

The effectiveness of occupational therapy in enabling adults with a diagnosis of depression to improve their function and meaningful participation; a mixed methods study.

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## Thesis

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## Contents

List of Tables.....	viii
List of Figures .....	ix
Acknowledgements:.....	x
Declaration.....	xi
Key Terminology and Abbreviations List.....	xii
Abstract.....	xiii
Chapter 1 Introduction .....	1
1.1 Introduction .....	1
1.2 Depression .....	2
1.2.1 Depression, diagnosis, and impact of the condition.....	2
1.2.2 Wider perspectives on depression.....	3
1.2.3 The impact of depression on function and participation in everyday activities...	5
1.3 Occupation and occupational therapy.....	5
1.3.1 Occupation .....	5
1.3.2 Occupational functioning and occupational performance .....	7
1.3.3 The concept of participation.....	8
1.3.4 Occupational engagement.....	9
1.3.5 Occupational therapy.....	10
1.3.6 Models of practice: the theoretical underpinning of occupational therapy .....	12
1.3.7 Occupational therapy in mental health .....	14
1.3.8 Occupational therapy practice in community mental health teams .....	14
1.4 Outcomes and effectiveness in occupational therapy.....	15
1.4.1 Measuring outcomes and demonstrating effectiveness .....	15
1.4.2 Outcome measures in occupational therapy research .....	15
1.4.3 Measurement of occupational functioning and participation.....	16
1.4.4 Effectiveness research in mental health occupational therapy.....	16
1.5 Policy and practice guidance.....	17
1.6 Aims and objectives .....	18
1.6.1 Aim: .....	18
1.6.2 Research questions: .....	18
1.6.3 Objectives:.....	19
1.7 Personal perspectives and subjectivity (Part 1).....	19
1.7.1 Professional leadership.....	19

1.7.2	The limited evidence base.....	22
1.7.3	Evidence from clinical practice.....	23
1.7.4	Depression.....	24
1.8	Summary .....	24
Chapter 2	Literature Review .....	25
2.1	Introduction .....	25
2.2	Search strategy.....	25
2.3	Results.....	27
2.3.1	Section (i): The impact of depression on occupational performance and participation.....	27
2.3.2	Section (ii): The benefits of activity participation for people with a diagnosis of depression.....	31
2.3.3	Section (iii): Depression and the occupational therapy role.....	37
2.3.4	Section (iv): The effectiveness of occupational therapy in mental health.....	42
2.4	Summary .....	58
2.5	Rationale for a systematic review.....	60
Chapter 3	Systematic Review.....	62
3.1	Introduction .....	62
3.2	Methods .....	63
3.2.1	Eligibility criteria.....	63
3.2.2	Search strategy.....	64
3.2.3	Selection procedure .....	65
3.2.4	Methodological quality .....	65
3.2.5	Data extraction, analysis and synthesis .....	65
3.3	Results.....	66
3.3.1	Retrieval of studies.....	66
3.3.2	Characteristics of studies .....	68
3.3.3	Methodological quality .....	68
3.3.4	Outcome of interventions.....	72
3.3.5	Best evidence synthesis .....	72
3.4	Discussion.....	81
3.4.1	Strengths and limitations of the included studies .....	82
3.4.2	Strengths and limitations of this review .....	84
3.4.3	Suggestions for future research.....	87

3.5	Conclusion .....	88
Chapter 4	Methodology.....	90
4.1	Introduction .....	90
4.1.1	Paradigm choice .....	90
4.1.2	Epistemology and philosophical stance .....	92
4.1.3	Theoretical perspectives relating to research design of effectiveness studies ..	93
4.1.4	Personal perspectives and subjectivity (Part 2) .....	93
4.2	Overview of research design and methodology .....	94
4.2.1	Quantitative component.....	96
4.2.2	Qualitative component .....	98
4.2.3	Inclusion/exclusion criteria .....	98
4.2.4	The occupational therapy intervention .....	99
4.2.5	Reflexivity during the research process .....	101
4.3	Quantitative data collection.....	101
4.3.1	The primary outcome measure:.....	102
4.3.2	Secondary quantitative outcome measures: .....	103
4.3.3	Completion of quantitative outcome measures .....	105
4.3.4	Process data collection.....	106
4.4	Qualitative data collection .....	107
4.5	Data analysis .....	110
4.5.1	Quantitative data analysis.....	110
4.5.2	Qualitative data analysis .....	113
4.5.3	Triangulation of different data types .....	115
4.6	The study sample .....	116
4.7	Ethical issues .....	117
4.7.1	Service user participant burden and risk .....	117
4.7.2	Occupational therapist burden and risk.....	119
4.7.3	Potential risk to researchers .....	119
4.8	Chapter summary.....	119
Chapter 5	Quantitative Findings .....	120
5.1	Introduction .....	120
5.2	Recruitment and participant characteristics.....	120
5.3	Study outcomes.....	123
5.3.1	Occupational performance (primary outcome) .....	123

5.3.2	Satisfaction with occupational performance (secondary outcome).....	124
5.3.3	Work and social functioning (secondary outcome) .....	125
5.3.4	Depression (secondary outcome) .....	125
5.3.5	Participation (USER-P).....	126
5.3.6	Health related quality of life (SF-36).....	127
5.3.7	Longitudinal outcomes.....	128
5.3.8	Regression to the mean .....	128
5.3.9	Summary of quantitative findings.....	131
5.4	Process outcomes .....	131
5.4.1	Treatment fidelity to the occupational therapy intervention.....	131
5.4.2	Amount of occupational therapy .....	134
5.4.3	Association between outcomes .....	135
5.4.4	Other interventions (non-occupational therapy).....	138
5.4.5	Occupational therapy compared with non-occupational therapy.....	139
5.4.6	Who provided the occupational therapy interventions?.....	139
5.5	Summary .....	140
Chapter 6	Qualitative Findings.....	142
6.1	Introduction .....	142
6.2	Characteristics of semi-structured interview participants.....	142
6.3	Thematic analysis.....	143
6.3.1	Theme 1: Occupational therapy is about everyday things .....	145
6.3.2	Theme 2: Occupational therapy is more than talking.....	148
6.3.3	Theme 3: Occupational therapy is client-centred.....	150
6.3.4	Theme 4: Other aspects of the occupational therapy therapeutic process .....	153
6.3.5	Theme 5: Occupational therapy is motivating and effective .....	155
6.3.6	Theme 6: Characteristics of the occupational therapist helped progress .....	157
6.4	An alternative perspective .....	159
6.5	Summary .....	160
Chapter 7	Discussion.....	161
7.1	Introduction .....	161
7.2	Summary of quantitative findings:.....	163
7.2.1	Occupational therapy and function and participation.....	163
7.2.2	Occupational therapy and depression symptomology .....	165
7.2.3	Occupational therapy and quality of life.....	165

7.3	Summary of process outcomes.....	166
7.3.1	Treatment fidelity to the occupational therapy intervention.....	166
7.3.2	Amount of occupational therapy .....	167
7.3.3	Association between outcomes .....	168
7.3.4	Other interventions (non-occupational therapy).....	169
7.4	Regression to the mean .....	169
7.5	Summary of qualitative findings .....	172
7.5.1	Occupational therapy is about everyday things.....	172
7.5.2	Occupational therapy is more than talking.....	173
7.5.3	Occupational therapy is client centred .....	174
7.5.4	Other aspects of the occupational therapy therapeutic process .....	175
7.5.5	Occupational therapy is motivating and effective .....	176
7.5.6	Characteristics of the occupational therapists.....	178
7.5.7	Comparison between interviews .....	179
7.6	Answering the research questions through the integration of quantitative and qualitative findings.....	180
7.6.1	Does occupational therapy lead to improved and/or increased occupational performance and participation? .....	181
7.6.2	What impact does occupational therapy have on depressive symptomology? .....	181
7.6.3	Does occupational therapy improve the quality of life of individuals with a diagnosis of depression? .....	186
7.6.4	What are the components of occupational therapy that are most effective from the perspective of service users with a diagnosis of depression? .....	186
7.7	Personal perspectives and subjectivity (Part 3) .....	188
7.8	Study strengths and limitations .....	190
7.8.1	Research design .....	190
7.8.2	Recruitment .....	192
7.8.3	Sample.....	193
7.8.4	Outcome measures .....	194
7.8.5	Process evaluation .....	195
7.8.6	Strengths and limitations of the qualitative component.....	196
7.8.7	The Impact of Covid-19 on this research study.....	199
7.9	Chapter summary.....	200
Chapter 8	Conclusion.....	201
8.1	Study summary .....	201

8.2	Personal perspectives and subjectivity (part 4) .....	203
8.3	Recommendations for research.....	204
8.4	Key messages for practice.....	206
8.4.1	Key messages from the literature review and systematic review .....	207
8.4.2	Key messages from this study.....	207
8.5	Dissemination and impact: contributing to the occupational evidence base and best practice.....	208
	References.....	211
	Appendices.....	249
	Appendix 1: Systematic review (published version) .....	249
	Appendix 2: Canadian Occupational Performance Measure .....	281
	Appendix 3: Outcome measure booklet .....	282
	Appendix 4: Intervention Log.....	287
	Appendix 5: Interview schedule.....	289
	Appendix 6: Time-use diary.....	293
	Appendix 7: Participant recruitment and enrolment process .....	300
	Appendix 8: Ethics approval letters .....	301
	Appendix 9: Participant consent form (service user participants).....	309
	Appendix 10: Participant information sheet (service user participants) .....	310
	Appendix 11: Participant information sheet (occupational therapist participants).....	315
	Appendix 12: Consent form (occupational therapist participants).....	319
	Appendix 13: Excerpt from interview transcript.....	320
	Appendix 14: Thematic analysis – example of early-stage analysis.....	322

## List of Tables

<i>Table 1. Search strategy MEDLINE, CINAHL, AMED, PsychINFO and EMBASE</i>	26
<i>Table 2. Systematic reviews: effectiveness of occupational therapy in mental illness</i>	44
<i>Table 3. Other primary research studies (occupational therapy in mental health)</i>	47
<i>Table 4. Best Evidence Synthesis</i>	66
<i>Table 5. Characteristics of included studies</i>	69
<i>Table 6. Summary of quality characteristics of quantitative and mixed methods studies</i>	71
<i>Table 7. Reported effects for primary and secondary outcomes (quantitative)</i>	76
<i>Table 8. Reported effects (qualitative)</i>	80
<i>Table 9. Methodological strands: key features of methodology</i>	95
<i>Table 10. Quantitative outcome measures</i>	106
<i>Table 11. Characteristics of study participants</i>	122
<i>Table 12. Mean (SD) outcome measure findings</i>	123
<i>Table 13: Correlation analysis to evaluate possible regression to the mean</i>	129
<i>Table 14. Number of occupational therapy components provided to participants</i>	132
<i>Table 15. Number of occupational therapy components by intervention phase</i>	133
<i>Table 16. Amount of occupational therapy provided</i>	134
<i>Table 17. Correlation table (amount of occupational therapy and outcomes)</i>	136
<i>Table 18. Correlation table (outcome measures achieving statistical significance)</i>	137
<i>Table 19. Other intervention provided by occupational therapists and other professionals</i>	138
<i>Table 20. Total occupational therapy and non-occupational therapy provided</i>	139
<i>Table 21. Characteristics of the occupational therapist sample</i>	140
<i>Table 22. Characteristics of interview participants</i>	143
<i>Table 23. Qualitative analysis: themes and subthemes</i>	144
<i>Table 24. Mean and percentage improvement in BDI scores: baseline to end of study</i>	170
<i>Table 25. Mixed methods triangulation table</i>	182
<i>Table 26. Mechanisms of change</i>	187



## List of Figures

<i>Figure 1. Symptoms of depression</i>	<u>2</u>
<i>Figure 2. Occupational therapy RTW interventions for depression</i>	<u>39</u>
<i>Figure 3. Flow diagram</i>	<u>67</u>
<i>Figure 4. Occupational therapy process and intervention components</i>	<u>100</u>
<i>Figure 5. Flowchart summarising data collection process</i>	<u>111</u>
<i>Figure 6. Beck Depression Inventory (question 9)</i>	<u>112</u>
<i>Figure 7. Study flow diagram</i>	<u>121</u>
<i>Figure 8. COPM-P outcomes by participant</i>	<u>124</u>
<i>Figure 9. COPM-S outcomes by participant</i>	<u>124</u>
<i>Figure 10. WSAS outcomes by participant</i>	<u>125</u>
<i>Figure 11. BDI outcomes by participant</i>	<u>126</u>
<i>Figure 12. Participation outcomes by participation domain</i>	<u>127</u>
<i>Figure 13. SF-36 outcomes by domain</i>	<u>128</u>
<i>Figure 14. Correlations between change scores and T1 and between T1 and T2 for COPM and BDI</i>	<u>130</u>
<i>Figure 15. Occupational therapy by phase for those who completed therapy (a) and withdrew (b)</i>	<u>133</u>
<i>Figure 16. Core skills of occupational therapists</i>	<u>178</u>

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I would like to dedicate this thesis to the memory of my dear father, David Russell Jackson from whom I inherited determination, and learned to give attention to detail.

## Declaration

Chapter 3 of this thesis presents a systematic review which was published in the Journal of Affective Disorders in January 2021 with the following citation:

**Christie, L., Inman, J., Davys, D. and Cook, P.A. (2021). A systematic review into the effectiveness of occupational therapy for improving function and participation in activities of everyday life in adults with a diagnosis of depression. *Journal of Affective Disorders* (282), 962-973. <https://doi.org/10.1016/j.jad.2020.12.080>**

The published version can be found in Appendix 1.

### Author contribution to systematic review:

LC: Conceptualisation, methodology, investigation, analysis, writing (including original draft preparation).

Jl: Investigation, analysis, review, editing.

DD: Review, editing, supervision.

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## Key Terminology and Abbreviations List

AfC	Agenda for Change
AOTA	American Occupational Therapy Association
BDI	Beck Depression Inventory
CBT	Cognitive Behavioural Therapy
CMHT	Community Mental Health Team
COPM	Canadian Occupational Performance Measure
CPA	Care Programme Approach
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders
ICF	International Classification of Functioning, Disability, And Health
MRC	Medical Research Council
NICE	National Institute for Health and Care Excellence
OD	Other Design (quantitative methodology)
OT	Occupational Therapy
PIS	Participant information sheet
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
RCOT	Royal College of Occupational Therapists
RCP	Royal College of Psychiatrists
RCT	Randomised Controlled Trial
RTM	Regression to the mean
RTW	Return to Work
SF-36	The Short Form – 36 Health Survey
SD	Standard Deviation
SMI	Serious Mental Illness
SPSS	Statistical Package for Social Sciences
SSI	Semi Structured Interview
TAU	Treatment as Usual
USER-P	Utrecht Scale for Evaluation of Rehabilitation Participation
WFOT	World Federation of Occupational Therapists
WHO	World Health Organisation
WSAS	Work and Social Adjustment Scale

# Abstract

## Background

Depression is a leading cause of disability and is characterised by a loss of interest in activities as well as difficulty carrying out everyday activities. Occupational therapy aims to enable people to participate in the daily activities they want or need to do to improve health and well-being, however there is a limited evidence base relating to the effectiveness and impact of occupational therapy in depression.

## Purpose

This mixed-methods study aimed to (a) evaluate the effectiveness of individualised occupational therapy in enabling individuals with a diagnosis of depression to improve their occupational functioning and participation in everyday activities and (b), identify the most effective components of occupational therapy from the perspective of service users.

## Method

A single group pretest-posttest study design was used utilising the following outcome measures: Canadian Occupational Performance Measure (COPM), Beck Depression Inventory II (BDI II), Work and Social Adjustment Scale (WSAS), Utrecht Scale for Evaluation of Rehabilitation-Participation (User-P) and the Short Form-36 Health Survey (SF-36). Semi-structured interviews were undertaken at completion of the intervention. Methods of data analysis included correlations, paired *t* tests and descriptive statistics for the quantitative data, and thematic analysis for the interview data.

## Findings

Quantitative findings show statistically significant improvements in the COPM-P, COPM-S, BDI II, WSAS, two scales of the USER-P and three scales of the SF-36 outcome measure. In addition, correlation analysis suggested a tendency for those participants who had more occupational therapy to have better outcomes suggesting preliminary indication of a 'dose-response' relationship relating to the amount of occupational therapy people receive.

Six key themes and 16 subthemes emerged from the qualitative data, which give insight into the aspects of occupational therapy that participants found most helpful. These include: a focus on what was meaningful to them, resuming previous activities, especially hobbies, focusing on small things at the start, setting their own goals, and the partnership between themselves and their occupational therapist. Additionally, qualitative data suggest participants found occupational therapy motivating and effective with progress being attributed to occupational therapy.

### **Conclusions**

The qualitative findings confirm the quantitative findings. There may be some indication of a causal relationship between occupational therapy and improved occupational function and/or participation but this should be considered cautiously. The positive findings may also allow this study to serve as a feasibility study for a larger study.

### **Implications**

This research further develops the evidence base for occupational therapy in mental health by showing that occupational therapy was associated with improved outcomes in people with depression. There were powerful narratives demonstrating how occupational therapy improved functioning, which were backed up by promising improvements in objective measures. Further larger scale studies would be needed to confirm the quantitative findings.

# Chapter 1 Introduction

## 1.1 Introduction

Depression is a common mental health disorder which has become a public health concern (Monroe and Anderson, 2015). There are more than 264 million people with depression worldwide (World Health Organisation [WHO], 2020). Depression can be a disabling condition, and is associated with functional disability (Malinowski et al., 2017). It has significant consequences for individuals, their families, and the wider society. This study considers whether occupational therapy, which aims to promote health and well-being through enabling increased occupational functioning and participation in everyday activities, is effective for people with a diagnosis of depression. Occupational therapy researchers have highlighted the lack of research evidence in relation to occupational therapy in mental health (Bullock and Bannigan, 2011; Fox et al., 2017; Gutman, 2011; Swarbrick and Noyes, 2018) and there have been calls for this to be urgently addressed (D'Amico et al., 2018; Fox et al., 2017; Ikiugu et al., 2017; Swarbrick and Noyes, 2018). The lack of evidence for depression is highlighted in the results of the systematic review in Chapter 3 of this thesis.

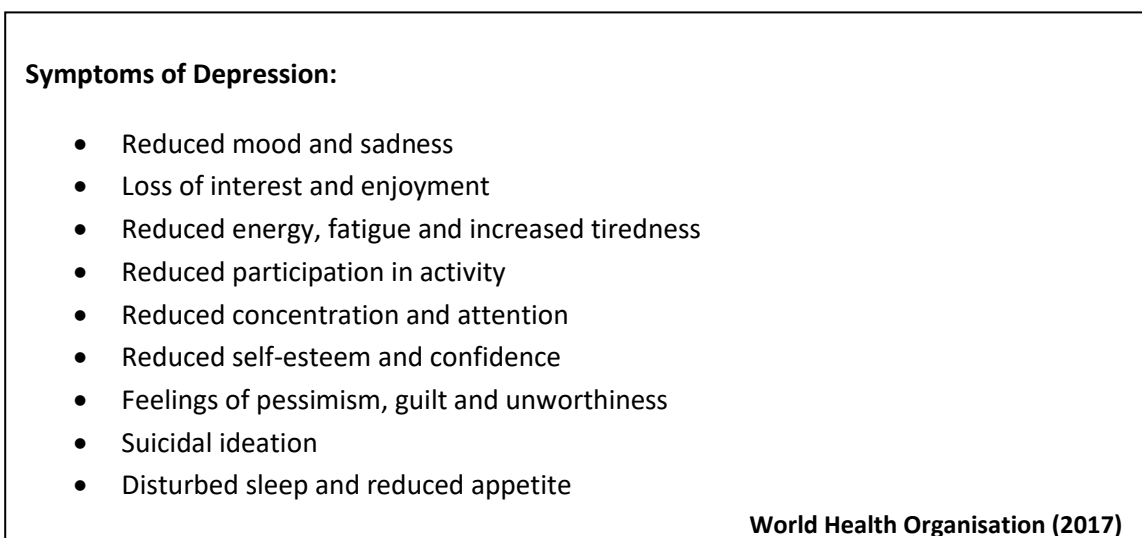
This chapter introduces depression as a mental health disorder and the impact of depression on the individual and their ability to function and participate in their everyday life (Section 1.2). It also introduces the terms 'occupation' and 'occupational therapy' and considers occupational therapy practice in mental health and how this aims to improve or restore function and enhance participation (Section 1.3). Section 1.4 explores how outcomes are examined and effectiveness is measured in occupational therapy practice and research, as well as the importance of evidence-based practice, including choice of outcome measurement tools. The primary outcomes of interest for this study, namely occupational performance, and participation, are introduced along with the theoretical perspectives on their relevance to health and well-being, and the associated difficulties relating to their measurement. The current evidence base and the limited research into the effectiveness of occupational therapy in mental health is also considered. Towards the end of this introductory chapter policy and practice guidance

is considered (Section 1.5), the aims and objectives are outlined in Section 1.6 and finally, personal perspectives on my pre-doctoral journey including drivers for this study and the impact of Covid-19 on the research process are provided in Section 1.7.

## 1.2 Depression

### 1.2.1 Depression, diagnosis, and impact of the condition

Depression is a common mental health disorder. According to the World Health Organisation's ICD-10 Classification of Mental and Behavioural Disorders (WHO, 2001) depression is categorised as a mood disorder, which is an umbrella term for people who experience extremes in the mood continuum (Spangler, 2011). Other disorders within this category include mania and bipolar affective disorder. To be classified as a disorder the presenting symptoms need to be severe enough to disrupt everyday function and be accompanied by reduced interest or loss of pleasure in activities (Coryell, 2018). The most common symptoms of depression are summarised in Figure 1.



**Figure 1. Symptoms of depression**

Depression is classified according to severity, determined by the number of symptoms present. For depression to be classified as a major depressive disorder (severe depression) seven or more of the above symptoms will have been present for at least two weeks (WHO, 2012). The Mental Health Foundation (2016) highlights that depression is the most common mental illness worldwide and reported the 2014 UK



adult prevalence figures as 3.3%. This data from the Adult Psychiatric Morbidity Survey is collected every seven years. It has been shown that prevalence rises significantly as people get older, with one in five older adults (over the age of sixty-five) experiencing depression (NHS England, 2019) and the incidence of depression in people living in care homes being as high as 40% (NHS England 2016). Furthermore, the risk of depression doubles when physical health conditions are present (NHS England, 2017). Other groups that may experience a higher prevalence of depression include black women (Mental Health Foundation, 2016; Stansfeld et al., 2016), refugees and asylum seekers (Fazel, Wheeler, and Danesh, 2005) and those who identify as lesbian, gay, bisexual and transgender (Colledge et al., 2015; Guasp, 2015). In terms of cost to society, depression can impact upon educational outcomes and earning potential, and lead to increased unemployment (Kessler, 2012). In 2017, 8.1% of women and 5.7% of men reported mental ill-health as their reason for sickness absence from work. Additionally, 9.6% of 25 - 34-year-olds cited mental ill-health generally as their reason for taking sick leave in 2017 compared with 7.2% in 2009 (Office for National Statistics, 2019).

### **1.2.2 Wider perspectives on depression**

The above description is based upon the medical model and is presented here because it is the dominant model within the practice setting where this research took place. However, it is important to note that as a client-centred profession, occupational therapy has a much broader focus than purely a medical model perspective. Occupational therapy is holistic and collaborative and ensures the individual and their wishes, needs and goals are placed at the forefront rather than their symptoms or disability (Sumsion, 2006).

The medical model has been criticised for being overly paternalistic and lacking compassion (Shah and Mountain, 2007) with its narrow focus on the physical and organic cause of mental disorders and symptom relief (Beresford, 2002). It also assumes that mental illness is inherently disabling when it could be argued that society's view of what is typical in terms of function, experience, and behaviour, should be considered more broadly (Rashed, 2019). The Mad Studies field combines theory and academic study relating to the service user experience of mental illness with activism (Castrodale,

2015). This and the Mad Pride movement work in partnership with service users to campaign for social justice to eliminate stigma for people who have a mental illness, promote diversity and understanding (Beresford, 2020). Followers of this movement have suggested that some more unusual experiences associated with mental illness should be celebrated and that some symptoms of mental illness can be enriching and life enhancing (Jost, 2009). Whilst the creativity that may present itself during periods of mania in bipolar disorder may be seen in this light by some, it is less likely that people with a diagnosis of severe depression, which was the focus of this research study, would consider their symptoms in this way (Jost, 2009).

Recovery model perspectives of depression, also from alternative, non-medical paradigms, go further than focussing on clinical symptoms (Duggal, 2019) and consider that mental well-being is more than the absence of symptoms of illness (Keyes, 2007). They aim to provide increased choice, control, and autonomy for those experiencing depression (Chambers et al. 2015) by also considering the impact upon people`s lives, their personal goals, empowerment, inclusion, connectedness and personal responsibility, identity, and hope (Duggal, 2019). Jacob (2015) highlighted that because many people experiencing severe mental illness are unable to regain their previous level of function, recovery approaches are important to ensure individuals are empowered to regain control over their lives. This perspective aligns well with the fundamental principles of occupational therapy, a client-centred intervention.

A Human Rights perspective of depression suggests that a lack of consideration to human rights can result in a deterioration in mental health and suggests improved mental health can result from approaches based on human justice and a civilised society (Porsdam Mann et al., 2016). For example, stigma evident in both healthcare and wider community settings has been found to be a barrier to social participation and employment and can prevent access to care and treatment when required (McNair et al. 2002).

Working within the context of the medical model can pose challenges for occupational therapist who may have to reconcile the conflicts between paradigms in practicing in a client-centred way within settings where the medical model is dominant (Parker, 2006).

Occupational therapists therefore need to be aware of these various perspectives in the field and consider their impact and context within their everyday practice.

### **1.2.3 The impact of depression on function and participation in everyday activities**

Worldwide, depression is the leading cause of disability linked to disease and is characterised by a loss of interest in activities as well as difficulty carrying out everyday activities (WHO, 2020). Functioning within everyday activities can be significantly impaired which can impact on a person's ability to live independently. Psychosocial dysfunction can have significant implications for the individual and their ability to maintain work and social relationships (Bonder, 2010). The level of disruption to function and participation depends on the severity of the depressive episode but can be substantial and can affect participation in everyday activities including self-care, work, social and leisure (Bonder, 2010).

Depression can lead to a vicious cycle of low mood and inactivity where symptoms such as reduced mood, tiredness, and loss of interest result in reduced activity (Lovell and Richards, 2012). The resulting consequence of this can be increased feelings of hopelessness and guilt that can further increase depressive symptoms as the individual has fewer opportunities to experience the positive effects of activity participation, develop confidence, and hope (Unutzer and Park, 2012). The impact of a depressive episode in terms of disruption to function and participation can therefore be severe and affect all areas of a person's life. The disruption can be long lasting, continuing even when depression symptoms start to improve (Daremo et al., 2015) and functional deficits can be at the same or at a higher level as those experienced due to chronic physical conditions (Wells et al., 1989). The measurement of both occupational functioning and participation will be considered in Section 1.4.3.

## **1.3 Occupation and occupational therapy**

### **1.3.1 Occupation**

The word 'occupation' has been defined as "groups of activities and tasks in everyday life, which are named, organised, and given value and meaning by individuals and a

culture” (Townsend, 2002 p3). They are the different activities people do each day, they are fundamental to our everyday lives, help us become who we are and enable us to achieve our life goals (Watson and Fourie, 2004). Occupations are therefore the activities we do every day. They can be associated with work, leisure, and personal care.

*‘Doing things increases our sense of self-worth. If we have nothing to do then we can become very isolated and this works against us. Some of the things we do and benefit from, such as music or singing have no tangible benefit but leave us feeling invigorated and happy.’*

(Service user) (Royal College of Occupational Therapists [RCOT] 2006, p. 9)

To maintain health and normal function, human beings must remain active (RCOT, 2017a). Occupations also form an important part of our identities. Wilcock (1998b) has described the key components of occupation as ‘doing, being and becoming’ to explain how occupation enables us to be who we are, and to become who we want to be. Occupations can be classified in many ways, but occupational therapists routinely categorise occupations as self-care, productivity, or leisure (Law et al., 1990). Self-care activities include getting washed and dressed or cooking a meal. Productive activities can include activities such as work, volunteering, domestic tasks, and caring responsibilities. Leisure activities may include hobbies, interests, and social activities (RCOT, 2020).

Occupation and activity are therefore core concepts of the occupational therapy profession and have been widely defined and discussed throughout the development of the profession. Reilly (1962), for example, explored whether occupational therapy was of sufficient value to patients to warrant provision. She considered the uniqueness of occupational therapy and how occupational functioning can give individuals the power to improve their own lives. Yerxa (1998) considered both research and theoretic literature and concluded that given the opportunity to participate in wider activities, it is within the gift of human beings to improve their own health. In occupational therapy practice, occupation is considered to be both a means, and an end. (Holding, 2011) and the therapeutic use of activity is one of the fundamental beliefs of occupational

therapists (Chandani and Hill, 1990; RCOT, 2017a; Salles and Matsukura, 2016; Taylor and Manguno, 1991), and is routinely used as a treatment medium.

### **1.3.2 Occupational functioning and occupational performance**

Various definitions of the terms functioning, and performance exist. The term functioning is generally understood to mean that something is working or operating. The International Classification of Functioning, Disability and Health (WHO, 2002) define functioning as a broad concept, referring to all bodily functions, including biological and physiological functions, as well as functioning to enable participation in activities or occupations. Within occupational therapy, Trombly (1993) has described how the term occupational functioning can be used to refer to the functional skills associated with and necessary for performing an activity. The wide and varied use of the term function may have contributed to confusion about the occupational therapy role (Baum and Edwards, 1995).

According to the ICF the term performance relates to the activities an individual undertakes within their environment (WHO, 2002). Within occupational therapy the concept of occupational performance has been defined as the undertaking of activities, occupations, and roles within the context of interactions between the person and their environment (Baum, Christiansen, and Bass, 2015). Occupational performance requires functional skills such as physical skills, cognitive skills, and social abilities for it to take place (Duncan, 2011). The term occupational performance therefore refers the act of performing an activity whereas the term occupational functioning refers to the individual's skills or functional abilities that enables them to perform the activity, such as walking, lifting, thinking, and communicating. Other differences in interpretation of these two terms exist, for example, literature searches indicated that outside occupational therapy both occupational performance and occupational functioning are frequently used to refer more specifically to the ability to perform or function within a work or employment role or to refer to vocational rehabilitation, whereas within occupational therapy, most papers use the term occupational performance.

The terms 'occupational functioning' and 'occupational performance' are often used interchangeably by occupational therapists in practice and in the occupational therapy

literature. It has been highlighted that whilst this interchangeability may have contributed to some confusion regarding the two terms, occupational therapists enable people to increase their skills and confidence, and so undertake the activities important to them, increasing their performance and therefore also their functioning (Baum and Edwards 1995).

In relation to both concepts, occupational therapists are trained to consider how the person functions, or performs, within their various occupational roles and helps them to address any difficulties they may have participating in activities that contribute to these roles. Within this thesis, the terms occupational functioning and occupational performance will both be used dependent upon the context of the writing.

### **1.3.3 The concept of participation**

The term participation commonly refers to taking part in something. The International Classification of Functioning, Disability and Health (ICF) defines participation as being involved in a life situation, highlighting that the term 'participation restriction' relates to the problems people face when they are not able to engage in activities of daily life (WHO, 2002). They identify participation as one of the key health-related domains detailing these for both activity and participation (WHO, 2001). For example, in addition to bodily function, the ICF definition also includes the concepts of activity and participation. Similarly, limitation of participation is included in the ICF definition of disability (WHO, 2001).

Within the occupational therapy literature, the term occupational participation has been defined as engagement in meaningful activities (Kielhofner, 2008). The core beliefs of the occupational therapy profession are that both occupation and participation in activity, are important to health and well-being (Wilcock, 1998a; Yerxa 1998). As well as meeting our basic life-sustaining needs, participation in occupation or activity helps us develop and utilise skills and capabilities, interact with others and achieve our goals (RCOT, 2006).

Concerns have been highlighted however regarding the above ICF definition of participation; specifically, there are suggestions that the definition lacks clarity (Khetani

and Coster, 2007) and gives insufficient attention to social and community participation (Piskur et al., 2014). Additionally, whilst the ICF suggests the term activities usually relate to individual functioning and that activities are more likely to be performed alone, the term participation is often associated with doing activities with others (Resnik and Plow, 2009), there are activities often undertaken alone that could be considered as participation, such as travelling and eating (McConachie et al., 2006). It has been highlighted that these different interpretations have led to a lack of consensus on how participation should be measured and challenges relating to this (Section 1.4.3). Within this thesis, the term participation has been used to refer to involvement in any activity meaningful to the individual within their everyday life.

#### **1.3.4 Occupational engagement**

The term engagement has different definitions within and outside occupational therapy. For example, in general terms and in wider healthcare settings engagement may be used to refer to whether an individual is interested or motivated to participate in treatment or therapy (Dewis and Harrison, 2008). The importance of the role of the occupational therapist in engaging service users with mental illness in the occupational therapy process, has been highlighted for them to benefit from the intervention (Creek, 2003). Within occupational therapy the term occupational engagement has been defined as participation in an activity that is meaningful and important to the individual (Hitch, 2009; Polatajko et al. 2007). Occupational therapy theory advocates that meaningful occupational engagement is essential for health and wellbeing (Christiansen et al., 2015) and that an individual's occupational performance results from the interaction between the person, the activity they are engaged in and their environment (Polatajko et al., 2007). The concept of occupational engagement underpins the practice of occupational therapy (Black et al., 2019).

However, as is the case for the term participation, inconsistencies in the definition of engagement have resulted in a construct without a clear definition (Black et al., 2019). It has been highlighted that the terms participation and engagement are sometimes used interchangeably within the occupational therapy profession, but that engagement in an occupation differs from participation because during a period of participation, the

individual's level of engagement with the activity may vary and they may become more, or less engaged whilst still participating (Morris and Cox, 2007). For example, an individual may physically participate in an activity in a passive fashion, such as watching television with little interest in the programme being viewed and, conversely, may be fully engaged in an occupation without actively participating in it (Polatajko et al., 2007) for example by watching a sporting event or theatre performance. It has been noted that the ICF does not refer to the concept of engagement and therefore does not offer a definition. Without agreement on a common definition of the concept appropriate outcome measures cannot be determined and this will continue to be problematic for occupational therapists, both in practice and in research (Black et al. 2019). Within this thesis the term engagement has been used to refer to the act of actively participating in an occupation or activity meaningful to the individual.

### **1.3.5 Occupational therapy**

Reilly (1962) highlighted the importance to society of people being helped to improve their own health through the act of 'doing'. Occupational therapy is a client-centred intervention that considers the impact of occupations on the individual's health and well-being, and how participation in activities that are meaningful to the person can support recovery and wellbeing (Fossey and Bramley, 2014; Nordaunet and Sælør, 2018). Occupational therapy aims to enable people to participate in the daily activities they want or need to do and so improve health, well-being, and quality of life (World Federation of Occupational Therapists [WFOT], 2012). Occupational therapists are skilled at understanding and analysing activities to identify both the demands of the activities and the skills needed to undertake or participate in them (RCOT, 2019). Following assessment of occupational performance to identify participation difficulties and needs, occupational therapists use a range of strategies, techniques, and interventions to help people improve their occupational functioning and participation. In everyday practice, occupational therapists support people to actively engage in activities that will support their wellbeing (Bass et al., 2015), for example, supporting them to build the skills and confidence to re-engage in a hobby, prepare food, get out to the shops, socialise, return to work, or contribute to society. In this thesis, the terms occupational therapy and occupational therapy interventions are used interchangeably



to describe any therapeutic intervention delivered as part of an occupational therapy programme with the overall aim of restoring function and facilitating engagement in activities.

In clinical practice, individualised client-centred occupational therapy is routinely provided to meet any identified needs (RCOT, 2017a). WFOT (2012), defines occupational therapy as an intervention designed to enable participation in activities of everyday life with the goal of promoting health and well-being. Individualised client-centred occupational therapy will include a wide range of therapeutic interventions specifically designed to meet the occupational needs of the individual. Following information gathering and a full assessment to identify specific needs and goals, the occupational therapist will collaboratively with the patient or service user, plan and deliver intervention to meet their specific needs and support them to achieve their therapy goals (Duncan, 2011). In this thesis, the term 'individualised client-centred occupational therapy' will be used to refer to an occupational therapy programme specially tailored to the individual. In some settings, occupational therapists deliver specific interventions (often group interventions) designed and delivered to meet a particular need that several service users may have, this allows some or all of the person's individual needs to be met in a group. This may include vocational rehabilitation groups and cookery groups, for example. In this thesis the term 'specific occupational therapy intervention' will be used to refer to such interventions. Factors that may indicate a need for occupational therapy intervention include: (i) an urgent need for the person to increase their independence in everyday living skills or improve safe functioning (ii) a significant limitation to the range of occupations they are able to participate in (iii) a significant change in, or threat to, their usual roles (Creek 2003; Wilcock, 2006).

Mahaffey et al. (2015) highlight the occupational therapy role as being to support those who need more help than usual to enable them to look after themselves, their homes and to meaningfully engage and participate in their communities. The concepts of occupational performance and participation are therefore important to health and well-being and are crucial to recovery where such impairment is a feature of an illness. The measurement of these concepts will be introduced in Section 1.4.3. As well as

supporting occupational engagement and participation, occupational therapists also use activity or occupation as a treatment medium to meet service users' occupational needs and work towards their occupational goals. Kielhofner (2007), described occupation as a unique tool that has the power to advance the health and well-being of those occupational therapists work with. The therapeutic use of activity is therefore a fundamental component of occupational therapy.

Occupational therapy has been described as a complex intervention because it is multifaceted and there are numerous elements that interact to bring about improvement in occupational participation (Creek, 2003, 2009). Occupational therapy therefore “rests upon the ontological assumption that there is a relationship between engagement in occupation and health” (Blair and Robertson, 2005, p 269). Although participation in activities of everyday life is considered crucial for our development and to give meaning and purpose to life, there are disagreements concerning the definition of participation and how it should be measured. These disagreements relate to the domains that should be included in its measurement (Dijkers, 2010; Khetani and Coster, 2007). This will be further discussed in Section 1.4.3.

Occupational therapy supports people to live their everyday lives, as they would like them to be, to live as they wish and work towards goals that are important and meaningful to them. It has been suggested that those people receiving occupational therapy who are able to understand the link between engagement in meaningful activities and health and well-being, have the most potential to improve their health and well-being through making changes to the way they live their lives (van Niekerk, 2014). Therefore, developing this understanding during therapy is a vital part of the role of the occupational therapist.

### **1.3.6 Models of practice: the theoretical underpinning of occupational therapy**

There are a range of occupational therapy models of practice that provide the theoretical underpinning for occupational therapy practice. In addition to impairment focussed models (or frames of reference) such as psychodynamic, cognitive-behavioural, biomechanical, and rehabilitative models, there are a range of occupation-

focussed models commonly used within occupational therapy practice. For example, the Person, Environment, Occupation Model is a client centred model that theorises that it is the interaction between the person, their environment, and the occupation itself that enables participation to take place and highlights the significance of how these components interact and the congruence between them (Law et al. 1996). Reed and Sanderson's Model of Adaptation through Occupation provides a frame of reference for how an individual adapts to the challenge of engaging in an occupation that is initially new or where it is difficult to achieve mastery, and again emphasises the importance of the interaction between the person and their environment (Schkade and Schultz, 1992). The Kawa model (Iwama et al., 2009) uses the metaphor of a river to describe an individual's journey through life, which may encounter different levels of 'flow' as well as different environments that may increase or decrease flow. There may also be situations that interrupt or block the flow, and resources that may support the individual to progress. The Model of Human Occupation (Kielhofner, 1980) provides a theory for how occupations are performed, considering volition (the individual's motivation), habituation (their habits and roles) as well as the individual's performance capacity, again emphasising the importance of the environments (both physical and social) that occupations take place in.

In the setting where this research study took place, the Canadian Model of Occupational Performance and Engagement (CMOP-E) (Polatajko et al., 2007) is routinely utilised to underpin practice. CMOP-E supports client-centred practice with an emphasis on engagement and identifies self-care, productivity, and leisure as key occupational performance areas which are performed through the interaction of the person's performance components (affective, cognitive, physical, and spiritual, which is central to the model) within the context of the individual's environments (physical, social, institutional, and cultural). The CMOP-E is widely used in practice and research (Sumsion et al., 2011). The Canadian Occupational Performance Measure (Law et al., 1990) an outcome measure directly associated with the COPM-E model, was utilised as the primary outcome measure for this research study (Chapter 4).

### **1.3.7 Occupational therapy in mental health**

In the United Kingdom in the early twentieth century, the first occupational therapy departments were found in mental health hospitals and the role of the occupational therapists who worked within them was to facilitate groups in arts and crafts and to organise recreational activities for both acutely unwell and long-term patients (Paterson, 2014). The role of the occupational therapist in mental health has evolved over time. In its Strategy for Occupational Therapy in Mental Health Services 2007-2017, the Royal College of Occupational Therapists (2006) summarised that occupational therapy intervention is aimed at supporting the recovery of the ordinary lives of people affected by mental illness and that recovery will be provided in partnership with service user and carers. Today occupational therapy is an established intervention routinely offered to people with mental illness including depression, specifically where occupational, functional, or vocational needs are identified (Department of Health [DoH], 2001, 2002; Royal College of Psychiatrists [RCP], 2016, 2020).

### **1.3.8 Occupational therapy practice in community mental health teams**

Occupational therapists routinely work in community mental health teams (CMHTs) in the United Kingdom. However, the role of occupational therapists within such teams varies widely across the UK. In some community teams, occupational therapists work almost exclusively on meeting the occupational, functional, and vocational needs of the service users whereas in other areas occupational therapists work as generic mental health practitioners and 'care-coordinators'. The generic versus specialist role 'debate' has been widely discussed in the literature (Cook, 2003; Culverhouse and Bibby, 2008; Lloyd, King and McKenna, 2004; Michetti and Dieleman, 2014). It has been suggested that service users' recovery may be best supported if occupational therapists are able to focus on delivering occupational therapy (Cook, 2003; Culverhouse and Bibby, 2008) however; staff shortages and capacity challenges mean that this is not always provided to the same extent. This is despite national guidance highlighting the need for occupational therapy to be provided within CMHTs (DoH, 2001, 2002; RCP, 2016, 2020).

## **1.4 Outcomes and effectiveness in occupational therapy**

### **1.4.1 Measuring outcomes and demonstrating effectiveness**

Whilst it has been widely stated that participating in activities or occupations can improve mental health and well-being, there is currently a limited evidence base relating to the effectiveness and impact of occupational therapy in mental health (Section 1.1). From a clinical perspective, occupational therapy services need to deliver high quality, effective interventions, enabling the best possible outcomes for service users, yet there is also a need to routinely measure, demonstrate and promote these outcomes. Evidence to support best practice is essential to ensure the delivery of high-quality effective interventions (WHO, 2004), so that limited NHS resources can be used to achieve the best outcomes for service users, to support their recovery and enable a safe and timely discharge. The need to routinely use outcome measures in both everyday practice and research is also highlighted in the Royal College of Occupational Therapists Code of Ethics and Professional Conduct (RCOT, 2015) and Professional Standards for Occupational Therapy Practice (RCOT, 2017b). Occupational therapy clinical outcomes can be used to support best practice and justify interventions. The Royal College of Occupational Therapists' Position Statement on the use of standardised outcome measures highlights that they are necessary to *"provide credible and reliable justification for the intervention that is delivered"* (RCOT, 2013, p. 1). However, the challenge in occupational therapy is how to measure and compare interventions that are individually tailored to the service user. Chapter 4 will highlight the importance of using measures that are sufficiently sensitive to evaluate individual goals and measure outcomes of a programme of intervention that has been tailored to individual need.

### **1.4.2 Outcome measures in occupational therapy research**

The Royal College of Occupational Therapists encourages the use of standardised outcome measures to support the development of a robust evidence base (RCOT, 2012). Multiple outcome measures can be necessary as occupational therapy is multifaceted and can lead to change in many aspects of a person's presentation and situation (Bagiella, 2009). Core outcome measurement sets are recommended (Williamson et al., 2017) however there is a lack of consensus on which outcome measures are suitable for

occupational therapy intervention studies (Steultjens, et al., 2002). These factors can prevent meta-analysis when systematic reviews are undertaken and therefore occupational therapy researchers are encouraged to consider their choice of measures carefully (Bullock and Bannigan, 2011). This topic will be further explored in the systematic review within Chapter 3 of this thesis.

### **1.4.3 Measurement of occupational functioning and participation**

It is important that there is a good match between the purpose of a research study and the instruments chosen to ensure that outcome research is both valid and useful (Coster, 2013). A diagnosis of depression can often result in functional difficulties and limitations to occupational performance, or activity participation (see Section 1.2.2) and the primary aim of occupational therapy is to increase occupational performance and participation (see Section 1.3.4). The measurement of increased participation and improved occupational functioning are therefore of particular interest for this thesis. The theoretical perspectives relating to the relevance of the concepts of occupational functioning and participation, and their association with health and well-being were presented in Section 1.3.

Measurement of function and participation will therefore be considered along with secondary measurement of depression, health, and well-being. Whilst measures of functioning have been widely considered in the literature (Dronavalli and Thompson, 2015; Fortuna et al., 2018; Fuller, 2011), there is currently a lack of consensus about how the concept of participation should be measured and Section 1.3.3 highlighted that concerns have been raised regarding the ICF's definition of participation. The amount and type of occupational participation is sometimes explored to support and monitor progress in occupational therapy clinical practice and could for example include time-use diaries to monitor increases in occupational participation however, the overlapping definition therefore continues to present challenges in selecting appropriate measurement tools (Babulal et al., 2015).

### **1.4.4 Effectiveness research in mental health occupational therapy**

Knowing whether an intervention is effective is crucial to support recovery, health, and well-being. This information is important both at service user and service provider level

to maximise the impact of limited health resources. The National Institute for Health and Care Excellence (NICE) develop intervention guidelines by considering the key principles of what works and base their recommendations on the best available evidence (National Institute for Health and Care Excellence [NICE], 2014). Their definition of effectiveness is “The extent to which an intervention produces an overall benefit under usual or everyday conditions” (NICE, 2014a p. 21). As highlighted in Section 1.1, there have been repeated calls for further research exploring the effectiveness of occupational therapy in the field of mental health.

Section 1.3.4 has highlighted that occupational therapy is a multifaceted intervention. Researching the effectiveness of occupational therapy is complex. Creek (2009) has articulated that this is because of the difficulty identifying the specific elements that have a positive impact. There have been calls for research to determine the specific components of occupational therapy that are the most effective Lindstrom et al. (2011). Difficulties clarifying what ‘is’ and what ‘is not’ occupational therapy has also been identified as a barrier to research (Creek, 2003). Another significant factor is that experimental designs and the Randomised Controlled Trial (RCT) in particular, are the optimum research design for effectiveness studies (Craig et al., 2008) and there are significant challenges in undertaking RCTs in clinical settings when the intervention being evaluated is routinely offered, and ethical factors often prevent this type of research being utilised. This will be explored in Chapters 3 and 4 of this thesis.

## **1.5 Policy and practice guidance**

NICE provide evidenced-based clinical guidance on the assessment and treatment of people with depression (NICE, 2009, updated 2018). Whilst this guidance does not make specific recommendations about occupational therapy, it does highlight that management of adults with depression should include assessment and support for functional and vocational needs and include a rehabilitation programme if the person has lost their employment and withdrawn from social activities. Additionally, they recommend taking functional impairment into account when considering risk of relapse and referral to a ‘specialist service’ if personal and social functioning is impaired or

vocational support is needed. Whilst these fall under the role and remit of occupational therapists (RCOT, 2006; RCP, 2016, 2020) and occupational therapy might be the appropriate specialist service, this is not specified in the guidance. Given that NICE guidelines are evidence-based and are produced by independent committees using the best available evidence (NICE, 2014a), a significant consequence of the limited evidence for occupational therapy for people with a diagnosis of depression is therefore the limited reference to occupational therapy in the NICE guidance. This further highlights the importance of increasing the evidence base in this area. At the time of writing, the NICE guidance for depression in adults is being updated with an expected publication date of May 2022 (NICE, 2018). The draft version of the updated guidance makes no reference to occupational therapy but again includes guidance on functional, vocational and rehabilitation needs (NICE, 2018). Both the originally published and recently updated Royal College of Psychiatrists Accreditation for Community Mental Health Services (ACOMHS) Standards for Adult Community Mental Health Services (RCP, 2016, 2020) specify that occupational therapists should provide dedicated input into CMHTs to provide occupational assessment and evidenced-based occupational interventions.

## **1.6 Aims and objectives**

### **1.6.1 Aim:**

The aim of this research study is to explore whether occupational therapy is effective in enabling individuals living in the community with a diagnosis of depression, to improve their function and participate meaningfully in their everyday lives.

### **1.6.2 Research questions:**

The study sought to answer the following research questions:

1. Is occupational therapy effective in enabling individuals with a diagnosis of depression, to improve their occupational performance and participation?
2. What impact does occupational therapy have on depressive symptomology?
3. Does occupational therapy improve the quality of life of individuals with a diagnosis of depression?



4. What are the most effective components of occupational therapy from the perspective of service users with a diagnosis of depression?

### **1.6.3 Objectives:**

- To evaluate the current evidence base for the effectiveness of occupational therapy in depression using a systematic review of the literature.
- To evaluate the occupational functioning and participation in activities of everyday life of individuals with a diagnosis of depression before and after occupational therapy intervention, and three months following completion of the intervention.
- To evaluate depression symptomology and quality of life before and after occupational therapy intervention, and three months following completion of the intervention.
- To explore service user perceptions of the effectiveness of occupational therapy in supporting their recovery and their views on what are the most effective components of occupational therapy.

## **1.7 Personal perspectives and subjectivity (Part 1)**

It is vitally important that researchers play close attention to their subjectivity and biases (Cheater, 1987). Reflexivity is the process where a researcher acknowledges their place and continued presence in their research and maintains an awareness of this to critically reflect the research process (Underwood, Satterthwait and Bartlett, 2010). In clinical practice therapists develop skills in reflecting on their presence within the therapeutic process and potential impact upon intervention delivery. Reflexivity is therefore a set of skills that need to be developed by researchers which must include the questioning of their assumptions about people and their needs and difficulties (Taylor and White, 2000). Reflexivity relating to this research study will be discussed in Chapter 4.

### **1.7.1 Professional leadership**

It is necessary to critically reflect to identify and acknowledge how my personal experiences have impacted upon this research to support objectivity, reliability, and

validity throughout the process (Underwood et al., 2010). Motivation for this doctoral research came from personal experience of the challenges of holding an occupational therapy professional leadership position.

Probyn (2003, p. 294) said:

*“The space and place we inhabit produce us”*

As an occupational therapy professional lead, the spaces and places I inhabited within a National Health Service in financially challenging times was the starting point for my doctoral study. Having the responsibility to ensure that service users with occupational needs received occupational therapy in a timely manner in a context of ever reducing resources was a constant challenge. Additionally, the dearth of evidence for occupational therapy in mental health and the associated limited reference to occupational therapy in mental health best-practice guidance, meant that it was increasingly difficult to demonstrate the positive impact of occupational therapy, to ensure this resource was used to meet urgent occupational need rather than being diverted to more generic mental health practitioner tasks (Section 1.3.6).

Section 1.3.6 highlighted that not all staff currently employed as occupational therapists in the mental health field spend all their clinical time delivering occupational therapy due to a rise in generic or generalist working (Fox, 2013). Whilst standards for community mental health services in the UK highlight occupational therapy as essential provision (RCP, 2016, 2020) staff shortages and cost saving initiatives have seen occupational therapy posts cut and therapists spending more time undertaking the generic mental health practitioner tasks, such as care coordination, often seen as a higher priority within services under pressure. The detrimental impact on occupational therapy resources being able to meet service users' occupational, functional, and vocational needs, has been widely reported (Culverhouse and Bibby, 2008). In the United States, this change has impacted negatively upon the quality of patient care, professional identity and multi-disciplinary team working (Fox, 2013).

In the NHS organisation where I worked on commencement of my doctoral studies, austerity measures were exacerbating a health care system already under pressure,

meaning that occupational therapists were frequently required to hold a generic rather than occupational therapy specific caseload. In CMHTs occupational therapists tend to be lone professionals working as part of a multidisciplinary team consisting mainly of mental health nurses and social workers. In cases where a lone occupational therapist undertakes a dual role (both care coordinator and occupational therapist) or picks up additional generic responsibilities, this has a direct impact on the availability of occupational therapy to all service users with the limited specialist resource being further diluted. It is recognised that for people to be effective at work, they must be enabled to “do what they do best” every day (Janke et al., 2015 p1). Generic working does not support this and can result in mental health practitioners delivering interventions they are not experienced in delivering.

Across the Trust the amount of generic working by lone occupational therapists in CMHTs varies from zero to 100%. Individual team managers who have line management responsibility for their occupational therapist, make these decisions based on the staffing levels in their team and their knowledge and understanding of the occupational therapy role and the value they place on it. As a professional lead occupational therapist, it is vital to champion the occupational rights of service users. I worked with team managers to increase their awareness of the occupational therapy role and agree processes and pathways with the aim of ensuring that service users had their occupational needs identified and considered, so that those who needed it could access occupational therapy.

I also worked with those involved in delivering cost-improvement programmes to minimise the impact on occupational therapy posts and limit further impact on the occupational therapy workforce being able to meet service users’ occupational, functional, and vocational needs. Whilst recognising that as a professional lead within a large organisation I was in a position of power, this is in fact relative. This position may have afforded certain privileges, such as some autonomy and that of being able to make decisions and influence the direction of travel of a professional group, however within the organisation the balance of power to support true co-production between managers and professional leads it not always equal. It has been acknowledged that more

attention needs to be given to how relationships within organisations can be mediated to support co-production (Hyde and Davies, 2004).

This personal experience of working for a NHS Trust in financially challenging times where cost-saving initiatives were a regular feature, alongside the challenges of ensuring that service users had their occupational needs identified and met was therefore a key driver for this research study. Reflecting on my work-based pressures at that time; I believe that had a stronger body of research evidence existed regarding the effectiveness of occupational therapy in mental health and had there been increased reference to occupational therapy in NICE guidance, the preservation of the occupational therapy specialist role would have been less problematic, and more occupational therapy interventions would have been delivered.

### **1.7.2 The limited evidence base**

Sections 1.1 and 1.4 have highlighted the limited evidence base for occupational therapy in mental health. In relation to depression, where functional limitation may suggest that occupational therapy may be an obvious intervention choice the limited evidence-base may seem particularly surprising. In addition to the challenges highlighted in Section 1.4.4, occupational therapy is a small profession and has not been as research active as other professions. In the field of mental health, it has been suggested that this is due to more occupational therapists working generically, with fewer opportunities to engage in research specially relating to the profession (Birken et al., 2017). It has been highlighted that occupational therapy sits outside the dominant discourses of medicine and psychology in the field of mental health practice and this can result in a sense of powerlessness which may prevent the occupational therapy perspective being championed (Ormston, 2004). It has also been suggested that occupational therapists struggle with their identity, confidence, and feelings of low status compared with other members of the multi-disciplinary teams due to a lack of clarity of their role (Turner and Knight, 2015) and 'burnout' (Edwards and Durette, 2010). There have been calls for occupational therapists to strive to be more powerful in influencing others and bring about change to ensure the occupational needs of service users are met (Griffin 2001; Melton and Creek, 2006).

I was inspired and encouraged to undertake my doctoral journey, to support the further development of the evidence base, by my own professional lead. Leadership of research in practice is crucial within clinical leadership roles. Within health care, those leaders who can influence, shape, and deliver services are those who will enable the NHS to realise its vision (Scottish Executive, 2006). There have been calls for all occupational therapists, regardless of role or grade, to embrace all leadership opportunities to ensure that the matters of importance to those people whose function and participation is limited (our service users) and to our society, are addressed (Rodger, 2012).

### **1.7.3 Evidence from clinical practice**

In addition to formal research, it is essential for practicing health professionals to demonstrate the effectiveness of their clinical interventions. The occupational therapy service referred to above introduced the routine use of standardised occupational therapy outcome measures in 2010 to ensure outcomes were collected, collated, and demonstrated. The Canadian Occupational Performance Measure (COPM) (Law et al., 2005) was chosen for this routine measurement because it is able to measure change in occupational functioning over a course of occupational therapy intervention (Law et al., 2005) and it supports the review of outcomes from both a functional and quality perspective (Parker and Sykes, 2006). During routine use within this practice setting, occupational therapists anecdotally reported that the COPM supported them to (i) ensure the assessment process is collaborative and occupationally focussed (ii) monitor whether service delivery meets service user's needs (iii) maintain focus on the service user's occupational goals and (iv) provide feedback to the service user about their progress to maintain motivation and promote partnership working. In addition, the routine use of the COPM across all localities was consistently showing positive 'clinically important' change in service users perceived level of occupational performance and satisfaction following occupational therapy intervention. A clinically important change is defined as an increase of two or more points before and after occupational therapy (between their T1 and T2 measurements) (Law et al., 1991). I therefore wanted to test this formally, which was a further driver for this research study.

#### **1.7.4 Depression**

As well as over 25 years experience providing occupational therapy for people with a diagnosis of depression, I have known people personally who have experienced periods of severe depression and have seen (first-hand and outside my professional remit) the disruption to everyday function that depression can bring. None of these people had the opportunity to receive occupational therapy and I strongly believe that support to re-engage in everyday activities and increase participation at home and in local communities is crucial to recovery from depression, and that occupational therapy can facilitate this. My decision to investigate depression for this research study was born out of this professional and personal experience, my understanding that the evidence base on depression was small, and my desire to contribute to the development of this.

Personal perspectives will be further considered in both Chapter 7 and 8.

### **1.8 Summary**

Health services have limited funds and both service managers and commissioning bodies have decisions to make regarding the best way to spend health resources. Practicing occupational therapists and researchers need to better evidence the benefits and outcomes of their interventions to ensure that future service cuts do not result in further reduction in occupational therapy posts to ensure that the occupational, functional, and vocational needs of service users can be met. This study is important therefore as a contribution to the evidence base for the effectiveness of occupational therapy in mental health and for people with a diagnosis of depression.

This chapter has provided information on depression, how it is diagnosed, and the impact of the condition (Section 1.2). It has introduced occupational therapy and key occupational therapy terms (Section 1.3) discussed outcomes, outcome measurement and effectiveness in both clinical practice and occupational therapy research (Section 1.4), policy and practice guidance (Section 1.5) and the study aim, and objectives were stated (Section 1.6). Finally, personal perspectives were introduced in Section 1.7.

## **Chapter 2 Literature Review**

### **2.1 Introduction**

An initial scoping review of the literature found limited published research into the clinical effectiveness or perceived impact of occupational therapy in restoring and maintaining function and participation in people with a diagnosis of depression. A systematic review was conducted to evaluate and synthesise this topic (Chapter 3) and was published in the Journal of Affective Disorders. Since one of the objectives of this thesis was to evaluate the current evidence base for the effectiveness of occupational therapy for people with a diagnosis of depression, this literature review does not include discussion of this; it concentrates instead on the wider literature relevant to this thesis. However, Section 2.3.3 does include information relating to the role of occupational therapy drawn from some of the papers included in the systematic review.

The scoping searches of the literature highlighted that much of the occupational therapy effectiveness research undertaken in adult mental health has been conducted with generic study populations such as ‘severe mental illness’ rather than a specific mental health diagnoses, such as depression or schizophrenia. Section 2.3.4 of this literature review therefore includes effectiveness studies with generic mental health populations. The search strategy is shown in Section 2.2 and results are presented in four categories: (i) the impact of depression on occupational performance (Section 2.3.1), (ii) the benefits of activity participation for people with a diagnosis of depression (Section 2.3.2), (iii) occupational therapy for people with a diagnosis of depression (Section 2.3.3) and (iv) the effectiveness of occupational therapy in mental health (Section 2.3.4). The findings are summarised and discussed in Section 2.4 and finally, the rationale for a systematic review is provided in Section 2.5.

### **2.2 Search strategy**

The search strategy relating to the effectiveness of occupational therapy in restoring and maintaining occupational functioning and participation in people with a diagnosis of depression can be found in Section 3.2.2. The papers for this broader literature

review were obtained through widening search parameters from only ‘depression’ to consider publications with more generic diagnostic terms such as ‘mental illness’ and ‘psychiatric’ as these studies were likely to include people with a diagnosis of depression (Table 1). Intervention key terms included ‘occupational therapy’, ‘self-care’, ‘productive’, ‘vocation’, ‘daily activities’, ‘daily life’, ‘leisure’. The search was narrowed by reducing the number of thesaurus terms used, and not exploding the terms in EMBASE to avoid irrelevant results. Research papers that did not meet the specific inclusion criteria for the systematic review in Chapter 3 but were considered relevant to this wider review are included in this literature review. Finally, additional searches relating to the benefits of activity participation to health and well-being were conducted through searching key words and phrases such as: ‘activity’, ‘occupation’, ‘health’, ‘well-being’, ‘benefits’ and ‘effects’ using university electronic library resources and the use of key websites such as the Royal College of Occupational Therapists, and the American Occupational Therapy Association (AOTA).

**Table 1. Search strategy MEDLINE, CINAHL, AMED, PsychINFO and EMBASE**

<b>Search terms: literature review</b>			
Databases	Search term, group 1 (Diagnosis)	Boolean terms	Search terms, group 2 (Intervention)
MEDLINE CINAHL AMED PsychINFO EMBASE	“mental illness” OR “mentally ill” OR “mental health” OR “psychiatr*”	AND	“Occupational therapy”, OR “Vocational rehabilitation” OR “self-care” OR “Leisure” OR “daily living” OR “life-skills” OR “productive” OR “independence” OR “everyday life” OR “meaningful occupation*” OR “everyday occupation*” OR “daily activit*”



## 2.3 Results

The total number of articles found in this literature search was 1086 (610 once the duplicates were removed). Papers with specific diagnoses other than depression, such as Schizophrenia, Anxiety and Personality Disorder were excluded, as were those that did not specifically relate the information sought. Some of the papers utilised in this review are historical, being older than ten years, but have been included due to the limited number of relevant papers on the topic. In total 86 papers were used to inform this literature review.

