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An Exploration of Empathy-Enhancing Interventions and the Prevalence of Mentalization within the Field of Nursing.

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THE UNIVERSITY of EDINBURGH

Doctorate in Clinical Psychology

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Acknowledgments:

Firstly, I would like to thank Prof. Matthias Schwannauer for his invaluable input as my academic supervisor, but also for being extremely patient with my many questions. Thank you to Dr Katie Whyte, my clinical supervisor for her support.

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Thank you to my friend, soon to be Dr Daniel Baxter, for always being there, providing happy distractions and helping me gain a sense of perspective. His wise counsel was invaluable and helped to shape my project.

I cannot thank my fiancé, Bryan McShane enough for being the best support I could have asked or wished for and being with me every step of this journey. His patience is unbelievable, as is his endless belief in me. I thank him for transcribing and helping me organise the qualitative data, but also for being my sounding board and helping me get through one of the most difficult periods of my life. I couldn’t have done this without him.

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Contents

1. Thesis Abstract 8
2. Thesis Lay Summary 10
3. Systematic Review 11

Abstract 11
Introduction 12
Person-Centred Care 12
Theoretical Underpinnings of PCC 13
Empathy 14
Factors Influencing Empathy Levels 15
Innate vs Learned Empathy 15
Educational Approaches 16
Empathy-Enhancing Interventions 16
Aim of Systematic Review 17

Method 18
Protocol 18
Eligibility Criteria 18
Inclusion Criteria 18
Exclusion Criteria 18
Search Strategy 18
Study Selection Process 19
Data Collection and Synthesis Process 19

Results 20
Study Selection 20
Study Characteristics & Extracted Data 21
Effectiveness of Educational Interventions 39
Risk of Bias 50
Methodological Quality 55
Randomised Controlled Trials (RCTs) 56
Quasi-Experimental Studies 57
Types of Educational Interventions 57
Outcome measures 58

Discussion 60
Summary of Findings 60
Hierarchical Linear Regression.
Recruitment
Data Collection
  Measure of Wellbeing
  Measure of Self-Reported Reflective Functioning
  Critical Incident Technique (CIT)
Procedure
Data Analysis
  Qualitative Analysis
  Reflexivity
  RF Coding
Statistical Analysis
Exploring Research Questions
Results
  Research Question 1:
    Qualitative Data
      Physical Aggression.
      Physical Health Decline
      Serious Attempts on Life.
  Research Question 2:
    Hierarchical Linear Regression
    Compassion satisfaction
    Burnout
    Secondary Traumatic Stress.
    Thematic analysis
      Pragmatic Approach to Care.
      Compassionate Approach to Care
      Organisational Barriers to Care- Disempowerment.
Discussion
  Self-reported versus Narrated RF
  Qualitative data on Narrated RF Ability
Wellbeing
  Thematic Analysis
Study Limitations
Word counts of main text (excluding tables, figures, references & appendices):

Systematic Review: 5,975  Empirical Paper: 10,791
Total: 16,766
1. Thesis Abstract

**Background:** Empathy is considered an important component of Person Centred Care (PCC), as is the process of mentalization in the successful application of sensitive care-giving. Both concepts can overlap, with empathy underpinning mentalization. Nurses tend to work within emotionally-charged environments, which can cause excess pressure and negatively impact both empathy, and the ability to mentalize. Nurses, however, require resilient empathy and mentalizing skills to be able to adequately cope with such levels of pressure.

**Methods:** This thesis systematically reviewed research which promoted empathy-enhancing interventions, particularly those aimed at nurses. An empirical study was conducted to investigate the mentalizing ability of registered mental health nurses (RMNs) by means of a self-reported measure, and a narration of a critical incident. Additionally, a wellbeing outcome measure was completed by participants to investigate whether mentalizing ability could predict wellbeing.

**Results:** Empathy-enhancing interventions were perceived to be successful, with thirteen studies finding significant improvements to empathy levels of nurses. The sustained treatment effect of the interventions is, however, unknown. The empirical study showed that self-reported high mentalizing ability was a significant predictor of compassion satisfaction (wellbeing measure). By contrast, inferred mentalizing ability from participant narratives had no association with self-reported ability and was not a predictor of wellbeing.

**Conclusion:** Empathy levels of nurses can be enhanced to some extent, an important factor in the successful delivery of PCC. However, future research with standardised interventions and more rigorous study designs are required in order to understand whether the enhanced empathy levels can be sustained over time. The results from the empirical study suggested effective mentalizing skills predicted positive wellbeing, a potential protective factor for mental health. The study however was underpowered, therefore the results may only be considered preliminary. Future research is required with an adequately powered sample.
2. Thesis Lay Summary:

**Background:** Being able to empathise and to “put yourself in someone else’s shoes” are considered important skills for nurses to have for the effective and sensitive delivery of Person Centred Care (PCC). The ability to infer what someone else may be thinking and feeling is referred to as Mentalization. Nurses often work within high pressurised environments, which can reduce their ability to empathise and consider how the patient may be thinking or feeling. It is therefore essential for nurses to have resilient empathy and mentalizing skills to enable them to cope with such environments in order to deliver the required level of care that is both sensitive, and patient centred.

**Methods:** This thesis firstly evaluated training programmes for improving empathy skills in nurses. Secondly, registered mental health nurses (RMNs) were asked to complete a questionnaire and reflect upon a challenging incident which happened whilst caring for a patient. Both of these methods were used to assess their ability to mentalize as stated above. RMNs were also asked to complete a questionnaire about their wellbeing in order to establish whether their mentalizing ability and wellbeing were related to one another.

**Results:** Overall, out of the 16 training programmes reviewed, 13 successfully improved nurses’ empathy levels. The majority of the programmes, however did not complete a follow up to assess whether this increase was maintained over time. The study with RMNs suggested that the high mentalizing ability measured on the questionnaire predicted high scores on the wellbeing measure, as they had a high level of satisfaction from helping others. Simply discussing a challenging incident, however, did not have the same impact on wellbeing.

