# The University of Salford

# School of Nursing Midwifery and Social Work and Social Sciences

# MSc in Nursing

Student nurses' preparation and negotiation of transition to the Registered Nurse role. Are there any factors that influence or inhibit this successful negotiation and transition?

A systematic review

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**<u>Statement of ownership.</u>**

*"I declare that no part of this dissertation has been taken from existing published or unpublished material without due acknowledgement and that all secondary material used herein has been fully referenced."*

*Signed..............   C E Croughan..............*

*Date.................8th February 2016.......................................*

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*'Remember that what is hard to endure-will be sweet to recall'*

-Tote Yamada

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**ABSTRACT**

**Aim**

The aim of this systematic review is to review and determine the student nurse preparation and negotiation of their readiness to qualify as a registered nurse on the Nursing and Midwifery Council register. There is consideration given with aspects and elements explored that determine the influences that lead to success of this transition and the success or inhibitors of this negotiation alongside transition from student nurse to the registered nurse role. The aim of this review therefore, is to critically review the evidence to identify if there are any factors that negotiate the preparation and transition from student nurse to the registered nurse role.

The objectives of this review are as follows:

- To conduct a comprehensive literature search and identify evidence that is relevant
- To appraise critically the quality of identified evidence and analyse the findings to ascertain if there are any factors that negotiate the preparation and transition from student nurse to the registered nurse role and whether the factors influence or inhibit this transition
- To determine and explore the factors that influence or inhibit success or failure encompassed within the student nurse transition to registered nurse

**Method:**

A review of relevant literature was undertaken utilising a systematic review approach incorporating literature from 2007 to 2015 inclusive with seminal and relevant work from 1974, 1986, 1989, 2000 and 2001 which provide a longevity view of influencing factors for transition. For the review to begin, key search terms were identified using a variety of terminologies and databases initially included CINAHL, EBSCO, Medline and Science Direct with progression further through Academic Search Premier, SCOPUS and the COCHRANE library. Further reading and supporting evidence was found including elements of grey literature. Data of relevance was extracted using the Centre for Reviews and Dissemination (CRD) (2009) approach and the Critical Appraisal Skills Programme (CASP) (2013) tool alongside the National Institute for Clinical Excellence Quality Appraisal Checklist (NICE 2012) and the Quality Appraisal Checklist for Correlational studies 2012 (Long 2005).

**Results:**

A total of 13 papers were included in the study. The analysis and syntheses identified that there were varying factors that influenced or inhibited the student nurse transition to registered nurse incorporating both intrinsic and extrinsic factors.

**Conclusion:**

There is a plethora of research in relation to student nurse success in identifying factors that may aid or inhibit their role transition to registered nurse. There is an evident diverse range of factors that are inclusive within the intrinsic and extrinsic elements identified such as social, cultural, institutional (both clinical and educational) and personal factors.

**Chapter 1**

**BACKGROUND:**

**Introduction:** The literature surrounding student nurses and their preparation for their registered nurse role is vast and at times unclear with variances in interpretation and understanding. Research is extensive but limited progress appears to have been made in relation to factors effecting successful transition incorporating elements of intrinsic and extrinsic components, so this chapter will identify previous literature surrounding role transition and what factors influence or inhibit successful transition alongside exploring elements such as personal qualities of individuals, social and cultural influences and institutional/organisational support alongside other influencing components.

For a substantial period of time and in accordance with the literature, it has been recognised by many that transition from student nurse to registered nurse is often described as a 'reality shock', this being recognised in work by Kramer (1974) with a considerable number of stressors and factors relating to this experience. Intrinsic elements such as motivation (personal motivations),cognitive engagement and individual learning styles have also been identified as having a contribution alongside external factors such as social, cultural, behaviours and clinical practice experiences (both within institutions and organisations). Preceptorships and mentorship experiences also had some significance in role transition for many students providing an essential start to a nursing career within the nurse's first registered nurse post. (Barton 2006, Beauvais, Stewart, DeNico & Beavais 2014, Pitt, Powis, Levett-Jones & Hunter 2014, Rose 2011, Suresh, Mathews & Coyne 2012, Teoh, Pua & Chan 2013,Urwin,Stanley,Jones,Gallagher,Wainwright & Perkins 2010.)

Duchscher (2009) describes a newly registered nurse's journey as a transition of progression through stages of doing, being and knowing. This journey also incorporated elements such as adjusting, rediscovering, exploring and engaging of and for the individual. She identified that although this journey was not entirely linear or progressive, it was evolutionary and ultimately transformative for all participants (Duchscher 2008).

Ross and Clifford (2002) believes that part of that journey is when support is required at time of nursing governing body registration but also when there are omissions in final year progression and planning. Dante (2013) identified that social foundations such as peer groups, friendship groups and social living circumstances alongside students as individuals were contributory factors for students not transitioning successfully and also the burden of lower self-esteem and economic burden also had impacts for individual students.

Throughout a substantial period of time major reforms involving student nurse education programmes and adequate preparation for the nursing role has taken place alongside policy change and health care delivery and provision of care. A shift in education from Project 2000 (United Kingdom Central Council for Nursing, Midwifery and Health Visiting (UKCC 1986) was one of the first changes removing the role away from the Schools of Nursing which were often based within the hospital setting, to incorporate higher education institution teaching usually established within Universities. There still remains however, the question as to whether these changes in nursing education and policy have supported the student nurse by providing them with the tools, knowledge and basic skills to support their understanding of their immediate registered nurse role alongside the ability to function both competently and or confidently in their roles. Lauder, Roxburgh, Holland, Johnson, Watson, Porter….Behr (2008) identified that despite high levels of competence within students, this does not necessarily mean that high levels of confidence are apparent within these individuals.

Early studies in relation to student nurse transition focused on educational institutions as being the main instigators of factors that may aide or inhibit transition, with a shift in the 1980's studies concentrating on characteristics of the individual learner as a success factor (Urwin et al 2010). More progressive literature identifies high levels of intrinsic and extrinsic motivators as influencing factors in the role of influencing or inhibiting this successful role transition negotiation. A major finding was that newly registered practitioners who manage transition successfully are able to provide more effective care and provide this care at a prompter rate, they feel more prepared about their new role and are likely to remain within their chosen profession aiding retention for employers and job satisfaction for the individual (Wheeler & Grice 2000).

Whitehead, Owen, Holmes, Beddingham, Simmons, Henshaw, Barton and Walker (2013) identified key findings in their research that indicated that preceptorship within nursing courses and orientation programmes was the most significant factor in preparing the graduates for the transition from student nurse to registered nurse. There were issues however that affect retention and areas were identified within some nursing programmes that could prepare these unique nursing graduates more effectively for the transition into registered nursing practice in addressing nurse curricula and their individual suitability for nursing as a profession. Subsequent guidance and findings from United Kingdom Government literature (Department of Health 2006, Department of Health 2008), identified a correlation between newly registered nurses being able to provide a greater contribution to patient care at a level that is expected and also greater benefits to the individual nurses themselves such as job satisfaction and professional development. From literature reviewed it is apparent that these transition components are not just contained within the United Kingdom but also internationally (Beauvais et al 2014, Deasy, Doody & Tuohy 2011, Kelly & Ahern 2009, Morrow 2009 and Pitt et al 2014).

**Background and topic relevance:**

At present within England, United Kingdom there are 377,191 registered nursing staff with an increase of 18,432 more than were registered a decade ago in 2005 (National Health Service (NHS) Confederation 2015). The number of newly qualified nurses within these statistics presently is unavailable despite thorough exploration but this has clearly highlighted that these are members of the NHS that will shape, plan and contribute towards our health care future. Higgins, Spencer and Kane (2010) identified that these new recruits are representing our health care workforce future with almost 60% of the nursing workforce being newly qualified. Consequently, the transition from student to qualified nurse should be a major concern and priority for the NHS and other health professional institutions.

The Nursing and Midwifery Council (NMC 2010) finalised standards for a year-long Preceptorship programme for newly registered nurses in line with the Department of Health (DH) Preceptorship framework (2010) to aide this transition period which was instigated following on from the Lord Darzi review (DH, 2008).

In 2010 alone, Preceptorship was fully funded by central NHS funds amounting to £30m per year (Keen 2010 cited in DOH (2010). However this responsibility now appears to be shifting to a local level assigning this task to the NMC to legislate for employers to make the decision regarding supporting newly qualified nurses for themselves at a local level. Surprisingly there is limited literature related to the evaluation of Preceptorship programmes to date, but within the literature that has been found, Preceptorship was proficient in developing confidence and competence within individuals (and the correlation between these two) but often organisational constraints made achievements within the programme more difficult and a more flexible and a more individualised approached was needed to be explored further (Mason 2013). Haggerty,Holloway and Wison (2013) supports this and in addition identified the need of access to Preceptors (staff willing to undertake the role inclusive of their own preparation), the importance of this newly found relationship and the overall philosophy and ethos of institutions and individuals to support Preceptorship and hence the transition from student nurse to registered nurse.

In August 2013 the report of National Advisory Group on the Safety of Patients in England (2013) was published and this report was set up as a response to the Francis report (2013). The Berwick Report (2013) published from findings within the Francis report (2013) and focused primarily on NHS staffing levels. Berwick (2013) recommended that Government, Health Education England (2015) and NHS England (2014) should assure that sufficient staff are available to meet the NHS's needs now and in the future. Health care organisations should ensure that staff are present in appropriate numbers to provide safe care at all times and are well-supported when doing so. The Care Quality Commission (2009) requires that health care providers provide appropriate support to enable successful transition to take place including appropriate training relevant to role and professional development. Thus leading on to effective transition for the student nurses to qualified nurse to support all the findings and expectations as above with recognition of factors that may influence or inhibit this transition and that they can be successfully identified, appraised, actioned and subsequently implemented.

However, despite the above, there are still factors remaining that may influence or inhibit successful negotiation and transition of the student nurse and that these factors

may not always be tangible and may not necessarily have clear well-defined solutions all of which will require further exploration and study.

**Existing review of role transition and experiences:**

Literature reviews of the nurse role transition would not be complete without the work of Kramer (1974) who explored intricately the transition of student nurse to registered nurse. Her terminology use of 'reality shock' remains profound in the world of under graduates entering the world of nursing with cultural views around ritualistic based care as opposed to the real nursing world incorporating individual ideas, provisions of care and values within the workplace. Some of these she highlighted can often lead to variable positive experiences of professional status and desire but also leading to decreased job satisfaction and some disillusionment in the profession.

The work of Schumacer and Meleis (1994) highlight that transition is mutli faceted – phases, time and perception concepts, whereas Chick and Meleis (1986) cited in Chinn,P.,(Ed) argued that there are other contributory factors related to nursing transition such as adolescence, parenthood, chronic disease or even retirement status, claiming that transition can commence at any stage of the nursing role. The relevance however, that amalgamated all these components together, was often individuals response and management of these given situations and transitions. Often these individual experiences containing both intrinsic and extrinsic elements may inhibit or facilitate successful negotiation and transition from student nurse to the registered nurse role.

Much of the literature and reading reviewed around this subject area included positive aspects of the role as opposed to focusing purely on the negative aspects of role transition and this journey. Jasper (1996)'s seminal work discussed the transition of students to nurses, as moving between two different worlds, suggesting that students were often sheltered, understanding only limited elements within a virtual nursing world, whereas the world of the newly qualified nurse created more exposure and challenges.

Whitehead (2001) identified student qualitative concerns such as trepidation and fear and Maben and McLeod Clark (2006) noted newly qualified nurses felt 'on their own'

compared with their previous student role and expressed their experiences as 'high' and low' periods over time.

Several pieces of literature reviewed (Gerrish 2000, Beecroft, Santaner, Lacy, Kunzman & Dorey 2006) highlighted clearly taught concepts of nurse education programmes, compared to the reality of practising as newly qualified nurses within the constraints of resources and local policies. This could imply however, there is still a significant gap between theory and practice. Whitehead (2001) suggested this issue should be seriously considered by those directly involved in nurse education and that these findings identify concerns about the preparation of newly qualified nurses from the outset, regardless of any support systems that may or may not be in place from clinical practice or institutions similarly. Hence, some institutions are now instigating a review and redesigning of their programme (curricula) content in line with changing health care needs and specialist service provision (Healthier Together Campaign Greater Manchester 2015).  In Mooney's (2007a) work, she noted that the participants in her study felt there was no time for nursing, suggesting the time spent as students did not prepare them for the realities of practice. Her study found that other staff and patients had high expectations of newly qualified nurses once they were in practice, along with an assumption that qualified meant 'all knowledgeable'.

The increase in newly qualified nurses' responsibility and accountability was a major stressor in the transition process within existing work, highlighting key responsibilities such as management, delegation, drug administration and prioritising care. From her qualitative action research study of student nurses, newly qualified nurses and ward managers, Baillie (1999) identified management skills of newly qualified as a major area of concern. Mooney (2007a) highlighted how ward managers' expectations of newly qualified nurses were unrealistic, suggesting that pressures of the ward environment, being able to adapt and integrate quickly and the added responsibility of accountability were particularly overwhelming. Etheridge (2007) stated that student nurses were often unaware of the levels of responsibility and often confidence is lacking in some even to make effective clinical judgements.

Newton and McKenna (2007) support this by claiming that students do often underestimate the preparation required for their new role and need support to reduce

stress and aide development in confidence levels. This is something clearly apparent within the literature that needs further development and exploration.

Maben et al (2006) also noted inconsistencies in preparation for aspects of management, suggesting that while the theoretical context was adequate, the practical aspects, such as drug administration, prioritising care, decision making and clinical skills were variable. This was attributed to the differences each practice placement offered the participant, so varying their individual experiences, exposures and abilities. This may highlight clearly that there are potential issues in relation to student nurse placement experience. Despite the literature supporting student nurses in managing and getting the best out of their clinical placements, Leducq, Walsh, Hinsliff-Smith and Mcgarry (2012) discuss and make reference to the 'theory to practice gap'. The initial socialisation of students whilst on placement in relation to the preparation from their Universities of study, clinical practice and University experience are viewed as contrasting worlds and students often have difficulty in associating meaning to classroom and their actual placement experience.