This section of the results is organised into four components:

- i. The impact of depression on occupational performance and participation
- ii. The benefits of activity participation for people with a diagnosis of depression
- iii. Occupational therapy for people with a diagnosis of depression
- iv. The effectiveness of occupational therapy for people with a mental illness

### 2.3.1 Section (i): The impact of depression on occupational performance and participation

Depression can result in people experiencing less pleasure associated with the things they do (Bonder, 2010). Severe depression can have a marked impact on everyday functioning and result in an avoidance or inability to participate in everyday activities (Drageset et al., 2011; Malinowski et al., 2017). Over thirty years ago Wells et al., (1989) in a large-scale American study of functioning and well-being in patients with depression, found that compared with eight chronic medical conditions, people with depression can have functional deficits at the same or higher level than people with chronic medical conditions. Data from over 11,000 patients considered physical, social and role functioning, and found associations between limitation in multiple aspects of functioning and well-being. Impairment in task functioning was the most frequently reported reason for symptom-related distress in depression by participants in a qualitative study of eighteen patients (Hanson and Young, 2012), alongside getting things done and a need to accomplish tasks.

### **2.3.1.1 Self-care**

Depression can result in reduced concentration, motivation and energy needed to take part in everyday tasks (Kusznir et al., 1996; RCOT (n.d.)) and can significantly impact a person's ability to care for themselves (Coyle, 2012), and others (Turney, 2011a, 2011b). Creek (2008) used a single case study of an individual with depression to highlight how depression can affect functioning and a person's ability to participate in their everyday activities. She reported that someone experiencing a major depressive episode may give up their everyday activities almost entirely, including personal and self-care tasks. However, as a case study, this represents a subjective account and findings may therefore not be transferable (Bryman, 2012).

Three papers have explored the impact of depression on a person's ability to perform self-care tasks and have considered different aspects of this. Drageset et al. (2011) explored the impact of depressive symptoms among nursing home residents in Norway and the relationship between these symptoms on activities of daily living (ADL) using a cross-sectional comparative design. This study involved 227 residents from 30 nursing homes and reported an association between depression and increased dependence in ADL in residents. Leibold et al. (2014), conducted a qualitative study of 27 people with depression in the USA and explored both activity choice and why participants continued or stopped participating in activities when depressed using semi-structured interviews. The findings highlighted that some participants prioritised their activities to preserve energy for those they perceived to be most important, and some made changes in how they performed or engaged in activities to enable continuance. The reasons why participants continued with activities were identified as: habit/commitment, activities were still gratifying, encouragement from others, forcing themselves, distraction, and the desire to hide their depression from others. Themes for ceasing participation in activities were (i) activities were no longer meaningful (ii) a lack of energy (iii) too physically painful or (iv) to reduce social interaction. The authors acknowledged that the semi-structured interviews took place following recovery from depression which may have influenced participant narratives.

### **2.3.1.2 Productivity**

Depression can significantly affect a person's ability to participate in a wide range of productive activities, including employment (Lerner and Henke, 2008; WHO, 2012). Chapter 1 highlighted that difficulties with work and poor social function are key characteristics of the condition but again, research in this area is limited. A literature review has considered the association between depression, work functioning and productivity (Lerner and Henke, 2008). In terms of work functioning, people with depression were found to have increased absenteeism, increased rates of unemployment and more functional deficits within the workplace. The authors highlighted methodological variations between the studies reviewed meant they were unable to quantify the magnitude of differences. Two other studies have reported an association between depression, unemployment, and job loss (Andreeva et al., 2015; El-Guebaly et al., 2007). The earlier study, (El-Guebaly et al., 2007) found a strong association between mood disorders, lack of employment and work functioning difficulties and noted an increase in absence from work due to mental health difficulties.

The more recent of these, a German study of almost 4000 employees (Andreeva et al., 2015) also found that depression is a significant cause of work loss, and risk of work loss is greater as the severity of the depression increases. Their findings also indicate that women with depression have a greater risk of losing their job than men. The study relied on self-reports, introducing the risk of response bias, potentially reducing validity (Rosenman et al., 2011). This study also highlighted that depression can have a significant economic impact on the individual as well as on the wider society. A Cochrane review exploring return-to-work interventions for people with depression (Nieuwenhuijsen et al., 2014) provided further evidence of wide-ranging workplace functional difficulties such as task performance difficulties, errors, and safety concerns; this review also highlighted the secondary effects of reduced financial security, structure, routine, social contact, and increased fatigue.

### **2.3.1.3 Leisure and social activities:**

Depression can affect every part of life including social relationships (Carriere et al., 2011; Hirschfeld et al., 2002; Kennedy et al., 2007) and the ability to take part in leisure

activities (Blanco and Barnett, 2014; Nimrod et al., 2012). In terms of social functioning, Hirschfeld et al. (2002) found that people with depression had significantly impaired social functioning compared to the general population as supported by Hanson and Young, (2012) and Kupferberg et al., (2016). Hanson and Young (2012) found a link between symptom related distress and impaired social function. Kupferberg et al., (2016) considered findings from a wide range of behavioural and neuroimaging studies relating to social functioning in depression. This study highlighted that people with depression experienced reduced desire for social contact and experienced less pleasure from socialising. Similarly, in a more recent cross-sectional study of 214 patients with both major depression disorder and anxiety, the association between symptom severity, neuro-cognitive impairment, and social occupational functioning was examined (Liu et al., 2019). Associations between both symptom severity and social-occupational function, and between neuro-cognitive impairment associated with depression (such as reduced concentration, memory and thought processes) and social-occupational function were found. The authors highlight they were unable to establish causal relationships due to the study design.

Studies have also shown that impairment in social functioning due to depression may persist following remission resulting in enduring difficulties (Daremo et al., 2015; Kuznir, et al., 1996; Waters, 1995). A review of the literature on social functioning after depression since 1980 (Kennedy et al., 2007) also supported this view. However, the authors highlighted that few outcome studies had been published on the topic and that some of the reviewed studies were of poor methodological quality. It is therefore important that these findings are considered cautiously.

Larson (1990) investigated 15 patients with depression in America and found a correlation between onset of depressive illness and increased participation in passive and solitary leisure activities, such as watching television. She suggested this may be an adaptive behaviour in response to change or stress and highlighted this may interfere with participation in usual routines and roles. It is possible, therefore, that a change to passive and solitary leisure activities could be due to impaired social functioning. Larson's study, however, was a small-scale study and used self-report measures which

may have reduced the validity and generalisability of the findings (Bryman, 2012). This study is over thirty years old, but it is included due to the dearth of more recent research.

### **2.3.2 Section (ii): The benefits of activity participation for people with a diagnosis of depression**

Section 1.3 highlighted the premise that participation in activity is beneficial to health and well-being as one of the theoretical underpinnings of the occupational therapy profession (Wilcock, 2006; RCOT, 2006), along with the assumption that engagement will improve occupational performance (Goldberg et al., 2002). According to RCOT (2006), participation in occupation or activity helps people develop and utilise skills and capabilities, interact with others and achieve goals. Occupational therapists believe that participation in a range of purposeful occupations or activities will support health and well-being and that restriction of occupations can lead to poor physical and mental health (RCOT, 2006). Understanding why and how participation in occupations or activities is beneficial to health and well-being is essential to support evidence-based practice and to improve the outcomes of occupational therapy intervention, yet there is limited information on this topic (Creek and Hughes, 2008).

Prominent occupational therapy academics and authors in the field claim occupation is integral to health and well-being and is enhanced through 'doing' (Wilcock, 2006). Occupation is said to develop our dignity, capabilities, and health (Peloquin, 2007). It has been widely stated that participation in activity is important for identity formation and reconstruction (Peralta-Catipon, 2012; RCOT, 2006; Williamson, 2000). Wilcock (2006) articulated that people commonly identify themselves and others by the things they 'do', that 'doing' things helps them to 'be' and 'become' who they are, and improved health and well-being will result naturally from this interaction. The current literature suggests participating in occupations or activities has the potential to benefit health, including mental health.

The positive impact an activity has on health and well-being is dependent upon a wide range of social and contextual factors (Creek and Hughes, 2008). However, it must be acknowledged that participation in occupation and activities can be detrimental health and well-being. Work-related stress is one example of such an impact. Others include

muscle pain after a strenuous walk or fractured bones through a sporting injury. The concept of a 'dark side of occupation' has also been described, suggesting that some 'anti-social' occupations, activities, or aspects of occupations may not support good health or well-being (Kiepek and Magalhaes, 2011; Twinley, 2013) such as smoking, drug taking or criminality. It is recognised that sometimes the activities we engage in can be harmful to ourselves or others. Whilst it is acknowledged that not all activities or occupations are beneficial to health and well-being, many are considered good for us, and this section will focus on the research into the benefits of activity or occupational participation for people experiencing depression.

Research has shown that recovery from depression can be supported by a person increasing their engagement in activities they consider to be pleasant. Studies have highlighted a relationship between a person's mood and the number of pleasant activities engaged in and supporting an individual with depression to increase their participation in pleasant activities can support recovery (Lewinsohn and Gaf, 1973; Pickett et al., 2017; Ryba et al., 2014). Such interventions, known as 'behavioural activation' and 'activity scheduling' will be further discussed (Section 2.3.3.5).

The benefits of specific types of activities on depression have also been explored:

#### **2.3.2.1 The benefits of physical activities on depression**

The current knowledge base suggests a strong association between physical activities and positive mental health and well-being as highlighted by numerous robust research studies (Firth et al., 2015; Morres et al., 2019), although the absence of a systematic review on the topic is highlighted. For those experiencing depression, physical activity can help the person manage low mood by allowing them to feel more engaged in their life (Pickett et al., 2017). Studies have examined the relationship between exercise and depression. Krivokapic (2016) found that members of a sports club who exercised three times a week had lower levels of depression. Whilst their findings were statistically significant, their sample of over 350 people, which included a control group, was not a clinical sample. This study replicated the findings of an earlier large-scale study by Harvey et al. (2010) who explored whether physical activities have antidepressant and anti-anxiety effects and reported that those who participated in regular physical

activities, including very low intensity activities during their leisure time, were less likely to experience symptoms of depression. The authors also highlighted that social engagement was particularly important in explaining the association between participation in physical activities within leisure time and reduction in depressive symptoms. The large numbers of participants and the use of validated outcome measures are strengths of this study however the outcome measures chosen rely on the self-reports of participants which may reduce validity by introducing response bias.

Babyak et al. (2000) explored the impact of physical activity on pre-existing depressive symptomology incorporating 156 participants with a diagnosis of major depressive disorder. This study found that participation in physical activity can result in a significant reduction in depression symptomology. This was a longitudinal quantitative study, and the authors also reported that the social support provided within the group setting could also have contributed to the positive effects. The study reported significant findings in relation to the association between the physical activity and depression.

#### **2.3.2.2 The benefits of social and leisure activities on depression**

Whilst the above studies highlight the potential benefits of social interaction that took place during the physical activity, research has also focussed on the positive associations between social and leisure activities and depressive symptoms. The evidence base in this area however is less well developed as earlier authors were unable to confirm the association. For example, in a literature review of the effect of leisure participation in the elderly, Fine (2000) highlighted that although there were indications that leisure activity improves depression, limitations in the designs of studies meant it was not possible to draw conclusions. Hitch, Wright and Pepin (2015) in their systematic review on the same topic, concluded that the evidence base is small and highlighted there was insufficient evidence to conclude that participating in leisure activities improves the mental health of older people with depression. Whilst conclusions could not be drawn regarding whether leisure participation improves the mental health of people experiencing depression, this review highlighted the importance of activity choice in optimising the impact of engagement, and suggested that participants' previous

interests, successes and activities identified as meaningful should be the focus of intervention.

A large-scale American study of 25 online communities for people with depression was conducted, using a netnography approach (Nimrod et al., 2012). This study involved analysis of over 9,000 posts. The researchers found that even though participants were aware of the benefits of engaging in leisure on their mental health, the more depressed they were, the less they were able to participate in activities. The researchers also highlighted the effects of the 'vicious circle' (Section 1.2.2) that can result from participation difficulties which further increases depressive symptomology (Teasdale, 1983). Key limitations of this study are that only people who use the internet and on-line communities were included.

More recently, Goodman et al. (2016a, 2016b) and Smallfield et al. (2018) explored the impact of leisure on the symptoms of depression in unemployment and whether lack of leisure participation whilst unemployed increased the risk of poor mental health. They reported a positive association between participation in leisure activities and good mental health in unemployed people and found that all types of leisure activities reduce depressive symptomology but leisure activities that involve social interaction had the most health benefits. Goodman et al. (2016b) also found that participants who structured their time through participation in leisure activities whilst unemployed may reduce their risk of mental ill-health. These findings may indicate that interventions to support positive time use may be a suitable cost-effective intervention to improve mental health. Both studies recruited from an on-line forum where users were paid, leading to selection bias and a sample that may not be representative of the general population.

The beneficial effect of participation in leisure activities has also been studied using qualitative methodologies. Using semi-structured in-depth interviews with eight middle-aged women with mild depressive symptoms in Korea, Kim and Kim (2014) found that participation in leisure activities helps foster positive emotions, strengthen relationships with others and develop coping skills. The limited age-range and severity of depression may however limit the transferability of these findings.



The benefits of more specific activities on depression have also been considered. Culph et al. (2015) explored the benefit to men with depression of participating in 'Men's Shed's', a specific leisure intervention designed to provide an opportunity to socialise whilst participating in woodwork or similar activities. In-depth interviews highlighted the wide range of benefits associated with participation including sense of purpose, improved routines, motivation, and sense of self-worth. This study was a mixed methods study and utilised the Beck's Depression Inventory for the quantitative arm of the study. The authors reported that participation led reduced depression symptomology. However, with no control group, a positive association cannot be made. It must be highlighted that not all participants had a diagnosis of depression, which may mean that this was not a clinically relevant sample and results may therefore not be transferable.

### **2.3.2.3 The benefits of productive activities on depression**

Productive activities include work (both paid and unpaid) domestic tasks, and activities related to education and learning (Law et al., 2005). A productive activity can be any activity that helps to maintain or advance society or the individual (Creek, 2014a), or that makes an economic or social contribution (Canadian Association of Occupational Therapists, 2002). There is strong evidence of a positive association between participation in productive activities and positive mental health and wellbeing (Christie and Smithson, 2017). The role of paid and unpaid employment in promoting and supporting recovery in those experiencing difficulties with their mental health has also been widely acknowledged (Black, 2008; RCP, 2008; Waddell and Burton, 2006). As well as providing an income, work meets psychosocial needs (Dodu, 2005; Waddell and Burton, 2006), and supports identity (Ezzy, 1993; Nordenmark and Strandh, 1999). Being out of work is associated with an increased risk of mental ill health including depression (Black, 2008). The RCOT (2018) highlight that work is essential to good health and a key role of occupational therapy is to support people to stay in, or return to, work.

In an independent systematic review '*Is work good for your health and well-being?*' commissioned by the Department for Work and Pensions, Waddell and Burton (2006) explored the association between work and well-being in relation to a range of health conditions including mental illness. The review included 51 research studies that

specifically considered the impact of work on mental illness. Whilst not limited to studies including participants with a diagnosis of depression, the authors concluded that work helps promote recovery and independence, improves health outcomes, quality of life and overall well-being. A more recent systematic review of 33 studies identified that work is good for health, particularly mental health, and especially depression (van der Noordt et al., 2014). The study reported strong evidence for the protective benefits of work on depression. The findings of this systematic review support the earlier findings of Waddell and Burton (2006).

Research studies have also considered the impact of work and productive activity on older adults. Studies have suggested that those who engage in productive activities after retirement are less likely to experience depression (Choi et al., 2013) and that such involvement can have a positive effect on depression symptomology (Herzog et al., 1998). Using data from 14 European countries, Choi et al. (2013) found that people who are engaged in paid or unpaid work or volunteering, are less likely to experience depression. This study had a sample size of over 7000 participants, however, the narrow age range of participants (all of retirement age and above) mean the findings may not be transferrable to other age groups. Herzog et al. (1998) also highlighted the positive association between productive activities in retirement and depression. The authors assert that the main productive occupations participants were involved in were domestic and household tasks and responsibilities, and volunteering because most participants were retired. This study relied on self-reported data which may have resulted in response bias.

Voluntary work is important because it supports people to positively contribute to society (Young and Passmore, 2007). Studies have endorsed this notion and cite the benefits of non-paid work in supporting well-being and reduced depressive symptomology. Volunteering can be of particular benefit to older people because they may no longer be involved in paid work (Musick and Wilson, 2003). They considered the benefits of volunteering from three waves of an American data set and over 8000 responses. This study reported an association between volunteering and lower depression levels for people over sixty-five and highlights that volunteering improves social connections. A more recent large-scale pan European study of over 10,000 people

over the age of fifty that considered the impact of volunteering on people with depression (Wahrendorf and Siegrist, 2010) had similar findings. Their outcomes suggest that participating in voluntary activities helps well-being in older age. Possible limitations to this study relate to the self-reporting of data.

### **2.3.3 Section (iii): Depression and the occupational therapy role**

This section of the literature focusses on information specific to the role and input of the occupational therapist for people with a diagnosis of depression and includes information from papers that did, and did not, meet the inclusion criteria for the systematic review in Chapter 3.

Regardless of service user diagnosis, the role of the occupational therapist is to enable people to participate in the daily activities they want or need to do. With regard to depression in particular, the Royal College of Occupational Therapists (RCOT, n. d.) highlight the key aim of occupational therapy is to improve motivation and confidence in relation to activities that are important to the individual. This includes managing daily routines, socialising and any responsibilities that person may have, including work. Similarly, the AOTA highlights that life roles that are meaningful to the person with a diagnosis of depression should be the primary focus and intervention should be provided to enable them to re-engage with these (American Occupational Therapy Association [AOTA], 2020). They suggest that occupational therapy assessment should highlight obstacles or barriers to the individual being able to undertake these roles and following this, support the individual to simplify or adapt activities or roles to enhance accomplishment. Also highlighted is the importance of the person developing a healthy balance of activities and a meaningful daily routine (AOTA, 2020).

The only formal systematic review on the topic of occupational therapy and depression took place thirty years ago (Devereaux and Carlson, 1992). The authors highlighted that occupational therapy has a key role for people experiencing depression, because of the focus on behaviour, roles and adaptation. Two case studies and one experiential-reflective paper have explored and described the role of occupational therapy for people with depression. These case studies, also over 25 years old (Custer and Wassink, 1990 and Waters, 1995), highlighted the role of the occupational therapist in the

development and recovery of skills relating to time-use and management, occupational balance, social skills and confidence and work preparation skills. There was also a focus on self-care, productive and leisure occupations. Although case studies, both were published in peer reviewed journals.

Although not a formal systematic review, Hitch et al. (2012) published evidence-based guidance for improving participation and engagement in depression. They acknowledged the absence of clinical guidance for occupational therapists working with people with a diagnosis of depression, and the need to access evidence from a range of disciplines, as such, they developed guidance on assessment and intervention methods to increase engagement and participation in activities. Their recommendations relate to the core dimensions of occupational therapy originally proposed by Wilcock, (2006); doing, being, becoming, and belonging, and include methods of assessment and suggested methods of promoting increased engagement and participation including living skills, stress management, art therapy, life-style counselling and problem solving.

Holding (2011), an occupational therapist who published a reflective case study exploring her own personal experiences of depression, highlighted the following occupational therapy interventions as crucial: (i) educating the person about the importance and benefits of participating in activities; (ii) helping the person identify meaningful roles and activities to engage in; (iii) identify responsibilities or tasks linked to these roles and activities to encourage participation; (iv) identify possible barriers to engaging in current or new roles and activities; and (v) encourage the development of strategies to overcome identified barriers. This was not published in a peer reviewed journal, was not a formal research study and lacked a robust methodology. It is included however because as an occupational therapist experiencing depression, her insights are of value and are in line with national/international guidance stated above.

#### **2.3.3.1 Occupational therapy supporting return to work**

The RCOT (2018) highlighted that a key role of occupational therapy is to support people to stay in, or return to, work. The evidence base relating to occupational therapy specifically to support return-to-work (RTW) for people with depression is further developed and specific roles in relation to this specialist area have been described

through case studies, practice evaluation and effectiveness studies. Three occupational therapy effectiveness studies have evaluated specific occupational therapy interventions designed to support RTW in people with a diagnosis of depression (Hees et al., 2013; Schene et al., 2007; Wisenthal et al., 2018). Whilst these studies meet the inclusion criteria for the systematic review and will be discussed in more detail in Chapter 3 in terms of the effectiveness of the interventions, the occupational therapy role and interventions described in these papers is also relevant to this section of the literature review and so is briefly summarised in Figure 2 below.

- Problem clarification, exploring goals and expectations (Hees et al., 2010, 2013; Schene et al., 2007)
- Assessment including simulation, role-play, and observation (Hees et al., 2010, 2013; Schene et al., 2007)
- Group sessions designed to explore factors impacting on work functioning, including relationships at work and factors relating to home that may interfere with work (Hees et al., 2010, 2013; Schene et al., 2007)
- Liaison with the employer and work-integration planning (Hees et al., 2010, 2013; Schene et al., 2007)
- Commencing work where possible (Schene et al., 2007)
- Graded task simulation to support the individual to improve skills needed for work (Wisenthal et al., 2013, 2018)
- Interventions to improve cognitive skills, often impaired as a result of depressive illness. (Wisenthal et al., 2013, 2018)

**Figure 2. Occupational therapy RTW interventions for depression**

A case study (Radley, 2004) also described the occupational therapy offered to support RTW. Interventions were offered to enhance daily routines, manage self-care tasks, build concentration, and increase stamina. Interventions addressed communication problems and other difficult situations within the workplace, including time management and energy levels. However, this paper was not published in a peer-reviewed journal and lacks a robust methodology affecting the quality of the study including validity, reliability, and replicability (Bryman, 2012).

### **2.3.3.2 Occupational therapy lifestyle interventions**

Occupational therapy lifestyle interventions enable people to participate in their everyday life and support them to have a balanced lifestyle and improved quality of life (Chen et al., 2015, Lund et al., 2019). Chen et al. (2015) described an occupational therapy group lifestyle intervention entitled Life Adaptation Skills Training (LAST), to enable participants with a diagnosis of depression to live a satisfied and balanced life. The intervention consisted of sessions including self-management of illness, stress management, relationship skills, and emotional expression.

### **2.3.3.3 Occupational therapy creative interventions**

Several authors have described the use of creative therapy within occupational therapy for people with depression. Cooper (2013) explored 'Using Writing as Therapy', a structured writing therapy over several sessions which encouraged the use of writing to explore areas such as past experiences, habits, assumptions, difficult times and life choices to support identity development and enhance self-esteem. Edel et al. (2017) described the use of traditional handicrafts as an occupational therapy intervention for people with a diagnosis of depression, stating that in Germany the use of handicrafts is one of the four key occupational therapy interventions. A further creative occupational therapy intervention 'The Tree Theme Method', an intervention for people with anxiety and depression developed in Scandinavia (Gunnarsson et al., 2010, Gunnarsson et al., 2015, Gunnarsson et al., 2018). This intervention incorporates symbolism of a tree to represent different times in a person's life to make and tell stories with the aim of making connections between new and previous identities. These studies did not meet the inclusion criteria for the systematic review in Chapter 3 as it was not possible to separate out the results relating to those participants with depression, however the outcomes are included in Section 2.3.4 below.

### **2.3.3.4 Research on clinician opinion of the role of occupational therapy**

Clinician opinion of the role of occupational therapy for people with depression was explored by Hitch, Taylor and Pepin (2015). Nominal group technique was used to identify the occupational therapy assessments and interventions for people with depression used in everyday practice, to investigate whether these were supported by

research evidence. They found a consensus on 35 assessments and specific interventions considered appropriate for people with depression by practicing occupational therapists. The interventions identified include time-use diaries, writing groups, activity-based groups, skills training, daily living skills, art therapy, engagement in leisure activities, re-establishment of roles and routines, self-management, and lifestyle counselling. They concluded however, that very few of the interventions were supported by evidence relating to the improvement of occupational performance.

The limited evidence for occupational therapy in mental health and for depression specifically, alongside a call for further research, is highlighted widely in the published papers (Chen et al., 2015; Devereaux and Carlson, 1992; Hitch, Taylor and Pepin, 2015). As well as the impact upon practitioners, health providers and commissioners, the limited evidence has additional consequences. Hitch, Taylor and Pepin (2015) highlight that although occupational therapy has been practiced with people who have depression since the dawn of the profession, there is little guidance on best practice and occupational therapists therefore need to draw upon and synthesise evidence from a wide range of sources, such as psychology. Holding (2011) disagrees with this, stating that occupational therapists should focus on the basic principles of their own profession highlighting the importance of using occupation to support people to restructure their lives. Although an opinion piece, she reiterates that occupation is necessary, that people should have physical and mental occupations, occupations they enjoy, and that occupation can be used to heal bodies and minds.

#### **2.3.3.5 Other factors impacting on the occupational therapy role and outcomes**

Research studies have explored a range of other factors that may impact on the role of the occupational therapist when working with people who have depression, such as the optimum time for delivery of interventions and factors that might influence engagement in therapy. Waters (1995) highlighted that if clients are discharged once their depressive symptoms start to improve, they may not have had opportunity to address all the deficits in functioning that resulted from their depression. Similarly, Kuszniir, et al. (1996) found that in some cases, functional problems can continue even when the person is relatively free of depressive symptoms. In terms of the optimum time for

occupational therapy, research has found that a reduction in depressive symptomology and improvement in occupational functioning do not necessarily occur simultaneously (Daremo et al., 2015). Examination of the above research papers suggests that activity adaptation, prioritisation, energy conservation and ensuring that therapists provide time and space for recovery during interventions are important factors for the occupational therapist to consider.

Anticipatory factors relating to occupational performance may also influence treatment outcomes; more specifically that anticipation that something will, or will not, be pleasurable influences motivation to engage in activities. Two studies have explored this. Sherdell et al., (2012) found that someone experiencing depression may still have an interest in an activity, but anticipatory feelings or thoughts that the activity will not be pleasurable may prevent engagement as opposed to a lack of interest in the activity. Similarly, Taiwan, Ay-Woan et al. (2006) found that when depressed, a person's perception of their own competence or ability to perform an activity can negatively affect their overall quality of life, even in the absence of functional deficits. The study by Ay-Woan et al. (2006) had a small sample size with mainly female participants whilst Sherdell et al. (2012) had limited activity choices; both these factors may impact upon the usefulness of the findings which may not be transferable to other situations (Creswell and Plano Clark, 2017). Collectively, however, these studies suggest that when depressed, people may be more likely to continue with activities they find pleasurable and in which they perceive themselves to be competent, highlighting additional factors that may influence the role of the occupational therapist in supporting the individual to engage in occupation (AOTA, 2020).

#### **2.3.4 Section (iv): The effectiveness of occupational therapy in mental health**

According to Steultjens et al. (2005), it is not possible for the effectiveness of occupational therapy in the field of mental illness to be confirmed or denied due to the limited effectiveness research and lack of available evidence. Since the first objective of this research study was to carry out a systematic review of the effectiveness of occupational therapy for people with a diagnosis of depression (Chapter 3), this section of the literature review aims to review and summarise the wider literature on the



effectiveness of occupational therapy in mental health. The initial scoping review highlighted that much of the research into the effectiveness of occupational therapy in mental health has been conducted with participants from a generic population, such as 'severe mental illness' rather than one specific mental health diagnosis. The papers that specifically analyse occupational therapy interventions for depression will be the subject of the systematic review in Chapter 3.

Since 2011, eight systematic reviews and additional primary research studies have explored the effectiveness of occupational therapy interventions in mental health generally, including a range of mental health diagnoses, including depression. As these did not consider different diagnoses separately, it was not possible to draw conclusions relating specifically to depression and therefore they were not eligible to be considered in the systematic review in Chapter 3. These systematic reviews are summarised in Table 2 below. Two included individualised client-centred occupational therapy (Gibson et al., 2011, and D'Amico et al., 2018). Four focused on specific occupational therapy interventions; occupational therapy group work (Bullock and Bannigan, 2011), employment interventions (Arbesman and Logsdon 2011 and Noyes et al., 2018) and Horticultural therapy (Cipriani et al., 2017). Two further studies (Ikiugu et al., 2017 and Wimpenny et al., 2014) included a range of occupational therapy intervention types. Not all the primary research studies included in these systematic reviews were specific occupational therapy interventions, some were occupation-based interventions delivered by non-occupational therapists however all were occupation-focussed. Seven further quantitative studies and one qualitative study were identified that had not been included within systematic reviews (Table 3).

<b>Table 2. Systematic reviews: effectiveness of occupational therapy in mental illness</b>					
<b>Authors (ref.)</b>	<b>Focus of Systematic Review</b>	<b>No. of included studies</b>	<b>Inclusion criteria</b>	<b>Reported Findings</b>	<b>Comments</b>
Arbesman and Lodgeson (2011)	Vocational and educational engagement	46	SMI All settings Age 18-65 All OT	<ul style="list-style-type: none"> <li>• Strong evidence exists for supported employment interventions</li> <li>• The evidence for occupational therapy interventions for activities of daily living, home-making and supported parenting, although positive was limited.</li> <li>• Education programmes that include goal setting, and include a cognitive element</li> <li>• A focus on skill development led to increase participation in educational activities.</li> </ul>	<ul style="list-style-type: none"> <li>• Articles were critically appraised using an appropriate tool.</li> <li>• Lack of clarity around how the authors determined the stated level of evidence reported.</li> </ul>
Bullock and Bannigan (2011)	Occupational therapy group work in mental health	3	Activity-based group interventions	<ul style="list-style-type: none"> <li>• No conclusions were drawn regarding the effectiveness of occupational therapy group work interventions in mental health</li> <li>• The diverse nature of the studies and poor-quality studies prevented this.</li> </ul>	<ul style="list-style-type: none"> <li>• Articles were critically appraised using an appropriate tool.</li> <li>• Good level of methodological detail.</li> </ul>
Cipriani, Benz, Holmgren, Kinter, McGarry and Rufini (2017)	Horticultural Therapy	14	Mental health (in-patient of community)	<ul style="list-style-type: none"> <li>• Eleven of the fourteen studies reported statistically significant findings highlighting a positive association between horticultural therapy and mental health, quality of life or occupational functioning.</li> </ul>	<ul style="list-style-type: none"> <li>• A formal methodology, giving attention to rigour was presented.</li> </ul>

<b>Authors (ref.)</b>	<b>Focus of Systematic Review</b>	<b>No. of included studies</b>	<b>Inclusion criteria</b>	<b>Reported Findings</b>	<b>Comments</b>
D'Amico, Jaffe and Gardner (2018)	Various occupational therapy interventions	61	SMI All occupational therapy areas	<ul style="list-style-type: none"> <li>• Strong evidence for both occupation and cognitive interventions</li> <li>• Strong evidence for psycho-educative interventions.</li> <li>• Moderate evidence for interventions focussed on skill development</li> </ul>	<ul style="list-style-type: none"> <li>• Not all outcomes were considered.</li> <li>• Cochrane guidelines were used to consider rigour and bias.</li> <li>• Lack of detail regarding how level of evidence was determined.</li> </ul>
Gibson, D'Amico, Jaffe and Arbesman (2011)	Life roles and community integration	52	Serious Mental Illness (SMI)	<ul style="list-style-type: none"> <li>• Moderate to strong evidence for the benefits of social skills training,</li> <li>• Moderate evidence for the benefits of life-skills, activities of daily living training, work participation and social participation.</li> <li>• The evidence for the benefits of individualised client-centred occupational therapy, for role development, routine development, and CBT approaches although positive, is limited.</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of detail about their consideration of quality and rigour of the included studies.</li> <li>• Lack of clarity around how the authors determined the stated level of evidence.</li> </ul>
Ikiugu, Nissen, Bellar, Maassen and Van Peurse (2017)	Various occupational therapy interventions (a meta-analysis)	11	Mental illness diagnosis	<ul style="list-style-type: none"> <li>• A medium effect in relation to occupational therapy improving occupational functioning</li> <li>• A small effect on occupational therapy improving wellbeing.</li> </ul>	<ul style="list-style-type: none"> <li>• The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) protocol/Consolidated Standards of Reporting Trials (CONSORT) Checklist were utilised.</li> </ul>

<b>Table 2. Systematic reviews: effectiveness of occupational therapy in mental illness (cont.)</b>					
<b>Authors (ref.)</b>	<b>Focus of Systematic Review</b>	<b>No. of included studies</b>	<b>Inclusion criteria</b>	<b>Reported Findings</b>	<b>Comments</b>
Noyes et al. (2018)	Employment and education	57	SMI	<ul style="list-style-type: none"> <li>• Strong evidence for work interventions based on the Individual Placement and Support model.</li> <li>• Strong evidence for cognitive occupational therapy interventions</li> <li>• Moderate evidence for supported education interventions.</li> </ul>	<ul style="list-style-type: none"> <li>• A formal process for consideration of risk of bias and rigour was utilised.</li> <li>• The strength of the evidence was graded using formal guidance.</li> </ul>
Wimpenny, et al. (2014)	Qualitative occupational therapy research studies	22	Mental illness	<ul style="list-style-type: none"> <li>• From a service user and carer perspective, occupational therapists should provide space and time for recovery, rediscovery of former selves, identity development and support participation in communities.</li> </ul>	<ul style="list-style-type: none"> <li>• The study was overseen by three steering groups that included public and patient involvement.</li> <li>• Little discussion about rigor and methodological quality in the paper.</li> </ul>

<b>Authors (ref.)</b>	<b>Sample Size</b>	<b>Setting</b>	<b>Methods/ Design</b>	<b>Occupational Therapy Intervention</b>	<b>Outcomes Measured</b>	<b>Reported Findings</b>	<b>Comments</b>
Kohn et al. (2012)	31	Community	QUANT Single group pretest- posttest	Individualised	Psychological distress	<ul style="list-style-type: none"> <li>Reduction in psychological distress following occupational therapy intervention</li> <li>Findings were 'significant' and 'highly significant' for males</li> <li>The outcomes for females were not statistically significant.</li> </ul>	<ul style="list-style-type: none"> <li>Cause and effect cannot be inferred due to absence of control groups</li> </ul>
Gunnarsson and Eklund (2009)	35	Out-patients	QUANT 'quasi- experimental' used a pretest- posttest methodology	Specific: creative therapy	A range of self-report measures of symptoms, health, and occupational functioning	<ul style="list-style-type: none"> <li>A correlation between the therapeutic relationship and improved outcomes (symptom reduction) and client satisfaction.</li> <li>Positive changes to occupational functioning and health.</li> </ul>	<ul style="list-style-type: none"> <li>As above</li> </ul>
Sherring et al. (2010)	43	Community Mental Health Team	QUANT	Specific: vocational intervention	Employment status	<ul style="list-style-type: none"> <li>77% of participants achieved competitive employment.</li> <li>60.6% still in employment at the end of the two-year period.</li> </ul>	<ul style="list-style-type: none"> <li>Young people in first 5 years of illness.</li> <li>May not be representative of wider population</li> </ul>

<b>Table 3: Other primary research studies (occupational therapy in mental health) (cont.)</b>							
<b>Authors (ref.)</b>	<b>Sample Size</b>	<b>Setting</b>	<b>Methods/ Design</b>	<b>Occupational Therapy Intervention</b>	<b>Outcomes Measured</b>	<b>Reported Findings</b>	<b>Comments</b>
Chuang, et al. (2015)	58	Recently discharged from in-patient setting	QUANT: retrospective cohort study	Specific: vocational intervention	Employment status	<ul style="list-style-type: none"> <li>79.3% of participants in employment (sheltered, supported or regular employment) following completion of the programme.</li> <li>69.0% in employment at 6-month follow up</li> </ul>	<ul style="list-style-type: none"> <li>The absence of control groups in these studies mean that cause and effect cannot be inferred.</li> </ul>
Eklund, et al. (2017)	226	Community and out-patient psychiatric settings	QUANT: cluster randomised controlled trial	Specific: lifestyle intervention	Activity participation and well-being	<ul style="list-style-type: none"> <li>Effective, in comparison with control, regarding activity participation, balance, function, symptom severity.</li> <li>Improvements in satisfaction and self-rated health were not greater than the control group.</li> </ul>	<ul style="list-style-type: none"> <li>Cluster randomisation ensured allocation concealment.</li> <li>No blinding but participants and research assistants were unaware of treatment allocation at start</li> </ul>
Van der Haas & Horwood (2006)	18	Community Mental Health Team	QUAL:	Individualised	Perceived effectiveness	<ul style="list-style-type: none"> <li>Indication that therapy had contributed to increased confidence, personal development, improved satisfaction with occupational participation</li> </ul>	<ul style="list-style-type: none"> <li>Very low response rate (15%)</li> </ul>

<b>Table 3: Other primary research studies (occupational therapy in mental health) (cont.)</b>							
<b>Authors (ref.)</b>	<b>Sample Size</b>	<b>Setting</b>	<b>Methods/ Design</b>	<b>Occupational Therapy Intervention</b>	<b>Outcomes Measured</b>	<b>Reported Findings</b>	<b>Comments</b>
Gunnarson et al. (2018)	117	Community/ Out-patients	QUANT: RCT	Specific: creative therapy	Functioning and satisfaction with activities in everyday life	<ul style="list-style-type: none"> <li>No significant differences found between the two groups (both groups reported positive outcomes).</li> </ul>	<ul style="list-style-type: none"> <li>Block randomisation. Single-blinded to participant and therapist until first outcome measure completed.</li> <li>Blinded to research assistant throughout the study.</li> <li>Participants were mainly women, so findings may not be generalizable to men.</li> </ul>

Seven categories of occupational therapy interventions were identified from both the systematic reviews and the primary studies: (i) occupational therapy group work, (ii) cognitive, behavioural, and psycho-educational interventions, (iii) vocational interventions, (iv) skill development, (v) activity-based interventions including creative therapy, (vi) lifestyle interventions, (vii) individualised client-centred occupational therapy and (viii) reviews not able to be classified by intervention type. These broad categories are used only to support the structure of this review; it is acknowledged that interventions may fit into more than one of the categories above.

#### **2.3.4.1 Occupational therapy group work,**

Only one systematic review considered occupational therapy group work. Bullock and Bannigan (2011), found only three studies meeting the review inclusion criteria following their review of 136 papers. They concluded they were unable to draw conclusions regarding the effectiveness of activity-based group work interventions in mental health because of the diverse nature and poor quality of the studies.

A small number of primary research studies have considered the benefits of different types of occupational therapy group work. In a qualitative study involving 145 participants, Hasson-Ohayon et al. (2006) evaluated psychosocial intervention groups for people with severe mental illness comparing verbal (psycho-educational) with activity-based therapy (a karate group and an aerobic exercise group as the control). The reported findings from interviews with participants were that activity-based groups were more effective than verbally based (discussion/educative) group. They highlighted the karate group activity had greater benefits than the verbal group, with greater cognitive and physical benefits, resulting in an increased sense of self-control and empowerment. Sundsteigen et al. (2009) in another quantitative study explored patient's direct experience of occupational therapy groupwork and how this effects functioning within daily occupations and changes in this over time. The researchers identified that intervention outcomes were enhanced when participants engaged actively rather than passively.



#### **2.3.4.2 Cognitive, behavioural, and psycho-educational occupational therapy interventions**

A systematic review by Gibson et al. (2011) included several studies that considered the effectiveness of cognitive-behavioural or neurocognitive approaches to skills such as prevocational training, activities of daily living and interventions to improve social functioning. The review concluded that the evidence relating to the use of cognitive-behavioural techniques in the areas of work, activities of daily living and social participation is moderate to strong. A more recent systematic review (D'Amico et al., 2018) found strong evidence for psycho-educative interventions and interventions to develop and maintain skills in activities of daily living.

Appraisal of Gibson et al. (2011) shows that although critical appraisal is mentioned, consideration of quality and rigour of the included studies is not explicitly stated. Their results are combined into themes and presented descriptively, but it is not clear how the authors determined the stated level of evidence reported which may have introduced bias, potentially impacting on the reliability and validity of the conclusions (Møller and Myles, 2016). D'Amico et al. (2018) only considered an eight-year period and only research studies that focused on occupational were included. This means that any effectiveness studies that used symptom reduction or improvement in mental state as outcomes were not included. D'Amico et al. (2018) did use Cochrane guidelines to consider rigour and bias. Due to heterogeneity, the results were not combined but presented either descriptively or with *p* values as appropriate. However, similarly detail is not given regarding how the stated level of evidence was determined. The varying dependent variables and outcomes being explored in these three systematic reviews mean that comparison and synthesis is not possible.

#### **2.3.4.3 Vocational interventions**

Two systematic reviews have focussed on vocational and/or educational occupational therapy interventions. Arbesman and Lodgeson (2011) concluded that strong evidence exists for supported employment interventions and that supported-education interventions can lead to increased participation in educational activities. They also highlighted that those education programmes that include goal setting, a cognitive element and skill development, lead to increased participation in educational activities.

Again, there is a lack of clarity however, around how the authors determined the stated level of evidence. Another systematic review focussing on specific employment and educational interventions (Noyes et al., 2018), reported similar findings, highlighting strong evidence for the effectiveness of work interventions based on the 'Individual Placement and Support' model, and moderate evidence for the effectiveness of supported education interventions by occupational therapists. This review detailed their formal process for consideration of bias and rigour and graded the strength of the evidence using stated guidance.

Two further primary research studies have considered the effectiveness of specific occupational therapy vocational interventions, both with positive findings relating to the numbers of people in employment by the end of the study and those who had sustained this at follow up. Sherring et al. (2010) explored the effectiveness of an occupational therapy specific supported employment programme for people with severe mental illness. Forty-three participants were involved in the programme and outcomes were monitored for a two-year period. The reported outcomes were that 77% of participants achieved competitive employment with 60.6% still in employment at the end of the two-year period. The study authors report their results were consistent with other (non-occupational therapy) supported employment research and highlight this as a suitable approach when co-location of mental health and formal vocational services is not possible. As the study targeted young people in their first five years of illness, the outcomes may not be representative of the wider population with mental illness (Bowling, 2014). More recently, Chuang et al. (2015) conducted research on an occupational therapy vocational intervention for people with severe mental illness and reported similar findings. This Taiwanese retrospective cohort study of 58 participants evaluated a prevocational training programme for people who had recently been discharged from a mental health inpatient hospital. This study, which did not have a control group and lacked randomisation, reported that 79.3% of participants were in employment (sheltered, supported or regular employment) following completion of the programme with 69.0% in employment at the 6 months follow up.

#### **2.3.4.4 Skill development**

In terms of skill development, moderate to strong evidence has been found for social skills training and interventions relating to social participation through systematic reviews (D'Amico et al., 2018; Gibson et al., 2011). Both reviews reported variation relating to the skill being considered. These reviews included interventions that aimed to develop specific skills, such as assertiveness. D'Amico et al. (2018) reported studies had found significant improvement in participant's community living skills and social skills through weekly skill-based occupational therapy interventions. A further systematic review (Arbesman and Logsdon, 2011) reported strong evidence for specific manualised role-development interventions that aim to develop and maintain skills necessary for the maintenance of meaningful roles. They also reviewed other occupational therapy skill development interventions and reported the evidence for occupational therapy interventions for activities of daily living, home-making and supported parenting although positive, was limited.

#### **2.3.4.5 Activity-based leisure interventions**

D'Amico et al. (2018) highlighted moderate evidence for leisure-based interventions. Studies explored interventions that encouraged increased engagement in leisure pursuits. However, findings suggest that increased engagement was not sustained in the longer term. Another leisure activity intervention (Cipriani et al. 2017) considered horticultural interventions generally (not just occupational therapy horticultural interventions). Eleven of the fourteen studies included in this review reported statistically significant findings highlighting a positive association between horticultural therapy and either mental health, quality of life or occupational functioning. The authors used a formal methodology however the results were presented individually and were not combined through meta-analysis due to the high number of dependent variables across the included studies.

An occupational therapy intervention known as the "The Tree Theme Method" (TTM), a creative therapy designed to help people explore life stories that was described in Section 2.3.3 (occupational therapy for depression) above has also been evaluated for its effectiveness (Gunnarsson and Eklund, 2009). The study, which highlighted symptom

reduction as an outcome, was studied using a range of self-rating instruments. Patient acceptability and qualitative outcomes were considered and a correlation between the therapeutic relationship and symptom reduction and client satisfaction were reported, as well as positive changes to occupational functioning and health. This study was described as quasi-experimental and used a pretest-posttest methodology without a control group. In a later study of the same intervention, Gunnarson et al. (2018) used a formal RCT design to compare TTM to occupational therapy treatment as usual for people with depression or anxiety, however no significant differences were found between the two groups with both reporting positive outcomes.

#### **2.3.4.6 Lifestyle interventions**

Two systematic reviews (D'Amico et al., 2018; Gibson, et al, 2011) reported positive findings for lifestyle and daily living skills interventions with the former review reporting moderate evidence of effectiveness and the latter reporting strong evidence. D'Amico et al. (2018) highlighted that the evidence for interventions which address individualised ADL was particularly strong. Included studies explored life-skills, community participation, self-care, shopping, cooking, and other activities. A cluster RCT (Eklund et al., 2017) furthered the evidence-base in this area. This study was conducted to measure the effectiveness of a specific occupational therapy group life-style intervention with people who have a mental illness. It was designed to encourage activity balance and engagement and support the development of a meaningful lifestyle. This specific occupational therapy intervention was compared to standard occupational therapy (treatment as usual). The findings for the intervention group were reported as effective compared to the control group, however subjective perceptions including participant's satisfaction with their participation in activities, and self-rated health and well-being, were not greater than the control group. This study ensured allocation concealment. There was no blinding but both participants and research assistants were unaware of treatment allocation at the start which enhances the study value in relation to treatment effects (Creswell, 2014).

#### **2.3.4.7 Individualised client-centred occupational therapy.**

As described in Chapter 1, occupational therapy is routinely provided as an individualised intervention designed to meet the specific occupational needs of the individual. The systematic review by D'Amico et al. (2018) highlighted that the evidence where interventions address individualised need was particularly strong; conversely, the systematic review by Gibson et al. (2011) concluded that the evidence for the effectiveness of individualised occupational therapy, although positive, is limited.

Two further research studies, one quantitative and one qualitative, not included in the above systematic reviews, have explored individualised occupational therapy for those experiencing mental ill health. Kohn et al. (2012) evaluated outcomes following individualised occupational therapy intervention provided in home or community settings through a single group pre-test post-test quantitative design. They reported a reduction in psychological distress following occupational therapy intervention using the Kessler Psychological Distress Scale K10. These outcomes were reported as 'significant' and 'highly significant' for male service users, however the outcomes for female service users were not statistically significant. Whilst this study reports positive findings, the absence of control group mean that cause and effect cannot be inferred (Craig et al., 2008). In a qualitative study examining the impact of individualised occupational therapy in a community mental health team setting, Van der Haas and Horwood (2006) gathered data on perceived effectiveness by service users. Despite a low response rate (15%), participants reported that occupational therapy had contributed to increased confidence, personal development, and improved satisfaction with their occupational involvement. These additional primary research studies, although of interest, do not add to the findings of the systematic reviews because the research designs did not support the inference of cause and effect.

#### **2.3.4.8 Systematic reviews that cannot be classified by intervention type**

Finally, two systematic reviews explored a range of occupational therapy interventions. In 2014, Wimpenny et al. conducted a research synthesis of qualitative effectiveness studies in mental health to identify which interventions used by occupational therapists are considered effective by service users. The study was overseen by three steering

groups that included public and patient involvement. Some of the 22 studies related to adult mental health (some involved child participants). The findings suggest that from a service user and carer perspective, for an intervention to be considered effective, occupational therapists need to provide space and time for recovery, rediscovery of former selves, identity development and provide support to participate in communities. There was, however, little discussion about rigor and methodological quality (Long and Johnson, 2000).

The second, a relatively recent systematic review (Ikiugu et al., 2017) included a meta-analysis of 11 RCTs. Papers exploring a range of occupational therapy interventions were included and a meta-analysis is presented. The reported findings were a medium effect in relation to occupational therapy improving occupational functioning and a small effect of occupational therapy improving wellbeing. The authors followed a formal methodology and noted that their quality appraisal process had identified under-reporting of the PRISMA criteria suggesting that the reported effect sizes should be considered cautiously. Whilst the information from these two reviews cannot be combined into the categories of intervention types described in Sections 2.3.4.1 to 2.3.4.7, they provide some indication of the positive impact of occupational therapy interventions on improving occupational functioning and well-being and add a service user and carer perspective regarding the aspects of an intervention that are considered to make an intervention effective.

#### **2.3.4.9 Summary of the evidence on the effectiveness of occupational therapy in mental health**

This section of the literature review has focussed on the effectiveness of occupational therapy in mental health and has considered both individual (client-centred) interventions as well as more specific occupational therapy interventions. The following is a summary of the evidence from a synthesis of the reported findings of the systematic reviews and meta-analyses as well as the additional papers discussed above, taking into account the quality of these reviews and papers.

- There is strong evidence for the delivery of cognitive interventions and psycho-educative occupational therapy interventions (D'Amico et al., 2018, Noyes et al., 2018).

- There is moderate to strong evidence to support occupational therapy social skills training (Gibson et al., 2011).
- There is moderate to strong evidence for occupational therapy supported employment interventions (Arbesman and Lodgeson, 2011; D'Amico et al., 2018; Gibson et al., 2011; Noyes et al., 2018).
- There is moderate evidence for the provision of life-skills interventions by occupational therapists (Gibson et al., 2011).
- There is moderate evidence for occupational therapy improving function (Ikiugu et al., 2017).
- There is moderate evidence to support occupational therapy interventions focussed on skill development (D'Amico et al., 2018).
- There is moderate evidence for the effectiveness of occupational therapy supported education interventions (Noyes et al., 2018).
- There is limited to moderate evidence to support occupational therapy interventions for activities of daily living (Arbesman and Lodgeson, 2011, Gibson et al., 2011).
- There is limited but positive evidence to support individualised occupational therapy (Gibson et al., 2011).
- There is limited evidence for occupational therapy improving well-being (Ikiugu et al., 2017).
- There is limited evidence to support occupational therapy interventions for home-making and supported parenting (Arbesman and Lodgeson, 2011).
- There is a positive association between horticultural therapy and either mental health, quality of life or occupational functioning (Cipriani et al., 2017).
- Additional RCT findings by Eklund et al. (2017) provided further evidence for occupational therapy life-style interventions supporting improvement in activity participation, balance, function, and symptom severity, in comparison with their control group.
- Additional, qualitative findings by Wimpenny et al. (2013) suggest that for an intervention to be considered effective, occupational therapists should provide

space and time for recovery, rediscovery of former selves, identity development and support to participate in communities.

In terms of the above reported level of evidence, only one of the systematic reviews discussed in this literature review (Noyes et al., 2018) provided detail about the method they used to determine their stated level of evidence, for example, 'strong', 'moderate' or 'limited'. They used the guidelines of the U.S. Preventive Services Task Force who provide evidence-based guidelines for health clinicians (Petitti et al., 2009). This method which is based on the number of included studies of particular types such as the number of RCTs, is similar to the method used by Steultjens (2002). Steultjens' method has been selected for use for the systematic review within this thesis (Chapter 3) to ensure a robust process and is detailed in Section 3.2.4. Whilst it is possible that other systematic reviews used a similar process, this is not explicitly stated, and the above findings should therefore be considered cautiously.

## **2.4 Summary**

This chapter has detailed a search strategy (Section 2.2) as well as the results of a literature review on the wider literature relevant to this thesis. The review was presented in four sections: (i) the impact of depression on occupational performance (Section 2.3.1), (ii) the benefits of activity participation for depression (Section 2.3.2), (iii) depression and the occupational therapy role (Section 2.3.3) and (iv) the effectiveness of occupational therapy in mental health (Section 3.2.4). Section 2.3.1 highlighted that the functional difficulties for someone experiencing a depressive illness can be severe and wide ranging, with the potential to affect all aspects of their life. The person's underlying depressive symptoms, such as reduced concentration and poor motivation, have been identified as playing a large part in these functional difficulties. Research has shown that these functional difficulties can lead to wider consequences such as reduced quality of life, loss of personal relationships and employment difficulties.

The benefits and importance of activity participation were described in Section 2.3.2. Activity participation has been deemed necessary for identity formation and



reconstruction and supports confidence building, social skills development, responsibility taking as well as structure and routine building. Furthermore, it can support the individual to find hope and meaning alongside an improved sense of well-being. Activities considered meaningful to the individual have been identified as providing the most benefit and whilst what is meaningful is subjective, activities highlighted as likely to be meaningful include vocational activities, reading, activities that facilitate creative expression and those associated with roles valued by the individual. The limited information on the topic of why and how participation in occupations or activities is beneficial to health and well-being was highlighted as a gap in the literature.

Except for those studies exploring the occupational therapy role in supporting return-to-work, only a small number of research studies and case studies have considered the role of occupational therapy for people with depression. This literature review has highlighted that building self-confidence and motivation are key roles of the occupational therapist, so that re-engagement in former activities and roles, or commencing new ones can follow. Social skills training has been identified as important, particularly if the depressive episode has been long lasting, as is a focus on responsibilities such as work or carer roles and interventions supporting a balanced lifestyle. The role of the occupational therapist in working with service users to identify current and potential obstacles to engagement, to formulate a plan and ensure healthy patterns of occupation has also been highlighted, as have additional factors that might influence engagement in occupational participation.

In terms of effectiveness studies relating to people with severe mental illness, Section 2.3.4 has reported and described the occupational therapy research papers, and systematic reviews that have been published. Whilst some studies report positive effects of occupational therapy, methodological challenges, for example the lack of control groups and inconsistent findings, limit the conclusions that can be drawn. Some researchers have investigated very specific occupational therapy interventions, such as creative therapy, lifestyle interventions, vocational interventions, or occupational therapy groups. Some have compared these specific interventions with treatment as usual (TAU) (occupational therapy as routinely provided in the setting). Although some

studies reported positive changes, others concluded that the difference between the intervention and control groups were not significant in terms of positive outcomes, for example improvement in mental health, reduction in symptoms or increase in level of function or activity engagement. Qualitative studies have reported insights relating to factors that can enhance outcomes during therapy such as participant engagement, interaction with others, and the therapist's attitude and behaviour.

The limited evidence has indicated that occupational therapy is effective in supporting increased function and activity participation, reduced symptomology, improved mental health, skill development and improved vocational and educational outcomes. Overall, the findings of this literature review suggest the evidence for leisure-based occupational therapy interventions is less well developed than other occupational interventions and more research is needed to strengthen the evidence base. Other gaps in the research have been highlighted such as the optimum time during an episode of depression for occupational therapy to be most beneficial and which interventions provide the most benefit or efficacy. Whilst the effectiveness of occupational therapy group work has yet to be evidenced and further research into the topic is urgently needed, qualitative studies have suggested that service users find experiential activity-based groups of more benefit than discussion type groups in terms of improved physical, cognitive and psychological benefits.

The effectiveness studies relating specifically to people with a diagnosis of depression will be discussed in the systematic review in Chapter three.

## **2.5 Rationale for a systematic review**

Previous systematic reviews have been completed in related areas including occupational therapy interventions and community integration and life roles of adults with serious mental illness (Gibson et al., 2011); occupational therapy interventions in the treatment of people with severe mental illness (Höhl et al., 2017); and the effectiveness of occupational therapy group work interventions for people with mental health problems (Bullock and Bannigan, 2011). Whilst these reviews have included

people with depression, they also included participants with a wide range of diagnoses, and it is not possible to draw out specific results relevant to depression. A Cochrane review in 2014 (Nieuwenhuijsen et al., 2014) looked at interventions to help depressed people resume work, and this did include occupational therapy papers. However, this was a specific 'return to work' review and did not explore the wider impact of occupational therapy on everyday function and wider participation.

There is a dearth of published research exploring the effectiveness of occupational therapy in mental health generally and depression specifically. It was therefore deemed necessary to carry out a systematic review to ensure that all pre-existing knowledge was identified, quality appraised and evaluated to identify the gaps in the field and inform future research. The following chapter presents the systematic review, which was published in the *Journal of Affective Disorders* in January 2021.

## Chapter 3 Systematic Review

### 3.1 Introduction

The overall aim of this thesis was to evaluate the effectiveness of occupational therapy in enabling adults with depressive illness to improve and maintain their occupational functioning and meaningful participation. Chapter 2 of this thesis has highlighted the dearth of published research and systematic reviews on this subject and the need to identify pre-existing research to clarify gaps in the current body of evidence. Chapter 2 has also highlighted that no systematic reviews to date have focused on the effectiveness of occupational therapy for people with depression. There have been few systematic reviews exploring occupational therapy in mental health generally. Where there is a limited body of empirical research on a topic, it is particularly important to identify all existing knowledge to further understand the gaps in the evidence base prior to undertaking primary research (Khan et al., 2011).

This systematic review sought to answer the question: Does occupational therapy improve function and participation in activities of everyday life in adults with a diagnosis of depression? The rationale for this specific question was that although the aim of occupational therapy is to improve health and well-being, occupational therapy achieves this primarily through improving occupational performance to enable improved occupational participation (Chapter 1). Function and participation were therefore considered the most appropriate primary outcomes however due to a dearth of studies; all outcomes were considered as detailed in Section 3.2.1.

This chapter presents a systematic review published in the *Journal of Affective Disorders* in January 2021 (Appendix 1):

Christie, L., Inman, J., Davys, D. and Cook, P.A. (2021). A systematic review into the effectiveness of occupational therapy for improving function and participation in activities of everyday life in adults with a diagnosis of depression. *Journal of Affective Disorders* (282), 962-973. <https://doi.org/10.1016/j.jad.2020.12.080>

Section 3.2 will discuss and describe the methodology of this systematic review including the eligibility criteria (Section 3.2.1), search strategy (Section 3.2.2), selection process (Section 3.2.3), quality appraisal (Section 3.2.4) and data extraction (Section 3.2.5). The results are presented in Section 3.3; with retrieval process (Section 3.3.1) details and the characteristics of the included studies and occupational therapy interventions evaluated are provided in Section 3.3.2. The methodological quality of included studies is described in Section 3.3.3 and an analysis of the outcomes of the effectiveness of the occupational therapy interventions is provided in Section 3.3.4. A best evidence synthesis follows in Section 3.3.5. The discussion in Section 3.4 provides a summary of the evidence and strengths and limitations of the included studies and of this systematic review are considered in Section 3.4.1 and 3.4.2 respectively, and finally recommendations for future research are presented in Section 3.4.3. Conclusions are drawn in Section 3.5 regarding the effectiveness of occupational therapy and recommendations are made based on the findings of this systematic review to support further occupational therapy research as well as this thesis.

## **3.2 Methods**

### **3.2.1 Eligibility criteria**

This systematic review was undertaken and is reported in line with the Preferred Reporting Items for Systematic Reviews and Meta-analysis (PRISMA) (Moher et al., 2009) and The Joanna Briggs Institute Reviewers' Manual (Aromataris and Munn, 2017). In line with guidance that systematic review protocols are published on a register when in progress to avoid duplication of research by alerting other reviewers that the review has commenced (Aromataris and Munn, 2017), the review protocol was registered with PROSPERO in March 2018:

[https://www.crd.york.ac.uk/prospero/display\\_record.php?RecordID=89613](https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=89613), (Christie et al., 2018).

All stages of the review process including selection of studies, quality appraisal and data extraction were independently considered by two reviewers (LC and JI) with

disagreements resolved through discussion and where a consensus was not reached, a third reviewer (DD) was consulted for a majority decision. The PICO model was used to develop the search strategy: the patient/problem (P), intervention/exposure (I); comparison intervention/ exposure (C) and the clinical outcome of interest (O).

The population of interest (P) was adults with a primary diagnosis of depression. The intervention (I) was occupational therapy, defined as an intervention designed to enable participation in activities of everyday life with the goal of promoting health and well-being (WFOT, 2012). This included occupational, functional, and vocational interventions designed to increase function or optimise participation in activities of everyday life, delivered or facilitated by a qualified occupational therapist. The comparison (C) was no occupational therapy.

The outcomes (O) of primary interest were change in level of function or participation in activities of everyday life or change in satisfaction in these. There were no restrictions on secondary outcomes to ensure that all outcomes relevant to practice were included (Khan et al, 2011). Studies relating to children and young people under the age of 18 and people with a diagnosis of organic brain disorder (or a suspected organic cause to their depressive illness) were excluded, as were studies relating to people with bipolar disorder, because this diagnosis is treated separately in the UK's National Institute for Health and Care Excellence Guidance (NICE, 2009, updated 2018) (NICE, 2014b, updated 2020). Only studies in English were included.

### **3.2.2 Search strategy**

The following electronic databases were searched: AMED, CINAHL, The Cochrane Library, EMBASE, MEDLINE, PsycINFO and OT Seeker. The search strategy used the keywords: "Depression" OR "Depressive illness" OR "Affective disorder" OR "low mood" OR "Mood disorder" AND "Occupational therapy", OR "Vocational rehabilitation" OR "self-care" OR "Leisure" OR "daily living" OR "life-skills" OR "skill" OR "productive" OR "independence" OR "participation" OR "everyday life". The inclusion dates for the searches were January 1993 to February 2019. Searches were conducted in March 2017 and repeated in February 2019.

### **3.2.3 Selection procedure**

At stage one, titles and abstracts were screened against the inclusion and exclusion criteria, using full texts if necessary, to identify all potentially relevant papers. At stage two, the full texts of all papers considered potentially relevant by either reviewer were independently examined to determine whether the inclusion criteria had been met. The reference lists of included studies were reviewed for any other eligible studies for completeness.

### **3.2.4 Methodological quality**

The identified quantitative studies were subject to critical appraisal and methodological quality assessment using the following criteria recommended by van Tulder et al. (1997) and further developed by Steultjens et al. (2002). Randomised Controlled Trials (RCTs) and Controlled Clinical Trials (CCTs) were assessed against eleven internal validity criteria, six descriptive criteria and two statistical criteria. For studies to be considered 'high' quality, at least six internal validity criteria, three descriptive and one statistical criterion must have scored positively. Other Designs (ODs), a term used by Steultjens et al. (2002) to refer to all studies that were not RCTs or CCTs, were assessed against seven internal validity criteria, four descriptive criteria and two statistical criteria. For studies to be considered 'sufficient' quality, at least four internal validity criteria, two descriptive criteria and one statistical criterion must have achieved a positive score. The qualitative study was appraised using the CASP Tool for Qualitative Research (Critical Appraisal Skills Programme, 2018).