**Conclusion:** Empathy levels of nurses can be enhanced to some extent, which is important for nurses to be able to deliver PCC effectively, but future research is necessary to understand whether this improvement requires to be maintained by regular training. Results from the second study suggested nurses skilled in inferring another person’s thoughts and feelings have a resulting high sense of satisfaction when caring for others. Importantly, this level of satisfaction was as a result of the high levels of mentalizing ability, which in turn could indicate a protective factor against developing mental health problems. This study however, was necessarily limited by only having 13 participants therefore future research with a larger sample could be more conclusive.
3. Systematic Review

Effectiveness of Empathy-Enhancing Interventions within the Field of Nursing: A Systematic Review

Prepared in accordance with the author guidelines for the Journal of Clinical Nursing (Appendix A)
Abstract

Objective: Empathy is an important concept in the ability of nurses to provide effective Person Centred Care (PCC). Nurses are often working within emotionally-charged environments which can negatively impact empathy skills and ability to deliver PCC adequately. A plethora of research has described empathy-enhancing interventions for health professionals in general. This review aims to provide an updated systematic exploration of interventions aimed at increasing empathy in nurses.

Method: A systematic review of the existing evidence was conducted across 5 databases. A total of 261 studies were returned from an electronic literature search. Sixteen studies were considered eligible for inclusion following screening processes. The majority of these studies were conducted in Asia, with none from within the UK.

Results: Overall the results from the reviewed studies were promising, with thirteen studies finding a significant improvement to empathy levels on completion of the educational intervention. Nine studies reported enhanced empathy skills with large and medium effect sizes. Training utilising experiential learning methods appeared to be the most successful at enhancing empathy. The sustained treatment effect of individual interventions is unknown.

Conclusion: Overall, the educational interventions evidenced to some extent effectiveness in improving empathy within the nursing field, but potential conclusions may be restricted by various methodological limitations. Further research is required to evolve past the methodological constraints of the current evidence base, and to investigate sustained treatment effects.

Key words: Empathy; Communication Skills; Educational Intervention; Training; Nurses
Introduction

Person-Centred Care

Person-centred care (PCC) is the current therapeutic approach to nursing within Scotland (Scottish Government, 2020). It is the current strategic priority for NHS Scotland and the Scottish Government, and a vital component of the 2020 vision for Health and Social Care. This approach centres on patients being active partners in treatment planning and treated as individuals with idiosyncratic care needs (Satran et al., 2020). PCC is associated with positive treatment outcomes, with significant decreases in mortality and morbidity rates (Pagan & Carlson, 2013; Roumieu et al., 2011), and improved patient satisfaction (Rathert, Wyrwich, & Boren, 2012; Zimmermann, Konrad, Müller, Rundel, & Körner, 2014).

Theoretical Underpinnings of PCC

The origins of PCC are in humanistic psychotherapy (Mitchell & Agnelli, 2015). Rogers (1951) suggested PCC requires therapists to develop a trusting and genuine relationship with patients in order to achieve empathy, by understanding the person’s perspective, and by being non-judgemental. PCC as a framework has since been applied to most healthcare provisions (Hardman & Howick, 2019). A more recent theory by Hansen, Walters and Howes (2016) suggests PCC is grounded in a bio-social holistic approach with three key areas; clinical knowledge, practical skills, and communication skills. With empathy being a key component of effective communication skills. Empathy is arguably an important cornerstone of PCC (Bauchat, Seropian & Jeffries, 2016; Cairns, Pinker, Ward, Watson & Laidlaw, 2020; Fazio, Pace, Flinner & Kallmyer, 2018; Hardman & Howick, 2019; Hayley et al., 2017). Growing evidence suggests a link between empathic healthcare professionals and improved patient outcomes (Derksen, Bensing & Lagro-Janssen, 2013; Hardman & Howick, 2019; Howick et al., 2018).
Brunero, Lamont and Coates (2010) highlight the risk of reduced professional and objective boundaries when nurses act empathically. Research with oncology nurses suggests that being empathic can have its disadvantages in the form of increased stress and vulnerability of burnout (Hope-Stone & Mills, 2001). Nonetheless, a larger body of evidence emphasises the overall benefit to patients of having empathetic nurses (Baillie, 1996; Hope-Stone & Mills, 2001; Teófilo et al., 2019; Kesbakhi, & Rohani, 2020) and healthcare professionals (Jordan, 2000; Watson, 2002).

**Empathy**

Empathy is a multifaceted construct (Bas-Sarmiento et al., 2020), often difficult to define. Rogers (1957) described empathy as: “the ability to sense the client’s private world as if it were your own, but without ever losing the ‘as if’ quality”. Alligood (1992) and Spiro (1992) suggest there are intrinsic and acquired elements of empathy: moral, emotive, cognitive, and behavioural. The researchers suggest, intrinsically, an individual’s ability to empathise may vary from one individual to another as some people are innately more empathic than others. However, ‘acquired empathy’ can be developed through experience and practice.

More recently, empathy is considered the ability to understand the perspective and emotional experience of an individual, and to communicate this understanding clearly and coherently (Frankel, 2017; Williams & Stickley 2010). With respect to nurses, the definition of empathy is extended to refer to the ability to understand and meet both physical and emotional needs of the patient (Satran et al., 2020). Lam, Kolomitro and Alamparambil (2011) refers to earlier theories and suggests empathy has three main components: affective, cognitive and behavioural. The affective component refers to the ability to resonate with, or experience another person’s emotions (Barrett-Lennard, 1981). The cognitive element refers to the ability to infer another person’s thoughts or perspectives (Dymond, 1949). Finally, the
behavioural component refers to the ability to communicate the emotional resonance and shared perspective, through verbal and non-verbal means (Kagan & Schneider, 1987).