Gerrish (2000) supports this after identifying managerial responsibilities for the newly qualified as problematic; this related to both self-management and management within a team. Despite the exposure to practical placements as part of the training curriculum, it was only when working as a qualified nurse that the realities of what was required became apparent. Mooney (2007a) suggested these negative experiences had a profound influence on whether newly qualified nurses remained in the profession which raises significant recruitment, retention and attrition issues within healthcare institutions. Jasper (1996) suggested that despite an obvious lack of support, newly qualified nurses learnt to cope with the change in status from supernumerary student to independent practitioner as an aspect of their new role, which resulted in their confidence levels increasing.

Despite many similarities being found, each individual experience is unique. As Meleis (2010) framework of situation specific theory suggests, individual experience during transition is paramount to allow for the facilitation or impediment of the process.

Knowledge and preparation of the role is paramount, lack of this can inhibit the process or outcome. If transition is viewed as a negative experience then this may hinder or disrupt the experience, similarly if appraisal and evaluation of an anticipated

experience may also facilitate or hinder the process (Davies 2005, Meleis 2010). There is also literature and theory around social conditioning although it is argued that this is not a key element of transition and as Tradewell (1996) believes, this can provide individuals with knowledge, skills and behaviours to support transition. Individuals intrinsic and extrinsic factors such as socio economic background, familial education and upbringing, cultural diversities inclusive of morals, values and belief systems are all believed to either influence inhibit successful role transition. Schumacher and Meleis (1994) support conditions within fundamental family networks or communities that can have significant impact on transition, social support from these members and peers create a positive experience whereas lack of this can lead to frustration and often feelings of powerlessness and feelings of being unsupported. Much of the content found within the literature suggests that newly registered nurses experience of transition particularly in relation to lack of preparation within the clinical environment was particularly profound at the beginning of their first stage of transition (Clark & Holmes 2007, Gerrish 2000, Whitehead 2001)

**Professional significance/relevance of the topic:**

In 1996 my first registered nurse post began and a positive experience of Preceptorship was experienced, a 1:1 preceptor, time scheduled for learning and developing, regular meetings and support from other staff aiding this succession. Preceptorship, supported by Lord Darzi (2008) guides the foundation stages of nursing, enabling newly registered staff through Benner's (1986) transition stage from novice to expert. Benner (1986) believed that nursing skills and knowledge progressed through stages of clinical competence and as a new member of junior staff, this process was of high relevance to me as I developed in distinguishing between characteristics and variances in my learning through the five stages of Benner (1986) often re visiting my student learning. This learning as a student nurse, taught me processes and ways in which I learned best, with a reflector style being my preferred way of learning to enhance my practice (Fleming 1987) and whilst being supported, this aided my development in clinical competence through transition and the demands of my new role.

With a successful Preceptorship completed, the overwhelming need to continue my education emerged and continuing professional development (CPD) became a clear focus. The NMC (2015) clearly state that nurses must take active measures to

maintain their competence through regular professional development and thus my educational journey continued.

With my considerations of the possibility of transferring into education, previous observation of teaching styles and delivery of such had started to raise my motivation and critical thinking skills in how I could relate this into my nursing practice. Pimparyonm, Caleer, Pemba and Roff (2000) in their international study, identified that composites of teaching and learning were related to the characteristics of how teaching was delivered and the environment teaching was done including self-perception and motivation of the nursing students, hence my thoughts processes to progress into a teaching role to support and aid student nurses through their transition. Elements of motivation began to play their part in my nursing career as Petri and Govern (2013) support, this can be seen as an incentive and a driver in obtaining goals that are emotionally meaningful, however over a short period of time, I began to lose satisfaction in my job role and began to experience feelings of failing as a health care provider, reducing my motivation and internal drive to succeed.

Many factors were beyond my control, recurring admissions of patients, ingratitude towards me as a member of staff, alongside poor organisation and performance from management, all contributed to this feeling of reduced motivation hence extrinsic factors related to my transition becoming apparent. All these afore mentioned had the initiation to inhibit my own development and transition further, I recognised a sense of satisfaction and need was required. Maslow's (1954) seminal work relating to hierarchy of humanistic needs highlighted to me that my job satisfaction was my need of fulfilment. Spector (1997) and Pinder (2008) approaches to job satisfaction utilises a more cognitive approach with attitudinal perspectives being an underlying need, they suggest that self-esteem leads to high levels of motivation enhancing also social and emotional skills.

After a move from one nursing area to another, as identified within the seminal work of Skinner (1969), positive reinforcement took place with others recognising my performance and abilities, thus developing a positive effect on my behaviours and motivation. Moreover, my keen interest and success in education of students was something I wanted to pursue in a more recognisable way. A specialist nurse in education role emerged and I began to be responsible for nursing student quality and

experience. This began to promote the feelings of need and the satisfaction of this heightened my motivation to succeed.

With my dual role in clinical practice and education, this upheld my clinical credibility as a practitioner and as the Department of Health (DOH) (1999) supported by Fisher (2005) believes, that there is growing pressure from the Government and health professionals to recruit nurse teachers possessing both practical and recent nursing experience. Incorporating this and preparation and negotiation of transition captured in reflection of my own experiences, there has been an identification of psychological empowerment, resilience, spiritual well-being and academic success that all play an important role in the challenges that nurse experience and education presents  all of which I can consort with from my Preceptorship role onwards (Beauvais, Stewart, DeNisco, 2014).

Watkins (2011) highlights that seeking support and managing anxieties can have a profound effect on the learning and success of nursing students but as Beauvais et al (2014) depicts, the recognition required to seek this support is variable. Duchscher (2009) in her work around initial stages of adaption, believes that transition shock represents the initial reaction of new nurses moving from a protected academic environment to unfamiliar and expectant contexts of professional practice. Her recommendations were for institutions to provide preparatory theory about role transition and provide a diverse range of clinical placements. Within my current job role as an Adult Nursing Lecturer in a School of Nursing, within a University, I have strived to provide both with insight and passion of incorporating my own experiences to aide transition.

Morrow (2009) depicts, reciprocal mentoring relationships aide succession.  Arming the student with the necessary tools to develop into confident and competent practitioners whilst the mentors also develop their professional leadership skills enhancing and developing a workforce. This is relevant to my experiences and career to date and equips me with the drive and motivation to support and enhance my own student groups learning and development using personal experience to support.

The personal gains of this systematic review included the opportunity to focus on a topic of interest with relevance to my job role and within that job role being responsible

as a tutor for preparation of students undertaking role transition and professional development. I have identified an understanding of a variety of different research methodologies and the opportunity to gain insight into the strength and limitations of published research.

With a focus on factors that may influence or inhibit role transition from student to registered nurse, it is becoming clearer that this needs further exploration to evaluate and analyse what we already know about role transition but also what we need to know further and that the possibility of discovering future research and findings to aid successful role transition from student nurse to registered nurse role.

**Chapter 2**

**SEARCH METHOD:**

**2.1 Introduction:**

This section will depict and discuss the research methodology used to conduct the review inclusive of a systematic process, how the question for research was identified,

inclusion and exclusion criteria, identification of processes used to ascertain the evidence and in conclusion and how the studies were selected and chosen for inclusion.

## 2.2 Search method and overview criteria:

Systematic reviews enable practitioners and decision-makers to utilise the latest research and information about best practice decisions that can be made with a non-bias approach. However, often with the large volumes of information generated by studies there is the potential for bias, methodological flaws, time and context dependency, misinterpreted or misrepresentation with often conflicting conclusions (Wilson, Petticrew, Calnan & Nazareth 2008).This could also be related to bias or differences in design or conduction. Bullock, Mountford and Stanley (2002) support this by suggesting that subsequent confusion and lack of clarity can occur with decisions having to be made and as to whether these results can be used to formulate decisions and changes to practice for example as the basis for practice and policy making decisions. Systematic reviews aim to identify, evaluate and summarise findings to overcome some of these issues. When appropriate, combining the results of several studies gives a more reliable and precise estimate of an intervention's effectiveness than a single study alone.

According to Mann and Weightman (2015) a systematic review involves primarily identifying a research question, developing a review protocol, search the literature, identify and critically appraise relevant studies, collate this data and finally to summarise findings for potential publication or further review. Systematic reviews aim to identify, evaluate and summarise findings of many relevant individual studies, thereby making the available evidence more accessible to decision makers. When appropriate, combining the results of several studies gives a more reliable and precise estimate of an intervention's effectiveness than one study alone (Evans 2007).

When effective they can provide reliable estimates about the effects of interventions so that conclusions are defensible (Brown, Brunnhuber, Chalkidou, Chalmers, Clark & Fenton 2006) supports this by stating that clarity is then provided from where knowledge may previously have been lacking.

The Cochrane Collaboration (2011) is arguably the global leader for methodological development, conducting and publishing intervention reviews, they claim to be the key benchmark for systematic review methods. The Centre for Reviews and Dissemination (CRD) (2008) support this by depicting where results of studies have been combined then reliability and precision is deemed more accurate than single studies. In support of this fact, when such studies are carried out well, this increases the defensibility and hence lead into new areas of research and insights.

The rating system or evidence of hierarchy models were developed to identify the relevance of worth of different types of research. These were often seen however, as inflexible with systematic reviews or meta-analysis at the top and qualitative research at the bottom. This rating system has been designed to support the strength of a studies design (Lo-Biondo Wood & Haber 2014), grading the strength of a body of incorporating three domains of quality, quantity and consistency (Agency for Healthcare and Research 2002).

A genre of evidence was utilised for this review incorporating the three main considerations when searching for appropriate literature, effectiveness, appropriateness and feasibility. In relation to effectiveness questions such as whether the interventions achieved the intended outcomes. In relation to appropriateness, the address of any impact of interventions from the perspective of the recipients was of value and in relation to feasibility, determining whether any interventions can or should be implemented. Papers varied from excellent to fair with limitations on papers determined as poor in the research evidence evaluating health care interventions hierarchy. The variety of excellent to fair was distinguished in the papers that were finally identified such as systematic reviews, the pinnacle of hierarchy of evidence to before and after studies which are identified as fair within this hierarchy. Evans (2003) however identifies that despite this hierarchy, caution must still be taken.

Despite outcome measures used and populations studied, this can still potentially exert influences on usability of evidence and considerations of the quality of research needs to be given. If processes used during studies was poor then any findings must be regarded with caution.

In accordance with Cochrane Collaboration (2013) methods used in reviews should be selected to optimise results that will provide the best current evidence upon which

decisions can be based and should be described adequately enough for planned steps to be commenced. These may include methods to review protocols, select studies for reviews and templates for inclusion assessment, data collection, synthesising data and methods to ensure that up to date evidence is used to ensure reviews are up to date and a system is in place to respond to any critiques made (CRD 2009).

**2.3 Search Strategy:**

***Student nurses' preparation and negotiation of transition to the registered nurse role. Are there any factors that influence or inhibit this successful negotiation and transition?***

To summarise the search strategy/inclusion and exclusion criteria (in relation to student nurses' preparation and negotiation of transition to the Registered Nurse role and also inclusive of factors that may influence or inhibit this) is illustrated in Table 1 on the following page.

*Table 1: Inclusion-Exclusion Criteria*

| INCLUSION CRITERIA | EXCLUSION CRITERIA |
|---|---|
| Nursing Students age 18 or above (eligible for a Nursing Education programme as per admission criteria) from a variety of generational periods on ALL branches of a nursing education programme | Nursing students under 18 years of age (as not eligible for a Nursing Education programme) |
| Influential factors to aide transition | Papers that do not contain factors to aide transition |

| | |
|---|---|
| Inhibitory factors to hinder transition | Papers that do not contain factors to inhibit transition |
| Studies limited from 2005 onwards (seminal work will be included) | Studies from before 2005 |
| Strategic and National publications (inclusive of grey literature) | Nurse transition not directly linked to newly qualified nurses |
| Seminal work related to Role Transition | Other health care professions /Allied health care students |
| Literature incorporating academic themes | Other professions |
| Literature incorporating Personal/Motivational themes | Other students who are not nursing students |
| Health care professional nursing roles and beyond the newly registered nurses role incorporating Preceptorship | Other managers |
| Various studies from international countries to aide comparisons | |
| Qualitative, Quantitative, mixed method, correlational research design papers, literature reviews, systematic reviews | |
| Nurses involved in continuing education work/programs | |
| Registered Nurses(including newly qualified) /Mentors/Preceptors/Nurse Managers/Academic Staff | |

The inclusion and exclusion criteria clearly defines boundaries required for the review question and following the CRD (2008) guidance this will allow for all studies of interest being captured with potential opportunity to diverge further, in the reading of reviews and collection of data. To include a broad range of criteria is more reliable in capturing all studies of interest. If the criteria is too narrowly defined this could lead to missing studies of relevance and hence may reduce results that could have been included. Moreover, if the inclusion criteria is too complex then this could lead to over completed and time consuming searching.

As Jones, Warren and Davies (2015) identified in their work, there are generational concepts that often also require consideration in supporting individuals as they embark on their careers. They identified that there could potentially be at any one time, four different generations working together in the same employment environment.

These differences depicted generational variances in values, expectations, perceptions and motivations which bared some relevance to staff education and engagement. Understanding differing motivational needs across these generations offers employers and education providers a real opportunity to better align support to meet individual needs and to improve recruitment and retention and hypothetically-role transition.

A number of studies were reviewed from America, Ireland, Singapore and Australia which were of interest and which may have some relevance in providing an understanding of differences (if any) in transition from student nurse to registered nurse and the variables that may be related to that concept.

The identification of such papers was acknowledged using a Situation, Problem, Investigate, Construct and Evaluate (SPICE) model (Booth 2004 cited in Booth, A.,(Ed) (Table 2). A SPICE model allows for a research question to be explored by using key themes/areas. Typically there are five areas of exploration but for the purpose of this systematic review only three have been utilised. Gerrish and Lathlean (2015) clearly describes the SPICE utilisation model:

**Setting:** This review focuses primarily on the hospital and community settings (clinical placements) and academic settings (Universities) where students shared equal amounts of time and were factors relating to transition.

