Appendices

Appendix 1: Gantt chart
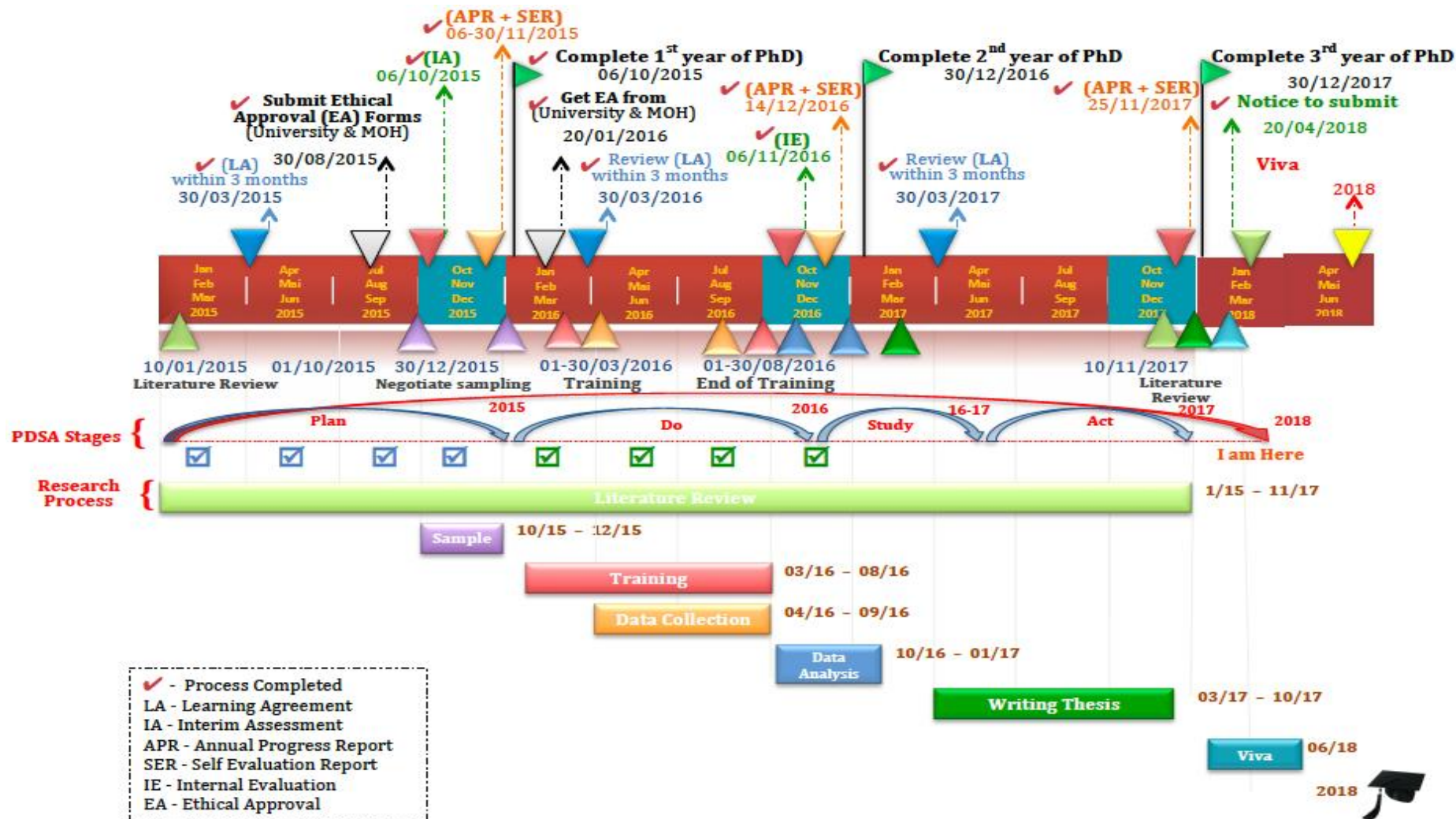
Appendix 2a: CINHAL search strategy

Search ID#	Search Terms	Actions
S20	S4 AND S16	(15)
S19	S3 AND S17	(0)
S18	S4 AND S17	(0)
S17	S6 AND S16	(23)
S16	S7 AND S8 AND S9	(1,892)
S15	S7 OR S8 OR S9	(376,254)
S14	S10 AND S12	(0)
S13	S10 AND S12	(0)
S12	S7 AND S9	(3,916)
S11	S7 OR S9	(161,832)
S10	S4 AND S6	(50)
S9	Burnout OR stress OR quality care	(152,304)
S8	Nurses OR primary care nurse OR qualified nurse	(238,929)
S7	Job satisfaction OR work satisfaction	(13,444)
S6	(MH "Primary Health Care") OR "primary health care OR hospitals OR public health care"	(31,383)
S5	"Primary health care" OR public health care OR community health care	(39,217)
S4	(MH "Clinical Supervision")	(1,892)
S3	Clinical supervision	(2,859)
S2	Clinical supervision OR mentor*	(13,382)
S1	Clinical supervision OR mentor* OR group clinical supervision	(13,382)

Appendix 2b: Medline Ovid search strategy

# ▼	Searches	Results
14	Limit 13 to yr.="2000 - 2015"	414
13	2 and 8	516
12	2 and 6	53
11	1 and 6	559
10	1 and 8	5876
9	4 and 5	69833
8	6 or 7	8642380
7	(Burnout or Turnover or retention or quality care or patient safety or stress or support). MP. [MP=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]	8631557
6	Job satisfaction.mp. Or Job Satisfaction/	21686
5	1 or 2 or 3	82310
4	(Primary Health Care or public health care or hospital). MP. [MP=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]	990626
3	"Primary health care". MP. Or Primary Health Care/	68178
2	"Clinical supervision". MP.	1069
1	(Clinical supervision or mentor*).MP. [MP=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]	14330

Appendix 2c: Academic Search Premiere

Search ID#	Search Terms	Search Options	Actions
S16	S4 AND S13	**Limiters** - Published Date: 20000101-20151231 **Search modes** - Boolean/Phrase	(115)
S15	S4 AND S13	**Search modes** - Boolean/Phrase	(117)
S14	S6 AND S13	**Search modes** - Boolean/Phrase	(9,707)
S13	S7 AND S12	**Search modes** - Boolean/Phrase	(179,252)
S12	S8 OR S11	**Search modes** - Boolean/Phrase	(1,809,404)
S11	S9 OR S10	**Search modes** - Boolean/Phrase	(1,809,404)
S10	Burnout OR stress OR quality care OR IS decision making OR patient safety OR support OR improve performance OR improve knowledge OR improve skill OR improve practice	**Search modes** - Boolean/Phrase	(1,764,323)
S9	"Job satisfaction" OR work satisfaction OR well-being	**Search modes** - Boolean/Phrase	(64,438)
S8	DE "JOB satisfaction"	**Search modes** - Boolean/Phrase	(8,043)
S7	Primary health care OR hospital OR public health care	**Search modes** - Boolean/Phrase	(1,565,137)
S6	"Primary health care" OR public health care OR community health care	**Search modes** - Boolean/Phrase	(48,811)
S5	DE "PRIMARY health care"	**Search modes** - Boolean/Phrase	(9,222)
S4	DE "CLINICAL supervision"	**Search modes** - Boolean/Phrase	(850)
S3	"Clinical supervision"	**Search modes** - Boolean/Phrase	(1,794)
S2	Clinical supervision	**Search modes** - Boolean/Phrase	(2,157)
S1	"Clinical supervision" OR mentor*	**Search modes** - Boolean/Phrase	(29,291)

Appendix 3: Hawker's Assessment Tool

	Good 4	Fair 3	Poor 2	Very poor 1	Comment
Author and title:					
Date:					
1. Abstract and title					
2. Introduction and aims					
3. Method and data					
4. Sampling					
5. Data analysis					
6. Ethics and bias					
7. Findings/results					
8. Transferability/generalizability					
9. Implications and usefulness					
Total					

1. Abstract and title: Did they provide a clear description of the study?

Good   Structured abstract with full information and clear title.

Fair   Abstract with most of the information.

Poor   Inadequate abstract

Very Poor   No abstract

2. Introduction and aims: Was there a good background and clear statement of the aims of the research?

Good   Full but concise background to discussion/study containing up-to date literature review and highlighting gaps in knowledge.

              Clear statement of aim AND objectives including research questions

Fair	Some background and literature review.
	Research questions outlined.
Poor	Some background but no aim/objectives/questions, OR
	Aims/objectives but inadequate background
Very Poor	No mention of aims/objectives
	No background or literature review.

3. Method and data: Is the method appropriate and clearly explained?

Good	Method is appropriate and described clearly.
	Clear details of the data collection and recording
Fair	Method appropriate, description could be better.
	Data described.
Poor	Questionable whether method is appropriate
	Method described inadequately.
	Little description of data
Very Poor	No mention of method, AND/OR Method inappropriate, AND/OR
	No details of data.

4. Sampling: Was the sampling strategy appropriate to address the aims?

Good	Details (age/gender/race/context) of who was studied and how they were recruited.
	Why this group was targeted.
	The sample size was justified for the study.
	Response rates shown and explained
Fair	Sample size justified.
	Most information given, but some missing
Poor	Sampling mentioned but few descriptive details.
Very Poor	No details of sample

5. Data analysis: Was the description of the data analysis sufficiently rigorous?

Good	Clear description of how analysis was done.
	Qualitative studies: Description of how themes derived/respondent validation or triangulation.
	Quantitative studies: Reasons for tests selected hypothesis driven/ numbers add up/statistical significance discussed.
Fair	Qualitative: Descriptive discussion of analysis.
	Quantitative
Poor	Minimal details about analysis
Very Poor	No discussion of analysis

6. Ethics and bias: Have ethical issues been addressed, and what has necessary ethical approval gained? Has the relationship between researchers and participants been adequately considered?