### **3.2.5 Data extraction, analysis and synthesis**

A standardised pre-piloted data extraction form was used. The data extracted included: inclusion criteria, study setting and population, methodology, intervention and control intervention, intensity, frequency and duration of the intervention and outcomes. Due to studies not being sufficiently homogenous and differences in data reporting, the results could not be combined through meta-analysis (Blundell, 2014). The original aim was to extract the mean (standard deviation) at baseline and the standardised mean difference (95 percent confidence interval) post intervention, as recommended by Steultjens et al. (2002). However, only one paper (Hees et al., 2013) provided this. The

corresponding authors for the other RCTs were contacted twice to request the missing data but no response was received. However, even if it had been possible, meta-analysis would still have been restricted by heterogeneity of outcomes. Due to the wide range of outcomes measured, only one outcome (depression symptomology) could feasibly have been combined across three RCTs. Moreover, these studies evaluated a range of occupational therapy interventions meaning that meta-analysis could not have been conducted for specific intervention types. A best evidence synthesis was therefore utilised as an alternative to meta-analysis (Slavin, 1995), providing a rating for each type of occupational therapy intervention and the level of evidence of effectiveness. The evidence was rated as strong, moderate, limited, indicative or none, replicating the method used by Steultjens et al. (2002), as described in Table 4.

**Table 4. Best Evidence Synthesis**

*(Adapted from Steultjens et al., 2002, with permission)*

<b>Strong evidence</b>	Consistent, statistically significant findings in outcome measures in at least two high quality RCTs*
<b>Moderate evidence</b>	Consistent, statistically significant findings in outcome measures in at least one high quality RCT and at least one low quality RCT or high quality CCT*
<b>Limited evidence</b>	Statistically significant findings in outcome measures in at least one high quality RCT*, or consistent, statistically significant findings in at least two high quality CCTs* (in the absence of high quality RCTs)
<b>Indicative findings</b>	Statistically significant findings in outcome measures in at least one high quality CCT*, or one low quality RCT* (in the absence of high quality RCTs) or consistent, statistically significant findings in at least two ODs with sufficient quality (in the absence of high quality RCTs and CCTs)
<b>No evidence</b>	In cases of results of eligible studies that do not meet the criteria for one of the above-stated levels of evidence, or in case of conflicting results among RCTs and CCTs, or in case of no eligible studies

RCTs=randomised controlled trials; CCTs=controlled clinical trials; ODs=other designs.

\* If the proportion of studies that show evidence is <50% of the total number of studies within the same category of methodological quality and study design (RCTs, CCTs or ODs), we state no evidence

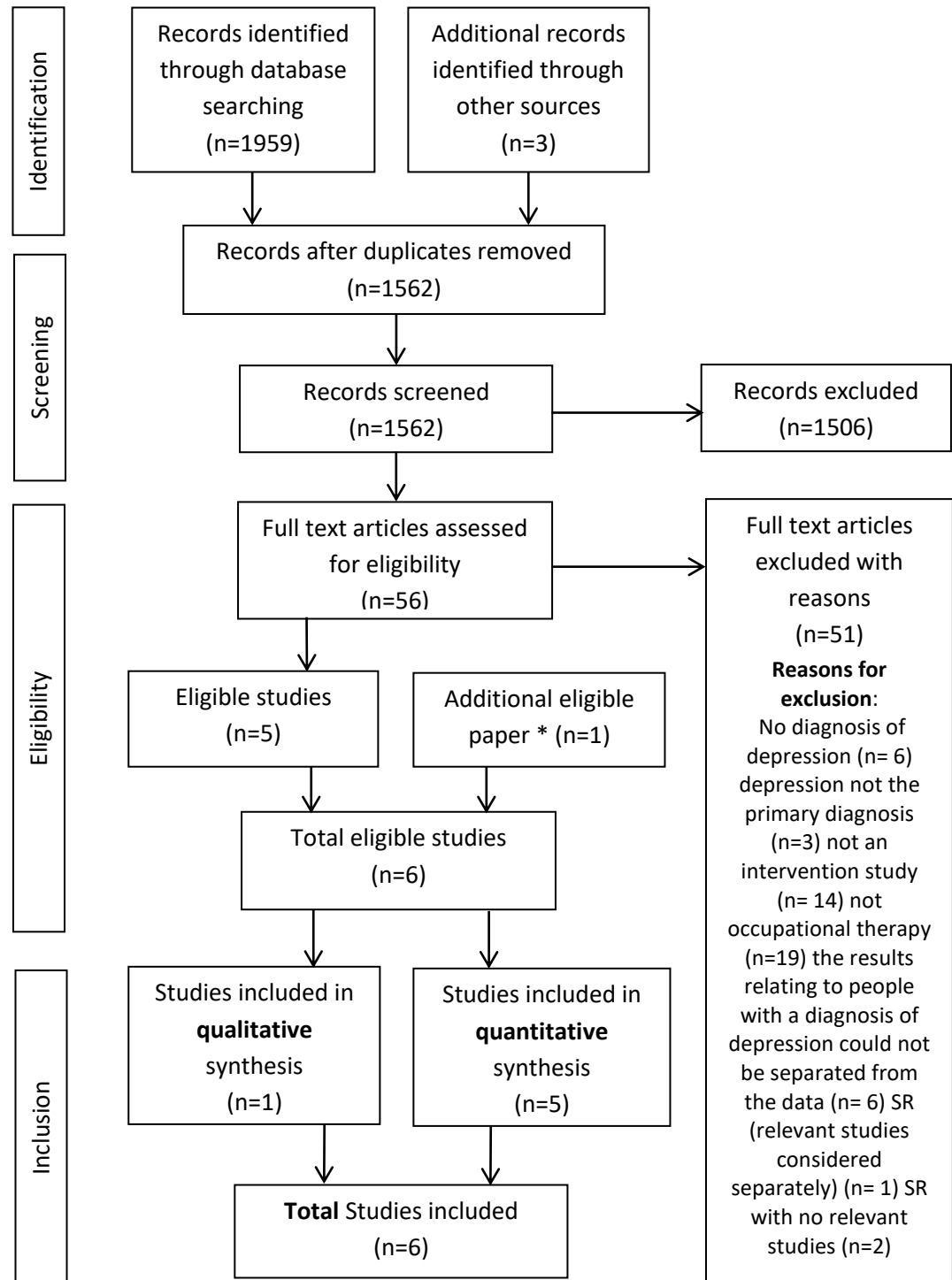
### 3.3 Results

#### 3.3.1 Retrieval of studies

An initial search identified 1962 articles. After removal of duplicates, 1562 articles were screened, and 63 full-text articles were retrieved. 58 studies were excluded at stage two (Figure 3). Five full-text articles were identified as appropriate for inclusion. One further paper was found when searches were re-run in February 2019 (Figure 3). Of the six



studies identified; four were RCTs (Chen et al., 2015; Edel et al., 2017; Hees et al., 2013 and Schene et al., 2007) one a qualitative study (Cooper, 2013) and one a mixed methods study (Wisenthal et al., 2018).



**Figure 3. Flow diagram**

\* One additional paper was found when the searches were re-run in February 2019.

### **3.3.2 Characteristics of studies**

Studies were carried out in Canada, Germany, the Netherlands, Taiwan, and the UK and represented a total of 374 participants. All included studies evaluated specific occupational therapy interventions, rather than the individualised client-centred occupational therapy most commonly provided in everyday practice. The mode of delivery of all included interventions was primarily group-based as opposed to individual intervention, although four studies (Chen et al., 2015; Hees et al., 2013; Schene et al., 2007 and Wisenthal et al., 2018) included some individualised components. Characteristics of the included studies and intervention types are shown in Table 5.

### **3.3.3 Methodological quality**

Overall, the quality of the included studies was good (Table 6); acknowledging that successful blinding towards the intervention may be very challenging or not feasible. Three studies; all RCTs, were identified to be of high methodological quality (Chen et al., 2015; Hees et al., 2013; Schene et al., 2007). One RCT (Edel et al. (2017) was found to be of low quality and the most recent OD (Wisenthal et al., 2018) was found to be of 'sufficient' quality. The RCT that was rated as low was noted to have problems with internal validity, only meeting five criteria out of the minimum of six. The remaining four studies all scored sufficiently regarding internal validity, descriptive and statistical criteria.

Appraisal of the qualitative study (Cooper et al., 2013) found that whilst some detail was given around selection criteria, there was no discussion around how recruitment and selection was undertaken. There was also a lack of detail around co-interventions and compliance, however data collection was considered appropriate for the aims and methodology. There is evidence that the researcher, who also delivered the intervention to the participants, had critically considered her role, influence, and the risk of bias. There is also evidence of rigorous data analysis.

A lack of detail in intervention and comparison descriptions was noted in one quantitative (Hees et al., 2013) and one qualitative study (Cooper, 2013). Additionally, missing data and incomplete recording was noted (Table 7 below).

**Table 5. Characteristics of included studies**

Reference	No. of participants	Research methods	Inclusion criteria and setting	Interventions		Outcome measures	Time Period
				Control Group	Intervention Group		
Schene et al. (2007)	62	RCT	Age 18+ with work - place associated Major Depression without psychosis or drug/ alcohol dependence. BDI score greater than 15. Setting: Psychiatric Medical Centre.	TAU: Clinical management inc. assessment, psychoeducation, support, CBT + medication if indicated.	<b>RTW intervention:</b> 12-month programme inc. role-play, video observation, work integration preparation, employer, liaison exploration of work problems, review of progress in work + TAU.	<ul style="list-style-type: none"> <li>• Interview for Diagnosis of DSM-IV Mood Disorders</li> <li>• BDI II</li> <li>• Work resumption (time worked)</li> <li>• Questionnaire Organisational Stress</li> <li>• Healthcare costs.</li> </ul>	Baseline plus 6, 12 and 42 months
Hees et al. (2013)	117	RCT	Age 18-65, with MDD, associated with work place, without psychosis or drug and alcohol dependency. Setting: Psychiatric services.	TAU: Outpatient treatment according to APA guidelines, psycho-education, support, CBT & medication if indicated.	<b>RTW Intervention:</b> 9 x Individual + 8 x group sessions + meeting with employer. Am to simulate work tasks/skills. Graded to increase competence & confidence + TAU.	<ul style="list-style-type: none"> <li>• Absenteeism/time to RTW</li> <li>• Hamilton Depression Scale</li> <li>• Inventory of Depression Symptoms</li> <li>• WLQ</li> <li>• SF-36</li> <li>• Utrecht Coping List</li> </ul>	Baseline plus: T1: 6 months T2: 12 months T3: 18 months
Chen et al. (2015)	68	RCT	Age 18+ with Major Depression or dysthymia. Out-patient. Literate with MMSE score of 24+. Setting: Psychiatric clinic in Taiwan.	Standardised telephone contact including enquiry of daily routines, general mental well-being and social/activity participation.	<b>Lifestyle Intervention:</b> 'Life Adaptation Skills Training' (LAST) to improve function/ lifestyle, interpersonal skills, illness/stress management. 24 sessions 1.5 hours (over 12 weeks)	<ul style="list-style-type: none"> <li>• WHO-QOL</li> <li>• Occupational Self-assessment</li> <li>• BDI (II)</li> <li>• Beck Anxiety Inventory</li> <li>• Beck Scale Suicide Ideation</li> </ul>	T1: Baseline T2: 3 Months (post intervention). T3: 6 months

Abbreviations: BDI = Beck Depression Inventory, TAU = Treatment As Usual, OD = Other design PObs = Participant observation CBT = Cognitive Behavioural Therapy, RTW = Return to work , APA = American Psychiatric Association, WLQ = Work Limitations Questionnaire, SF-36 = Medical Outcomes Study Short Form, MMSE = Mini Mental State Examination, WHO-QOL = World Health Organisation Quality of Life Scale

**Table 5: Characteristics of included studies (continued)**

Reference	No. of participants	Research methods	Inclusion criteria and setting	Interventions		Outcome measures	Time period
				Control group	Intervention group		
Edel et al. (2017)	82	RCT	Diagnosis of moderate or severe Major Depression without psychosis. Setting: German psychiatric inpatient units.	Participation in a board game group	<b>Handicraft Intervention:</b> Basic craft activities such as woodwork or art.	<ul style="list-style-type: none"> <li>• Hamilton Depression Scale</li> <li>• BDI II</li> <li>• Hamilton Anxiety Scale</li> <li>• Personal &amp; Social Performance Scale</li> </ul>	Baseline plus 3-9 weeks after baseline
Wisenthal et al. (2018)	21	OD	Age 18+, basic reading and writing skills, off work due to diagnosis of depression, with no co-existing drug/alcohol disorder. Employed in office work rather than manual work. Setting: community mental health.	N/A	<b>RTW Intervention:</b> 'Cognitive Work Hardening' an intervention designed to support return to work which uses role play, simulation etc. (31 hours of intervention over 4 weeks)	<ul style="list-style-type: none"> <li>• Work Ability Index</li> <li>• Multidimensional Assessment of Fatigue</li> <li>• BDI II</li> </ul> (Plus, qualitative interviews at T2 (4 weeks) and at 3-month follow-up)	T1: Baseline T2: Post-test (4 weeks) T3: 3-month follow-up
Cooper (2013)	24	OD	Inclusion criteria and recruitment process not clear. Participants had a diagnosis of depression as all or part of their diagnosis. Setting: mental health unit: drop-in sessions.	Creative Writing Course (creative art therapy not delivered by an occupational therapist)	<b>Writing Intervention:</b> Using Writing as Therapy Course (a structured brief writing therapy)	<ul style="list-style-type: none"> <li>• Questionnaires and interviews</li> </ul>	PObs and interviews over a 12-month period.

Abbreviations: BDI = Beck Depression Inventory, TAU = Treatment As Usual, OD = Other design PObs = Participant observation CBT = Cognitive Behavioural Therapy, RTW = Return to work, APA = American Psychiatric Association, WLQ = Work Limitations Questionnaire, SF-36 = Medical Outcomes Study Short Form, MMSE = Mini Mental State Examination, WHO-QOL = World Health Organisation Quality of Life Scale

**Table 6. Summary of quality characteristics of quantitative and mixed methods studies**

First Author (Date)	Selection			Interventions						Outcome Measurement						Statistics			Methodological Quality		
	Criterion code	a	b(i)	b(ii)	c	d	e	f	g	h	i	j	k	l	m (i)	m(ii)	n	o		p	q
	Allocation				Follow-up timing																
Criterion name	Eligibility criteria specified	randomisation	concealment	Baseline similarity	Interventions explicitly described	Therapist blinding	Co-interventions avoided or comparable	Compliance acceptable	Participant blinding	Assessor blinding (or not involved in treatment for OD's)	Relevant outcome measures	Adverse effects described	Described & acceptable withdrawal/drop-out	Short-term	Long-term	Timing comparable between groups (or patients for OD's)	Sample sizes described	Intention to treat analysis	Point estimates/ measures of variability		
<b>RCTs</b>																					
Schene (2007)	✓	✓	✓	✓	✓	x	✓	x	x	✓	✓	x	✓	✓	✓	✓	✓	✓	✓	✓	<b>High</b>
Hees (2013)	✓	✓	✓	✓	x	x	✓	✓	x	✓	✓	x	✓	✓	✓	✓	✓	✓	✓	✓	<b>High</b>
Chen (2015)	✓	✓	✓	x	✓	x	✓	x	x	✓	✓	x	x	✓	x	✓	✓	✓	✓	✓	<b>High</b>
Edel (2017)	✓	✓	✓	x	✓	x	✓	x	x	x	✓	x	x	✓	x	✓	✓	x	✓	✓	<b>Low</b>
<b>OD</b>																					
Wisenthal (2018)	✓	N/A	N/A	N/A	✓	N/A	x	x	N/A	✓	✓	x	✓	✓	x	✓	✓	x	✓	✓	<b>Sufficient</b>

**Abbreviations:** RCT= Randomised Controlled Trial. OD = Other Design

Assessment of Quality: RCTs: Assessed against eleven internal validity criteria, six descriptive criteria and two statistical criteria. For studies to be considered 'high' quality, at least six internal validity criteria, three descriptive and one statistical criterion must be positively scored (Steultjens et al., 2002).

OD's: Assessed against seven internal validity criteria, four descriptive criteria and 2 statistical criteria. For studies to be considered 'sufficient' quality, at least four internal validity criteria, two descriptive criteria and one statistical criterion must be positively scored (Steultjens et al., 2002). N.B. (✓ = yes x = no or can't tell)

Internal Validity Criteria = b, e, f, g, h, i, j, l, n, p

Descriptive Criteria = a, c, d, k, m

Statistical Criteria = o, q

### **3.3.4 Outcome of interventions**

The reported effects of the occupational therapy interventions on both primary and secondary outcomes from the quantitative and qualitative data are reported in Table 7 and Table 8 respectively (below).

### **3.3.5 Best evidence synthesis**

A best evidence synthesis for each of the intervention types was conducted using the outcomes reported in Table 7 and the guidelines shown in Table 4 in Section 3.2.5.

#### **3.3.5.1 Occupational therapy return-to-work interventions.**

Three studies on the effectiveness of occupational therapy return-to-work (RTW) interventions were included in the evidence synthesis. All three measured occupational performance, function and/or participation. Two studies reported statistically significant findings in these measures (Schene et al., 2007 and Wisenthal et al., 2018). Schene et al. (2007), a high quality RCT, measured work participation through work resumption data (days and hours worked per week). Time from baseline to any work participation highlighted a statistically significant difference in favour of the occupational therapy intervention group. Additionally, total hours worked highlighted that the intervention group worked significantly more than the control group during the initial 18-month period. The second RTW study (Hees et al., 2013), also a high quality RCT, measured at-work functioning. They found no significant difference between the intervention and control groups with both demonstrating significantly reduced absenteeism and role limitation. The self-report data collected was not reported in their paper. Wisenthal et al. (2018), an OD of sufficient quality, measured work function by assessing 'work readiness' also with statistically significant post-test scores.

In terms of depression symptomology, all three RTW studies reported statistically significant findings. Schene et al. (2007), and Wisenthal et al. (2018), utilised the Beck's Depression Inventory (BDI). Schene et al. (2007) reported statistically significant differences between intervention and control groups, during the long-term follow up phase of their RCT, and Wisenthal et al. (2018) reported significant improvement in post-intervention depression symptomology in their single-group study. The positive findings

from the BDI in Schene et al. (2007) were contradicted by their secondary measure of depression (participants' DSM-IV<sup>1</sup>) which did not replicate the significant BDI findings (the TAU group showed greater improvement). However, diagnostic reliability using the DSM-IV has been questioned (Chmielewski et al., 2015) whereas the BDI is a standardised measure, widely used in research, with excellent psychometric properties (Dozois and Covin, 2004), and could potentially be given greater emphasis.

Hees et al. (2013) reported statistically significant improvement in depressive symptomology and symptom remission in the occupational therapy group. In addition, sustainable remission (6 months or more) was higher in the occupational therapy group. Whilst their secondary measure of depression also showed greater improvements in favour of the occupational therapy intervention group, this did not achieve statistical significance. Only one other outcome considered across the RTW studies achieved statistical significance; Wisenthal et al. (2018) reported significantly lower fatigue scores in post-test measurements following occupational therapy. Schene et al. (2007) and Hees et al. (2013) measured stress levels and coping respectively, with no significant findings. Therefore, based on statistically significant findings in two high quality RCTs and an OD of sufficient quality, there is strong evidence for the effectiveness of occupational therapy RTW interventions for improving depression symptomology. Based on statistically significant findings in one high quality RCT there is limited evidence for the effectiveness of occupational therapy RTW interventions for improving occupational functioning and/or participation. Based on statistically significant findings in only one OD, there is no evidence for the effectiveness of occupational therapy RTW interventions in improving work readiness and overall health and well-being, as per the definition of best evidence in Table 4 in Section 3.2.5.

### **3.3.5.2 Occupational therapy lifestyle interventions**

Only one RCT explored the effectiveness of occupational therapy lifestyle interventions for people with a diagnosis of depression (Chen et al., 2015). There was no significant difference between the groups relating to occupational competence, sense of mastery or depression symptomology. However, there were statistically significant findings

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<sup>1</sup> DSM-IV Scores: classification found in the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition

relating to a reduction in suicidal ideation and anxiety. These are encouraging findings due to suicidal ideation being a key symptom of major depressive disorder (WHO, 2017) and the high incidence of anxiety associated with depression (Hirschfeld, 2001). Chen et al. (2015) was judged to be high quality however the description of the 'standardised phone contact' (the control) suggests that some occupational therapy may have been delivered because these included 'enquiry' about daily routines and social activity. It is not possible to determine whether occupational therapy was delivered, due to the lack of detail reported. However, based on one high quality RCT, there is limited evidence for the effectiveness of occupational therapy lifestyle interventions for reducing anxiety and suicidal ideation in people with a diagnosis of depression and no evidence for the effectiveness of occupational therapy lifestyle interventions in improving occupational functioning, participation, or depressive symptomology.

### **3.3.5.3 Occupational therapy handicraft interventions**

One RCT (Edel et al., 2017) explored the effectiveness of occupational therapy handicraft interventions for people with a diagnosis of depression reporting significant findings in favour of the occupational therapy group regarding basic work skills at 6 weeks. The study authors also reported statistically significant improvements in relation to anxiety reduction in their male sample at three weeks but found no significant difference between the groups regarding depressive symptomology.

In this study however, both the intervention and control groups were facilitated by occupational therapists and the control group intervention involved participation in an occupation (playing a board game). The information that Edel et al. (2017) provided suggests this was selected as a control due to its 'resemblance' to occupational therapy, because German in-patients consider this an essential part of treatment. However, the control participants may potentially have received the intervention being evaluated. Therefore, based on only one low quality RCT, there is only indicative evidence for the effectiveness of occupational therapy handicraft interventions having a positive effect on occupational functioning and anxiety symptoms in people with a diagnosis of depression and no evidence of a positive effect on depressive symptomology.



#### **3.3.5.4 Other findings: occupational therapy and cost-effectiveness**

One study (Schene et al., 2007) included an economic evaluation. They considered psychotropic medication use and occupational therapy costs, reporting the intervention group (TAU with the addition of occupational therapy) had a 75.5% probability of being more cost-effective compared with TAU (with no occupational therapy).

#### **3.3.5.5 Service user perspectives**

Two studies contributed qualitative data (Cooper et al., 2013 and Wisenthal et al., 2018) but had different research topics (an occupational therapy writing intervention and a RTW intervention respectively). Cooper (2013) identified themes across four key areas (clients as writers, therapist role, stigma and how writing helps). Key outcomes reported were that both interventions have potential benefits for people with a diagnosis of depression. The benefits of 'Using Writing as Therapy' were identified as supporting cognitive change such as increasing self-awareness and participants distancing themselves from their stories through writing and restructuring their memories and experiences. In addition, the author highlights the potential usefulness of the intervention as part of the occupational therapy process; in supporting assessment and engagement. The potential benefits of the creative writing (non-therapeutic) group were identified as helping people step away from unhappy memories and feelings. Whilst the reported findings are positive, the quality appraisal process identified some potential concerns regarding the methodology. Wisenthal et al. (2018) reported qualitative data relating to the elements of intervention participants considered important in supporting return-to-work, as well as overall gains. Important intervention element themes included structure, simulation, coaching, feedback, pacing and role play. The overall gains were reported as developing a routine, improving self-confidence, improving stamina and cognitive function, as well as coping and pacing skills, and how the therapist may enable these through providing feedback. Collectively these studies provide indication of the benefits, drawbacks, and how and why treatments may be effective, and some insight into service users' experience of occupational therapy.

**Table 7. Reported effects for primary and secondary outcomes (quantitative)**

(as defined in the systematic review protocol)

First author and year of publication	Type	Quality	Effects of occupational therapy				
			Occupational Performance, Function and Participation	Depression Symptoms	Quality of Life	Health and well-being	Other mental health symptoms
Occupational Therapy Return-to-Work interventions							
Schene et al. (2007)	RCT	High	<p><b>Work resumption:</b></p> <p>Time baseline to any work participation I=mean 207 days C=mean 299 days (<math>p=0.01</math>)</p> <p><b>(days/h worked):</b></p> <p>Months 1-6: (<math>p=0.022</math>) I=20.45 C=0.00</p> <p>Months 7-12: (<math>p=0.042</math>) I=261h C=0.85h</p> <p>Months 13-18: (<math>p=0.035</math>) I=456.25h C=156.42h</p>	<p><b>DSM-IV Criteria:</b></p> <p>No significant difference between groups</p> <p><b>BDI II:</b></p> <p>BDI Scores:</p> <p>0 months: I=27.1 C=23.6</p> <p>42 months: I=12.3 C=14.0</p> <p>Statistically significant differences reported during the long-term follow up phase of the study in favour of the OT group: (<math>p=0.032</math>)</p>	Not measured	Not measured	<p><b>Questionnaire Organisational Stress:</b></p> <p>no significant difference between groups</p>

**Table 7. Reported effects for primary and secondary outcomes (quantitative) (continued)**

First author and year of publication	Type	Quality	Effects of occupational therapy				
			Occupational Performance, Function and Participation	Depression Symptoms	Quality of Life	Health and well-being	Other mental health symptoms
Occupational Therapy Return-to-Work interventions (continued)							
Hees et al. (2013)	RCT	High	<p><b>Absenteeism/time taken to RTW:</b> no significant difference between groups</p> <p><b>Work Limitation Questionnaire:</b> no significant difference between groups</p> <p><b>SF-36:</b> no significant difference between groups</p> <p><b>10-point Likert scale:</b> The data were not reported.</p>	<p><b>Hamilton Depression Rating Scale</b> Symptomology: M (SD) at 6, 12, 18 months: I=11.2 (6.6), 7.1 (6.7), 4.7 (5.4) C=12.4 (8.1), 9.6 (7.8), 8.8 (8.2) Both I and C reduced but I reduced significantly more (group x time statistically significant <math>p = 0.03</math>)</p> <p><b>Symptom remission:</b> Percentage at 6, 12, 18 months: I=32%, 57%, 77% C=31%, 47%, 52% Statistically significant (<math>p=0.05</math>)</p> <p><b>Sustainable remission:</b> (6 months or more) also higher in I group (<math>p=0.04</math>).</p> <p><b>Inventory of Depressive Symptoms:</b> no significant difference between groups</p>	Not measured	Not measured	<b>Utrecht Coping List:</b> no significant difference between groups

**Table 7. Reported effects for primary and secondary outcomes (quantitative) (continued)**

First author and year of publication	Type	Quality	Effects of occupational therapy				
			Occupational Performance, Function and Participation	Depression Symptoms	Quality of Life	Health and well-being	Other mental health symptoms
Occupational Therapy Return-to-Work interventions (continued)							
Wisenthal et al. (2018)	OD - MIXED METHODS	Sufficient	<b>Work Ability Index</b> M (SD) Pretest – Posttest 22.7 (6.51) – 28.0 (8.11)  Difference mean (SD) = 5.3 (5.20)  Significant ( $p < 0.01$ ) Effect size ( $d = 1.02$ )	<b>BDI-II</b> M (SD) Pretest – posttest 25.7 (12.05) – 14.7 (10.46)  Difference mean (SD) = 11.0 (10.07)  Significant ( $p < 0.01$ ) Effect size ( $d = 1.09$ )	Not measured	<b>Multi-dimensional assessment Fatigue</b> M (SD) Pretest – posttest 34.1 (6.89)–30.7 (8.38)  Difference mean (SD) = 3.4 (6.34)  Significant ( $p < 0.5$ ) Effect size ( $d = 0.53$ )	Not measured
Occupational therapy lifestyle intervention							
Chen et al. (2015)	RCT	High	<b>Occupational self-assessment:</b> no significant difference between groups  <b>Mastery scale:</b> no significant difference between groups	<b>BDI II:</b> no significant difference between groups	<b>WHOQOL:</b> no significant difference between groups	Not measured	<b>Beck Anxiety Inventory:</b> Significant findings ( $p < 0.05$ ) in favour of the I group  <b>Beck Scale Suicide Ideation:</b> Significant findings in favour the I group ( $p < 0.01$ )

**Table 7. Reported effects for primary and secondary outcomes (quantitative) (continued)**

First author and year of publication	Type	Quality	Effects of occupational therapy				
			Occupational Performance, Function and Participation	Depression Symptoms	Quality of Life	Health and well-being	Other mental health symptoms
Occupational therapy handicraft intervention							
Edel et al., (2017)	RCT	Low	<p><b>Personal &amp; social performance scale (PSP):</b> no significant difference between groups. <b>PSP total scores not provided*</b></p> <p><b>Ergo-assess (basic work skills)*:</b></p> <p>M (SD) pretest - M (SD) posttest I=13.9 (3.51) – 11.0 (3.59) C=12.7 (5.12) – 11.9 (5.03)</p> <p>Time x group interaction (<math>p=0.017</math>) at 6 weeks</p>	<p><b>Hamilton Depression Rating Scale (HAM-D):</b> no significant difference between groups reported by study authors. <b>HAM-D total scores not provided*</b></p> <p><b>BDI II:</b> no significant difference between groups reported by study authors. <b>BDI total scores not provided *</b></p>	Not measured	Not measured	<p><b>Hamilton Anxiety Rating Scale (HAM-A)</b></p> <p>M (SD) pretest - M (SD) posttest (Male sample) I=19.4 (7.56) – 10.9 (5.07) C=19.1 (5.61) – 16.4 (5.78)</p> <p>Time x group interaction at three weeks (<math>p=0.031</math>)</p> <p><b>N.B. HAM-A total scores not provided for all time points*</b></p>

**Abbreviations:** RCT = randomised controlled trial, OD = other design, I = intervention group, C = control group, OT = occupational therapy, M = mean, SD = standard deviation, BDI = Beck Depression Inventory, RTW = Return to work, SF-36 = Medical Outcomes Study Short Form, WHO-QOL = World Health Organisation Quality of Life Scale

\* The study authors only reported subscale data with significant interaction effects and did not report the full data for all outcome measures

**Table 8. Reported effects (qualitative)**

<b>First author and year of publication</b>	<b>Type</b>	<b>Quality</b>	<b>Interventions</b>	<b>Time period and Data Collection</b>	<b>Findings</b>
Cooper (2013)	QUAL	Low	'Using Writing as Therapy' a structured brief writing therapy to support identity and self-esteem, was compared with 'Creative Writing' a non-therapeutic group.	Participant observation and interviews over a 12-month period.	Cognitive changes such as increased self-awareness and through exploring/reframing memories, as reported by participants.
Wisenthal et al. (2018)	OTHER DESIGN (MIXED METHODS)	Sufficient	'Cognitive Work Hardening' an intervention designed to support return to work which uses role play, simulation etc. (31 h of intervention over 4 weeks)	Interviews at T2 (4 weeks) and at 3-month follow-up	<p><b>Intervention elements considered important for RTW preparation:</b> Structure, simulation, environment, video use, coaching, feedback, pacing and role-play.</p> <p><b>Overall gains from the intervention:</b> Routine, self-confidence, stamina, increased cognitions, coping skills, pacing skills, self-efficacy.</p>

### 3.4 Discussion

This is the first time that occupational therapy for people with a diagnosis of depression has been subjected to a systematic review. The review found strong evidence for the effectiveness of occupational therapy return to work (RTW) interventions in improving depression symptomology and limited evidence for the effectiveness of occupational therapy RTW interventions in improving work participation. These are useful findings in terms of occupational therapy playing an important part in providing interventions for people with a diagnosis of depression. The review also found some evidence for the effectiveness of occupational therapy lifestyle interventions for reducing anxiety and suicidal ideation associated with depression, but this evidence was limited due to only one study having researched this. It is therefore important that this potential benefit of occupational therapy is explored further, given the difficulties people with a diagnosis of depression can experience engaging in everyday activities and the high incidence of these secondary symptoms. There was an indication that occupational therapy handicraft interventions may have a positive effect on occupational functioning and anxiety symptoms associated with depression. Additionally, there is also evidence to suggest occupational therapy may be a cost-effective return-to-work intervention for people with a diagnosis of depression. This is important to note since social and health care costs relating to mental ill health totalled £34.9 billion in 2017 in the UK (Parsonage and Saini, 2017) and globally the cost to the economy is estimated to be 1 trillion US Dollars per year in lost productivity (WHO, 2019).

This review found no evidence for the effectiveness of occupational therapy RTW interventions in improving work readiness or overall health and well-being, and no evidence for the effectiveness of occupational therapy lifestyle interventions in improving occupational functioning or participation. A lack of evidence of effectiveness is not the same as an intervention being found to be ineffective and may simply mean that sufficient high-quality research has not yet taken place (Bullock and Bannigan, 2011). The current limited evidence in some areas poses challenges for the occupational therapy profession, as practitioners continue to provide theory-based interventions within an evidence-based healthcare system where limited resources are allocated to achieve the best outcomes for service users. Notably missing from the evidence base

are any studies that focus on depression that examine whether individualised client-centred occupational therapy tailored to individual need is an effective intervention.

Previous systematic reviews that have explored whether occupational therapy is effective with generic mental health populations defined as 'serious mental illness' have reported similar findings. For example, strong evidence for return-to-work interventions was reported by Arbesman and Logsdon (2011) and Noyes et al. (2018) which included the study relating to depression by Hees et al. (2013). Limited evidence for daily routine development was reported in the systematic review by Gibson et al. (2011) and strong evidence for occupation-based interventions was reported by D'Amico et al. (2018), which included the study relating to depression by Chen et al. (2015) included in this review. The included studies in the systematic reviews with generic mental health populations are varied and not all included studies relate to occupational therapy interventions which makes it difficult for the overall results to be compared. For example, D'Amico et al. (2018) and Gibson et al. (2011) include non-occupational therapy studies, and Noyes et al. (2018) report that their review contains studies that occupational therapy practitioners can provide, which may mean that some of the included interventions are not occupational therapy as defined for this review. Additionally, the included studies in the reviews with generic mental health study populations also include studies of the effectiveness of individualised client-centred occupational therapy tailored to individual need, a notable gap in the evidence base for depression. Finally, with the exception of Noyes et al. (2018), previous systematic reviews on generic mental health populations do not give details about how the reported level of evidence was determined.

### **3.4.1 Strengths and limitations of the included studies**

The studies evaluated a range of occupational therapy interventions, RTW, Lifestyle, handicraft, and writing. Overall, the quality of the included studies was good with three out of the four RCTs being judged as high quality. The population studied in this review was adults with a primary diagnosis of depression.

Occupational therapy should be offered if an individual has a need or difficulty associated with activity limitation or restriction in participation (Creek, 2014b). In clinical



settings it is usual for service users to be screened for appropriateness for therapy (Christie et al., 2014; Creek, 2014b). If studies into the effectiveness of occupational therapy include individuals who have not undergone such screening (individuals who may not need occupational therapy), the measurement of effectiveness may be diluted. None of the included studies specified that a participant must have an identified occupational, functional, or vocational need or difficulty. Similarly, a systematic review of occupational therapy for people with a diagnosis of psychosis found that occupational need was stipulated in the inclusion criteria for less than a quarter of studies (Inman, 2017). Thus, for both depression and psychosis, this is a significant failing in study design.

Although the study by Hees et al. (2013) met the necessary internal validity, descriptive and statistical criteria necessary to be judged as high quality (Table 6), it lacked some detail regarding intervention frequency, duration, and intensity. Explicit intervention description is essential to ensure clear conclusions can be drawn and ensure studies can be replicated (Hoffmann et al., 2014). Importantly, it is these descriptions that also enable research to be transferred to practice settings. Occupational therapy intervention schedules or specifications can support this process by detailing the necessary components and delivery details of the intervention which support fidelity (Cook and Birrell, 2007; Inman, 2017). This review also noted little reference to measurement of treatment fidelity or adherence, with only one study (Schene et al., 2007) describing how adherence to treatment was measured. It is important that the amount of the intended intervention received is recorded and assessed to increase the reliability and validity of the findings (Breckenridge and Jones, 2015).

All four RCTs in this review had control groups described as non-occupational therapy treatment as usual (TAU). However, critical appraisal highlighted that in two studies (Edel et al., 2017 and Hees et al. 2013) the comparison intervention may not have been a 'true' control and participants may have inadvertently received occupational therapy. Given that there needs to be a clear distinction between intervention and control to measure the effect size (Schäfer and Schwarz, 2019), these comparisons may not have been well-considered. However, as there are few circumstances when it is ethical to deny a routinely offered intervention to participants, studies with true control groups

may only be possible in limited situations where the interventions are not routinely offered, for example in private clinics.

To avoid these ethical challenges many researchers adopt single group pretest-posttest designs (Belli, 2009), such as Wisenthal et al. (2018). This design brings significant drawbacks, including risk to internal validity, maturation effects, history, and testing effects (Thyer, 2012). Additionally, with no control group causal inferences cannot be made as it is possible participants may have recovered their level of function and participation naturally or through some other means (Belli, 2009). Therefore, a further potential bias in this review relates to 'regression to the mean' (RTM), the phenomenon where extreme outcomes tend to be followed by more moderate ones due to chance. Hence, a person who qualifies for a study into depression because of a high score on a depression scale is likely to have a more moderate depression score on a subsequent test, regardless of treatment. The non-RCT OD (Wisenthal et al., 2018), whilst being judged to be of sufficient quality, did not give detail about how the phenomenon of RTM was considered. There is a risk that improvements were attributed to the intervention when they were due to chance (random fluctuations) (Morton and Torgerson, 2003).

A further potential method for circumventing the ethical challenges associated with undertaking RCTs and to improve upon the single-group design, is to use occupational therapy as both the intervention and the control by comparing newly developed interventions with occupational therapy TAU. However, the choice of control determines whether there is the potential for absolute or comparative treatment efficacy to be produced (Karlsson and Bergmark, 2015). As an approach, comparison with an occupational therapy TAU would be beneficial if occupational therapy TAU was known to be effective. As there is little evidence that this is the case for occupational therapy for those with a diagnosis of depression, the research priority is to demonstrate the benefit of occupational therapy compared to no occupational therapy.

### **3.4.2 Strengths and limitations of this review**

This systematic review found only six papers meeting the inclusion criteria. Included studies evaluated a wide range of occupational therapy intervention types. The best evidence synthesis drew outcomes from only three high quality RCTs, one low quality

RCT and one OD. Whilst the number of included studies was limited, the rigorous methodology increased the validity of the review findings. The addition of qualitative data into this review has incorporated service user perspectives.

The aim of occupational therapy is to increase function and participation in activities. All studies in this review included a measure of one or both of these; however, a total of nine different measures were used. No outcome measure was used more than once in the RCTs across any of the intervention types for any primary or secondary outcome. This prevented meta-analysis which would have further enhanced the findings through statistically combining and integrating the results of the included studies (Moher et al., 2009). It has been recommended that there should be standardised core outcome sets and measurement instruments for any given field to facilitate comparison between interventions and support meta-analysis in future research (Bullock and Bannigan, 2011; Williamson et al., 2017). However, there is a lack of consensus on which outcome measurement tools are suitable for occupational therapy intervention studies (Steultjens, et al., 2002) and multiple measures can be necessary because interventions impact across many aspects of a patient's presentation (Bagiella, 2009). Nevertheless, occupational therapy researchers need to carefully consider their choice of outcome measure to ensure meta-analysis is possible in future reviews.

There were no studies evaluating occupational therapy as routinely provided in practice (as individualised client-centred programmes tailored to individuals). This is a serious gap in the evidence base. It is however challenging to evaluate occupational therapy through RCTs in many health settings due to the ethical implications highlighted above, which may account for the lack of research into individualised client-centred occupational therapy. An alternative may be to utilise people on a waiting list for occupational therapy as a control group, which is considered suitable when it is not ethical to deny an intervention (Kielhofner, 2006). This allows those people at the top of a waiting list to form an intervention group and those lower down the waiting list to form a control group, receiving the intervention later, having waited no longer than usual to receive the intervention. At the same time, this allows the researcher to introduce randomisation into the study design thus getting around the problems presented by pre-test/post-test designs.

It is relatively common for occupational therapy research in mental health to be conducted with generic study populations such as 'severe mental illness' rather than specific mental health diagnoses, for example depression or schizophrenia. Whilst using generic populations may allow easier recruitment of participants within mental health settings, this does not allow outcomes for specific diagnoses to be considered. This practice contributes to the dearth of condition-specific evidence for the effectiveness of occupational therapy in mental health. Many potentially useful published papers were excluded from this review for this reason. There are limited references to occupational therapy within clinical guidelines for many mental health conditions in the UK. The National Institute for Health and Care Excellence develop intervention guidelines by considering the key principle of what works and base recommendations on the best available evidence (NICE, 2014a). Such guidance supports policymakers to make decisions about how to use limited health resources and provides best practice guidance for clinicians. This deficit can result in wide variations in practice and interventions with minimal impact being delivered to (Fisher et al., 2003). Practitioners are therefore required to draw on the literature from the wider range of psychosocial interventions and consider the relevance of this to their practice (Lloyd, Bassett and King, 2004). Therefore, researchers should opt for condition specific study populations where possible, with the aim of furthering the evidence base for the effectiveness of occupational therapy and supporting clinical guidance.

Due to wide differences between the types of occupational therapy interventions, the best evidence synthesis considered outcomes for each intervention type separately (RTW, lifestyle and handicraft) rather than across outcome. The studies could have been synthesised and presented by outcomes and interested readers can use Table 7 to evaluate this. For example, despite some lack of consistency in findings between depression scales, three out of the five quantitative studies (Edel et al., 2017; Schene et al, 2007; Wisenthal et al., 2018) reported statistically significant improvements in depression symptoms depression following occupational therapy. Analysing the data by outcome type rather than intervention type would have increased the potential for meta-analysis. However, missing data would still have prevented this. Meta-analysis across intervention type was not possible due to the range of outcome measures used.

The included studies in this systematic review originated from five countries, with differing healthcare, sickness benefit and return-to-work provision, all of which may impact upon applicability of the evidence to different settings (Bryman, 2012). The studies investigated very specific occupational therapy interventions which may mean that the findings are not transferable to all occupational therapy interventions and settings. Other limitations of this review were the dearth of studies meeting the inclusion criteria and English language restrictions due to the lack of funding for translation which may have excluded some potentially relevant research studies. Additionally, this systematic review did not include grey literature; therefore, it is possible that some potentially useful evidence was missed.

### **3.4.3 Suggestions for future research**

There is limited evidence on the effectiveness of occupational therapy interventions in mental health generally, and concern about this is widely reported (Bullock & Bannigan, 2011; Cook et al., 2009; Gutman, 2009, 2011). The Royal College of Occupational Therapists has highlighted a need to further develop the evidence base (RCOT, 2017c). Policy makers have a responsibility to ensure limited healthcare resources are used efficiently and effectively. The limited evidence base continues to put occupational therapists and service users at risk from cost-savings due to austerity, since occupational therapy is regarded as optional in some settings. Whilst the indication of effect provided by this systematic review is helpful, gaps in the evidence base need to be urgently filled by further research.

There is an urgent need for true RCTs comparing occupational therapy interventions with no occupational therapy to fill the gap in the evidence base. Researchers should first consider the RCT as the most robust method for effectiveness research (Medical Research Council, 2008) using well-designed and appropriate control groups so that causal inferences can be made. Additionally, researchers should wherever possible, conduct occupational therapy research with diagnosis-specific study populations to support the synthesis of occupational therapy intervention effectiveness research into clinical guidelines. Given the lack of evidence relating to the effectiveness of occupational therapy individualised, client-centred interventions as routinely provided

in clinical practice, this should be prioritised as a research area. Finally, core sets of outcome measurement instruments for occupational therapy mental health research need to be agreed to support comparison between studies and future meta-analysis.

### **3.5 Conclusion**

The overall evidence base for the effectiveness of occupational therapy interventions for people with a diagnosis of depression is limited. However, this review found strong evidence for the effectiveness of occupational therapy RTW interventions for improving depression symptomology. Limited evidence was found for the effectiveness of occupational therapy RTW interventions for improving work participation. There is currently no evidence for the effectiveness of occupational therapy RTW interventions in improving work readiness or overall health and well-being. In terms of lifestyle interventions, there is limited evidence for the effectiveness of occupational therapy for reducing anxiety and suicidal ideation in people with a diagnosis of depression and no evidence for the effectiveness of occupational therapy for improving performance or participation. These results are in line with the findings of previous systematic reviews of occupational therapy with patients who have severe mental illness. The qualitative components in this review presented additional information to help explain the findings by providing detail in relation to participants perceived gains from occupational therapy interventions and how therapists may enable change. All six studies in this review evaluated a specifically designed occupational therapy intervention, as opposed to individualised client-centred intervention, highlighting a clear gap in the research.

There is an urgent need for large-scale diagnosis-specific research into the effectiveness of occupational therapy interventions for people with a diagnosis of depression. Individualised occupational therapy, as is routinely provided in clinical care, is provided because it is theoretically effective even though there is no good quality research (RCT level) to confirm its effectiveness. As such, occupational therapy does not appear in clinical guidelines. If the occupational therapy profession does not urgently address this gap in research, there is a risk of services being further cut as commissioners continue to make difficult decisions on the best way to spend limited health funding.

The earlier chapters of this thesis have highlighted the dearth of published research exploring the effectiveness of occupational therapy in mental health. The above systematic review has recommended large-scale diagnosis-specific research be undertaken, on the topic, specifically relating to people with a diagnosis of depression, as it is routinely provided in clinical care. Whilst it is not possible to undertake large scale research within a doctoral study, it is hoped that this diagnosis specific research study will go some way in furthering the evidence base.

# Chapter 4 Methodology

## 4.1 Introduction

Having established a clear gap in the literature as examined in chapters 2 and 3, this chapter will introduce the philosophical position and epistemological stance that has shaped this research study and led to the adopted methodology and the theoretical perspectives regarding the evaluation of the effectiveness of occupational therapy. These, as well as personal factors are explored (Section 4.1). This is followed by discussion and rationale for the research design and methodology adopted (Section 4.2) and detail of data collection (Sections 4.3 and 4.4) data analysis (Section 4.5) and the study sample (Section 4.6). Finally, ethical considerations are highlighted and described (Section 4.7).

### 4.1.1 Paradigm choice

Pragmatism as a 'World View' or paradigm is well placed to underpin research that seeks to evaluate the impact or effectiveness of a health intervention. It is termed here as an 'approach' as it may not strictly be defined as a paradigm in the Kuhnian sense of the word because it is not a formally shared view within a scholarly community (Morgan, 2007). Pragmatism attempts to bring together the insights of both qualitative and quantitative research into a workable solution to the methodological differences of purist positions so that research can result in the best possible way of knowing (Johnson & Onwuegbuzie, 2004). It focusses on real world problems and supports the use of different methods of obtaining knowledge and a more comprehensive exploration of the topic that would not be possible using one method alone (Shaw et al., 2010). Pragmatism values both subjective and objective knowledge (Creswell and Plano Clark, 2017). It is the emphasis on whichever methods and data collection tools will best produce meaningful results that is important (Houghton et al., 2012) and considers that both scientific knowledge and common sense are equally relevant (Florczak, 2014).

Pragmatism therefore supports a mixed methods approach to answer the research question on whether occupational therapy is effective in enabling individuals living in the community with a diagnosis of depression, to improve their functioning and



participate meaningfully in their everyday lives. It supports the integration of the results so that conclusions can be drawn from the combination of both perspectives (Creswell, 2014). This methodology will ensure the research study is able to impact on practice (a requirement of professional doctorate research studies). Mixed methods research has been criticised in relation to strategies being drawn from conflicting paradigms (Bryman, 2012), however it allows for exploration from different perspectives to “facilitate understanding about multifaceted phenomena such as health, illness and occupation” (Mortenson and Oliffe, 2009 p.14). It is a unique way of collecting data to develop treatment-based knowledge that is vital to clinical practice, whilst at the same time empowering service users (Shaw et al., 2010) which complements the philosophical base of the profession of occupational therapy.

Pragmatism therefore also supports service user involvement and ‘freedom of enquiry’ so that communities can stipulate what matters to them and decide the most meaningful way to investigate (Morgan, 2014). The nature of human experience is central, which ensures the ‘right’ questions are asked ensuring meaningful research (Morgan, 2014). It is the emphasis and incorporation of patient beliefs that makes pragmatism the most appropriate paradigm to support the generation of the best possible evidence for practice (Shaw et al., 2010). Bishop (2015) highlights that pragmatism enables the subjective meaning of someone’s situation or experience to be explored through qualitative data, so it is more than just an account of a situation.

With services under pressure to provide detailed service evaluations whilst needing to be ‘patient-centred’, mixed methods approaches can support this (O’Cathain et al., 2007). Research from a single positive or constructionist perspective may never be sufficient to inform complex clinical practice (Shaw et al., 2010). Johnson and Schoonenboom (2016) have described how intervention designs exploring effectiveness can be improved with the addition of qualitative components to achieve results that are more useful to everyday practice, through the interaction of the different components. Indeed, when exploring knowledge generation in occupational therapy, Duncan and Nicol (2004) suggest that mixed method designs are often essential due to the complexity of meaning within research questions. A mixed-methods approach was therefore considered necessary to comprehensively answer the research question for

this study. My epistemological position is therefore that both qualitative and quantitative data are required to gain a comprehensive understanding of this phenomena. Pragmatism as an overarching worldview, and as an approach, has therefore guided this mixed methods study.

#### **4.1.2 Epistemology and philosophical stance**

A researcher's philosophical stance, including their epistemological and ontological position are important as they are informed by their subjective beliefs, values, and priorities, and will therefore influence all aspects of their research (Bowling, 2014). Section 4.1.1 has highlighted that my epistemological position is one of pragmatism; that a combination of qualitative and quantitative data is required to gain a full and comprehensive understanding of the research topic. From an ontological perspective, my position is that there are multiple realities which may exist independently of what we know, and which are relative to an individual's personal experience. The use of a critical realist perspective therefore supported the use of both quantitative and qualitative approaches within this study.

Critical realism focusses on understanding, in addition to describing, what has happened, to consider the causal mechanisms (Vincent and O'Mahoney, 2018). It focusses on the social world, and the situations and discourses within it, to identify and consider the mechanisms that are at play (Bryman, 2012). Because critical realism has a focus on the causes of experiences and observed situations whilst encouraging inclusive and holistic investigation, it has been identified as particularly useful for highlighting complexity and undertaking mixed methods research in health care situations (Walsh and Evans, 2014). From an epistemological perspective, it was considered that critical realism would also support the triangulation process in this mixed methods study to allow causality to be considered from more than one perspective. As the critical realist approach falls between the positive and interpretive research paradigms it is congruent with a pragmatic world view which advocates for the insights of different methodologies and paradigms to be brought together so that the best possible way of knowing can be utilised (Section 4.1.1).

Critical realism combines realism with a constructivist epistemology (Nightingale and Cromby, 2002; Walsh and Evans, 2014). Constructivism is of importance to this research because it emphasises the significance of the direct lived experience of participants and the view that each participant may have their own reality, and that interactions between individuals results in the construction of social properties (Robson and McCartan, 2016).

#### **4.1.3 Theoretical perspectives relating to research design of effectiveness studies**

Guidance on evaluating complex interventions has been developed to support researchers to select appropriate measures whilst considering any constraints. These highlight the need for a focus on what works in practice, the range of effects, variations and causes of variation (The Medical Research Council, 2008). As highlighted in the introductory chapter (Section 1.3.4), occupational therapy has been described as a complex intervention (Creek, 2003). A key indicator of a complex intervention is the presence of multiple components that interact to illicit an overall outcome. Creek (2009) highlighted the need for exploring relationships between different components rather than studying them in isolation. The challenge of evaluating complex interventions has been widely documented (Datta and Petticrew, 2013; Hawe et al., 2004; Watt et al., 2015).

#### **4.1.4 Personal perspectives and subjectivity (Part 2)**

I have reflected on my choice of mixed methods and pragmatism extensively. I have considered whether I am a true pragmatist believing in the equal weight of quantitative and qualitative methodologies or whether I favour quantitative methods. I believe that I am a true pragmatist. A key driver for this research study was a desire to provide both evidence of effectiveness for an NHS environment that values numerical data, with knowledge that NICE guidance is produced in line with a 'hierarchy of evidence' favouring quantitative data. Whilst these have required me to prioritise the quantitative arm, I firmly believe in the power of patients' stories in evaluating an intervention experience in a meaningful way. I have questioned why RCTs, and other quantitative designs are 'better' than qualitative data in all health research. As a Professional Lead Occupational Therapist, I heard patient stories of recovery from adversity that warmed

my heart; people who rebuilt their lives and regained the ability to engage in everyday activities that were important to them. I shared these stories within monthly and quarterly reporting. However, those who make the financial decisions often favour numbers to patient stories and these may not therefore carry as much weight as data on a spreadsheet to those balancing the finances of a large NHS trust.

The consultation paper 'Liberating the NHS: no decision about me, without me' (DoH, 2012) highlights the importance of listening to the voices of the people who use health services. I believe that the best way to find out how effective and useful a service or intervention is, is to ask the people who use the service or receive the intervention. Whilst I was unable to give the qualitative component equal weight due to the limitations on word count in a professional doctorate thesis, I wanted to ensure these voices were included in this study. Whilst there is a 'hierarchy' of evidence, I strongly believe that service users voices need to be heard and that RCTs are not the only way to demonstrate effectiveness. My experiences and biases have therefore shaped my ontological and epistemological positions.

## **4.2 Overview of research design and methodology**

This research utilised a QUAN + qual convergent mixed methods intervention evaluation design (Creswell and Plano Clark 2017), including both quantitative and qualitative components to answer the research question as fully as possible. Whilst the data were collected sequentially, quantitative followed by qualitative, the components were not dependent upon one another as is the process for sequential designs (Creswell, 2014). Sequential data collection was utilised in this design to allow participants to complete therapy prior to being interviewed.

An overview of the methodological strands of this study can be found in Table 9.

**Table 9. Methodological strands: key features of methodology**

<b>Aim:</b> To explore whether occupational therapy is effective in enabling individuals with a diagnosis of depression to improve their functioning and participate meaningfully in their everyday lives.			
<b>Objective</b>	<b>Research method</b>	<b>Research purpose</b>	<b>Outcome Measures</b>
To evaluate the current evidence base	<b>Systematic review</b>	To evaluate the current evidence-base for the effectiveness of occupational therapy in depression	N/A
To evaluate the occupational functioning of individuals with a diagnosis of depression before and after occupational therapy intervention, and three months following completion of the intervention.	<b>Quantitative</b> Single group pre-test- post-test design  All outcome measures were utilised before and after intervention and where possible at 3 months post intervention (to explore maintenance effects).  Occupational therapy intervention logs	To explore the effectiveness of occupational therapy interventions by measuring change in function over a course of occupational therapy intervention relating to participants chosen occupational goals.  To record fidelity and adherence to treatment to identify how much occupational therapy participants have had and what interventions have been delivered.	<b>Primary:</b> COPM-P (standardised, evidenced-based, validated and individualised occupational therapy outcome measurement tool)  <b>Secondary:</b> COPM-S As above Review of service user perceived level of satisfaction regarding their function within their chosen occupational goals  The Work and Social Adjustment Scale
To evaluate participation in activities of everyday life, depression symptomology and quality of life, before and after occupational therapy intervention.	<b>Quantitative</b>  As above	To explore the effectiveness of occupational therapy interventions by measuring change in participation in everyday life over a course of occupational therapy intervention regarding participants chosen occupational goals.	Beck Depression Inventory (depression symptomology)  SF-36 Health Survey (health related quality of life)  The Utrecht Scale for Evaluation of Rehabilitation-Participation (Participation).  A time-use diary was utilised to support this process to provide an additional evaluation of level of participation.
To explore service user perceptions of the effectiveness of occupational therapy in supporting recovery and enabling people to live meaningful lives.	<b>Qualitative</b>	To allow detailed discussion of everyday experience.  To explore service users' perception of the impact and effectiveness of the intervention they received.  To explore the mechanisms of change.	N/A

### **4.2.1 Quantitative component**

Experimental designs are considered most suitable for establishing cause and effect in relation to the effectiveness of interventions (Bannigan, 2004). Occupational Therapy is considered by some to be a complex intervention (Creek, 2003, 2009; RCOT, 2018) and there are now guidelines in place to support how such interventions are evaluated. The Medical Research Council (MRC) also recommends that this should be through experimental designs (Craig et al., 2008). The gold standard experimental design is often considered to be the RCT. In some situations, however it is not ethical for research participants to be randomly assigned between experimental and control groups (Belli, 2009). In most mental health settings in the UK, occupational therapy is an intervention that is routinely offered to service users with depression where they have occupational, functional, or vocational needs, therefore it would not be ethical to deny participants this intervention. For this reason, a pre-experimental design was used to collect the primary quantitative data over time utilising a pre-test post-test design.

The systematic review in Chapter 3 described disadvantages of non-experimental research designs and highlighted participants may recover their level of function and participation naturally or through some other means between pre-test (T1) and post-test (T2) measurements. It highlighted there may be a natural drift towards improvement due to relatively extreme symptom scores at T1 with subsequent scores being more likely to be closer to the norm due to chance (the phenomenon known as regression to the mean (RTM)) which can result in bias. In addition to this, the effects of the testing itself may also serve to improve functioning. This phenomenon needs to be considered at all stages of the research process (Chiolero et al., 2013). RTM analysis therefore formed part of the quantitative data analysis for this study. To maximise internal validity, support reliability and the examination of potentially causal relationships in pre-experimental designs, a longitudinal measurement was added (Belli, 2009; Seifert et al., 2010). Therefore, in addition to the pre-test and post-test, participants were measured again three months post intervention where study timescales allowed, to explore whether the effects of the intervention were maintained. The longitudinal design therefore strengthened this study.

The results of both the literature review (Chapter 2) and systematic review (Chapter 3) have influenced methodological choices for this study. It is apparent from the literature that there is a lack of research into individualised client centred occupational therapy as routinely provided in clinical practice, in mental health generally. Section 3.4.1 highlighted that occupational therapy researchers tend to circumvent the ethical challenges associated with RCTs, by using occupational therapy as both the intervention and the control group; comparing newly developed interventions with occupational therapy treatment as usual (TAU), in order that participants are not denied an intervention routinely offered. This has resulted in a lack of RCTs that evaluate occupational therapy compared with no occupational therapy. It has been highlighted that demonstrating the benefit of occupational therapy compared to no occupational therapy is a research priority. Whilst it was not possible to achieve such a design within the time constraints of this doctoral study, the design chosen may enable this study to serve as a feasibility study for a future RCT.

Chapters 2 and 3 have also reported a tendency for occupational therapy researchers to choose generic study populations, such as 'serious mental illness' rather than specific mental health diagnoses, such as depression. It has been suggested that this may have contributed to the limited condition-specific evidence for the effectiveness of occupational therapy in mental health and may in turn have impacted on the limited reference to occupational therapy in NICE guidance which is diagnosis specific. This study therefore has opted for a condition specific study population.

#### **4.2.1.1 Process measurement**

It is good practice to monitor fidelity and adherence to an intervention being evaluated, to consider the amount and intensity of the intervention that participants receive (Persch and Page, 2013; Sturkenboom et al., 2013). Intervention logs were therefore utilised to measure fidelity and adherence to the occupational therapy intervention provided. This was particularly important in this research setting as it was recognised locally that there are occasions when planned occupational therapy is not able to be delivered due to reasons such as service user presentation and service pressures.

### **4.2.2 Qualitative component**

Much can be learned from exploring service users' experiences, particularly how interventions may impact on people's everyday lives (Smith, 2006) and through consideration of their individual circumstances (Silverman, 2006). In keeping with a constructivist stance, the qualitative component has sought to collect rich and detailed data to support interpretation of their direct and individual experiences of occupational therapy through semi-structured interviews. Of particular interest was the perceived effectiveness of occupational therapy in enabling meaningful participation in everyday life, as well as participants' opinions on what they feel had influenced their independence, recovery, and readiness for discharge. In qualitative research, critical realism can support the consideration of causality by searching for the mechanisms that are responsible for change and how they operate in each situation (Bryman, 2012). The qualitative component followed on from the quantitative component and participants were supported to fully explain their experiences and perceptions of occupational therapy and account for their progress, successes, limitations, and difficulties. The qualitative component was of particular importance in this study due to the use of a single-group design within the quantitative arm. The qualitative component will enable causality to be considered from more than one perspective (Shaw et al., 2010).

### **4.2.3 Inclusion/exclusion criteria**

The inclusion criteria for this study were:

1. Adults over the age of 18 with no upper age limit
2. A primary diagnosis of depression
3. An identified occupational, functional, or vocational need
4. Had been referred to and were on the waiting list for occupational therapy in a community mental health setting.

The exclusion criteria for this study were:

1. Individuals with organic mental health conditions
2. Dual diagnosis involving substance misuse
3. Those unable to give informed content.



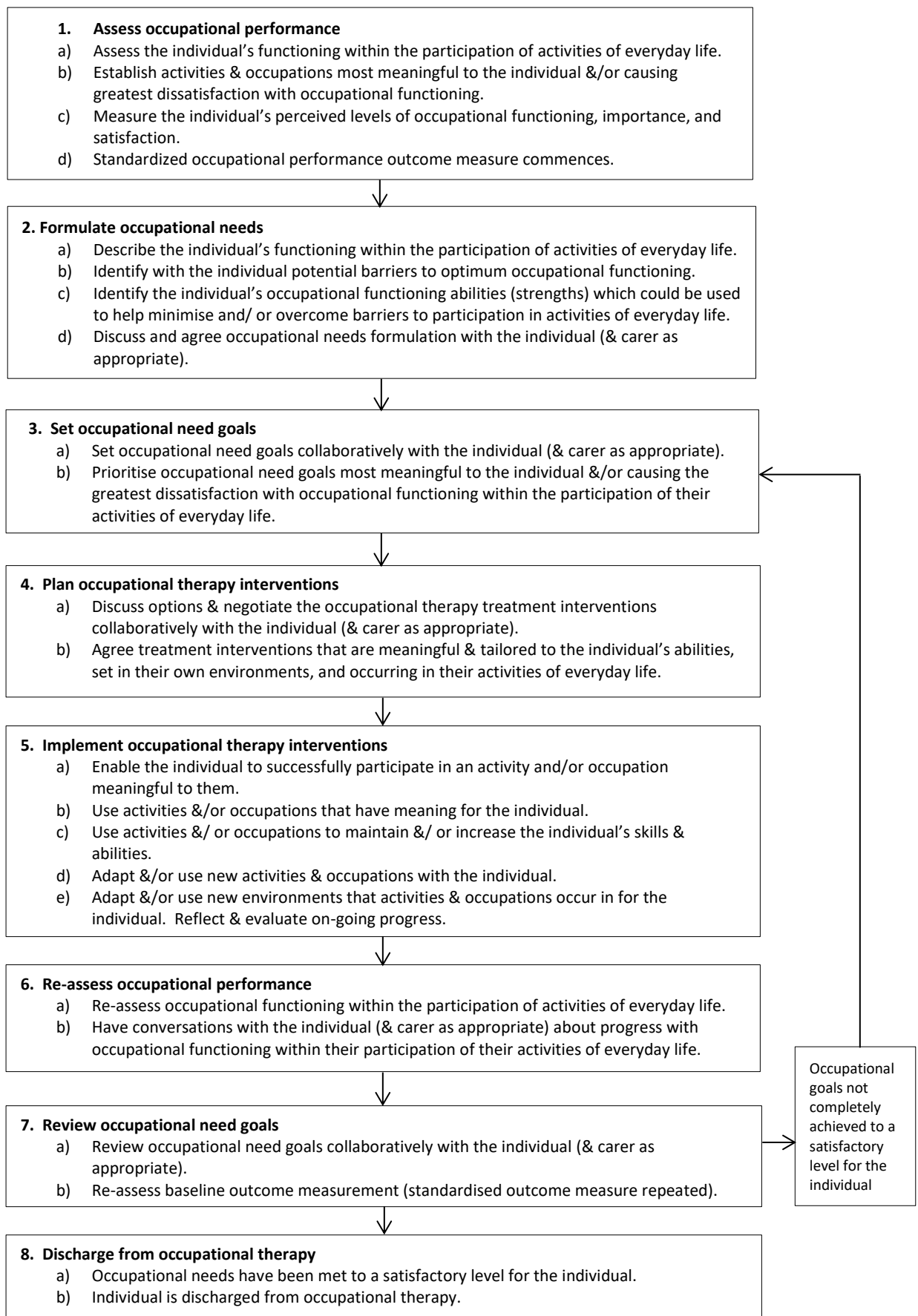
#### **4.2.4 The occupational therapy intervention**

Clinical input for RCTs and feasibility studies should take place under the same condition as it would in clinical practice (Medical Research Council, 2008). The occupational therapy provided for this research followed the intervention specification routinely utilised within the Trust (Inman, 2017). There was no control intervention. An overview of the process is provided in

Figure 4 below. In routine practice, individualised occupational therapy is not offered for a pre-determined length of time as it is based on individual need. Therefore, the number, length and frequency of sessions are not specified in advance and are based on ongoing review. Multiple parts of the process can be delivered simultaneously, and more than one intervention component can occur within each session.