**Perspective:** The main focus area is a variety of factors including features/issues related to Adult, Child, Learning Disability and Mental Health student nurses (hence a genre of nurses across all branches of a nursing programme) and in relation to role transition. This included newly qualified nurses, newly registered nurses, final year students, consolidation year students, new graduate nurses and orientation concepts. Some of the perspective domains were of a similar ilk but differentiation in words was used to ensure parity across.

**Intervention:** The interventions are inclusive of influences that aide successful transition and factors that inhibits role transition success. Many issues identified and depicted were inclusive of reality and transition shock, orientation and induction, management and developmental issues alongside preceptor/preceptorship, mentorship and residency to include some elements of international practices and evidence.

Utilising the above SPICE model allowed for the formulation of the review question and identification of relevant research to be used. Although the PICO model was considered, the components of SPICE allowed ease of utilisation in view of the hypothesis question generated and thus the SPICE model was preferred.

## 2.4 Research evidence identified:

Reducing bias can often be problematic and this can arise when identifying inclusion and exclusion criteria. As Cooper (1989) depicted, the selection needs to be explicit, objective and minimise potential errors of judgment. Selected criteria was chosen that pertains to the review question.

## 2.5 Selection of studies:

In total 13 were identified following the already mentioned database screening.

Process is illustrated in Figure 1.

**2.6 Ethical Approval:** In a systematic review, findings from existing studies become reviewed with no new research being identified therefore ethical approval was not required.

**2.7 Search method summary:**

The search for evidence commenced as a fairly broad search initially with the eventual support of the SPICE tool/model as can be seen in Table 2. Primarily the search covered quantitative work alongside qualitative data evidence. As Table 2 depicts the search terms utilised, there was a degree of attentiveness required to ensure that a non-ambiguous approach was used to deter results being effected such as intrinsic factor searches such as stress, individual experiences and exposures, individual backgrounds and previous history related to previous employment or age for example.

A number of databases were utilised to ensure a thorough search as possible which included CINAHL, EBSCO, Medline and Science Direct with progression further

through Academic Search Premier, SCOPUS and the COCHRANE library. Further reading and supporting evidence (including elements of grey literature) was found within these searches and via internet search engine. Data of relevance was extracted using the Centre for Reviews and Dissemination (CRD) (2009) approach and the Critical Appraisal Skills Programme (CASP) (2013) tool National Institute for Clinical Excellence (NICE 2012) and the Quality Appraisal Checklist for Correlational studies 2012 (Long 2005) was utilised to appraise the literature then found. The same approach to each database was identical with the support of predominantly truncation, represented by an asterix (*) for example nurs* to establish the words nurse, nurses, nursing. Relevant grey material was also scoped to identify and support the review question.

On commencement of searching, limitations were soon apparent so a robust date (year) limit became applicable. Some seminal work however which spanned from 1970's and beyond was included as this had some introductory baring on the review question for example, Kramer's work (1974) and the United Kingdom Central Council for Nursing, Midwifery and Health Visiting (UKCC1986). As Brettle and Grant (2004) affirm, retrieving data and literature requires such limitations.

*Table 2 - SPICE model and search question*

**Search Question**: *Student nurses' preparation and negotiation of transition to the Registered Nurse role. Are there any factors that influence or inhibit this successful negotiation and transition?*

| SPICE MODEL | SETTING | PERSEPCTIVE | PERSEPCTIVE | PERSEPCTIVE | INTERVENTION |
|---|---|---|---|---|---|
| **Essential Words** | *Academic* *Hospital* *Community* | *Role* *Transition* | *Adult Nursing* *Child Nursing* *Mental Health Nursing* | *Newly Qualified* *Newly Registered* | *Influences to success* *Inhibitors to success* |
| **Boolean Words** | *AND* | *AND* | *OR* | *OR* | *AND* |
| **Alternate/Synonym words/phrases** | *Placement* *Education* *Practice* *Clinical* *Theory* *Curricula* | *Final year* *Consolidation* *Preparation* *Flying Start* *Orientation* *Competence* *Internship* *Mentorship* *Preceptorship* | | | *Reality shock* *Transition shock* *Induction* *Management* *Development* *Induction* *Preceptor* *Nurse residency* |

Figure 1 - *Search process flow chart*

```
┌─────────────────────┐          ┌─────────────────────┐
│  Studies/Articles/  │          │                     │
│  Abstracts identifed│  ──────> │     Excluded:       │
│      n= 365         │          │      n=264          │
└─────────────────────┘          └─────────────────────┘
           │
           v
┌─────────────────────┐          ┌─────────────────────┐
│ Full papers/abstracts│         │                     │
│      screened       │  ──────> │     Excluded:       │
│       n=101         │          │       n=77          │
└─────────────────────┘          └─────────────────────┘
           │
           v
┌─────────────────────┐          ┌─────────────────────┐
│ Full copies screened│          │                     │
│   and concurred     │  ──────> │     Excluded:       │
│       n=24          │          │       n=11          │
└─────────────────────┘          └─────────────────────┘
           │
           v
┌─────────────────────┐          ┌─────────────────────┐
│ Studies that met    │          │                     │
│ inclusion criteria: │  ──────> │ Additional searches:│
│       n=13          │          │        n=4          │
└─────────────────────┘          └─────────────────────┘
           │
           v
┌─────────────────────┐
│ Inclusive studies   │
│   for the review:   │
│       n=13          │
└─────────────────────┘
```
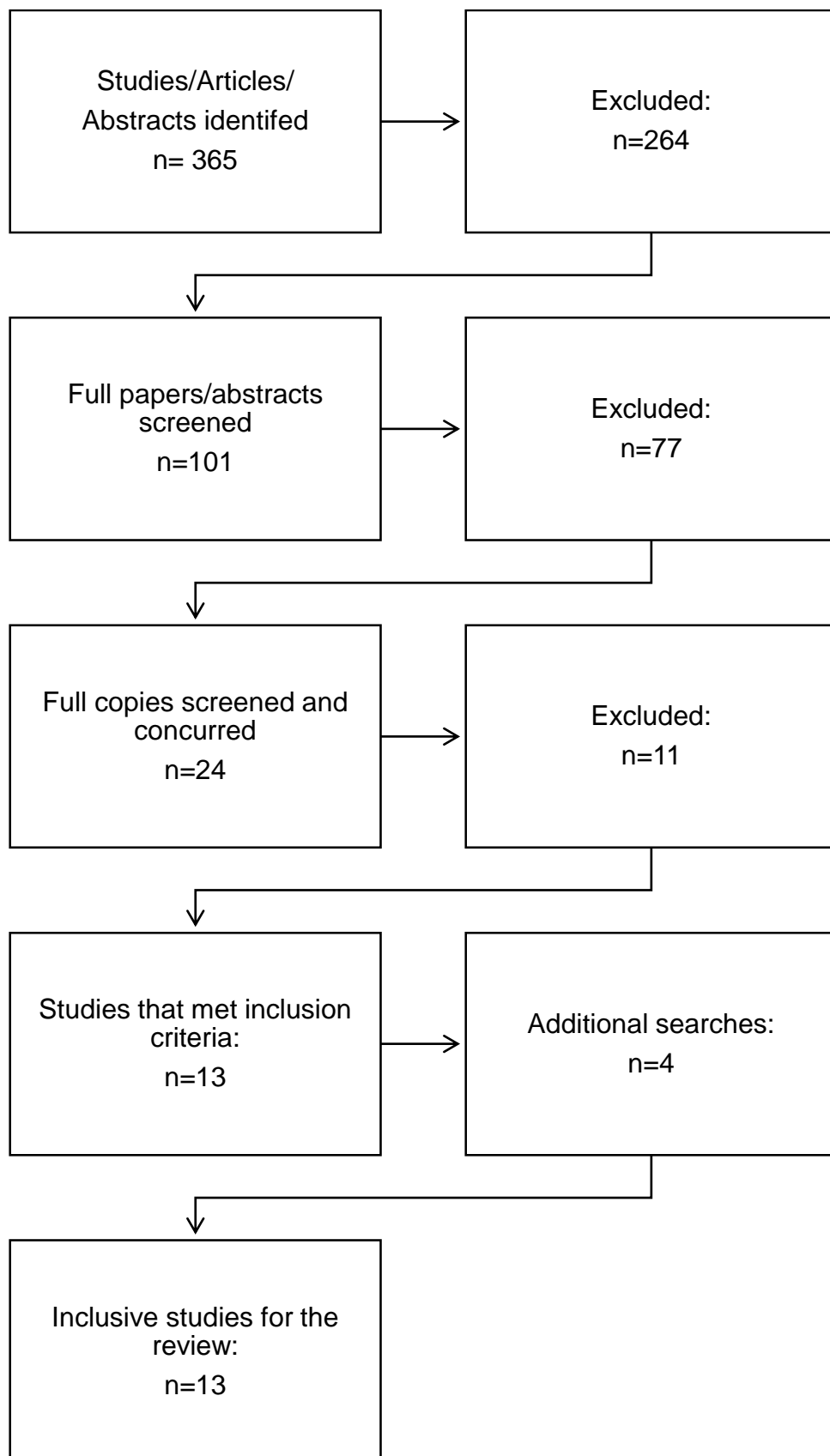
**Chapter 3**

**Systematic Review of the Literature**

**Introduction**

This section includes the data extraction process, quality appraisal of the included studies, synthesis of the data alongside a discussion and the findings. Study limitations have also been acknowledged and recommendations for future practice identified.

**3.2 Extraction of data**

Healthcare professionals often use systematic reviews to inform their clinical practice as these are deemed to be more efficient and rated excellent in the hierarchy of evidence scale (Evans 2003) , however as Walker (2014) identified, reviews are often conducted retrospectively and therefore a risk of bias may be inherent. Studies with positive outcomes are easier to publish than their less attractive negative counterparts so hence, a critical appraisal is required.

There are a number of quality appraisal tools available such as COCHRANE (Cochrane Collaboration 2011) and specifically for health care is Health on the Net (2015) (HON) which provides safety and accuracy when accessing healthcare literature. Due to the increasing popularity and use also of world wide access and technology, the quality of websites was also taken into consideration including monitoring of dates of access, authors and designation/profession and the use and collaboration of the CASP tool for this systematic review was identified, to support the quality appraisal. Utilising the CASP (2013) tool for systematic reviews and qualitative studies alongside the  National Institute for Clinical Excellence (NICE 2012) for the correlational studies and the Evaluative checklist for mixed method studies (Long 2005) tools, identification of factors influencing or inhibiting successful negotiation and transition for student nurses to registered nurses were identified.

Walker (2014) supported by Aveyard (2014) believe that strengths and weakness of a paper can be assessed using a structured approach and facilitate questions to pose towards the evidence to allow for verification of the strength and relevance of the

literature which will effectively allow for a consistent and systematic approach to the appraisal process.

Galvan (2006) also identified the use of constructing a variety of tables to support the synthesis of the literature by enabling the reviewer to outline, organise and summarise the literature depicted. The CRD (2009) state that no research is without its flaws and that the quality of research is variable, therefore, an essential element of systematic reviews is to appraise the quality of the research selected for use and inclusion within the study. On review of literature there is deemed to be no definitive agreement on the most prominent tool to be used, however, it is the general consensus that literature should be subject to the same appraisal process (Evans 2007 cited in Webb & Roe 2007).

Table 3 on the following page is a summary of the characteristics of the studies included in this review.

*Table 3 – Study Characteristics*

| AUTHOR/YEAR | TITLE /TYPE | DESIGN OF STUDY | AIMS/OBJECTIVES | METHODS UTILISED DATA COLLECTION | INFLUENCES/INHIBITORS |
|---|---|---|---|---|---|
| Barton,T.D (2007)<br><br>United Kingdom | Student nurse practitioners-A rite of passage? The University of Van Gennep's Model of social transition<br><br>*Journal article* | Qualitative longitudinal study | To identify student nurses on a clinical degree programme and their comparison of social/cultural composites in transition | Semi structured interviews (x2)<br><br>Field notes over a 2year period<br><br>participant observation | 2 key specific start/end points |
| Beauvais,A, Stewart,J DeNisco,S, Beauvais,J (2014)<br><br>United States of America | Factors related to academic success amongst nursing students: A descriptive correlational research study<br><br>*Journal article* | Descriptive correlational study | To determine whether certain concepts played a role in persistence in a challenging nurse education programme | Background data<br><br>Tests(emotional intelligence)<br><br>Scales ( Empowerment, resilience, spiritual well-being) | Small sample size not-reflective of all nursing students, Differences in spiritual support across Universities, Self-reporting bias' |
| Boychuck Duchscher,J. (2009)<br><br>Canada | Transition shock: the initial stage of role adaption for newly registered nurses<br><br>*Journal article/Peer Review* | Systematic review | Provision of theoretical framework to support managers, educators and practitioners in transition experience | 4 Qualitative studies on graduate transition. Methodological framework is not well defined | Utilisation of four papers only from 1999-2009<br><br>No recognition of change in nursing education provision |

| AUTHOR/YEAR | TITLE /TYPE | DESIGN OF STUDY | AIMS/OBJECTIVES | METHODS UTILISED DATA COLLECTION | INFLUENCES/INHIBITORS |
|---|---|---|---|---|---|
| Burke.L, Sayer.J,Morris-Thomspon.T,Marks-Maran.D, (2014)<br><br>United Kingdom | Recruiting competent newly qualified nurses in the London region: An exploratory study<br><br>*Journal article* | Quantitative<br><br>Qualitative | Compare and contrast interpretations of competence of newly qualified nurses in London trusts and explore employer experience and expectations | 3 phase Mixed method approach Literature review, electronic survey, focus groups<br><br>Utilisation of Knowledge Skills Framework (KSF) and Nursing Midwifery Council (NMC) competencies | Only 2 tools utilised to compare/contrast, Only 3 London borough trusts utilised, Minimal evidence re validity of tools used, Lack of evidence re assessment tools used to assess competence, Personal qualities omitted to be included |
| Carlin,A ,Duffy,K (2013)<br><br>United Kingdom | Newly qualified staff's perceptions of senior charge nurse roles<br><br>*Journal article/Peer Review* | Qualitative<br><br>Interpretative phenomenological analysis | To develop a clearer understanding of leadership as experienced by newly qualified staff nurses | Interviews/purposeful sampling/interpretive phenomenological analysis | Qualified for 1 year or less, Variety of ward settings, Aged 25-45years,Subjective |
| Edwards.D,Hawker.C ,Carrier.J,Rees.C (2015)<br><br>United Kingdom | A systematic review of the effectiveness and strategies and interventions to improve the transition from student to newly qualified nurse<br><br>*Systematic review* | Systematic Review | To determine the effectiveness of strategies used to support newly qualified nurses during transition into the workplace followed by an evaluation of same | Systematic review | Written in English language only |