Lam’s (2011) theory was applied to this current review, because the three components of empathy map well onto the communication and interpersonal skills competences required of nurses (Nursing & Midwifery Council (NMC), 2018). Wherein nurses are expected to: “demonstrate the ability to listen with empathy. By applying a structured approach to assess, understand and communicate with, interpret and respond therapeutically to people who have complex physical and psychological health needs or those in behavioural distress”. Where, “understand and communicate” relates to the affective component; “interpret” relates to the cognitive element, and; “respond therapeutically” relates to affective and behavioural. Furthermore, the training programmes and outcome measures evaluated within this current review targeted the three components of empathy, in some form.

**Factors Influencing Empathy Levels**

Research suggests emotionally-charged situations can negatively impact an individual’s ability to empathise (Taleghani et al., 2017). Nurses consistently observe human suffering, helplessness and pain, and can often encounter conflicts with patients, families and other professionals (Satran et al., 2020). Michaelsen (2012) suggests reduced empathy may lead to the undesirable situation of nurses avoiding or distancing themselves from certain patients. Michaelsen suggests avoidance or distancing can be psychological or physical and are common defence mechanisms to engage when faced with emotionally complex situations. Whilst these coping strategies may protect nurses well-being, they may also prevent patients from receiving the level of care they require, and potentially result in clinical errors (Korenetal., 2007). Conversely, another coping strategy for some nurses may be to neglect their own well-being and instead over involve themselves emotionally with the patient. This impaired self-awareness can result in burnout, compassion fatigue and emotional burden.
(Cricco-Lizza, 2014; Hunt, Denieff, & Gooney, 2017) which consequently could impact delivery of PCC. Consequently, it is very desirable for nurses to have highly developed and resilient empathic skills to enable them to cope well with such emotionally charged situations.

Additionally, research has suggested empathy can diminish over time (Hojar et al., 2009; Lor et al., 2015; Nunes, Williams, Sa & Stevenson, 2011). Patients receiving interventions devoid of empathy are less likely to follow recommendations, and experience potentially poorer outcomes and broken trust in the healthcare service (Riess, 2017).

**Innate vs Learned Empathy**

Considering the above influences on empathy levels, it is important to discuss whether empathy can be learned or developed. Empathy was initially considered an innate human attribute that could not be learned or developed (Frankel, 2017). Research however suggests empathy can be developed through practice and education (Ançel, 2006; Cunico, Sartori, Marognolli & Meneghini, 2012) and is an acquired professional competency of health and social care professionals (Batt-Rawden, Chisolm, Anton & Flickinger, 2013; Doyle, Hungerford & Cruickshank, 2014; Kelm, Womer, Walter & Feudtner, 2014; Ward, Cody, Schaal & Hojat, 2012; Williams & Stickley, 2010). Alligood (1992) theorised there are two types of empathy: ‘basic empathy’ as an innate personality trait, and ‘trained empathy’. Empathy is considered a significant component of the relationship between a patient and nurse (Ozcan, Oflaz & Sutcu Cicek, 2010) and consequently is a focus of undergraduate nursing curricula.

**Educational Approaches**

The majority of empathy-enhancing interventions within the literature utilises an experiential approach (Ançel, 2006; Bays et al., 2014; Cunico et al., 2012; Hart et al., 2006; Henry et al., 2011; Nosek et al., 2014; Roter et al., 2004; Sheehan et al., 2013; Yang et al.,
Brunero et al. (2010) suggests this method is the most promising to improve empathy within nurses. Reflective learning (RL) is an educational approach typically used within higher education, particularly within nursing degrees (Fernández-Peña et al., 2016). This approach is influenced by Kolb’s (1984) Experiential Learning Theory, which has four steps within a cyclical process: 1- concrete experience: doing/having an experience; 2- reflective observation: reviewing the positives and negatives of the experience; 3- abstract conceptualisations: concluding/learning from the experience; and 4- active experimentation: planning or trying out what has been learned. Kolb highlighted learning cannot occur without reflection (Fernández-Peña et al., 2016). Hamilton (2008) suggests however that educational interventions incorporating experiential learning should revolve around daily nursing activities, and reflect typical high demands, which is currently not often the case.

Two systematic reviews found experiential learning methods to be effective in improving empathy levels (Batt-Rawden et al., 2013; Bearman, Palermo, Allen & Williams, 2015). Both sets of findings, however, focused on medical students and the results may not be generalisable to qualified medical professionals. Other research has based educational interventions on humanitarian principles such as reflective writing, literature, and drama techniques (Bonvicini et al., 2009; Dow et al., 2007; Ozcan, Oflaz & Bakir, 2012; Shapiro et al., 2004). Further research is required to explore the efficacy of this approach.

**Empathy-enhancing interventions**

There is a plethora of research investigating whether empathy levels of medical professionals in general, can be enhanced by educational interventions. Five systematic reviews have been conducted to consider the evidence (Fragkos & Crampton, 2020; Kelm et al., 2014; Kiosses, Karathanos & Tatsioni, 2016; Patel et al., 2019; Winter, Issa, Roberts, Norman & Howick, 2020). Overall the results were promising and suggested medical professionals empathy could be improved through empathy-enhancing interventions.
However, limitations to studies reviewed include: lack of control (Kelm et al., 2014); not considering whether increased empathy levels were sustained over time (Fragkos & Crampton, 2020; Patel et al., 2019; Winter et al., 2020); and impact to patients’ outcomes or perspective were not assessed (Kiosses et al., 2016).

Levett-Jones et al. (2019) conducted a systematic review assessing the effectiveness of ‘empathy education’ with respect to undergraduate nursing students. They reported nine out of 23 studies demonstrated significant improvements to empathy levels, however most had low effect sizes. The researchers noted however that they were unable to comment on whether this transferred to practice, nor longer-term impact due to the lack of longitudinal studies.