The occupational therapy process commences with assessment of occupational performance to identify occupational, functional, or vocational need (Creek, 2014b). Formulation then takes place to make sense of the person's occupational situation and difficulties in a way that is informed by the occupational therapists professional reasoning and occupational therapy theory (Brooks and Parkinson, 2018). The service user is then supported to identify their occupational goals before a therapy plan is developed collaboratively between service user and occupational therapist. Whilst therapy is ongoing, regular review will take place in relation to progress with occupational performance and goals. Once a service user has achieved their goals, they will be discharged from occupational therapy.

Occupational therapy may take place in the individual's home, place of work or out in the service user's community (Creek, 2014b). Typical treatments sessions locally are of one-hour duration with longer sessions when intervention in a community setting is required. Where participants had not completed their occupational therapy when the six months post-test measures were undertaken, they continued their therapy after their involvement in the study if they still had unmet occupational needs.



**Figure 4. Occupational therapy process and intervention components**  
 (Permission granted to reproduce from Lancashire and South Cumbria NHS Foundation Trust).

#### **4.2.5 Reflexivity during the research process**

Chapter 1 introduced the concept of reflexivity as the process whereby the researcher critically reflects upon the research process at all stages, with particular attention being given to their place within the research, their values, motivations, and personal biases, to promote objectivity. A reflexive diary was kept throughout the research process as recommended by Finlay (1998) to consider my subjective experience and motives for undertaking the research, my underlying assumptions that may impact on the research, and my expectations, behaviour, emotions, and unconscious responses. Reflexivity is further detailed in relation to data collection within section 4.4 and data analysis in Section 4.5.2. The reflexive diary contributed to the development of sections on personal perspectives and subjectivity in Chapter 1 (Section 1.7), Chapter 4 (Section 4.1.3), Chapter 7 (Section 7.7) and Chapter 8 (Section 8.2).

#### **4.3 Quantitative data collection**

The participant's occupational therapy was provided by twelve occupational therapy participants who also provided fidelity data. The data collection process was supported by six volunteer research assistants. All 18 occupational therapists (including those acting as volunteer research assistants) were trained in the research process, in all procedures relating to screening and identification of potential participants, and the process to recruit participants and achieve informed consent (Appendix 7). The Research Assistants were also trained in the completion of the outcome measures. In addition, all occupational therapists completed the National Institute of Health Research Good Clinical Practice training. The recruitment phase commenced in July 2018 and was completed on 31<sup>st</sup> March 2019. Longitudinal follow up data were only achieved for three participants due to study timeframes. All Data collection continued until 31<sup>st</sup> March 2020.

In September 2019, I moved employment to another NHS Trust. As the data collection was still ongoing, I nominated one of the research assistants as 'local collaborator' to oversee the remaining data collection. The necessary approvals were established with both NHS Trusts to allow access to the data for analysis.

### **4.3.1 The primary outcome measure:**

Chapter 1 described how models of practice provide the theoretical underpinning of occupational therapy and highlighted that in the setting where the research study took place, the Canadian Model of Occupational Performance and Engagement (CMOP-E) is routinely utilised to underpin practice. The Canadian Occupational Performance Measure (Law et al., 1990), an outcome measure directly associated with the COPM-E model, was also regularly used in the research setting and was utilised as the primary outcome measure for this research study, so that the outcomes routinely achieved in practice could be tested more formally (Section 1.7.3) and to ensure the research study was able to directly impact on practice, a requirement of professional doctorate research studies.

The primary outcome measure was the performance scale (COPM-P) of the Canadian Occupational Performance Measure (COPM) (Law et al., 1990). The COPM is a client-centred, standardised, evidence-based, and individualised occupational therapy outcome measurement tool (Appendix 2). The COPM-P measures change in occupational functioning over a course of intervention (Law et al., 2005) and was therefore suitable to use as a pre-test and post-test measure. Its reliability and validity in mental health is well documented (Boyer et al., 2000; Law et al., 2005; Pan et al., 2003). Previous occupational therapy researchers have recommended that individualised measures, such as the COPM, should be used to investigate occupational therapy outcomes, because other measures are not sensitive enough to measure outcomes relating to individual goals within an intervention programme that has been tailored to the individual's specific needs (Cook et al., 2009). The process of completing this measure involved participant and occupational therapist having a conversation to enable the participant to identify their occupational needs, including current functional difficulties and individual priorities. This involved the participant subsequently self-scoring their level of function regarding these priorities, before and after occupational therapy intervention.

### **4.3.2 Secondary quantitative outcome measures:**

The satisfaction scale (COPM-S) of the Canadian Occupational Performance Measure (COPM), (Law et al., 1990) was utilised as a secondary measure. COPM-S measures change in satisfaction with occupational functioning over a course of intervention. As well as measuring the person's ability to function within activities, it is important that occupational therapists consider whether improved function leads to increased participation (Dunford and Bannigan, 2011). The lack of consensus regarding the definition of participation, resulting from ambiguities in the definition within the International Classification of Functioning, Disability and Health, has impeded the development of valid tools for measuring this concept (Coster and Khetani, 2008) as highlighted in Chapter 1. Since measuring participation is crucial for this study, attempts were made to select the best available measure considering the definition the selected measure represented (Coster and Khetani, 2008). As recommended by the Allied Health Professions Outcome Measures UK Working Group (2019), measures were compared, considering client acceptability and feasibility as well as measurement properties. Measures of participation that were considered included the Utrecht Scale for Evaluation of Rehabilitation-Participation (User-P) van der Zee, et al. (2010), the Participation Scale (van Brakel, 2010) and various time-use surveys such as the UK 2015 Time Use Survey (Gershuny and Sullivan, 2017). The User-P was selected because it has good validity, reproducibility, sound psychometric properties, and reported acceptability to participants (van der Zee, et al., 2010).

The Work and Social Adjustment Scale (WSAS) is a patient-reported outcome measure (Mundt et al., 2002) developed to explore functional impairment for people with anxiety and depression and is widely used across the NHS in the United Kingdom. It has strong psychometric properties and is simple to complete having only five questions as well as high reliability and is sensitive to treatment effects (Zahra et al., 2014). For this study the WSAS was modified because whilst it was designed to measure function (including, functioning at work, within home management, social and leisure activities) it does not include measurement of self-care, a core functional domain. The score boundaries for the WSAS were developed following work to evaluate the reliability and validity of the

measure through convergent and criterion validities regarding condition severity two groups of participants (depression and OCD) (Mundt et al., 2002).

The procedure for modifying the WSAS was to firstly review the literature for any examples of WSAS modification followed by making and testing the modification (Tucker et al. 2012). The review of the literature did not identify any previous examples of modification and no detail regarding the weighting of the different functional domains. A decision was made to modify the scale by adding a sixth question with identical phrasing to the other five questions but relating to the missing domain (Appendix 3). This resulted in a maximum score of 48 instead of 40. This modification is similar to those made by Resnicow et al. (2003) who added an item to an existing physical activity scale. The reliability and validity of this modified version has not been assessed and recommendations regarding this are made in Chapter 7. The lack of a self-care domain within a tool that measures functioning will also be further discussed in Chapter 7.

The Beck Depression Inventory (BDI) is a questionnaire that evaluates the severity of depression. The revised BDI-II (formulated to the DSM-IV criteria for major depression) contains 21 questions and is scored on a four-point scale. It demonstrates excellent psychometric properties and is widely used in research (Dozois and Covin, 2004). The Short Form-36 Health Survey (Rand 36-item Health Survey) is a 36-item questionnaire and is the most frequently used generic health status measurement tool in the world (Bowling, 2005). It takes up to 10 minutes to complete, has been widely evaluated and has high psychometric properties including validity and internal consistency (Garratt et al., 1993).

In addition to the analysis of the total scores of the above quantitative outcome measures, two individual scores were identified a priori, for separate consideration as they were of particular interest and relevance to occupational therapy outcomes. These were:

- USER-P – 1B: frequency of activities\*
- BDI (II) – Q12: interest in people and activities

\* Due to an omission when transferring the data from hard copies of the outcome measure booklets to a spreadsheet ready for analysis with SPSS, the 1B subscale data

were not included, meaning the 'frequency of activities' subscale (1B) of the USER-P could not be considered separately. Unfortunately, this error could not be remedied within study timescales due to me leaving the Trust and no longer having easy access to the hard copies.

### **4.3.3 Completion of quantitative outcome measures**

The initial COPM-P (primary) measure was collaboratively completed with the service users, by the therapists who provided their therapy, as is usual practice within the service. The COPM-S (secondary measure) was collected at the same time, again as is usual practice. The post-test and follow up COPM measurements were undertaken by a research assistant to ensure impartiality because the occupational therapist may consciously or unconsciously wish to observe improvement in their service user. The research assistant was a registered occupational therapist, but not the occupational therapist that provided therapy to that participant. Six occupational therapists were 'recruited' as volunteer research assistants; these were occupational therapists from other teams and services across the Trust, who had an interest in research. This was offered as a Continued Professional Development (CPD) opportunity via the Trusts Allied Health Professionals (AHP) Research Forum that I co-facilitated. I provided training for the research assistants to ensure that the outcome measures were used correctly and consistently. De-briefing and feedback sessions were built into the CPD opportunity so that the volunteer research assistants could gain an understanding of how the findings would be analysed and how the research would be used to inform practice.

The remaining quantitative measures were also completed by the volunteer research assistants. All quantitative measures, (both primary and secondary) were completed prior to the start of therapy and at the end of therapy (or after six months if occupational therapy was still ongoing). All measures except the COPM-P and COPM-S were repeated three months after the end of therapy (for those whose occupational therapy has been completed). The COPM-P and COPM-S were not repeated at three months post intervention because the COPM is a clinical tool and it was anticipated that some service user participants may have been discharged from the service by T3.

The third measurement (at three months after completion of occupational therapy) was not achieved for all participants. This was because many participants were receiving therapy for a longer period and their follow-up dates therefore fell outside the timeframe for this study. The main outcomes analysis was therefore based on the comparison of the primary and secondary outcome measures before and after occupational therapy. The outcome measures, completion method and the usual completion times, are shown in Table 10. The outcome measure booklet can be found in Appendix 3.

**Table 10. Quantitative outcome measures**

<b>Instrument</b>	<b>Outcome measured</b>	<b>Data Collected by</b>	<b>Anticipated time required to complete</b>
<b>Primary outcome</b>			
COPM-P	Occupational performance	Pre-test by occupational therapist. Post-test by research assistant (RA)	1 minute
<b>Secondary outcomes</b>			
COPM-S	Satisfaction with occupational performance	Pre-test by occupational therapist. Post-test by research assistant (RA)	1 minute
Utrecht Scale for Evaluation of Rehabilitation-Participation (USER-P) van der Zee, et al. (2010)	Participation	Pre-test and post-test by RA	12 minutes
Work and Social Adjustment Scale (WSAS). Mundt et al. (2002).	Functioning	Pre-test and post-test by RA	2 minutes
Beck's Depression Inventory-II (BDI), Beck et al. (1996)	Depression symptomology	Pre-test and post-test by RA	10 minutes
Rand 36-item Short Form Health Survey (SF-36) (Ware and Sherbourne, 1992)	Health related quality of life	Pre-test and post-test by RA	15 minutes
		<b>TOTAL TIME</b>	<b>40 minutes</b>

#### **4.3.4 Process data collection**

In addition to the routine recording of each intervention in the service user's healthcare record, the occupational therapists completed an anonymised intervention log providing details of each session they provided (Appendix 4) so that fidelity and adherence to the specified intervention could be monitored and to determine whether the amount or



'dose' of occupational therapy that participants received impacted upon outcomes. Whilst the word 'dose' is aligned to the medical model which has been identified as conflicting with the client-centred nature of occupational therapy (Parker, 2006), the MRC guidance on the process evaluation of studies evaluating complex interventions utilises this term to refer to the amount of the intervention that is delivered (Moore et al., 2015). Additionally, the Bradford Hill Criteria for Causality includes 'dose response' as one of the principles for establishing evidence of causal relationships; that causality can be inferred when differing amounts of an intervention are found to have differing effects (Hill, 2015). These criteria are increasingly used to evaluate cause and effect when ethical considerations prevent the use of RCTs (Boniface et al., 2017).

The intervention log was based on the occupational therapy intervention specification that was routinely utilised within the Trust (Inman, 2017). This captured information including duration and frequency of sessions, type and detail of interventions offered, service user adherence and any non-occupational therapy interventions offered during the appointment. Using a tick-box, the occupational therapists recorded all intervention components delivered during each session as well as detail of other interventions provided by other professionals in between occupational therapy sessions (extracted from participants' care record). The occupational therapists also documented how well the participant adhered to the intervention (during the session itself and between occupational therapy sessions) using Likert scales. Figure 5 below summarises the quantitative, qualitative and fidelity data collection process.

#### **4.4 Qualitative data collection**

In line with a critical realist approach that incorporates elements of both positivism and constructivism (Section 4.1.2), semi-structured interviews (SSIs) were carried out to gain an understanding of the lived experience of participants in relation to their occupational therapy interventions. Semi-structured interviews are flexible, with planned questions within an interview guide which can be modified as needed. Follow-up questions can be asked for clarity or to find out more about what the participant has said (Robson and McCartan, 2016). They are suitable for focussing on the topic in question whilst

affording participants the freedom to answer in the way they choose. Semi-structured interviews can however be time consuming and may not give participants the opportunity to speak on a topic of their choosing. The interviewer may also unconsciously influence participants responses highlighting the importance of reflexivity to ensure trustworthiness (Section 4.2.5).

Semi-structured interviews are a common method of data collection within qualitative studies (Bryman, 2012). Alternative data collection methods considered include unstructured interviews and focus groups. Whilst unstructured interviews would have allowed more time and freedom for participants to explain their situations (Bowling, 2014), these would not have been possible within the constraints of a doctoral study and with a single researcher. Focus groups were discounted because it was considered that participants with severe depression may find these difficult to attend and may therefore generate logistical difficulties for both participants and researcher. Semi-structured interviews were also selected over focus groups because, although time consuming, they support detailed discussion of personal experience (Kisely and Kendall, 2011) and avoid some of the disadvantages of focus groups such as the potential for powerful group dynamics to impact on data (Ajetunmobi, 2012). The semi-structured interviews sought to gather data on the perceived effectiveness of occupational therapy and the mechanisms of change for how any difference in participant functioning, and/or activity participation, had come about, from the perspective of those who had recently experienced it. They also sought information on the perceived impact of occupational therapy, relating to any changes on overall recovery and progress. The aim was to undertake up to 10 interviews.

Bryman (2012) highlights the importance of using an interview schedule (Appendix 5) to ensure consistency across the interviews. It is recommended that service users are involved in the development of interview schedules to seek feedback on the content and structure (Harris, 2005). A small group of service user volunteers (who were not study participants) were consulted to ensure the schedule was client-centred, meaningful to participants and was able to gather the relevant information. They were also asked to consider the wording and acceptability of the interview schedule to support the process of reflexivity and ensuring trustworthiness by minimising the impact

of researcher biases on the data collection process. The participants who took part in the semi-structured interviews were selected from those who consented to take part in the interviews in chronological order of therapy completion. Qualitative data collection took place when participants had completed, or almost completed, their occupational therapy intervention prior to the three-month follow up measurements. Interviews took place in an NHS building or the participant's home as most appropriate for the individual. From a reflexivity perspective, consideration at the data collection stage was given to my interface within the interviews and interaction with the participants as the researcher (Mason, 2018). Reassurance and explanations were given to minimise the impact of both researcher bias and the participant consciously or unconsciously wishing to respond in line with perceived expectations. In addition to making regular entries in a reflexive diary, regular reflexive discussions took place with supervisors during the data collection stage.

A time-use diary was also utilised to provide additional qualitative data as an indication of participation (Spissu et al., 2009). The same group of service user volunteers were asked to review the wording and acceptability of time-use diary to minimise the impact of researcher bias on the design of the diary. Given the documented concern regarding the validity of participation scales, it was considered this would support the measurement of participation with the aim of enabling triangulation or additional explanation of the data. Time-use diaries are routinely used in occupational therapy practice, particularly with people with symptoms of depression as they are an established technique for exploring engagement in occupation (Wilcock, 2007). All participants were asked to complete a time-use diary for seven days at the start and end of their period of occupational therapy (Appendix 6). They were asked to record their daily activities and rate how important and meaningful each activity was to them. The initial diary was completed as part of therapy and was administered by their designated occupational therapist. The diaries were scanned into the medical records as is usual practice, and the anonymous hard copy utilised for research purposes. Participants were asked to complete a post intervention time-use diary at the end of their intervention. This was collected by the research assistant who visited to complete the post-test outcome measures. Time use methods have the added advantage of supporting a

process of reflection for service users around changes in patterns of daily occupations (Orban et al., 2012) and it was considered they would therefore support the qualitative interview process. Only four completed sets of time-use diaries from service user participants were returned due to participants either forgetting to complete them or mislaying them.

## **4.5 Data analysis**

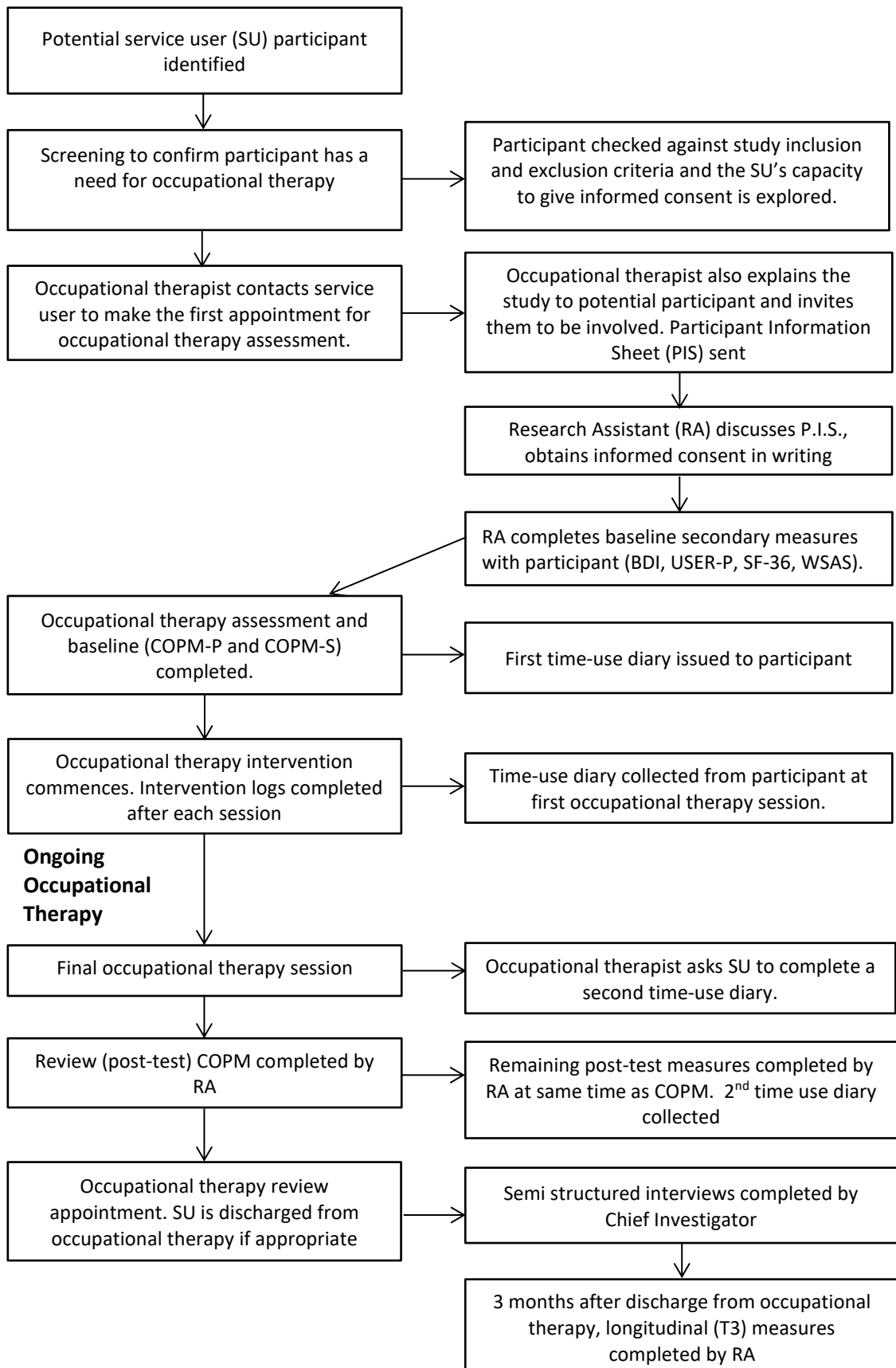
The raw data was summarised into a format that was meaningful, representative, and accurate (Costley et al., 2010). Pragmatism guided the process of bringing together qualitative and quantitative data to ensure the strengths and benefits of each approach were used to answer the research question (Meissner et al., 2011).

### **4.5.1 Quantitative data analysis**

In this study it was expected that three measurements (pre-test, post-test and 3-month follow up) would be achieved for most participants. The aim was to apply the Repeated Measures ANOVA Test to the data, which detects overall differences between mean scores in related groups. However, since only two time points were achieved (because time did not allow sufficient third measurements to be taken) the Paired *t* Test, the equivalent measure for when there are only two time points, was utilised. Statistical analysis was carried out using SPSS, version 26 and testing of the data used the  $p=0.05$  level of significance. Repeated measures and paired tests consider that individuals are likely to vary less between subsequent measures than they are between each other because they are measurements on the same person. For this study only the time effect was measured because there were no groups to be compared. The statistical problem of regression to the mean (RTM) was evaluated by assessing whether those with the most severe scores at baseline made the largest 'recovery' at post-test using a correlation analysis (Linden, 2013).

**Standard Occupational Therapy Pathway**

**Research Pathway**



**Figure 5. Flowchart summarising data collection process**

#### 4.5.1.1 Dealing with missing data

One participant declined to answer question 9 on the BDI during the pre-test measures. This question relates to suicidal ideation (Figure 6). This missing data was managed pragmatically. Missing data analysis methods should ensure confidence in assumptions not leading to bias (Kang, 2013). Whilst mean substitution can result in bias, as it was likely that the missing score was either 2 or 3 (given that it is unlikely the participant would have been concerned to disclose a response of 0 or 1), mean substitution based on estimated values was possible. The participant was therefore assigned a score of 2.5 (the mean of 2 and 3). Steps were taken to ensure participant safety due to potential risk relating to the participant who declined to answer this question (see Section 4.8).

Question 9	Suicidal Thoughts or Wishes
0	I don't have any thoughts of killing myself.
1	I have thoughts of killing myself but would not carry them out.
2	I would like to kill myself.
3	I would kill myself if I had chance.

**Figure 6. Beck Depression Inventory (question 9)**

#### 4.5.1.2 Subscale analysis

Whilst outcome measure scales are designed to be analysed as a whole, separate analysis of Question 12 of the BDI regarding interest in people and activities, was undertaken (paired *t* test) due to it being of particular interest and relevance to occupational therapy. As stated in section 4.3.2, this was planned a priori.

#### 4.5.1.3 Process data analysis

Process data collection was impacted by incomplete recording and inconsistencies in recording by the occupational therapists. This will be discussed further in Chapter 7. Process data were analysed descriptively except for analyses relating to the amount of occupational therapy participants received. To determine whether the amount or 'dose' of occupational therapy that participants received impacted upon outcomes, the data from those outcome measures or subscales yielding statistically significant findings (COPM-P, COPM-S, BDI, WSAS, SF-36 (energy/fatigue and emotional wellbeing subscales) and USER-P (limitation change and satisfaction change subscales) were

correlated against 'dose' (number of occupational therapy sessions/total number of minutes of occupational therapy).

#### **4.5.2 Qualitative data analysis**

In line with the pragmatist world view and the ontological and epistemological perspectives of this research as set out in Section 4.1, thematic analysis as a methodology for data analysis was utilised as this is aligned to both constructivism and realism (Braun and Clarke, 2006). Thematic analysis allows large amounts of data to be summarised to highlight similarities, differences, and any unexpected information (Braun and Clarke, 2006). Whilst eight interviews took place, only seven recordings were achieved due to a technical issue. The interviews each lasted between 40 and 75 minutes. All interviews were fully transcribed using Intelligent Verbatim transcription style. The rationale for this decision was that the qualitative component is secondary to the quantitative component and only *what* was said and not *how* it was said would be analysed. Therefore, Intelligent Verbatim transcription style would give the information required. I transcribed one interview myself to develop skills in this area, and the remaining were completed by an administrator to meet doctoral thesis timeframes.

A process of thematic analysis recommended by Braun and Clarke (2006) was followed. The data were grouped to identify themes, and coded (Lathlean, 2010). Following transcription and data familiarisation the data were grouped into tables of potentially relevant categories to allow the potential themes and subthemes to be identified, narrowed down and appropriately defined. The data were transcribed and organised into a form that supports the process of theming, coding, and analysis (Braun and Clark, 2006; Marshall and Rossman, 2016). Only those themes with sufficient data to support them formed the final selection (Braun and Clarke, 2006). Therefore, data were therefore grouped and re-grouped multiple times to allow all themes to emerge and be narrowed down to identify those arising in at least four interviews to ensure that the themes most prevalent across the interviews were presented. These were then cross-checked for duplication by one of the research supervisors (DD) to support confirmability. Themes and subthemes were subsequently named and defined. Whilst the intention had been to analyse the time-use diaries descriptively, insufficient data

was captured to support analysis. Reflexivity continued through the data analysis process to ensure my position in relation to the research did not adversely impact the analysis through consultation with others and repeated review (Berger, 2015).

#### **4.5.2.1 Trustworthiness**

Chapter 1 introduced the concept of reflexivity and Section 4.2.5 has given an overview of how reflexivity was practiced during this research study. Reflexivity continued through the data analysis process to ensure the impact of my subjective position in relation to the research was minimised. Reflexivity can also promote trustworthiness because it can minimise the impact of research bias and therefore support objectivity. For example, Section 4.4 highlighted that during the research design stage, participants with previous experience of depression were consulted regarding the wording and acceptability of both the time-use diaries and interview schedules. This discussion supported the process of reflexivity whilst also promoting trustworthiness by minimising the impact of researcher biases on the data collection process. As a research concept, trustworthiness promotes credibility, transferability, dependability, and confirmability (Nowell, et al., 2017).

Credibility can be achieved by demonstrating the researcher's interpretation matches participants views (Tobin and Begley, 2004). Member checking is a strategy that can support this however it can place an additional burden on participants and give them the opportunity to change or withdraw data. Additionally, this would have been difficult to achieve within doctoral study timescales. Researcher triangulation, by way of regular discussion with a research supervisor, was used as an alternative (Schwandt et al., 2007) as well as independent analysis of the transcripts by the research supervisor. Audio recording and verbatim transcription were also used to ensure credibility. The transferability of findings was supported by the provision of detailed descriptions of the themes and subthemes to allow other researchers to judge transferability (Schwandt et al., 2007) (Chapter 6). In this study a logical and traceable thematic analysis process that progressed stage by stage promoted dependability (Tobin and Begley, 2004). Confirmability was supported by demonstrating the findings were derived from the



qualitative data through this inclusion of direct quotations in the reporting of the qualitative findings and the inclusion of a transcript extract as an appendix.

Giving attention to reflexivity and trustworthiness was essential throughout this research study. This was particularly so during the qualitative component of the research where the aim was to ensure the reality of the participants and their lived experience is fully represented in line with the ontological and epistemological perspectives presented (Section 4.1).

### **4.5.3 Triangulation of different data types**

During data analysis, mixed methods triangulation of the quantitative and qualitative data was utilised to meaningfully combine the different data sources with the aim of enhancing interpretation and minimising bias (Thurmond, 2001; Williamson, 2005). This is necessary within mixed methods designs so that all data types can be utilised to answer the research question as fully as possible and consequently one type may further explain the other (Creswell and Plano Clark, 2017). As recommended for convergent mixed methods intervention designs, the data were merged and compared, and the quantitative data were then utilised to support the qualitative data with results being displayed on a side-by-side joint table with differences and similarities highlighted (Creswell, 2014) (Chapter 7).

The risks associated with triangulation were considered due to the data coming from different paradigms. This is because whilst triangulation may highlight different perspectives relating to the research questions, validity of inferences made cannot be assumed (Long and Johnson, 2000) and data are specific to their context. This may therefore qualify findings rather than confirm or contradict them (Barbour, 1999). Furthermore, there is a risk of the qualitative data not relating to the quantitative data where the data types are analysed separately and therefore further analysis may be necessary (Tonkin-Crine et al., 2016). This however was not required within this study.

## 4.6 The study sample

The location for this research study was Community Mental Health Teams within a NHS Trust in the North of England. The participants were recruited from the target population, i.e., service users with a primary diagnosis of depression, who had an identified need for occupational therapy and were on the occupational therapy waiting list. All those meeting the study inclusion criteria within teams where participating occupational therapists were based between 03.07.18 and 31.06.19 were invited to take part. These were taken in consecutive order, unless any participant was screened as being high priority. Higher priority cases were seen sooner in line with local protocols. A power calculation based on an expected mean pre-test-post-test difference of two points on the COPM scale (standard deviation = 2.5) indicated that sixteen participants would be needed for a power of 80% and a significance level of 5%. Data from routine quarterly reporting within the service were used to provide the COPM estimates to inform this calculation. Consideration was given to likely attrition rates. In similar research with people with psychosis, Cook et al. (2009) experienced a five per cent attrition rate; however their research study was not longitudinal, where attrition rates are likely to be higher. The target sample size for this study was therefore 26 to support a final sample of sufficient size. With no funding, the size of the final study sample was determined by the available occupational therapy resources and participants within the NHS Trust at the time of the study as well as thesis timescales. A small purposive sample for the qualitative component was recruited for the qualitative component to provide a deep case-focussed analysis of the participants' perspectives (Collins et al., 2007). These individuals were drawn from those involved in the quantitative arm of the study. Participants were invited to participate in consecutive order, once they had completed, or almost completed, their occupational therapy intervention, subject to their consent. Purposive sampling was suitable because it ensured the participants had recent experience of occupational therapy and therefore had relevant experience of the phenomena under consideration.

The enrolment process for service user participants is detailed in Appendix 7. The recruitment process was supported by registered occupational therapists and an administrator. The fidelity sample was all the occupational therapists providing

occupational therapy to the participants in the study ( $n=12$ ). They were required to provide detail of the content of the interventions they delivered to the service user participants. Expressions of interest were requested from occupational therapists across the service, and selection was based on the potential suitability of the cases on their occupational therapy waiting lists at the time.

## **4.7 Ethical issues**

A practical risk-analysis or management approach was used (Long and Johnson, 2007) so that high standards of conduct were ensured and potential harm to participants minimised. University of Salford Ethics Committee approval was successfully achieved in December 2017, reference number HSR1718-034. Health Research Authority approval and NHS Research Ethics Committee approval was achieved in June 2018, reference number, 18/NW/0275 (Appendix 8). In this study, there were both service user participants and occupational therapist participants.

### **4.7.1 Service user participant burden and risk**

Only people able to give informed consent were recruited and written consent was sought from all participants (Appendix 9). Participants were informed that they could withdraw from the study at any time, without giving reason and without consequence. For the service user participants, engagement in the study involved them receiving occupational therapy interventions they would have been routinely offered without any change. However, they were also required to complete the outcome measures with a research assistant (the pre-test/post-test measurements). These were completed prior to commencing therapy, at the end of therapy (or at six months if therapy is still ongoing) and three months after the completion of therapy (where this was within the study timescales). The completion time of outcome measures and their 'acceptability' to participants in terms of ease of use, was considered when measures were selected. Participants were asked to keep a log of the activities they took part in each day (time-use diary) for one week at the start and end of therapy. The research assistants met with individuals at the most convenient location to them, either in their own home or at the community mental health team base to complete the outcome measures.

Eight research participants were asked to take part in semi-structured interviews (SSIs) to explore their individual experience of occupational therapy. These interviews aimed to last for up to sixty minutes however participants were advised that they were free to end the interview at any time. Again, interviews were carried out at the most convenient location to them. The Participant Information Sheet (PIS) (Appendix 10) made it clear that if participants disclosed information of significant concern during an interview such as suicidal ideation, abuse, safeguarding concerns, illegal activity or information that suggested the participant (or someone else) was at risk of harm, this information would be shared in the interests of safety. No such disclosures were necessary following the semi-structured interviews however there was one instance, during T1 outcome measure completion, where a participant declined to answer a question on suicidal ideation. Steps were taken to ensure participant safety; following discussion with the participant the research assistant contacted the participant's care coordinator with their consent, to ensure further support was available should the participant require this.

The information sheet highlighted that discussion of sensitive information or feelings may impact negatively upon the participant and that this risk would be minimised using a sensitive interview approach. Participants were advised that the interview could be stopped or paused at any point if they wished. Any participant who became distressed would be supported by the provision of relevant contact information such as the Crisis Team or Mental Health Line. This however was not necessary for any participant. Time was provided at the end of each interview to ensure the well-being of the participant.

Service users who were consulted in the design of the interviews specifically asked that the interview guide include reminders that the information participants gave would not be passed to their care team or therapist, would not impact on the care and treatment they receive, included in their medical records, or shared with other agencies. This was because service users may fear being discharged from mental health services before they perceive themselves to be well. Participants were reminded about this at each interview. At the end of the study thank you letters containing a summary of the study findings were sent to those service user participants who requested this.

### **4.7.2 Occupational therapist burden and risk**

The occupational therapist participant information sheet and consent form can be found in Appendices 11 and 12. There was a small burden on the occupational therapist participants recruited into the study. They were required to give potential participants information about the study over the telephone during routine appointment booking telephone calls. They were also required to complete an 'Intervention log' after delivering each session to participants for fidelity to be measured. The occupational therapists were reassured that their performance was not being judged when completing the intervention logs. Support was available for the occupational therapists for the duration of the study, initially from myself as the Chief Investigator and from the assigned 'Local Collaborator' once I had moved to a different Trust. Additional support would have been made available to occupational therapists, if they had experienced distress due to being involved in this research study, however no distress was reported.

### **4.7.3 Potential risk to researchers**

Risk assessment for all those involved in this research study took place in accordance with the Trust's lone working policies and procedures. All staff involved had experience of working with the client group concerned and were up to date with relevant mandatory training such as conflict resolution. As chief investigator I ensured that all staff involved received appropriate training, supervision, and support for their roles.

## **4.8 Chapter summary**

This chapter has presented an overview of the mixed-methods research methodology used for this study, including paradigm choice and theoretical and personal perspectives (Section 4.1), an overview of the quantitative and qualitative design components, inclusion and exclusion criteria and detail of the occupational therapy intervention examined in this study (Section 4.2), quantitative data collection including fidelity data (Section 4.3) and qualitative data collection (Section 4.4). The data analysis processes, including the triangulation of the different data sources was detailed in Section 4.5. The study sample was described in Section 4.6 and finally, ethical considerations were highlighted and discussed (Section 4.7).

## Chapter 5 Quantitative Findings

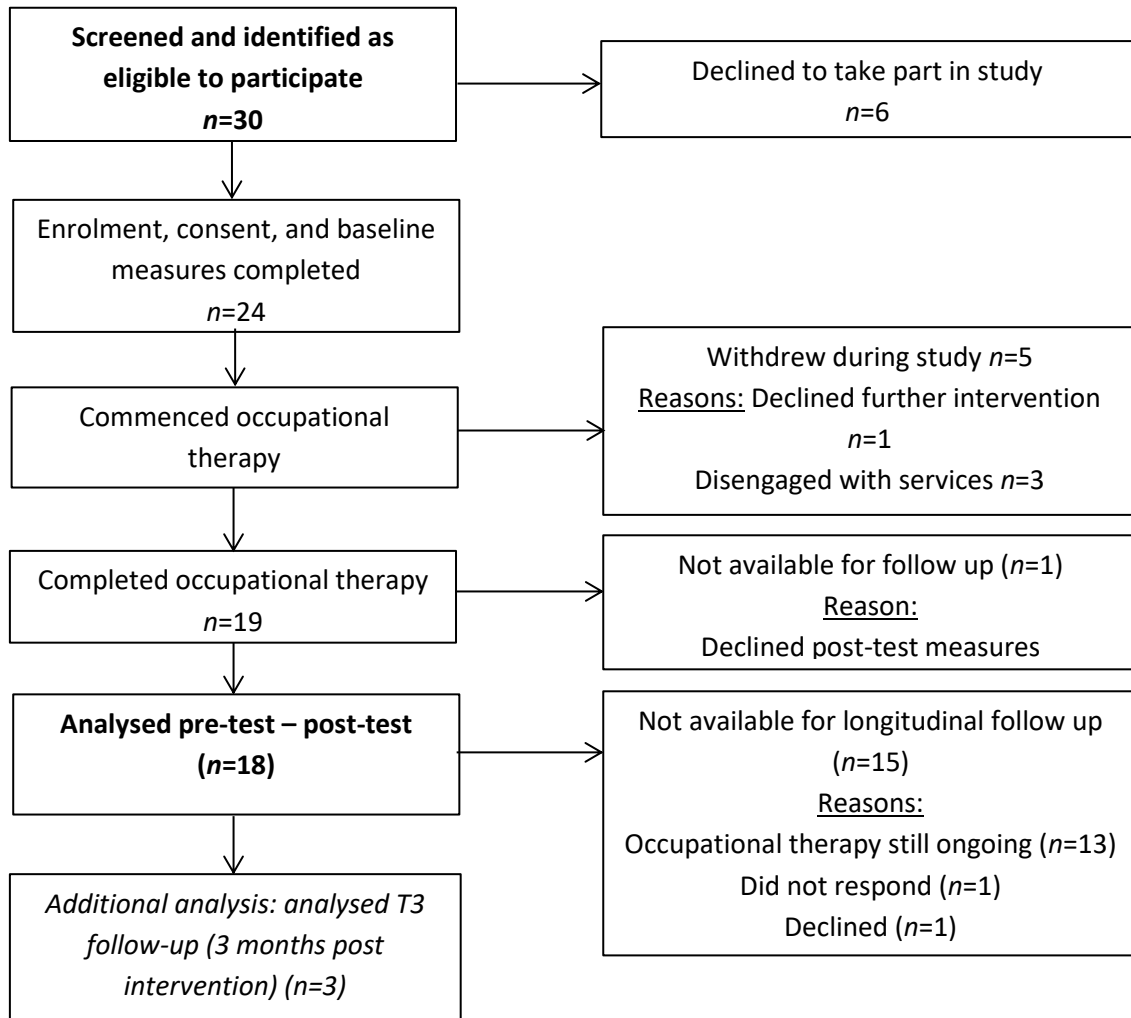
### 5.1 Introduction

This chapter presents the quantitative findings of both the research study outcomes and process outcomes. This includes recruitment and participant characteristics (Section 5.2). The findings of each of the outcome measures are detailed in Section 5.3.1 - 5.3.6 inclusive, with a summary of the quantitative findings provided in Section 5.3.7. Results of the regression to the mean phenomenon analysis are provided in Section 5.3.8 and process outcomes are presented in Section 5.4.

### 5.2 Recruitment and participant characteristics

Whilst 36 service users were identified as meeting the eligibility criteria for the study and 24 participants initially consented to take part, some withdrew after giving consent ( $n=3$ ) and others withdrew whilst the study was ongoing ( $n=3$ ). Pre-test and post-test data were therefore collected for 18 service user participants, which exceeded the minimum required ( $n=16$ ) for a power calculation of 80% and a significance level of 5% (Section 4.7). Only three of these went on to complete longitudinal (T3) measures, because occupational therapy was ongoing. The initial aim had been to recruit up to ten participants for the qualitative component, however the study timeframe only allowed for eight. Seven of the interview transcripts were usable and included in analysis. Participant flow through the study is detailed in Figure 7.

Characteristics of the study sample are provided in Table 11, including a comparison of characteristics of those who did, and did not, complete the study. At baseline, there were fifteen females and nine males, of which four females and two males withdrew. The average age of the participants was 49.4 years and most (96%) were white with 4% being non-white. Most participants were not employed; 75% of participants were unemployed, 12.5% were retired and 12.5% were in employment. In terms of social-economic characteristics (based on postcode) 66.6% of participants lived in the 30% most deprived areas of the UK whilst 33.3% lived in the 70% least deprived areas.



**Figure 7. Study flow diagram**

Whilst five participants had their diagnosis of depression for less than five years, three had had the diagnosis for more than 20 years. Most participants had no secondary diagnosis (79%). Amongst those who did, there were diagnoses of social anxiety disorder, agoraphobia, anxiety, and post-traumatic stress disorder (PTSD). In terms of baseline depression levels, most participants (91.7 %) fell into the severely depressed category with BDI scores of 29 and over, with the remaining 8.3 per cent falling in the moderately severe category. The Fishers Exact Test was applied to the demographic variables. There was no relationship between gender and dropout ( $p = 1.0$ ).

For socio-economic status, using the Index Multiple Deprivation score, when comparing the 30% most deprived (classed as disadvantaged) with the 70% least deprived there was no relationship between deprivation and dropout (Fishers Exact  $p=1$ ). There was an

almost significant tendency for those who had a moderate (rather than a severe) baseline depression (BDI) score to withdraw (Fishers Exact  $p=0.0543$ ). However, due to the small sample of individuals with moderate scores (two in total, both of whom withdrew), it is not possible to draw firm conclusions from this.

**Table 11. Characteristics of study participants**

Characteristic	Participants who gave consent/ completed baseline outcome measures. $n=24$	Participants who withdrew from the study $n=6$ (25%)	Participants who completed the study $n=18$ (75%)
Gender <ul style="list-style-type: none"> <li>Female, <math>n</math> (%)</li> <li>Male, <math>n</math> (%)</li> </ul>	15 (62.5) 9 (37.5)	4 (66.7) 2 (33.3)	11 (61.1) 7 (38.9)
Age (years) mean (S.D.)	49.4 (11.81)	52.2 (13.25)	48.5 (11.14)
Ethnicity: <ul style="list-style-type: none"> <li>White</li> <li>Non-White</li> </ul>	95.8% 4.2%	100% 0	94.4% 5.6%
Employment status, $n$ (%): <ul style="list-style-type: none"> <li>Employed</li> <li>Unemployed</li> <li>Retired</li> </ul>	3 (12.5) 18 (75.0) 3 (12.5)	1 (16.7) 4 (66.7) 1 (16.7)	2 (11.1) 14 (77.8) 2 (11.1)
Socio-economic status IMD* Score (based on postcode), $n$ (%): <ul style="list-style-type: none"> <li>Least deprived 70%</li> <li>Most deprived 30%</li> </ul>	8 (33.3) 16 (66.6)	2 (33.3) 4 (66.6)	6 (33.3) 12 (66.6)
Time since diagnosis of depression <ul style="list-style-type: none"> <li>&lt; 1 year</li> <li>2-5 years</li> <li>6-10 years</li> <li>11-19 years</li> <li>20 + years</li> </ul>	5 7 6 3 3	2 1 3 0 0	3 6 3 3 3
Secondary diagnosis, $n$ (%): <ul style="list-style-type: none"> <li>None</li> <li>Social Anxiety Disorder</li> <li>Anxiety</li> <li>Anxiety and agoraphobia</li> <li>PTSD</li> <li>PTSD with grief reaction</li> </ul>	19 (79.2) 1 (4.2) 1 (4.2) 1 (4.2) 1 (4.2) 1 (4.2)	5 (83.33) 0 0 0 0 1 (16.7)	14 (77.8) 1 (5.6) 1 (5.6) 1 (5.6) 1 (5.6) 0
Baseline depression severity score (BDI II), $n$ (%) <ul style="list-style-type: none"> <li>1-13 (minimal)</li> <li>14-19 (mild)</li> <li>20-28 (moderate)</li> <li>29-63 (severe)</li> </ul>	0 0 2 (8.3) 22 (91.7)	0 0 2 (33.3) 4 (66.7)	0 0 0 18 (100.0)

\*Indices of multiple deprivation



## 5.3 Study outcomes

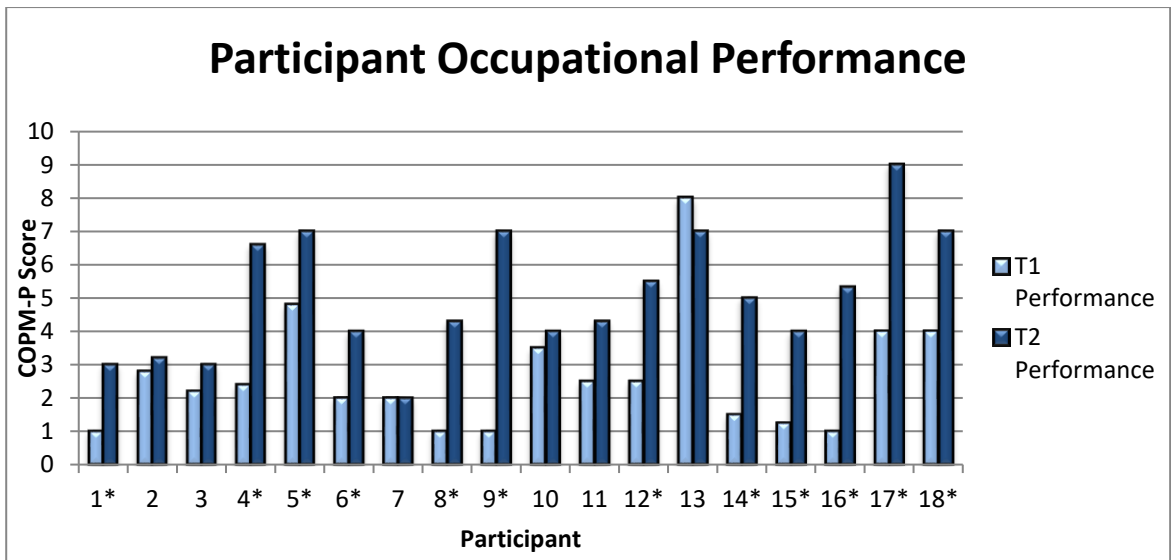
### 5.3.1 Occupational performance (primary outcome)

Scores on the COPM-P improved significantly from pre-test to post-test ( $p=0.0001$ ). The majority (88.9%) of participants improved their performance score, with 66.7% improving their performance score by at least two points, the defined criteria for a 'clinically important' change. The mean improvement following occupational therapy was 2.4 (i.e., clinically important), increasing from a mean of 2.6 (SD 1.77) at baseline to a mean of 5.1 (SD 1.86). Outcomes for all measures (both primary and secondary) are provided in Table 12 below. A graph showing the outcomes of COPM-P by participant is shown in Figure 8.

**Table 12. Mean (SD) outcome measure findings**

Measure	Mean (SD) T1	Mean (SD) T2	Mean Difference [95% CI]	<i>t</i>	<i>p</i>
COPM-P	2.6 (1.77)	5.1 (1.86)	2.4 [1.52 - 3.35]	5.60	0.0001***
COPM-S	2.9 (2.16)	5.3 (2.35)	2.4 [1.26-3.46]	4.54	0.0003***
WSAS	38.2 (5.65)	30.8 (11.02)	7.4 [0.97-13.92]	2.42	0.0268*
BDI	44.1 (8.04)	31.8 (15.01)	12.3 [5.37-19.30]	3.74	0.0016**
BDI Question 12	2.6 (0.86)	2.1 (1.26)	0.50 [-1.12-0.12]	1.70	0.1075
<b>USER-P</b>					
<i>Participation Frequency</i>	20.6 (12.33)	22.2 (9.37)	1.6 [-3.36-6.62]	0.69	0.5000
<i>Participation Limitation</i>	46.7 (19.36)	58.9 (19.14)	12.2 [6.95-17.48]	4.89	0.0001***
<i>Participation Satisfaction</i>	26.3 (22.42)	41.8 (24.05)	15.4 [8.46-22.41]	4.67	0.0002***
<b>SF-36</b>					
<i>Physical Functioning</i>	32.2 (29.91)	36.1 (2.35)	3.9 [-6.08-13.85]	0.82	0.4217
<i>Role Limitation Phys. Health</i>	11.1 (26.04)	23.6 (2.35)	12.5[-1.15-26.15]	1.93	0.0702
<i>Role limitation Emotional</i>	14.8 (26.13)	18.5 (34.72)	3.7[-13.25-20.66]	0.46	0.6506
<i>Energy Fatigue</i>	12.4 (19.51)	20.8 (21.37)	8.4 [1.30-15.51]	2.50	0.0231*
<i>Emotional Well being</i>	24.0 (20.44)	37.8 (24.47)	13.8 [2.15-25.40]	2.50	0.0229*
<i>Social Functioning</i>	14.6 (19.76)	27.8 (28.30)	13.2 [0.86-25.53]	2.26	0.0375*
<i>Pain</i>	45.3 (35.49)	43.3 (31.92)	1.9 [-6.81-10.70]	0.47	0.6453
<i>General Health</i>	25.3 (21.59)	27.2 (22.11)	1.9 [- 6.97-10.85]	0.46	0.6510
<i>Overall Health Change</i>	37.5 (31.21)	45.8 (31.21)	8.3[-10.74-27.40]	0.92	0.3695

\* Statistically significant  $p < 0.05$ ; \*\* highly statistically significant  $< 0.01$ ; \*\*\* very highly statistically significant  $< 0.001$

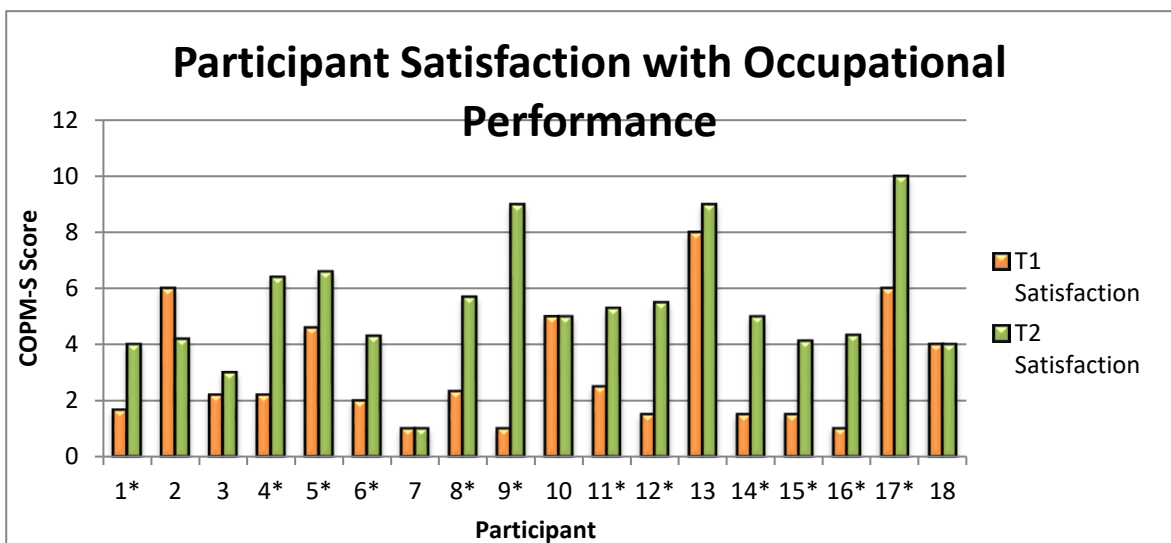


**Figure 8. COPM-P outcomes by participant**

\*Indicates participants achieving an improvement score of two or more points (representing a clinically important change)

### 5.3.2 Satisfaction with occupational performance (secondary outcome).

Scores on the COPM-S improved significantly from pre-test to post-test ( $p=0.0003$ ). The majority (77.8%) of participants improved their satisfaction with their occupational functioning with 66.7% of participants improving their score by two points or more (a clinically important change). The mean improvement following occupational therapy was 2.4 (i.e., clinically important) increasing from a mean of 2.9 (SD 2.16) at baseline to 5.3 (SD 2.35). A graph showing the outcomes of COPM-S by participant is shown in Figure 9.

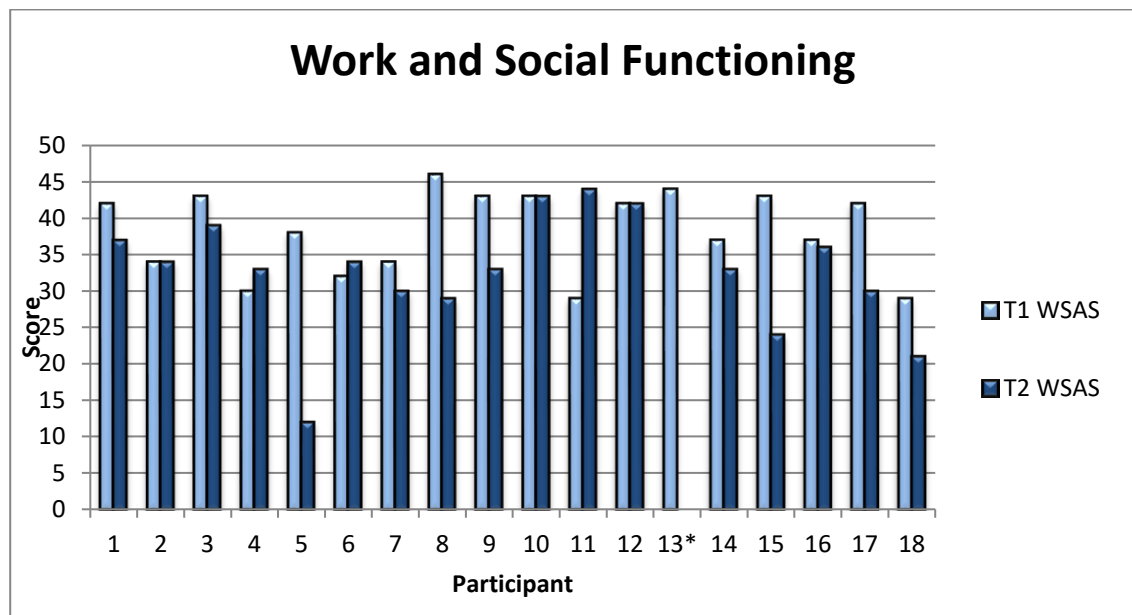


**Figure 9. COPM-S outcomes by participant**

\*Indicates those Service Users achieving an improvement score of two or more points (representing a clinically important change).

### 5.3.3 Work and social functioning (secondary outcome)

Scores on the modified WSAS improved significantly from pre-test to post-test ( $p=0.0268$ ). At baseline the mean WSAS score was 38.2 (SD 5.65). At post-test the mean score had improved by reducing by 7.4 to 30.8 (SD 11.02). A graph showing the outcomes of WSAS by participant is shown in Figure 10.

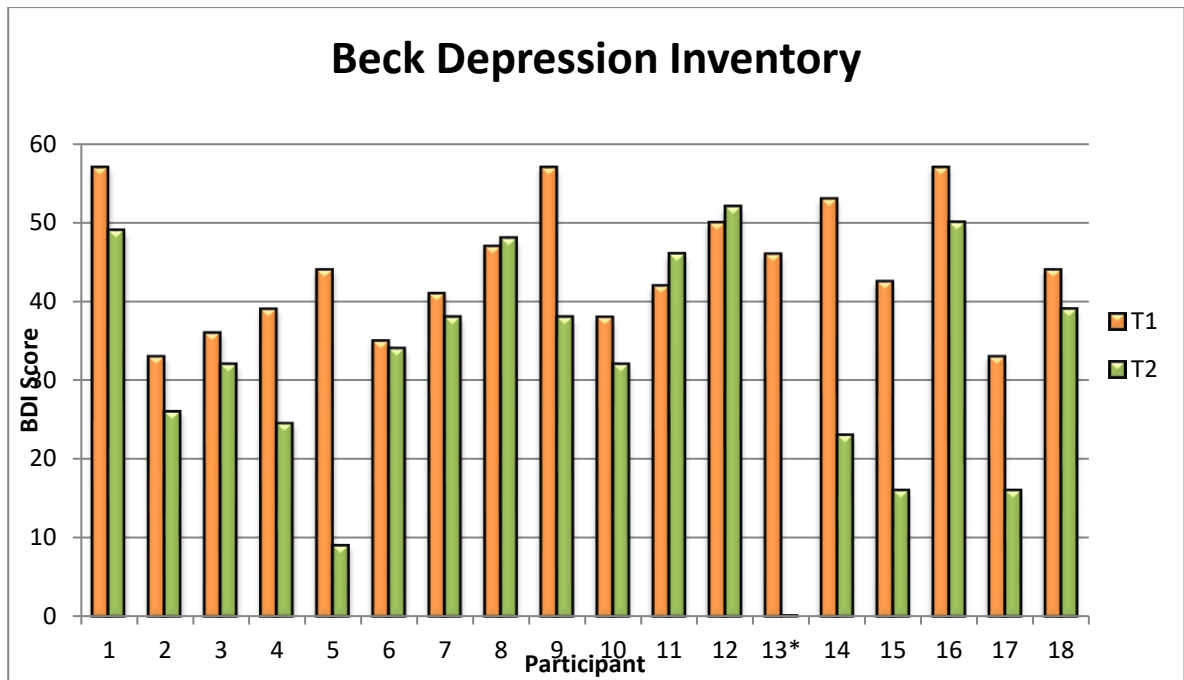


**Figure 10. WSAS outcomes by participant**

\*participant scored zero at T2

### 5.3.4 Depression (secondary outcome)

Scores on the BDI improved significantly from pre-test to post-test ( $p=0.0016$ ). At baseline the mean BDI score was 44.1 (SD 8.04). At post-test the mean score had improved by reducing by 12.3 to 31.8 (SD 15.01). A graph showing the outcomes of BDI by participant is shown in Figure 11.



**Figure 11. BDI outcomes by participant**

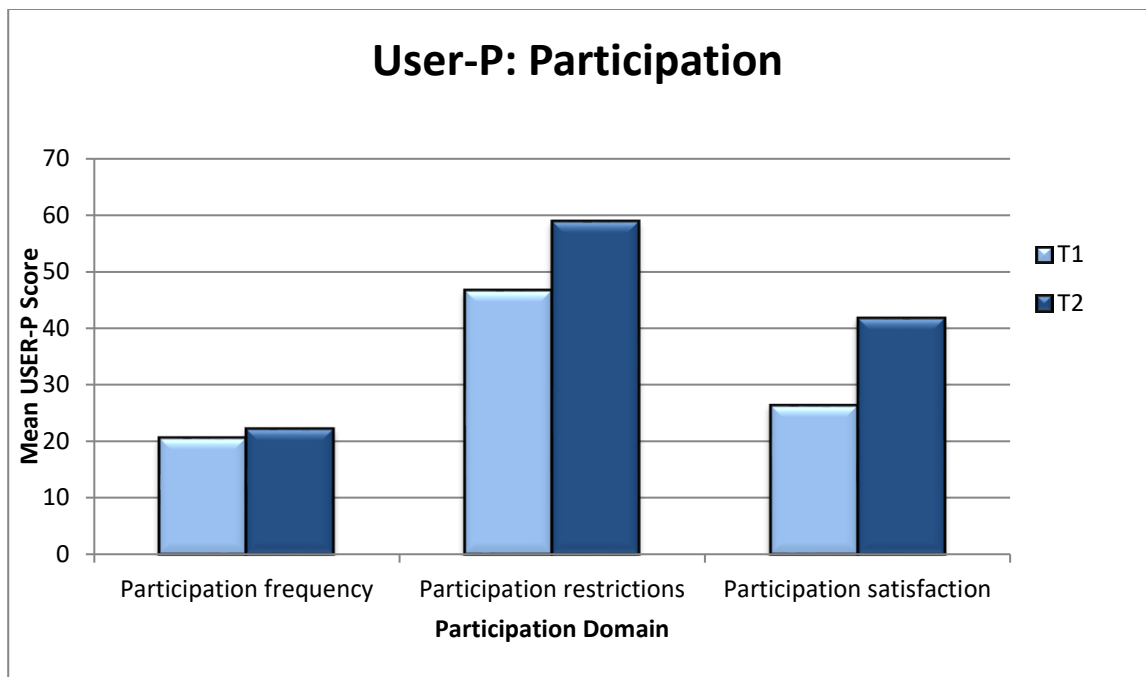
\*participant scored zero at T2

Question 12 of the BDI (interest in people and activities) was analysed separately due to this question being of particular interest and relevance to occupational therapy. This analysis did not show a statistically significant difference between T1 and T2 (Table 12).