| AUTHOR/YEAR | TITLE /TYPE | DESIGN OF STUDY | AIMS/OBJECTIVES | METHODS UTILISED DATA COLLECTION | INFLUENCES/INHIBITORS |
|---|---|---|---|---|---|
| Nash.R, Lemcke.P,Sacre.S (2009)<br><br>Australia | Enhancing transition: An enhanced model of clinical placement for final year nursing students (Australia)<br><br>*Journal article* | Qualitative study | Development/trial of a collaborative model related to final year students' transition. Incorporated health care providers collaboration | Questionnaire pre and post final nursing clinical placement | Hospital based only, Subjective<br><br>Selected nursing groups (volunteers) |
| Pitt.V,Powis.D,Levett-Jones.T,Hunter.S (2013)<br><br>Australia | The influence of personal qualities on performance and progression in a pre-registration nursing programme (Australia)<br><br>*Journal article* | Qualitative longitudinal / correlational study | Explore the relationship between students personal qualities and their academic and clinical performance, behaviours and progression through a pre-registration nursing programme | 3 x Personal Quality Assessments (PQA)<br><br>Data collection from: Grades related to theory/practice, Class attendance, final clinical competency and life events stressors. | Only 138 students (convenience sampling),Subjective life stressor variables, Lack of other occurrences i.e. academic misconduct, simulation or tutorial observations |
| Rose.S (2011)<br><br>United States of America | Academic success of nursing students: Does motivation matter? (USA)<br><br>*Journal article* | Literature review | To determine whether motivation has a significant influence on nursing students academic success | Literature review | Literature review from 1994-2010,Limited number of literature reviewed (26 in total) |

| AUTHOR/YEAR | TITLE /TYPE | DESIGN OF STUDY | AIMS/OBJECTIVES | METHODS UTILISED DATA COLLECTION | INFLUENCES/INHIBITORS |
|---|---|---|---|---|---|
| Suresh.P.Mathews.A, Coyne.I (2012)<br><br>Ireland | Stress and stressors in the clinical environment: a comparative study of fourth year student nurses and newly qualified general nurses in Ireland.<br><br>*Journal article* | Cross sectional survey<br><br>Self-reporting questionnaires | To measure and compare the perceived levels of job related stress/stressors of newly qualified and fourth year students nurses in the clinical environment and explore the participants views on stress/stressors | Qualitative data collection<br><br>Open ended questions<br><br>Nursing stress scale utilised | Variances on nurse education programme design compared to other countries, Convenience sampling ,Subjective, Institutions not included community based placements not included |
| Teoh.Yen Tjuin Eugene,Pua.Lay Hoon,Chan.Moon Fai (2012)<br><br>Singapore | Lost in transition: A review of qualitative literature of newly registered nurses experience in their transition to practice journey (Singapore)<br><br>*Journal article* | Literature review | Review of qualitative research conducted to identify why nurses leave the nursing profession and how educators can reduce stress and uncertainty in the academic journey | Qualitative literature review | Literature reviewed from 1982-2011,16 pieces only reviewed |
| Urwin.S,Stanley.R,Jones.M, Gallagher.A,Wainwright.P (2010)<br><br>United Kingdom | Understanding student nurse attrition: Learning from the literature<br><br>*Journal article* | Literature review | To determine why student nurses leave their programs of study from an institutional, political/professional and personal view. | Existing literature from 1969 - 2008 | All factors have an influence and cannot be determined which determines attrition |

| AUTHOR/YEAR | TITLE /TYPE | DESIGN OF STUDY | AIMS/OBJECTIVES | METHODS UTILISED DATA COLLECTION | INFLUENCES/INHIBITORS |
|---|---|---|---|---|---|
| Whitehead.B,Owen.P ,Holmes.D,Beddingha m.E,Simmons.M,Hen shaw.L,Barton.M,Wal ker.C (2013)<br><br>United Kingdom | Supporting newly qualified nurses in the UK:A systematic literature review<br><br>*Journal article* | Systematic review | A review of published literature related to the development of Preceptorship designed to support newly qualified nurses within the UK | | Unpublished materials not included, Isolated to the UK only ,No comparison made to nurses NOT undergoing a Preceptorship programme, Variables in definition of Preceptorship |

### 3.3 Quality Appraisal

For the purpose of the quality appraisal a variety of tools to assist in this process were reviewed and due to the nature of the studies identified these tools were chosen to determine a non-bias outcome towards any type of research or study identified for use.

The Critical Appraisal Skills Programme CASP tool (2013) was one identified and is fit for purpose as the research question is an exploratory one: *Student nurses preparation and negotiation of transition to the registered nurse role. Are there any factors that influence or inhibit this successful negotiation and transition?*

The CASP tool also promotes the effective review of qualitative research, of which some of the identified literature, includes qualitative studies. Boland, Cherry & Dickson (2013) support this notion by stating that the inclusion of critically appraising the topic within a systematic review also provides an excellent learning opportunity for the author to identify and subsequently set individual learning objectives, hence developing research synthesis skills whilst working on the realm of existing research findings.

On commencement of utilising the CASP (2013) tool for systematic reviews, it was soon identified that some of the terminology used was inelastic and not fit for purpose for all the reviews, therefore it was identified that other critical appraisal tools were necessary to perform a quality appraisal effectively. These included qualitative mixed method tool, correlational study and cohort study tools (CASP 2013, National Institute for Clinical Excellence (NICE 2012) and a Quality Appraisal Checklist for Correlational studies 2012 (Long 2005).

The final thirteen papers chosen were identified for a variety of reasons. They were all inclusive of the initial inclusion criteria (as stipulated in Table 1) which aids paper identification directly from the review question. Alongside this, availability and use of resources by the reviewer was paramount in relation to the criteria needing to be met in relation to the review question. The CRD (2009) are in agreement with this approach and also state that identification of the papers chosen using these available resources and by searching multiple, often overlapping resources, was identified in this review. This was evident as common themes in relation to the review question, began to emerge.

In association with the hierarchy of evidence, the search related to the review question identified three systematic reviews. Evidence hierarchy allows for a top down approach to locate the best possible evidence available, systematic reviews are considered to be elite within this category as supported by the National Health and Medical Research Council (NHMRC 2009). If systematic reviews are not available then a move down critically appraised topics/articles, randomised controlled trials, cohort studies, case control studies and finally background information and expert opinion, will be moving towards the lower level of evidence to review. The NHMRC (2009) continues to say that different hierarchies of evidence exist for different question types and that often experts may disagree on the ranking of information evident. Evans (2003) argues that limitations of present hierarchies is that many focus on predominantly effectiveness and whether interventions are appropriate for intended recipients alongside impacts on organisations or consumers and whether any results from the reviews could be implemented. He identifies that alongside effectiveness, appropriateness and feasibility also need to be taken into consideration when reviewing evidence.

In relation to the review question, a variety of approaches have been utilised throughout the thirteen papers including correlational studies, literature reviews, cross sectional studies, qualitative and quantitative approaches, self-reporting and longitudinal studies and mixed method. This plethora of approaches was essential to be utilised to obtain the results required to determine the influential or inhibiting factors that aide successful negotiation and transition of student nurses to the newly registered nurse role. The studies that were appraised can be shown in Table 4 (Appendix 1), Table 5 (Appendix 2), Table 6 (Appendix 3) and Table 7 (Appendix 4), utilising a narrative quality appraisal approach. The utilisation of a narrative appraisal will enable the reader to comprehend a comprehensive step by step approach.

### 3.4 Summary of Quality Appraisal

As the CRD (2009) advocates, assessing quality of studies is paramount in determining truth within findings. This is supported by Arthur, Waring, Coe and Hedges (2013) who state that this allows for the robust process of summarising, interpreting strength and outcomes of evidence provided. Within this summarising process, key themes can be identified alongside bias or errors and primarily accuracy and relevance for future development. Oxman and Guyatt (1993b) supports this thought process and

state that the use of explicit, systematic methods in reviews can limit components of bias and reduce elements of chance hence enhancing reliable results on which conclusions and decisions can be made. This process in relation to the process of quality appraisal will support whether studies identified will support this future development to offer treatment guidance, prevention, diagnostic or policy decision making for example. Oxman et al (1993b) also defines that a wider recognition of synthesis and dissemination of reviews results has enhanced peoples thought processes and considerations in relation to validity and its issues. This can often aid confidence within findings generated in or by papers.

As there was a variety of literature reviewed incorporating approaches inclusive of correlational studies, literature reviews, cross sectional studies, qualitative and quantitate approaches, a schematic approach proved to be utilitarian. Utilising the CASP (2013), National Institute for Clinical Excellence (NICE 2012) and the Quality Appraisal Checklist for correlational studies (Long 2005) tools, clarity and emerging themes were identified. As CRD (2009) supports, analysing relationships between the literatures, will help to provide an overall assessment of the strength of evidence presented, this is necessary when drawing conclusions.

The thirteen studies included within the review, all had a differentiation in approaches within with the designs of the studies also being variable. Two were described as correlational studies (Beauvais et al 2014, Pitt et al 2014), two were mixed method studies (Burke et al 2014, Suresh et al 2012) and three were literature reviews (Rose 2011, Teoh et al 2013 and Urwin 2010). Of the remaining six, three were qualitative research design (Barton 2007, Nash et al 2009 and Carlin and Duffy 2013) and the final three papers reviewed were systematic reviews (Edwards et al 201, Duchscher 2009 and Whitehead et al 2013).

Beauvais et al (2014) and Pitt et al (2014) work are correlational studies, studies whereby relationships between two or more variables can be identified with further inquiry into the extent of how they co-vary (Arthur et al 2013) and as the Cochrane Collaboration (2011) support, correlations between these characteristics can provide further information about which characteristics can be confounded with each other. Walker (2005) firmly believes that such results can provide valuable hypothesis in relation to contributions for further research. However, some elements of Beauvais et

al (2014) and Pitt et al (2014) work require further exploration due to the small sample sizes used and small student nursing representative sample, effecting these studies quality. This may hold significance for other attributes or issues if studies are carried out with students on other programmes that may not be non-nursing specific.

A clearly identifiable aims and objectives of a particular piece of research is paramount and enables the reader to identify at an early stage whether this piece of work is relevant and suitable alongside the abstract of the work to determine its relevance. Due to the nature of the research checklists utilised for this systematic review, not all checklist defined the question relating to aims and objectives. The qualitative studies CASP (2013) checklist defined this clearly whereas the NICE (2005) and mixed method checklists (Long 2005) were not as clearly defined. However, on review of the papers to determine clearly aims and objectives, one of the correlational papers (Beauvais et al 2014) alongside the qualitative papers (Barton 2007, Nash et al 2009) and inclusive of the literature review papers (Rose 2011, Teoh et al 2013 and Urwin 2010), all of these either did not state aims and objectives at all or referred to the use of words such as 'objectives'. Some were hidden within the abstracts or the summary work at the beginning of the article and of those that did have clear aims and objectives and within the 'objectives' of others, key themes emerged and had reference made to them which supports influences or inhibitors towards successful negotiation and transition to the registered nurse role.

Beauvais et al (2014) work was a repetition of similar work (Mayer,Salovey & Caruso 2004 and Suliman 2010) with no new developments identified although the nature of the correlational study was achieved as new hypotheses were generated in relation to understanding intrinsic factors more, but how was not identified or suggestions for further research identified clearly.

Suggestions were made to conduct test-re test designs alongside further examination of emotional intelligence and elements of well-being which could potentially develop new hypothesis in relation to workplace performance and health associated benefits.

Identified within the findings section below, there are common themes that allowed for a smooth process and transition of reading, reviewing and summarising the literature within the quality appraisal outcomes. These themes for identification are study design (as of the thirteen included, three were literature reviews, two correlational studies,

three qualitative studies, three systematic reviews and two mixed method approaches) an also methods of research and the samples identified and used. Data collection and analysis of this data and areas of bias have been explored also. Ethical considerations were also addressed initially but all the studies had gained ethical approval (either at local, strategic or approved level) where necessary via the correct channels or none was required.

In relation to results and research/reviews conducted, Arthur et al (2013) defines identifiable aims of a piece of research as development contained within a paradigm. The seminal work of Kuhn (1996) explored this further by enlightening the world of research with new exploration and disciplines such as phenomenology, postmodernism and critical theory with each author having their own universal interpretation of particular aims and objectives for that piece of research. This however open up the questionability of bias being present in some of the papers. With regards to the nature of following the inclusion and exclusion criteria, study designs across the papers was variable. Within Beauvais et al (2014) work, there was a potential bias in the results due to the University being her employer alongside the use of a possible convenient sample chosen with students who may be more conscientious to complete the study. Many of the papers had potential bias incorporated within. Pitt et al (2014) identified that only 35% of the sample size remained during her research, hence not a full representative sample available within the results. Beauvais et al (2014) also identified a small sample size, potentially a convenient sample chosen and the participants were situated within a sole University complex, of which was the researchers' place of work (Appendix 4)

Two of the papers Burke et al (2014) and Suresh et al (2012) utilised a mixed method approach, incorporating both qualitative and quantitative (Appendix 3).Aveyard (2014) supports this approach as different insights with qualitative data providing a different facet to quantitative data. This approach however was a small majority of the thirteen papers reviewed with the systematic reviews being the most adopted approach which is in line with the pinnacle of hierarchy of evidence.

Due to the nature of the hypothesis of this review, a variety of methods needed to be identified to collect objective and subjective data. One of the papers Nash et al (2009) identified the use of qualitative data. This would be appropriate for the type of research

question related to enhancing transition in student nurse's final year of study incorporating varied health care providers. However, Carlin and Duffy (2013) paper utilised a qualitative approach with an additional phenomenological analysis perspective as solely qualitative data may have been of diminished value. Snelgrove (2014) believes that this approach is necessary to 'capture the moment' rather than looking at future or past experiences.