Good	Ethics: Where necessary issues of confidentiality, sensitivity, and consent were addressed.
	Bias: Researcher was reflexive and/or aware of own bias.
Fair	Lip service was paid to above
Poor	Brief mention of issues
Very Poor	No mention of issues

7. Results: Is there a clear statement of the findings?

Good	Findings explicit, easy to understand, and in logical progression.
	Tables, if present, are explained in text.
	Results relate directly to aims.
	Sufficient data are presented to support findings.
Fair	Findings mentioned but more explanation could be given.
	Data presented relate directly to results.
Poor	Findings presented haphazardly, not explained, and do not progress logically from results.
Very Poor	Findings not mentioned or do not relate to aims.

8. Transferability or generalizability: Are the findings of this study transferable to a wider population?

| Good | Context and setting of the study is described sufficiently to allow comparison with other contexts and settings, plus high score in Question 4 (sampling). |

Fair	Some context and setting described, but more needed to replicate or compare the study with others, PLUS fair score or higher in Question 4.
Poor	Minimal description of context/setting
Very Poor	No description of context/setting

9. Implications and usefulness: How important are these findings to policy and practice?

Good	Contributes something new and/or different in terms of understanding/insight or perspective.
	Suggests ideas for further research
	Suggests implications for policy and/or practice
Fair	Two of the above (state what is missing in comments).
Poor	Only one of the above
Very Poor	None of the above

Appendix 4a: Campbell sample calculation (power calculation)

Appendix 4b: Raosoft sample size calculation

Appendix 5: Recruitment flyer draft (for intervention & non-intervention group)

Appendix 12: b) Recruitment flyer draft for (non-intervention group)

للموظف المشارك
نداء لجميع ممرضات الرعاية الصحية الاولية
اذا كانت لديك الرغبة بالمشاركة في دراسة حول تطبيق الاشراف الاكلينيكي .. كل ما تحتاجين
القيام به هو استكمال الاستبيان الخاص بالرضا الوظيفي ..علما من ان تحليل البيانات ستكون
بسرية و مجهولة المصدر و الهوية

<u>Recruitment Poster</u>
Calling all Primary Health Care nurses
Are you interested to take part in a study about implement Clinical Supervision?
All you need to do is complete a job satisfaction questionnaire
All data is anonymous and confidential

Appendix 12: a) Recruitment flyer draft for (intervention group)

لمن لديه الرغبة بالمشاركة ارجوا التكرم بالتواصل مع الباحث من خلال البريد الالكتروني التالي:

Email: s.n.almadani@edu.salford.ac.uk

Appendix 6: Ethical Approval from University of Salford

University of Salford
MANCHESTER

Research, Innovation and Academic
Engagement Ethical Approval Panel

Research Centres Support Team
G0.3 Joule House
University of Salford
M5 4WT

T +44(0)161 295 2280

www.salford.ac.uk/

20 January 2016

Dear Sumaia,

RE: ETHICS APPLICATION HSCR 15-97 – Does Clinical Supervision improve Job Satisfaction for Primary Health Care qualified nurses at Jeddah, Saudi Arabia?

Based on the information you provided, I am pleased to inform you that application HSCR15-97 has been approved.

If there are any changes to the project and/ or its methodology, please inform the Panel as soon as possible by contacting Health-ResearchEthics@salford.ac.uk

Yours sincerely,

Sue McAndrew
Chair of the Research Ethics Panel

Appendix 7: Ethical Permission from MOH in SA

Kingdom of Saudi Arabia Ministry of Health King Fahad Medical City (162)		المملكة العربية السعودية وزارة الصحة مدينة الملك فهد الطبية (١٦٢)

IRB Registration Number with KACST, KSA: H-01-R-012
IRB Registration Number with OHRP/NIH, USA: IRB00008644
Approval Number Federal Wide Assurance NIH, USA: FWA00018774

January 11, 2016
IRB Log Number: 15-469E
Department: External
Category of Approval: EXEMPT

Dear Sumaia Almadani,

I am pleased to inform you that your submission dated January 1, 2016 for the study titled **'Does clinical supervision improve job satisfaction for qualified nurses in Primary Health Care in Jeddah, Saudi Arabia?'** was reviewed and was approved. Please note that this approval is from the research ethics perspective only. You will still need to get permission from the head of department or unit in KFMC or an external institution to commence data collection.

We wish you well as you proceed with the study and request you to keep the IRB informed of the progress on a regular basis, using the IRB log number shown above.

Please be advised that regulations require that you submit a progress report on your research every 6 months. You are also required to submit any manuscript resulting from this research for approval by IRB before submission to journals for publication.

As a researcher you are required to have current and valid certification on protection human research subjects that can be obtained by taking a short online course at the US NIH site or the Saudi NCBE site followed by a multiple choice test. Please submit your current and valid certificate for our records. Failure to submit this certificate shall a reason for suspension of your research project.

If you have any further questions feel free to contact me.

Sincerely yours,

Prof. Omar H. Kasule
Chairman Institutional Review Board--IRB.
King Fahad Medical City, Riyadh, KSA.
Tel: + 966 1 288 9999 Ext. 26913
E-mail: okasule@kfmc.med.sa

Appendix 8: Confirmation letter from the PHC organisation

مديرية الشؤون الصحية بمحافظة جدة
Directorate of Health Affairs — Jeddah
(202/275) (٢٠٢/٢٧٥)

وزارة الصحة
Ministry of Health

الموضوع: الموافقة على إجراء بحث

إدارة البحوث والدراسات الطبية

سعادة مساعد مدير الشؤون الصحية للصحة العامة بمحافظة جدة،
السلام عليكم ورحمة الله وبركاته..

نفيدكم بأن الباحثة اسمها أدناه سوف تقوم بإجراء البحث كالتالي:

اسم الباحثة:	سمية نصار المدني
رقم البحث:	٠٠٦٥٨
رقم الموافقة:	A٠٠٣٢٤
عنوان البحث:	هل الإشراف الإكلينيكي يساعد في تحسين الرضا الوظيفي لدى الممرضات في الرعاية الصحية الأولية بجدة في المملكة العربية السعودية.
مدة الموافقة:	سنة من تاريخه.

وبناء على موافقة الإدارة العامة للبحوث والدراسات بوزارة الصحة ولجنة الأخلاقيات بمدينة الملك فهد الطبية ، وجد أنه لا مانع من إجراء البحث.

أمل تسهيل مهمة الباحثة في إجراء البحث مع مراعاة الآتي:

١. اتباع قوانين اللجنة الوطنية للأخلاقيات الحيوية والطبية.
٢. في حال أي تغيير في خطة البحث يجب الحصول على موافقة إدارة الأبحاث.
٣. عدم تأثر الخدمة في المرافق المعنية.
٤. المحافظة على حقوق الأشخاص الخاضعين للبحث وخصوصياتهم.
٥. استخدام المعلومات لأغراض البحث العلمي فقط.
٦. تقديم تقرير عن سير الدراسة لإدارة البحوث كل ستة أشهر.

و نرفق لسعادتكم (خطة البحث — الاستبيان – السيرة الذاتية – وخطاب لجنة أخلاقيات البحث بمدينة الملك فهد الطبية).

شاكرين تعاونكم.

ولكم تحياتي»

مساعد مدير الشؤون الصحية للتخطيط والتطوير بمحافظة جدة

د/ محمود مدني العلي

مدير إدارة البحوث والدراسات الطبية

د/ محمد عبد الرؤوف توفيق

الرقم: ٢٠٢/١٩٢٦٥ /٤٧/ج
التاريخ: ٢٢/ ٤/ ٢٧ ١٤هـ
١/ ٣/ ١٦ م٢٠
المرفقات: ٥١

Website : www.mohj.gov.sa

Appendix 9: letter for Nursing Director at PHC Administrative in Jeddah region

To Nursing Director at PHC administrative in Jeddah region

Dear Mrs.(*********************),

I am a PhD student in University of Salford, undertaking a research study to determine the impact of Clinical Supervision (CS) on Primary Health Care (PHC) nurses' Job Satisfaction (JS) in Jeddah region. Prior to starting this research an Ethical Approval from Ministry of Health in Saudi Arabia will be gained.

I am planning to establish a CS in some PHC centres to find out if it could improve nurses' JS. In a primary care professional climate we are always persuaded to improve staff JS. It is possible JS could be linked to other factors such as, reduced staff turnover, intention to leave and support/ enhancement of high quality care services. It is crucial that we develop our understanding and continue professional practice to discover where good practice occurs and what makes it good; as well as enhancing reflective practice and sharing experiences between professionals working in PHC organizations.

Thus, I would like to invite nursing staff from six PHC centres to be part of this study. In order to decide whether or not the research study can be undertaken within the PHC centres you lead, you should know about the study purpose, the procedures that will be performed and its risks and benefits to make an informed decision. The main purpose of this study is to determine whether PHC nurses' JS level can be enhanced through CS in some selected centres across Jeddah region. The information gathered would be used to gain a deeper understanding of CS and whether it has an impact on JS levels.

Requirements for involvement in the study:

- A 1-hour of introduction session for people interested in volunteering for the study to attend. General information about the study will be given in order for potential participants to decide if they wish to take part.

- Those consenting to be allocated to a small group and each group will be required to attend a 3 day training programme at a specified time during the month of March, 2016 Prior to this they will be asked to complete a pre-test questionnaire (MSQ).

- Following the training programme each participant will be expected to attend a supervision group for 1 session per month for approximately 1-2 hours. Each group will include 4-6 participants

- At the end of month 6 all participants will be asked to complete the same questionnaire (MSQ).

- A small number of participants (n=5) will be asked for interview (face to face) to evaluate their experience of the training and implementation of CS

Prior notice will be given as to when the training sessions will take place in order for planning of any staff changes so as not to compromise patient care.

All of the above, with the exception of the pre and post-test questionnaires, will only apply to the intervention group.

As I would hope that the involvement of PHC nurses in this research will provide an opportunity for them to reflect on their practice in a structured, supported and on-going way, which will be of benefit to their own professional development.

If you agree to support this study we ask you to distribute the following attached letters (invitation letter, information sheet and the reply-slip) to these selected areas (A1, A2, A3, B1, B2, B3) while the individuals who would like to participate will send me directly the reply slip through the collection box in each PHC centre as I also hope to receive a confirmation letter from you for supporting this study.