### 5.3.5 Participation (USER-P)

There are three separate scores generated by the USER-P, these relate to participation frequency, limitation and satisfaction. There is no total score. Each scale generates a score between 0 and 100 with higher scores indicating better levels of participation. Whilst the pre-test and post-test scores on the participation scale did not show a statistically significant improvement, scores in both participation restriction (activity limitation) and participation satisfaction (daily life satisfaction) scales improved significantly from pre-test to post-test. At baseline the mean USEP-P participation restriction score was 46.7 (SD 19.36). At post-test the mean score had improved, reducing by 15.4 to 58.9 (SD 19.14) which was very highly significant at  $p=0.0001$ . At baseline the mean USEP-P participation satisfaction score was 26.3 (SD 22.42). At post-test the mean score had improved reducing by 15.4 to 41.8 (SD 24.05). The mean

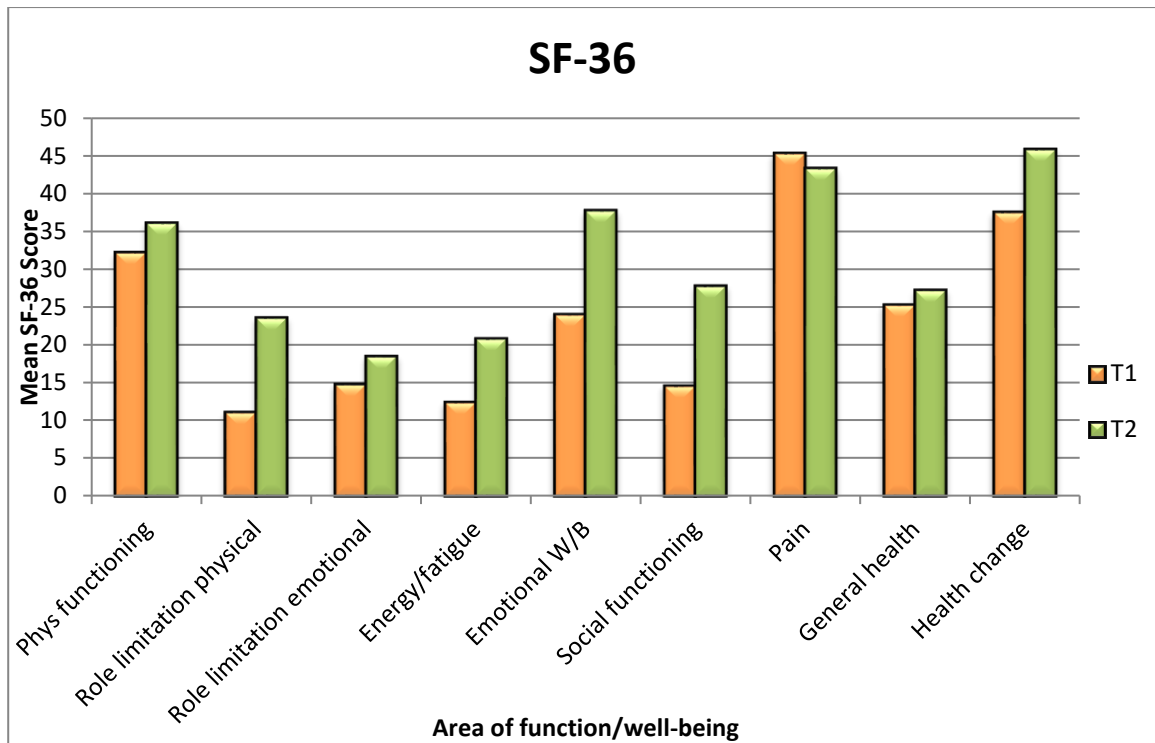
improvement was very highly significant at  $p=0.0002$ . A graph showing the outcomes of USER-P by participation domain is shown in Figure 12.



**Figure 12. Participation outcomes by participation domain**

### 5.3.6 Health related quality of life (SF-36)

There are nine separate scores generated by the SF-36, these relate to physical functioning, role limitation (physical), role limitation (emotional), energy/fatigue, emotional well-being, social functioning, pain, general health and health change. There is no total score. Each sub-scale generates a score between 0 and 100 with higher scores indicating better well-being. Whilst the pre-test and post-test scores on several scales did not show a statistically significant improvement, scores on energy/fatigue, emotional well-being and social functioning sub-scales all improved significantly from pre-test to post-test at  $p<0.05$  ( $p=.0231$ ,  $p=0.0229$  and  $p=0.0375$  respectively). See Figure 13 below.



**Figure 13. SF-36 outcomes by domain**

### 5.3.7 Longitudinal outcomes

Only three participants went on to complete longitudinal T3 (3-month follow-up) measures, because occupational therapy was ongoing, meaning that statistical analysis was not possible for T3. The three completed measures for T3 indicate that following improvements these participants had made at T2, one participant continued to make further improvement after occupational therapy had completed (between T2 and T3), one participant maintained their progress between T2 and T3 and the third showed signs of deterioration between T2 and T3.

### 5.3.8 Regression to the mean

Given the lack of a control group in this study and the likely impact of the regression to the mean (RTM) phenomenon, where a natural drift towards improvement in outcome scores is usually observed, further analysis of the quantitative data was needed to consider whether improvements were due to the occupational therapy intervention or natural drift. A correlation analysis was used to assess whether those with the most

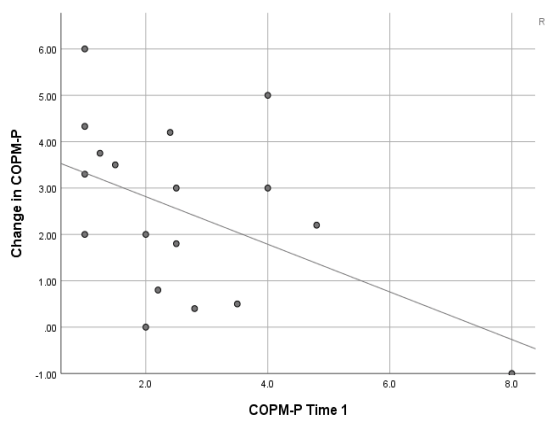
severe scores at baseline made the largest ‘recovery’ at post-test. Table 13 and Figure 14 show the results of the analysis (Pearson correlations).

**Table 13: Correlation analysis to evaluate possible regression to the mean**

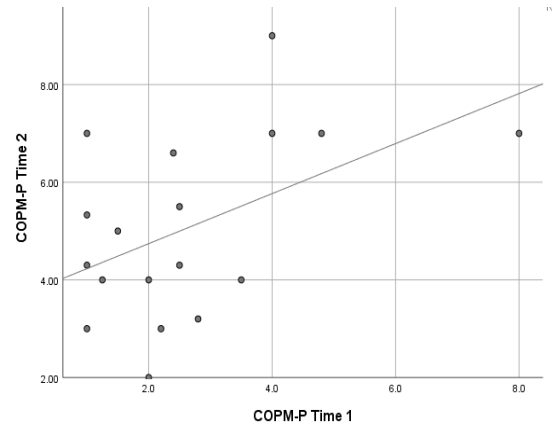
n=18	Correlation between T1 and T2		Correlation between Change Score and T1	
	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
COPM-P	0.485*	0.41	-0.485*	0.041
COPM-S	0.525*	0.025	-0.412	0.089
BDI	0.388	0.112	0.129	0.529

\*Correlation is significant at the 0.05 level (2 tailed)

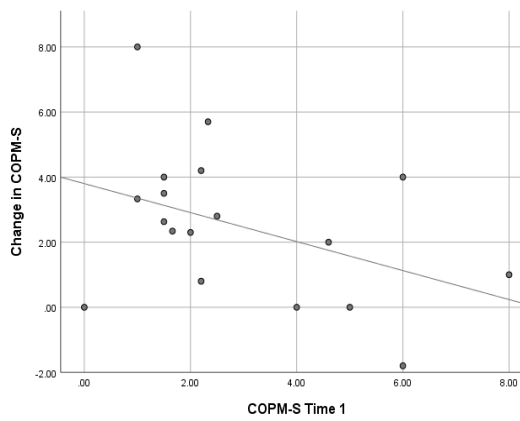
Table 13 shows that in general, T1 scores were correlated with T2 scores, as expected. There was a negative moderate correlation between T1 and change in score for both COPM-P (significant at  $r=-0.485$ ) and COPM-S (not significant at  $r= -0.412$ ). Figure 14 (a and b) shows that those people who scored lower (worse) at the beginning made more of an improvement for COPM-P (Figure 14a) and COPM-S (Figure 14b), as would be expected if RTM was having an effect. It should be noted that, for those who score more highly on the COPM-Likert scales of 1-10 there is less potential to make improvement. Figure 14 (d to f) also shows that the better participants perform at T1 then the better they perform at T2 and those with lower (worse) scores at T1 also tend to have lower scores at T2. RTM arises when two sets of scores are imperfectly correlated, as is the case here. It is likely that the outlying score (a score of eight at T1) will have affected the correlations due to the small sample size and that the small sample size has affected all these analyses, for example, causing this outlier to have a disproportionate effect on the correlation (Figure 14). Overall, the results suggest that at least some of the apparent improvement in the COPM is a natural drift that would have been expected in line with the RTM phenomenon. However, this is not the case for the BDI, where there was no significant correlation between T1 and T2 (Table 14c) and no correlation between T1 and the change in BDI scores (Table 14f).



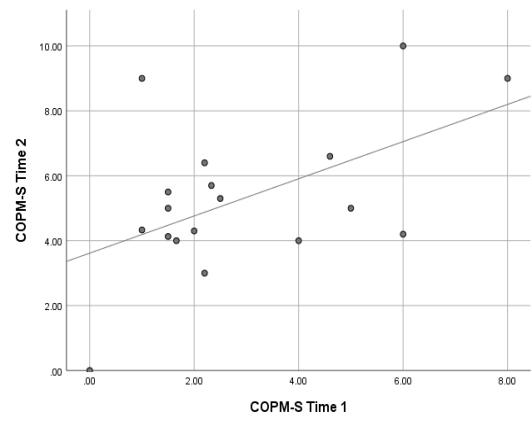
(a)



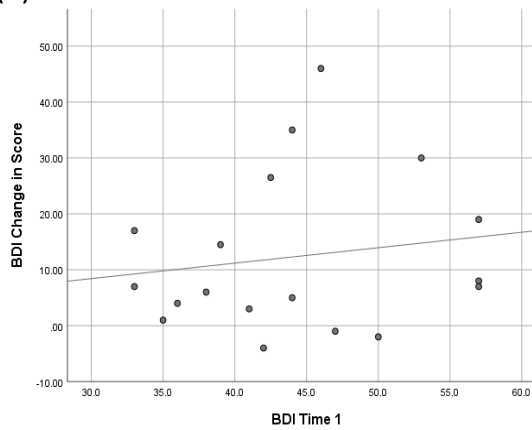
(d)



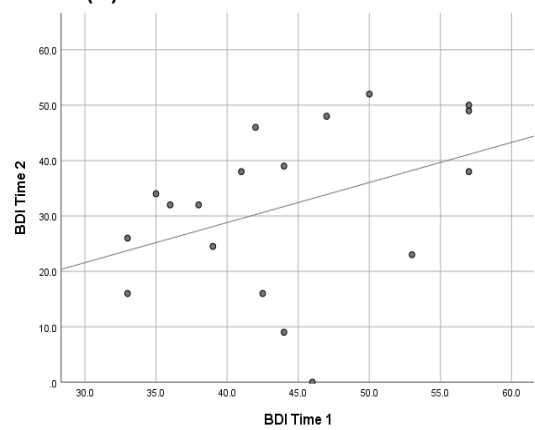
(b)



(e)



(c)



(f)

**Figure 14. Correlations between change scores and T1 and between T1 and T2 for COPM and BDI**

**(Correlations between change scores and T1 scores for (a) COPM-P, (b) COPM-S & (c) BDI; and between T1 and T2 scores for (d) COPM-P, (e) COPM-S & (f) BDI)**



### **5.3.9 Summary of quantitative findings**

The primary measure was the Performance Scale of the Canadian Occupational Performance Measure (COPM-P). The improvement in the primary measure was found to be highly statistically significant ( $p=0.0001$ ) and the improvement met the criteria to be classified as a 'clinically important change', in that there was an improvement of an average of at least two points across the cohort (Law et al. 2005). The secondary outcome measures all showed an improvement between pre-test and post-test measurement. All of these were statistically significant except for the USER-P participation sub-scale and certain sub-scales of the SF-36. The improvement on the participation sub-scale of the USER-P was smaller and was not significant ( $p=0.5000$ ). Statistically significant improvements were found in depression symptomology (BDI), functioning (WSAS), both the Activity Limitation and Daily Life Satisfaction subscales of the USER-P, as well as the Satisfaction Scale of the COPM-S and the Energy/fatigue, Emotional Well-being, and Social Functioning subscales of the SF-36. However, the analysis in Section 5.3.8 suggests that at least some of this effect is likely to be natural drift that would have happened anyway, in line with the RTM phenomenon.

## **5.4 Process outcomes**

### **5.4.1 Treatment fidelity to the occupational therapy intervention**

Intervention logs (Appendix 4) were utilised to measure fidelity and adherence to the occupational therapy intervention and so that the amount or 'dose' of occupational therapy that participants received could be evaluated. The intervention logs were completed by the occupational therapists. Completed logs detailed the components of the occupational therapy that were delivered during each session as well as any other intervention they delivered alongside or instead of their planned occupational therapy session. Details of other interventions provided by other professionals in between occupational therapy sessions (extracted from participants' care record) were also recorded. As described in Section 4.5 the intervention logs included Likert scales so that the occupational therapists could record how well the participant adhered to the intervention, both during occupational therapy sessions and between sessions.

#### 5.4.1.1 Components of occupational therapy interventions provided

The occupational therapy intervention process including the key occupational therapy components evaluated were based on the intervention specification routinely utilised within the Trust, as described in Chapter 4 (Inman, 2017) detailed in

Figure 4. As highlighted, multiple parts of the process can be delivered simultaneously, and more than one intervention component can take place within each session. Table 14 and Table 15 as well as Figure 14 show the range and overall number of occupational therapy intervention components provided to participants who completed therapy and to those who withdrew from the study. As well as showing the different occupational therapy components within each treatment phase, Table 14 shows that participants who withdrew from occupational therapy received fewer components of occupational therapy in total than those who completed therapy (a mean of 40.4 for those who completed therapy compared with 17.8 for those who did not).

**Table 14. Number of occupational therapy components provided to participants**

	Occupational therapy component	Completed therapy (n=18)		Did not complete (n=6)	
		Total	Mean	Total	Mean
Assessment	1. Assess occupational performance	64	3.55	16	2.67
	2. Agree occupational formulation	22	1.22	12	2.00
	3. Agree occupational goals	44	2.44	13	2.17
	4. Plan intervention	72	4.0	13	2.17
Intervention	5a. Use meaningful activities	107	5.94	13	2.17
	5b. Use activity to improve functioning	99	5.50	11	1.83
	5c. Adapt/use new activities	51	2.83	4	0.67
	5d. Adapt/use new environments	71	3.94	4	0.67
	5e. Reflect/evaluate progress	126	7.00	18	3.00
Discharge	6. Reassess occupational performance	35	1.94	0	0.00
	7. Review occupational goals	31	1.72	2	0.33
	8. Discharge	5	0.28	1	0.17
	<b>TOTAL</b>	<b>727</b>	<b>40.39</b>	<b>107</b>	<b>17.83</b>

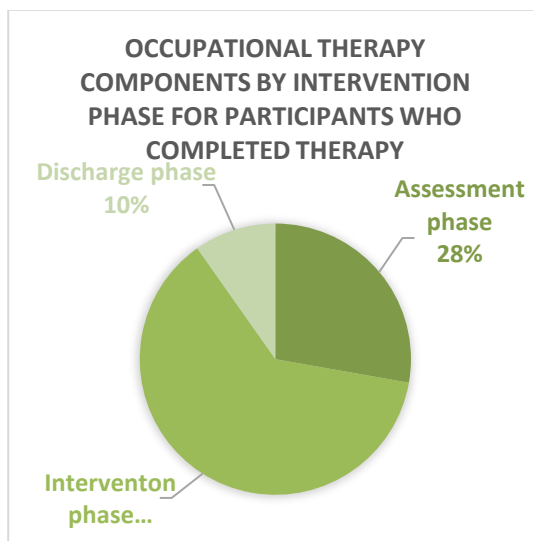
Table 14 and Figure 14 show that the occupational therapy components provided to those who withdrew from therapy were weighted towards the assessment phase (components 1-4) at the start of treatment; 51% of their total intervention compared

with 28% of the total for those who completed treatment. The intervention phase (components 5a-5e) formed 46% of the total intervention for those who withdrew (49 components) compared with 62% (454 components) of the total for those who completed therapy.

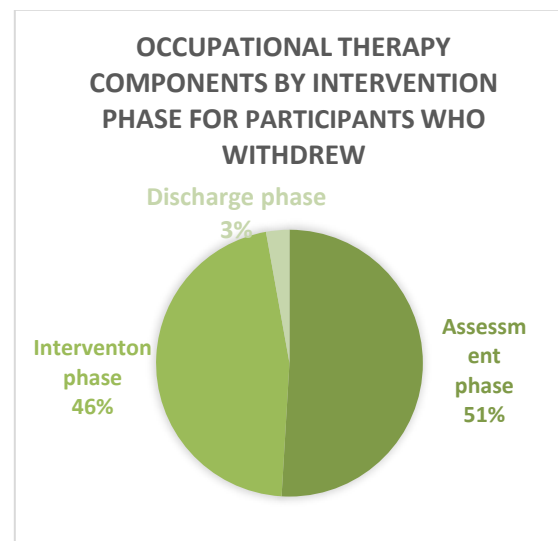
**Table 15. Number of occupational therapy components by intervention phase**

	Completed Therapy (n=18)		Did not complete therapy (n=6)	
	Total	Mean	Total	Mean
<b>Assessment phase (1-4)</b>	202 (28%)	11.2	54 (51%)	9
<b>Intervention phase (5a-5e)</b>	454 (62%)	25.2	49 (46%)	8.2
<b>Review &amp; discharge phase (6-8)</b>	71 (10%)	3.9	3 (3%)	0.5

a)



b)



**Figure 15. Occupational therapy by phase for those who completed therapy (a) and withdrew (b)**

Table 14 also shows that within the intervention stage, the largest phase of the occupational therapy provided (62% for those who completed treatment) contains five occupational therapy components (5a – 5e). For those who completed therapy, the key occupational therapy component delivered most was 5e. (reflect and evaluate progress)

provided 126 times (28% of the total intervention phase activity), with each participant who completed occupational therapy receiving an average of 25.2 components. Other components provided frequently were 5a. (use meaningful activities), provided 107 times, (24%) and 5b. (use activity to improve functioning), provided 99 times (22%). The intervention components provided least were 5d. (Adapt/Use new environments), provided 71 times (16%) and 5c. (Adapt/use new activities), provided 51 times (11%).

#### 5.4.2 Amount of occupational therapy

Table 16 shows the number and length of occupational therapy sessions, the frequency of sessions, session duration and adherence to treatment by study participants for both those participants who completed occupational therapy and those who withdrew.

**Table 16. Amount of occupational therapy provided**

	Completed Therapy (n=18)		Did not complete Therapy (n=6)	
	Mean	SD	Mean	SD
Number of occupational therapy sessions	13.0	6.07	7.0	3.92
Frequency (time in weeks between sessions) *	2.8	0.97	1.6	0.86
Duration of treatment (time in weeks between first and last session) *	37.2	12.57	14.7	7.99
Intensity (length of each session in minutes)	63.6	11.72	66.5	7.21
Participant in-session adherence to treatment (Likert scale 1-10)	8.2	1.24	7.6	1.44
Participant between session adherence to treatment (Likert scale 1-10)	6.5	1.79	6.7	1.81

\*Frequency and duration of treatment may have included a gap in treatment due to participant ill health or treatment delays due to Covid-19

SD = Standard Deviation

For those who completed therapy, the mean number of sessions participants received was 13, compared to 7 for those who discontinued therapy. The mean treatment duration for those who completed therapy was 37.2 weeks with a mean frequency of 2.8 weeks between sessions. The mean session duration was just over one hour (63.6 minutes) per session. Participant in-session adherence, as assessed by their occupational therapist (using a Likert Scale 1-10) was 8.2/10 for those who completed

therapy in comparison with 7.6/10 for those who discontinued. Between-session adherence was 6.5/10 for those who completed and 6.7/10 for those who discontinued. These scores suggest the level of participant adherence was greater whilst they were working directly with their occupational therapist. Participant adherence impacts upon the total amount of occupational therapy received because if adherence to the intervention is low, the full value of the intervention may not be realised.

To further consider whether the amount or dose of occupational therapy impacted on outcomes, a correlation analysis was undertaken for each of the scales that showed statistically significant findings (Table 17). This table shows correlations between the amount of improvement in COPM-P (primary outcome) and the number of occupational therapy sessions delivered ( $r=0.546$ ,  $p=0.019$ ), session frequency ( $r=-0.571$ ,  $p=0.013$ ), and total time in occupational therapy ( $r=0.476$ ,  $p=0.046$ ). In addition, the amount of Key Component 5 that was delivered showed moderate correlation (almost significant at  $r=0.468$ ,  $p=0.050$ ). This shows that the more occupational therapy participants received and the more often they received it, the better their progress. This lends cautious support for a potential causal relationship. There were however no correlations between dose and the secondary outcome measures. The findings suggest that there was a tendency for the participants who had more occupational therapy to have better outcomes relating to improving their occupational performance. This would need to be confirmed through a larger study.

### **5.4.3 Association between outcomes**

Whilst undertaking correlation analysis to consider whether the amount of occupational therapy participants received impacted upon outcomes (Section 5.4.2) associations were observed between certain outcome measures. For example, there were statistically significant correlations between improvements in COPM-P and COPM-S ( $r=0.799$ ,  $p=0.000$ ), between the BDI and the WSAS ( $r=0.777$ ,  $p=0.000$ ), between the BDI and two sub-scales of the SF-36 (emotional wellbeing  $r=0.671$ ,  $p=0.002$  and social functioning  $r=0.6888$ ,  $p=0.002$ ) and the USER-P Participation Satisfaction subscale ( $r=0.595$ ,  $p=0.009$ ) (Table 18). Further correlations are highlighted in the table in bold.

**Table 17. Correlation table (amount of occupational therapy and outcomes)**

		COPM-P Change Score	COPM-S Change Score	BDI Change Score	WSAS Change Score	SF36 Energy/ Fatigue Change Score	SF36 Emotional WB Change	SF36 Social Function Change	USER-P Limitation Change	USER-P Satisfaction Change
<b>Total OT Sessions</b>	Pearson Correlation	<b>.546*</b>	.366	-.171	-.287	-.106	.122	-.071	.440	-.030
	Sig. (2-tailed)	.019	.135	.497	.248	.675	.628	.779	.068	.907
<b>Non-OT Sessions</b>	Pearson Correlation	.016	-.030	-.395	-.118	.172	-.380	.021	-.312	.056
	Sig. (2-tailed)	.950	.906	.105	.640	.494	.120	.934	.207	.826
<b>Average Session Duration (mins)</b>	Pearson Correlation	.387	.368	-.153	-.183	-.083	-.019	-.230	.244	-.074
	Sig. (2-tailed)	.113	.133	.543	.468	.742	.941	.359	.329	.769
<b>Average Session Frequency (weeks)</b>	Pearson Correlation	<b>-.571*</b>	-.435	.227	.265	.176	-.092	-.023	-.115	-.013
	Sig. (2-tailed)	.013	.072	.365	.288	.484	.716	.929	.649	.959
<b>Treatment Duration (weeks)</b>	Pearson Correlation	.286	.264	-.252	-.325	-.171	-.225	-.466	.350	.076
	Sig. (2-tailed)	.250	.290	.313	.188	.497	.370	.051	.154	.764
<b>Total OT Time</b>	Pearson Correlation	<b>.476*</b>	.319	-.167	-.256	-.108	.058	-.145	.383	-.088
	Sig. (2-tailed)	.046	.197	.508	.304	.668	.818	.567	.116	.730
<b>Total Key Component 5</b>	Pearson Correlation	<b>.468*</b>	.366	-.201	-.229	.083	-.070	-.107	.148	.009
	Sig. (2-tailed)	.050	.135	.424	.361	.742	.784	.673	.559	.972

\* Correlation is significant at the 0.05 level (2-tailed)

**Table 18. Correlation table (outcome measures achieving statistical significance)**

		COPM-P Change Score	COPM-S Change Score	BDI Change Score	WSAS Change Score	SF36 Energy/ Fatigue Change	SF36 Emotional WB Change	SF36 Social Function Change	USER-P Limitation Change	USER-P Satisfaction Change
	<i>n</i>	18	18	18	18	18	18	18	18	18
<b>COPM-P Change Score</b>	Pearson Correlation	1	<b>.799**</b>	-.003	-.147	.059	.133	.267	.106	.095
	Sig. (2-tailed)									
<b>COPM-S Change Score</b>	Pearson Correlation		1	.052	.020	-.025	.076	.095	.253	.124
	Sig. (2-tailed)	.000								
<b>BDI Change Score</b>	Pearson Correlation			1	<b>.777**</b>	.397	<b>.671**</b>	<b>.688**</b>	.043	<b>.594**</b>
	Sig. (2-tailed)	.992	.836							
<b>WSAS Change Score</b>	Pearson Correlation				1	.344	.316	.461	.011	<b>.494*</b>
	Sig. (2-tailed)	.560	.937	.000						
<b>SF36 Energy/ Fatigue Change Score</b>	Pearson Correlation					1	<b>.550*</b>	<b>.603**</b>	-.162	<b>.573*</b>
	Sig. (2-tailed)	.817	.922	.103	.162					
<b>SF36 Emotional WB Change</b>	Pearson Correlation						1	<b>.713**</b>	.076	<b>.566*</b>
	Sig. (2-tailed)	.598	.763	.002	.201	.018				
<b>SF36 Social Function Change</b>	Pearson Correlation							1	-.004	<b>.594**</b>
	Sig. (2-tailed)	.284	.708	.002	.054	.008	.001			
<b>USER-P Limitation Change</b>	Pearson Correlation								1	.299
	Sig. (2-tailed)	.676	.310	.865	.966	.522	.763	.989		
<b>USER-P Satisfaction Change</b>	Pearson Correlation									1
	Sig. (2-tailed)	.707	.623	.009	.037	.013	.014	.009	.228	

\*\* Correlation is significant at the 0.01 level (2-tailed). \* Correlation is significant at the 0.05 level (2-tailed).  *p* value  Correlation coefficient

#### 5.4.4 Other interventions (non-occupational therapy)

During the time participants were receiving occupational therapy, they also received non-occupational therapy interventions both from their occupational therapist and from other health professionals. Table 19 shows the number of non-occupational therapy interventions provided to participants by their occupational therapists and other professionals involved in their care for participants who completed occupational therapy. A quarter (63 out of 252 interventions) of the non-occupational therapy provided was by occupational therapists. During the study participants also received a range of other interventions including psychiatry appointments, psychology, and support worker intervention. In addition, whilst not necessarily an intervention, most participants had appointments with their care coordinator (if this was not their occupational therapist) and therefore it is possible that non-occupational therapy interventions may have been delivered within these sessions which cannot be quantified.

**Table 19. Other intervention provided by occupational therapists and other professionals**

Intervention type	No. of non-OT interventions* provided by OT	No. of interventions* provided by other professionals	TOTAL
Care Coordination/(CPA)**	15	101	116
Psychiatrist/Psychological therapy appt	0	46	46
Support worker appointment	0	26	26
Crisis support/resolution	16	8	24
Social work intervention	0	7	7
Physiotherapy appointment	0	1	1
Support to attend an appointment	20	0	20
Support with a housing or debt matter	2	0	2
Support with a medication matter	10	0	10
<b>TOTAL</b>	<b>63</b>	<b>189</b>	<b>252</b>

\* Multiple interventions can take place within each session

\*\* Care coordination and CPA are not necessarily an intervention, however a participant's care-coordinator (another mental health professional) could have delivered an intervention during these sessions



### 5.4.5 Occupational therapy compared with non-occupational therapy

Table 20 shows the number of occupational therapy and non-occupational therapy interventions delivered to all study participants by all those involved in their care and that occupational therapy formed 77% of the quantifiable intervention received during this time.

**Table 20. Total occupational therapy and non-occupational therapy provided**

	<b>Occupational therapy interventions provided by occupational therapists</b>	<b>Non-occupational therapy interventions provided by occupational therapist</b>	<b>Non-occupational therapy interventions provided by other professionals</b>
<i>n</i>	833	63	189
%	76.8%	5.80%	17.4%
<b>TOTAL %</b>	<b>Occupational therapy = 76.8%</b>	<b>Other intervention = 23.2%</b>	

### 5.4.6 Who provided the occupational therapy interventions?

Twelve occupational therapists (eleven female and one male) were recruited into the study to provide occupational therapy for the service user participants and to provide data relating to the interventions they provided. Characteristics of the occupational therapist sample are provided in Table 21 below. The seniority of the occupational therapists based on their Agenda for Change (AfC) banding varied with five senior occupational therapists (AfC Band 6), six entry-level occupational therapists (AfC Band 5) and one clinical specialist occupational therapist in a leadership position (AfC band 7). There was a mean of 7.9 years since qualifying (standard deviation 5.64). On average, the percentage of their caseload allocated to providing occupational therapy was 81%. Most occupational therapists worked with adult mental health caseloads (83.3%) with only 16.6 per cent working with older adult mental health caseloads, resulting in more adult as opposed to older adult study participants. Three of the occupational therapists had a dual role, being both the participant's care-coordinator and their occupational therapist.

**Table 21. Characteristics of the occupational therapist sample**

<b>Characteristic</b>	<b>Occupational Therapist Participants (n=12)</b>
<b>Gender</b>	
• Female <i>n</i> (%)	11(91.6)
• Male <i>n</i> %	1 (8.3)
<b>Age</b> (years) mean (SD)	44.0 (8.61)
<b>Length of time since qualifying</b> (years) mean (SD)	7.9 (5.64)
<b>Grade</b>	
• AfC band: Band 5 <i>n</i> (%)	6 (50%)
• AfC band: Band 6 <i>n</i> (%)	5 (41.7%)
• AfC band: Band 7 <i>n</i> (%)	1 (8.3%)
<b>Dual role</b> (provides occupational therapy and care coordination) <i>n</i> (%)	10 (83%)
<b>Overall percentage of caseload that is to provide occupational therapy % (SD)</b>	81.25 (19.05)
<b>Specialism</b>	
• Adult <i>n</i> (%)	10 (83.3)
• Older Adult <i>n</i> (%)	2 (16.6)

The table shows that the occupational therapist participants who delivered the therapy spent most of their time undertaking occupational therapy with less than 20% spent on generic roles or interventions. However, as will be explored further in the discussion chapter, the occupational therapist sample was not representative of occupational therapy caseloads within the service, as a larger proportion of Band 5 occupational therapists (with significantly less care coordination responsibility) elected to take part in this study. Several therapists at Band 6 declined the invitation citing high generic caseloads for their reason.

## 5.5 Summary

The quantitative outcomes have shown that of the thirty service users who met the eligibility criteria for the study, 24 were recruited and 18 completed therapy, exceeding the minimum required. Baseline characteristics were described in Section 5.2. The results (Section 5.3) show statistically significant improvements in the COPM-P, COPM-S, BDI II, WSAS, two scales of the USER-P and three scales of the SF-36 outcome measure.

The findings of the regression to the mean analysis were presented in Section 5.3.8. The process outcomes (Section 5.4) show that the occupational therapists delivered the intervention in line with what was expected. Detail of the occupational therapy interventions and amount of occupational therapy provided were descriptively presented in Sections 5.4.1.1 and 5.4.2 respectively. The results show that there was a tendency for participants who had more occupational therapy to have better outcomes. Associations between the outcomes were presented in Section 5.4.3 and detail of the other interventions participants received was presented in Section 5.4.4. Section 5.4.5 details a comparison between the amount of occupational therapy and non-occupational therapy interventions provided and finally, detail of the occupational therapists who provided the intervention are provided in Section 5.4.6.

## **Chapter 6 Qualitative Findings**

### **6.1 Introduction**

The qualitative component of this study aimed to collect rich data to support the interpretation of participants' direct and individual experiences of occupational therapy. Of particular interest was the perceived effectiveness of occupational therapy in enabling meaningful participation in everyday life, and participants' opinions on what they felt had supported their progress. The qualitative component followed on from the quantitative component, and participants were a subset of the wider study sample. As described in the methods (Chapter 4), an interview guide that focused on the research question was utilised so that the data collected would meet the study objectives (Appendix 5). The quantitative findings of this mixed methods study were reported in Chapter 5. This chapter will therefore focus on the findings from the transcripts of the semi-structured interviews. Following a description of participant demographics (Section 6.2) each theme and subtheme will be discussed in turn (Section 6.3) and finally, the alternative perspective provided by one participant is described (Section 6.4).

### **6.2 Characteristics of semi-structured interview participants**

Eight participants were interviewed on, or shortly before, completion of their occupational therapy intervention. Whilst the study protocol highlighted that up to ten participants would be interviewed for the qualitative component of the study, the timeframe only allowed for eight. Technical issues meant that only seven recordings and transcripts were achieved. Characteristics of the participants in the qualitative component of the study are shown in Table 22 below. This subsample was made up of one male and six female participants. The average age was 54.4, 85.7% were white and 14.3% non-white. Five interviewees were unemployed, one was retired, and one worked part-time. In terms of social-economic characteristics (based on postcode) 57.1% of interviewees lived in the 30% most deprived areas of the UK whilst 42.9% lived in the 70% least deprived areas. Two participants had their diagnosis of depression for less than five years, three had the diagnosis for more than ten years. In terms of baseline levels of depression, all participants fell into the severely depressed category with BDI

scores of 29 and over. Participants in the seven transcribed interviews were allocated a pseudonym (alphabetical in order of interview date) as follows: Anne, Barbara, Catherine, Daniel, Elizabeth, Frances, and Gabby.

**Table 22. Characteristics of interview participants**

Characteristic	Participants in qualitative component of study <i>n</i> =7
Gender <ul style="list-style-type: none"> <li>Female, <i>n</i> (%)</li> <li>Male, <i>n</i> (%)</li> </ul>	6 (85.7) 1 (14.3)
Age (years) mean (S.D.)	54.4 (8.36)
Ethnicity: <ul style="list-style-type: none"> <li>White</li> <li>Non-white</li> </ul>	85.7% 14.3%
Employment status, <i>n</i> (%): <ul style="list-style-type: none"> <li>Employed</li> <li>Unemployed</li> <li>Retired</li> </ul>	1 (14.3) 5 (71.4) 1 (14.3)
Socio-economic status IMD Score (based on postcode), <i>n</i> (%): <ul style="list-style-type: none"> <li>Least deprived 70%</li> <li>Most deprived 30%</li> </ul>	3 (42.9) 4 (57.1)
Time since diagnosis of depression <ul style="list-style-type: none"> <li>&lt; 1 year</li> <li>2-5 years</li> <li>6-10 years</li> <li>11-19 years</li> <li>20 + years</li> </ul>	1 1 2 2 1
Baseline depression severity score (BDI II), <i>n</i> (%) <ul style="list-style-type: none"> <li>1-13 (minimal)</li> <li>14-19 (mild)</li> <li>20-28 (moderate)</li> <li>29-63 (severe)</li> </ul>	0 0 0 7 (100)

### 6.3 Thematic analysis

The interviews each lasted between 40 and 75 minutes. All interviews were fully transcribed using Intelligent Verbatim transcription style meaning that stutters, stammers and ‘ahs’ ‘ums’ and ‘errs’ were removed (an excerpt can be found in Appendix 13). Data analysis was undertaken using thematic analysis as described in Chapter 4 with data being grouped to identify themes, and then coded, grouped, and regrouped into tables to allow the potential themes and subthemes to emerge (Appendix 14). During

analysis, recurring themes within and across transcripts were drawn out. As highlighted in Chapter 4, only those themes appearing in at least four interview transcripts were included in the final list. Analysis revealed six overarching themes and 16 subthemes relating to the participants experience of occupational therapy. However, whilst these are described as separate themes, it is important to note that there was considerable overlap within and between themes and sub-themes. Key themes and sub themes are presented in Table 23. Each will be described in detail using participant quotes to further explain or demonstrate the key points. One participant had a very different perspective from the other participants and therefore most of their comments did not fall into the key themes and subthemes that resulted from the thematic analysis of the transcripts. To ensure that this participant’s voice was not excluded from this thesis, their perspective is presented in Section 6.4.

**Table 23. Qualitative analysis: themes and subthemes**

	<b>Key themes present in all interviews</b>	<b>Subthemes</b>	<b>No. of interviews containing subtheme</b>
<b>i</b>	<b>Occupational therapy is about everyday things</b>	a) Increasing participation in ordinary activities.	7
		b) Resuming activities previously undertaken	6
<b>ii</b>	<b>Occupational therapy is more than talking</b>	a) Talking to enable ‘doing’	6
		b) ‘Doing’ as part of therapy	7
		c) Practical support enables progress	4
<b>iii</b>	<b>Occupational therapy is client centred</b>	a) Service user leads during therapy	7
		b) Partnership and co-production	4
		c) Individualised and meaningful	7
		d) Role of the service user	7
<b>iv</b>	<b>Other aspects of the occupational therapy therapeutic process</b>	a) Pace, grading and low-pressurised approach	7
		b) Therapeutic relationship	6
		c) Teaching, enabling, and structuring	4
<b>v</b>	<b>Occupational therapy is motivating and effective</b>	a) Increased function and participation	7
		b) Other positive change	6
<b>vi</b>	<b>Characteristics of the occupational therapists helped progress</b>	a) Professional Skills	5
		b) Personal Characteristics	4

### **6.3.1 Theme 1: Occupational therapy is about everyday things**

This theme was present in all seven interviews. Participants described occupational therapy as being about everyday life and activities, they spoke about being able to engage with everyday activities and to 'live life' again. The occupational therapy interventions discussed related to everyday activities such as self-care (eating, taking a shower, and hair care), productivity (such as work and volunteering) and leisure activities. In addition, participants stated that occupational therapy interventions enhanced the development of self-confidence, self-worth, satisfaction, developing structure, routine, and communication skills. Occupational therapists were also said to assist with problem solving, sign posting to other relevant services and advising service users.

#### **6.3.1.1 Subtheme 1a: Increasing participation in ordinary activities.**

The focus of occupational therapy on ordinary everyday activities, self-care, productivity, and leisure was referred to by all seven interview participants. They spoke about how they had resumed basic self-care tasks such as showering and taking care of their appearance after occupational therapy intervention and described how this had helped them to feel better and progress further.

*"I've even started looking after myself, getting my nails done, having my feet done... I sort of take more care in my appearance than I did before."*  
(Elizabeth)

*It's a bit embarrassing but I never really used to have a shower every day....so now I've started showering every day, eating ... you know, looking after myself a bit better."* (Anne)

One participant highlighted that she had not been eating properly which had been identified as a risk. She described how the occupational therapist had focussed on this basic occupation as an urgent need before moving on to other aspects of her self-care. When speaking of their increased participation in self-care tasks another participant highlighted:

*"I feel good that I am able to do it [look after myself better], without sort of being prompted. I did it on my own!"* (Elizabeth)

Some participants indicated that they may go on to carry out more 'extra-ordinary' activities, such as running a craft group, as they continued to progress once basic needs had been met. This suggests that once basic needs are met, people may then have capacity to progress in other areas of life such as work or hobbies, as well as gaining confidence, hope and optimism in relation to future participation in everyday activities.

The impact of increased participation in everyday activities on self-worth and satisfaction was noted in several transcripts. When describing her success at growing vegetables in her allotment Barbara highlighted:

*"So yeah, I like the; 'I've grown that myself', I get chuffed."* (Barbara)

Examination of the transcripts identified the importance of hobbies and other enjoyable activities or interests in helping participants on their recovery journey. The benefits of engaging in hobbies or other enjoyable activities to support recovery and increase mood was highlighted in Chapter 2. This was described by several participants with one interviewee stating:

*"Helping with my hobbies; I think that is a crucial thing that has really helped me"* (Anne).

Participants identified a range of hobbies they had commenced or recommenced with support from their occupational therapist. These included crafts, aromatherapy, gardening and attending church. They highlighted the pleasure they had experienced in resuming them.

*".... But when I go up there, [to the allotment] I forget about everything and I'll go up for an hour or two hours and I forget that I'm up there, and I'll be there for four hours, because I'm enjoying it."* (Barbara)

Overall, the everyday activities participants spoke about during the interviews related to self-care and leisure activities; there was less discussion of productive occupations. Productive occupations referred to included volunteering and domestic or personal responsibilities such as walking the dog, with only one referencing paid work. Given the demographics of the interviewees however, with only one in paid employment, this may be expected.



Using activity within occupational therapy to create or increase structure and routine in everyday lives to support health and wellbeing was described by three participants. They identified how their occupational therapist incorporated this into their interventions.

*Obviously, we spoke about the need for structure you know. [Occupational therapist] brought it up, ...so, it was a case of having a set time to wake up, and to get up, and get dressed. I had difficulties actually getting myself to do stuff. So, you learn you have to have structure to your days. Doing all this is important.” (Daniel)*

Participants spoke about how developing routines and how having structure to their days had contributed to their recovery. They described how they planned and developed activities and routines together with the occupational therapist so that a structure was in place until their next occupational therapy session.

#### **6.3.1.2 Subtheme 1b: Resuming activities previously undertaken**

Six out of the seven interviewees highlighted that occupational therapy had helped them in resuming former activities. They spoke about how resuming previous activities had led to feelings of normality and recovery and highlighted how much they had missed some of these activities.

*“I think I like doing things again that I have done before.... I think it's helped me not to feel as though I'm a lesser person, because I suffer from depression.” (Gabby)*

*“It was hard, but with her [occupational therapist] help I was able to do things...like when I started going back to church... I didn't realise just how much I missed going.” (Elizabeth)*

Several participants described their experience and progress as starting to ‘live again’. There was a sense of people “returning” to their lives, describing how occupational therapy was about getting their life and ‘me’ back. Some participants also said they had found the process easier than expected:

*“I just sort of slid back into things that I used to do before.” (Barbara)*

### **6.3.2 Theme 2: Occupational therapy is more than talking**

This theme was present in all interviews. Participants highlighted that occupational therapy is more than talking, they described how occupational therapy is about 'doing' and is 'hands on', practical and 'different' to other therapies. They talked about occupational therapy enabling the development of new skills and rebuilding previous skills. Participants also noted how talking and practical support can enable 'doing'. Participants felt that talking within therapy facilitated planning, finding ideas, and supported the consideration of available options. Talking also facilitates an increase in confidence, allows problem solving and can serve as a reality check. Additionally, it can allow for the review and amendment of plans, exploration of emotions and celebration of success. Finally, talking supports the service user to speak freely and helps to validate them as an individual.

#### **6.3.2.1 Subtheme 2a: Talking to enable 'doing'**

Six of the seven participants spoke about the conversations they had with their occupational therapists and how these conversations supported their progress. Most described how discussions with their therapist helped them consider which activities to choose and to take their first steps towards active engagement. Most respondents commented on conversations that explored obstacles, found solutions, and broke down tasks to make them seem easier. This subtheme links to and overlaps with the subtheme professional skills (theme 6a) below.

Two participants described how the therapeutic value of conversations with the occupational therapist was not always immediately obvious. One described how her occupational therapist had a discrete approach that somehow made her want to do things, whilst another claimed that her therapist "*planted seeds*" (Anne) that left her thinking and planning for herself.

*"You go to therapy and they say you must do this and must do that, but she [the occupational therapist] plants a seed, ... yeah she plants a seed and you think why didn't I think of that? It's the changing bit.... the changing.... that small little seed.... nobody's telling you to do it, you're doing it for yourself...that's why it has been so good..." (Anne)*

The conversations with the therapist were also described as helping participants prepare for activity participation. One participant described how these preliminary conversations helped her to “get used to the idea” and another spoke of being reassured.

*“She gives me different options and we discuss, and even if we plan Wednesday, if I feel I can't go into that craft group, it's not a problem if I go into the library instead.” (Frances)*

Other participants described how conversations with their therapist instilled hope and self-belief, helping them to challenge their thinking and consequently progress.

### **6.3.2.2 Subtheme 2b: ‘Doing’ as part of therapy**

Participants described occupational therapy as ‘different’ from other therapies in that occupational therapy inherently involves ‘doing’ as well as talking. Interviewees spoke about returning to activities during therapy, doing new activities, doing activities with their occupational therapist within therapy as well as independently. One participant described how occupational therapy had provided her with what she felt she needed when other therapies had not worked, emphasising the difference between talking therapies and occupational therapy which involved ‘doing’ at a practical level in addition to talking:

*This [occupational therapy] is completely different to anything I've had before, which is marvellous really... but I just wish I'd had it earlier rather than... you know if CBT [Cognitive Behavioural Therapy] treatment doesn't work, I've had CAT therapy [Cognitive Analytic Therapy], I've had everything.... and all it did were... ..it's [occupational therapy] not really about talking .... it's about doing.” (Anne)*

The importance of the occupational therapist and participants ‘doing’ things together as part of an overall graded plan was also highlighted. This seemed to be especially important at the start of the occupational therapy process, as part of a graded approach, to help participants take their first steps towards recovery:

*“[Occupational therapist] has arranged to walk with me to a craft group, and she's going to stay there, but not actually be with me. To try and get me out with other people..., just to get me back to that group.” (Frances)*

Grading will be discussed further in Section 6.3.4.1 below. Participants also described how much they had enjoyed returning to their occupations and doing them with their occupational therapist. Some described how doing activities together included tasks around the house such as housework, and how they had been surprised that the occupational therapist had helped them with such tasks. This doing of everyday tasks together provided participants with the reassurance that helped them to take their first steps, by making tasks feel less overwhelming. One participant explained:

*“At the moment we sit and talk, but there's a garden group on a Friday at [location], we're trying to find out exactly where it is, if it's within a walking distance that I can cope with. So that's the goal to do with [occupational therapist].” (Frances)*

### **6.3.2.3 Subtheme 2c: Practical support enables progress**

Examination of the transcripts identified that four interviewees highlighted the importance of practical help they had received from their occupational therapist. They explained that this enabled them to progress and made them feel valued. Participants referred to a wide range of practical assistance such as signposting, providing information about local services, helping them to liaise with others, finding additional support and helping with a household task that felt overwhelming. Others described how the occupational therapist had provided ideas relating to new interests and hobbies to help them in the recovery process. This is described by one participant:

*“A guy rang me up yesterday and said that [occupational therapist] had been in contact with him and said I'm having a look for courses for, you know like meditation and aromatherapy, and I thought well it's starting... it's something I enjoy.” (Anne)*

### **6.3.3 Theme 3: Occupational therapy is client-centred**

This theme was present in all interviews. Participants spoke about how the occupational therapy process was led by them, focussed on them as an individual, including their specific needs, their goals and what was important and meaningful to them. This highlights the importance of co-production and partnership between therapist and service user. Participants also spoke of expectations on both sides with the service user

having responsibilities for engagement and commitment within therapy as well as the therapist.

### **6.3.3.1 Subtheme 3a: Service user leads during therapy**

Respondents described how they had made the decisions about both the direction and pace of their occupational therapy, and how important this was for them.

*“That I can make the choice of which way I want to go. She’s [occupational therapist] not just got one road or one goal in mind .... She gives me different options and we discuss the options.... She’s leaving the options open, with different ways around it.” (Frances)*

Others described how they continued to have choices as therapy progressed and that the pace of therapy was guided by them. This subtheme links with and connects to theme (4a) Pace, grading and low pressure.

### **6.3.3.2 Subtheme 3b: Partnership and co-production**

The partnership between therapist and service user is an important aspect of client-centred practice and the recovery process. There was evidence in the transcripts that the participant and occupational therapist worked together as a team and were both committed to achieving the goals the service user had set. Partnership working was noted by the choice of personal pronouns in descriptions. Participants’ consistency used the word ‘we’ as opposed to ‘I’ or ‘she’ or ‘him’, which suggested a collaboration within the therapeutic process. Participant responses suggest this collaborative process was ongoing and maintained throughout therapy. For example:

*“There’s a gardening group on a Friday at [location], **we’re** trying to find out exactly where it is.... **We’ve** set that first goal”. (Frances)*

This subtheme links with theme (4b) therapeutic relationship as partnership would not be possible without a good therapeutic relationship being in place.

### **6.3.3.3 Subtheme 3c: Individualised and meaningful**

Interview participants highlighted a range of ways they felt that their needs, wishes, and preferences had guided the occupational therapy they received. The focus of

occupational therapy on what was important to them, including their interests or former interests, was also deemed important.

*“It was just something that I enjoyed because we knew the gym was out [for physical health reasons]. We knew, like aerobics classes were out, so out of all the exercise I used to do, we thought swimming would have been the best.” (Catherine)*

Notably, several participants described surprise that occupational therapy was about them and their everyday lives.

*“I thought it was going to be like all the other therapies that haven't worked but I thought I might as well try it, I didn't know it was going to be about me, I thought it would be about problem solving and but not about my everyday life, ‘cos I've had no support on that.” (Anne)*

Participants highlighted that their therapist was able to elicit what was important through conversation with them naturally, without them realising. For example:

*“She [occupational therapist] hasn't come to my house to tell me what I should do...it's come purely from me, sort of, but I didn't think of it, it just came out. That's the difference cos it's what you want to do.” (Anne)*

#### **6.3.3.4 Subtheme 3d: Role of service user**

A primary factor highlighted by participants that helped them progress in therapy was the need for them to be motivated to engage in occupational therapy, to have a desire for change and be ready to put the effort in, practicing between sessions if needed. Additionally, participants spoke also of the importance of being truthful with their occupational therapist stating that if they claimed to be doing things when they were not, then they were limiting their own progress. One participant explained:

*“You've got to want to do it, .... it's pointless doing this therapy if you don't want to get better, it's not a magic cure for... if you do put the effort in then it's worth every bit of effort...I could lie and just have a shower when she [occupational therapist] came, but what's the point in that? ... so I'm committed, I want to get better, so it's pointless for me saying I'll do it and I don't.” (Anne)*

### **6.3.4 Theme 4: Other aspects of the occupational therapy therapeutic process**

This theme was present in all interviews and includes subthemes relating to the occupational therapy process that are not covered in previous themes. Participants spoke about the therapeutic relationship itself, about grading an activity and the non-directive, low-pressurised nature of therapy, all of which helped them to engage and progress. The pace of therapy was seen as important, particularly as this can be slow with small, graded steps at the service user's pace, which may sometimes involve backwards steps. Finally, this subtheme includes additional therapeutic techniques utilised by the occupational therapists.

#### **6.3.4.1 Subtheme 4a: Pace, grading and low-pressurised approach**

All participants highlighted that the pace, grading and low-pressurised delivery of the intervention was particularly helpful. For example, some spoke about positive change happening so gradually that they did not notice it taking place:

*“And it [occupational therapy] was just such a gradual process it's almost like you've got a child and they grow taller and taller; you don't see it happening.” (Gabby)*

Participants explained that by commencing with small tasks they felt were manageable, or making small changes initially, this helped them to feel they were moving in the right direction and subsequently build on these successes as they grew in confidence.

*“If I'm like struggling with something .... she'll break it down... into steps for me that are easier. We've planned the route for going to the group on Wednesday... where's the seat is, where I can sit down if I need to, on the way. So, she's broken it down so that it's not such a massive thing. It's more controllable and if I know about it before hand, I can cope with it.”  
(Frances)*

Interviewees described success in small tasks led on to success in slightly bigger tasks and then continued progress towards their goals, with one participant describing the process as a *“chain reaction that just keeps going”* (Anne)

A low or gently pressured approach in line with service user capacity was apparent throughout all seven interviews with participants commenting on how they valued the

therapist working at their pace. Some participants described gentle pressure of just the right amount to motivate them or want to make progress and take their next steps.

*“She's not pressured me into doing you know; she hasn't said when I come next week how about doing such and such. She's never done that, but it's... I don't know, it's being there, sort of in the back; I need to get going with my own life back on track.”* (Elizabeth)

The occupational therapist's manner was also highlighted as contributing to the low pressured nature and success of therapy delivery, which is included and discussed in more detail in Section 6.3.6.2 (theme 6b).

#### **6.3.4.2 Subtheme 4b: Therapeutic relationship**

Interviewees highlighted many aspects of the therapeutic relationship that they valued, they spoke about trust, understanding each other, feeling safe and secure and feeling their therapist was dependable and genuinely caring about their progress with Gabby describing her occupational therapist as *'her rock'*.

A sense that participants felt confident in their therapist's abilities and support was evident in most transcripts. One participant described how she felt certain that her therapist would identify and help her navigate any barriers to progress:

*“...I just know that with her [occupational therapist] help, I'll be able to get over that hurdle, and be able to sort out what I need for the sewing group. I know she'll help me get there and she'll help me get around the things that are stopping me...”* (Elizabeth)

Being able to trust their therapist, not feeling judged and their therapist believing in them and their ability to succeed was also present throughout the transcripts. Participants commented on the consistency of their therapist and how the development of their relationship was important:

*“The same person coming, so you could open up and trust that person”.* (Barbara)

This subthemes links and overlaps with **Theme 6b Personal characteristics** (of the occupational therapist) and **Theme 3b partnership and co-production**.



#### **6.3.4.3 Subtheme 4c: Teaching, enabling, and structuring**

The transcripts highlighted that occupational therapists are also seen as teachers, enablers, and problem-solvers by the participants, and as people who are resourceful and knowledgeable. Participants described how their occupational therapist had supported them to increase their level of participation in everyday activities through problem solving (often in relation to exploring and navigating obstacles) advising them and teaching coping strategies to deal with problems that arose.

One participant highlighted:

*“She [occupational therapist] helps if I'm like struggling with something, she'll say give me a different way of doing it, in the house”. (Frances)*

This subtheme overlaps with subtheme **(2a) talking to enable doing** and **(6a) Professional skills**.

#### **6.3.5 Theme 5: Occupational therapy is motivating and effective**

Again, this theme was present in all interviews. Participants spoke about the positive outcomes they had experienced through occupational therapy intervention including an increased ability to participate in everyday activities. They highlighted that progress leads to more progress, and some spoke about other positive change on account of their occupational therapy intervention such as through undertaking self-care tasks or a visit to the shops.

*It was one day at the weekend, and I thought, oh the place is tidy, I felt a bit better because my house was tidy, and I think just gradually I just did a bit more and did a bit more. (Barbara)*

##### **6.3.5.1 Subtheme 5a: Increased function and participation**

Participants gave moving accounts of how occupational therapy had improved their functioning and participation in everyday activities. They described how they had progressed with a wide range of everyday activities:

*“I can hang my washing out now, whereas I never used to. I know it's a simple thing...” (Frances)*

*“Basically, I went from not leaving the house and not doing anything to volunteering two days a week”. (Daniel).*

Similarly, participants described how they had been able to return to much-loved hobbies such as their allotment, swimming or attending church.

*“Like for a start, going out with my volunteer for shopping, that was one thing I wanted to start again, which I have started, and it's been great. It's been a while since I've been shopping, and to just go out.... And I used to go to church and that sort of stopped, and I've been going back to church since I've started seeing [occupational therapist]. I used to go swimming a long time ago and I've started that again”. (Elizabeth)*

They also spoke of their overall progress and general increase in activity participation:

*“I do sort of make myself coffee and just sort of listen to the radio, tidy up the kitchen and I'll go and get changed and take the dog out for a walk. And then just depending on the day... I just seem to fill my days now.”*  
(Gabby)

Furthermore, participants spoke with real hope and optimism about future possibilities in terms of their activity participation and improvement in their everyday lives.

*“She's given me the options for me to decide what I want to do, and that's really important. It's a big step you know. I am... reliving .....she's helping me relive it in a better way. I can step outside my front door, and I know I'm going to be ok. And if I need it, I've got [friend a and friend b]. All I've got to do is knock on their doors.” (Frances)*

They described how they had been surprised at the pace of their progress; that they had not expected to restore their function or participation so quickly or easily.

#### **6.3.5.2 Subtheme 5b: Other positive change**

Other positive change relating to occupational therapy interventions reported by participants refer to the overall difference occupational therapy had made to them with comments such as:

*“It's like really you've just been reborn”. (Anne)*

*“Well, it's fun getting up now in the morning, and I actually want to get up”. (Gabby)*

One participant detailed how they had previously received other types of therapy or mental health treatment, but this had not been effective or met their needs in the same way as occupational therapy, as highlighted earlier, and as follows:

*“She [the occupational therapist] has made such a difference to my life. I am much more confident now. She has made me stop ignoring things. I wish I had had OT earlier... It has done more for me than anything else ever has.” (Elizabeth)*

### **6.3.6 Theme 6: Characteristics of the occupational therapist helped progress**

This theme is present in all interviews. The characteristics of individual occupational therapists were highlighted as important, with reference to their professional skills, personal qualities, and manner. Participants highlighted many positive characteristics that their occupational therapist presented and considered these to have played an instrumental part in their progress.

#### **6.3.6.1 Subtheme 6a: Professional skills**

The professional skills of occupational therapists include, collaboration, assessment, enablement, problem-solving, the therapeutic use of activity, groupwork and environmental adaptation (RCOT, 2019). Participants also described their occupational therapist as being insightful and perceptive. Examples of how occupational therapists use their professional skills and the impact of these were seen throughout all transcripts and have been described within several of the above themes. For example, **Theme 2(b) Talking to enable ‘doing’** highlights how conversations between therapist and service user enabled progress; how they explored obstacles, found solutions, and had discussions that led to breaking down tasks to make them more manageable. Additionally, **Theme (4c) Teaching, enabling, and structuring** gives examples of the therapeutic techniques occupational therapists may utilise. These are examples of therapists utilising their core professional skills to enable occupational participation or improve function.

#### **6.3.6.2 Subtheme 6b: Personal characteristics**

Being a ‘lovely person’ was one of the most common ways participants described their occupational therapist, related adjectives such as, kind, friendly, compassionate, trustworthy, and understanding were also common as the following quotes highlight:

*She [occupational therapist] was lovely, she's been really nice and she just.... we've had tears, we've had laughter. (Barbara)*

*It's just she [occupational therapist] put me at ease on the first session we had. I can more or less talk to her about things and not be afraid of what to say. It's the way she approaches things. I think that's what made it.*

(Elizabeth)

The therapist's ability to put people at ease and how this helped to develop a trusting therapeutic relationship was described by several participants, they particularly highlighted the importance of feeling able to talk to their therapist to share thoughts, feelings, hopes and fears, and explained that trust takes time to build.

Being able to provide reassurance and support if required was a characteristic that was particularly highlighted in most interviews. Positivity in their therapist was also a valued trait, as was the ability to remain so when obstacles arose. Additionally, their therapist's ability to motivate and empower them without it being obvious, was also raised by some participants, as was feeling supported to believe in themselves and in future possibilities.

*"I like the way she encourages, but while we're talking there is that goal she wants you to achieve". (Catherine)*

One participant explained that her occupational therapist had a way of making her want to do things just by their questioning:

*"We just talked. It was like quite a few of the suggestions... then I was thinking to myself how did I get around to that? It's just sort of... she asked me what I have been doing .... and it was like gradual, but seemed to steer me towards, I don't know... She's got the knack! She makes me see the options instead of me just starrng like tunnel vision. She helps me see the broader....". (Elizabeth)*

Being flexible and open minded were other qualities frequently valued by participants with respondents describing how their therapist was prepared to come up with a 'Plan B' when needed or was supportive when things had not gone to plan which had contributed to the overall low-pressured nature of the process.

Finally, some participants associated the unpressurised nature of their therapy to their therapist's manner.

*"I think it's just her manner...there's no pressure honestly to do it. It's about not being forceful. .... she's not giving you orders, not telling you what to do. She said, 'when you're ready, we'll go.'" (Anne)*

*If she was just to come and say, 'right we're going to do this today', there is no way I would be able to stay outside the door.'" (Frances)*

## **6.4 An alternative perspective**

As introduced in Section 6.1, one participant had a very different perspective to the rest of the participants. In particular, the interview transcript shows that this participant wanted the occupational therapist to force them or in some way compel them to engage in the intervention plan, stating that this would have been the only way to get them to participate in activities, and that even this would have been unlikely to bring them any positive outcome.

*"...the only thing [to facilitate engagement] would have been to force something on me. So, someone just saying you don't have any choice in the matter, you go here on that day and do this, do that...you've got no choice ok right, and when you are there, you are going to do this..."*

The participant suggested the therapist could have said:

*"I don't care that you don't particularly get anything out of it [activity participation], but you have to go along and do this, ok?"*

The participant reported that occupational therapy was not helpful because the therapist did not compel them to act. This participant reported a desire for their situation to be different but acknowledged a lack of motivation and a complete lack of interest in all activities and suggestions made to them by the occupational therapist and had not been able to identify any desired goals. The participant described how they derived no pleasure or benefit from engaging in any activities:

*"I have no hobbies; I have no likes"*

*"When someone helps someone, and they get a nice warm glow... I don't get that... I don't get anything out of that".*

The interview transcript also highlighted that the referral to occupational therapy came following other professional specialities being unable to help the participant. They reported that occupational therapy had been suggested as all other treatments had been unsuccessful and occupational therapy was a last resort:

*“To be honest, it seemed like everyone’s kind of run out of ideas....it was, ‘have you ever seen an occupational therapist? No? Maybe you should see an occupational therapist’”*

No other participants made comments similar to these.

## **6.5 Summary**

This chapter has presented the results of the qualitative analysis including the characteristics of the participants who took part in the interviews (Section 6.2) and the thematic analysis (Section 6.3) that identified 6 key themes and 16 subthemes. The six themes were defined as (i) Occupational therapy is about everyday things (Section 6.3.1); (ii) Occupational therapy is more than talking (Section 6.3.2), (iii) Occupational therapy is client-centred (Section 6.3.3), (iv) Other aspects of the occupational therapy therapeutic process (Section 6.3.4), (v) Occupational therapy is motivating and effective (Section 6.3.5) and (vi) Characteristics of the occupational therapists helped progress (Section 6.3.6). Finally, the alternative perspective provided by one participant, was described in Section 6.4.

# Chapter 7 Discussion

## 7.1 Introduction

Chapters 1 and 2 of this thesis highlighted the dearth in evidence for occupational therapy in mental health generally and the systematic review in Chapter 3 concluded that there was an urgent need for diagnosis-specific research to confirm the effectiveness of individualised occupational therapy, as is routinely provided in clinical practice. This research study sought to answer the following research questions:

1. Is occupational therapy effective in enabling individuals with a diagnosis of depression to improve their level of function and increase their participation in everyday activities?
2. What impact does occupational therapy have on depressive symptomology?
3. Does occupational therapy improve the quality of life of individuals with a diagnosis of depression?
4. What are the most effective or helpful components of occupational therapy from the perspective of service users with a diagnosis of depression?