In the studies by Barton (2007), Carlin and Duffy (2013) and Nash et al (2008) there were variances in sampling despite the different hypothesis of the individual papers. There was minimal justification for the sample sizes used which could lead to elements of bias but Roberts (2007) has suggested that producing research in areas known to the researcher, then this may help support understanding and comprehension of the studies being carried out.  Barton (2007) identified a higher ratio of females to male, Carlin and Duffy (2013) only used five NQ and all were female. Nash et al (2009) study utilised larger numbers but within all of the three papers, no rationale was provide for these numbers of participants utilised. Collectively however, both samples of participants could be purposive as is common in qualitative studies (Aveyard 2014) (Appendix 2).

As themes for factors that influence or inhibit successful negotiation of transition from student nurse to registered nurse begin to evolve, some of the systematic reviews presented themselves in a variety of different ways (Appendix 1). Whitehead et al (2103) identified in his work supporting NQ nurses in the United Kingdom, that there was a consensus that Preceptorship was an essential component of successful transition with management infrastructure in place.

However, there was no illustration of sample sizes used or cohorts groups and in comparison to Urwin et al (2010) work reviewing student nurse attrition where cohorts and sample size were depicted was defined but only small statistics provided. Evans (2007) believes that in view of the differing populations' utilised within independent systematic reviews, different outcomes being measured may deem the reviews disparate in being able to clarify and confirm results due to different populations being studied and average effects would fail to represent the great variations in the outcomes.

Across some of the papers Duchscher (2009), Edwards et al (2015), Rose (2011) and Teoh et al (2013) studies were similar enough to justify combination of results in their meta-analysis. Duchscher (2009) interventions and combination of results was reasonable to do so as holistic views of transition and individual perceptions of same was evaluated alongside Teoh et al (2013) in individual nurses experience of their transition journey. Differences between the authors inclusion of studies for their respective systematic reviews was explored. Edwards et al (2105) clearly depicted differences including discussion of variables (response rates, measurable tools) alongside Rose (2011) who also provided clarity with her methodological approach in determining whether motivation had any correlation with academic success.

All the systematic reviews had barriers that may influence or inhibit successful transition including role adaption-the initial stages, review of strategies and interventions to improve transition, personal experiences and support for student nurses and NQ staff but despondently Urwin et al (2010) was the only paper that did not make any specific directives for proposals for new research or exploration and Duchscher (2009) re iterated much of what is already known in previous research and findings in relation to role transition.

## 3.5 Summary of Findings

From the thematic analysis of the factors that influence or inhibit successful negotiation of transition from the student nurse role to registered nurse role, common themes began to emerge independently at an early stage of the systematic review with two main considerations presenting two fold results. These are categorised into sub themes, intrinsic factors (with intrinsic/extrinsic factors combined (Table 8) and extrinsic factors (Table 9). Each on their own independent merit either influenced or inhibited successful negotiation and transition with consideration given in relation to what was viewed as an inhibitor or influencing factor.

*Table 8 - Summary of Findings INTRINSIC FACTORS in relation to factors that influence or inhibit successful negotiation and transition from student nurse to registered nurse role*

| THEMES IDENTIFIED | SUB THEMES IDENTIFIED | FINDINGS |
|---|---|---|
| **INTRINSIC FACTORS** | Personal Qualities of the students | Correlation between students' personal qualities and academic/clinical performance. |
| | | Low levels of 'aloofness' and high levels self-control/resilience in students |
| | | Emotional intelligence (EI),the higher the EI the more successful the student |
| | | Pre-existing personal requisites for nursing: students moral orientation and empathy |
| | Social and Cultural | Elements of social conditioning and students previous life/work experiences |
| | | Social inclusion experiences and the desire for students to 'fit in' |
| | | Communication techniques utilised by individuals for success and progression/Role identification |
| | | Peer support (inclusive within the academic and clinical setting) |
| | | Professional identity within the student nurse role |
| | | Social transition models and the student journey experienced though stages (Van Gennep 1970) |

| | | |
|---|---|---|
| **INTRINSIC FACTORS** | Motivation and Engagement | Students personal motivational patterns and behaviours |
| | | Cognitive engagement within the academic/clinical environment |
| | | Students personal extrinsic goal setting/Personal Interest and dedication to the nursing education journey |
| | | Stress factors experienced by the student |
| **INTRINSIC AND EXTRINSIC FACTORS** | Attrition | Financial difficulties experienced during the nurse education programme |
| | | Family circumstances (inadvertent changes throughout the education programme) |
| | | Differences in students chosen branch of study on pre-registration education nursing programme |
| | | Recognition of unsuitable career choice |

*Table 9 - Summary of Findings EXTRINSIC FACTORS in relation to factors that influence or inhibit successful negotiation and transition from student nurse to registered nurse role*

| THEMES IDENTIFIED | SUB THEMES IDENTIFIED | FINDINGS |
|---|---|---|
| **EXTRINSIC FACTORS** | Role Modelling | Expectations of student nurses and vice versa of registered nurses/qualified staff |
| | | Preceptorship and mentorship roles and quality of same |
| | | Leadership skills and traits-students/NQ exposure to and the observation of |
| | Institutional and Organisational | Work environment/clinical placements students exposure to/of |
| | | Provision of appropriate training programmes pre/post qualification (Mentorship and Preceptorship components) |
| | | Preparatory reading of role transition essential via the Educational Institutions to support the students |

**3.6 Discussion of Findings**

The qualitative studies (Carlin and Duffy 2013, Nash et al 2009) and the systematic reviews (Duchscher 2009, Edwards et al 2015 and Whitehead 2013 et al) identified predominantly extrinsic factors such as Preceptorship qualities, institutional factors (Trusts - hospitals and community) ,clinical placements, mentor and preceptor role. The intrinsic factors identified for successful negotiation and transition were predominantly within the qualitative, correlational, mixed method studies and the literature review papers (Barton 2007,Burke et al 2014,Beauvais et al 2014,Pitt et al 2014,Rose 2011,Suresh et al 2012, Teoh et al 2013 and Urwin et al 2010).The nature of these papers however did contain a specific focus with results identifying inadequate Preceptorship, varied clinical practice experiences and success related to students utilising an enhanced model of clinical placement and organisational/institutional elements.

The papers that identified intrinsic factors as factors that may influence or inhibit successful transition produced themes such as social and cultural influences, personal motivators and behavioural recognition as influencing factors. Only three papers identified (with recognition of stress) that both intrinsic and extrinsic factors were integrated in relation to a successful negotiation of transition (Burke et al 2104, Rose 2011 and Suresh et al 2012). Finally, it was identified that all the thirteen papers study design was inclusive of contributory factors within the inclusion and exclusion criteria.

**INTRINSIC FACTORS**

**Personal Qualities**

Aloofness and Confidence in Academic and Clinical Performance

There is deemed to be an understanding within the nursing profession and wider health care providers that there are certain qualities desired for nursing, information which can be found in job application form criteria, organisational staff trust values and the 6C's (Cummings 2013) but in relation to role transition and the student nurse and from the findings, it was identified that there was a correlation between personal qualities, academic and clinical performance also. Pitt et al (2014) identified low levels of 'aloofness' from students and also that high levels of self-control and resilience provided better performance in these two areas.

The students with low levels of aloofness developed better in relationships with staff, peers and patients, whilst having high levels of confidence was a strong indicator for clinical performance in that, students with high levels of confidence were found to perform better when undertaking clinical skills. Low levels of aloofness could be identified as a successful component of reaching role transition due to the elements of social interaction, reduced stress levels and having the ability to communicate effectively. Aloofness however, may also be indicated as a barrier to transition for some students as individual characteristics of students can often be difficult to distinguish in relation to certain approaches that they may make towards their student role, progression that is made throughout their education programme and elements of health and well-being that facets of altered aloofness can bring. This may be of benefit as an area for further exploration.

As with many correlational studies, firm conclusions can be difficult to draw upon with findings becoming generalised. With Pitt et al (2014) there was a specific relationship between personal qualities and academic/clinical performance specifically related to lower 'aloofness' but higher resilience of the individual. Although this correlation was low according to the results with limited discussion given, this could label the outcomes of the discussion within the paper as weak. However, potentially the identification and insight into future success of students could be instigated with further hypotheses being identified from these findings.

Resilience and Emotional Intelligence

Resilience in students was noted to predict effective full programme completion with the conclusion that personal qualities could be considered as an ideal prospect when considering student nurses for nursing education programs. Effective resilience therefore could be noted to enhance successful negotiation of transition for the students but issues may arise if students are unaware of resilience as a concept, its components, their individual understanding of resilience in relation to self-management and management of others and often the lack of this knowledge may be a barrier in moving forward in transition.

Beauvais et al (2014) study identified emotional intelligence (EI) as an intrinsic factor and that this was related to academic success in that, the higher the EI, the more successful the student was.

Brackett,Rivers,Reyes and Salovey (2012) supported this concept and identified that high EI equipped students with abilities to manage emotions daily led to effective management of learning and studying within an education programme. This research however was identified within students at secondary (high) school age, hence the research results related to differences in age range and scale and could be deemed as incomparable but some elements such as resilience awareness and promotion of this in well-being at a young age could be considered for further exploration, thus aiding successful transition if resilience is managed well an appropriate tools educated and developed skilfully.

Pre requisites for nursing role

The results from above could be deemed to be a predictable objective in relation to the qualities required to be a nurse (and thus aiding transition) which is currently found within the requirements such as The 6C's (Cummings 2013) and Compassion in Practice (NHS England 2012) but this was well supported in other studies (Urwin et al 2010, Teoh et al 2013) with recognition that there is not just one single attribute that influences or inhibits student nurse attrition in relation to personal qualities, there are many. Beauvais et al (2014) and Pitt et al (2014) work (which was based within international countries Australia and United States of America) were identified to gain a comparison of literature and research done within the authors residing country (United Kingdom) to make any correlations between national and international influencing and inhibiting factors to registered nurse role transition success. There was a difference in the way that nurse education was structured with a variety of different components and styles of delivery in comparison to the United Kingdom. Whilst a definitive depiction wasn't made of the specific structure of these nurse education programs, insight was gained into the acceptance of applicants process, this work was done by administration staff from a paper based application form with markers such as aptitude testing and educational grade average scores. No identification of humanistic aptitudes or behaviours were addressed.

Pre requisites for nursing was also identified such as empathy and moral orientation believing that student nurses base much of their progression and transition decision making on individual beliefs or societal guidance.

However in comparison to existing work (Bore, Munro, Kerridge & Powis 2005), there was a difference in findings which identified that moral orientation was a contributory factor to success but also determined elements of ethical orientation as inclusive in this successful transition but this was not a finding nor addressed by Pitt et al (2014).

In relation to pre requisites for the nursing role, some institutions do consider potential students interactions in groups at nurse education programme interviews (within the United Kingdom) but specific tools or PQA scales are not utilised to measure such qualities hence these attributes could not be reliantly utilised. The interpretation of such attributes could also potentially be at the discretion of the interviewer and open to elements of bias and personal preference at that time introducing an element of bias. This concept however may identify areas of further consideration and study to enhance the quality of potential nursing students to programs of study and identify individuals who potentially have the tools and intrinsic elements to complete a nurse education programme successfully. Specific attributes (such as personality traits, conscientiousness or personal values) are not yet considered definitively prior to commencement on all nurse education programmes and at present other countries do utilise such to inform their prospective students (Hamilton 2011).

**Social and Cultural**

Social Inclusion

Within the literature, themes incorporating social and cultural elements influencing or inhibiting transition were found. Both Urwin et al (2010) and Teoh (2013) in their qualitative literature reviews identified that social conditioning and experiences can influence or inhibit successful transition. Interestingly, Teoh et al (2013) predominantly documented this whereby students 'fitted into' nursing culture. She characterised from the literature how social inclusion and 'fitting in' becomes an important criterion of student nurse journey success. Many of the studies in the review included social and cultural elements (Barton 2007, Teoh et al 2013 and Urwin et al 2010) as a strong inhibitor or influence with this being their main theme within the findings. Themes such as making friends, learning routines, being as able as their peers.

However it was identified in Teoh's (2013) paper, it was often primarily the responsibility of the individual with a strong preferences for individual communication techniques with other healthcare providers, developing a professional identify and role

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conflict between being a student, stage of training and capabilities that aided elements of transition. Support from peers and mentor/preceptor and individual coping mechanisms was also a consideration and for some students and an aid to successful transition but for some students this unfortunately acted as a barrier (lack of support and non-effective mentorship). Within the findings however, no address was made of whether despite the above factors, some students till may be successful in their transition inclusive of elements such as students who are predominantly private people or those who may not be particularly communicative and of a quiet character.

The qualitative data (Barton 2007, Carlin and Duffy 2013 and Nash et al (2009) provided commentaries such as the ability to make friends on clinical placement including social interactions during the working day and rest periods alongside different staff members in different roles such as members of the multi-disciplinary team and medical staff thus enhancing feelings of belonging and 'fitting in'. These different exposures to staff and ways of working (such as routine and distinct individual methods) may correlate into positive experiences for the student nurse to meet their own personal demands and needs in effect supporting the successful transition journey. As in Maslow's (1954) seminal work the hierarchy of humanistic needs emphasises job satisfaction leading to enhanced levels of motivation thus enhancing social skills and personal actualisation although it can be said does one ever reach the full realisation of one's potential and one's true self.

Communication, Role identity and Peer support

Other narratives (Suresh et al 2012 & Burke et al 2014) included difficulties with senior staff who would not converse with the students both on or off duty, however when the uniform was adorned the concept of role shifted to them then being given an abundance of tasks to do and some recognition. This could potentially lead to disconcertment of team dynamics and the students place within that team alongside role orientation and confusion.

If this behaviour and approach to students was a frequent occurrence there could be the potential for students to regress back with issues of the social inclusion and fitting in culture thus becoming a barrier to successful transition at any given point in the nurse education program.