If you have any questions or queries, I'd be grateful if you could make contact with me at: **********************

With many thanks for your interest and I very much hope to be able to work with you.

Yours faithfully, *************,   PhD Student Date: 29 /11/2015 – 13/01/1437   Contact: +00000000000

Appendix 10a: Invitation Letter for Intervention Group

Researcher Name*****
PhD – GTS student
School of Nursing, Midwifery, Social Work & Social Sciences
Mary Seacole Building
University of Salford
Salford, M6 6PU**

M: 000000000000
Email: ****************

Dear Participant

I am a PhD student undertaking a research study to determine if Clinical Supervision (CS) could improve the Primary Health Care (PHC) nurses' Job Satisfaction (JS) levels in the Jeddah region.

I am establishing a CS concept in some PHC centres to find out if it is able to improve nurses' JS level. To do this, I need an intervention group of nurses to measure their JS level, train them to undertake and experience CS then re-measure their JS level and compare the differences (if any) with the other group (Non-interventional Group) who will not receive CS.

Enclosed is an information sheet explaining all about the study and this letter is inviting you to take part in this study. If after reading the information sheet you would like to participate in the study then please return the attached reply slip in the collection box marked/identified in your PHC centre. Following this I will send you a letter inviting you to attend the (CS introductory session). If I don't receive the reply slip within 7-15 days you will receive another reminder letter. If you don't respond after this second letter, it will be assumed you don't wish to participate. Your participation is completely voluntary.

Thank you for taking the time to read the information.

Appendix 10b: Reply Slip for intervention group (for who would like to participate and attend the introductory session).

REPLY SLIP: **Research Code =**

If you are interested in being involved please sign this reply slip and send it back directly to the researcher through posting this letter in the collection box in your centre.

Please indicate the suitable date you would like to attend the Introduction session from the following:

　　　　　　20 Mar　☐　　　　25 Mar　☐　　　　29 Mar　☐

I am willing to attend the information session about clinical supervision to improve nurses' Job Satisfaction.

My contact details are:

Name:……………………………………………………………………….....

Telephone No:………………………………………………………………………

My Email address……………………………………………………………………..

To Researcher
(****************)
PhD student

Appendix 11a: Invitation Letter for Non-Intervention Group

Researcher Name*****
PhD – GTS student
School of Nursing, Midwifery, Social Work & Social Sciences
Mary Seacole Building
University of Salford
Salford, M6 6PU**

**M: 00000000000
Email: ********************

Dear Participant

I am a PhD student undertaking a research study to determine if Clinical Supervision (CS) could improve the Primary Health Care (PHC) nurses' Job Satisfaction (JS) level in Jeddah region.

I am establishing a CS concept in some other PHC centres to find out if it is able to improve nurses' JS level. To do this, I need a non-intervention group of nurses to measure their JS levels and compare/contrast with the intervention group.

Enclosed is an information sheet explaining all about the study and this letter is inviting you to take part in this study. If after reading the information sheet you would like to participate in the study then please return the attached reply slip in the collection box marked/identified in your PHC centre. Following this I will send you a consent form with a questionnaire to complete. If I don't receive the reply slip within 7-15 days you will receive another reminder letter. If you don't respond after this second letter, it will be assumed you don't wish to participate. Your participation is completely voluntary.

Thank you for taking the time to read the information

(******************)

Appendix 11b: Reply Slip for Non-Intervention Group

REPLY SLIP: **Research Code =**

If you are interested in being involved please sign this reply slip and send it back directly to the researcher through posting this letter in the collection box in your centre.

I am willing to participate in this study to improve nurses' Job Satisfaction

My contact details are:

Name:……………………………………………………………………....

Telephone No:………………………………………………………………

My Email address………………………………………………………..

To Researcher
(**********************)
PhD student

Appendix 12a:

Information Sheet for (Intervention Group)

Study Title:

Does Clinical Supervision improve Job Satisfaction for Primary Health Care nurses in Jeddah, Saudi Arabia?

My name is Sumaia Al-Madani I am a PhD student at the University of Salford and I would like to invite you to take part in a research study. Before you decide you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully. Ask questions if anything you read is not clear or would like more information. Take time to decide whether or not to take part.

I am undertaking a research study to find out if Clinical Supervision (CS) impacts on Job Satisfaction (JS) for Primary Health Care (PHC) nurses in Jeddah city. Supported by two supervisors, Dr Mary E. Braine (Senior lecturer, School of Nursing, Midwifery, Social Work and Social Science) and Dr Janice Grant (Director Multi-Professional Postgraduate Studies, School of Nursing, Midwifery, Social Work and Social Science).

What is the purpose of the study?

The main purpose of this study is to determine whether PHC nurses' JS level can be enhanced through CS in some selected centres across Jeddah region. The study aims to select some PHC centres that will represent the PHC organisation at Jeddah region. The information gathered would be used to gain a deeper understanding of CS and whether it has an impact on JS levels.

Does the study have an Ethical Consideration?

This study has been reviewed by the Health Research Ethics Panel of University of Salford, the Ministry of Health in Saudi Arabia, and also confirmation has been sought from the Nursing Directorate of PHC administrative in Jeddah Region.

Why is the research study useful?

The study is aim to seek if CS has an impact on JS for PHC nurses in Jeddah region. This information could inform the need for CS intervention in PHC

centres to develop PHC nursing staff, improve their skill and performance that may increase their JS level.

Why have you been invited or asked to take part?

PHC nurses are playing the crucial role in PHC organisations in Saudi Health strategy although there are persistent challenges for those nursing workforce including the main, JS. There has been limited research about CS within PHC in SA, and its impact on JS and other related factors such as stress and burnout. You have been invited to take part in this study as you work in one of the selected 6 PHC centres. The selected centres will be divided into two groups; the intervention group (Al-Mahjar, Bryman and Al-Hamra centres) and a non-intervention group (Al-Sulaimania, Ameer Abdulmajeed and Al-Safa1). You have been asked to participate as a member of the intervention group who will receive CS interventions. However both groups will represent the PHC organisation at Jeddah region.

Do you have to take part?

Taking part in this research is entirely voluntary, if you decide to not take part in this study you don't have to give a reason, and non-participation will not affect your professional employment in your PHC Centre. However, if you decide to take part you will be asked to complete an informed consent form. If you decide to take part, you are still free to withdraw at any time without giving a reason.

What will happen to you if you take part?

Each individual will participate in the following process:

1. You will receive some information by post that includes an invitation letter, reply slip and the information sheet.
2. You will be asked to return the reply slip within 7-15 days to the researcher, by posting it in the collection box in each selected centre, if you want to take part.
3. You will be invited to attend the introduction session at Al-Hamra training centre lasting between 1-2 hours. <u>This will enable you to make an informed decision as to whether or not you want to participate.</u>

4. You will receive a consent form and the JS questionnaire by the researcher at the end of the introduction session.

5. If you would like to take part, you will be asked to complete and return the consent form and the JS questionnaire by the next day to the researcher by posting it in the same collection box in your centre.

6. You will be allocated to a group for CS training, which will take three days. Each group will be allocated to a specific training programme during the month of March 2016.

7. After completing the training sessions you will be assigned and allocated by the researcher support to undertake CS for 6 months in your clinical area according to the training guidelines protocols. This will involve attending for group supervision session once a month and this will last for 1-2 hours.

8. You will complete the CS related documents e.g. CS contract form, planning sheet and monthly attending sheet relating to the CS process.

9. After the six months of CS experience, you will be asked to complete the same JS questionnaire again.

10. You may be asked to take part in semi-structured interview, to allow you to discuss the experience in CS intervention and whether it has improved your JS or not.

What are the possible benefits of taking part?

The researcher cannot promise that the study will help you but the information we get from the study will help to increase the understanding of Clinical Supervision and Job Satisfaction.

What if there is a problem?

If you have a concern about any aspect of this study, you should ask to speak to the nursing director who will do their best to answer your questions (0000000000). If you remain unhappy and wish to complain formally you can do this through contacting the University of Salford, my research supervisor: ***********************, Email: ***********************, Tel:000000000000 (School of Nursing, Midwifery, Social Work & Social Sciences, Mary Seacole Building, University of Salford, Salford, M6 6PU, M: 0044-161 295 6491, Email: *********************). If you remain dissatisfied you can contact

Mr.Anish Kurien, Research and Innovation Manage, Tel: +44(0) 161295 5276 a.kurien@salford.ac.uk.

Will your taking part in the study be kept confidential?

All information, which is collected, about you during the course of the research will be kept strictly confidential. No personal identifying information will be disclosed. There will be no identifying names on the questionnaires, you will be identified by an Identification (ID) number and any information about you will have your name removed so that you cannot be recognised from it. The ID number will not be available to anyone accept the researchers which will be, stored separately from the questionnaire data. The anonymised data will be used within thesis writing and subsequent publications and will not be attributable to individuals by name, or place of work.

What will happen if you don't carry on with the study?

If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form, and you are still free to withdraw your consent and discontinue participation at any time without explanation at any point. If you do decide later to withdraw from the study, you may also withdraw any information that has been collected about you. If you decide to withdraw, the information about you will be destroyed.

What will happen to the results of the research study?

The overall result and the study report will be made available to the University of Salford and to other researchers. Results from the study are likely to be published in clinical journals and at conferences, but you will not be identifiable in any of the reports or publications.

Further information and contact details:

Thank you for taking the time to read this information sheet. If you have any further questions please contact the researcher ******************** on 0000000000, email:*******************, or my research supervisor Dr.********************* on telephone number 00000000000, Email:************************. Once you feel fully informed to participate please sign the attached consent form. A copy of the consent will be given to you and the original kept with your data.

Appendix 12b:

Information Sheet for (Non-Intervention Group)

<u>**Study Title**</u>:

Does Clinical Supervision improve Job Satisfaction for qualified nurses in Primary Health Care in Jeddah, Saudi Arabia?