Occupational therapy aims to enable people to participate in the daily activities they want or need to do and so improve their health, well-being, and quality of life (Chapter 1). The understanding of the concepts and complexities relating to different definitions and interpretation of key concepts including function, participation and engagement were discussed in Chapter 1. It was highlighted that in both clinical settings and occupational therapy literature the terms occupational functioning and occupational performance continue to be used interchangeably which can lead to confusion. Occupational therapists in both practice settings and in research therefore need to have a clearer understanding of these terms.

The introductory sections of this thesis also highlighted that whilst this research study took place within a setting where the medical model was dominant, such a model can present challenges for occupational therapy practice, which has a focus upon client centred interventions. Some of the criticisms of the medical model were presented in

Chapter 1, alongside alternative perspectives on depression and mental health, such as mad studies, the recovery model, and human rights approaches. It is recommended that these should be considered further both within the research domain and within clinical practice.

Chapter 4 described how this research study utilised a pragmatic world view which advocates for a mixed methods approach with critical realism incorporating aspects of both positivism and constructivism. This supported both quantitative and qualitative data collection to gain a full and comprehensive understanding of the topic and ensure that both mechanisms of change and causality were explored through the direct lived experience of occupational therapy from the reality of the participants. It is acknowledged that the study findings are embedded within this chosen philosophical standpoint which will have brought certain perspectives and biases to the research, however reflexivity throughout the research process sought to minimise this. Aspects of my own personal perspectives and subjectivity were explored within Sections 1.7 and 4.1 and will be further considered in Section 7.7.

Chapter 4 described the QUAN + qual convergent mixed methods intervention evaluation design utilised for this study, whereby a single group pre-test post-test quantitative component (n=18) was followed by a qualitative component (n=7). Quantitative data were collected at pre-test and post-test with standardised outcome measures. Qualitative data were subsequently collected through semi-structured interviews with a sub-section of participants. Process data were collected through intervention logs completed by the occupational therapist participants when they delivered the occupational therapy. Following data collection, sequential mixed methods data analysis was undertaken. The previous two chapters (Chapters 5 and 6) reported the quantitative and qualitative findings of the study. The purpose of this chapter is to discuss, triangulate, and integrate these findings and consider them relative to the research questions with reference to relevant occupational therapy theory and the pre-existing evidence base presented earlier in this thesis. The quantitative findings are summarised and discussed in Section 7.2 and the process outcomes in Section 7.3. The potential impact of the regression to the mean phenomenon on the quantitative findings is discussed in Section 7.4 and the qualitative findings are summarised and



discussed in Section 7.5. Following this the results are integrated to allow both to be considered relative to each of the research questions (Section 7.6). The final sections of this chapter will consider personal perspectives and subjectivity (Section 7.7) and study strengths and limitations (Section 7.8).

## **7.2 Summary of quantitative findings:**

### **7.2.1 Occupational therapy and function and participation.**

Improvement in occupational functioning and participation was measured by the primary outcome measure, the Performance Scale of the Canadian Occupational Performance Measure (COPM-P). Compared to before the intervention, scores on COPM-P were significantly greater after the intervention ( $p < 0.001$ ). Secondary outcome measures that evaluated functioning and participation were the Satisfaction Scale of the Canadian Occupational Performance Measure (COPM-S), the Work and Social Adjustment Scale (WSAS) and the Utrecht Scale for Evaluation of Rehabilitation-Participation (USER-P). The secondary measures also showed statistically significant improvement between pre-test and post-test measures in all except one subscale of the USER-P (participation frequency,  $p = 0.500$ ). These statistically significant findings should be considered relative to both the findings of the regression to the mean analysis (Section 5.3.8) and the results of the correlation analysis (Section 5.4.2) that showed statistically significant correlations between the amount of improvement in COPM-P (primary outcome) and the number of occupational therapy sessions delivered ( $r = 0.546$ ,  $p = 0.019$ ), session frequency ( $r = -0.571$ ,  $p = 0.013$ ), and total time in occupational therapy ( $r = 0.476$ ,  $p = 0.046$ ), highlighting there was a tendency for participants who had more occupational therapy to have better functional outcomes.

In relation to the frequency scale of the USER-P outcome measure, it is possible that this is not able to register the smaller changes that might be expected in someone recovering from severe depression. For example, Section 1 (a) of the USEP-P outcome measure (Appendix 3) asks the participant how many hours per week they spend on a range of activities, with multiple choice responses of 1-8 hours, 9-16 hours, 17-24 hours, 25-35 hours, or 36 hours or more. Therefore, if a participant increased their participation in an

activity from one hour per week to eight hours per week, this would not register as a change on their overall score. As disruption to function can be slow to recover in people with depression (Daremo et al., 2015) and functional limitations can remain when people are no-longer experiencing depressive symptoms (Collard et al., 2018), an increase of seven hours spent on an activity may be considerable from the perspective of participant or their occupational therapist, yet the USER-P was not sufficiently sensitive to detect these small but clinically relevant improvements.

The systematic review in Chapter 3 highlighted that no previous studies have evaluated the effects of individualised client-centred occupational therapy tailored to individual need for people with a diagnosis of depression, and therefore direct comparisons with previous research cannot be made. However, the statistically significant improvements in function and participation highlighted above are consistent with the findings of Wisenthal et al. (2018) in their pre-test post-test occupational therapy return-to-work (RTW) intervention study relating to people with a diagnosis of depression. Additionally, the findings show a similar magnitude of effects as the RTW RCT undertaken by Schene et al. (2007). Both these studies found that occupational therapy led to an improvement in work functioning and reported statistically significant findings in relation to these outcomes.

Furthermore, the finding that function and participation improved significantly builds on previous research with generic mental health study populations, which have reported evidence for occupational therapy improving function (Arbesman and Lodgeson, 2011; Cipriani et al., 2017; D'Amico et al., 2018; Eklund et al., 2017; Gibson et al., 2011; Ikiugu et al., 2017; Noyes et al., 2018). As was the case for depression, there is also limited research into the effectiveness of individualised occupational therapy in general mental health populations. The systematic review by Gibson et al. (2011) presented only five primary research studies that have investigated individualised therapy with generic mental health populations, and these appeared to show little impact of the intervention (Gibson et al., 2011). However, only one of the included studies explored fully individualised occupational therapy with a population that included participants with a diagnosis of depression. This study (Eklund, 2001) explored participation in valued occupational roles such as home maintainer, caregiver, and

hobbyist, and found a significant increase in the number of roles undertaken from pre-test to post-test, which would suggest occupational therapy may have led to an increase in occupational functioning and participation.

### **7.2.2 Occupational therapy and depression symptomology**

Scores on the Beck Depression Inventory (BDI) improved significantly from pre-test to post-test ( $p=0.0016$ ). The actual improvement (mean reduction in BDI scores) from T1 to T2 was 44.1 – 31.8 (a reduction of 12.3 points). This finding is consistent with Wisenthal et al. (2018) in their occupational therapy return-to-work (RTW) single group pre-test post-test intervention study with people with a diagnosis of depression whose participants had a mean decrease in BDI scores of 11.0 points. This improvement in score could not be fully explained by the regression to the mean phenomenon (i.e., was not due to random fluctuation), suggesting that the participants may have experienced a genuine improvement between the two time points.

### **7.2.3 Occupational therapy and quality of life**

The SF-36 measures many aspects of health-related quality of life, of which several are of interest to occupational therapy in mental health study population, namely Energy/Fatigue, Emotional Wellbeing and Social Functioning, all of which showed statistically significant improvements between baseline and follow-up ( $p < 0.05$ ), and a fourth domain (role limitation due to emotional difficulties). This fourth domain of interest was not statistically significant ( $p=0.6506$ ) however this subscale requires a YES or NO response from participants regarding questions such as whether they have spent less time on activities or have not accomplished as much as they would have liked. A possible explanation for the lack of improvement on this scale is that a higher score may not be achieved until the participant's functioning has fully restored, so this question-and-answer format may not capture smaller progress.

Previous research studies have not found a positive association between occupational therapy and quality of life in depression. Comparable research has either not measured this outcome (Edel et al., 2017; Hees et al., 2013; Schene et al., 2007; Wisenthal et al., 2018) or has not achieved statistical significance (Chen et al., 2015). However, within generic mental health study populations, an association has been found for example, a

positive association was found between horticultural therapy and quality of life (Cipriani et al., 2017). Similarly, a positive association between participation in occupational roles, such as caregiver, friend, hobbyist, and quality of life was also found (Eklund, 2001).

## **7.3 Summary of process outcomes**

### **7.3.1 Treatment fidelity to the occupational therapy intervention**

As highlighted in Chapter 4, it is good practice to monitor treatment fidelity during intervention studies to assess whether the intervention was delivered as planned and ensure consistency in delivery across participants. Intervention Logs (Appendix 4) enabled the occupational therapists to record details of the interventions they provided so that fidelity and adherence to the occupational therapy intervention could be measured. The logs captured information including duration of session, type and detail of interventions offered, service user adherence and any non-occupational therapy interventions offered during the appointment. This was considered important in this research setting as it was recognised there are occasions when planned occupational therapy is not able to be delivered due to reasons such as service user presentation and increased generic working due to service pressures. In the setting that this research took place, occupational therapy is delivered according to the intervention specification described in Chapter 4. Given that in routine practice, individualised occupational therapy is not offered for a pre-determined length of time, and the number, length and frequency of sessions are not specified in advance (as it is based on individual need), treatment fidelity cannot be compared with set descriptors. However, the process outcomes in Chapter 5 show that study participants received the expected intervention components described in the specification.

The qualitative findings of this study highlighted that the above intervention specification does not include reference to the use or adaptation of activities previously undertaken by service users. Given that the interview transcripts show these were frequently utilised within the occupational therapy provided and the significance of

these to the participants, it is recommended that the specification be amended to reference both former activities and the use of former environments.

### **7.3.2 Amount of occupational therapy**

The results of a correlation analysis relating to the amount of occupational therapy participants received and study outcomes has shown variation in the amount received and a positive relationship between the amount of occupational therapy received and improvement in outcome. There were statistically significant correlations between the amount of improvement in COPM-P (primary outcome) and the number of occupational therapy sessions delivered ( $r=0.546$ ,  $p=0.019$ ), session frequency ( $r=-0.571$ ,  $p=0.013$ ), and total time in occupational therapy ( $r=0.476$ ,  $p=0.046$ ). These findings therefore give some indication of a 'dose-response' relationship relating to the amount of occupational therapy people receive which would need to be confirmed through a larger study.

It highlighted in Chapter 1 that not all staff currently employed as occupational therapists in mental health spend all their clinical time delivering occupational therapy due to an increase in generic working practices. Whilst standards for community mental health services in the UK highlight occupational therapy as essential provision, staff shortages and cost saving initiatives have seen occupational therapy posts cut and occupational therapists spending more time undertaking the generic mental health practitioner tasks often seen as a higher priority within services under pressure. A generic versus specialist debate has been well documented in occupational therapy literature over the last 20 years. Research papers and opinion pieces have highlighted the advantages and disadvantages of the case management model versus specialist practitioners and therapists, as well as the benefits to service users of occupational therapists delivering occupational therapy rather than undertaking generic roles in ensuring service users' needs are met (Cook, 2003, Culverhouse and Bibby, 2008).

In this research study some occupational therapists had a purely occupational therapy caseload ( $n=2$ ) with the remaining ( $n=10$ ) spending varying amounts of time undertaking care-coordination. It is possible that for those participants who were allocated an occupational therapist who was also a care coordinator, their occupational therapy may have been 'diluted', but this would need confirming by further research. Whilst this dual

role should not have impacted upon participants achieving their occupational goals over their complete course of treatment (occupational therapy will have continued after the study, until their needs were met), this may have impacted upon the outcomes achieved during the timescales of the study. They may have received less occupational therapy by this point due to the dual role held by their occupational therapist. Whilst there may be other reasons why a participant received less occupational therapy, such as service user engagement, deterioration in mental health, the participant having other needs that required prioritisation or, in the case of this study, Covid-19, it is recommended that future studies include a longer time-period to ensure the post-test measurements capture the outcomes of a full course of occupational therapy (see Section 7.6.1).

In CMHTs, occupational therapists tend to be lone professionals working as part of a multidisciplinary team consisting mainly of mental health nurses and social workers. In cases where a lone occupational therapist undertakes a dual role, this has an impact on the availability of occupational therapy to all service users on the team's caseload, due to a limited resource being further diluted. It is notable that the occupational therapist sample in this study had a high occupational therapy and low generic caseload however this sample was found to be biased with Band 5 occupational therapists (with lower care coordination caseloads) forming 50% of the occupational therapists in this study, whereas this band forms 28% of the occupational therapists across the service. This is because many occupational therapists undertaking care coordination declined to take part in the study citing their low occupational therapy caseload as the reason. This may suggest that in the clinical setting the available occupational therapy resource from the occupational therapy workforce may be significantly less than provided by the cohort of occupational therapists who participated in this study.

### **7.3.3 Association between outcomes**

Improvement associations were observed between certain outcome measures. For example, there were statistically significant correlations between improvements in COPM-P and COPM-S, between the BDI and the WSAS, between the BDI and two subscales of the SF-36 (emotional wellbeing and social functioning) and the USER-P Participation Satisfaction subscale. It is not surprising that improvements in one

outcome measure may correlate with improvements in another, for example it is reasonable to expect that if someone improves their performance in COPM-P they might also improve satisfaction with performance (COPM-S). It is notable however that no correlation was found between improvement in performance (COPM-P) and improvements in symptoms of depression (BDI). Previous research has also found that reduction in depressive symptomology and improvement in occupational functioning do not necessarily occur simultaneously (Daremo et al., 2015).

### **7.3.4 Other interventions (non-occupational therapy)**

The process findings show that participants received other interventions whilst they were involved in this study. Although this was a relatively small amount (23.2%), the absence of a control group means that cause and effect cannot be inferred (Craig et al., 2008) so whilst statistically significant improvements were found, the other interventions may have contributed to these findings.

## **7.4 Regression to the mean**

A regression to the mean (RTM) analysis (Section 5.3.8) was undertaken due to the lack of a control group in the study design. With RTM, a natural drift towards improvement in outcome scores would be expected, especially where there are relatively extreme scores at T1. The results of the analysis suggested that at least some of the apparent improvement in the COPM was due to this phenomenon however this was not the case for the BDI where no such evidence was found. To explore this further, comparable findings from other similar studies were also evaluated to see whether improvements in these study outcomes were of a similar magnitude. The only comparable studies utilising the same outcome were Schene et al., (2007) and Wisenthal et al. (2018) who both used the Beck Depression Inventory (BDI). This study BDI findings were compared with BDI findings of Schene et al., (2007), a RCT, and Wisenthal et al. (2018) a single group pre-test post-test study, to see whether improvements were of the same magnitude.

As BDI scores were very low, falling into the severely depressed category at baseline, any subsequent measure is likely to be closer to the mean. The comparable data are

shown in Table 24 below which does show a drift towards improvement in the Schene et al. (2007) control group, suggesting that at least some of the effect is improvement that would have happened due to a natural drift towards improvement.

**Table 24. Mean and percentage improvement in BDI scores: baseline to end of study**

Study	Baseline	4 weeks	6 months	Improvement (Mean)	Improvement (%)	42 months	Improvement Baseline to 42 Months Mean (%)	Improvement Baseline to 42 months (%)
Schene et al. (2007) Intervention	27.1	N/A	18.8	8.3	30.6%	12.3	<b>14.8<sup>a</sup></b>	<b>54.6%</b>
Schene et al. (2007) Control	23.6	N/A	15.3	8.3	35.2%	14.0	9.6	40.7%
Wisenthal et al. (2018)	25.7	14.7	N/A	<b>11.0<sup>b</sup></b>	<b>42.8%</b>	N/A	N/A	N/A
This study	44.1	N/A	31.8	<b>12.3<sup>b</sup></b>	<b>27.9%</b>	N/A	N/A	N/A

<sup>a</sup>statistically significant improvement compared to the control

<sup>b</sup> statistically significant improvement compared to baseline

However, the table also shows the percentage reduction in BDI score of 12.3% falls between the intervention and control group scores of the RCT by Schene et al. (2007) who reported mean reduction of 14.8% (intervention) and 9.6% (control). It is therefore reasonable to suggest that a drift of 9.6% would be expected due to RTM but as there was an improvement of 12.3% (of a greater magnitude than this RCT's control group), this suggests occupational therapy intervention did improve BDI scores. In comparison, participants in the Wisenthal et al. (2018) single group study had a mean BDI improvement of 42.8%.

Notably, the table also shows that the improvement made by participants in this study was of a smaller percentage than these earlier studies, possibly due to the severity of depression scores at baseline. Even though these studies were comparable in terms of using the BDI, they had very different baseline depression scores. The participants in this study had a baseline mean depression score of 44.1, which falls into the category indicating severe depression, whereas baselines scores of both Schene et al. (2007) and



Withenthal et al. (2018) studies were within the moderate-severe depression category. This suggests that this study population were significantly more depressed than the populations of these earlier studies. The findings (Chapter 5 and 6) suggest they were a group of people with significant functional impairment (for example not able to attend to their self-care needs) compared with people in these earlier studies who were at the point of returning to work (Schene et al., 2007 and Withenthal et al., 2018). It is also notable that Schene et al. (2007) did not show a significant improvement until the T5 measurement at 48 months whereas this study has shown a statistically significant improvement at six months. BDI scores show that at post-test, participants in this study were still more depressed at the end of their intervention than the participants of both other studies even though statistically significant improvements had been made. Chapter 1 highlighted the impact of very severe depression on functioning, suggesting the more severe the depression, the greater impact on function, which may indicate that more severely depressed people take longer to improve their function.

In conclusion, the findings of the RTM analysis show the phenomenon does appear to explain improvements in the COPM at least partially (but not the BDI) and therefore injects a note of caution. The results of the correlation analysis (Section 5.4.2) have shown a link between the amount of occupational therapy received and positive outcome, and therefore a preliminary indication of a 'dose-response' relationship relating to the amount of occupational therapy people receive. This may partly explain the increases between T1 and T2 and suggests this may not solely be due to regression to the mean. Furthermore, under the Bradford-Hill causal criteria (Hill, 2015) having a dose-response relationship is one of the indicators of a causal relationship which may further strengthen the suggestion of causality here. Finally, the above comparisons to existing literature that has used a control group found a drift towards improvement in BDI scores, but not as much as was found in this study, which further suggests the intervention may have been having an effect. This relationship would need to be confirmed through a larger study.

## **7.5 Summary of qualitative findings**

The qualitative analysis revealed six overarching themes as follows: (i) Occupational therapy is about everyday things (ii) Occupational therapy is more than talking, (iii) Occupational therapy is client centred, (iv) Other aspects of the Occupational therapy therapeutic process, (v) Occupational therapy is motivating and effective and (vi) Characteristics of the occupational therapists helped progress. These themes, and associated subthemes are discussed below.

### **7.5.1 Occupational therapy is about everyday things**

Participants described how they had been able to participate in self-care activities, develop routines and structure, and engage in hobbies through occupational therapy. The qualitative data highlighted more references to participants resuming self-care activities than other activity types. Participants spoke about starting to eat more healthily and take regular showers after commencing therapy. It is likely that priority was given to basic physiological needs before those relating to esteem and self-actualisation, which may be more aligned to productive and leisure activities. This suggests the occupational therapist was acting in line with their professional responsibility and duty of care to promote and protect the best interests of service users and manage risk (Health and Care Professions Council, 2016). Therefore, both participant priorities and occupational therapy prioritisation protocols may reflect Maslow's Hierarchy of Needs (Maslow, 1943) highlighting basic needs such as food and hygiene are met as a priority before other needs. Participation in hobbies or leisure activities was also frequently referenced, more so than productive activities (paid or voluntary). This however may be due in part to only one of the interview participants being employed at the time of the study. Chapter 1 highlighted that difficulties with work are key characteristics of depression and it is widely acknowledged that depression impacts on work functioning, and employment (Lerner and Henke, 2008). Whilst one participant described how her occupational therapist supported her to rebuild skills and confidence to enable return to work, this was the only example amongst the transcripts. A possible reason for fewer references to productive activities is that the benefits of engaging in leisure or other pleasant activities for improving mood is widely recognised

(Lewinsohn and Gaf, 1973; Pickett et al., 2017; Ryba et al., 2014) and occupational therapists may focus on these before moving on to more productive occupations.

Also notable in the transcripts was the regular reference to participants resuming participation in activities previously undertaken. Chapter 2 highlighted that the activities individuals regularly participate in form part of their identity, and loss of important roles and activities can negatively impact on wellbeing. Resuming activities previously undertaken can help the individual rediscover or reconnect with their former selves (Wimpenny et al., Cook, 2014). A focus on restoring such activities is also important to prevent occupational alienation, where a person's occupations are meaningless and unfulfilling (Hagedorn, 2001). If someone has engaged in an activity previously and gained enjoyment from it, it is likely that they will do so again. This is in keeping with client-centred practice within occupational therapy that promotes the use of activities important and meaningful to the individual (Bjørkedal et al., 2020; Fossey and Bramley, 2014; Nordaunet and Sælør, 2018; Pontes and Polatajko, 2016). Meaningful activities are discussed further in Section 7.3.3 below. Participants reported it was helpful and rewarding to work on activities previously undertaken within therapy. Participation in everyday activity was also considered a catalyst as taking small steps and achieving success led to further increases in participation and study participants highlighted that 'doing' led to positive change. This further supports the findings of previous qualitative research. For example, Mee et al. (2004) also found that participation in activity builds competence and skill development and is consistent with occupational therapy which is based on the premise that wellbeing can be achieved through doing (Wilcock, 2006).

### **7.5.2 Occupational therapy is more than talking**

It was clear from the transcripts that the occupational therapy people received focused on the "the ordinary and extraordinary things that people do every day" (Watson, 2004, p.3). Activity participation was used both as a 'means to' and 'end' of occupational therapy treatment (Holding, 2011) and participants referred to 'doing' things with, or without, their occupational therapist when working towards their occupational goals. Participation in an activity or occupation is rarely passive. Participants spoke about how occupational therapy is different to other therapies and commented that undertaking

activities during therapy builds skills and confidence which can enable participation in a graded way, for example, with the support of the therapist in the first instance. Occupational therapy theory highlights the importance of occupational therapists 'doing' activities with service users to truly 'be' with them (Creek, 2014b).

Study participants also stated that talking with their occupational therapist was important to enable their 'doing'. It was evident from the interviews that conversations with their therapists supported progress with function and activity participation. Participants felt that talking within therapy facilitated planning and consideration of available options, so they could choose activities important to them. They also described how conversations with their occupational therapist supported them to review progress, solve problems, grow in confidence, and celebrate successes. Whilst ensuring that therapy is based on what is important and meaningful for the individual, communication between occupational therapist and service user is essential to allow the therapist to fully understand their everyday life (Werngren-Elgström, 1997). Conversations allow the therapist to learn more about what will help individuals progress, which allows them to adapt their approaches as therapy progresses (Corring and Cook, 2006). Communication is a core skill of an occupational therapist and when combined with clinical reasoning and client-centred practice, this enables the therapist to support their service users to progress (Creek, 2014b).

### **7.5.3 Occupational therapy is client centred**

During the interviews, participants spoke about how the occupational therapy process was non-directive; focussed on them and was personally meaningful, which helped them engage. Some participants expressed surprise that occupational therapy was about them and their everyday life. Client-centredness is a core component of occupational therapy (Egan et al., 1998; Law et al., 1995; Sumsion, 2006). Within occupational therapy theory, client-centred practice includes a range of concepts such as partnership, choice, and responsibility on the part of both therapist and client (Law et al., 1995). A key aim of occupational therapy and client-centredness is to facilitate engagement in activities that are meaningful to the individual. Occupational therapy theory states that such engagement improves health and well-being (Wilcock, 1998a).

Meaningful activities are those which lead to a sense of fulfilment, restoration, connection with others or society as well as those which shape our identity (Roberts and Bannigan, 2018). Study participants stated that activities they had engaged in were personally important and meaningful, which supported progress. This supports previous research as Mulholland and Jackson (2018) also found that participation in meaningful activities influences the recovery process, and such activities help people to connect with their sense of self to support recovery from depression.

True partnership between service user and professional, a further aspect of client-centred practice, results in an equal relationship and assumes that the service user is the expert in their own life and that they are the best person to lead (Flatt, 2016). Participant responses suggest they felt their therapist was truly invested in them achieving their goals and that they were working together to achieve these goals. These findings on partnership are in line with a study on partnership between professionals and young people in a community youth group (Timor-Shlevin and Krumer-Nevo, 2016) which identified an overall partnership experience throughout everyday encounters led to improved relationships and decision making. Participants also spoke about the service user having joint responsibility for making progress within therapy, highlighting the need for the individual to actively engage in the therapeutic process to ensure progress. Occupational therapy theory on service user engagement refers to the importance of the therapist considering what will support the service user to actively engage in therapy and potential barriers to engagement (McCullough, 2014). The qualitative findings presented here suggest that participants were aware that they would need to actively engage in the therapy as described by Anne: *“You've got to want to do it, .... it's pointless doing this therapy if you don't want to get better”*.

#### **7.5.4 Other aspects of the occupational therapy therapeutic process**

Participant narratives included reference to other aspects of the occupational therapy therapeutic process such as grading and a low-pressure approach which made it easier for them to engage and progress. They also referred to the importance of the therapeutic relationship and trust between therapist and participant which, although can take time to develop, enabled them to share thoughts and feelings which enhanced

progress. Shared decision making within the therapeutic relationship was also a prominent feature of the narratives, apparent when dealing with both setbacks and successes. This is in line with earlier research on therapeutic relationships; Farrelly and Lester (2014) found mutual trust, respect, and shared decision making were crucial aspects of therapeutic relationships.

Participants spoke about other techniques used to support progress such as teaching them new ways of undertaking tasks and structuring routines, also amongst the core skills of occupational therapists (Figure 16). Equally the impact of grading (another core occupational therapy skill) on progress was apparent. Participants spoke about how this enabled them to progress at a rate with which they felt comfortable and how taking small steps led to further progress. Grading as a therapeutic process is not limited to occupational therapy however within occupational therapy theory, it means adapting an activity so that it becomes gradually more or less demanding in line with functional ability (Creek, 2014b). Through grading, a service user is enabled to progress to a further goal once an initial goal has been achieved as motivation and self-efficacy increase through positive experience (McCullough, 2014). This is in keeping with the Person, Environment and Occupation (PEO) model whereby a person interacts with their occupations and roles within the environments that they perform them in and adapting or grading elements of the activity or the environment as part of therapy can enable a person to function or participate (Law et al., 1996).

### **7.5.5 Occupational therapy is motivating and effective**

Participants highlighted how grading in occupational therapy (described in Section 7.5.4 above) and the success they achieved, increased their motivation as their small successes gradually lead on to bigger achievements. Regarding effectiveness, the qualitative findings indicate that participants felt they made a significant improvement in participation within their everyday activities through occupational therapy. They spoke passionately about what they had achieved, being able to get out and 'do' things and the difference their increase in function and participation had made to them, especially regarding a return to activities that had previously been important or enjoyable. This is consistent with the findings of a qualitative study by Van der Haas &

Horwood (2006) who also found increased satisfaction with occupational participation following occupational therapy. Moreover, participants reported that resuming their activities led to feelings of normality and recovery. This was described by Anne as: *“It’s like really you’ve just been reborn”*. These findings are also consistent with earlier studies which highlighted rediscovery of former selves and increased participation in communities as key occupational therapy outcomes (Wimpenny et al., 2014) in addition to skills development and improving competence (Mee et al., 2004).

Participants commented that resuming self-care tasks helped them feel better and improved their self-esteem and overall wellbeing. The benefits of self-care activities in improving symptoms of depression or improving health and wellbeing are widely recognised (Den Boer et al., 2004, Gellatly et al., 2007). One participant highlighted that returning to her hobbies had the most impact on her recovery. This reflects the findings of a study of activity participation during recovery from a stroke (Atler, 2016) where participation in hobbies had the biggest impact on participants experiencing pleasure, being productive and advancing their recovery.

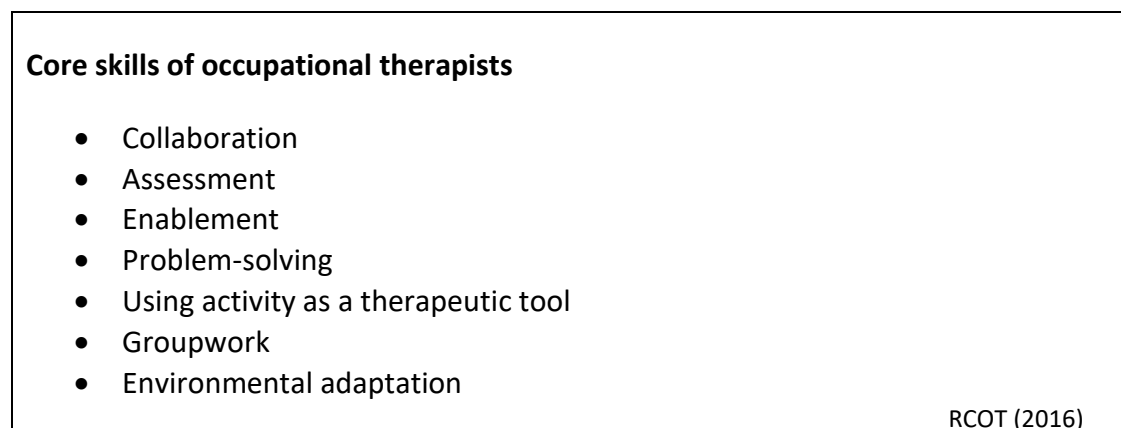
No previous qualitative effectiveness studies have evaluated whether individualised client-centred occupational therapy is effective for people with a diagnosis of depression in improving function and participation, therefore direct comparisons with previous research cannot be made. The positive findings associated with increased function and participation however support a previous study on an occupational therapy RTW intervention which found improved routine development, stamina, coping and pacing skills in relation to work activities (Wisenthal et al., 2018). Additionally, the findings presented here reflect the results of a study with a generic mental health study population exploring perceived effectiveness of occupational therapy where participants found occupational therapy in a Community Mental Health Team (CMHT) effective in improving occupational satisfaction (Van der Haas and Horwood, 2006).

Whilst participants did not specifically refer to occupational therapy impacting on their mood, the qualitative data contained many references to participants describing improvements in depressive symptoms. A key symptom of depression is loss of interest and enjoyment in (and reduced participation in) activities. The qualitative findings have

highlighted that participants described increased participation in, and enjoyment of, activities. Furthermore, a common theme was that occupational therapy was motivating, and progress had led to more progress which increased confidence and self-esteem. Again, direct comparisons with previous qualitative research cannot be made as no previous qualitative research studies have evaluated whether occupational therapy is an effective intervention for people with a diagnosis of depression (or other generic mental health study population) in improving symptoms of depression.

### **7.5.6 Characteristics of the occupational therapists**

As highlighted in Chapter 1 occupational therapy is a complex intervention with numerous elements interacting to bring about improvement in function and participation. One of these elements is that the therapist delivering the intervention brings different skills, experiences, personal qualities, and characteristics. From the interview transcripts it was clear that participants felt the characteristics of their occupational therapist were very important, including both professional skills and personal qualities. Furthermore, they spoke about the techniques their therapists used to make positive change. The core skills of an occupational therapist are highlighted in Figure 16 below.



**Figure 16. Core skills of occupational therapists**

In Chapter 6, it was reported that participants stated that occupational therapists utilised their professional skills to enable progress through assessment, problem solving, activity engagement and collaboration. Participants described their therapist as perceptive and insightful, describing how they worked around difficulties to help them achieve goals and considered the impact of their environments upon their functioning.



Creek (2014a) described how the occupational therapists use of 'self' is one of the three key 'tools' of therapy, the others being activities and the environment. Participants highlighted many positive characteristics of their occupational therapist and considered these instrumental in their progress. Such characteristics include the therapist being kind, friendly, trustworthy, compassionate, and understanding. This aligns with occupational therapy theory on the therapeutic use of self which highlights the use of interpersonal skills throughout the occupational therapy process. This may include respect, compassion, empathy, honesty, flexibility, and humour (Creek, 2014b). Section 7.5.3 noted the importance of a partnership between the service user and occupational therapist, and personal qualities are instrumental in this. The findings are in keeping with previous studies on the personal attributes of Cognitive-Behaviour Therapists who were seen to positively influence the development of therapeutic relationships to enhance therapy gains (Ackerman and Hilsenroth, 2003). Similarly, a more recent study involving physiotherapists (Morera-Balaguer et al., 2018) found being kind, empathic, warm, having a sense of humour and a positive attitude were valued by patients.

### **7.5.7 Comparison between interviews**

A significant difference noted between the interviews was that some participants were able to explain their situation from an occupational perspective, often using language used by occupational therapists, including terms such as productivity, meaningful activity, grading and goals. Chapter 1 highlighted that where service users can understand the benefits of participation in meaningful activities, they have more potential to improve their health and well-being which emphasises the importance of the occupational therapist's role within this process. It is clear from the transcripts that some participants understood occupational therapy as a concept and the gains they had made during therapy. Cross-referencing of interview transcripts with the occupational therapy participants who delivered their therapy suggests that participants who had an occupational therapist whose caseload was predominantly concerned with the provision of occupational therapy, as opposed to generic or care-coordination caseloads, were better able to appreciate this concept. This may further suggest these participants had more occupational therapy than other participants however this is an anecdotal finding which may benefit from further research.

What was also prominent in the qualitative data was success stories of how participants had been enabled to improve their functioning and participation within their everyday life. Only one participant highlighted a different perspective. This participant made very different comments to other participants. For example, where all other participants highlighted the low pressured approach being helpful in supporting them to progress, this participant expressed that more pressure would have been preferable to compel them to undertake activities. As the findings of the thematic analysis presented in this thesis are those highlighted by a minimum of four out of the seven participants, this participant's outlying comments are not presented within the main themes of the qualitative findings chapter (Chapter 6). However, to ensure this participant's voice was included in this thesis, their perspective was presented in Section 6.4. Reflexivity relating to this subject is included in Section 7.7.

## **7.6 Answering the research questions through the integration of quantitative and qualitative findings**

Whilst the Medical Research Council (MRC) recommends effectiveness studies are evaluated through experimental designs preferably RCTs (Craig et al., 2008), ethical and logistical issues prevented the use of a two-group design for this research and so a mixed-methods approach was utilised. Methodological considerations will be discussed further in Section 7.7. Both the quantitative and qualitative findings of this study suggest that occupational therapy may have supported participants to make positive progress however triangulation will ensure the research questions are considered from more than one perspective to enhance the overall findings (Bamberger, 2012) and cross-verification of the different data sources will consider any additional explanations of the data (Richardson, 2006).

The quantitative and qualitative data sets were analysed separately, and a process of triangulation was subsequently applied to consider how these contributed to each of the research questions. The time-use diary component of the study did not result in any useable data. The triangulation table (Table 25) shows the integration of the quantitative and qualitative data relative to the research questions and highlights how the qualitative data helped to explain the quantitative findings. The summaries that follow should be

considered within the context of the process outcomes reported in Chapter 5, summarised in Section 7.3 which highlight that study participants received occupational therapy as would have been expected in a clinical setting and they also received other interventions during the study period.

### **7.6.1 Does occupational therapy lead to improved and/or increased occupational performance and participation?**

All but one of the occupational performance and/or participation measures and subscales relating to occupational functioning and participation showed statistically significant improvements (Table 12). Regression to the mean analysis (Section 5.3.8 and 7.4) highlighted that even though there had been a natural drift towards an improvement in scores, the improvement found was bigger than would have been expected in the absence of the intervention. Furthermore, the correlations between dose and improvement in function lends further cautious support for a potential causal relationship between occupational therapy and improved outcomes. The qualitative findings add further support, with participants referring to increased participation in a wide range of activities including self-care, productivity, and leisure, and the value they placed on this, which they directly attributed to occupational therapy. The qualitative data highlighted more references to participants resuming participation in self-care activities and hobbies than other activity types and highlighted the importance of resuming former activities in the recovery process.

### **7.6.2 What impact does occupational therapy have on depressive symptomology?**

Similarly, scores on the Beck Depression Inventory showed highly statistically significant improvements ( $p < 0.01$ ). The qualitative findings also suggest that participants made improvements in key depression symptoms; participants described increased participation and enjoyment in a range of activities. Additionally, transcripts show that participants had felt better on account of undertaking valued activities and how occupational therapy led to increased motivation, confidence, and self-esteem. Furthermore, participants described how increased participation led to feelings of hope and optimism about the future.

Table 25. Mixed methods triangulation table

	Research Question	Quantitative Findings	Qualitative Findings (subthemes and overview)	Difference/Similarity	Conclusion
1	Does occupational therapy lead to improved and/or increased occupational functioning and participation?	<p>Comparisons between T1 and T2 showed: Improvements on both scales of the Canadian Occupational Performance Measure (COPM-P) and (COPM-S) were very highly statistically significant (<math>p &lt; 0.001</math>).</p> <p>Improvement on the Work and Social Adjustment Scale (WSAS) was statistically significant (<math>p &lt; 0.05</math>).</p> <p>Improvement on the participation limitation and participation satisfaction of the USER-P scale was significant (<math>p &lt; 0.001</math>).</p> <p>Improvement on the participation frequency scale of the USEP-P was not significant (<math>p = 0.5000</math>)</p>	<p><b>Subthemes:</b> (1a) Increasing participation in ordinary activities, (1b) Resuming activities previously undertaken, (2b) 'Doing' as part of therapy, (5a) Increased function and participation</p> <p><b>Overview:</b> Participants felt they made a significant improvement in function and participation. They described how they had been able to resume self-care activities, develop routines and structure, and engage in hobbies. They described how increased participation led to further improvement in functioning and participation.</p>	<p><b>Results convergent:</b> The quantitative findings showed statistically significant improvements except for one subscale of the USER-P participation measure.</p> <p>The qualitative findings further support the quantitative findings with participants highlighting increased participation in all types of activities including self-care, productivity, and leisure. There were no qualitative data relating to participation frequency since the diary data collection was not sufficient to support analysis.</p>	<p>On the evidence presented occupational therapy leads to improved and/or increased occupational functioning and participation. The single-group design means these findings should be considered cautiously; however, the qualitative data confirm the quantitative findings. The process outcomes have given some indication of causality with a potential dose relationship being found (the more occupational therapy participants had, the better the outcome).</p>

<b>Table 25: Mixed methods triangulation table (cont.)</b>					
2	What impact does occupational therapy have on depressive symptomology?	Comparison between baseline and follow up showed that improvement on the Beck Depression Inventory was highly statistically significant ( $p < 0.01$ )	<p><b>Subthemes:</b> (1a) Increasing participation in ordinary activities, (1b) Resuming activities previously undertaken (2b) 'Doing' as part of therapy (5a) Increased function and participation, (5b) Other positive change.</p> <p><b>Overview:</b> Participants described increased participation and enjoyment in a range of activities. Interview transcripts highlighted participants described how occupational therapy had led to increased motivation, confidence, and self-esteem.</p>	<p>Results convergent:</p> <p>The quantitative findings showed statistically significant improvements in depression symptomology.</p> <p>The interview transcripts highlight improved key symptoms of depression namely, increased enjoyment and participation in activities, increased self-esteem, and confidence.</p>	On the evidence presented it would appear that occupational therapy can lead to reductions in depressive symptoms, however, the single-group design means that these findings should be considered cautiously.

<b>Table 25: Mixed methods triangulation table (cont.)</b>					
3	Does occupational therapy improve the quality of life of individuals with a diagnosis of depression?	<p>Improvement on Energy/Fatigue, Emotional well-being and Social Functioning subscales of the SF-36 was statistically significant (<math>p &lt; 0.05</math>).</p> <p>Improvements on the Physical Functioning, Role Limitation, Physical Health, Role limitation (Emotional), Pain General Health and Overall Health Change subscales of the SF-36 were not statistically significant.</p>	<p><b>Subthemes:</b> (1a) Increasing participation in ordinary activities, (1b) Resuming activities previously undertaken (2b) 'Doing' as part of therapy (5a) Increased function and participation (5b) Other positive change.</p> <p><b>Overview:</b> Participants described an overall improvement in their everyday life and feelings of normality and recovery through developing routines, structure and resuming activities important to them. Participants had developed skills and confidence and tried new activities.</p>	<p>Results convergent:</p> <p>The quantitative findings on key subscales showed statistically significant improvements.</p> <p>The interview transcripts suggest that participants had improved on key quality of life domains, namely, emotional, and social wellbeing, personal development as well as activity involvement and functioning</p>	<p>On the evidence presented it appears that occupational therapy can improve quality of life in some quality-of-life domains. However, the single-group design means that these findings should be considered cautiously.</p>

<b>Table 25: Mixed methods triangulation table (cont.)</b>					
4	What are the components of occupational therapy that are most effective from the perspective of service users with a diagnosis of depression	N/A	<p><b>Subthemes:</b> (1a) Resuming activities previously undertaken, (2a) Talking to enable doing, (2b) 'Doing' as part of therapy, (2c) Practical support enables progress, (3a) Service user leads during therapy, (3b) Partnership and co-production, (3c) Individualised and meaningful, (3d) Role of service user, (4a) Pace, grading and low pressured approach, (4b) Therapeutic relationship (4c) Teaching, enabling and structuring, (6a) Professional skills, (6b) Personal characteristics (of the therapist).</p> <p><b>Overview:</b> Interview transcripts highlighted the following as important to participants:</p> <ul style="list-style-type: none"> <li>• Setting their set own goals</li> <li>• Moving at their own pace</li> <li>• Conversations with their therapist</li> <li>• Practical support from therapist</li> <li>• The gentle low-pressurised approach</li> <li>• Resuming previous activities, especially hobbies</li> <li>• Focus on what is meaningful to them</li> <li>• Skills/characteristics of therapist</li> <li>• The partnership between therapist and themselves</li> <li>• Focussing on small things at start</li> </ul> <p>In addition, participants acknowledged that they needed to be motivated and ready to engage to make progress.</p>	The quantitative data did not contribute to this research question.	The qualitative findings have provided an insight into the components of occupational therapy that are most effective from the perspective of service users.

### **7.6.3 Does occupational therapy improve the quality of life of individuals with a diagnosis of depression?**

Scores on three out of the four subscales of the SF-36 relevant to the study population showed statistically significant improvements ( $p < 0.05$ ) (Table 12). Quality of life domains typically include physical, material, emotional and social wellbeing, personal development, and activity involvement, all of which should be aligned to an individual's personal values (Felce and Perry, 1995). Health-related quality of life domains however primarily focus upon function and wellbeing (Karimi and Brazier, 2016). Considering both these definitions in terms of the qualitative data, the interview transcripts suggest that participants had made improvements in key quality of life domains because of occupational therapy. Participants described overall improvements in their everyday life and feelings of normality and recovery through developing routines, structure and resuming activities important to them.

### **7.6.4 What are the components of occupational therapy that are most effective from the perspective of service users with a diagnosis of depression?**

As well as knowing whether an intervention is effective, it is important to understand which parts service users find most helpful. As highlighted in chapter 1 occupational therapy is a multifaceted intervention with many components and so it can be difficult to identify the specific component that is beneficial. When specifically asked about what they found most helpful about their occupational therapy; participants had difficulty identifying specific components with typical responses including: *"everything"* and *"all of it"*. Table 26 below draws together the mechanisms of change from participant perspectives as demonstrated throughout the qualitative analysis in Chapter 6. All qualitative themes contained data associated with this research question. The term 'mechanisms of change' can be aligned to logic models of intervention which suggests a theory of change relating to how a particular intervention leads to an outcome (Public Health England, 2018).



**Table 26. Mechanisms of change**

<b>Theme</b>	<b>Subtheme</b>	<b>Examples of mechanisms</b>
<b>Occupational therapy is about everyday things</b>	1a) Increasing participation in ordinary activities	Undertaking self-care tasks led to participants feeling better, built confidence and supported feelings of progress.
	1b) Resuming activities previously undertaken	Resuming former activities and reconnecting with former interests led to feelings of normality and enjoyment
<b>Occupational therapy is about more than talking</b>	2a) Talking to enable doing	Talking with their therapist helped progress by finding ideas solutions and built confidence. Activities were graded or adapted to make them seem easier.
	2b) 'doing' as part of therapy	Doing leads to more doing, undertaking activities with their therapist.
	2c) Practical support enables progress	Practical support can enable progress, for example the therapist finding local services or directly helping the client with a difficult task.
<b>Occupational therapy is client centred</b>	3a) Service user leads during therapy	Being able to set their own goals and take things at their pace supported participants to achieve their occupational goals
	3b) Partnership and co-production	The partnership between therapist and service user was important as was working together on shared goals and activities
	3c) Individualised and meaningful	Undertaking activities important and meaningful to the individual was important to progress
	3d) Role of service user	To succeed the service user needs to be motivated to change and ready to engage.
<b>Other aspects of the Occupational therapy therapeutic process</b>	4a) Pace, grading/low-pressurised approach	The gentle low-pressurised approach was valued and allowed success to lead to more success.
	4b) Therapeutic relationship	The relationship between participant and occupational therapist supported progress
	4c) Teaching, enabling, and structuring	Occupational Therapists facilitate progress using a range of therapeutic techniques
<b>Characteristics of the therapist helped progress</b>	6a) Professional skills	Skills such as enablement, problem-solving, the therapeutic use of activity and environmental adaptation enabled progress.
	6b) Personal characteristics	Personal characteristics such as kindness and sense of humour were instrumental in participants progress

## 7.7 Personal perspectives and subjectivity (Part 3)

Chapter 1 highlighted that my research journey was borne out of my experiences as a Professional Lead Occupational Therapist. In particular, the challenges I faced ensuring that service users received the right care at the right time within a National Health Service where cost-saving initiatives resulted in ever reducing resources. Demonstrating the positive impact of occupational therapy to protect occupational therapy resources to ensure service users occupational needs were met was difficult, due to the limited evidence base for occupational therapy in mental health, and the subsequent limited reference to occupational therapy in best-practice guidance such as that produced by the National Institute for Health and Care Excellence. It has been highlighted that the lack of evidence of effectiveness does not mean that an intervention is not effective (Bullock and Bannigan, 2011). However, the occupational therapy profession has not yet been able to sufficiently document the effectiveness of their interventions in mental health. This is associated with a lack of researchers able to undertake the necessary studies rather than these interventions lacking effectiveness (Gutman, 2009, 2011). I therefore commenced my research journey with a determination to contribute to the evidence-base for the effectiveness of occupational therapy in mental health.

It is vitally important that researchers pay close attention to their own subjectivity (Cheater, 1987). I recognise that my work-based challenges, and determination to further the evidence base, form a subjective presence that cannot be removed from this research. However, acknowledging this and being reflective have supported reliability and validity (Underwood et al., 2010). I believe my initial desire to conduct a RCT was influenced by workplace challenges. I consider that this is not because I hold the belief that qualitative research is not as valuable as quantitative research but because the NHS organisation around me is heavily influenced by statistical data which in turn drives the business decisions made. It is possible that if I had embarked on the same research from a different background, I might not feel the same, recognising that qualitative research is often best placed to explore the service users' subjective experience, particularly in relation to the impact on people's lives (Smith, 2006).

The importance of reflexivity when planning and undertaking research is highlighted in Chapter 4. I reflected upon myself and biases throughout the qualitative data collection and analysis process, particularly as one of the seven interview participants held a different perspective to the other participants (Section 6.4). As is usual in qualitative analysis, there was a focus on key themes and subthemes arising from the data and the presentation of commonly occurring perspectives (Braun and Clark, 2006; Marshall and Rossman, 2016) and this participant's perspective could therefore not be incorporated into the key themes and subthemes arising within the other interviews.

I have considered why this participant held views that were so different from the other participants. Whilst, as researcher, I did not have access to this participant's medical history, anecdotal information from the occupational therapist suggested this participant had atypical circumstances and, as a relatively junior therapist, she had struggled to work with them. It is possible therefore that contextual issues relating to their circumstances impacted this. There were indications in this participant's interview transcript that would also suggest this participant may have had other circumstances impacting upon their presentation and their difficulties could not be appropriately met by occupational therapy. As occupational therapy is a client-centred intervention which places service users' goals and wishes central to the therapy provided, the notion of compelling anyone to take action is completely at odds with its values and principles. Whilst it might be interesting to consider whether other service users feel, or have felt, that being compelled to participate in therapy would be helpful for them, it is likely that this participant did not meet the criteria for occupational therapy. This also raises questions around the screening and prioritisation of service users for occupational therapy intervention, considering the limited available resource in many practice settings (Chapter 1) and the supervisory systems in place to support practice.

It was necessary to continually consider whether my beliefs, values and research motivations had influenced the data analysis of this participants transcript. I repeatedly questioned my own biases about this, and the absence of this participants points in the reported findings. The interview with this participant was difficult because it was hard not to revert into therapist mode whilst in discussion with them. Their transcript was

difficult to analyse and, similarly, integrating their perspective and voice into this thesis has presented challenges. As the reason for their referral to occupational therapy was atypical and the participant was unable to identify any desired goals and felt the only method of bringing about change would be to compel them to engage in a treatment plan, their perspective was at odds with the fundamental principles of occupational therapy, a client-centred intervention. Following numerous reflective discussions with my research supervisors as part of the overall reflexive process, a decision was made to present this participant's voice separately (Section 6.4).

## **7.8 Study strengths and limitations**

### **7.8.1 Research design**

Chapter 4 highlighted that the RCT is the gold standard research design for intervention studies, but it would not have been ethical to deny service users an intervention that was routinely offered in the research setting (i.e., occupational therapy, where occupational needs are present) to achieve this. Alternative methods of delivering a two-group design, such as through a waiting list control group, were considered but were not logistically possible due to study timescales and the unpredictable nature of waiting times for occupational therapy across different mental health teams within the Trust. Therefore, a single group pre-test post-test design was adopted as the next best methodology in these circumstances (Belli, 2009). Despite the lack of a control group for comparison for the analysis of cause and effect, Chapter 4 highlighted that the single group design is widely used in clinical settings where it would be unethical to use a RCT. Efforts were made to enhance the research design through the addition of a longitudinal component, however longitudinal (T3) measurements were only achieved for 3 participants. Study timescales combined with Covid-19 prevented sufficient T3 data being collected because most participants were still receiving occupational therapy intervention when T2 two measurements were undertaken. To further evaluate the effects of a single group design, RTM analysis was undertaken to further consider cause and effect (Morton and Torgerson, 2003). Findings were compared with the existing literature that had used a control group. This concluded that whilst it is possible that the

improvements found would have happened anyway, the larger improvements suggest that the improvement in outcomes were not purely because of RTM. Additionally, correlation analyses have given preliminary indication of a dose relationship between the amount of occupational therapy received and improved function. These additional analyses have helped to negate some of the limitations, such as the single group design. Therefore, despite the single group design, being necessary due to ethical, practical, and logistical limitations, there are some indications of cause and effect, and this research study will still contribute to the literature.

These findings require confirmation through further research. This study could serve as a feasibility study and lead onto a larger study, potentially of two-group design, utilising a waiting list control group, for example, with those on the waiting list being subject to RTM mitigation measures such as multiple baseline measurement to further strengthen the study design (Linden, 2013); monitoring whether people are improving by other means whilst they are waiting, or whether their relatively extreme scores at baseline results in random fluctuations (improvement) due to RTM.

It is also recommended that further studies explore whether a multi-centre study would be possible to increase the potential sample size. As it is likely that randomisation would still be impossible for ethical reasons, it is recommended that alternative methodologies for demonstrating cause and effect in an attempt to attribute causality in complex interventions are further considered. For example, through Contribution Analysis, Theory of Change or Realistic Evaluation. These theory-driven evaluation methodologies consider whether mechanisms of change are in line with the theories underpinning the interventions to attribute causality (Blamey and Mackenzie, 2007; Mayne, 2012). Such methodologies would need to be considered relative to the criteria for inclusion within NICE guidance and considering the merits of the different methodologies relative to the hierarchy of evidence. Whilst these theory-driven approaches were not considered for this study, it might be fruitful to further consider these alternative methods if a RCT does not prove possible.

Whilst the longitudinal component of this study did not prove possible, the addition of the RTM analysis and dose-response analysis strengthened the conclusions that could be drawn from this research design, as did the qualitative component, because it allowed participants to fully explain their experiences and perceptions of the effectiveness of occupational therapy whilst accounting for their progress, successes, limitations, and difficulties. A mixed methods approach therefore was able to contribute to a more comprehensive exploration of the topic to a depth that would not be possible using one method alone (Shaw et al., 2010). The qualitative findings strongly suggest that most participants considered the improvements they made were due to the occupational therapy they had received. Additionally, in line with the above realist or theory driven approaches, this may suggest that there is evidence that the expected mechanisms of change were taking place, further supporting causality.

A further practical limitation was that most participants were still actively engaged in occupational therapy at T2, this may mean that their full progress within occupational therapy may not have been captured. Whilst Covid-19 impacted upon intervention delivery, six-months between T1 and T2 was also likely to be insufficient given that 91.7% participants fell into the severely depressed category at the start of the study and the association between severe depression and severe functional limitation (Bonder, 2010). Future studies should therefore aim to capture the outcomes of a full course of occupational therapy intervention rather than a for a period of six months.

### **7.8.2 Recruitment**

Whilst this study did recruit the planned number of service user participants and occupational therapist participants to deliver the therapy and collect process data, the occupational therapists reported difficulty recruiting service user participants and a longer recruitment phase would therefore have been beneficial. Several factors may have impacted upon the reported recruitment challenges. Identifying people who met the inclusion criteria, without any of the exclusion criteria also being present was difficult due to the increasing complexity and comorbidity of service user presentations within the CMHTs. The recruitment process relied on other professionals (care-coordinators), in identifying and discussing clients, which was reported to be

problematic due to pressures within teams. Furthermore, service user diagnoses were not always recorded in the clients notes. Feedback from the volunteer research assistants also suggests that participants may have been discouraged from participating due to the format and length of the Participant Information Sheet (PIS). Information received suggest the fact they had received this in advance of the research assistants visit allowed them time to review and 'worry' about its meaning without anyone present to provide reassurance. These difficulties could have been mitigated against with a longer recruitment period and enhanced information for care-coordinators, possibly by a face-to-face research awareness presentation in addition to their letter. Delivery of the PIS by a research assistant, rather than by post, may have been beneficial so that queries could be discussed earlier, and reassurance given where appropriate.

Regarding the occupational therapy participants, recruitment difficulties were associated with work pressures and many occupational therapists undertaking multiple roles (both occupational therapist and care coordinator). Previous research has identified similar factors. Birken et al. (2017) found large caseloads, limited time, and lack of research skills prevented occupational therapists engaging in research and clinical trials. Section 7.3.2 has highlighted that this study found there was a tendency for more Band 5 occupational therapists (often the more junior therapists) who tend to have fewer care-coordination responsibilities, to participate. Future studies should aim to recruit occupational therapist participants representative of the service.

### **7.8.3 Sample**

The study sample and subsample were predominantly white, unemployed and between the ages of forty and sixty. Two thirds of participants lived in the 30% most deprived areas of the UK. The socio-economic breakdown of the interview sub-sample was different however, with only just over 40% living in the 30% most deprived areas, suggesting that more deprived participants were less comfortable taking part in an interview. The outcomes reported and experiences described may therefore not represent wider demographic groups. The final sample was based on the service users who met the inclusion criteria at the start of the study and whilst a more representative sample would have been preferable to increase the validity and transferability of the

findings (Bryman, 2012) this was not possible within study timescales. The sample size was small but was adequate for a power of 80% and a significance level of 5%. However, a larger sample size would be preferable for future research and a two-centre study involving two NHS Trusts, may further support an increase the potential sample size.

## **7.8.4 Outcome measures**

### **7.8.4.1 Sensitivity**

Two outcome measures, the USER-P (participation measure) and the SF-36 (health related quality of life scale) were not sensitive enough to detect smaller or ongoing change that may be clinically important. Chapter 4 highlighted the lack of consensus on the best measures for occupational therapy research, but whilst efforts were made to choose the best available measure, the USER-P was found to be not suitable for this study sample and purpose as it was not able to register the smaller changes that might be expected in someone recovering from severe depression. The SF-36, requiring a YES or NO response from participants, also did not capture ongoing change due to the measure only recording whether a participant had fully achieved an activity, meaning progress towards achieving a goal was not always captured. Future research should ensure measures are sensitive to the smaller changes that might be expected in a sample with severely restricted participation and capture ongoing improvement in function and participation.

### **7.8.4.2 Bias**

Outcome measures were standardised and selected for reliability and validity. All were patient-reported outcome measures (PROMs) which are considered important where the outcome relates to the person's everyday functioning (Coster, 2013) and are essential for measuring personal experience (Bowling, 2005). Whilst these have the potential for bias (Kyte, 2016), steps were taken to mitigate against this risk by using research assistants, rather than the occupational therapist who had worked with them (as is usual with the COPM) to undertake post-test measurements to ensure impartiality and because the occupational therapist may consciously or unconsciously wish to



observe improvement in their service user and participants may attempt to respond in relation to their own therapist's expectations.

#### **7.8.4.3 Time-use diary**

The time-use diary was co-developed with service users to ensure it would be acceptable for participants, however only three sets of completed T1 and T2 diaries were achieved rendering analysis impossible. Time-use diaries were chosen as they are routinely used in practice within the research setting however, they can be time consuming to complete and require commitment over an extended period. Feedback from the occupational therapists suggests a range of reasons for the diaries not being completed including participants losing them and participants having difficulty completing them. Future studies should consider additional support measures for participants such as interviews to support the process (Erlandsson and Eklund, 2001; Leufstadius and Eklund, 2014). It is also recommended that future research also considers alternative measures of participation.

#### **7.8.4.4 Outcome Measure Modification**

Whilst the WSAS, developed specifically to measure different aspects of functioning, is widely used in the NHS (being present in the core outcome set for all Improving Access to Psychology Services (IAPT) across the UK) it does not include a measurement of self-care, a core functional domain, which may have resulted in progress in this area not being captured. The WSAS was therefore modified for this study, and it is recommended that consideration be given to whether this outcome measure needs to be revised and recalibrated. Modified outcome measures may not share the same reliability and validity as the original measure (Stewart et al., 2012). Without the time constraints of a doctoral research study further testing on the modified WSAS would have been advisable through correlation with other functional scales to ensure the modification was successful and ensure reliability and validity (Tucker et al., 2012).

#### **7.8.5 Process evaluation**

Process evaluation showed that the occupational therapists delivered the intervention in line with what was expected (the specification described in Chapter 4) however, it is

possible that process data quality may have been compromised by inaccurate or incomplete recording by the occupational therapists. During data analysis it was noted that not all intervention logs had been completed correctly and whilst these had been checked by an administrator upon submission, this checking process was not sufficiently rigorous to identify errors in time to allow these to be amended and resubmitted within study timescales. Inconsistencies across the logs also suggested that further training would have been beneficial and closer monitoring of the logs from a clinical, as opposed to administrative, perspective would have been advantageous. It should also be noted that some data, such as overall intervention frequencies and durations may have included a gap in therapy provision or delays due to Covid-19.

As highlighted in Section 7.3.2, the results show that a greater number of occupational therapy participants graded at Agenda for Change Band 5, who have less generic care coordination responsibility within the service, took part in the study. Process findings suggest there may be an association between the amount of occupational therapy that participants received and their subsequent outcomes. It has been highlighted that having an occupational therapist who is also a care coordinator may dilute the amount of occupational therapy received, it may therefore be useful for future research studies to evaluate this.

## **7.8.6 Strengths and limitations of the qualitative component.**

### **7.8.6.1 Methodology**

As well as adding context to the quantitative findings and providing information on the perceived effectiveness and usefulness of occupational therapy in improving function and enabling meaningful participation in everyday life, this component of the study presented individual perspectives. Within the interviews, participants were able to consider what aspects of occupational therapy helped bring about change. Most participants attributed positive change to their occupational therapy intervention which may cautiously increase confidence in a cause-and-effect relationship in line with the theoretically driven approaches highlighted in Section 7.8.1.

The interview schedule was co-developed with service users who, as well as ensuring the schedule was client-centred and meaningful to participants, were able to share their experience and insights. For example, the group specifically asked that the interview guide include reminders that information would not be passed to their care team or therapist, included in their medical records, or shared with other agencies. They expressed that this was because service users may fear that their responses may impact on their care and treatment and because they may fear being discharged from mental health services or pressured to return to work before they perceive themselves to be well, highlighting the benefits of co-production.

The qualitative sample was a subsection of the wider study sample; participants who had completed, or almost completed their occupational therapy and who were willing to be interviewed. It is possible that their accounts were biased because those who chose to take part in this part of the study and to be interviewed, were those who had something they particularly wanted to say. Participants took part in one interview and therefore they gave their views as they were at that point in time (cross-sectional). The transcripts therefore only contain their perceptions on that single day. A longitudinal approach to this part of the study, with interviewees being followed through their course of therapy would have the potential for participant perceptions to be captured over a longer time frame and any possible changes over time, however this methodology would fall outside what is possible with a doctoral study.

#### **7.8.6.2 Sample**

This study had a relatively small sample size for the qualitative component due to time constraints and a mixed methodology approach. Gender, age, ethnicity, and social-economic factors were not equally represented in the sample leading to an unrepresentative and potentially biased sample. This may mean the findings are not transferable and generalisations should therefore be made with caution; a larger sample may have led to more representative findings. Future studies should aim to increase the size of the sample to enhance generalisability. One interview (the first interview) had to be discounted due to technology issues as the recording device stopped working shortly

after commencement which went unnoticed. All remaining interviews were recorded on two separate recording devices, to prevent this reoccurring.

### **7.8.6.3 Bias**

Both participant and researcher bias will have impacted upon this research study as subjectivity is an inherent part of qualitative research (Braun and Clarke, 2013). Interview participants may have responded in line with what they believed the researcher wanted to hear, or provided answers they considered acceptable, leading to biased feedback. Interview questions were designed to be open ended to prevent the participants only agreeing or disagreeing with the researcher. Whilst it was necessary for the interviews to be conducted by the lead researcher within this doctoral study, to support skill development, future research could consider using a person unconnected to the study to undertake the interviews.

There is also the potential for researcher bias in the data collection, analysis and interpretation of the themes arising from the transcripts. At data collection, a pre-determined interview schedule, co-designed with service users, was used ensuring open-ended questions and the avoidance of leading questions. Whilst it is possible that the predetermined questions in semi-structured interviews can be mis-interpreted or not fully understood by participants, attempts were made to minimise this by involving service users in the development of the interview schedule used for data collection and incorporating their recommendations into the interview guide.