Previous work conducted by Shaw (2010) in her qualitative study identified that many student nurses stated that uniform played a key role in creating unity within the profession and equality between other professions hence promote a more equal and productive working environment. Shaw and Timmins (2010) went on to depict how identification and correlation between uniform and role may be advantageous to explore further in relation to facilitating or inhibiting success in role transition and attitudes and behaviours towards students when or not wearing their professional uniform. Suresh et al (2012) compounded attitudes in general towards student nurses and stated that workload, short staffing and ward pressures as a cultural normality for disengagement with students. This inhibitory factor towards student nurse transition could potentially be enhanced by a more inclusive attitude towards students with strong definitions from staff supporting decision making with students hence nurturing an inclusive team approach. This potentially could encourage students to be valued team members despite other influencing factors that may affect their experiences.

<u>Social transition</u>

Barton (2007) primary focus was comparable, in stating that it is not only the academic journey that students must face and the structure of such, but transition in both academic and social concepts. Barton (2007) was the only author throughout the review who utilised concepts of social transition models as potential influences or inhibitors in negotiating successful transition by placing these rites of passage and transition models into specific concepts and taxonomies. They focused on five other transition models within (Lewin 1951, Woods 1991, Glaze 2002, Becker 1961 and Brown & Daye 2003 cited in Barton 2007).

Each of these theorists provided variable understanding and presentation of their transition models with some having fewer components than others (three stages Lewin 1951, Woods 1999) as compared to eight stages (Glaze 2002) and differences in terminology used such as 'idealism' (Woods 1999) compared to 'breaking free' (Brown and Daye 2003) and at the completion of a transition stage, terminology such as 'refreezing' (Lewin 1951) in comparison to 'the final perspective' (Becker 1961). Generating understanding of such models with initial concepts and theory taught within the HEI, this may facilitate a successful transition for student nurses, allowing the student to feel 'normal' as supported by the theory which may ease their transition and

offer insight into their role transition. However, some students may not find this beneficial and such concepts they may resist and the ideology of being placed 'within' a model may hinder their journey.

The research papers reviewed within this review were limited in this field however Darvill, Fallon and Livesley (2014) supported Barton (2007) (whose research was a timescale from pre-qualifying students to two years post qualification) but data was often difficult to correlate due to differences in timescales of data collection methods. Positively however, Barton (2007) did review further models of transition which identified similarities across from Van Gennep's (1970) original work incorporating rites of passage, although what these similarities were, Barton (2007) did not stipulate.

The greater understanding of these models Barton (2007) believes, may recognise support required in relationships between individual transition experiences and embracing life events (rites of passage). The successful understanding of both the nurse and education programme providers could potentially aid successful transition for the student nurse, providing understanding and clarity to their experiences when they undergo transition and change, recognising that structure of performing a clinical skill and passing successfully hold different concepts in that they enable life transitions in social and professional status.

**Motivation and Engagement**

Motivation

Motivation as a concept is infinite with questions still remaining unanswered as to what motivates nursing students both in the academic and practice settings and often how different vehicles for motivation have been utilised but not always evaluated for effective use. Within the literature, themes incorporating motivation and student engagement influencing or inhibiting transition were found. Within the literature findings, motivation of students and their engagement to their programme of study was evident. Rose (2011) in her literature review acknowledged that there was an abundance of influencing factors for both intrinsic and extrinsic elements aiding transition (understanding of motivational patterns and behaviour, cognitive engagement, extrinsic goal setting and personal interest.) She strongly identified that educators needed to identify these factors which may then potentially identify positive outcomes and achievement of student nurses, thus aiding retention and successful

transition. The literature identified variable influencing factors such as students' financial gain on becoming a NQ and also elements of future job security. Within this research by Walker, Greene and Mansell (2005) and Gambino (2010) it was identified that some students were more driven by extrinsic motivation rather than intrinsic motivators, despondently however, these students encountered greater difficulty completing their nursing programs. Rose (2011) acknowledged the opposite and believed that the drive to meet one's own needs was increasingly more prevalent identifying self-efficacy as an example but individual drivers for motivation are variable and not respectfully the same for each student. Ryan and Deci (2000) support this and state that motivation is not defined as a solitary phenomenon, individuals poses different amounts, hence the orientation of motivation is equally important to the level of the same.

Rose (2011) enhanced the above and was the only author to identify that her review needed other components to be taken into consideration such as historical and theoretical concepts (self-determination theory (SDT) (Deci, Eghrari, Patrick and Leone 1994). Once this concept can be understood (innate psychological needs, a need to feel competent and a need to feel autonomous) then students may have the ability to recognise their own performance and outcomes may be enhanced and developed. Educators may benefit from adopting this understanding and ways to enhance, foster and promote elements of motivation within students, learning to aid successful nursing education programme completion and subsequently a successful degree of role transition. Some of the papers reviewed (Edwards et al 2015, Duchscher 2009) also identified factors that may influence or inhibit successful role transition where motivation and student engagement was concerned however, there was limited address to how students' motivation can be continually assessed for success or encouraged to keep evolving.

Previous work done by Spouse (2000) in a longitudinal research study identified that students' pre conceptions of nursing had a profound effect and influence on their continuation of studies alongside supernumerary status and support from experienced practitioners supported students' retention and successful transition. This notion of pre conceived thoughts of students was not addressed in any of the thirteen reviews chosen and could be identified as area for further exploration and study.

Burke et al (2014) work focused primarily on competency success criteria (KSF and NMC frameworks) alongside a small proportion of personal qualities also to aid role transition success (respectful and professional attitudes).She attributed successful transition was linked to competence of individuals based on two comparable frameworks currently used within nursing (NMC) and healthcare institutions (KSF). She found similarities within both and believed this to be positive contributions between professionally led standards alongside employer led skills and requirements. Burke et al (2014) was the only paper identified from the thirteen who utilised existing frameworks such as these to determine successful transition and this may be an area of development to be explored further in relation to competency assessing. Within organisations and institutions to date there are variable competency assessment procedures for student nurses and those students entering their NQ status including competencies for specific clinical skills, diseases and patient care pathways. This could be considered identification that the student nurses achievements of becoming competent are continuously moving and changing in the ever transforming face of health care (Kessler,Spilsbury & Heron 2014) and may provide an intrinsic drive with extrinsic tangible gaols to be achieved.

Stress

Three of the reviews identified stress as major contributory factor for successful negotiation of transition (heavy workload, working relationships and unmet clinical learning outcomes) whilst on clinical placement alongside increasing academic demands. Suresh et al (2012) work ascertained that the identification of perceived stress levels were not significantly higher in the NQ nurses compared to the fourth year student nurses, however, the stressors were marginally different in that, the stressors were feelings of inadequate preparation and  lack of staff support. The NQ stressors were workload and other staff conflict so hence the emergence of different stressors at different given timescales in transition. Whilst there may be current service provision for supporting the final year students and NQ in relation to managing stress and health and well-being services, earlier research carried out by Timmins and Kaliszer (2002) defined that academic demands feature significantly high. The majority of health care providers do provide a well-being service but often demands on this provision presents long timeframes for access. In relation to stress influencing or inhibiting successful transition, some students may utilise stress as a driver for

achievement, in effect, stress being utilised to aid progression and success. Exposure to certain situations such as work deadlines, patient caseload or emergency care situations may act as an influential in role transition whereas for some students this may be a barrier to success. Reeve, Shumaker, Yearwood, Crowell and Riley (2013) identified that coping mechanisms are imperative to avoid the negativity of stress. Mechanisms such as peer discussion, exercise and healthy eating promoted positive steps whereas some students demonstrated irritability, feeling of sadness and ignorance of stress, both types being adaptive and maladaptive strategies, some of which could lead to poor well-being. Again, the inclusion of addressing these elements as an integrative part of nursing education may be beneficial to consider further. Acknowledgement also of some students not having access to these adaptive and maladaptive behaviours or support.

Pitt et al (2014) however utilised a tool (personal qualities assessment tool) (PQA) which primarily was designed for alternative use with medical students but had been adapted for the purpose of her research with student nurses. It could be suggested that utilisation of this tool also reflects qualities desired in nursing however implications for validity of the design and purpose of tools for a previous specific use may be questionable. This previous research Pitt et al (2104) refers to is her own and same three supporting author's hence elevating potential elements of bias and potentially hypothetically could decrease confidence in the findings. Some of these studies however had variances in their methodological quality, often by data collection tools employed potentially could have led to influenced results in relation to the research questions identified (Beauvais et al 2014) alongside a potentially informed ethnographer into data being collected and for what purpose (Barton 2007).

<u>Attrition</u>

Nursing programs are represented over a considerable period of time and with many aspects of timeline related situations, circumstances can alter and alternative routes in lifespan can be taken. Within the literature, themes incorporating attrition influencing or inhibiting transition were found. The findings within Urwin et al (2010) explored attrition and the correlation between the individual, personal and family circumstances (marriage, pregnancy, sickness) which when experienced resulted in long periods of time absent for the nurse education programme, the student needing to re-join after

an interrupt or leaving the programme all together dependent on the circumstance and financial difficulties (student poverty and debt). Ethnicity also was an influencing alongside gender as males were more likely to leave due to financial reasons although this was not explored within the study in detail.

Students chosen nursing branch of study was highlighted as a factor, child branch students were noted to leave due to family or personal problems and disability branch students identified negative attitudes towards their chosen branch of study by tutors and practitioners to support their attrition or movement to another branch. This however was a singular statement within the paper and out dated literature (Eaton, Williams and Green 2000). It could be said that due to the present time and climate of change within healthcare that this may now be unfounded. In Eaton et al (2000) cited in Urwin et al (2010) work, it was additionally highlighted that certain branches of students (predominantly child branch) left the programme of study early and that they averaged below the age of 21 years. This concept wasn't explored any further in this work but was explored further by Edwards (2015) but she only represented a sample of students experiencing changes to family, health or personal issues but with no clear definitive ages depicted just suggested. None of the remaining studies explored this concept in their work but it could be suggested that stages in life may present multiple or varying issues linked to successful or inhibitions to role transition possibly linked to specific periods in the individual life cycle such as parenthood, death of family or previous timeframe from academic study.

Acknowledgement of wrong career choice and University life as factors influencing or inhibiting successful negotiation and transition were also identified and all the above findings however were placed into specific pre-determined key areas linked to previous work done by Dopfer, Foster and Potts (2004) cited in Urwin et al (2010). This work related to three levels, micro (individual student factors) meso level (institutional factors) and macro level (political and professional). These were utilised to determine the results by setting them within chosen categories as opposed to allowing emerging themes taking place. Dawson (2008) believes that emergent themes taking place allows for more understanding of exploring relationships between theory and practice as opposed to pre determining structured outcomes however an element of structure has still taken place despite the content of the three categories determined. Many of the research papers utilised for this review applied pre-

determined subject matter Rose (2011), Teoh et al (2013) Urwin et al (2010), Suresh et al (2012) and Beauvais et al (2014).

There appeared to be a broad range of students at varying ages utilised within some of the papers, all at different stages of their training, variable nursing education programme experiences, previous life experience but these elements were limited or not addressed fully or correlated within the results. Urwin et al (2010) identifies mature students as high success rates due to maturity and coping mechanisms developed through life experiences and Beauvais et al (2014) identified that academic success had a relationship with emotional intelligence providing the mature students' abilities to manage the emotions that accompany them in their life experiences thus a more productive and sustainable nursing programme experience hence aiding a successful transition.

As identified clearly within Urwin et al (2010) work, it is recognisably apparent that attrition particularly is still a concern. Although steady through previous decades, greater emphasis is required on determining factors for supporting nursing students to stay and complete their nursing education programmes. Previous studies have reflected that attrition rates remain the same but due to continuously low response rates of subjects (people) in conducted research, study design, population leading to imprecise results and ambiguity therefore further clarity is required (Pitt et al 2014,Beavauis et al 2014 and Carlin et al 2013).

**EXTRINSIC FACTORS**

**Role Modelling**

Mentorship, Preceptorship, Leadership and Management

It can be said that poor experiences and events within the student nurse education programme can often hinder progression of students and considerably so when related to role modelling and influential figures. Within the literature, themes incorporating role modelling elements influencing or inhibiting transition were found. Carlin and Duffy (2013) proposed (that although her review was not predominantly linked with student nurse observations) the NQ nurses observation of the senior charge nurse role may aid influences or inhibitions in relation to role transition post qualifying as she identified expectations within the senior charge nurse roles, factors

such as 'role models' to the NQ alongside effective management including visibility and teamwork. If student nurses engaged in or experienced positive experiences of these then this aided successful role transition. The student develops the ability to relate to and adopt some personal and professional elements from already registered staff, often with knowledge and expertise in their chosen field. Sadly however, if students do not engage with their mentor for a variety of reasons such as character conflict or approachability, sickness or absence (of student or mentor) then these can be barriers to a successful transition due to lack of learning taking place or quality of the learning experience. Since the recent NHS (DH 2010) modernisation programmes, leadership has featured highly on the agenda with further development of leadership programmes and courses (NHS Leadership Academy 2015).

Carlin and Duffy (2013) identified that despite the qualitative approach used for their study, participants (NQ) were still unclear of a management role alongside the incorporation of greater demand for scrutiny, provision of evidence and indicator targets being met. This hypothesis has not progressed any further since research done by Doherty, Gatenby and Hales (2010). If student nurses had a greater understanding of leadership and team working roles then their transition journey may be more successful as prior knowledge, understanding and exposure to such may be beneficial. However, as Carlin and Duffy (2013) emphasises, lack of visibly from leaders and increasing administrative duties can produce barriers to effective role modelling with some leadership skills not being prominent or observed opportunistically. There is the potential that early succession planning of leadership skills and traits to be identified and nurtured at an early stage of a student nurse's career and education programme may be beneficial if factored into changing nurse education and curricula.