My name is Sumaia Al-Madani I am a PhD student at Salford University, and I would like to invite you to take part in a research study. Before you decide you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully. Ask questions if anything you read is not clear or would like more information. Take time to decide whether or not to take part.

I am undertaking a research study to find out if Clinical Supervision (CS) impacts on Job Satisfaction (JS) for Primary Health Care (PHC) nurses in Jeddah city. Supported by two supervisors, Dr Mary E. Braine (Senior lecturer, School of Nursing, Midwifery, Social Work and Social Science) and Dr Janice Grant (Director Multi-Professional Postgraduate Studies, School of Nursing, Midwifery, Social Work and Social Science).

What is the purpose of the study?

The main purpose of this study is to determine whether PHC nurses' JS level can be enhanced through CS in some selected centres across Jeddah region. The study aims to select some PHC centres that will represent the PHC organisation at Jeddah region. The information gathered would be used to gain a deeper understanding of CS and whether it has an impact on JS levels.

Does the study have an Ethical Consideration?

This study has been reviewed by the Health Research Ethics Panel of University of Salford, the Ministry of Health in Saudi Arabia, and also confirmation has been sought from the Nursing Directorate of PHC administrative in Jeddah Region.

Why is the research study useful?

The study is aim to seek if CS has an impact on JS for PHC nurses in Jeddah region. This information could inform the need for CS intervention in PHC

centres to develop PHC nursing staff, improve their skill and performance that may increase their JS level.

Why have you been invited or asked to take part?

PHC nurses are playing the crucial role in PHC organisations in Saudi Health strategy although there are persistent challenges for those nursing workforce including the main, JS. There has been limited research about CS within PHC in SA, and its impact on JS and other related factors such as stress and burnout. You have been invited to take part in this study as you work in one of the selected 6 PHC centres. The selected centres will be divided into two groups; the intervention group (Al-Mahjar, Brayman and Al-Hamra centres) and a non-intervention group (Al-Sulaimania, Ameer Abdulmajeed and Al-Safa1). You have been asked to participate as a member of the non-intervention group who will not receive CS intervention. However both groups will represent the PHC organisation at Jeddah region.

Do you have to take part?

Taking part in this research is entirely voluntary, if you decide to not take part in this study you don't have to give a reason, and non-participation will not affect your professional employment in your PHC Centre. However, if you decide to take part you will be asked to complete an informed consent form. If you decide to take part, you are still free to withdraw at any time without giving a reason. However, the researcher will still keep and use the data up to the point of withdrawal.

What will happen to you if you take part?

Each individual will participate in the following process:

1. You will receive some information by post that includes an invitation letter, reply slip and the information sheet.
2. You will be asked to return the reply slip within 7-15 days to the researcher, by posting it in the collection box in each selected centre, if you want to take part.
3. You will receive the consent form and the JS questionnaire by the researcher at the end of day.

4- You will be asked to complete the consent form and the JS questionnaire (pre-test) and submit it next day via posting the letters to the same collection box in each centre.

5- After 6 months you will be asked to complete the same JS questionnaire (post-test) and return it back to researcher via the same collection box.

What are the possible benefits of taking part?

The researcher cannot promise that the study will help you but the information we get from the study will help to increase the understanding of CS and JS.

What if there is a problem?

If you have a concern about any aspect of this study, you should ask to speak to the nursing director who will do their best to answer your questions (0000000000). If you remain unhappy and wish to complain formally you can do this through contacting the University of Salford, my research supervisor: ***********************, Email: ***********************, Tel:000000000000 (School of Nursing, Midwifery, Social Work & Social Sciences, Mary Seacole Building, University of Salford, Salford, M6 6PU, M: 0044-161 295 6491, Email: *********************). If you remain dissatisfied you can contact Mr Anish Kurien, Research and Innovation Manage, Tel +44(0) 161295 5276 a.kurien@salford.ac.uk.

Will your taking part in the study be kept confidential?

All information, which is collected, about you during the course of the research will be kept strictly confidential. No personal identifying information will be disclosed. There will be no identifying names on the questionnaires, you will be identified by an Identification (ID) number and any information about you will have your name removed so that you cannot be recognised from it. The ID number will not be available to anyone accept the researcher which will be, stored separately from the questionnaire data. The anonymised data will be used within thesis writing and subsequent publications and will not be attributable to individuals by name, or place of work.

What will happen if you don't carry on with the study?

If you do decide to take part you will be given this information sheet to keep

and be asked to sign a consent form, and you are still free to withdraw your consent and discontinue participation at any time without explanation at any point. If you do decide later to withdraw from the study, you may also withdraw any information that has been collected about you. If you decide to withdraw, the information about you will be destroyed.

What will happen to the results of the research study?

The overall result and the study report will be made available to the University of Salford and to other researchers. Results from the study are likely to be published in clinical journals and at conferences, but you will not be identifiable in any of the reports or publications.

Further information and contact details:

Thank you for taking the time to read this information sheet. If you have any further questions please contact the researcher ******************* on 0000000000, email:******************, or my research supervisor Dr.********************* on telephone number 00000000000, Email:************************. Once you feel fully informed to participate please sign the attached consent form. A copy of the consent will be given to you and the original kept with your data.

Appendix 13a:

Consent Form for Intervention Group

Title of Project: Does Clinical Supervision improve Job Satisfaction for qualified nurses in PHC in Jeddah, SA?

(Delete as appropriate)

⏏️☐I confirm that I have read and understood the information sheet (version 3, 11/11/2015) and what my contribution will be.	Yes	No
⏏️ I have had the opportunity to consider the information, ask question, and I have received satisfactory answers to any questions I have asked.	Yes	No
⏏️ I agree to completing a questionnaire at two intervals	Yes	No
⏏️ I agree to take part in the Clinical Supervision training sessions	Yes	No
⏏️ I agree to take part in Clinical Supervision in the purposive selected centres. I accept that information shared in these session must be kept confidential	Yes	No
⏏️ I understand that my participation is voluntary and that I can withdraw from the research at any time **without giving any reason**	Yes	No
⏏️ I agree to participate in an interview session following CS intervention, if I have been asked to take part.	Yes	No
⏏️ I agree to have my interview audio recorded and its contents to be used only for research purposes	Yes	No
⏏️ I understand that the information I provide could be used as part of the final study report or journal publications, but my response will not be identifiable to me	Yes	No
⏏️ **I agree to take part in the above study**	Yes	No

Name of Participant………………..Date………………… Signature……………..

Researcher…………………………Date…………………Signature……………..

Contact Information:

If you have any concerns, or worries about clinical supervision or the study then you should contact the Head of Nursing Department (****************) Ext: 000000000, and if you have any concerns about the conduct of study then you should contact the University of Salford, the research supervisor: (Dr*****************) (School of Nursing, Midwifery, Social Work & Social Sciences, Mary Seacole Building, University of Salford, Salford, M6 6PU, Contact: 0044-161 295 6491.

Appendix 13b:

Participant Consent Form for Non-Intervention Group

Title of Project: Does Clinical Supervision improve Job Satisfaction for qualified nurses in PHC in Jeddah, SA?

(Delete as appropriate)

▲☐I confirm that I have read and understood the information sheet (version 3, 11/11/2015) and what my contribution will be.	Yes	No
▲ I have had the opportunity to consider the information, ask question, and I have received satisfactory answers to any questions I have asked.	Yes	No
▲ I agree to completing a questionnaire at two intervals	Yes	No
▲ I understand that my participation is voluntary and that I can withdraw from the research at any time **without giving any reason**	Yes	No
▲ I understand that the information I provide could be used as part of the final study report or journal publications, but my response will not be identifiable to me	Yes	No
▲ **I agree to take part in the above study**	Yes	No

Name of Participant………………………………………………………..……...

Date………..…………………..Signature……………………………….………

Researcher Name……………………………………………………………….……

Date……………………………Signature…………………………………………..

Contact Information:

If you have any concerns, or worries about clinical supervision or the study then you should contact the Head of Nursing Department (****************) Ext: 000000000, and if you have any concerns about the conduct of study then you should contact the University of Salford, the research supervisor: (Dr*****************) (School of Nursing, Midwifery, Social Work & Social Sciences, Mary Seacole Building, University of Salford, Salford, M6 6PU, Contact: 0044-161 295 6491.

Appendix

Appendix 14a: Invitation letter for external moderators

Researcher Name*******
PhD – GTS student
School of Nursing, Midwifery, Social Work & Social Sciences
Mary Seacole Building
University of Salford
Salford, M6 6PU

M: 00000000000
Email: **********************

Dear Moderator/ …………………………………..

I am a PhD student undertaking a research study to determine if Clinical Supervision (CS) could improve the Primary Health Care (PHC) nurses' Job Satisfaction (JS) level in Jeddah region.

I am establishing a CS concept in some PHC centres to find out if it is able to improve nurses' JS level. To do this, I would like your help with the study, would you be able to act as a moderator within the study, providing education and training to the participants about CS. The training is estimated to take about one month, to cover the all participants who will be distributed in a small number of group of nurses (0-0), in rotation each group will be given 3 working days training about CS. Following training the participants will partake in CS in clinical practice for a period of 6 months. Each of your allocated groups will meet with you on a monthly basis for between 1-2 hours for the purpose of receiving CS. After this I will distribute questionnaires to participants in the study, to assess their JS levels. I will compare the differences (if any) between the intervention (receiving CS) and the non-intervention (No CS) groups.

Enclosed is an information sheet explaining all about the study and this letter is asking if you are interested in being involved as a Clinical Supervisor trainers for one month. If after reading the information sheet you would like to participate then please sign the reply slip and send it back to my email address. I will then contact you to discuss about the training sessions for PHC nurses in more details, as I will send a letter to your official manager asking permission to allow you to take part in the study. If I don't receive the reply slip within 7-15 days you will receive another email. If you don't respond after this second email, it will be assumed you don't wish to participate.
Thank you for taking the time to read the information.
PhD student

Appendix 14b: Reply Slip for external moderators

REPLY SLIP: **Research Code =**

If you are interested in being involved please sign this reply slip and send it back to the researcher via email.