The process of qualitative analysis followed a framework approach, based on Braun and Clarke (2006) however it is possible that the process could have lacked rigour due to the lack of a set structure. The qualitative analysis presented in this thesis followed a descriptive process, rather than a deeper interpretation, to maintain the focus on the voice of the participants and their view of the occupational therapy they had received. During the data analysis and interpretation stage the potential for researcher bias was managed through investigator triangulation to ensure themes and subthemes were independently reviewed by a supervisor (DD). Given the subjectivity involved in qualitative research that can lead to bias which cannot be eliminated, this was

considered during all stages of the research process (Braun and Clarke, 2013). As lead researcher I kept a reflective diary to ensure reflexivity continued throughout this process to consider my role and interface with the participants and the process (Mason, 2018). Additionally regular reflexive conversations with supervisors during data collection and analysis of the semi-structured interviews further supported reflexivity.

Trustworthiness was supported through researcher triangulation, independent analysis of interview transcripts, audio recording and verbatim transcription as well as a logical and traceable thematic analysis process. In this thesis trustworthiness is demonstrated through the provision of detailed descriptions of themes and subthemes, to allow other researchers to judge transferability, the inclusion of direct quotations in the reporting of the qualitative findings and the inclusion of a transcript extract as an appendix. Study time scales would not allow for member-checking whereby transcripts are returned to respondents for their validation (Birt et al., 2016) or an auditable decision trail of decisions made for others to follow to further support confirmability (Nowell et al., 2017), however it is recommended that this be considered in future research studies, balanced against whether participants might find it upsetting to revisit these, due to the potential for these to contain upsetting themes. Verbatim participant quotes were used to support transparency and provide evidence relating to the themes presented.

### **7.8.7 The Impact of Covid-19 on this research study**

In March 2020 as the Covid-19 pandemic was spreading globally, data collection for this research study was coming to an end. Whilst there was nothing formally in place to measure the impact of the pandemic on this study, anecdotal information reported by research assistants, undertaking the follow-up (six month and nine month) outcome measures, highlighted participants had generally ceased engaging in almost all activities outside the home, hindering their progress. This potentially impacted on the T2 and T3 scores of the remaining five participants who had not already completed the study. Given that outcomes being collected included level of function, satisfaction with, and participation in activity and depression symptoms, it is important that this is noted. The remaining thirteen participants had already completed their outcome measures prior to the emergence of Covid-19, and so these outcomes were not affected.

## **7.9 Chapter summary**

This discussion chapter has summarised and discussed the quantitative findings (Section 7.2), the process outcomes (Section 7.3), regression to the mean (Section 7.4) and the qualitative findings (7.5). It has considered how both the quantitative and qualitative components of this research study have contributed to answering each of the research questions (Section 7.6). Personal perspectives were again considered in Section 7.7 and study strengths and limitations were explored in Section 7.8.

## **Chapter 8 Conclusion**

This chapter will provide an overall summary (Section 8.1) and further personal perspectives regarding the completed study (Section 8.2). Recommendations for further research are presented in Section 8.3, and recommendations for practice are made in Section 8.4. Finally, consideration is given to the dissemination and impact of this research study (Section 8.5).

### **8.1 Study summary**

Twenty-four service user participants were recruited to take part in this research study into the effectiveness of occupational therapy for people with a diagnosis of depression, along with twelve occupational therapist participants to provide their intervention, in a large NHS trust in the North of England. Six volunteer research assistants were recruited to support with the data collection process. Eighteen participants completed pre-test and post-test measures, which was more than the minimum specified by the sample size calculation to be able to detect a significant difference between pre and post intervention, should one exist. Seven interviews were conducted with service user participants. The research questions for this study were related to the concepts of occupational functioning and occupational participation which, along with the terms occupational performance and occupational engagement do not have agreed definitions. This may result in confusion and terms being used interchangeably in both clinical practice and research. Chapter 1 details discussion of the use of these terms within clinical practice, the occupational therapy literature and wider society as well as how the terms were used within this study.

Analysis shows that the primary outcome measure, the performance scale of the Canadian Occupational Therapy Measure (COPM-P) showed very highly statistically significant improvements with all but two of the secondary outcome measures showing either significant (the Work and Social Adjustment Scale) highly significant (the Beck Depression Inventory) or very highly significant (the activity limitation scale and daily life

satisfaction scale of the USEP-P and the Satisfaction Scale of the COPM) improvements. Because a single group pre-test-post-test design was used, without a control group, it is difficult to attribute this improvement to the intervention as they may have improved naturally over time, through other treatment or therapy or through the statistical anomaly known as RTM. This is where there may be a natural drift towards improvement due to relatively extreme symptom scores at baseline with subsequent scores being more likely to be closer to the norm due to chance.

The results of a 'dose' analysis however, highlighted a positive correlation between the amount of occupational therapy participants received and the improvements in function. Moreover, further analysis found that even though there had been a natural drift towards an improvement in scores, the improvement found was bigger than would have been expected in the absence of the intervention lending further cautious support for a potential cause and effect relationship between occupational therapy and improved outcomes. Moreover, the evaluation of the RTM phenomenon did not completely account for changes in one of the secondary outcomes, the Beck Depression Inventory. Therefore, some confidence in the theory that a causal relationship is supported can be cautiously suggested. The positive findings may allow this study to serve as a feasibility study for research with two groups, considered more suitable for establishing cause and effect. However, alternative methodologies that may be suitable for strengthening confidence in causality, if a randomised study should prove to be impossible, could be further considered.

From a qualitative perspective, six key themes and a total of 16 subthemes were identified and defined. The qualitative component of this study further supports the positive quantitative findings by providing detailed information on the perceived effectiveness and usefulness of occupational therapy in enabling meaningful participation in everyday life for people with a diagnosis of depression. They provide participants perspectives on what aspects of occupational therapy helped them to improve their function and participation in everyday activities. Furthermore, the qualitative findings add context to the quantitative data and in line with theoretically driven approaches, with most confirming that the anticipated mechanisms of change



took place and because the participants perceived them to be causal, this further supports confidence attributing causality.

This research study used a pragmatic world view with elements of both positivism and constructivism which ensured that both mechanisms of change and causality were explored through direct lived experience of occupational therapy from the reality of the participants. It is acknowledged that the study findings are embedded within my chosen philosophical standpoint which will have brought certain perspectives and bias, and that additional perspectives may have been obtained from an alternative philosophical position. Additionally, due to the research setting, the dominant model operating within this setting was the medical model and the study findings should be considered with this in mind. It is acknowledged that wider perspectives on depression and mental illness may provide additional insights.

## **8.2 Personal perspectives and subjectivity (part 4)**

This research study has not been without its challenges. For example, the recruitment phase had to be extended due to difficulties recruiting participants meeting the inclusion criteria. This, along with Covid-19, subsequently impacted upon the number of participants that were able to achieve the longitudinal T3 measurement within study timescales, as therapy was still ongoing for many. Covid-19 also meant T2 measures were taken before some participants had completed their full course of therapy, potentially impacting on study outcomes. In addition, the time-use diaries, intended as a supplementary measure of participation, had a poor return rate and technical difficulties resulted in the loss of one of the eight semi-structured interview recordings. Moving posts and NHS trusts whilst data collection was underway provided additional challenges and reduced my easy access to data. Whilst some practicalities were resolved by one of the research assistants agreeing to act as local collaborator to oversee the data collection process, the logistics of working in a new role within a different NHS trust, further exacerbated by Covid-19, meant that a request for a short interruption to study became necessary.

Now the study is complete, I have reflected on the starting point of my doctoral journey. At that time, I was a Professional Lead Occupational Therapist striving to ensure all service users had their occupational, functional, and vocational needs identified and met. A limited workforce and ongoing challenges due to austerity measures within a health care system already under pressure added to the challenge. Several years on I believe the limited evidence base for the effectiveness of occupational therapy in mental health continues to put the profession and the service users who benefit from its interventions, at continued risk from cost-savings. I believe that, when a stronger body of research evidence exists regarding the effectiveness of the interventions we offer, the preservation of the occupational therapy specialist role and funding for posts will be less problematic. I am very aware that I embarked on this research with the aim of demonstrating effectiveness and am therefore inherently biased. I have continually used reflection to minimise this and maintain objectivity, as far as I am able, and have looked for other reasons why the improvements might have happened, for example by evaluating the natural drift upwards that occurs in single-group design studies. The statistically significant findings this study has achieved however, gives me hope that with further research, the evidence base for occupational therapy in mental health can be strengthened. This may then lead to increased reference to occupational therapy in the NICE guidelines which would ultimately ensure that service users with a need for occupational therapy can access this resource. More recently I have become aware of alternative research methodologies with the potential to attribute causality (referenced in Section 7.8). This means that if future RCTs prove not to be possible for ethical reasons, there are alternative methodologies for consideration. Furthermore, since these methodologies are method-neutral (Blamey and Mackenzie, 2007; Mayne, 2012) they sit well with pragmatism and my epistemological position that both qualitative and quantitative data are required to gain a comprehensive understanding when evaluating complex interventions and knowledge for clinical practice.

### **8.3 Recommendations for research**

The discussion chapter has highlighted various limitations of this research study, making recommendations for future research. Key recommendations are summarised here:

- The systematic review in Chapter 3 highlighted the urgent need for large-scale diagnosis-specific research into the effectiveness of occupational therapy interventions for people with a diagnosis of depression, including individualised occupational therapy, as is routinely provided in clinical care.
- The systematic review in Chapter 3 highlighted the need for a core outcome measurement set of instruments for occupational therapy mental health research to be agreed to support comparison between studies and future meta-analysis.
- It is recommended that the findings of this study are confirmed through future research, ideally a randomised trial, utilising a larger sample size. Future studies may want to explore a multi-centre study. It is also advised that future studies should aim to capture the outcomes of the full course of occupational therapy intervention rather than a period of six months.
- Future research could consider whether different methods for evaluating cause and effect in complex interventions could be utilised, such as Contribution Analysis, Theory of Change and Realistic Evaluation, whilst considering the criteria for inclusion within NICE guidance.
- Future studies should plan for a longer recruitment period and increased support for those involved in the recruitment process to mitigate against recruitment challenges. Additionally, it is recommended that future research studies consider whether hand-delivery of the participant information sheet may be more appropriate for this client group so that queries and concerns could be discussed earlier to encourage participant take-up.
- Future research should ensure that outcome measures are sensitive to the smaller changes that might be expected in a sample with severely restricted participation. Specifically, it is recommended that the Participation Scale (van Brakel, 2010) is further considered, and alternative time-use survey methods are explored.
- Future research should ensure all measures utilised capture ongoing improvement in function and participation.

- It is recommended that further service user involvement takes place to improve acceptability of time-use diaries both in research and everyday clinical practice and that alternative measures of participation are considered in future research.
- It is recommended that further testing on the modified WSAS take place through correlation with other functional scales to ensure the modification was successful and ensure reliability and validity. It is also recommended that consideration be given to whether this measure needs to be revised and recalibrated to include a measurement of self-care as a core functional domain.
- It may be useful for future research to compare the outcomes of participants with occupational therapists who are also care coordinators compared with those who have a purely occupational therapy caseload to see whether this impacts on occupational therapy outcomes.
- Similarly, it may be useful for future research to consider the impact of this dual role when an occupational therapist also acts as a care-coordinator, specifically whether this impacts on the amount of occupational therapy service user receive.
- It is recommended that key occupational therapy concepts including occupational functioning, occupational performance, participation, and engagement are given further consideration and for a consensus to be reached regarding the definition and use of these terms to reduce confusion and become more consistent.
- It is recommended that wider perspectives on mental health, such as mad studies, the recovery model and human rights approaches are further considered within the research domain.

## **8.4 Key messages for practice**

Practicing occupational therapists should be aware of the following key messages as informed by this primary research study as well as the literature review in Chapter 2 and systematic review in Chapter 3.

#### **8.4.1 Key messages from the literature review and systematic review**

1. Consider the following evidence-based interventions when supporting return-to-work as part of occupational therapy for people with a diagnosis of depression:
  - Problem clarification, exploring goals and expectations.
  - Assessment including simulation, role-play, and observation.
  - Group sessions designed to explore factors impacting on work functioning, including relationships at work and factors at home that may interfere with work.
  - Liaison with the employer and work-integration planning.
  - Support to commence work where possible.
  - Graded task simulation to support the individual to improve skills needed for work.
  - Interventions to improve cognitive skills, often impaired because of depressive illness.
2. To support service users to live a satisfied and balanced life, consider interventions such as self-management of illness, stress management, relationship skills, and emotional expression, as part of occupational therapy life-style interventions.

#### **8.4.2 Key messages from this study**

1. Ensure service users can progress at their own pace. A low-pressured approach is considered important.
2. Aim to focus on small tasks at the start of therapy as well as what is meaningful to service users.
3. Ensure the practical support needed by service users is provided or considered as part of therapy, as this is important in enabling progress.

4. Where possible, support the service user to resuming previous activities, especially former hobbies, as these have been found to be particularly important when working to increase participation in activities.
5. A therapist's personal characteristics are valued by service users. For example, kindness and a sense of humour are considered important in supporting progress.
6. Service users value the partnership between themselves and their therapist including a shared investment in their goals.
7. Participating in activities together during therapy is considered important to service users.
8. The service users' level of motivation and readiness to change is important for success.
9. Key occupational therapy concepts and the use of certain terminology, including occupational functioning, occupational performance, participation, and engagement as well as wider perspectives on mental health, such as mad studies, the recovery model and human rights approaches should be further considered within clinical practice.

## **8.5 Dissemination and impact: contributing to the occupational evidence base and best practice**

My research journey was borne out of a desire to contribute to the evidence base for the effectiveness of occupational therapy in mental health and to improve the overall care and treatment for people with a diagnosis of depression.

The potential impact of this research was considered during the design research process and mapped against the Research Councils UK Pathways to Impact Review (Hughes and Kitson, 2012). From an economic and societal impact perspective, this study has created knowledge useful to support patient care, recovery, and well-being. This will ultimately support capacity and flow through NHS services and the provision of the right care at the right time, enhancing effectiveness and sustainability whilst supporting policy making. It has also supported public engagement through the involvement of Experts by Experience in the research.

Chapter 1 of this thesis highlighted the limited effectiveness research in the field of mental health. The RCOT has also highlighted a need to further develop the evidence base (RCOT, 2017c) and the literature review and systematic review in Chapters 2 and 3 confirmed this. Academic impact has therefore been provided by advancing knowledge in relation to gaps in the previous research. The research has the potential to attract research and development investment in the future for a two-group study or other method suitable for evaluating cause and effect.

Dissemination, particularly through written publication, is important to ensure that research can inform a bigger audience that will include other academics and service providers (Saks and Allsop, 2013). The systematic review (Chapter 3) has already been published in the *Journal of Affective Disorders* (Christie et al., 2021) (Appendix 1) with the review protocol being published on PROSPERO (Christie et al., 2018). The systematic review concluded that the overall effectiveness evidence base for occupational therapy interventions for people with a diagnosis of depression is limited. The results were in line with the findings of previous systematic reviews of occupational therapy with patients who have severe mental illness. All included studies in the systematic review evaluated a specifically designed occupational therapy intervention, as opposed to an individualised client-centred intervention, highlighting a clear gap in the research. The review highlighted that there is an urgent need for large-scale diagnosis-specific research into the effectiveness of occupational therapy interventions for people with a diagnosis of depression, which is therefore one of the recommendations of this thesis (Section 8.3).

The quantitative arm of this study, although a single-group design, has provided preliminary indication of effectiveness that will need to be confirmed through further research. The qualitative findings further support this with participants describing how it had enabled their progress. Both the quantitative and qualitative findings will be submitted for publication in peer-reviewed journals. It is anticipated that the study will lead to the development of best practice guidelines that will be similarly disseminated.

Early findings from this primary research study were presented at the Royal College of Occupational Therapists Conference in June 2021 to an audience of around 300 people (excluding those who have since viewed by a catch-up facility). The networking associated with conference attendance has also supported dissemination. An invitation to present study findings at one of the Canadian Association of Occupational Therapists Practice Evidence Webinars, which provide evidence-informed, occupation-based sessions to inform practice, has been received and accepted. The presentation is booked to take place in June 2022. There is also potential for this research to be included on the Canadian Occupational Performance Measure (COPM) website, which provides details of research that uses the COPM as an outcome measure. Local dissemination within the Trust has taken place, with a presentation to a Trust Wide Occupational Therapy Best Practice Group.

This research study aimed to further develop the evidence base of occupational therapy for people with a diagnosis of depression by exploring areas that have not been researched before. It has provided new evidence for practice relating to the effectiveness of occupational therapy as it is routinely provided within everyday clinical practice rather than a specifically designed occupational therapy intervention and has evaluated and described participants' perceptions of effectiveness. These factors have not been researched before and therefore this provides new and original knowledge both to support practice and the overall care and treatment of people with depression.



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# Appendices

## Appendix 1: Systematic review (published version)

A systematic review into the effectiveness of occupational therapy for improving function and participation in activities of everyday life in adults with a diagnosis of depression

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## **Abstract**

**Background:** Depression is a common mental health disorder, the symptoms of which can disrupt functioning and lead to reduced participation in everyday activities. Occupational therapy is routinely provided for people with such difficulties; however, the evidence underpinning this intervention for depression has yet to be systematically assessed.

**Method:** A systematic review of the effectiveness of occupational therapy for people with a diagnosis of depression, using the Preferred Reporting Items for Systematic Reviews and Meta-analysis (PRISMA) was undertaken. Seven databases were searched using terms for depression combined with terms associated with occupational therapy. Due to heterogeneity in study design and outcome measures, a best evidence synthesis was undertaken as an alternative to meta-analysis.

**Results:** Of 1962 articles identified, 63 full texts were assessed and six met the inclusion criteria. Studies were carried out in Canada, Germany, the Netherlands, Taiwan and the United Kingdom. There was strong evidence for the effectiveness of occupational therapy return-to-work interventions for improving depression symptomology, limited evidence for occupational therapy lifestyle interventions for reducing anxiety and suicidal ideation, and limited evidence for improving work participation. No studies evaluated individualised client-centred occupational therapy, highlighting a gap in research.

**Limitations:** Incomplete reporting within studies and heterogeneity prevented meta-analysis. English language restrictions were applied.

**Conclusions:** Whilst overall the evidence base for occupational therapy for depression is limited, strong evidence was found for the effectiveness of occupational therapy return-to-work interventions, which is important given the costs associated with mental ill-health and work absence. Further research is needed to strengthen the evidence base.

**Keywords:** Depression, Mental health, Occupational therapy, Effectiveness, Functioning, Return-to-Work.



## Introduction

Worldwide, depression is the leading cause of disability linked to disease and is characterised by a loss of interest in activities as well as difficulty carrying out everyday activities (World Health Organisation, 2017). The level of disruption to function depends on the severity of the episode, but can be substantial and affect participation in everyday activities including self-care, work, social and leisure functioning (Bonder, 2010). Occupational therapy aims to enable people to participate in the daily activities they want or need to do and so improve health, well-being and quality of life (World Federation of Occupational Therapists, 2012). There is currently limited research evidence relating to the effectiveness and impact of occupational therapy in mental health generally (Gutman, 2009; Bullock & Bannigan, 2011). A scoping review of the literature relating to the effectiveness of occupational therapy for people with a diagnosis of depression also identified a dearth of published research.

Globally, not all staff currently employed as occupational therapists in the mental health field spend all their clinical time delivering occupational therapy due to a rise in generic or generalist working (Lloyd et al., 2004; Fox, 2013; Michetti and Dieleman, 2014). Whilst standards for community mental health services in the UK for example highlight occupational therapy as essential provision (Royal College of Psychiatrists, 2016), staff shortages and cost saving initiatives have seen occupational therapy positions reduced. Occupational therapists therefore spend less time delivering occupational therapy and more time undertaking generic mental health practitioner tasks, often seen as a higher priority within services under pressure. In the United States this change has impacted negatively upon the quality of patient care as well as on professional identity and multi-disciplinary team working (Fox 2013). Evidence to support best practice is essential not only to ensure the delivery of high-quality effective interventions (World Health Organisation, 2004), but also so that limited health care resources can be used to achieve the best outcomes for service users. The limited evidence for the effectiveness of occupational therapy in mental health therefore puts the profession, and the service users who benefit from its interventions, at continued risk from cost-savings due to austerity. The purpose of this systematic review was to answer the question: Does occupational therapy improve function and participation in activities of everyday life in adults with a diagnosis of depression?

## Methods

This systematic review was undertaken and is reported in line with the Preferred Reporting Items for Systematic Reviews and Meta-analysis (PRISMA) (Moher et al., 2009) and The Joanna Briggs Institute Reviewers' Manual (Aromataris and Munn, 2017). The review protocol was registered with PROSPERO in March 2018:

[https://www.crd.york.ac.uk/prospero/display\\_record.php?RecordID=89613](https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=89613), (Christie et al., 2018). All stages of the review process including selection of studies, quality appraisal and data extraction were independently considered by two reviewers (LC and JI) with disagreements resolved through discussion and where a consensus was not reached, a third reviewer (DD) was consulted for a majority decision. The PICO model was used to develop the search strategy: the patient/problem (P), intervention/exposure (I); comparison intervention/exposure (C) and the clinical outcome of interest (O).

The population of interest (P) was adults with a primary diagnosis of depression. The intervention (I) was occupational therapy as defined as an intervention designed to enable participation in activities of everyday life with the goal of promoting health and well-being (World Federation of Occupational Therapists, 2012). This included occupational, functional and vocational interventions designed to increase function or optimise participation in activities of everyday life, delivered or facilitated by a qualified occupational therapist. The comparison (C) was no occupational therapy.

The outcomes (O) of primary interest were change in occupational performance, level of function or participation in activities of everyday life or change in satisfaction in these. There were no restrictions on secondary outcomes to ensure that all outcomes relevant to practice were included (Khan et al, 2011). Studies relating to children and young people under the age of 18 and people with a diagnosis of organic brain disorder (or a suspected organic cause to their depressive illness) were excluded, as were studies relating to people with bipolar disorder because this diagnosis is treated separately in the UK's National Institute for Health and Care Guidance (National Institute for Health and Clinical Excellence, 2009, updated 2018) (National Institute for Health and Clinical Excellence, 2014b, updated 2020). Only studies in English were included.

The following electronic databases were searched: AMED, CINAHL, The Cochrane Library, EMBASE, MEDLINE, PsycINFO and OT Seeker. The search strategy used the keywords:

“Depression” OR “Depressive illness” OR “Affective disorder” OR “low mood” OR “Mood disorder” AND “Occupational therapy”, OR “Vocational rehabilitation” OR “self-care” OR “Leisure” OR “daily living” OR “life-skills” OR “skill” OR “productive” OR “independence” OR “participation OR “everyday life”. The inclusion dates for the searches were January 1993 to February 2019. Searches were conducted in March 2017 and repeated in February 2019. At stage one, titles and abstracts were screened against the inclusion and exclusion criteria, using full texts if necessary, to identify all potentially relevant papers. At stage two, the full texts of all papers considered potentially relevant by either reviewer were independently examined to determine whether the inclusion criteria had been met. The reference lists of included studies were reviewed for any other eligible studies for completeness. The identified quantitative studies were subject to critical appraisal and methodological quality assessment using the following criteria recommended by van Tulder et al. (1997) further developed by Steultjens et al. (2002). Randomised Controlled Trials (RCTs) and Controlled Clinical Trials (CCTs) were assessed against eleven internal validity criteria, six descriptive criteria and two statistical criteria. For studies to be considered 'high' quality, at least six internal validity criteria, three descriptive and one statistical criterion must have scored positively. Other Designs (ODs), a term used by Steultjens et al. (2002) to refer to all studies that were not RCTs or CCTs, were assessed against seven internal validity criteria, four descriptive criteria and two statistical criteria. For studies to be considered 'sufficient' quality, at least four internal validity criteria, two descriptive criteria and one statistical criterion must have achieved a positive score. The qualitative study was appraised using the CASP Tool for Qualitative Research (Critical Appraisal Skills Programme, 2018).

A standardised pre-piloted data extraction form was used. The data extracted included: inclusion criteria, study setting and population, methodology, intervention and control intervention, intensity, frequency and duration of the intervention and outcomes. Due to studies not being sufficiently homogenous and differences in data reporting, the results could not be combined through meta-analysis (Blundell, 2014). The original aim was to extract the mean (standard deviation) at baseline and the standardised mean difference (95 percent confidence interval) post intervention, as recommended by Steultjens et al. (2002). However, only one paper (Hees et al., 2013) provided this. The corresponding authors for the other RCTs were contacted twice to request the missing data but no response was received. However, even if it had been possible, meta-analysis would still have been restricted by heterogeneity of outcomes. Due to the wide range of outcomes measured, only one outcome (depression) could

feasibly have been combined across three RCTs. Moreover, these studies evaluated a range of occupational therapy interventions meaning that meta-analysis could not have been conducted for specific intervention types.

A best evidence synthesis was therefore utilised as an alternative to meta-analysis (Slavin, 1995), providing a rating for each type of occupational therapy intervention and the level of evidence of effectiveness. The evidence was rated as strong, moderate, limited, indicative or none, replicating the method used by Steultjens et al. (2002), as described in Table 1.

**Table 1: Best evidence synthesis** (adapted from Steultjens et al., 2002, with permission)

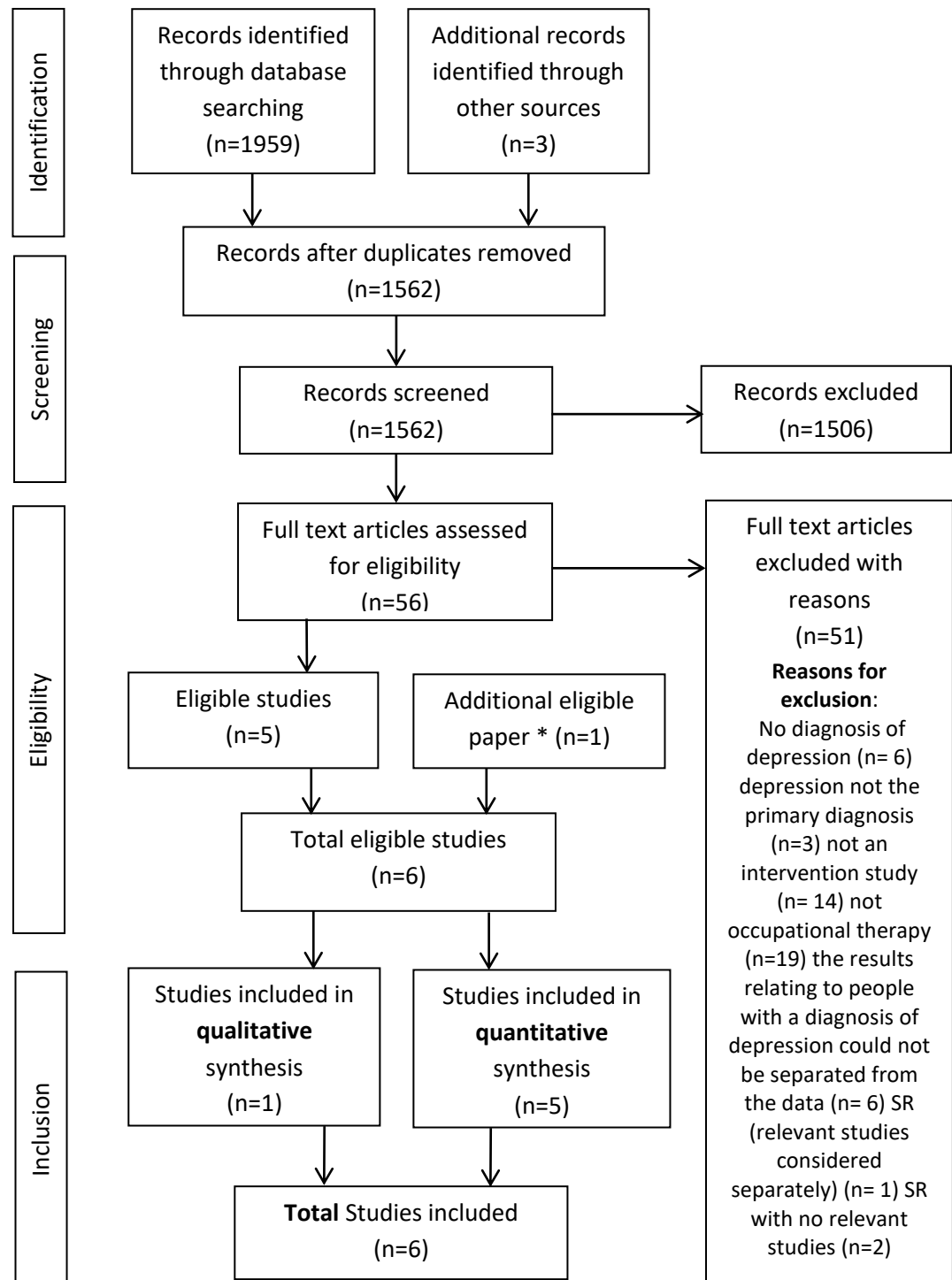
<b>Strong evidence</b>	Consistent, statistically significant findings in outcome measures in at least two high quality RCTs*
<b>Moderate evidence</b>	Consistent, statistically significant findings in outcome measures in at least one high quality RCT and at least one low quality RCT or high quality CCT*
<b>Limited evidence</b>	Statistically significant findings in outcome measures in at least one high quality RCT*, or consistent, statistically significant findings in at least two high quality CCTs* (in the absence of high quality RCTs)
<b>Indicative findings</b>	Statistically significant findings in outcome measures in at least one high quality CCT*, or one low quality RCT* (in the absence of high quality RCTs) or consistent, statistically significant findings in at least two ODs with sufficient quality (in the absence of high quality RCTs and CCTs)
<b>No evidence</b>	In cases of results of eligible studies that do not meet the criteria for one of the above-stated levels of evidence, or in case of conflicting results among RCTs and CCTs, or in case of no eligible studies
RCTs = randomised controlled trials; CCTs = controlled clinical trials; ODs = other designs. * If the proportion of studies that show evidence is <50% of the total number of studies within the same category of methodological quality and study design (RCTs, CCTs or ODs), we state no evidence	

## Results

### Retrieval of studies

An initial search retrieved 1962 articles. After removal of duplicates, 1562 articles were screened and 63 full-text articles were retrieved. 58 studies were excluded at stage two. Five full-text articles were identified as appropriate for inclusion. One further article was found when searches were re-run in February 2019 (Figure 1). Of the six studies identified; four were RCTs (Schene et al., 2007; Hees et al., 2013; Chen et al., 2015 and Edel et

al., 2017) one a qualitative study (Cooper 2013) and one a mixed methods study (Wisenthal et al., 2018).



**Figure 3: Flow diagram**

\* One additional paper was found when the searches were re-run in February 2019.

## **Characteristics of Studies**

Studies were carried out in Canada, Germany, the Netherlands, Taiwan and the United Kingdom and represented a total of 374 participants. All included studies evaluated specific occupational therapy interventions, rather than the individualised client-centred occupational therapy most commonly provided in everyday practice. The mode of delivery of all included interventions was primarily group-based as opposed to individual intervention, although four studies (Schene et al., 2007; Hees et al., 2013; Chen et al., 2015 and Wisenthal et al., 2018) included some individualised components. Characteristics of the included studies and the intervention types are shown in Table 2.

## **Methodological Quality**

Overall the quality of the included studies was good (Table 3); acknowledging that successful blinding towards the intervention may be very challenging or not feasible at all. Three studies; all RCTs, were identified to be of high quality (Schene et al. 2007; Hees et al., 2013 and Chen et al., 2015). One RCT (Edel et al. (2017) was found to be of low methodological quality and the most recent OD (Wisenthal et al., 2018) was found to be of 'sufficient' quality. The RCT that was rated as low was noted to have problems with internal validity, only meeting five criteria out of the minimum of six. The remaining four studies all scored sufficiently with regard to internal validity, descriptive criteria and statistical criteria.

Appraisal of the qualitative study (Cooper et al., 2013) found that whilst some detail was given around selection criteria, there was no discussion around how recruitment and selection was undertaken. There was also a lack of detail around co-interventions and compliance, however data collection was considered appropriate for the aims and methodology. There is evidence that the researcher, who also delivered the intervention to the participants, had critically considered her role, influence and the risk of bias. There is also evidence of rigorous data analysis. A lack of detail in intervention and comparison descriptions was noted in one quantitative (Hees et al., 2013) and one qualitative study (Cooper, 2013). Additionally, missing data and incomplete recording was noted (Table 3).

Table 2: Characteristics of included studies

Reference	No. of participants	Research methods	Inclusion criteria and setting	Interventions		Outcome measures	Time Period
				Control Group	Intervention Group		
Schene et al. (2007)	62	RCT	Age 18+ with work - place associated Major Depression without psychosis or drug/ alcohol dependence. BDI score greater than 15. Setting: Psychiatric Medical Centre.	TAU: Clinical management inc. assessment, psycho-education, support, CBT + medication if indicated.	RTW intervention: 12 month programme inc. role-play, video observation, work integration preparation, employer, liaison exploration of work problems, review of progress in work + TAU.	<ul style="list-style-type: none"> <li>• Interview for Diagnosis of DSM-IV Mood Disorders</li> <li>• BDI II</li> <li>• Work resumption (time worked)</li> <li>• Questionnaire Organisational Stress</li> <li>• Healthcare costs.</li> </ul>	Baseline plus 6, 12 and 42 months
Hees et al. (2013)	117	RCT	Age 18-65, with MDD, associated with work place, without psychosis or drug and alcohol dependency. Setting: Psychiatric services.	TAU: Outpatient treatment according to APA guidelines, psycho-education, support, CBT & medication if indicated.	RTW Intervention: 9 x Individual + 8 x group sessions + meeting with employer. Am to simulate work tasks/skills. Graded to increase competence & confidence + TAU.	<ul style="list-style-type: none"> <li>• Absenteeism/time to RTW</li> <li>• Hamilton Depression Scale</li> <li>• Inventory of Depression Symptoms</li> <li>• WLQ</li> <li>• SF-36</li> <li>• Utrecht Coping List</li> </ul>	Baseline plus: T1: 6 months T2: 12 months T3: 18 months
Chen et al. (2015)	68	RCT	Age 18+ with Major Depression or dysthymia. Out-patient. Literate with MMSE score of 24+. Setting: Psychiatric clinic in Taiwan.	Standardised telephone contact including enquiry of daily routines, general mental well-being and social/activity participation.	Lifestyle Intervention: 'Life Adaptation Skills Training' (LAST) to improve performance/ lifestyle, interpersonal skills, illness/stress management. 24 sessions 1.5 hours (over 12 weeks)	<ul style="list-style-type: none"> <li>• WHO-QOL</li> <li>• Occupational Self-assessment</li> <li>• BDI (II)</li> <li>• Beck Anxiety Inventory</li> <li>• Beck Scale Suicide Ideation</li> </ul>	T1: Baseline T2: 3 Months (post intervention). T3: 6 months

Abbreviations: BDI = Beck Depression Inventory, TAU = Treatment As Usual, OD = Other design PObs = Participant observation CBT = Cognitive Behavioural Therapy, RTW = Return to work, APA = American Psychiatric Association, WLQ = Work Limitations Questionnaire, SF-36 = Medical Outcomes Study Short Form, MMSE = Mini Mental State Examination, WHO-QOL = World Health Organisation Quality of Life Scale

Table 2: Characteristics of included studies (continued)

Reference	No. of participants	Research methods	Inclusion criteria and setting	Interventions		Outcome measures	Time period
				Control group	Intervention group		
Edel et al. (2017)	82	RCT	Diagnosis of moderate or severe Major Depression without psychosis. Setting: German psychiatric inpatient units.	Participation in a board game group	Handicraft Intervention: Basic craft activities such as woodwork or art.	<ul style="list-style-type: none"> <li>• Hamilton Depression Scale</li> <li>• BDI II</li> <li>• Hamilton Anxiety Scale</li> <li>• Personal &amp; Social Performance Scale</li> </ul>	Baseline plus 3-9 weeks after baseline
Wisenthal et al. (2018)	21	OD	Age 18+, basic reading and writing skills, off work due to diagnosis of depression, with no co-existing drug/alcohol disorder. Employed in office work rather than manual work. Setting: community mental health.	N/A	RTW Intervention: 'Cognitive Work Hardening' an intervention designed to support return to work which uses role play, simulation etc. (31 hours of intervention over 4 weeks)	<ul style="list-style-type: none"> <li>• Work Ability Index</li> <li>• Multidimensional Assessment of Fatigue</li> <li>• BDI II</li> </ul> (Plus qualitative interviews at T2 (4 weeks) and at 3-month follow-up)	T1: Baseline T2: Post-test (4 weeks) T3: 3 month follow-up
Cooper (2013)	24	OD	Inclusion criteria and recruitment process not clear. Participants had a diagnosis of depression as all or part of their diagnosis. Setting: mental health unit: drop in sessions.	Creative Writing Course (creative art therapy not delivered by an occupational therapist)	Writing Intervention: Using Writing as Therapy Course (a structured brief writing therapy)	<ul style="list-style-type: none"> <li>• Questionnaires and interviews</li> </ul>	PObs and interviews over a 12 month period.

Abbreviations: BDI = Beck Depression Inventory, TAU = Treatment As Usual, OD = Other design PObs = Participant observation CBT = Cognitive Behavioural Therapy, RTW = Return to work, APA = American Psychiatric Association, WLQ = Work Limitations Questionnaire, SF-36 = Medical Outcomes Study Short Form, MMSE = Mini Mental State Examination, WHO-QOL = World Health Organisation Quality of Life Scale



**Table 3: Summary of quality characteristics of randomised controlled trials and studies using other designs**

First Author (Date)	Selection			Interventions						Outcome Measurement						Statistics			Methodological Quality		
Criterion code	a	b(i)	b(ii)	c	d	e	f	g	h	i	j	k	l	m (i)	m(ii)	n	o	p	q		
	Allocation										Follow-up timing										
Criterion name	Eligibility criteria specified	randomisation	concealment	Baseline similarity	Interventions explicitly described	Therapist blinding	Co-interventions avoided or comparable	Compliance acceptable	Participant blinding	Assessor blinding (or not involved in treatment for OD's)	Relevant outcome measures	Adverse effects described	Described & acceptable withdrawal/drop-out	Short-term	Long-term	Timing comparable between groups (or patients for OD's)	Sample sizes described	Intention to treat analysis	Point estimates/ measures of variability		
<b>RCTs</b>																					
Schene (2007)	✓	✓	✓	✓	✓	x	✓	x	x	✓	✓	x	✓	✓	✓	✓	✓	✓	✓	<b>High</b>	
Hees (2013)	✓	✓	✓	✓	x	x	✓	✓	x	✓	✓	x	✓	✓	✓	✓	✓	✓	✓	<b>High</b>	
Chen (2015)	✓	✓	✓	x	✓	x	✓	x	x	✓	✓	x	x	✓	x	✓	✓	✓	✓	<b>High</b>	
Edel (2017)	✓	✓	✓	x	✓	x	✓	x	x	x	✓	x	x	✓	x	✓	✓	x	✓	<b>Low</b>	
<b>OD</b>																					
Wisenthal (2018)	✓	N/A	N/A	N/A	✓	N/A	x	x	N/A	✓	✓	x	✓	✓	x	✓	✓	x	✓	<b>Sufficient</b>	

**Abbreviations:** RCT= Randomised Controlled Trial OD = Other Design

Assessment of Quality: RCTs: Assessed against eleven internal validity criteria, six descriptive criteria and two statistical criteria. For studies to be considered 'high' quality, at least six internal validity criteria, three descriptive and one statistical criterion must be positively scored (Steuлтjens et al., 2002).

OD's: Assessed against seven internal validity criteria, four descriptive criteria and 2 statistical criteria. For studies to be considered 'sufficient' quality, at least four internal validity criteria, two descriptive criteria and one statistical criterion must be positively scored (Steuлтjens et al., 2002). N.B. (✓ = yes x = no or can't tell)

Internal Validity Criteria = b, e, f, g, h, i, j, l, n, p

Descriptive Criteria = a, c, d, k, m

Statistical Criteria = o, q

## **Outcome of Interventions**

The reported effects of the occupational therapy interventions on both primary and secondary outcomes from the quantitative and qualitative data are reported in Table 4 and Table 5 respectively.

## **Best Evidence Synthesis**

A best evidence synthesis for each of the intervention types was conducted using the outcomes reported in Table 4 and the guidelines shown in Table 1.

### **Occupational therapy return-to-work interventions.**

Three studies on the effectiveness of occupational therapy return-to-work (RTW) interventions were included in the evidence synthesis. All three measured occupational performance, function and/or participation. Two studies reported statistically significant findings in these measures (Schene et al., 2007 and Wisenthal et al., 2018). Schene et al. (2007), a high quality RCT, measured work participation through work resumption data (days and hours worked per week). Time from baseline to any work participation highlighted a statistically significant difference in favour of the occupational therapy intervention group. Additionally, total hours worked highlighted that the intervention group worked significantly more during the initial 18-month period. The second RTW study (Hees et al., 2013), also a high quality RCT, measured at-work functioning. They found no significant difference between the intervention and control groups with both demonstrating significantly reduced absenteeism and role limitation. The self-report data collected was not reported in their paper. Wisenthal et al. (2018), an OD of sufficient quality, measured work function by assessing 'work readiness' also with statistically significant post-test scores.

In terms of depression symptomology, all three RTW studies reported statistically significant findings. Schene et al. (2007), and Wisenthal et al. (2018), utilised the Beck's Depression Inventory (BDI). Schene et al. (2007) reported statistically significant differences between intervention and control groups, during the long-term follow up phase of their RCT, and Wisenthal et al. (2018) reported significant improvement in post-intervention depression symptomology in their single-group study. The positive findings from the BDI in Schene et al. (2007) were contradicted by their secondary measure of depression (participants' DSM-IV<sup>2</sup>) which did not replicate the significant BDI findings (the TAU group showed greater

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<sup>2</sup> DSM-IV Scores: classification found in the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition

improvement). However, diagnostic reliability using the DSM-IV has been questioned (Chmielewski et al., 2015) whereas the BDI is a standardised measure, widely used in research, with excellent psychometric properties (Dozois and Covin, 2004), and could potentially be given greater emphasis.

Hees et al. (2013) reported statistically significant improvement in depressive symptomology and symptom remission in the occupational therapy group. In addition, sustainable remission (6 months or more) was higher in the occupational therapy group. Whilst their secondary measure of depression also showed greater improvements in favour of the occupational therapy intervention group, this did not achieve statistical significance.

Only one other outcome considered across the RTW studies achieved statistical significance; Wisenthal et al. (2018) reported significantly lower fatigue scores in post-test measurements following occupational therapy. Schene et al. (2007) and Hees et al. (2013) measured stress levels and coping respectively, with no significant findings. Therefore, based on statistically significant findings in two high quality RCTs and an OD of sufficient quality, there is strong evidence for the effectiveness of occupational therapy RTW interventions for improving depression symptomology. Based on statistically significant findings in one high quality RCT there is limited evidence for the effectiveness of occupational therapy RTW interventions for improving occupational functioning, performance and/or participation. Based on statistically significant findings in only one OD, there is no evidence for the effectiveness of occupational therapy RTW interventions in improving work readiness and overall health and well-being, as per the definition of best evidence in Table 1.

### **Occupational therapy lifestyle interventions**

Only one RCT explored the effectiveness of occupational therapy lifestyle interventions for people with a diagnosis of depression (Chen et al., 2015). There was no significant difference between the groups relating to occupational competence, sense of mastery or depression symptomology. However, there were statistically significant findings relating to a reduction in suicidal ideation and anxiety. These are encouraging findings due to suicidal ideation being a key symptom of major depressive disorder (World Health Organisation, 2017) and the high incidence of anxiety associated with depression (Hirschfeld, 2001). Chen et al. (2015) was judged to be high quality however the description of the 'standardised phone contact' (the control) suggests that some occupational therapy may have been delivered because these included 'enquiry' about daily routines and social activity. It is not possible to determine

whether occupational therapy was delivered, due to the lack of detail reported. However, based on one high quality RCT, there is limited evidence for the effectiveness of occupational therapy lifestyle interventions for reducing anxiety and suicidal ideation in people with a diagnosis of depression and no evidence for the effectiveness of occupational therapy lifestyle interventions in improving occupational performance, functioning, participation or depressive symptomology.

### **Occupational therapy handicraft interventions**

One RCT (Edel et al., 2017) explored the effectiveness of occupational therapy handicraft interventions for people with a diagnosis of depression reporting significant findings in favour of the occupational therapy group regarding basic work skills at 6 weeks. The study authors also reported statistically significant findings in relation to anxiety in their male sample at three weeks but found no significant difference between the groups regarding depressive symptomology.

In this study however, both the intervention and control groups were facilitated by occupational therapists and the control group intervention involved participation in an occupation (i.e. playing a board game). The information that Edel et al. (2017) provided suggests that this was selected as a control due to its 'resemblance' to occupational therapy, because German in-patients consider this an essential part of treatment. However, the control participants may potentially have received the intervention being evaluated. Therefore, based on only one low quality RCT, there is only indicative evidence for the effectiveness of occupational therapy handicraft interventions having a positive effect on occupational performance and anxiety symptoms in people with a diagnosis of depression and no evidence of a positive effect on depressive symptomology.

### **Other Findings: Occupational therapy and cost-effectiveness**

One study (Schene et al., 2007) included an economic evaluation. They considered psychotropic medication use, and occupational therapy costs, reporting that the intervention group (TAU with the addition of occupational therapy) had a 75.5% probability of being more cost-effective compared with TAU (with no occupational therapy).

### **Service User perspectives**

Two studies contributed qualitative data (Cooper et al., 2013 and Wisenthal et al., 2018) but had different research topics (an occupational therapy writing intervention and a RTW

intervention respectively). Cooper (2013) identified themes across four key areas (clients as writers, therapist role, stigma and how writing helps). Key outcomes reported were that both interventions have potential benefits for people with a diagnosis of depression. The benefits of 'Using Writing as Therapy' in particular were identified as supporting cognitive changes, such as increasing self-awareness, and the participants distancing themselves from their stories through writing and restructuring memories and experiences. In addition, the author highlights the potential usefulness of the intervention as part of the occupational therapy process; in supporting assessment and engagement. The potential benefits of the creative writing (non-therapeutic) group were identified as helping people step away from unhappy memories and feelings. Whilst the reported findings are positive, the quality appraisal process identified some potential concerns regarding the methodology. Wisenthal et al. (2018) reported qualitative data relating to the elements of intervention participants considered important in supporting return-to-work, as well as overall gains. Important intervention element themes included structure, simulation, coaching, feedback, pacing and role play. The overall gains were reported as developing a routine, improving self-confidence, improving stamina and cognitive function, as well as coping and pacing skills and how the therapist may enable these through providing feedback. Collectively these studies provide indication of the benefits, drawbacks, and how and why treatments may be effective and some insight into service users' experience of occupational therapy.

## **Discussion**

This is the first time that occupational therapy for people with a diagnosis of depression has been subjected to a systematic review. The review found strong evidence for the effectiveness of occupational therapy return to work (RTW) interventions in improving depression symptomology and limited evidence for the effectiveness of occupational therapy RTW interventions in improving work participation. These are useful findings in terms of occupational therapy playing an important part in providing interventions for people with a diagnosis of depression. The review also found some evidence for the effectiveness of occupational therapy lifestyle interventions for reducing anxiety and suicidal ideation associated with depression, but this evidence was limited due to only one study having researched this area. It is therefore important that this potential benefit of occupational therapy is explored further, given the difficulties people with a diagnosis of depression can experience engaging in everyday activities and the high incidence of these secondary

symptoms. There was an indication that occupational therapy handicraft interventions may have a positive effect on occupational performance and anxiety symptoms associated with depression. Additionally, there is also evidence to suggest occupational therapy may be a cost-effective return-to-work intervention for people with a diagnosis of depression. This is important to note since social and health care costs relating to mental ill health totalled £34.9 billion in 2017 in the UK (Parsonage and Saini, 2017) and globally the cost to the economy is estimated to be 1 trillion US Dollars per year in lost productivity (World Health Organisation, 2019).

This review found no evidence for the effectiveness of occupational therapy RTW interventions in improving work readiness or overall health and well-being, and no evidence for the effectiveness of occupational therapy lifestyle interventions in improving occupational performance, function or participation. A lack of evidence of effectiveness is not the same as an intervention being found to be ineffective and may simply mean that sufficient high-quality research has not yet taken place. The current limited evidence in some areas poses challenges for the occupational therapy profession, as practitioners continue to provide theory-based interventions within an evidence-based healthcare system where limited resources are allocated to achieve the best outcomes for service users. Notably, missing from the evidence base are any studies that focus on depression that examine whether individualised client-centred occupational therapy tailored to individual need is an effective intervention.

Previous systematic reviews that have explored whether occupational therapy is effective with generic mental health populations defined as 'serious mental illness' have reported similar findings. For example, strong evidence for return-to-work interventions was reported by both Arbesman and Logsdon (2011) and Noyes, Sokolow and Arbesman (2018) which included the study relating to depression by Hees et al. (2013). Limited evidence for routine development was reported in the systematic review by Gibson, D'Amico, Jaffe and Arbesman (2011) and strong evidence for occupation-based interventions was reported by D'Amico, Jaffe and Gardner (2018), which included the study relating to depression by Chen et al. (2015) included in this review.

**Table 4: Summary of reported effects from the quantitative data for primary and secondary outcomes\***

\*as defined in the systematic review protocol

First author and year of publication	Type	Quality	Effects of occupational therapy				
			Occupational Performance, Functioning and Participation	Depression Symptoms	Quality of Life	Health and well-being	Other mental health symptoms
Occupational Therapy Return-to-Work interventions							
Schene et al. (2007)	RCT	High	<p><b>Work resumption:</b></p> <p>Time baseline to any work participation I = mean 207 days C = mean 299 days (<math>p = 0.01</math>)</p> <p><b>(days/h worked):</b></p> <p>Months 1-6: (<math>p = 0.022</math>) I = 20.45 C = 0.00</p> <p>Months 7-12: (<math>p = 0.042</math>) I = 261 h C = 0.85 h</p> <p>Months 13-18: (<math>p = 0.035</math>) I = 456.25 h C = 156.42 h</p>	<p><b>DSM-IV Criteria:</b></p> <p>No significant difference between groups</p> <p><b>BDI II:</b></p> <p>BDI Scores: 0 months: I = 27.1 C = 23.6 42 months: I = 12.3 C = 14.0</p> <p>Statistically significant differences reported during the long-term follow up phase of the study in favour of the OT group: (<math>p = 0.032</math>)</p>	Not measured	Not measured	<p><b>Questionnaire Organisational Stress:</b></p> <p>no significant difference between groups</p>

**Table 4: Summary of reported effects from the quantitative data for primary and secondary outcomes (continued)**

First author and year of publication	Type	Quality	Effects of occupational therapy				
			Occupational Performance, Functioning and Participation	Depression Symptoms	Quality of Life	Health and well-being	Other mental health symptoms
Occupational Therapy Return-to-Work interventions (continued)							
Hees et al. (2013)	RCT	High	<p><b>Absenteeism/time taken to RTW:</b> no significant difference between groups</p> <p><b>Work Limitation Questionnaire:</b> no significant difference between groups</p> <p><b>SF-36:</b> no significant difference between groups</p> <p><b>10-point Likert scale:</b> The data were not reported.</p>	<p><b>Hamilton Depression Rating Scale</b> Symptomology: M (SD) at 6, 12, 18 months: I = 11.2 (6.6), 7.1 (6.7), 4.7 (5.4) C = 12.4 (8.1), 9.6 (7.8), 8.8 (8.2) Both I and C reduced but I reduced significantly more (group x time statistically significant <math>p = 0.03</math>)</p> <p><b>Symptom remission:</b> Percentage at 6, 12, 18 months: I = 32%, 57%, 77% C = 31%, 47%, 52% Statistically significant (<math>p = 0.05</math>)</p> <p><b>Sustainable remission:</b> (6 months or more) also higher in I group (<math>p = 0.04</math>).</p> <p><b>Inventory of Depressive Symptoms:</b> no significant difference between groups</p>	Not measured	Not measured	<p><b>Utrecht Coping List:</b> no significant difference between groups</p>



**Table 4: Summary of reported effects from the quantitative data for primary and secondary outcomes (continued)**

First author and year of publication	Type	Quality	Effects of occupational therapy				
			Occupational Performance, Functioning and Participation	Depression Symptoms	Quality of Life	Health and well-being	Other mental health symptoms
Occupational Therapy Return-to-Work interventions (continued)							
Wisenthal et al. (2018)	OD - MIXED METHODS	Sufficient	<b>Work Ability Index</b> M (SD) Pretest – Posttest 22.71 (6.51) – 28.02 (8.11)  Difference mean (SD) = 5.31 (5.20)  Significant ( $p < 0.01$ ) Effect size ( $d = 1.02$ )	<b>BDI-II</b> M (SD) Pretest – posttest 25.67(12.05) – 14.67 (10.46)  Difference mean (SD) = 11.0 (10.07)  Significant ( $p < 0.01$ ) Effect size ( $d = 1.09$ )	Not measured	<b>Multi-dimensional assessment Fatigue</b>  M (SD) Pretest – posttest 34.06 (6.89)–30.68 (8.38)  Difference mean (SD) = 3.39 (6.34)  Significant ( $p < 0.5$ ) Effect size ( $d = 0.53$ )	Not measured
Occupational therapy lifestyle intervention							
Chen et al. (2015)	RCT	High	<b>Occupational self-assessment:</b> no significant difference between groups  <b>Mastery scale:</b> no significant difference between groups	<b>BDI II:</b> no significant difference between groups	<b>WHOQOL:</b> no significant difference between groups	Not measured	<b>Beck Anxiety Inventory:</b> Significant findings ( $p < 0.05$ ) in favour of the I group  <b>Beck Scale Suicide Ideation:</b> Significant findings in favour the I group ( $p < 0.01$ )

**Table 4: Summary of reported effects from the quantitative data for primary and secondary outcomes (continued)**

First author and year of publication	Type	Quality	Effects of occupational therapy				
			Occupational Performance, Functioning and Participation	Depression Symptoms	Quality of Life	Health and well-being	Other mental health symptoms
Occupational therapy handicraft intervention							
Edel et al., (2017)	RCT	Low	<p><b>Personal &amp; social performance scale (PSP):</b> no significant difference between groups. <b>PSP total scores not provided*</b></p> <p><b>Ergo-assess (basic work skills)*:</b></p> <p>M (SD) pretest - M (SD) posttest I = 13.90 (3.51) – 10.96 (3.59) C = 12.72 (5.12) – 11.90 (5.03)</p> <p>Time x group interaction (<math>p = 0.017</math>) at 6 weeks</p>	<p><b>Hamilton Depression Rating Scale (HAM-D):</b> no significant difference between groups reported by study authors. <b>HAM-D total scores not provided*</b></p> <p><b>BDI II:</b> no significant difference between groups reported by study authors. <b>BDI total scores not provided *</b></p>	Not measured	Not measured	<p><b>Hamilton Anxiety Rating Scale (HAM-A)</b></p> <p>M (SD) pretest - M (SD) posttest (Male sample) I = 19.38 (7.56) – 10.94 (5.07) C = 19.11 (5.61) – 16.35 (5.78)</p> <p>Time x group interaction at three weeks (<math>p = 0.031</math>)</p> <p><b>N.B. HAM-A total scores not provided for all time points*</b></p>
<p><b>Abbreviations:</b> RCT = randomised controlled trial, OD = other design, I = intervention group, C = control group, OT = occupational therapy, M = mean, SD = standard deviation, BDI = Beck Depression Inventory, RTW = Return to work, SF-36 = Medical Outcomes Study Short Form, WHO-QOL = World Health Organisation Quality of Life Scale</p>							

\* The study authors only reported subscale data with significant interaction effects and did not report the full data for all outcome measures

**Table 5: Summary of Reported Effects from Qualitative Data in the Included Studies**

<b>First author and year of publication</b>	<b>Type</b>	<b>Quality</b>	<b>Interventions</b>	<b>Time period and Data Collection</b>	<b>Findings</b>
Cooper (2013)	QUAL	Low	'Using Writing as Therapy' a structured brief writing therapy to support identity and self-esteem, was compared with 'Creative Writing' a non-therapeutic group.	Participant observation and interviews over a 12-month period.	Cognitive changes such as increased self-awareness and through exploring/reframing memories, as reported by participants.
Wisenthal et al. (2018)	OTHER DESIGN (MIXED METHODS)	Sufficient	'Cognitive Work Hardening' an intervention designed to support return to work which uses role play, simulation etc. (31 h of intervention over 4 weeks)	Interviews at T2 (4 weeks) and at 3-month follow-up	<p><b>Intervention elements considered important for RTW preparation:</b> Structure, simulation, environment, video use, coaching, feedback, pacing and role-play.</p> <p><b>Overall gains from the intervention:</b> Routine, self-confidence, stamina, increased cognitions, coping skills, pacing skills, self-efficacy.</p>

The included studies in the systematic reviews with generic mental health populations are varied and not all included studies relate to occupational therapy interventions, which makes it difficult for the overall results to be compared. For example, Gibson et al. (2011) and D'Amico et al. (2018) include non-occupational therapy studies, and Noyes et al. (2018) report that their review contains studies that occupational therapy practitioners can provide, which may mean that some of the included interventions are not occupational therapy as defined for this review. Additionally, the included studies in the reviews with generic mental health study populations also include studies of the effectiveness of individualised client-centred occupational therapy tailored to individual need, a notable gap in the evidence base for depression. Finally, with the exception of Noyes et al. (2018), previous systematic reviews on generic mental health populations do not give details about how the reported level of evidence was determined.

### **Strengths and limitations of the included studies**

The studies evaluated a range of occupational therapy interventions, RTW, Lifestyle, handicraft and writing. Overall, the quality of the included studies was good with three out of the four RCTs being judged as either high or sufficient quality. The population studied in this review was adults with a primary diagnosis of depression.

Occupational therapy should be offered if an individual has a need or difficulty associated with activity limitation or restriction in participation (Creek, 2014). In clinical settings it is usual for service users to be screened for appropriateness for therapy (Creek, 2014; Christie et al., 2014). If studies into the effectiveness of occupational therapy include individuals who have not undergone such screening (individuals who may not need occupational therapy), the measurement of effectiveness may be diluted. None of the included studies specified that a participant must have an identified occupational, functional or vocational need or difficulty. Similarly, a systematic review of occupational therapy with people with a diagnosis of psychosis found that occupational need was stipulated in the inclusion criteria for less than a quarter of studies (Inman, 2017). Thus, for both depression and psychosis, this is a significant failing in study design.

Although the study by Hees et al. (2013) met the necessary internal validity, descriptive and statistical criteria necessary to be judged as high quality (Table 3), it lacked some detail regarding

frequency, duration and intensity of the intervention. Explicit intervention description is essential to ensure clear conclusions can be drawn and ensure studies can be replicated (Hoffmann et al., 2014). Importantly, it is these descriptions that also enable research to be transferred to practice settings. Occupational therapy intervention schedules or specifications can support this process by detailing the necessary components and delivery details of the intervention which support fidelity (Cook and Birrell, 2007; Inman, 2017). This review also noted little reference to measurement of treatment fidelity or adherence, with only one study (Schene et al., 2007) describing how adherence to treatment was measured. It is important that the amount of the intended intervention actually received is recorded and assessed to increase the reliability and validity of the findings (Breckenridge and Jones, 2015).

All four RCTs in this review had control groups described as non-occupational therapy treatment as usual (TAU). However, critical appraisal highlighted that in two studies (Hees et al. 2013 and Edel et al., 2017) the comparison intervention may not have been a 'true' control and participants may have inadvertently received occupational therapy. Given that there needs to be a clear distinction between intervention and control in order to measure the effect size (Schäfer and Schwarz, 2019), these comparisons may not have been well-considered. However, as there are few circumstances when it is ethical to deny a routinely offered intervention to participants; studies with true control groups may only be possible in limited situations where such interventions are not routinely offered, such as private clinics.

In order to avoid these ethical challenges many researchers adopt single group pretest-posttest designs (Belli, 2009), such as Wisenthal et al. (2018). This design brings significant drawbacks, including risk to internal validity, such as maturation effects, history and testing effects (Thyer, 2012). Additionally, with no control group causal inferences cannot be made as it is possible that participants may have recovered or improved their level of function and participation naturally or through some other means (Belli, 2009). Therefore, a further potential bias in this review relates to 'regression to the mean', the phenomenon where extreme outcomes tend to be followed by more moderate ones due to chance. Hence, a person who qualifies for a study into depression because of a high score on a depression scale is likely to have a more moderate depression score on a subsequent test, regardless of treatment. The non-RCT OD (Wisenthal et al., 2018), whilst being judged to be of sufficient quality, did not give detail about how this phenomenon was considered. There is a risk that improvements were attributed to the intervention, when they were in fact due to chance (random fluctuations) (Morton and Torgerson, 2003).

A further potential method for circumventing the ethical challenges associated with undertaking RCTs, and to improve upon the single-group design, is to use occupational therapy as both the intervention and the control by comparing newly developed interventions with occupational therapy TAU. However, the choice of control determines whether there is the potential for absolute or comparative treatment efficacy to be produced (Karlsson and Bergmark, 2015). As an approach, comparison with an occupational therapy TAU would be beneficial if occupational therapy TAU was known to be effective. However, since there is little evidence that this is the case for occupational therapy for those with a diagnosis of depression, the research priority is to demonstrate the benefit of occupational therapy compared to no occupational therapy.

### **Strengths and limitations of this review**

This systematic review found only six papers meeting the inclusion criteria. Included studies evaluated a wide range of occupational therapy intervention types. The best evidence synthesis drew outcomes from only three high quality RCTs, one low quality RCT and one OD. Whilst the number of included studies was limited, the rigorous methodology increased the validity of the review findings. The addition of qualitative data into this review has incorporated service user perspectives.

The aim of occupational therapy is to increase occupational performance, function and participation in activities. All studies in this review included a measure of one or more of these elements; however a total of nine different measures were used. No outcome measure was used more than once in the RCTs across any of the intervention types for any primary or secondary outcome. This prevented meta-analysis which would have further enhanced the findings through statistically combining and integrating the results of the included studies (Moher et al., 2009). It has been recommended that there should be standardised core outcome sets and measurement instruments for any given field to facilitate comparison between interventions and support meta-analysis in future research (Steultjens et al., 2002; Bullock and Bannigan, 2011; Williamson et al., 2017). However, there is currently a lack of consensus on which outcome measurement tools are suitable for occupational therapy intervention studies (Steultjens, et al., 2002) and multiple measures can be necessary because interventions impact across many aspects of a patient's presentation (Bagiella, 2009). Nevertheless, occupational therapy researchers need to carefully consider their choice of outcome measure to ensure meta-analysis is possible in future reviews.