Training Programmes

Whitehead et al (2013) supports Edwards et al (2015) work and although predominantly linked to Preceptorship of NQ, they believe that not all NQ are fit for purpose on registration. They continue to state that despite being competent at this stage, often self-confidence is lacking (in relation to autonomy) and that Preceptorship must progress as an identified necessity. When appraising studies undertaken in the 1990's, to gain a historical perspective of support for student nurses entering their NQ

status, it was apparent then that enhancement of this was required (Jasper 1996, Maben & Clark 1998, Holland 1999). These studies identified ease of transition with structured support which was identified within these reviews. The same could be identified for mentorship programmes and training. If student nurses experiences mentors who have undergone and approved, effective, modern, evidence based mentorship training programme then the quality of mentorship that they receive could potentially be of a high value. As in line with the NMC (2015) who state that registered nurses who have completed Preceptorship then have a responsibility to progress towards completing a mentorship programme, this is often a requirement of specific organisations and Trusts within their role and job descriptions for qualified nurses.

Progression was made in Edwards et al (2015) work whose review emphasises the importance of organisations/institutions guiding and supporting the nursing students with effective support programs such as mentorship, but ensuring that mentors are adequately prepared for the role to aid its success. Edwards et al (2015) also includes preceptor identification for the role, preceptor training and preparation in collaboration with protected time for both preceptor and preceptee to get beyond this barrier. Student nurses understanding of this mentor/preceptor role and the elements contained within, can provide an advantage of requirements and expectations as students transition from student to NQ.

As recently in Haggerty, Holloway and Wison (2013) work, they recognised the need for student nurses to be able to have access to Mentors, staff who have been willing to undertake this role and have the abilities and qualities to be an effective mentor can aid successfully, student nurse transition. If the student has exposure to a mentor who is disinterested, non-committed or 'doesn't like having students', then the experience for the student will be a negative one and will present as a barrier to successful transition. The student independently also has responsibility to aid their role transition succession and barriers that may impede this may involve lack of interaction with placement prior to them commencing on their first day there but contributory to that is that the student may tolerate poor mentorship guidance as they have a fear of failing placement and equally vice versa, the mentor may not want to fail a student due to risking running the students chances of a vocation and career. Surprisingly this was an area that was not addressed across the reviews particularly with relation to Duffy's (2003) seminal work in mentors failing to fail students in clinical practice. Taylor (2008)

identified that students who may lack mentor interaction may often be left to learn for themselves and the same skill sets are repeated rather than new insights and developments evolve. This alongside working with health support worker staff as the students are not driven to think critically in clinical practice. These and other key areas are areas for exploration for further study with correlation to influences or inhibitors to successful role transition.

**Institutional and Organisational**

Preparatory Theory

The final factor within the literature incorporating institutional and organisational (Universities and hospital and community) was found to contain elements of influencing or inhibiting transition. Duchscher (2008) typifies that educational institutions and employers have a responsibility in providing preparatory theory to nursing students in relation to role transition specifically and supporting this with appropriate facilitation of educational clinical placements in preparation for the registered nurse role. Beauvais et al (2014) supports this with claims that focusing on positive aspects of personal attributes such as resilience, emotional intelligence and spiritual well-being and developing further understanding, may be helpful in developing teaching and learning process that promote retention in nursing programs hence incorporating elements of intrinsic factors to support the extrinsic elements also.

Clinical Placement Models

Nash et al (2009) an Australian practitioner, explored the utilisation of considering matching students to a clinical placement model hence developing transition to support an enriched experience through collaboration with workplace representatives and the provision of specialised support. The two clinical placement models within the study incorporated characteristics such as 1:1 mentorship guidance, rotation through different clinical areas (Adult, Children and Women's hospitals), and flexible rostering incorporating a full 24 hour cycle of care.  Students were also included in the facility wide based and ward events such as staff development activities and staff meetings. These positive experiences provided in a structured format and may ease the transition for student nurses and support its success however, these structured elements may also inhibit some students' transition as the formal structure may divert away from other learning opportunities or experiences that may be available that they

will not get to experience or gain exposure to. If the structure of the clinical placement model however is developed and established well and reviewed regularly, then these components may be taken into consideration from the onset.

It could be said that within current institutions and health care service providers, this type of model is currently taking place although a specific name may not have been assigned to it and can often be found at a local levels (Department of Health (DH) Preceptorship framework (2010). Questionably, if a name was assigned to our current practice this may potentially provide a different ethos to the process by making our current programmes of student nurse/NQ support more robust. Teoh et el (2013) however identified that students prior to becoming NQ rotate regularly between clinical placements, which could be inferred that they are starting a new work place several times over and with exposure to many disciplines , this could have detrimental effects on their working relationships. Barton (2007) however supports this and stated that students are utilising this experience to establish effective working relationships within the workplace inclusive of hierarchies and social structures, however, this study was not inclusive of all influences of transition but solely with other health care professionals.

Gambino (2010) believes that if there is an understanding of both intrinsic and extrinsic elements then this may help educational institutions support students further in their education programme challenges and experiences. Rose (2011) supports this concept and identifies that understanding what types of motivation students utilise throughout their nurse education programme can be advantageous to educators in supporting the students throughout their education but further work may be required however, to determine individual students' motivational patterns in identifying relationships between motivation and educational programme success.

## 3.7 Conclusion

In relation to the findings from this review, it is transparent that there are variances in factors effecting successful preparation and negotiation of transition from student nurse to registered nurse role. Experiences of individual in relation to intrinsic and extrinsic factors is vast and variable and some current elements and programmes within nursing still clearly do not take into consideration intrinsic motivators or factors. Moreover, when dealing with individuals and elements of influences (such as human

nature and socio economic differences (Teoh et al 2013) appreciation of the complexity in generating successful negotiation and transition from student nurse to registered nurse, is the acknowledgement of external and internal forces of control and that these will never be identical for all student nurses/individuals undergoing this transition.

Some of the studies identified for this review were considered low in relation to the hierarchy of evidence but common themes (intrinsic and extrinsic factors) became evident in relation to the types of reviews identified. Some of the reviews focused on previous research carried out which may help in determining avenues for further exploratory study in relation to finally taking these themes forward or essentially implementing some of these findings, in a timelier manner, into clinical practice and nursing educational programmes of study.

As with many situations, occurrences and concepts, a poor experience during any transition period can deter and hinder student nurses reaching their full potential. Unsuccessful transitions may lead to individuals leaving their first post prematurely or leave the nursing profession entirely. Contrary to this however successful negotiation of transition can lead to effective and efficacious nurses entering and completing their role transition state. It can be said however, that at what point does one enter or leave a transition state and is this transition always achieved or a continuous passage of a changing state irrespective of our journey.

## 3.8 Limitations of the study

Acknowledgement of certain limitations of the study need to be identified due to the nature of a novice approach to systematic reviews and elements within my limited experience. However, advice, resources and literature has been encompassed and identified to support this piece of work alongside the support of my supervisor. I feel that adequate timescale is given for this piece of work, however, if more time was available, a further scope of literature of studies may have been reviewed and utilised and further factors that influence or inhibit successful role transition may have emerged as I believe the full extent of influencing or inhibiting factors to aid successful role transition has much more discovery to be done with new insights to be explored further.

Doing this systematic review independently may also inherit some risk of unintentional bias in the studies selected, alongside some pre-existing background knowledge that already exists due to my present job role, however, in relation to this, guidance from the CRD (2009) was vigilantly utilised alongside other academic support, literature and appropriate resources. Arthur et al (2013) depicts that difficulties can be encountered when there is the assumption that not all aspects of the social world (intrinsic and extrinsic elements) can be measured whilst also attempting to maintain an approach which is fee from bias and remains objective. As with the intention of this systematic review, hopefully new understandings and developments can now be explored further in relation to a successful role transition for student nurses to the registered nurse role. New research developments may now appear by focusing on what factors influence successful negotiation of transition as opposed to which factors can inhibit inhibiting this success thus focusing to provide clarity and positive outcomes for student nurses undergoing role transit from student nurse to registered nurses.

## 3.9 Recommendations

Preceding from the fundamental elements contained within this report, inclusive of the data collection, analysis, synthesis and discussion of findings, there are a number of recommendations in relation to influential or inhibitory factors in the student nurses' successful preparation and negotiation to their registered nurse role.

<u>Research</u>

The incorporation and contribution of Universities and other organisations towards further research may have a positive effect on the outcomes and interventions related to student nurse negotiation and transition of their registered nurse journey outcome. In relation to further research, many of the studies identified needed further expansion such as sample size, longevity, approaches and different methods and design of research to eliminate repetitiveness and pose questions for further research to be carried out.

Some of the literature identified for the study was current and up to date, but little research has been identified since with implementations further from a research or

practice perspective. Opportunity could now be taken to promote further research in relation to some of the key aspects identified within the findings of this review. However, the possibility of more reliable measures may need to be identified to explore further outcomes in relation to intrinsic factors such as confidence, competence, knowledge, stress and anxiety, often all of which are difficult to measure with often an abundance of variables present. All though systematic reviews are considered the epiphany of research, it could be considered useful for smaller scales of research to be conducted to identify factors from a bottom up approach, considered at a local level for example. With the changing face of education shifting towards all degree or masters education programmes in conjunction with each other in some HEI's, there is a current shift in health care and practices needing to be recognised and nursing education programmes need to be appropriate and fit for purpose with the appropriate support mechanisms in place to ensure that student nurses journey through transition appropriately and successfully. Preparation from a physical, emotional and mental well-being approach with recognition of management tools to aide these elements of well-being, can only support a successful student nurse transition.

<u>Practice and Education</u>

The incorporation and contribution of higher education institutes (HEI) and other organisations towards practice and educational development may have a positive effect on the outcomes and interventions related to student nurse negotiation and transition of their registered nurse journey. With reference to Practice and Education, some of the findings identified highlighted contributory factors that may facilitate and instigate changes. Instigation of taking elements of research findings further from a nursing institutional perspective and incorporate the work going on at local level to a more strategic implementation, may be advantageous. The review of existing programmes such as Preceptorship (Whitehead 2013) and Mentorship programmes may identify benefits of further development for the student nursing population and that time elapsed since their implementation (Department of Health (DH) Preceptorship framework 2010) may now be a consideration for some health service/care institutions to review, analyse and make suggestions for further changes.

In relation to regard of style of nursing education such as the nurse education programmes in Ireland (Suresh et al 2012) and obtaining an enhanced understanding

of elements that emerged (such as research around Emotional Intelligence, spiritualism, resilience and emotional wellbeing), this could be effective in determining more clearly the preparation and negotiation of transition to registered nurse for many student nurses. Teaching and training students how to effectively manage stress, perseverance and resilience could potentially aid and facilitate positive experiences thus aiding their transition journey.

Conduction of research however would be advisable to examine student experience and ways in which students learning style and preferred ways of learning are recognisable for educators to use as an advantage for example, recognition of motivational factors rather than the main focus being objective, measurable data/events, hence enhancing the student experience and provision of education programme success.

Institutions may consider the incorporation of preparatory theory of factors such as resilience, managing stress and coping mechanisms at a lower level or earlier stage in the nurse education training programme (for example within the students first year of education) and perhaps the involvement of re addressing programme structure and content to support the smooth transition. It is also paramount that educators and practitioners recognise the indifferences that may present between the theory to practice gap and what enhancing factors can be identified to support and diminish the barriers to successful negotiation and transition from the student nurse to registered nurse role.

Further areas of exploration may include exploring further motivation, if nursing students change or adapt their motivation to learn and how nurse educators could support and facilitate this process effectively, may aid the transition journey with early recognition of when students need additional support and self-help techniques to enhance individual student motivation.

The research done around clinical placement models may benefit from being developed further and explore the benefits of 'fitting' nursing students into practice placements to ensure a full genre of experience by matching students to prospective areas of where they want to work could be beneficial and aid retention. The identification of skill sets still requiring completion in their nursing education programme may help to support the areas that the students have not had exposure to

but skills that essentially may be required as a NQ. By exposing the students to these omitted skills may ease confidence issues as their transition journey unfolds.

To conclude, the papers included for the purpose of this review were variable and rated as excellent to fair but further exploration may be needed of more studies of high quality will need to be conducted and publicised.

**APPENDIX 1** - *Table 4 – CASP (2013) Research Checklist of the studies systematic review for inclusion*

| CASP checklist | Boychuck Duchscher (2009) | Edwards et al (2015) | Rose (2011) | Teoh et al (2013) | Urwin et al (2010) | Whitehead et al (2013) |
|---|---|---|---|---|---|---|
| **Did the review address a clearly focused question?** | YES | YES | YES | YES | YES | YES |
| **Did the authors look for the right type of paper?** | YES | YES | YES | YES | YES | YES |
| **Do you think all the important relevant studies were included?** | YES | YES | YES | YES | YES | YES |
| **Did the reviews author do enough to assess the quality of the included studies?** | Timespan from 1998-2008 utilising 4 previous studies. Small numbers of subjects in the studies ranging from 5-15 although a qualitative and quantitative approach was utilised within these studies | Yes-robust systematic approach utilised with a clear methodological approach although was varied at times. It covered both quantitative and qualitative data. Only small sample sizes used however and low response rates which could alter the results with | Yes, however there was a high academic feature predominantly throughout with limited clinical discussion. Current and up to date studies (1992/2001-2008) used prior to this paper being published in 2011 but actual amount used not stipulated. | 67 papers reviewed in total with only 12 fitting inclusion criteria. Inclusion and exclusion criteria stipulated. Varity of approaches within these papers utilised including thematic analysis. Papers reviewed ranged from 2008-2011.An appropriate search | Some very dated literature evident from 1965/69/70 which were also predominantly the study of male nurses. An integrative review was stated to be done but the results did not clearly state the need to further | Yes, 167 articles with 24 being finally reviewed. Critical review took place, extracted and synthesised with recommended approaches (results table presented). Articles vary from 2005-2011 with 2 seminal pieces from 1966 and |

| | | no true reflection of ALL students shown. Variables were addressed however in each of the studies. Studies from year 2000-2010 only included | | was utilised with appropriate boolean words. No justification for some papers being excluded and no local papers were utilised which could have some advantages. | development within this topic or offered new insights. Appropriate background and search strategy. 3 levels utilised for the review. It was addressed that without full access to some literature that some results could not be verified. Majority of the literature looked at contained only small subjects/cohorts of students but this was across ALL branches of a nursing programme. A Tinto model of engagement was utilised throughout this piece of work but the | 1996 (rationale for their use provided).There is also an international theme including UK,NZ,Canada, Australia,Sweden ,Ireland,Scotland, Norway. All peer reviewed or literature searched articles with rationale provided for the use of other documentation.