One systematic review by Brunero et al. (2010) investigated the effect of empathy-enhancing interventions on nurses. The researchers concluded it was possible to increase nurses’ empathic ability however the lack of standardised training and evaluation methods raised generalisability concerns. Additionally, the researchers failed to discuss the lack of effect sizes reported and consequently it was not possible to conclude the clinical relevance of the individual interventions.

Overall, there has not been a review in the past decade that has provided an update on the efficacy of various types of empathy-enhancing interventions in relation to nurses. Recent literature has focused on medical professionals as a whole, or specific types of interventions. As mentioned above, nurses are at risk of burnout, which can negatively affect quality of nursing care (Cricco-Lizza, 2014; Hunt, Denieff, & Gooney, 2017). Gleichgerrcht and Decety (2013) suggest burnout is associated with personal distress, whilst job satisfaction is strongly associated with empathy. Furthermore, Thomas et al. (2007) suggest that increased levels of empathy provide a protective role against burnout.
Aim of Systematic Review

Considering the importance of empathy within the nursing field, this current systematic review aims to provide an updated systematic exploration of the effectiveness of empathy-enhancing interventions.
Method

Protocol

This review was conducted in accordance to The Joanna Brigg’s Institute (JBI) protocol for systematic reviews and reported using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher, Liberati, Tetzlaff, Altman & Prisma Group, 2009).

Eligibility Criteria

Inclusion Criteria

This review included studies employing a quantitative research method; available in English; involving an educational intervention to improve empathy levels; with at least one validated measure of empathy pre-and-post intervention. Participants had to be employed as a Registered Nurse or a student nurse working towards qualification. Studies eligible for this review were those using a pretest-postest design which included Randomised Controlled Trials (RCTs) and quasi-experimental studies.

Exclusion Criteria

Any study that focused on ‘communication skills’ without specifically measuring empathy was excluded. Reviews, book chapters, and responses to articles were not included within this systematic review.

Search Strategy

In November, 2020 a systematic search of EMBASE (1980-December, 2021), PsychINFO (1806-December, 2021), MEDLINE (1966-December, 2021), CINAHL Plus (1937-December, 2021) and COCHRANE (2000-2021) was conducted. These databases provided the largest source for nursing and allied health peer-reviewed journals and publications. The following search terms were used: ‘nurse*’, ‘nursing students’, ‘nursing
education’, ‘training’, ‘programme’, ‘empathy’, ‘communication skills’. Previous systematic reviews within this area typically applied more generic search terms relating to medical professionals as a whole. This current study focused on nurses only therefore the search terms were more specific. This may have limited the number of studies found, comparatively to similar reviews; however using specific search terms likely increased the probability of finding more relevant studies. The asterisks denote that all terms beginning with the root were included in the search. The terms were combined with the ‘Boolean operators’ (i.e. AND, OR) to connect the search terms and maximise coverage within the journal. Each database was searched individually, to minimise index conflicts between databases: improving likelihood of identifying all relevant articles. Results from the databases were downloaded to RefWorks©, duplicated citations were removed and the remaining results were examined.

**Study Selection Process**

Following the database search, the first author screened the titles of articles to remove irrelevant citations. The abstracts of remaining papers were then compared to inclusion and exclusion criteria. Papers were excluded as appropriate and full papers retrieved for those meeting inclusion criteria. Reference lists of included articles were scanned manually to identify relevant cited articles which may have been missed. *Figure 1* presents a diagrammatic summary of the full systematic search process. The first author assessed risk of bias and methodological quality of the included articles with the JBI Checklist for Randomized Controlled Trials (RCT) and JBI Checklist for Quasi-Experimental Studies.

**Data Collection and Synthesis Process**

Data was extracted by the first author from relevant studies using the JBI Meta-Analysis of Statistics Assessment and Review Instrument (MAStARI). The JBI was selected because it is an international evidence-based healthcare research organization. It supports the
synthesis of evidence-based practice information to health care professionals to support clinical decision-making. Furthermore, the JBI provides a manual for reviewing effectiveness of interventions and provides an appraisal tool for both RCTs and quasi-experimental studies. Extracted data included: population, research design, intervention type, comparator group, and outcome. A narrative approach to data synthesis was utilised due to the variety of research design, intervention and outcome measures across studies. The heterogeneity of the data precluded a meta-analytical approach. It is accepted there are limitations to the narrative approach, namely: small effects potentially being drawn out, and the risk of researcher bias (Rumrill & Fitzgerald, 2001).
Results

Study Selection

A total of 261 results were returned from the search process and 168 remained following removal of duplicates. These studies were assessed for eligibility using PICOS (Participants, Interventions, Comparisons, Outcomes and Study design) criteria. Sixteen eligible studies were evaluated using the JBI Quasi Experimental and JBI RCT critical appraisal tools. Figure 1 depicts the PRISMA diagram illustrating the systematic process of the study selection process.

Figure 1: PRISMA Flowchart of Systematic Search Process
Study Characteristics & Extracted Data

The majority of the studies were conducted within Asia (n=8) (Ancel (2006; Ding et al. 2020; Gür & Yılmaz, 2020; Kahriman et al., 2016; Lee et al., 2018; Li et al., 2019; Maghsud et al., 2020; Vaghee et al., 2018). Whilst five were conducted within Europe (Bas-Sarmiento et al., 2017; Bas-Sarmiento et al., 2019; Cunico et al., 2012; Ferri et al.; Poyato et al., 2018), one within the USA (Beddoe & Murphy, 2004), one within Africa (Alhassan, 2019) and one within Australia (Levett-Jones et al., 2017).