Please indicate the suitable date you would like to meet or discuss about the study plan and training sessions in more details.

Estimated Date to meet with the researcher …………………………………

I agree to be participated in this study to train the intervention group for improving nurses' Job Satisfaction through implementing CS in PHC centres.

My contact details are:

Name:………………………………………………………………………....

Telephone No:…………………………………………………………………

My Email address………………………………………………………………..

Further information and contact details:

Thank you for taking the time to read this information sheet. If you have any further questions please contact the researcher ******************** on 0000000000, email:******************, or my research supervisor Dr.********************* on telephone number 00000000000, Email:*************************.

To Researcher
(******************)
PhD student

Appendix 14c: Information sheet for the external moderators

Aim of the study:

The main purpose of this study is to improve Primary Health Care (PHC) nurses Job Satisfaction (JS) level through addressing Clinical Supervision (CS) in some selected centres across Jeddah region.

The benefit of study:

The study findings will highlight the impact of implementing CS on JS, and the importance of introducing this approach for PHC nurses. This information could inform the need for CS intervention in other PHC centres, to support and develop PHC nursing staff, and improve their skill and performance that may lead to increased JS levels.

Study steps:

The study will follow the quality improvement project steps, Plan, Do, Study, and Act (PDSA). To do this, I need an intervention group of PHC nurses to measure their JS levels through a JS questionnaire tool, and then train them by experienced moderators to put CS in to practice and implement it in the selected centres, finally re-measure their JS level and compare the differences (if any) with the other (Non-intervention Group) who will follow the same procedures of measurement (prior to and after) but without receiving CS intervention.

Research consideration:

This study has been reviewed by the Health Research Ethics Panel of University of Salford, the Ministry of Health in Saudi Arabia, and also confirmation has been sought from the Nursing Directorate of PHC administrative in Jeddah Region. All information which will be collected, about the participants during the course of the research will be kept strictly confidential, and any information about the participant, which leaves the PHC centre's will have their name removed so that they cannot be recognised. Taking part in this research is entirely voluntary, if you decide to not take part in this study you don't have to give a reason, and non-participation will not affect your professional employment in your organisation. However, if you decide to take part you will be asked to complete an informed consent form. If you decide

to take part, you are still free to withdraw at any time without giving a reason. If you do decide later to withdraw from the study, you may also withdraw any information that has been collected about you if you decide to withdraw, the information about you will be destroyed.

What will happen to you if you take part?
1. You will provide an introduction session for one hour for the intervention group.
2. Prepare the CS related documents and the training content with the researcher assistance
3. Distribute the participants into small groups with the researcher involvement
4. Provide one training session of CS which lasting for three working days for each group to enable the participants to undertake CS in their clinical area
5. Discuss the feedback and every training session progress with the researcher by the end of the session.
6. Submit to the researcher all training related documents such as attending sheet, CS forms and training progress report of each group by the end of every session.

At the end the information gathered from the both groups' questionnaires would be used to gain a deeper understanding of CS and whether it has an impact to improve JS level.

Contact Information:

If you have any concerns, or worries about clinical supervision or the study then you should contact the Head of Nursing Department (****************) Ext: 000000000, and if you have any concerns about the conduct of study then you should contact the University of Salford, the research supervisor: (Dr*****************) (School of Nursing, Midwifery, Social Work & Social Sciences, Mary Seacole Building, University of Salford, Salford, M6 6PU, Contact: 0044-161 295 6491.

Thank you for taking the time to read the information.
(***********************)

  PhD student

Appendix 14d:

Consent Form for external moderators

Title of Project: Does Clinical Supervision improve Job Satisfaction in Primary Health Care nurses in Jeddah, Saudi Arabia?

Name of Researcher: ********************

(Delete as appropriate)

⏏☐I confirm that I have read and understood the information sheet for the above study and what my contribution will be.	YES	NO
⏏ I understand how the researcher will use my responses, who will see them and how the data will be stored	YES	NO
⏏ **I agree to take part in the above study**	YES	NO

Name of Moderator   ……………………………………………………………

Signature   ……………………………………………………………

Date   ……………………………………………………………

Name of researcher taking consent   ……………………………………………………………

Researcher's e-mail address   ……………………………………………………………

Appendix 15: Minnesota Satisfaction Questionnaire sample

Instruction for Completing the Minnesota Satisfaction Questionnaire (MSQ)

Dear Employee,

To determine the level of job satisfaction in primary healthcare and in order to improve the satisfaction level, and provide a quality service, we would like you to complete the attached questionnaire: The Minnesota Satisfaction Questionnaire (MSQ). It is a self-completed questionnaire, it is not a test, and there is no right or wrong answer. It is important, however, that you give an accurate and honest answer to each question. Your responses to the questionnaire enable us to provide a clear picture about the status of, and reason for, Job Satisfaction for Primary Health Care (PHC) nurses, which will help you to understand how clinical supervision may affect job satisfaction in PHC centres in Jeddah, Saudi Arabia. In addition, the data will not be shared with anyone else in the Primary Healthcare Centre (PHC) that you work in, or within the PHC sector. All responses are anonymous.

Although there is no time limit for completion, experience shows it normally takes about 5-10 minutes to complete.

To aid in the completion of the attached questionnaire, please follow these steps:

- Do not write your name anywhere on this questionnaire.

- Read carefully each question and tick only one answer for each question. To indicate your choice, tick the appropriate box.

- Use a dry pen to answer your questions and do not use a pencil.

- Answer individually and do not discuss your ideas with others, to maintain response accuracy

Please return the completed questionnaire to the box provided in your centre in nursing education room.

If you have any queries then please contact me by email: ***********************, or by mobile: 000000000000.

Thank you for taking the time to complete this questionnaire.

Appendix

<u>Demographical Data</u>

Confidential

Your answers to the questions and all other information you give us will be held in the strictest confidence.

Today's date……………………………………………………………………..

Before you begin please indicate the following data by ticking the appropriate

box(es):

1. Nationality	Saudi National	☐
	Non-Saudi	☐

2. Gender	Male	☐
	Female	☐

3. Qualification	Diploma	☐
	Bachelor Degree	☐
	Master Degree	☐

4. Age	20-29 years	☐
	30-39 years	☐
	40-49 years	☐
	50-59 years	☐
	60 years and over	☐

5. How long have you been in this line of work?

	Less than 1-year	☐
	1-2 years	☐
	3-5 years	☐
	More than 5 years	☐

minnesota satisfaction questionnaire

The purpose of this questionnaire is to give you a chance to tell **how you feel about your present job,** what things you are **satisfied** with and what things you are **not satisfied** with.

On the basis of your answers and those of people like you, we hope to get a better understanding of the things people **like and dislike about their jobs.**

On the following pages you will find statements about your **present** job.

· Read each statement carefully.

· Decide **how satisfied you feel about the aspect of your job** described by the statement.

Keeping the statement in mind:

— if you feel that your job gives you **more than you expected,** check the box under **"Very Sat."** (Very Satisfied);

— if you feel that your job gives you **what you expected,** check the box under **"Sat."** (Satisfied);

— if you **cannot make up your mind** whether or not the job gives you what you expected, check the box under **"N"** (Neither Satisfied nor Dissatisfied);

— If you feel that your job gives you **less than you expected,** check the box under **"Dissat."** (Dissatisfied);

— if you feel that your job gives you **much less than you expected,** check the box under **"Very Dissat."** (Very Dissatisfied).

· Remember: Keep the statement in mind when deciding **how satisfied you feel about that aspect of your job.**

· Do this for **all** statements. Please answer **every** item.

Be frank and honest. Give a true picture of your feelings about your **present job.**

Ask yourself: How **satisfied** am I with this aspect of my job?

Very Sat. means I am very satisfied with this aspect of my job.

Sat. means I am satisfied with this aspect of my job.

N means I can't decide whether I am satisfied or not with this aspect of my job.

Dissat. means I am dissatisfied with this aspect of my job.

Very Dissat. means I am very dissatisfied with this aspect of my job.

On my present job, this is how I feel about . . .	Very Dissat.	Dissat.	N	Sat.	Very Sat.
1. Being able to keep busy all the time	□	□	□	□	□
2. The chance to work alone on the job	□	□	□	□	□
3. The chance to do different things from time to time	□	□	□	□	□
4. The chance to be "somebody" in the community	□	□	□	□	□
5. The way my boss handles his/her workers	□	□	□	□	□
6. The competence of my supervisor in making decisions	□	□	□	□	□
7. Being able to do things that don't go against my conscience	□	□	□	□	□
8. The way my job provides for steady employment	□	□	□	□	□
9. The chance to do things for other people	□	□	□	□	□
10. The chance to tell people what to do	□	□	□	□	□
11. The chance to do something that makes use of my abilities	□	□	□	□	□
12. The way company policies are put into practice	□	□	□	□	□
13. My pay and the amount of work I do	□	□	□	□	□
14. The chances for advancement on this job	□	□	□	□	□
15. The freedom to use my own judgment	□	□	□	□	□
16. The chance to try my own methods of doing the job	□	□	□	□	□
17. The working conditions	□	□	□	□	□
18. The way my co-workers get along with each other	□	□	□	□	□
19. The praise I get for doing a good job	□	□	□	□	□
20. The feeling of accomplishment I get from the job	□	□	□	□	□
	Very Dissat.	Dissat.	N	Sat.	Very Sat.

Appendix

Appendix 16: Original author's permission to use copyright of MSQ

January 6, 2016

Dear Sumaia Nassar Al-Madani,

We are pleased to grant you permission to use the **Minnesota Satisfaction Questionnaire 1977 short form** on a secure web site as you requested for your research. We acknowledge receipt of your $20.00 payment for Royalty fees for 100 MSQ short form surveys.

Please note that each copy that you make must include the following copyright statement:

Copyright 1977, Vocational Psychology Research , University of Minnesota. Reproduced by permission.

We would appreciate receiving a copy of any publications that result from your use of the **MSQ short form surveys.** We attempt to maintain an archive and bibliography of research related to Vocational Psychology Research instruments, and we would value your contribution to our collection.