Many of the articles for review focused particularly on post qualifying/Precept orship with a minimal amount on pre-registration or pre-qualifying allied health professionals |

| | | | | | discussion surrounding this was very limited. | |
|---|---|---|---|---|---|---|
| **If the results had been combined-was it reasonable to do so?** | Yes-to address a holistic view of transition and perceptions | Yes- although predominantly quantitative | Papers compared and contrasted and conclusion drawn from them. | Yes-to address a holistic view of nurse experiences in their transition journey. | Yes-provided although some limitations present. Very dated research 1960-1990's | Yes |
| **Overall results of the review** | No new data was presented or views from the results. Many of the discussion was based upon previous research which was consolidated within this review. | Extensive work with clear outcomes visible. The terminology was often unclear with an American connotation with no depiction of terminology/meanings which may lead to interpretation. No ethical approval or funding declared. | Recognition of contributory factors towards retention rates, personal issues, socioeconomic and intelligence plays a part. The paper has only made brief recommendations for practitioners in the conclusion stage. | Again, research developed in Singapore where a graduate nurse has a 3 month induction programme which is clinic skills based. Elements of institutions being responsible for issues related from theory to practice. | Recognition that there is not one single attribute that influences or inhibits student nurse attrition. Very vague with minor recommendations but no suggestions on how to the research forward | There appears to be a general consensus that Preceptorship is an essential component of successful transition with appropriate support systems in place via management. |
| **Are they precise?** | Yes | Yes effective and rigorous results discussed with both positive and negative elements | Vague | Yes | No recommendations for further studies or review depicted as you would normally find | No. There is no illustration of all the sample sizes/ groups used within the papers. or cohorts or gender etc. The |

| | | | | | with an integrative review | research designs were clear however despite the above. 12 of the 24 used small sample sizes only. Selective samples. |
|---|---|---|---|---|---|---|
| **Can they be applied to the local population?** | Yes- recommendations provided for practice/ policy(institutions and management) | Yes with scope for further development and research. Recognition that transition programmes and support is essential from a worldwide perspective. Further investigation into transition programmes in Canada would be beneficial | Yes but from a local level adoption. | Yes, but uptake required from institutions/clinical practitioners to take on board the literature and research findings related to this topic. | Limited – too many variables present within the reviews done. | Yes, recommendations provided for further research and practice; a large emphasis on Preceptorship programmes (may have been influenced by Government recommendations (Department of Health 2010) (DoH) |
| **Were all important outcomes considered?** | Implications for nursing discussed and broken down into key sections- previous experience, emotions, | Yes, although results were variable upon which type of transition programmes were reported on. | Brief discussions throughout so large amount of detail omitted. Key contributory factors were: environment, intrinsic/extrinsic motivators, teaching methods, cognitive | Yes, but some differences due to Singapore based hospital where nurse education training programmes differ. Outcomes relevant | No-many elements not discussed or not considered as only 3 levels considered(individual students, political/professi | Some differentiation o terminology such as' preceptor' |

| | physical, sociocultural | | engagement and individual learning styles. | to the literature paper. | onal and institutional) | |
|---|---|---|---|---|---|---|
| **Are the benefits worth the arm and costs?** | Canadian paper. This paper has reiterated much of what is already known | Yes although further research/studies recommended with larger sample sizes More objective/reliable outcome measures in place would be beneficial | This was an American review and evidence apparent that leans towards nursing education programmes are constructed differently to other counties although specifics were not identified. | A review based on a Singapore hospital. Apparent that there is little international review using a qualitative approach. A local qualitative approach may be beneficial. | No. Vast amounts of updated literature since this review in 2010. | Yes, to support Government recommendations (DoH 2010) and local level instigation of Preceptorship |

**APPENDIX 2** *Table 5 – CASP (2013) Research Checklist of the Qualitative studies for inclusion*

| CASP Qualitative studies checklist | Barton T (2007) | Carlin and Duffy (2013) | Nash et al (2009) |
|---|---|---|---|
| **Was there a clear statement of the aims of the research?** | NO | YES | YES, although the title does not mention 'evaluation' which is what this paper entails-an evaluation of a pre-existing model. |
| **Is a qualitative methodology appropriate?** | YES | YES | YES |
| **Was the research design appropriate to address the aims of the research?** | Yes-appropriate to gain data over a specific period of time. Mixed approaches required to gain influential or inhibitory factors information | An appropriate qualitative phenomenological approach utilised. | Literature review done with literature dating from 1989-2004 (dated) This paper was published 2008. Focus groups held at the beginning of the trial and at the end of the participant's nurse education training. |
| **Was the recruitment strategy appropriate to the aims of the research?** | Yes, but minimal numbers that were in equal to each other. Some heavily populated by males/females. | Yes-as this research potential could have been carried out with minimal budget. Only 5 registered nurses (all female and qualified 1 year or less) were utilised however which is a small section of the nursing population and also dependant on which stage of transition the nurse is, could affect the results. These participants had prior knowledge/information of the research. Only acute hospital employees utilised for this paper. | Australian based academic institutions (x3) 92 students in total participated (29 trial and 63 non trial) across the 3 sites. |

| Was the data collected in a way that addressed the research issue? | Yes-although qualitative data is difficult to predict and often evaluate without a tool for guidance. 2 year data collection process so well defined. There was no reference to participant numbers on completion of the study and who or why students may have left the study or at all. Interviews was method of data collection (during taught and clinical sessions) No discussion of clinical practice observation. The third data collection was field notes. | Leadership literature had a heavy focus in this paper. Face to face unstructured interviews carried out. | Open ended question interviews, and follow up focus groups to assess and explore the students' perceptions of the transition model. Questionnaire utilised was a pre-existing one devised in 1998. A preparedness score was allocated and analysis was done to asses whether there was differences across the 3 sites. |
|---|---|---|---|
| Has the relationship between researcher and participants been adequately considered? | Yes-qualitative, longitudinal, participant observation. Issues acknowledged of context, purpose, appropriateness, method specification, and generalisation. Does not state if Barton has a predominant clinical or academic role. | Unclear, although there is the possibility that both researchers are employed at the trust in question as a practice development and practice education specialists. | No description of the researcher and participants' relationship, whether the participants were based at the schools of nursing in question. |
| Have ethical issues been taken into consideration? | Ethical approval gained. | Ethical approval obtained and participants consent | Ethical approval granted at local level (all that was required) |
| Was the data analysis sufficiently rigorous? | Yes, Qualitative data used only, with extensive systematic data mapping and coding from which 5 transition themes were identified. Literature review also done but on Van Genneps' (1960) work only and his format of models and | Qualitative approach, but no robust discussion of the data analysis or collection methods. No numbers given of how many participants were asked to be involved and what the response rate was (%) Themes addressed that the | Yes quantitative and qualitative analysis done. |

| | | | |
|---|---|---|---|
| | themes followed – leading to potential bias in the structure of the interview questions. | participants discussed but these were limited due to only a small number of participants. If more participants involved-more themes may have merged. | |
| **Is there a clear statement of findings?** | Unclear to find initially but available to see within the discussion/conclusion stage. Defined the student nurse role related to social transition into 3 stages: separation/transition and incorporation. This however had close links to Van Genneps' Rite of Passage three stage model (1960). Other models of transition discussed briefly but none of the 5 other models mentioned were used to guide/influence the research.

YES – although local guidance may be required

YES- inclusion of qualitative data collection with a longitudinal approach which allowed for periods and timescales to be taken into consideration and feedback given at each state Year1, year 2 etc. | Only 5 staff members involved in the research (considered not a representative sample)

Purposeful sampling took place (background knowledge) which could be deemed to be bias

Unclear

Yes- but further scale studies would be advised | Students utilised for the review were currently on an existing transition project. Previous work done in the same subject area in 2006-results for this work were similar-would have anticipated some development and new areas for review. Funding grant declared within the review

Both quantitative and qualitative methods utilised which served the correct  data collection/analysis for this work

No ethical approval required and this was discussed. Similarity in results from previous research done in 2006.Weak findings that were consistent with these found previously.

Potential bias due to one organisation being an employer (Queensland University, Australia). Not depicted where the 23 questions asked were originally |

| | YES- if adopted by local organisations/stakeholders. Valuable information for institutions to consider and potentially adopt into nursing programmes | | sourced-potential bias towards the results. Terminology also 'I feel' could be considered as a preference statement for some but not all-multiple meanings<br><br>Yes-further development needed but with an independent approach and recommendations for alternative research to be conducted to reduce repetitiveness. |
|---|---|---|---|

**APPENDIX 3** *Table 6 – Long (2005) Research Checklist of the mixed method studies for inclusion*

| Mixed Method checklist | Burke et al (2014) | Suresh et al (2012) |
|---|---|---|
| **Study Evaluative Overview** | Current paper (2014) Findings are how newly qualified nursing employees did/did not meet expectations. Ability to assess numeracy and literacy was depicted but personal attributes were difficult to assess. Variety in competence assessments | Date of paper 2012. This study is similar to others studies carried out. Differentiations in perceived stress in newly qualified nurses in comparison to final year nursing students. Different comparisons noted however (workload) for the groups vice versa. Mix of researchers both academics and clinical practitioners. |
| **Study and Context (setting, sample, outcome measurement)** | Yes- mixed method approach appeared effective, allowing for incorporation of both qualitative and quantitative data collection. 2 institutions and 1 NHS trust provide a collaborative partnership. Unclear whether students who had to choose statements from a list had originally provided that information so ambiguity. Not all students were familiar with the KSF competencies which lacks informed responses. Ambiguity from students as to what they defined as 'competency and competencies'. London, UK based results. Potential ambiguity as to what was considered 'useful and important' assessment tools. 16month longitudinal approach allowing time for subjects to leave the study. No definitive number of literature pieces reviewed for the purpose of the study Yes – some lack of validity present of the measures being used ( accessibility of competencies and interpretation of some terminology and meanings (competence) | Purposeful timing of the data collection first 6 months qualifying OR on a rostered clinical placement. Robust data collection process- questionnaires, distribution of these however was different (in person and postal (Effect response rate?) Pilot study done prior. No inclusion or exclusion criteria stipulated but the sample groups were appropriate to the study. |

| | | |
|---|---|---|
| | Yes – some institutions may be able to utilise the findings for further research<br>Yes- robust analysis of data provided<br>Yes but  more robust processes need to be put into place to reduce ambiguity(qualitative) and increase validity | |
| **Ethics** | Ethical approval granted | Ethical approval obtained, consent gained from participants and no conflict of interest stipulated. |
| **Group comparability** | Same group members across the mixed method approach but no information given re the groups, age, gender etc. | Variance in post qualifying staff and students in their last year of nurse education training programme. Both sets independently have issues and concerns at higher/lower levels than the other |
| **Qualitative data collection and analysis** | Yes- captured both qualitative and quantitative date | Very good - Quantitative data: Nursing stress scale<br>Qualitative data: questionnaire.<br>Enough data provided re conditions of research. Difficulty in analysing the results as there was scope for ambiguity in the questions asked. Key themes identified from the qualitative data however: excess workload, difficult working relationships, unmet clinical needs and academic demands and clinical placement. |
| **Policy and practice implications** | Appears that there may further competence to be assessed other than a rigid framework such as NMC or KSF competencies.<br>Employers/organisations/ researchers may need to consider this in future work. | Early detection of stressors may not be identified alongside further local research as Trusts are independent although all covered strategically. Identification of same could increase retention rates |
| **Other comments** | Literature used from 1986-2009. Government documentation also utilised. | Literature used  from 1990-2007 |

**APPENDIX 4**  *NICE (2012) Research Checklist of the correlation method studies for inclusion*

| Correlation study checklist | Beauvais et al (2014) | Pitt et al (2014) |
|---|---|---|
| **Population** | An American study and Institutional Review Board approval was gained (IRB). Only 37 of 244 undergraduates were on a nursing programme so not representative fully of nursing students.97% were female (not a representative sample of nursing cohort) | Paper dated 2014. Based in a large multi campus University in Australia. Key findings identified links between academic performance and students' self-control, resilience, confidence, aloofness and involvement. Study was a longitudinal descriptive correlational study. |
| **Method of selection of exposure/comparison group** | The University utilised for the research was one of the researchers' employer-potential bias and a convenient sample group chosen. | Methods used were 517 nursing students over a 3 year period from commencement of a Batchelor nurse education programme to completion. Only 139 participated (26.8% response rate) Personal qualities assessment done on commencement of the programme and then subsequent academic, clinical alongside student behaviour measurements. Bias in the qualities that the 26.8% currently possessed that may affect the results alongside 86% being female and average age of 27years. Reduction in participants in Year 2/3 (leave of absence, failure or student withdrawal). |
| **Outcomes** | Variety of approaches with on line questionnaire utilised to collect psychological, resilience and spiritual well-being scales. Intervention effects present | Significant correlation between personal qualities and academic/clinical performance including behaviours and progression. Significant reduction in sample size towards the end of the 3 year (35%). Power calculations present. Only a small percentage of these completed the survey also increasing bias and validity. |

| | | |
|---|---|---|
| **Analyses** | Response rate recorded, characteristics defined but could be determined as generalised. Results open to interpretation dependant on external factors such as environment, disposition of individuals and current physical/mental state of health and wellbeing. Limited/no discussion re variables. Self-reporting was inadequate from the participants which decreased the validity of the results. | 3 year study with attrition issues (not explained) 35% withdrew. Possibility of convenient sampling in relation to the students who participated were more conscientious. Power calculation presented in relation to the PQA assessments. Limited information provided in relation to factors affecting the participants/source population to determine participation or to complete the study. No considerations/discussion given to bias |
| **Summary** | Similar to recent studies conducted with a negative impact on future development or research. Potential bias recommendations as the results have not shown any development in nursing students' attrition rates involving new trends such as emotional intelligence and empowerment. Other data collection tools may need to be considered and other subject groups. Further investigations / research may be beneficial research utilising different samples sizes / cohorts etc. | Could be applicable to UK research (has been done). Evidence to suggest that also that personal qualities may also aide attrition rates on nursing programmes alongside offering objective support for those students who may be at risk of poorer performance. |

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