Across all studies, 2047 individuals participated, of that 1709 were student nurses (83%), the remaining being registered nurses. Two studies assessed paediatric students/nurses (Ding et al. (2020; Kahriman et al., 2016), two studied psychiatric students/ nurses (Poyato et al., 2018; Vaghee et al., 2018), one studied critical care nurses (Maghsud et al., 2020) and one studied midwifery students (Alhassan, 2019). The majority of the total sample population were females (71.58%) however two studies failed to report descriptive statistics (Ancel, 2006; Kahriman et al., 2016). All studies assessed for potential confounding variables, such as: gender; age; marital status; degree; and typically found no significant differences between groups at pre-test. Bas-Sarmiento et al. (2017) was the only study that found gender differences at pre-test; with the empathy scores of females significantly higher than males. Further study characteristics and extracted data from the eligible studies are presented in Table 1.
### Table 1: Overview of Included Studies

<table>
<thead>
<tr>
<th>Citation</th>
<th>Country</th>
<th>Design</th>
<th>Participant Type</th>
<th>Educational Interventions</th>
<th>Measure of Empathy</th>
<th>Key Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td>Pre-test, post-test &amp; follow up at 6 months.</td>
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<td>Measure: ECS-B</td>
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<td>Measure: JSE</td>
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**Type of Training**
- 2 days.
- Number of hours of training per day NR.

**Content**
- -group discussions
- -role play
- -videos

**Delivery Mode**
- Face-to-Face

**Measure of Empathy**
- JSE HPS
**Table 1: Overview of Included Studies**

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<tr>
<th>Citation</th>
<th>Country</th>
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<th>Educational Interventions</th>
<th>Measure of Empathy</th>
<th>Key Findings</th>
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</thead>
<tbody>
<tr>
<td>4. Bas-Sarmiento et al. (2019)</td>
<td>Spain</td>
<td>Open RCT</td>
<td>2nd year nursing students across two universities.</td>
<td>As above (Bas-Sarmiento et al. 2017). 14 h / 7 sessions</td>
<td>RES</td>
<td>The study supports that training in empathic competences is effective.</td>
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<td>CARE</td>
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<td>5. Beddoe &amp; Murphy (2004)</td>
<td>USA</td>
<td>Pretest-Posttest without control.</td>
<td>Baccalaureate female nursing students.</td>
<td>Mindfulness-Based Stress Reduction (MBSR) course: Year or 8 x 2 h sessions weekly -body scan -meditation -Hatha yoga -walking</td>
<td>Subjective Measure: JSE</td>
<td>No increase to empathy levels. Being mindful decreases tendency to take on other’s</td>
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<td>Objective: Carkhuff</td>
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<td>Citation</td>
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<td>Educational Interventions</td>
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<td>Key Findings</td>
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<tr>
<td>6. Cunico et al. (2012)</td>
<td>Italy</td>
<td>Cohort longitudinal study.</td>
<td>First year nursing students.</td>
<td>Didactic training experience with seminars and laboratories: guided mediation audiotapes. 8 weeks in total.</td>
<td>Subjective Measure: BEES</td>
<td>Empathy is a skill that may be taught.</td>
</tr>
<tr>
<td>7. Ding et al. (2020)</td>
<td>China</td>
<td>Quasi-experimental.</td>
<td>Paediatric student nurses in final year of study.</td>
<td>Knowledge, Simulation and Sharing (KSS) module: 5 days over 10 months, teaching component, simulation</td>
<td>Subjective Measures: JSE-HP-S</td>
<td>KSS can enhance empathy and communication skills.</td>
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<td>Citation</td>
<td>Country</td>
<td>Design</td>
<td>Participant Type</td>
<td>Educational Interventions</td>
<td>Measure of Empathy</td>
<td>Key Findings</td>
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<td>- seminar on empathy</td>
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<td>Subjective Measures: BEES, JSE-HPS</td>
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<td>- presentation on expert-patient function - interactive meetings with nursing teacher and expert patient</td>
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<td>-debrief.</td>
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<tr>
<td>9. Gür &amp; Yilmaz (2020)</td>
<td>Turkey</td>
<td>RCT</td>
<td>Undergraduate nursing students.</td>
<td>Mindfulness-Based Empathy Training 16 sessions over 8 weeks.</td>
<td>Subjective Measure:</td>
<td>Empathy can be enhanced when mindfulness</td>
</tr>
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<td></td>
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<td></td>
<td></td>
<td>- teaching component Face-to-Face</td>
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<td>- body screening &amp;</td>
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</tbody>
</table>
## Table 1: Overview of Included Studies

<table>
<thead>
<tr>
<th>Citation</th>
<th>Country</th>
<th>Design</th>
<th>Participant Type</th>
<th>Educational Interventions</th>
<th>Measure of Empathy</th>
<th>Key Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Kahriman et al. (2016)</td>
<td>Turkey</td>
<td>Pre-post design with 2 groups.</td>
<td>Paediatric Nurses</td>
<td>Empathy Training&lt;br&gt;20 h: 5 weekly sessions x 4 h.&lt;br&gt;- group &amp; creative drama techniques&lt;br&gt;-expressing positive &amp; negative sides&lt;br&gt;-reflection&lt;br&gt;-mirroring activity in pairs&lt;br&gt;-role play</td>
<td>JSE</td>
<td>Training effective in enabling nurses to gain empathic skill.</td>
</tr>
<tr>
<td>No follow up.</td>
<td></td>
<td></td>
<td></td>
<td>(MBET):&lt;br&gt;4 h, 2 days a week.&lt;br&gt;meditation</td>
<td>Subjective</td>
<td>practices integrated into curricula.</td>
</tr>
<tr>
<td>11. Lee et al. (2018)</td>
<td>China</td>
<td>Quasi-experimental.</td>
<td>Student nurses.</td>
<td>Situated Teaching (ST)&lt;br&gt;10 hrs 15 mins over 4 sessions over 4 months.&lt;br&gt;- education&lt;br&gt;- role play&lt;br&gt;- observation&lt;br&gt;- oral reflection&lt;br&gt;- teaching briefings</td>
<td>Subjective</td>
<td>ST can improve empathy but multiple measurements of empathy preferable.</td>
</tr>
<tr>
<td>No follow up.</td>
<td></td>
<td></td>
<td></td>
<td>Face-to-Face</td>
<td>Objective</td>
<td></td>
</tr>
<tr>
<td>Citation</td>
<td>Country</td>
<td>Design</td>
<td>Participant Type</td>
<td>Educational Interventions</td>
<td>Measure of Empathy</td>
<td>Key Findings</td>
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</tr>
<tr>
<td>13. Li et al. (2019)</td>
<td>China</td>
<td>RCT</td>
<td>First year undergraduate nurse students.</td>
<td>Undergraduate Nursing Interpersonal Communication course Seminars 2 times per week for 2 weeks. 30 minute simulation classes 2 times per week for 8 weeks.</td>
<td>Face-to-Face</td>
<td>Objective Measures: JSE-HPS, Clinical Communication Ability Scale, General Self-Efficacy Scale Feasible teaching method to improve empathy, communication &amp; self-efficacy.</td>
</tr>
<tr>
<td>14. Maghsud</td>
<td>Iran</td>
<td>RCT</td>
<td>ICU nurses</td>
<td>Empathy Training 8 x 90 minute No specific detail reported of what</td>
<td>Face-to-Face</td>
<td>Subjective Intervention showed the</td>
</tr>
</tbody>
</table>
Table 1: Overview of Included Studies