If you have any questions, or if we can be of any additional assistance, please do not hesitate to contact us.

Sincerely,

Vocational Psychology Research

Appendix 17: Interview Schedule

Interview Schedule
For Intervention Group

Interview to follow as soon after the termination of the clinical supervision sessions as practicably possible.

 "Are you generally satisfied with your job?" or what is your job satisfaction level, or how do you feel at your work?

- "Please give an example and rationale for your answer, in accordance with whether you are satisfied?"
- "How do you think your JS could be improved?"

"What are your initial thoughts and feelings about the CS approach?"

- "How would you describe the kind of supervision that you gave/received to improve your JS?"
- "How does that relate to your theoretical understanding of supervision?"
- "Do you think that receiving CS could improve your JS?"
- "Do you feel that CS could improve other problems, like burnout, stress, lack of knowledge and skills? "

End Interview

- "Is there anything else about your JS in particular, or about CS in general, that you'd like to say?"

Appendix 18: Risk Scoring System and Matrix

Risk scoring System

Probability of occurrence	Project impact
1- very unlikely	1- Negligible (very low)
2- Fairly unlikely	2- Minor (low)
3- 50/50 chance	3- Moderate (medium)
4- Fairly likely	4- Serious or (high)
5- Very likely	5- Disastrous (very high)

Risk scoring matrix

P R O J E C T I M P A C T	5	5 Medium	10 Medium	15 High	20 Very high	25 Very high
	4	4 Low	8 Medium	12 High	16 High	20 Very high
	3	3 Low	6 Medium	9 Medium	12 High	15 High
	2	2 Very low	4 Low	6 Medium	8 Medium	10 Medium
	1	1 Very low	2 Very low	3 Low	4 Low	5 Medium
	0	1	2	3	4	5
		PROBABILITY OF OCCURRENCE				

(Source: Vose, 2008)

Appendix 19: Hybrid Supervision Framework

Presenting Case in
Clinical Supervision Framework

Clinical Supervision Form[1]
إستمارة الإشراف الإكلينيكي

Through integrating Proctor (1991), Nicklin (1997) and Rogers & Topping-Morris,
(1997) + Quality Improvement cycle

من خلال إستخدام دمج منهجية بروكتور ١٩٩١، نيكلين ١٩٩٧، روجير و توبينق ١٩٩٧مع

دائرة تحسين الجودة

FOCUS - PDSA
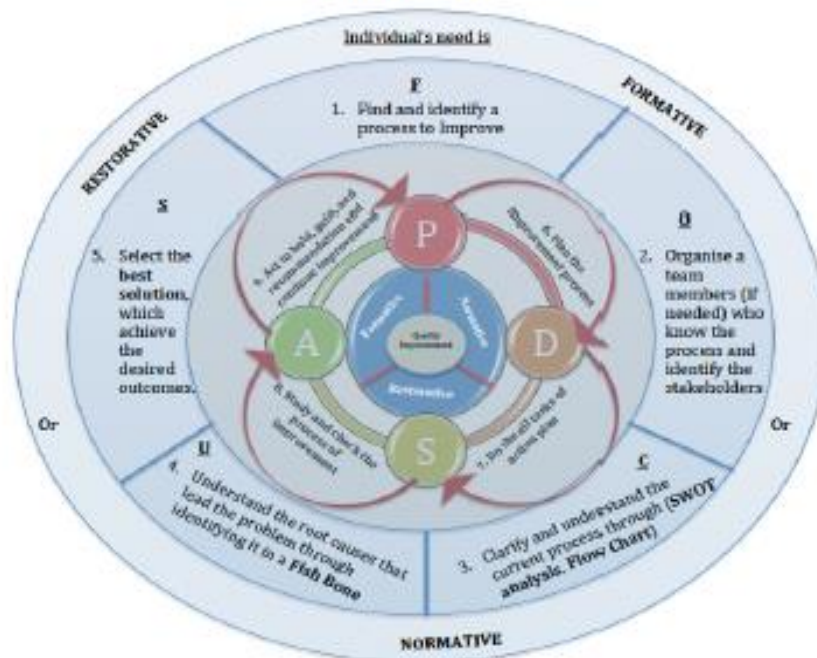
Supervisee Name:...

Supervisor Name:...

Mode of Supervision:

☐ Individual Supervision   ☐ Group Supervision   ☐ Peer Supervision

Data of Session:..Number of Session:.........................

[1] Adapted from: Proctor (1991), Nicklin, 1997, Rogers & Topping-Morris, 1997 and integrated in Quality Improvement approach

١-٢

Presenting a Case for Clinical Supervision

Table 1: Reported Outcomes categorised to Proctor's model:
(Circle your current needed outcome to discuss as a case according to your priority)

Normative: Professional accountability		
1 Change of action تغيير إجراء	9 Professional identity الهوية المهنية	17 Professional solidarity التضامن المهني
2 Moral sensitivity	10 Confirming uniqueness of role تاكيد ندرة الدور	18 Confirmation of nursing Interventions تأكيد (الممارسة/ التدخل) التمريضية
3 Problem solving حل مشكلة	11 Change organisation of nursing care تغيير نظام الرعاية التمريضية	
4 Commitment affirmation تاكيد الإلتزام	12 Improve individual's nursing care تحسين الرعاية التمريضية الفردية	19 Nurse patient cooperation تعاون الممرض والمريض
5 Confirmation of actions and role تثبيت الإجراء و الدور	13 Critiquing practice نقد الممارسة	20 Less patient resistance تقليل مقاومة المريض
6 Identify solutions تحديد الحلول	14 Improving practice تحسين الأداء	21 Improve patient relationship تحسين العلاقة بين المرضي
7 Improve nursing practice تحسين الأداء التمريضي	15 Risk taking المخاطرة	
8 Increase understanding of professional issues زيادة فهم القضايا المهنية	16 Job satisfaction الرضا الوظيفي	22 Other آخري
Formative: Skill and knowledge development		
23 New learning تعليم جديد	31 Professional development التطوير المهني	39 Communication skills مهارات التواصل
24 Improved knowledge تحسين المعلومات	32 Confirming patient uniqueness تاكيد انفرادية المريض	Other آخري
25 Professional development (deeper knowledge) التطوير المهني (معلومات عميقة)	33 Gaining knowledge إكتساب معلومات	40
26 Self confidence الثقة بالنفس	34 Competence الكفاءة	
27 Self-awareness of thoughts and feelings الوعي الذاتي للأفكار و المشاعر	35 Insight into therapeutic use of self when relating to patients نظرة ثاقبة اتجاه النفس الاستخدام العلاجي حين يتعلق بالمرضي	
28 Improved knowledge of human rights تحسين معلومات حقوق الناس	36 Improved idea تحسين الفكرة	
29 Recognizing family needs more إدراك أكثر لحاجة العائلة	37 Idea support دعم الفكرة	
30 Competence and creativity الكفاءة و الإبداع	38 Creativity and innovation الإبداع و الإختراع	
Restorative: Colleague/social support		
41 Listening and being supportive الإستماع و الدعم	50 Lower perceived anxiety تقليل القلق الملحوظ	58 Improved relationship with nurses تحسين العلاقات بين التمريض
42 Improve coping at work تحسين التعامل في العمل	51 Increased interest زيادة الحماس	
43 Accessing support دعم الوصول	52 Relief (discuss thoughts and feelings) إرتياح (مناقشة الأفكار و المشاعر)	59 Reduced tedium تقليل الملل
44 Better relationship amongst staff أفضل العلاقات بين العاملين		60 Reduced burnout إنخفاض الإرهاق
45 Engagement in the workplace الإنخراط في العمل	53 Empathy التعاطف	61 Personal accomplishment إنجازات الفردية
46 Safe group environment بيئة آمنة	54 Sense of community الشعور بالإنتماء للمجتمع	62 Personal development التطوير الشخصي
47 Sense of security الشعور بالأمان	55 Trust الثقة	63 Coping التعامل
48 Satisfaction with nurses الرضا مع فئة التمريض	56 Self understanding فهم النفس	Other آخري
49 Understanding colleagues فهم الزملاء	57 Reduced conflict تقليل الخلافات	64

Some frameworks for supervision and case study:

1.   **Find an issue or project to improve**
     1.1   Align with organizational goals
     1.2   Evaluate supervisee's need through identifying the known gap between their knowledge and skill
     1.3   Outline the participant's basic problems
     1.4   Review Applicable standards and guidelines

Name of issue or project

....
....

SMART goals	Results	Current Data

S = Specific, **M** = Measurable, **A** = Achievable, **R** = Realistic, **T** = Time Pound

2.   **Organize ad hoc (task force) team (if needed)**
     2.1   Identify the key players or stakeholders in process and recruit them (if needed) to solve the problem.
     2.2   Select team members who do or know the process from the appropriate level in the PHC organisation.
     2.3   Agree on mission statement.