There were no studies evaluating occupational therapy as routinely provided in practice (as individualised client-centred programmes tailored to individuals). This is a serious gap in the

evidence base. However, it is particularly challenging evaluating occupational therapy through RCTs in many health settings due to the ethical implications highlighted above, which may account for the lack of research into individualised client-centred occupational therapy. An alternative may be to utilise people on a waiting list for occupational therapy as a control group, which is considered suitable when it is not ethical to deny an intervention (Kielhofner, 2006). This allows those people at the top of a waiting list to form an intervention group and those lower down the waiting list to form a control group, receiving the intervention later, having waited no longer than usual to receive the intervention. At the same time, this allows the researcher to introduce randomisation into the study design, thus getting around the problems presented by pre-test/post-test designs.

It is relatively common for occupational therapy research in mental health to be conducted with generic study populations such as 'severe mental illness' rather than specific mental health diagnoses, such as depression or schizophrenia. Whilst using generic populations may allow easier recruitment of study populations within mental health settings, this does not allow outcomes for specific diagnoses to be considered. This practice contributes to the dearth of condition-specific evidence for the effectiveness of occupational therapy in mental health. Many potentially useful published papers were excluded from this review for this reason. There are currently limited references to occupational therapy within clinical guidelines for many mental health conditions in the UK. The National Institute of Clinical Excellence (NICE) develop intervention guidelines by considering the key principles of what works, and they base their recommendations on the best available evidence (National Institute for Health and Clinical Excellence, 2014a). Such guidance supports policymakers to make decisions about how to use limited health resources and provides best practice guidance for clinicians. This can result in wide variations in practice and sometimes interventions with minimal impact being delivered to patients (Fisher et al., 2003). Practitioners are therefore required to draw on the literature from the wider range of psychosocial interventions and consider the relevance of this to their practice (Lloyd, et al., 2004). Therefore, researchers should opt for a condition specific study population where possible, with the aim of improving the evidence base for use within clinical guidelines and furthering the evidence base for the effectiveness of occupational therapy.

Due to wide differences between the types of occupational therapy interventions, the best evidence synthesis considered outcomes for each type separately (RTW, lifestyle and handicraft interventions) rather than across outcome type. The studies could have been synthesised and presented by outcome type and interested readers can use Table 4 to evaluate this. For

example, despite some lack of consistency in findings between depression scales, three out of the five quantitative studies (Schene et al, 2007; Edel et al., 2017 and Wisenthal et al., 2018) reported statistically significant findings in relation to improvement in symptoms of depression following occupational therapy. Analysing the data by outcome type rather than intervention type would have increased the potential for meta-analysis. However, missing data would still have prevented this. In relation to the data analysis by intervention type, meta-analysis was not possible due to the wide range of outcome measures used.

The included studies in this systematic review originated from five countries, with differing healthcare, sickness benefit and return-to-work provision, all of which may impact upon applicability of the evidence to different settings (Bryman, 2012). The studies investigated very specific occupational therapy interventions which may mean that the findings are not completely transferable to all occupational therapy interventions and settings. Other limitations of this review were the dearth of studies meeting the inclusion criteria and English language restrictions due to the lack of funding for translation which may have excluded some potentially relevant research studies. Additionally, this systematic review did not include grey literature; therefore, it is possible that some potentially useful evidence was missed.

## **Suggestions for future research**

There is limited evidence on the effectiveness of occupational therapy interventions in mental health generally, and concern about this is widely reported (Cook et al., 2009; Gutman, 2009; Bullock & Bannigan, 2011; Gutman, 2011). The Royal College of Occupational Therapists has highlighted a need to further develop the evidence base (Royal College of Occupational Therapists, 2017). Policy makers have a responsibility to ensure limited healthcare resources are used efficiently and effectively. The limited evidence base continues to put occupational therapists and service users at risk from cost-savings due to austerity, since occupational therapy is regarded as optional in some settings. Whilst the indication of effect provided by this systematic review is helpful, gaps in the evidence base need to be urgently filled by further research.

There is an urgent need for true RCTs comparing occupational therapy interventions with no occupational therapy to fill the gap in the evidence base. Researchers should first consider the RCT as the most robust method for effectiveness research (Medical Research Council, 2008) using well-designed and appropriate control groups so causal inferences can be made. Additionally, researchers should, wherever possible, conduct occupational therapy research



with diagnosis-specific study populations, to support the synthesis of occupational therapy intervention effectiveness research into clinical guidelines.

Given the lack of evidence relating to the effectiveness of occupational therapy individualised, client-centred interventions as routinely provided in clinical practice, this should be prioritised as a research area. Finally, core sets of outcome measurement instruments for occupational therapy mental health research need to be agreed to support comparison between studies and future meta-analysis.

## **Conclusion**

The overall effectiveness evidence base for occupational therapy interventions for people with a diagnosis of depression is limited. However, this review found strong evidence for the effectiveness of occupational therapy RTW interventions for improving depression symptomology. Limited evidence was found for the effectiveness of occupational therapy RTW interventions for improving work participation. There is currently no evidence for the effectiveness of occupational therapy RTW interventions in improving work readiness or overall health and well-being. In terms of lifestyle interventions, there was limited evidence for the effectiveness of occupational therapy for reducing anxiety and suicidal ideation in people with a diagnosis of depression and no evidence for the effectiveness of occupational therapy for improving occupational performance, function or participation. These results were in line with the findings of previous systematic reviews of occupational therapy with patients who have severe mental illness. The qualitative components in this review presented additional information to help explain the findings by providing detail in relation to participants perceived gains from occupational therapy interventions and how therapists may enable change. All six studies in this review evaluated a specifically designed occupational therapy intervention, as opposed to individualised client-centred intervention, highlighting a clear gap in the research.

There is an urgent need for large-scale diagnosis-specific research into the effectiveness of occupational therapy interventions for people with a diagnosis of depression. Individualised occupational therapy, as is routinely provided in clinical care, is provided because it is theoretically effective even though there is no good quality research (RCT level) to confirm its effectiveness. As such, occupational therapy does not appear in clinical guidelines. If the occupational therapy profession does not urgently address this gap in research, there is a risk of services being further cut as commissioners continue to make difficult decisions on the best way to spend limited health funding.

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## Declarations of interest

None

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## Appendix 2: Canadian Occupational Performance Measure

(Law et al., 1990)

Outcome Measure removed due to copyright restrictions.

Outcome measure information can be viewed at:

[COPM | Canadian Occupational Performance Measure \(thecopm.ca\)](http://thecopm.ca)



# Occupational Therapy in Depression Study

## Participant's Progress Booklet

**CONFIDENTIAL**

Participant Identifier:

Date:

Measurement

1 2 3

(Please circle)



**QUALITY OF LIFE QUESTIONNAIRE (SF- 36 Health Survey)**  
**QUALITY OF LIFE QUESTIONNAIRE**

Outcome Measure removed due to copyright restrictions.

Outcome measure information can be viewed at:

[36-Item Short Form Survey \(SF-36\) | RAND](#)

## Utrecht Scale for Evaluation of Rehabilitation Participation (USER participation)

Outcome Measure removed due to copyright restrictions.

Outcome measure information can be viewed at:

<https://doi.org/10.2340/16501977-0589>

## Work and Social Adjustment Scale (WSAS)

Outcome Measure removed due to copyright restrictions.

Outcome measure information can be viewed at

<https://doi.org/10.1192/bjp.180.5.461>

## Beck's Depression Inventory - II

Outcome Measure removed due to copyright restrictions.

Outcome measure information can be viewed at:

[Beck Depression Inventory-II \(BDI-II\) \(pearsonclinical.co.uk\)](http://pearsonclinical.co.uk)

## Appendix 4: Intervention Log

### OTiD Study - Occupational Therapy Intervention Log

**CONFIDENTIAL**

Participant Identifier:  OT Identifier:  Date:

<b>Date of Contact:</b>	
<b>Session number:</b>	
<b>Duration of contact:</b>	
<b>Main purpose of contact</b>	<b>To provide occupational therapy</b> ✓/ X
	<b>Other – please specify and give reason</b> ✓/ X

#### **Section 1: About the occupational therapy you provided**

**N.B. This section only to be completed if you provided occupational therapy during today's session. If you only provided other interventions, please go to section 2 (overleaf).**

#### **Components of today's Occupational Therapy Session:**

<b>Occupational Therapy Activity (please tick all that apply)</b>	<b>✓/ X</b>
1. Assess occupational performance	
2. Complete/agree occupational formulation	
3. Agree occupational therapy goals/priorities	
4. Plan occupational therapy interventions	
5. <b>Provide intervention to improve function/enable participation (please also complete intervention box below)</b>	
6. Reassess occupational performance	
7. Review occupational therapy goals	
8. Discharge from occupational therapy	

#### **Detail of the occupational therapy Intervention:**

If you implemented occupational therapy intervention(s) during this session please give more detail below. Please only complete this if you ticked box 5 above.

<b>Intervention (Tick all that apply for today's session)</b>	<b>✓/ X</b>
Use activities or occupations that are meaningful for the individual	
Use activities or occupations that maintain or support the individuals skills/abilities	
Adapt/Use new activities/occupations with the individual	
Adapt/use new environments to support function/participation	
Reflect on and evaluate on going progress with function and/or participation	

**Section 2: Other Intervention**

If you provided other intervention that would not be described as occupational therapy then please specify here. If this was delivered in addition to occupational therapy please state whether it was the occupational therapy, or the other intervention, that formed the majority of the session.

Other intervention or support provided and reason for this provision	Other intervention was the primary intervention ✓/X	OT was the primary intervention ✓/X	Was this other intervention planned? YES/NO

**Section 3: Adherence to occupational therapy intervention**

Please rate the participant’s adherence to the intervention. This is the extent that the individual has complied/is complying with intervention.

**0= No adherence**

**10= Full adherence**

Adherence during today’s session:

0	1	2	3	4	5	6	7	8	9	10

Adherence between last session and this session:

0	1	2	2	4	5	6	7	8	9	10

**Section 4: Other interventions that the participant has received from other professionals/staff members since previous occupational therapy session.**

Intervention	How many sessions?
Care Co-ordination	
Psychological intervention	
Support Worker	
Other – please state	
Other – please state	
Other – please state	

**Date and time of next planned occupational therapy session:**

## Appendix 5: Interview schedule



# Occupational Therapy in Depression Study (OTiD)

## Interview Schedule

### Checklist for Interviewer

- Two audio recorders are required with spare batteries. Turn recorders on and state the time, date and interviewee identification code.
- The participants COPM goals, outcome scores and time-use diaries will need to be available to support the conversation.
- Questions to be delivered in an unrushed way – allow time for interviewee to think about the questions and consider their answers.

<b>Participant ID:</b>	<b>Name of occupational therapist:</b>
<b>Welcome and Introductions (names) and background of researcher</b> – reassurance/putting the person at ease.	
<b>Short description of the interview's purpose:</b> To find out what aspects of occupational therapy intervention people find to be most helpful or effective in supporting their recovery.	
<b>Explain the interview process</b> <ul style="list-style-type: none"> <li>• I am interested in your personal experience of occupational therapy, there are no right or wrong answers and the questions will relate specifically to the occupational therapy intervention you received from _____(name of occupational therapist).</li> <li>• This is a confidential interview, so please be open and honest about your experiences. The information will be treated in the strictest confidence.</li> <li>• As the researcher I am not part of the team that have provided your occupational therapy. Any information you give will not be passed to the team or the therapist concerned and will not impact on the care and treatment you receive.</li> <li>• The information you give will not be included in your medical records and will not be shared with other agencies. It will be anonymised and used to improve the service we provide.</li> <li>• However, if you were to tell me something illegal or that suggests that you and/or someone else is at risk of serious harm, then I will have to pass this information on.</li> <li>• We will have around an hour to talk together today.</li> </ul>	
<b>Review and confirm consent:</b> you have signed the consent form and as agreed we will audio record the discussion. I would like to remind you that you can withdraw at any time without giving any reason, and without your rights being affected.	
Do you have any questions before we start?	
<b>Time interview started:</b>	

<b>Question 1: Before we start the questions about your occupational therapy, could you just tell me a little bit about you living situation and the support you have?</b>	
<i>Prompts (only if required)</i>	<i>Do you live alone?</i>
	<i>Do you have support from any family or friends?</i>
	<i>Do you have any support from anyone else?</i>

<b>Question 2: I am aware that you have been working with _____ as your occupational therapist. You will have been referred to occupational therapy because you were having difficulty with some of the things that you wanted or needed to do in your everyday life? Can you tell me what kind of things you were having difficulty with when you started occupational therapy?</b>	
<i>Prompts (only if required)</i>	<i>Did you have difficulties in looking after yourself</i>
	<i>Did you have difficulties doing leisure or social activities</i>
	<i>Did you have difficulties with work/education or other responsibilities</i>
	<i>Did you have any other difficulties?</i>

<b>Question 3: Can you tell me what you were hoping to achieve (or improve) through working with _____ (name of occupational therapist) your occupational therapist</b>	
<i>Prompts (only if required)</i>	<i>Did you agree some goals together?</i>
	<i>Can you tell me what they were? <b>NB Interviewer to note them down here to refer to later in the interview.</b></i>
	<i>Interviewer to refer to participants COPM Goals if needed to support recall.</i>

<b>Question 4: Can you tell me a little about your experience of occupational therapy, what kinds of things did you do with _____(your occupational therapist).</b>	
<i>Prompts (only if required)</i>	<i>Things you did during the sessions</i>
	<i>Things you did on your own or with others in between the sessions (tasks or homework that you agreed to do)</i>
	<i>Did you find these things easy/hard.... why?</i>
	<i>If you talked about things with your occupational therapist (rather than doing things) what kinds of things did you talk about and did this help?</i>



<b>Question 5: Did doing these things, or talking about things with the occupational therapist help in any way, and if so, can you say why/how this helped you? (And if you don't think they helped, can you say why not?)</b>	
<i>Prompts (only if required)</i>	<i>So what specifically was it that helped you?</i>
	<i>Can you tell me how and why this helped you?</i>

<b>Question 6: Is there any further information that you can give me that would help me to understand what was helpful in relation to (only ask if needed):</b>	
	<i>..... the things <b>you</b> did during therapy</i>
	<i>..... how you and _____ (name of OT) worked together</i>
	<i>..... the things that _____ (name of OT) did or said</i>

<b>Question 7: If you think back to your initial goals of occupational therapy that you mentioned earlier (give a reminder regarding their goals), how are things now?</b> N.B. Reference their COPM outcome scores here if this helps recollection.	
<i>Prompts (if required)</i>	<i>Is there anything you can do better (or more easily) now than before?</i>
	<i>Are you now able to do the activities that you need to do, or want to do, each day?</i>
	<i>What do you do differently now than you did before your occupational therapy?</i>
	<i>Have these changes made a difference in your day to day life and if so how?</i>
	<i>What do you think brought about the changes?</i>

<b>Question 8: Have you noticed any differences in how you spend your time now compared with before you started occupational therapy? (from using the time use log/diary that you kept) do you have any comments to make about this?</b>	
<i>Prompts (if required)</i>	<i>What do you notice?</i>
	<i>Do you have any comments to make about your use of time at the start of your occupational therapy intervention and now?</i>
	<i>If there are differences, why do you think that is/what helped with this?</i>

**Regarding the final 3 questions:**

Just to remind you again that any information you give will not be passed to the team or the therapist concerned and will not impact on the care and treatment you receive, or decisions made about this. The information you give will not be included in your medical records and will not be shared with other agencies.

**Question 9: Do you think that any of the things you talked about or did with the OT has helped you feel closer to recovery or even discharge from mental health services?**

Just to remind you that any information you give will not be passed to the team or the therapist concerned and will not impact on the care and treatment you receive, or decisions made about this. The information you give will not be included in your medical records and will not be shared with other agencies.

	<i>Is there anything else that occupational therapy helped in relation to this?</i>
	<i>What were the things you particularly needed to do in to recover and move towards discharge</i>
	<i>Did occupational therapy support this process and if so how? What did the therapist do that particularly helped or led to change that supported your recovery or journey towards discharge?</i>

**Question 10: Were there any unhelpful or disappointing aspects of the occupational therapy you received?**

<i>Prompts (if required)</i>	<i>How could it have been improved?</i>
	<i>Was there anything missing in the occupational therapy support provided (that you expected to get but didn't)?</i>
	<i>How could it have been improved in terms of how it was delivered?</i>
	<i>What would have been more helpful</i>

**Question 11: What was the best thing about occupational therapy?**


<i>Prompts (if required)</i>	<i>Has occupational therapy helped?</i>
	<i>How has it particularly helped your recovery?</i>
	<i>Why did it help?</i>


**You have given me some really valuable information. As our time is almost up, is there anything else you would like to add?**

Offer the opportunity for interviewees to add to any of their earlier answers if needed.

**Time interview ended:**

## Appendix 6: Time-use diary

Lancashire Care   
NHS Foundation Trust



University of  
**Salford**  
MANCHESTER

# Occupational Therapy in Depression Study

## Participant's Time-Use Diary

**CONFIDENTIAL**

Participant Identifier:

Date:

Diary 1    Diary 2    (Please circle)

Thank you very much for agreeing to complete this time-use diary.  
Please keep the diary with you during the day and fill it in when you have a spare moment or two throughout the day. Try not to leave it all until the end of the day, as it may be difficult to remember everything that you have done earlier in the day.

### Instructions for completing the Time-Use Diary.

#### What you were doing?

- Please record what you were doing in each 3 hour period, and also state if you did the activities with someone else. If you did the activity with someone else then please state who this was.
- Please record all types of activity through the day. This includes personal and self-care tasks, leisure, work, volunteering, childcare, educational activities and responsibilities that you may have. Please include travel, using a computer and/or the internet (including accessing this on the phone or tablet) and playing computer games etc.
- Please do not leave any blanks. Remember that you are always doing something, even if this is sitting in a chair, watching the television or taking a nap. We are aware that everyone needs rest and would like to reassure you that we do not expect you to be busy all the time. Try to give us a picture of your everyday life and this will help your occupational therapist to support your recovery.
- Please ask your occupational therapist for more advice if you are not sure about anything.

#### How important was this activity to you?

Please give each activity a score from 1-10 regarding how important the activity was to you. For example, a score of 1 might indicate that an activity that was not at all important to you and a score of 10 might indicate that the activity was extremely important to you.

#### Notes page

Please use the notes page to give us any additional information if you think it is needed or to jot down anything that you were not sure about. You can discuss these things with your occupational therapist at your next appointment. If you do not have anything else to add, then please leave this page blank.

Please refer to the Example Diary on the next page to help you

#### Example Diary

Time		What were you doing?	How important was this activity to you on this scale? 1 2 3 4 5 6 7 8 9 10
Early morning	6am - 9am	Sleeping	5
Late morning	9am - 12pm	Got up & dressed Coffee Walked dog TV	4 4 5 3
Early afternoon	12pm - 3pm	Friend visited Walked to shops with friend Sandwich in café with friend	7 5 6
Late afternoon	3pm - 6pm	TV Had a lie down Walked dog	4 3 4
Early evening	6pm - 9pm	Made tea TV Telephoned daughter	4 3 8
Late evening	9pm - 12pm	TV Shower Sleeping	3 3 5
Night time	12pm - 6am	Sleeping	5

Day 1 .....

Time		What were you doing?	How meaningful or important was this activity to you on this scale?
			1 2 3 4 5 6 7 8 9 10
Early morning	6am - 9am		
Late morning	9am - 12pm		
Early afternoon	12pm - 3pm		
Late afternoon	3pm - 6pm		
Early evening	6pm - 9pm		
Late evening	9pm - 12pm		
Night time	12pm - 6am		

Day 2 .....

Time		What were you doing?	How meaningful or important was this activity to you on this scale?
			1 2 3 4 5 6 7 8 9 10
Early morning	6am - 9am		
Late morning	9am - 12pm		
Early afternoon	12pm - 3pm		
Late afternoon	3pm - 6pm		
Early evening	6pm - 9pm		
Late evening	9pm - 12pm		
Night time	12pm - 6am		

Day 3 .....

Time		What were you doing?	How meaningful or important was this activity to you on this scale? 1 2 3 4 5 6 7 8 9 10
Early morning	6am - 9am		
Late morning	9am - 12pm		
Early afternoon	12pm - 3pm		
Late afternoon	3pm - 6pm		
Early evening	6pm - 9pm		
Late evening	9pm - 12pm		
Night time	12pm - 6am		

Day 4 .....

Time		What were you doing?	How meaningful or important was this activity to you on this scale? 1 2 3 4 5 6 7 8 9 10
Early morning	6am - 9am		
Late morning	9am - 12pm		
Early afternoon	12pm - 3pm		
Late afternoon	3pm - 6pm		
Early evening	6pm - 9pm		
Late evening	9pm - 12pm		
Night time	12pm - 6am		

Day 5 .....

Time		What were you doing?	How meaningful or important was this activity to you on this scale? 1 2 3 4 5 6 7 8 9 10
Early morning	6am - 9am		
Late morning	9am - 12pm		
Early afternoon	12pm - 3pm		
Late afternoon	3pm - 6pm		
Early evening	6pm - 9pm		
Late evening	9pm - 12pm		
Night time	12pm - 6am		

Day 6 .....

Time		What were you doing?	How meaningful or important was this activity to you on this scale? 1 2 3 4 5 6 7 8 9 10
Early morning	6am - 9am		
Late morning	9am - 12pm		
Early afternoon	12pm - 3pm		
Late afternoon	3pm - 6pm		
Early evening	6pm - 9pm		
Late evening	9pm - 12pm		
Night time	12pm - 6am		

Day 7 .....

Time		What were you doing?	How meaningful or important was this activity to you on this scale? 1 2 3 4 5 6 7 8 9 10
Early morning	6am - 9am		
Late morning	9am - 12pm		
Early afternoon	12pm - 3pm		
Late afternoon	3pm - 6pm		
Early evening	6pm - 9pm		
Late evening	9pm - 12pm		
Night time	12pm - 6am		

Notes Page



Thank you for taking the time to complete this diary

## Appendix 7: Participant recruitment and enrolment process



## Appendix 8: Ethics approval letters



Research, Enterprise and Engagement  
Ethical Approval Panel

Research Centres Support Team  
G0.3 Joule House  
University of Salford  
M5 4WT

T +44(0)161 295 2280

[www.salford.ac.uk/](http://www.salford.ac.uk/)

31 January 2018

Dear Lynn,

**RE: ETHICS APPLICATION HSR1718-034 – ‘The effectiveness of occupational therapy in enabling adults with depressive illness to improve and maintain occupational functioning and meaningful participation; a longitudinal mixed methods study.’**

Based on the information that you have provided, I am pleased to inform you that your application HSR1718-034 has been approved to go forward to NRES.

Once you have received it, please submit a copy of the NRES approval letter to [Health-ResearchEthics@salford.ac.uk](mailto:Health-ResearchEthics@salford.ac.uk) so that it can be placed on your application file.

If there are any changes to the project and/or its methodology, then please inform the Health Research Ethics Support team as soon as possible.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Sue McAndrew'.

Professor Sue McAndrew  
Chair of the Research Ethics Panel



Ymchwil Iechyd  
a Gofal Cymru  
Health and Care  
Research Wales



Mrs Lynn Christie  
Woodlands Resource Centre  
155 St Andrew's Road South  
Lytham St Annes, Lancashire  
FY8 1YB

Email: [hra.approval@nhs.net](mailto:hra.approval@nhs.net)  
[Research-permissions@wales.nhs.uk](mailto:Research-permissions@wales.nhs.uk)

13 June 2018

Dear Mrs Christie

**HRA and Health and Care  
Research Wales (HCRW)  
Approval Letter**

**Study title:** The effectiveness of occupational therapy in enabling adults with depressive illness to improve and maintain occupational functioning and meaningful participation; a longitudinal mixed methods study.

**IRAS project ID:** 243317

**REC reference:** 18/NW/0275

**Sponsor** University of Salford

I am pleased to confirm that [HRA and Health and Care Research Wales \(HCRW\) Approval](#) has been given for the above referenced study, on the basis described in the application form, protocol, supporting documentation and any clarifications received. You should not expect to receive anything further relating to this application.

**How should I continue to work with participating NHS organisations in England and Wales?**

You should now provide a copy of this letter to all participating NHS organisations in England and Wales, as well as any documentation that has been updated as a result of the assessment.

Following the arranging of capacity and capability, participating NHS organisations should **formally confirm** their capacity and capability to undertake the study. How this will be confirmed is detailed in the "*summary of assessment*" section towards the end of this letter.

You should provide, if you have not already done so, detailed instructions to each organisation as to how you will notify them that research activities may commence at site following their confirmation of capacity and capability (e.g. provision by you of a 'green light' email, formal notification following a site initiation visit, activities may commence immediately following confirmation by participating organisation, etc.).

It is important that you involve both the research management function (e.g. R&D office) supporting each organisation and the local research team (where there is one) in setting up your study. Contact details of the research management function for each organisation can be accessed [here](#).

**How should I work with participating NHS/HSC organisations in Northern Ireland and Scotland?**

HRA and HCRW Approval does not apply to NHS/HSC organisations within the devolved administrations of Northern Ireland and Scotland.

If you indicated in your IRAS form that you do have participating organisations in either of these devolved administrations, the final document set and the study wide governance report (including this letter) has been sent to the coordinating centre of each participating nation. You should work with the relevant national coordinating functions to ensure any nation specific checks are complete, and with each site so that they are able to give management permission for the study to begin.

Please see [IRAS Help](#) for information on working with NHS/HSC organisations in Northern Ireland and Scotland.

**How should I work with participating non-NHS organisations?**

HRA and HCRW Approval does not apply to non-NHS organisations. You should work with your non-NHS organisations to [obtain local agreement](#) in accordance with their procedures.

**What are my notification responsibilities during the study?**

The document "*After Ethical Review – guidance for sponsors and investigators*", issued with your REC favourable opinion, gives detailed guidance on reporting expectations for studies, including:

- Registration of research
- Notifying amendments
- Notifying the end of the study

The [HRA website](#) also provides guidance on these topics, and is updated in the light of changes in reporting expectations or procedures.

**I am a participating NHS organisation in England or Wales. What should I do once I receive this letter?**

You should work with the applicant and sponsor to complete any outstanding arrangements so you are able to confirm capacity and capability in line with the information provided in this letter.

The sponsor contact for this application is as follows:

Name: Professor Penny Cook

Tel: 0161 295 2804

Email: [p.a.cook@salford.ac.uk](mailto:p.a.cook@salford.ac.uk)

**Who should I contact for further information?**

Please do not hesitate to contact me for assistance with this application. My contact details are below.

Your IRAS project ID is **243317**. Please quote this on all correspondence.

Yours sincerely

Kevin Ahmed

Assessor

Telephone: 0207 104 8171

Email: [hra.approval@nhs.net](mailto:hra.approval@nhs.net)

Copy to: *Professor Penny A. Cook, Sponsor Contact, University of Salford  
Ms Beverley Lowe, R&D Contact, Lancashire Care NHS Foundation Trust*



## Health Research Authority

### North West - Preston Research Ethics Committee

Barlow House  
3rd Floor  
4 Minshull Street  
Manchester  
M1 3DZ

**Please note:** This is the favourable opinion of the REC only and does not allow you to start your study at NHS sites in England until you receive HRA Approval

13 June 2018

Mrs Lynn Christie  
Woodlands Resource Centre  
155 St Andrew's Road South  
Lytham St Annes, Lancashire  
FY8 1YB

Dear Mrs Christie

**Study title:** The effectiveness of occupational therapy in enabling adults with depressive illness to improve and maintain occupational functioning and meaningful participation; a longitudinal mixed methods study.

**REC reference:** 18/NW/0275

**IRAS project ID:** 243317

Thank you for your letter of 25 May 2018, responding to the Committee's request for further information on the above research and submitting revised documentation].

The further information has been considered on behalf of the Committee by the Chair

We plan to publish your research summary wording for the above study on the HRA website, together with your contact details. Publication will be no earlier than three months from the date of this opinion letter. Should you wish to provide a substitute contact point, require further information, or wish to make a request to postpone publication, please contact [hra.studyregistration@nhs.net](mailto:hra.studyregistration@nhs.net) outlining the reasons for your request.

### **Confirmation of ethical opinion**

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

### **Conditions of the favourable opinion**

The REC favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission must be obtained from each host organisation prior to the start of the study at the site concerned.

*Management permission should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements. Each NHS organisation must confirm through the signing of agreements and/or other documents that it has given permission for the research to proceed (except where explicitly specified otherwise).*

*Guidance on applying for HRA and HCRW Approval (England and Wales)/ NHS permission for research is available in the Integrated Research Application System, at [www.hra.nhs.uk](http://www.hra.nhs.uk) or at <http://www.rdforum.nhs.uk>.*

*Where a NHS organisation's role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission for this activity.*

*For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.*

*Sponsors are not required to notify the Committee of management permissions from host organisations*

### **Registration of Clinical Trials**

All clinical trials (defined as the first four categories on the IRAS filter page) must be registered on a publically accessible database within 6 weeks of recruitment of the first participant (for medical device studies, within the timeline determined by the current registration and publication trees).

There is no requirement to separately notify the REC but you should do so at the earliest opportunity e.g. when submitting an amendment. We will audit the registration details as part of the annual progress reporting process.

To ensure transparency in research, we strongly recommend that all research is registered but for non-clinical trials this is not currently mandatory.

If a sponsor wishes to request a deferral for study registration within the required timeframe, they should contact [hra.studyregistration@nhs.net](mailto:hra.studyregistration@nhs.net). The expectation is that all clinical trials will be registered, however, in exceptional circumstances non registration may be permissible with prior agreement from the HRA. Guidance on where to register is provided on the HRA website.

**It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).**

#### Ethical review of research sites

##### NHS sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

##### Non-NHS sites

#### Approved documents

⊕ The final list of documents reviewed and approved by the Committee is as follows:

<i>Document</i>	<i>Version</i>	<i>Date</i>
Covering letter on headed paper [Covering Letter]	1	22 March 2018
Evidence of Sponsor insurance or indemnity ( <a href="#">non NHS Sponsors only</a> ) [Indemnity Insurance Doc]		15 July 2017
GP/consultant information sheets or letters [Consultant/Staff Information]	1	10 March 2018
GP/consultant information sheets or letters [Covering letter to <a href="#">Consultant</a> ]	1	10 March 2018
Interview schedules or topic guides for participants [Interview Guide]	1	09 December 2017
IRAS Application Form [IRAS_Form_22032018]		22 March 2018
IRAS Checklist XML [Checklist_22032018]		22 March 2018
Letter from sponsor [University Ethics Approval]		31 January 2018
Letter from statistician [Ethics - statistician letter]		02 March 2018
Letters of invitation to participant [Invitation Script (phone call)]	1	09 December 2017
Other [Receipt for incentive payment]	1	09 December 2017
Other [Confidentiality agreement for friend or relative]	1	09 December 2017
Other [Email from hosting organisation]		01 December 2017
Participant consent form [Consent Form]	1	09 December 2017
Participant consent form [Occupational Therapist Consent Form]	1	09 December 2017
Participant information sheet (PIS) [PIS]	1	09 December 2017
Participant information sheet (PIS)	2	14 May 2018
Participant information sheet (PIS) [Occupational Therapist Information Sheet]	1	19 December 2017
Referee's report or other scientific critique report [University Ethics Panel Report]		31 January 2018
Research protocol or project proposal [Draft Research Protocol]	1	20 March 2018



Response to Request for Further Information [Response Letter to REC]		25 May 2018
Sample diary card/patient card [Draft time-use diary]	1	09 December 2017
Sample diary card/patient card [Participant registration form]	1	19 March 2018
Sample diary card/patient card [OT Intervention Log]	1.	09 December 2017
Sample diary card/patient card [Occupational Therapist Registration Form]		09 December 2017
Summary CV for Chief Investigator (CI) [Lynn Christie CV]		07 March 2018
Summary CV for supervisor (student research) [CV 1st academic supervisor]	1	05 March 2018
Summary CV for supervisor (student research) [CV 2nd academic supervisor]		19 December 2017
Summary, synopsis or diagram (flowchart) of protocol in non technical language [OTiD Study Flowchart]	1	07 March 2018
Summary, synopsis or diagram (flowchart) of protocol in non technical language [Recruitment and enrolment process]	1	09 December 2017
Validated questionnaire [COPM - Primary Outcome Measure]		
Validated questionnaire [Secondary outcome measures booklet]	1	09 December 2017

### Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

### After ethical review

#### Reporting requirements

The attached document “*After ethical review – guidance for researchers*” gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Notification of serious breaches of the protocol
- Progress and safety reports
- Notifying the end of the study

The HRA website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

### User Feedback

The Health Research Authority is continually striving to provide a high quality service to all applicants and sponsors. You are invited to give your view of the service you have received and the application procedure. If you wish to make your views known please use the feedback form available on the HRA website:

<http://www.hra.nhs.uk/about-the-hra/governance/quality-assurance/>

## HRA Training

We are pleased to welcome researchers and R&D staff at our training days – see details at <http://www.hra.nhs.uk/hra-training/>

<b>18/NW/0275</b>	<b>Please quote this number on all correspondence</b>
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With the Committee's best wishes for the success of this project.

Yours sincerely



pp  
**Professor Carol Haigh**  
**Chair**

Email: [nrescommittee.northwest-preston@nhs.net](mailto:nrescommittee.northwest-preston@nhs.net)

*Enclosures:* "After ethical review – guidance for researchers" [\[SL-AR2\]](#)

*Copy to:* *Professor Penny A. Cook*  
*Ms Beverley Lowe, Lancashire Care NHS Foundation Trust*

## Appendix 9: Participant consent form (service user participants)



University of  
**Salford**  
MANCHESTER

Lancashire Care   
NHS Foundation Trust

### OTiD STUDY CONSENT FORM

**Title of study:** The effectiveness of occupational therapy in enabling adults with depressive illness to improve and maintain occupational functioning and meaningful participation; a longitudinal mixed methods study.

**Name of Researcher:** Lynn Christie

**Please complete and sign this form after you have read and understood the study information sheet. Read the following statements and select 'Yes' or 'No' in the box on the right-hand side.**

1.	I confirm that I have read and understand the study information sheet, Version 1, dated 09/12/17, for the above study. I have had the opportunity to consider the information and to ask questions which have been answered satisfactorily.	Yes/No
2.	I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without my rights being affected.	Yes/No
3.	If I do decide to withdraw, I understand that the information I have given, up to the point of withdrawal, will be used in the research, unless I specifically ask for it to be withdrawn. I am aware that the timeframe for withdrawal of data already given is 1 month after the data is collected.	Yes/No
4.	I agree to participate by completing questionnaires in relation to my progress and by completing a time-use diary.	Yes/No
5.	I consent to being interviewed and for the interview to be audio recorded.	Yes/No
6.	I give permission to use quotes and I understand that these will be anonymised.	Yes/No
7.	I understand my consultant will be informed of my participation in this study	Yes/No
8.	I understand my personal details will be kept confidential and not be revealed to people outside the research team. However, I am aware that if I reveal anything related to criminal activity and/or something harmful to myself, or others, the researcher will have to share that information with the appropriate authorities.	Yes/No
9.	I understand that my anonymised data will be used in the researcher's thesis, NHS and academic publications (including on the internet), and at conferences	Yes/No
10.	I agree that my data, once anonymised, may be kept, and reused by the researcher for further research and as a training dataset	Yes/No
11.	I agree to take part in the study	Yes/No

-----  
Name of participant

-----  
Date

-----  
Signature

## Appendix 10: Participant information sheet (service user participants)

**Title of study: Occupational Therapy in Depression Study**

**Name of Researcher: Lynn Christie**

### Invitation paragraph

Thank you for considering participating in this research project. Before you decide whether to take part, it is important that you understand why the research is being conducted and what it would involve for you. Please read the following information carefully and ask if there is anything that is not clear. If you would like more information, please speak to the researchers, or contact them using the details at the end of this document.

### What is the purpose of the study?

We would like to invite you to take part in our research study to help us to find out more about how effective occupational therapy is for people with depression.

The purpose of the study is to improve the overall care and treatment we provide as well as the outcomes, for the people who use our services.

### Why have I been invited to take part?

You have been invited to take part because you are currently having care and treatment from one of the participating Community Mental Health Teams within Lancashire Care NHS Foundation Trust, and it has been identified by the team that you may benefit from occupational therapy as part of the care and treatment you receive.

### Do I have to take part?

No, you do not have to take part. If you do decide that you do not want to be involved, it will not affect the standard of care and treatment that you receive. If you decide to take part then you will be asked to sign a consent form, however you will still be free to withdraw from the study at any time without giving a reason.

### **What will happen to me if I take part?**

If you decide to take part, you will receive occupational therapy as usual, which includes having a dedicated occupational therapist who will help you work towards things that are important to you. Occupational therapy aims to promote health and independence and help people to participate more in activities that are important to them. For example, this might be supporting you to be able to shop independently, cook for yourself, or take part in a favourite hobby. You will discuss and agree your goals with your occupational therapist and then you will usually be seen weekly, or fortnightly by your therapist. The occupational therapists will record these interventions in your case notes but will also submit anonymised details of your intervention to a research administrator to be reviewed by the primary researcher and her supervisors. Your occupational therapy will be provided alongside all other interventions agreed in your care plan.

During the study you will also be asked to keep a log of the things you do each day in the form of an activity diary. This may take you a few minutes 2 or 3 times a day.

A research assistant will also meet with you 3 or 4 times during the study in to complete some forms relating to the research.

- The research assistant will go through this information sheet in more detail, to make sure you are happy to take part in the study. You will be able to ask any questions that you may have.
- The research assistant will ask you some questions about the activities that you do each day and about how you manage generally, your depression symptoms and your well-being.
- These meetings will be at times that are convenient to you and should last no more than one hour.

The primary researcher will then meet with up to 10 research participants when they have completed their occupational therapy intervention to find out more about their individual experience of occupational therapy. The researcher will be interested in your views on what you found to be most helpful in terms of your recovery through the occupational therapy intervention you received. You may, or may not, be asked to take part in this part of the research.

- The interview may last for up to 60 minutes and will be audio recorded.
- What you say to the researcher will remain confidential and you will be free to end the interview at any time.
- The audio recorder can be stopped at any time during the interview, to give you the opportunity to rewind and delete parts if you should wish to.
- At the end of the interview the audio-recorder will be turned off and there will an opportunity for you and the researcher to talk together (just in case you have found anything upsetting or difficult). This information will not be included in the research.

After the study any remaining occupational therapy you receive will not form part of the study and no further data will be collected for research purposes. When you have achieved your occupational therapy goals you will be discharged from occupational therapy but any other care on your care plan will continue.

At the end of your involvement in this research study you will be given a £10 high street gift voucher to say thank you for taking the time to participate in this research study.

### **What are the possible disadvantages and risks of taking part?**

There will be some questions for you to answer with a research assistant, who will visit you before the study starts, after you have finished your occupational therapy (or after 6 months) and again three months after your therapy has ended if your occupational therapy ends within the duration of the study. The research assistant will ask you questions about your everyday life and your depression symptoms. The lead researcher may ask to meet with you to find out more about your experience of receiving occupational therapy.

It is not expected that this study will cause any upset however sometimes people find it upsetting talking about their difficulties. The researcher will be sensitive and supportive and, if you do feel upset, the interview can be stopped, and you will be given contact details for additional support.

### **What are the possible benefits of taking part?**

I cannot promise that this research study will help you as an individual; however, the information gathered will help to increase our understanding of occupational therapy for people with depression and may help us to improve the overall care and treatment offered to people with depression.

### **What if there is a problem?**

If you are unhappy about any part of this study, then you can speak to the primary researcher: Mrs Lynn Christie Tel: 01253 951356 email: [woodlands.admin@lancashirecare.nhs.uk](mailto:woodlands.admin@lancashirecare.nhs.uk)

Alternately you can contact the researcher's supervisors: Prof Penny A. Cook, Tel: 0161 295 2804 Email: [p.a.cook@salford.ac.uk](mailto:p.a.cook@salford.ac.uk) or Dr Deborah Davys, Tel: 0161 295 2869 Email: [d.davys@salford.ac.uk](mailto:d.davys@salford.ac.uk)

If you remain dissatisfied, please contact Dr Susan McAndrew, Chair of the Health Research Ethics Panel, Room MS1.91, Mary Seacole Building, Frederick Road Campus, University of Salford, Salford, M6 6PU. Tel: 0161 295 2778. Email: [s.mcandrew@salford.ac.uk](mailto:s.mcandrew@salford.ac.uk)

Alternatively you could contact Lancashire Care NHS Foundation Trust Customer Care Department in one of the following ways:

**Telephone:** 01772 695315 or 01772 773629 or Freephone 0808 144 1010      **Email:** [customer.care@lancashirecare.nhs.uk](mailto:customer.care@lancashirecare.nhs.uk)

**Letter:** Customer Care Department, Sceptre Point, Sceptre Way, Walton Summit, Bamber Bridge, Preston, PR5 6AW

Expressing a concern or making a complaint will not affect the care and treatment that you receive.

### **Will my taking part in the study be kept confidential?**

Yes, all information will remain confidential, and all data collected will be anonymised and stored securely in accordance with relevant ethical and legal requirements. However, we must stress that if you tell the researcher, or anyone else involved in the research, something illegal or that suggests that you or another person may be at risk of harm, then the researcher has a responsibility to report this. Your consultant will be informed of your participation in this study. Members of the research team may have access to your medical records and trial data where this is relevant. We will respect your information and keep it confidential at all times.

### **What will happen if I don't carry on with the study?**

Taking part in this research study is completely voluntary and you can decide not to carry on at any time, without consequence. This will not affect your care and treatment or access to services in the future. If you decide during the study that you would like to stop taking part, then you can let your occupational therapist know. If you withdraw during the study, you can decide whether any of the information you have already given can still be used in the study. If you do not wish for it to be used, then it will be destroyed and not form any part of the research. However, you must let the researcher know before the information is analysed as it will not be possible to remove data after this time. The time frame for you to withdraw your data is one month after the data is collected.

### **What will happen to the results of the research study?**

The results of the study will be used to make recommendations around 'best practice' and to improve the overall care and treatment for people with depression. The research will also be written up as a paper for academic journals or presented at professional conferences. A summary of the research may be placed on NHS or other appropriate websites.

This study and the results will also be written up by the primary researcher to form the thesis for their PhD. All information from the research will be anonymised before it is included in any of the above. You can be sent a summary of what the researcher found if you request this.

### **Who is organising or sponsoring the research?**

The study is being carried out as a clinical research study for a PhD with the University of Salford. The research is being supported by Lancashire Care NHS Foundation Trust.

### **Who has approved the study?**

As with all research conducted within the NHS, this research study has been reviewed by a NHS Research Ethics Committee. It was approved by the North West NHS Research Ethics Committee on 13/06/18 (application 18/NW/0275). The research study was approved by the University of Salford Ethics Committee on 31/01/18 (Application number: HSR1718-034).

### **Data Protection Information**

The University of Salford is the sponsor for this study based in the United Kingdom. We will be using information from you and/or your medical records to undertake this study and will act as the data controller for this study. This means that we are responsible for looking after your information and using it properly. The University of Salford will keep non-identifiable information about you for 10 years after the study has finished. You can find out more about how we use your information Lynn Christie, The Chief Investigator. Lancashire Care NHS Trust will collect information from you and/or your medical records for this research study in accordance with our instructions. Lancashire Care NHS Trust will keep your name, NHS number and contact details confidential and will not pass this information to The University of Salford and will use this information as needed, to contact you about the research study, and make sure that relevant information about the study is recorded for your care, and to oversee the quality of the study. Certain individuals from the University of Salford and regulatory organisations may look at your research records to check the accuracy of the research study. The University of Salford will only receive information without any identifying information and the people from the University who analyse the information will not be able to identify you and will not be able to find out your name, NHS number or contact details. Lancashire care NHS Foundation Trust will keep identifiable information about you from this study for 3 years after the study has finished.

### **Further information and contact details:**

Mrs Lynn Christie      Tel: 01253 951356      Email: [woodlands.admin@lancashirecare.nhs.uk](mailto:woodlands.admin@lancashirecare.nhs.uk)



## Appendix 11: Participant information sheet (occupational therapist participants)



### Occupational Therapy in Depression (OTiD) Study

#### PARTICIPANT INFORMATION SHEET – FOR OCCUPATIONAL THERAPISTS

**Title of study:** The effectiveness of occupational therapy in enabling adults with depressive illness to improve and maintain occupational functioning and meaningful participation; a longitudinal mixed methods study.

**Name of Researcher:** Lynn Christie, Clinical Specialist Occupational Therapist (LCFT) and Doctoral Student (University of Salford)

#### Invitation paragraph

Thank you for considering participating in this research project. Before you decide whether to take part, it is important that you understand why the research is being conducted and what it would involve for you. Please read the following information carefully and ask if there is anything that is not clear. If you would like more information, please speak to the researcher, or contact them using the details at the end of this document.

#### What is the purpose of the study?

The aim of this research study is to explore how effective occupational therapy is in enabling individuals living in the community with a diagnosis of depression to improve their function and participate meaningfully in their everyday lives. The purpose of the study is to improve the overall care and treatment we provide as well as the outcomes, for the people who use our services.

#### Why have I been invited to take part?

You have been invited to take part because you are an occupational therapist in one of the participating Community Mental Health Teams within Lancashire Care NHS Foundation Trust and may have service users on your waiting list that you will see as part of your routine practice, and who are eligible to be participants in this research study. You have been invited to take part in this study because you have been identified as already providing occupational therapy to individuals with a diagnosis of depression, living in the community, as a routine part of your current practice.

#### Do I have to take part?

No, you do not have to take part. If you decide to take part then you will be asked to sign a consent form, however you will still be free to withdraw from the study at any time without giving a reason.

### **What will happen to me if I take part?**

If you decide to take part, your involvement in this research study would mostly be 'business as usual' which means providing occupational therapy assessment and intervention for service users on your waiting list.

If you decide to take part, there will be some small additional tasks for you to complete.

- When contacting your service users to arrange to commence occupational therapy, you will be asked to let them know that the research study is taking place within Lancashire Care NHS Foundation Trust and give some initial information to see if they are interested in taking part. If so, you will need to obtain verbal consent for a research assistant to contact them.
- During the assessment phase, you will record and submit the service user's COPM goals and scores and ask the service user to complete a time-use diary. You should send these to the research administrator, with the names removed and replaced by the participant codes.
- During the intervention phase, you will provide your intervention as usual and, after each occupational therapy session, you will complete a log providing a summary of your intervention. You will submit this with names removed, using the participant code. This should take 5-10 minutes.
- You will be asked to provide occupational therapy for 4 research participants with a diagnosis of depression, as part of your usual caseload expectation.
- At the end of the occupational therapy intervention, you will need to ask the service user to complete a second time-use diary.

You will be provided with some training to help you become familiar with the study protocol and recording and administrative process relating to the research. The lead researcher will go through this information sheet in more detail, to make sure you are happy to take part in the study. You will be able to ask any questions that you may have. You will receive ongoing support from the lead researcher and the research administrator and can contact them about any queries you have, for example about the study protocol or the recording of data.

### **What are the possible disadvantages and risks of taking part?**

Being part of the study will mean it may take a little more time to complete the study recording process (5-10 minutes) and you will need to attend some additional training to ensure you feel confident with the study recording requirements. It may take you a little extra time when screening your occupational therapy referrals, as you will need to check whether potential participants meet the eligibility criteria for the study and have the capacity to be able to give informed consent by checking the service user's details and liaising with the service user's care coordinator.

### **What are the possible benefits of taking part?**

The information gathered will help to increase our understanding of occupational therapy for people with depression and may help us to improve the overall care and treatment offered to people with depression. It will also increase the knowledge base about occupational therapy in mental health. Being involved in this applied clinical research study will also support your continued professional development (CPD).

### **What if there is a problem?**

If you are unhappy about any part of this study then you can speak to the lead researcher, Lynn Christie, telephone 01253 951356 or email: [lynn.christie@lancashirecare.nhs.uk](mailto:lynn.christie@lancashirecare.nhs.uk). If you remain unhappy you can contact the primary supervisor: Professor Penny A. Cook, Tel: 0161 295 2804 Email: [p.a.cook@salford.ac.uk](mailto:p.a.cook@salford.ac.uk)

If you remain dissatisfied, please contact Dr Susan McAndrew, Chair of the Health Research Ethics Panel, Room MS1.91, Mary Seacole Building, Frederick Road Campus, University of Salford, Salford, M6 6PU. Tel: 0161 295 2778. E: [s.mcandrew@salford.ac.uk](mailto:s.mcandrew@salford.ac.uk)

### **Will my information be kept confidential?**

Yes, all information will remain confidential, and all data collected will be anonymised and stored securely in accordance with relevant ethical and legal requirements. We will respect your information and keep it confidential. All information collected is for research purposes only and will not be used to review your performance as a practitioner. Other members of the research team will have access to the medical records of the service users you are working with, for risk assessment purposes.

### **What will happen if I don't carry on with the study?**

Taking part in this research study is completely voluntary and you can decide not to carry on at any time, without consequence. If you decide during the study that you would like to stop taking part, then you can let the lead researcher know however we will still need to use the data collected up to the point of withdrawal. We will then organise for another occupational therapist to take your place in the study.

### **What will happen to the results of the research study?**

The results of the study will be used to make recommendations around 'best practice' and to improve the overall care and treatment for people with depression. The research will also be written up as a paper for academic journals or presented at professional conferences. A summary of the research may be placed on NHS or other appropriate websites. This study and the results will also be written up by the lead researcher to form the thesis for their PhD. All information from the research will be anonymised before it is included in any of the above.

You can be sent a summary of what the researcher found if you request this.

### **Who is organising or sponsoring the research?**

The study is being carried out as a clinical research study for a PhD with the University of Salford. The research is being supported by Lancashire Care NHS Foundation Trust.

### **Who has reviewed the study?**

As with all research conducted within the NHS, this research study has been reviewed and given a favourable opinion by the North West NHS Research Ethics Committee on 13/06/18 (application 18/NW/0275). This research study was approved by the University of Salford Ethics committee on 31/01/18 (Application number: HSR1718-034).

### **Data Protection**

The University of Salford is the sponsor for this study based in the United Kingdom. We will be using information from you and/or your medical records in to undertake this study and will act as the data controller for this study. This means that we are responsible for looking after your information and using it properly. The University of Salford will keep non-identifiable information about you for 10 years after the study has finished. You can find out more about how we use your information Lynn Christie, The Chief Investigator. Lancashire Care NHS Trust will collect information from you and/or your medical records for this research study in accordance with our instructions. Lancashire Care NHS Trust will keep your name, NHS number and contact details confidential and will not pass this information to The University of Salford and will use this information as needed, to contact you about the research study, and make sure that relevant information about the study is recorded for your care, and to oversee the quality of the study. Certain individuals from the University of Salford and regulatory organisations may look at your research records to check the accuracy of the research study. The University of Salford will only receive information without any identifying information and the people from the University who analyse the information will not be able to identify you and will not be able to find out your name, NHS number or contact details. Lancashire care NHS Foundation Trust will keep identifiable information about you from this study for 3 years after the study has finished.

### **Further information and contact details:**

If you require any further information, please contact:

Lynn Christie, Fylde CMHT, Woodlands, 155 St Andrews Road South, St Annes, FY8 1YB  
Email: [lynn.christie@lancashirecare.nhs.uk](mailto:lynn.christie@lancashirecare.nhs.uk) Tel: 01253 951355

## Appendix 12: Consent form (occupational therapist participants)



University of  
**Salford**  
MANCHESTER

Lancashire Care   
NHS Foundation Trust

### OTiD STUDY CONSENT FORM

#### OTiD STUDY: CONSENT FORM FOR OCCUPATIONAL THERAPISTS

**Title of study:** The effectiveness of occupational therapy in enabling adults with depressive illness to improve and maintain occupational functioning and meaningful participation; a longitudinal mixed methods study.

**Name of Researcher:** Lynn Christie

Please complete and sign this form **after** you have read and understood the study information sheet. Read the following statements and select 'Yes' or 'No' in the box on the right-hand side.

1. I confirm that I have read and understand the study information sheet, Version 1, dated 09/12/17, for the above study. I have had the opportunity to consider the information and to ask questions which have been answered satisfactorily.	Yes/No
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without my legal or employment rights being affected.	Yes/No
3. I understand that the researcher has a legal and professional duty of care to report any concerns about my professional practice.	Yes/No
4. I agree to participate by completing intervention logs in relation to the intervention I provide, to support treatment fidelity to be monitored.	Yes/No
5. I understand my personal details will be kept confidential and not be revealed to people outside the research team.	Yes/No
6. I understand that my anonymised data will be used in the researcher's thesis, NHS and academic publications (including on the internet), and at conferences.	Yes/No
7. I agree that my data, once anonymised, may be kept, and reused by the researcher for further research and as a training dataset.	Yes/No
8. I agree to take part in the study.	Yes/No

-----  
Name of participant

-----  
Date

-----  
Signature

## Appendix 13: Excerpt from interview transcript

Interview number 2, pages 3-4

**Interviewer** - No but it sounds like you've come a long way with re-finding yourself already ((does it?)) yeah from what you're saying to me.

**Respondent** - But I'm desperately wanting.... if I commit to something, I put 100% in ((brilliant)) you know.

**Interviewer** - So is there anything else? Once you've agreed what you're going to do during the week is there anything else that makes you do it?

**Respondent** - I think... it's a good starting path. You can see a bit of hope. When you do other therapies, you're left with it and it's just a feeling you have. So, you've got all these ideas, so I'm going to do that next week, I'll do that tomorrow, I'll do.... Your head tells you what you're going to do but you don't physically do it ((ok)) where with this ((occupational therapy?)) Yeah, it's just a case of like you're thinking well [respondent's name] if you can do that maybe you can do something else ((yes absolutely)) you know it's a bit like a domino effect, you know it's just that little start of a knock and it triggering you know... when my dog died and... Garden, I love my garden but you know... why don't you remember him in a nice way, so I made him a little garden outside, are you with me? It's like stuff like that that helps you.

**Interviewer** - So there's something about it being important to you and it being... so a relevant goal or something? ((Yeah)) and something about it being achievable as well so... ((that's the word)) if there was a.... you know, someone suggested climbing up Mount Everest that wouldn't be achievable ((no)) so something about you believing you can ((it's starting slow)) right starting with small things?

**Respondent** - Yeah 'cos every day when you're really depressed, every day is different. I cry every day and stuff, but I can focus on... you know... like I get up now, make myself a coffee, I do meditation you know. My concentration... I used to meditate a lot, but I couldn't do it anymore but then she showed me [respondent's name] you don't have to do meditation for 20/30 minutes, there's an app. You know 'cos obviously I don't go anywhere, I don't really know, so it's only 5 minutes. I used to do it, me and my dog used to do it... he used to lie there and just did breathing to calm yourself down for the day then I'll go and have my shower. So that's a thing I would never dreamt of doing, you know what I mean? I'm trying to get my spirituality back... a lot of peace and stuff and I want to start going out again, back to nature and stuff like that ((ok fantastic)) but if I'm looking better then I don't mind.....I didn't used to want anyone to see me.

**Interviewer** - Yes so, it's about... something then about the order of goals as well then doing them in the right order ((that's it)) so that one can then lead into something else?

- Respondent** - Yeah that's it. It's like the structure of it.... so obviously now I'm doing the showering the other thing is from the other goal, were.... Like I say they're all linked. So, like the eating plan; eating better. I've joined that [name of diet club] have you heard of it? ((Yes, I've heard of it)). It's.....My goals are really at the beginning. I'm starting small but then I'm gonna make the bigger changes... you know, the eating better you know...' cos obviously I've not got day and night.
- Interviewer** - Yes and doing those early goals will then make it easier to do the getting out more, 'cos you'll feel more confident won't you?
- Respondent** - Yeah but the next thing... obviously it's gonna be the being around people ((ok)) which I know I'm gonna find really really hard, but nobody's ever come with me before.
- Interviewer** - So it's something about going to be doing something together. Doing an activity together?
- Respondent** - To support me, just 'till I get back... you know, just to help me walk through that door a couple of times and like... letting me leave my house to... but the fact that there is somebody there is... will come with me just for a coffee cos I know that if I went in on my own, I'd just have a panic attack.
- Interviewer** - So that makes it easier to start that goal for you?
- Respondent** - I'm not being funny, 'cos I know I'm gonna be terrible, but the fact is that it's me leaving my house ((ok)) so... and the fact that I've got that support which you don't get with any other therapy, so that is very very important ((yeah)) very very important at the start, the support is... that there's gonna be somebody to go with you. You're not a baby, don't get me wrong but ((yeah)) I'm not going for an interview but it's just something that I might enjoy.
- Interviewer** - So if someone had come in and said you need to do this this and this ((yeah)) off you go, so that wouldn't have worked? What is it? Is it knowing the bits that you might find difficult? Is it having that support at the time when you're starting it off?
- Respondent** - The starting off bit, you know.... when obviously, it might not be for me, but a guy rang me up yesterday and said that [occupational therapist] had been in contact with him and said she had said I'm having a look for courses for, you know like meditation and aromatherapy and I thought well it's starting, you know it's something I enjoy and I'm gonna be around people that.... this is going to sound awful, that it's not a 'therapy group' ((yes)) you're not asking me to go to therapy group ((it's real life)) it's real life and everyone's got a story to tell, everybody has got trauma and stuff, but then you'll meet people that don't need to know that side of me ((no, absolutely you can tell them what you...)). Well, when you go to them kind of groups, you seem to...

## Appendix 14: Thematic analysis – example of early-stage analysis

Interview number	Codes	Themes	Possible subthemes
	<ul style="list-style-type: none"> <li>• Start to live/rebuild life/ important things x 4</li> <li>• Structure</li> <li>• Importance of looking after self</li> <li>• Ideas/suggestions x 4</li> <li>• Co-production: Working /doing things/laughing together/ collaboratively Partnership/ team working x 9</li> <li>• Starting slowly – basics/ small/achievable steps/step-by-step/Graded x 18</li> <li>• Connecting with others</li> <li>• Therapist skills/manner</li> <li>• No pressure: gentle approach/ not pushy/forceful/ directive x 16</li> <li>• Approach</li> <li>• Plants/Planting a seed x 4</li> <li>• Therapist skills/manner</li> <li>• Compassionate</li> <li>• Feels supported to try, hands on/ practical help, being there x 10</li> <li>• Expectations without pressure</li> <li>• Starting with basics – self-care</li> <li>• Finding Hope</li> <li>• Enabling self-belief</li> <li>• Knock-on effect/ Building on successes/Chain of events/ Catalyst/ goals leading to further goals x 11</li> <li>• A different way to do things</li> <li>• Order of goals</li> <li>• Task made easier</li> <li>• Therapist dependable</li> <li>• Real life mainstream activities not therapy 'groups'</li> <li>• Feeling secure –confident with the therapist</li> <li>• Someone to talk to when out to reduce discomfort</li> <li>• Confidence/trust in therapist</li> <li>• Initially fear of unknown – didn't know what to expect</li> </ul>	<p>Occupational therapy is about everyday things OT is about everyday life and activities, being able to do normal things and being able to 'live life' again.</p> <p>Occupational therapy is about more than talking; it is about doing things combined with talking it is more 'hands on' and is different to other therapies.</p> <p>Occupational therapy is client centred and collaborative; the partnership between the therapist and SU is important.</p> <p>Occupational therapy as a therapeutic process.</p>	<ul style="list-style-type: none"> <li>• Rebuilding what may have gone before</li> <li>• Enabled to do normal things/Allowing things to become normal/Living life again</li> <li>• Structuring routines is both a goal and treatment method</li> <li>• Teaching &amp; enabling: a different way to do things/take part/ providing ideas/Sowing seeds / growing analogy</li> <li>• OT is a supportive therapy; provides direct practical support (doing together)</li> <li>• OT is a recovery journey</li> <li>• Individualised and based on what's meaningful/ enjoyable to the person</li> <li>• SU taking the lead</li> <li>• Co-production; Teamwork between OT and SU</li> </ul>



	<ul style="list-style-type: none"> <li>• Worry it might be too difficult</li> <li>• Individualised/Focus on what important/meaningful the individual wants x 6</li> <li>• Knowing she wouldn't be judged/non-judgemental x 2</li> <li>• Therapist drawing things out</li> <li>• Permission to make own choices</li> <li>• Therapist drawing out what important to the individual</li> <li>• OT - a different approach to other treatments</li> <li>• Doing more important than talking</li> <li>• Therapeutic relationship</li> <li>• Going around obstacles/doing it is spite of adversities</li> <li>• Focus on recovery of self</li> <li>• Change in thinking</li> <li>• SU belief/commitment/readiness/ wants to succeed/ engagement/ owning goals x 16</li> <li>• Effective</li> <li>• Future focussed – not problem focussed</li> <li>• Focus on hobbies/enjoyable activities x 3</li> <li>• Learning from therapist</li> <li>• Try and see/test out</li> <li>• Journey</li> <li>• Consolidation</li> <li>• Normal things/Becoming the norm/normalising x 7</li> <li>• Keep moving forwards x 2</li> <li>• Checking progress</li> <li>• Increased confidence</li> <li>• Can still do more even when depression /past still impacting</li> <li>• Changing</li> <li>• Acknowledgement that can live life in spite of problems</li> <li>• Feeling able to cope</li> <li>• Allowing SU to take lead/be in control x 6</li> <li>• Reassurance</li> <li>• SU Honesty important</li> </ul>	<p>OT makes a positive difference – it is motivating and effective.</p> <p>The Characteristics of individual occupational therapists are important and play a part in therapy.</p> <p>SU commitment important.</p> <p>What would have helped.</p> <p>What didn't help.</p>	<ul style="list-style-type: none"> <li>• Starts slowly, feels achievable</li> <li>• Small steps towards a bigger goal</li> <li>• Building on successes</li> <li>• Grading – actions and goals</li> <li>• 'Chain reaction'</li> <li>• Goals are sequential and linked.</li> <li>• Not 'pushy' or directive not forced on the SU</li> <li>• Joint construction of goals / therapy.</li> <li>• Therapist and SU working as a team.</li> <li>• Shared goals, both invested</li> <li>• Co-production/ partnership; working together</li> <li>• Working as a team on a shared project that both are invested in</li> <li>• OT helped to start to live life again</li> <li>• Enabled to do normal things</li> <li>• Instilled hope</li> <li>• It's the first time I've had the support that I've needed</li> <li>• How and why it helped</li> <li>• positive, trustworthy, SU focused, non-judgemental, use of humour and honesty, caring, compassionate, dependable,</li> </ul>
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