<table>
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<th>Citation</th>
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<th>Key Findings</th>
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</thead>
<tbody>
<tr>
<td>et al. (2020)</td>
<td></td>
<td></td>
<td></td>
<td>No follow up.</td>
<td></td>
<td>Effectiveness of empathy training on the empathy skills of nurses.</td>
</tr>
<tr>
<td>15. Poyato et al. (2018)</td>
<td>Spain</td>
<td>Quasi-experimental</td>
<td>Psychiatric Nurses</td>
<td>Evidence Based Practices</td>
<td>No. of hours of training per day NR.</td>
<td>Face-to-Face</td>
</tr>
</tbody>
</table>
Table 1: Overview of Included Studies

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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Type of Training</td>
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<td>Duration</td>
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<td>Content</td>
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<td>Delivery Mode</td>
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reported. Hayse protocol (1986): 

-workshop on MH stigma.

Table Key: NR= not reported; IG= Intervention Group; CG= Control Group; JSE-HP-S = Jefferson Scale of Empathy-Health Profession-Student Version (Hojat et al., 2002); ECS-B = The Scale for Empathic Communication Scale (Dökmen, 1988); RES = The Reynolds Empathy Scale (Reynolds, 2000); CARE = The Consultation and Relational Empathy Measure (Mercer et al., 2004); IRI= Interpersonal Reactivity Index (Davis, 1980); BEES= The Balanced Emotional Empathy Scale (Mehrabian, 1996); CCCS = Clinical Communication Competence Scale (Yang et al., 2010); ESS= The Empathic Skill Scale (Dokmen, 2005); OSCE = Objective Structured Clinical Examination; CSES = Comprehensive State Empathy Scale.
Effectiveness of Educational Interventions