N	Name	Occupation	Role in team
1			Team Leader
2			Team Facilitator
3			Member
4			Member
5			Member

3.   **Clarify current process & desired outcomes**
     3.1   Draw the Flaw Chart for actual process
     3.2   Identify the customer and the supplier for each step.
     3.3   Understand how current processes work and obtain input from all affected areas (process).
     3.4   Collect data

Flow Chart

```
        ┌──────────────────────┐
        │  Beginning of the    │
        │      process         │
        └──────────────────────┘
                  │
                  ▼
  ┌─────────────────────────────────┐
  │ 1. Process:                     │
  │ ─────────────────────────────── │
  │              Responsible person │
  └─────────────────────────────────┘
                  │
                  ▼
  ┌─────────────────────────────────┐
  │ 2. Process:                     │
  │ ─────────────────────────────── │
  │              Responsible person │
  └─────────────────────────────────┘
                  │
                  ▼
  ┌─────────────────────────────────┐
  │ 3. Process:                     │
  │ ─────────────────────────────── │
  │              Responsible person │
  └─────────────────────────────────┘
                  │
                  ▼
  ┌─────────────────────────────────┐
  │ 4. Process:                     │
  │ ─────────────────────────────── │
  │              Responsible person │
  └─────────────────────────────────┘
                  │
                  ▼
  ┌─────────────────────────────────┐
  │ 5. Process:                     │
  │ ─────────────────────────────── │
  │              Responsible person │
  └─────────────────────────────────┘
                  │
                  ▼
  ┌─────────────────────────────────┐
  │ 6. Process:                     │
  │ ─────────────────────────────── │
  │              Responsible person │
  └─────────────────────────────────┘
                  │
                  ▼
        ┌──────────────────────┐
        │  End of the process  │
        └──────────────────────┘
```
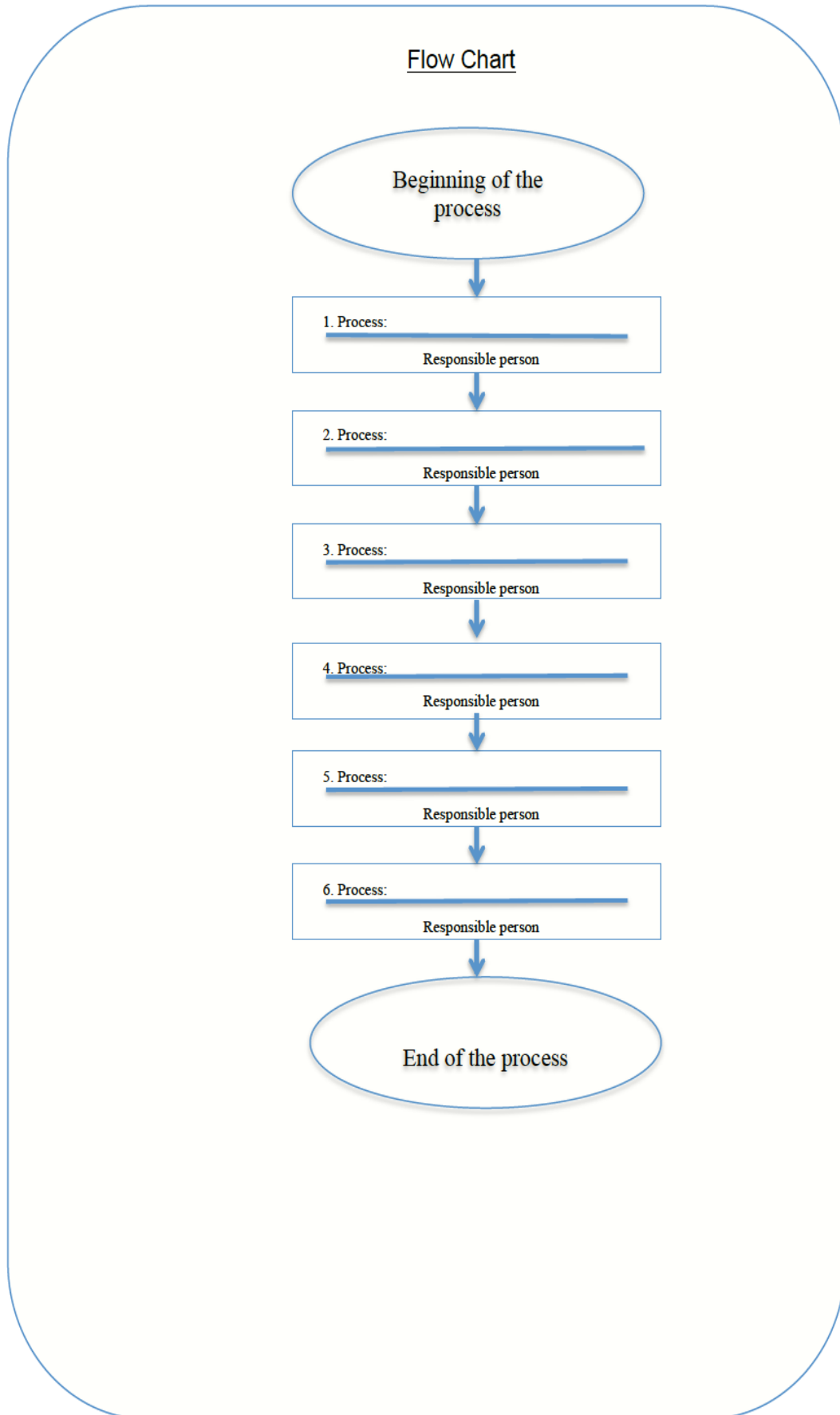
Data Collection Sheet:	
Issue or Project Title:	
What are the data, information and statistics available and related to the problem? • • •	What kind of information that needs to find and how could find it? • • •
Where is the problem? (Setting or Place)	When the problem occurs usually? (Timing)
Who has a direct or indirect relation with the problem? (Management department, individuals)	How big the problem is? (Expected %)

4.   Understand the process, root causes and desired outcomes

4.1   Identify the tools required to describe and analyse the process and desired outcome, such as: Fish Bone, Pareto Chart, and Histogram.

4.2   Identify all possible causes and variations, developing solutions to achieve the desired outcome.
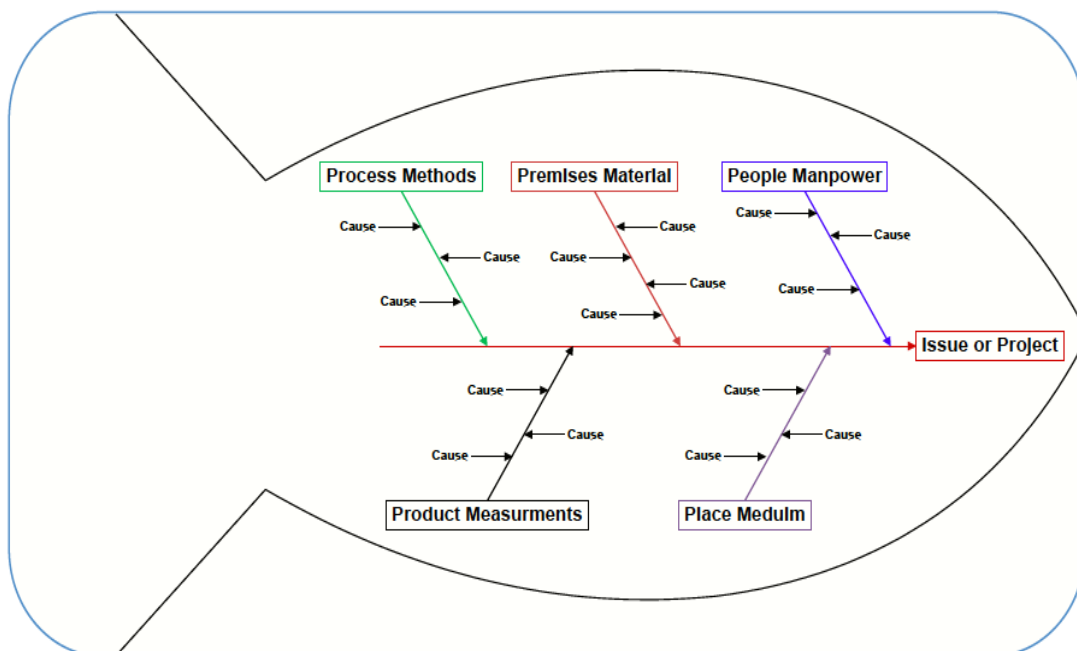
Fish Bone

All proposed solutions that could lead to the achievement of results:

N	Root Causes
1	
2	
3	
4	

5. Select the best practice procedure

5.1   Analyse alternative solutions and process improvement

5.2   Choose the best solution that will achieve the desired outcome

5.3   Put the chosen solution in a presented abstract for results planned to achieve, includes the resources required and those responsible for processes and the timetable for implementation.

N	Proposed solutions	Vote	Total
1			
2			
3			
4			

Title of Project or solving problem:
Best Solution:
Expected Results Achieved:
Required Resources:
Responsible (Management, individual):
Required Timeframe to perform:

6. **Plan for improvement the issue or project (initiative):**
    6.1   Assign tasks, develop a checklist and set realistic time frames
    6.2   Determine who will be responsible for obtaining any necessary data, monitoring the project and keeping it on track.
    6.3   Notify and obtain the support of all those who will be affected by the implementation.

Action Plan

Title of improvement process or project:

Objectives:

N	Detailed Activities	Resources	Responsible	Time Frame
1				
2				
3				
4				

Gantt Chart

N	Activities		Time Frame (Month or Week)											
			1	2	3	4	5	6	7	8	9	10	11	12
1		Planed												
		Actual												
2		Planed												
		Actual												
3		Planed												
		Actual												
4		Planed												
		Actual												

Follow-up the process

N	Activity	Indicator	Follow-up Mechanism	Responsible for Follow-up
1				
2				
3				
4				

7. **Do the improvement issue or project**
    7.1   The solution identified in the FOCUS process is implemented in a systematic manner.
    7.2   Educate and train all people involved.
    7.3   Collect data and update the checklist required.

8. **Check the Results**
    8.1   Check and analyse if the result lead to the expected improvement.
    8.2   Compare the data collected during FOCUS with that collected during /after implementation to ascertain if project goals were met.
    8.3   Check for any adverse or counterproductive consequences that occur due to the new changes.
    8.4   Continue to collect data to determine effectiveness and compliance with the solution.

Title of improvement/ issue/ project:

N	Data prior to action (before improvement)	Data after action	Un-expected events
1			
2			
3			

9. **Act to hold gains or re-adjust FOCUS-PDC**
    9.1   If the project goals were met, the change and the desired outcome were obtained, standardize the improved process throughout the PHC organisation where applicable.
    9.2   Make all necessary adjustments to policies and procedures.
    9.3   Inform and educate people in new processes
    9.4   Document the changes.
    9.5   Continue to monitor the process to identify additional opportunities for improvement.

10. **The participant has received his/her:**
    (a) Normative need   (b) Formative need   (c) Restorative need.