Overall the educational interventions improved empathy levels to some degree. Three studies failed to find an improvement to empathy levels post-intervention (Alhassan, 2019; Beddoe & Murphy, 2004; Cunico et al., 2012). One study failed to find a significant improvement of empathy on a subjective measure but found a significant effect on an objective measure (Lee et al., 2018). Only five studies reported effect sizes (Alhassan, 2019; Bas-Sarmiento et al., 2019; Gür & Yilmaz, 2020; Maghsud et al., 2020; Vaghee et al. 2018), with medium effects found for all but Alhassan (2019). Cohen’s D (d) effect sizes were calculated for each study using mean and SD, including studies who had reported Eta squared (η2) (Gür & Yilmaz, 2020; Maghsud et al., 2020; Vaghee et al. 2018) to ease comparison of results. One study did not report means and SDs (Beddoe & Murphy, 2004) and one failed to report SDs (Cunico et al., 2012) therefore effect sizes could not be calculated. Summary data for individual studies are presented in Table 2.
<table>
<thead>
<tr>
<th>Study</th>
<th>n</th>
<th>IG : CG</th>
<th>Statistical Analysis</th>
<th>Effect of Intervention</th>
<th>p Value</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Alhassan (2019)</td>
<td>n= 173</td>
<td>93:80</td>
<td>64.67% females</td>
<td>ANOVA. Sharipo-Wilk’s test. Power calculation: n= 197, coefficient .95</td>
<td>NS differences. Post-test: CG (110.0, SD= 11.0) vs IG (111.9, SD= 9.0)</td>
<td>p &gt; .05</td>
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<td></td>
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<td></td>
<td>Follow-up: CG (M= 111.9, SD= 8.3) vs IG (109.4 SD=10.4)</td>
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<tr>
<td>2. Ancel (2006)</td>
<td>n= 190</td>
<td>Descriptive stats NR</td>
<td>ANOVA. CHI-Square.</td>
<td>ECS-B mean scores sig. increased from pre-test</td>
<td>p &lt;.05</td>
<td>d = -1.09</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Quasi single group</td>
<td>No power calculation.</td>
<td>(155.6 SD = 23.1) to post-test (180.5, SD = 22.4).</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td>Sig. effect of age (F= 3.568) &amp; education (F=38.193)</td>
<td>p = .030</td>
<td>p = .001</td>
</tr>
<tr>
<td>3. Bas-Sarmiento et al. (2017)</td>
<td>n= 48</td>
<td>79.16% females</td>
<td>Wilcoxon rank-sum; pre vs post mean (SD). Spearman Correlation.</td>
<td>JSE Pre-test only. Sig. diff between males &amp; females (121.07, SD = 8.53)</td>
<td>p =.031</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Quasi single group</td>
<td>No power calculations.</td>
<td>(115.50, SD = 6.75)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>RES</td>
<td>Sig. diff pre-to-post</td>
<td>p = .00</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(66.11, SD= 14.27 vs 82.57, SD= 13.39) and pre-to-follow-up (81.47, SD= 13.57).</td>
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<tr>
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<td></td>
<td>CARE</td>
<td>Sig. diff pre-to-post</td>
<td>p = .00</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td>(22.56, SD= 2.20 vs 28.50, SD= 6.60), pre-to follow up (32.80, SD= 9.22),</td>
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<td></td>
<td>post-to-follow up (28.5 vs 32.8)</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td>Student-Fisher t-test &amp; Wilcoxon signed-rank test.</td>
<td>Carkhuff between groups</td>
<td>C1: sig. diff at post-test</td>
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<td>Cohen’s D</td>
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<td></td>
<td>No power calculations. C2: Sig. diff at post-test</td>
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<tr>
<td>Study</td>
<td>n</td>
<td>Statistical Analysis</td>
<td>Effect of Intervention</td>
<td>p Value</td>
<td>Effect Size</td>
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<tr>
<td>IG : CG</td>
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<td></td>
<td></td>
<td><strong>Study</strong></td>
<td><strong>n</strong></td>
<td><strong>Statistical Analysis</strong></td>
<td><strong>Effect of Intervention</strong></td>
<td><strong>p Value</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>between IG (2.88, SD= .88) &amp; CG 2.15, SD=.96)</strong></td>
<td><strong>between IG and CG.</strong></td>
<td><strong>p = .011</strong></td>
<td><strong>d = .79</strong></td>
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<tr>
<td></td>
<td></td>
<td>&amp; delayed IG (3.52, SD=.42) &amp; CG.</td>
<td></td>
<td><strong>p = .00</strong></td>
<td><strong>d = 1.84</strong></td>
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<tr>
<td></td>
<td></td>
<td><strong>RES between groups</strong></td>
<td><strong>C1: sig. diff between IG (84.70, SD= 15.62) &amp; CG (74.70, SD= 15.57)</strong></td>
<td><strong>p = .009</strong></td>
<td><strong>d = .64</strong></td>
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<tr>
<td></td>
<td></td>
<td><strong>&amp; CG.</strong></td>
<td><strong>C2: no sig. diff. between groups.</strong></td>
<td></td>
<td><strong>p &gt; .05</strong></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td><strong>CARE between groups</strong></td>
<td><strong>C1: sig. diff at post-test</strong></td>
<td><strong>between IG (29.00, SD= 5.98) and CG (23.11, SD= 5.88), &amp; delayed IG (28.82, SD= 5.16) &amp; CG (23.11).</strong></td>
<td><strong>p = .00</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>C2: sig diff between delayed IG (41.50, SD= 7.79) and CG (27.63, SD= 8.12).</strong></td>
<td></td>
<td><strong>p = .00</strong></td>
<td><strong>d = 1.03</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Results maintained at follow-up</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>5. Beddoe &amp; Murphy (2004)</td>
<td>n= 16</td>
<td><strong>females</strong></td>
<td><strong>Paired T-test.</strong></td>
<td><strong>No significant effect found</strong></td>
<td><strong>p &gt;.05</strong></td>
<td><strong>NR &amp; unable to calculate.</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>No power calculation.</strong></td>
<td><strong>No mean or SD reported.</strong></td>
<td></td>
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</tr>
<tr>
<td>6. Cunico et al. (2012)</td>
<td>n= 103</td>
<td><strong>62 : 41</strong></td>
<td><strong>75.8% females</strong></td>
<td><strong>T-test.</strong></td>
<td><strong>ANOVA.</strong></td>
<td><strong>BEES</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>No power calculation but reported n = 100 generally statistically relevant.</strong></td>
<td><strong>IG: 31.56 vs. CG: 35.07</strong></td>
<td><strong>No SD reported.</strong></td>
<td></td>
</tr>
<tr>
<td>7. Ding et al. (2020)</td>
<td>n= 250</td>
<td><strong>125: 125</strong></td>
<td><strong>95.6% females</strong></td>
<td><strong>T-test.</strong></td>
<td><strong>JSE-HP-S</strong></td>
<td><strong>JSE-HP-S</strong></td>
</tr>
</tbody>
</table>