Appendix 20: Allocation of intervention group for monthly supervision sessions

Amended groups in B1 Centre: **From 1049 To 1062**

Code	GROUP 1	Task	Code	GROUP 2	Task	Code	GROUP 3	Task
	1049	Supervisor		1050	Supervisor		1051	Supervisor
	1052	Supervisee		1053	Supervisee		1060	Supervisee
	1055	Supervisee		1054	Supervisee		1061	Supervisee
	1057	Supervisee		1056	Supervisee		1062	Supervisee
	1058	Supervisee		1059	Supervisee			

Amended groups in B2 Centre: **From 1063 To 1077**

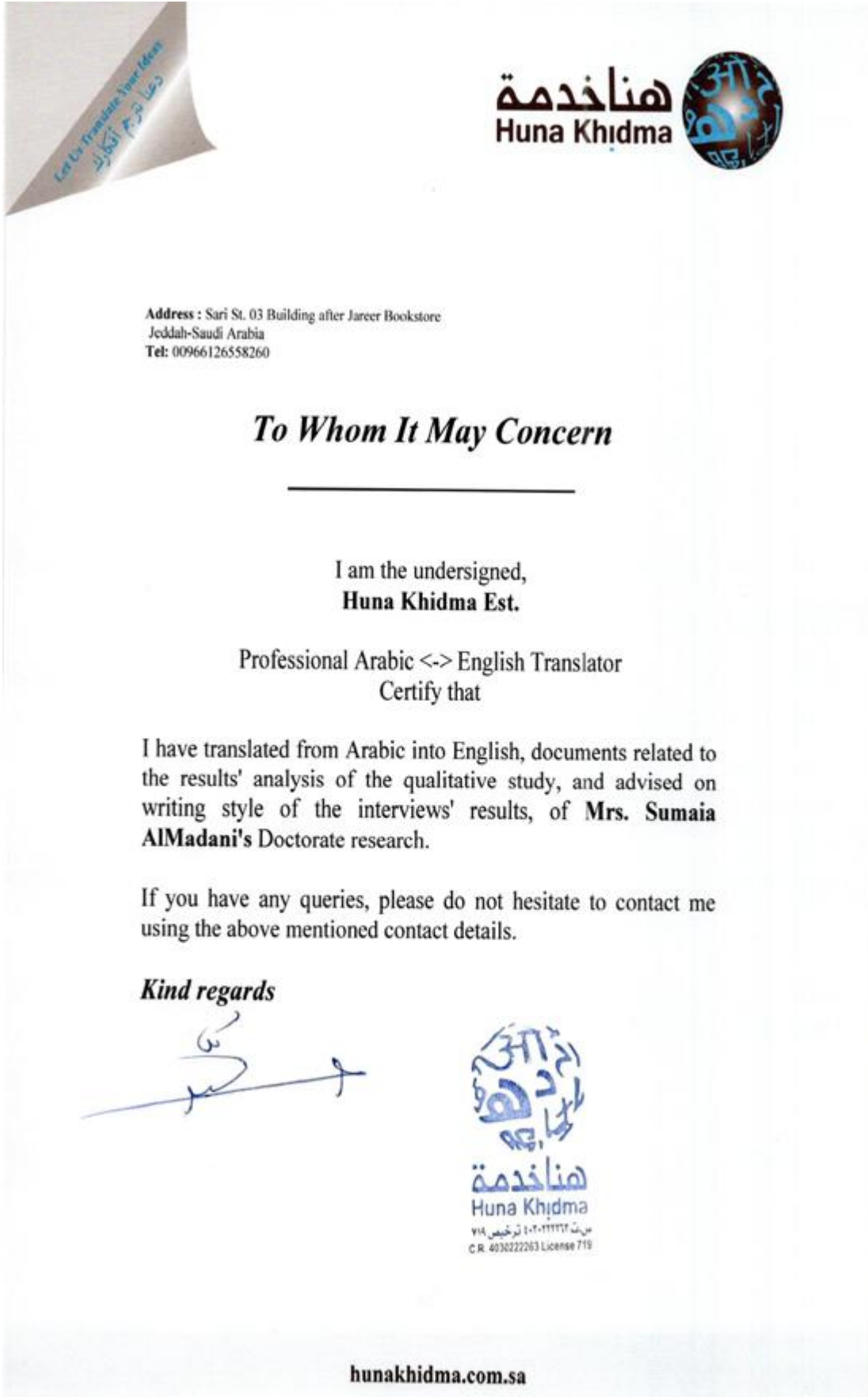| Code	GROUP 1	Task	Code	GROUP 2	Task	Code	GROUP 3	Task
	1063	Supervisor		1064	Supervisor		1071	Supervisor
	1066	Supervisee		1065	Supervisee		1076	Supervisee
	1067	Supervisee		1069	Supervisee		1077	Supervisee
	1068	Supervisee		1070	Supervisee		1075	Supervisee
	1072	Supervisee		1073	Supervisee		1074	Supervisee

Amended groups in B3 Centre: **From 1078 To 1091**

Code	GROUP 1	Task	Code	GROUP 2	Task	Code	GROUP 3	
	1078	Supervisor		1080	Supervisor		1086	Supervisor
	1079	Supervisee		1082	Supervisee		1088	Supervisee
	1081	Supervisee		1084	Supervisee		1089	Supervisee
	1083	Supervisee		1085	Supervisee		1091	Supervisee
	1087	Supervisee		1090	Supervisee			

Appendix 21: Non-verbal transcription conventions[4]

Sound:	
Any environmental sounds (name of sound)	(knocking on door), (phone ringing)
Affirmative sounds	yah
Volume of speaking:	
Louder tone	use UPPER CASE e.g., RIGHT
Stressed/or emphasized word	use Capital case e.g., Yes
Expressions:	
Long or short silence, pause of less or more than 0.5 of a second (unless precisely timed)	leap (…)
Long quotes	leap (……)
Thinking to answer	(umm)
Words spoken while laughing or laughing or smiling	(laughing), (smiling)
Both researcher and participant are laughing at something	(laughter)
Repeating what someone else has said use speech marks	'quotes'
Others	(coughing)
Punctuation	
End of thought period	use of full stop .
End of phrase/ or more expected	use a comma ,
Unclear words, sentences or abbreviations	explained between brackets [ ]

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[4] Adopted from: Braine (2010); Dresing, Thorsten, and Schmieder (2015); Gumperz and Berenz (1993)

Appendix 22: Translation of the transcriptions

هناخدمة
Huna Khidma

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Jeddah-Saudi Arabia
Tel: 00966126558260

To Whom It May Concern

I am the undersigned,
Huna Khidma Est.

Professional Arabic <-> English Translator
Certify that

I have translated from Arabic into English, documents related to the results' analysis of the qualitative study, and advised on writing style of the interviews' results, of **Mrs. Sumaia AlMadani's** Doctorate research.

If you have any queries, please do not hesitate to contact me using the above mentioned contact details.

Kind regards

هناخدمة
Huna Khidma
سجل تجاري ٤٠٣٠٢٢٢٢٦٣ ترخيص ٧١٩
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Appendix 23: Examples of meaning units, condensed meaning units, sub-themes and the emergent themes 1-6 from the content analysis.

Meaning unit	Interviewees	Condensed meaning unit description close to the text	Sub-theme	Final emergent themes
Theme 1				
"...now I feel moderately stable in my current job..."	**R**	Satisfied at work.	-	Interviewees' perceptions of job satisfaction
Theme 2				
"...I am feeling good at my work because there are several positive changes occurring in our health system, as I think ... the quality management becomes an essential requirement..."	**R**	Satisfied toward the job due to apply quality management.	Quality management	Factors influencing job satisfaction
"...my relationship with the staff and head nurse is not too good (Laughing). They don't like my attitudes, and …… how I deal with my patients..."	**H**	Negative relationship between the senior and junior nurses	Interpersonal relationship	
"... I am satisfied with the new views of improving professional development in the primary care organisation, whether by enabling me to continue my education or by keeping me up-to-date..."	**A**	Satisfied due having professional development opportunities.	Professional development	
"I am not satisfied with my work, as I am working in a vaccination clinic and, due to the workload, I cannot even attend any training sessions except the one offered inside the centre (sigh). There are several reasons, such as the environment at work is so messy ..., there is shortage of staff, and……the structure of the building is so old…"	**H**	Dissatisfied in the job due to work environment.	Work environment	
"... I found the clinical supervision programme an appropriate approach for improving job satisfaction …"	**A**	Satisfied at work due to attendance at monthly clinical supervision session.	Clinical supervision	
Theme 3				
"...clinical supervision is a clinical reflective process which provides support to employees', not evaluate processes or……judging the individual or...observing employee's mistakes."	**A**	Definition of clinical supervision	-	General perceptions of clinical supervision
Theme 4				
"I think this approach [clinical supervision] is designed based on the quality improvement framework, which was great, because we all (knocking on door) have a little experience in quality tools that are used to solve problems..."	**A**	The hybrid supervision framework was easy to apply	Experience of clinical supervision framework (model)	Factors that influence effective clinical supervision
"...in the advanced level of clinical supervision sessions [fourth month of supervision] it became difficult to finish the session in under two hours, and ... I needed more time to handle each member's issue umm and ... a quiet place to hold the session..."	**R**	Insufficient time and length, inappropriate place influence clinical supervision affectivity.	Setting, length and frequency of session	
"...my supervisor is so talented and active (smiling); recently she has suggested and created a clinical supervision group in "WhatsApp" social media for several reasons, such as to not miss any monthly sessions for any reason ..."	**M**	The assigned supervisors for clinical supervision should be qualified and knowledgeable.	Qualified supervisor	
"...I think I was so lucky to have a multiple-talented and knowledgeable colleagues in my group during the six months, who respected each other's views whether, as a supervisee' or as a supervisor."	**A**	Supportive relationship between all in the group.	Supervisory relationship	
"...it [group clinical supervision] was a useful way because none of us had previous experience in clinical supervision, and this group supervision helped me to enhance my relationship with the staff ...".	**L**	Group clinical supervision mode preferable to improve knowledge and skill	Mode of clinical supervision	
Theme 5				
"...It definitely improved my knowledge during these six months of the intervention, although there was a long interval between each session."	**G**	Clinical supervision improved the knowledge and skill	-	Impact of clinical supervision on burnout, stress and knowledge and skill