**CCCS**
<table>
<thead>
<tr>
<th>Study</th>
<th>n</th>
<th>Statistical Analysis</th>
<th>Effect of Intervention</th>
<th>p Value</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>IG : CG</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Ferri et al. (2019)</td>
<td>n= 144</td>
<td>T-test.</td>
<td><strong>BEES</strong> IG post-test mean scores (90.22, SD= 9.99) sig. higher than CG (87.41, SD= 11.69)</td>
<td>$p &lt; .42$</td>
<td>$d = .29$</td>
</tr>
<tr>
<td>RCT</td>
<td>72 :72</td>
<td>IG mean post-test scores (38.10, SD= 16.98) sig. higher than CG (31.0, SD= 15.90)</td>
<td>$p = .02$</td>
<td>$d = .43$</td>
<td></td>
</tr>
<tr>
<td>88% females.</td>
<td></td>
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<tr>
<td>Intention-to-treat principles.</td>
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<tr>
<td>Power set at .80; n= 72 per group.</td>
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</tr>
<tr>
<td>9. Gür &amp; Yilmaz (2020)</td>
<td>n= 123</td>
<td>Two-way factorial repeated-measures ANOVA.</td>
<td><strong>JSE</strong> IG mean empathy scores sig. higher</td>
<td>$p = .015$</td>
<td>$d = .94$</td>
</tr>
<tr>
<td>RCT</td>
<td>61 :62</td>
<td>Statistical power set at .80; n= 34.</td>
<td>(101.14, SD =15.19) than CG (86.25, SD= 16.38) at post-test:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>69.9% females</td>
<td></td>
<td>Partial Eta Squared ($\eta^2$) calculation.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>10. Kahriman et al. (2016)</td>
<td>n= 48</td>
<td>T-test.</td>
<td><strong>ESS</strong> Post mean scores for IG (169.5, SD= 22.1) sig. higher than CG (135.1, SD= 51.7).</td>
<td>$p = .015$</td>
<td>$d = .87$</td>
</tr>
<tr>
<td>Quasi</td>
<td>17 :31</td>
<td>No power calculations.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Descriptive stats NR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Lee et al. (2018)</td>
<td>n= 92</td>
<td>T-test.</td>
<td><strong>JSE-HP-S:</strong> No sig. diff. between groups from pre-to-post</td>
<td></td>
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</tr>
<tr>
<td>Quasi</td>
<td>48:44</td>
<td>Generalized Estimation Equation (GEE).</td>
<td></td>
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<tr>
<td>72.81% female</td>
<td></td>
<td>Correlation.</td>
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<tr>
<td>Power calculation:</td>
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<tr>
<td>n=103 large enough to detect medium-large effect sizes ($r = .3$) with a power of .8.</td>
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<tr>
<td>IG:111.83, SD = 7.54 vs CG: 108.89, SD = 12.82</td>
<td></td>
<td></td>
<td>$p = .172$</td>
<td>$d = .279$</td>
<td></td>
</tr>
<tr>
<td>OSCE: Mean scores rated for IG sig. higher than CG (examiners: 20.67, SD= 7.98 vs 11.61, SD= 7.52; situated patients: 27.10, SD= 7.16 vs 21.31, SD= 6.81).</td>
<td></td>
<td></td>
<td>$p &lt; .001$</td>
<td>$d = .82$</td>
<td></td>
</tr>
<tr>
<td>Study</td>
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<td>p Value</td>
<td>Effect Size</td>
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<tr>
<td>IG : CG</td>
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</tr>
<tr>
<td>Quasi</td>
<td>202: 188</td>
<td>No sig. correlation between objective &amp; subjective measures.</td>
<td>CSES</td>
<td>Sig. higher empathy mean scores for full sample at post-test (3.38, SD= .61 vs 3.75, SD= .66).</td>
<td>p &lt; .001</td>
</tr>
<tr>
<td></td>
<td>92.5% females</td>
<td>Mean post-test scores for ‘rehabilitation nurses’ (0.45, SD= .60) sig. higher than ‘patient role’ (.29, SD= .81).</td>
<td></td>
<td></td>
<td>p &lt; .05</td>
</tr>
<tr>
<td>RCT</td>
<td>66: 66</td>
<td>IG post-test mean scores (97.73, SD= 8.38) sig. increased compared to CG (92.74, SD= 4.83) on all dimensions of scale</td>
<td>JSE-HPS</td>
<td>IG mean post-test scores (105.94, SD= 2.69) sig. higher than CG (89.08, SD= 4.83).</td>
<td>p &lt; .01</td>
</tr>
<tr>
<td></td>
<td>80.26% females</td>
<td>Clinical Communication Ability Scale</td>
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<tr>
<td></td>
<td></td>
<td>IG mean post-test scores (105.94, SD= 2.69) sig. higher than CG (89.08, SD= 4.83).</td>
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<tr>
<td></td>
<td></td>
<td>General Self-Efficacy Scale</td>
<td>IG post-test mean scores (41.23, SD= 5.01) sig. higher than CG (37.91, SD= 5.32).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Maghsud et al. (2020)</td>
<td>80</td>
<td>Covariance Analysis.</td>
<td>Statistical power = .564</td>
<td>Davis Empathy Scale</td>
<td>IG sig. higher post-test mean scores (67.70, SD= 9.02) than CG (63.54, SD= 8.05).</td>
</tr>
<tr>
<td>RCT</td>
<td>40: 40</td>
<td>Eta Squared ($\eta^2$) calculation.</td>
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<tr>
<td></td>
<td>84.75% females</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Poyato et al. (2018)</td>
<td>20</td>
<td>Wilcoxon’s test</td>
<td>Spearman’s correlation.</td>
<td>IRI</td>
<td>IG sig. higher post-test whole mean score (91.2, SD= 8.6) than CG (89.9, SD= 7.9).</td>
</tr>
<tr>
<td>Quasi</td>
<td>9: 11</td>
<td>No power calculation.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>65% females</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Vaghee et al. (2018)</td>
<td>111</td>
<td>Chi-square.</td>
<td>Repeated-measures</td>
<td>JSE</td>
<td>Sig. increase for all groups at post-test &amp; follow-up.</td>
</tr>
<tr>
<td>Study</td>
<td>n</td>
<td>Statistical Analysis</td>
<td>Effect of Intervention</td>
<td>p Value</td>
<td>Effect Size</td>
</tr>
<tr>
<td>---------</td>
<td>---</td>
<td>----------------------</td>
<td>------------------------</td>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>IG : CG</td>
<td></td>
<td>Scheffe post-hoc test. No power calculation. Partial eta ( \eta^2 ) calculation reported within groups &amp; between 3 groups but not 2.</td>
<td>Contact-based group sig. higher mean empathy scores at post-test (114.78, SD= 9.01) &amp; follow up (110.83, SD= 9.93).</td>
<td>( p &lt; .005 )</td>
<td>( d = .42 )</td>
</tr>
</tbody>
</table>

**Risk of Bias**

The JBI outlines a pyramid for ‘levels of evidence for effectiveness of experimental designs’ (Joanna Briggs Institute, 2017). This hierarchy provides a concept of higher to lower levels of evidence of effectiveness. Accordingly, seven studies included within this review reported level 1.c (RCT) and nine reported level 2.c (quasi-experimental). *Table 3* presents critical appraisal of risk of bias of the seven RCTs assessed with the JBI Checklist for RCT. *Table 4* presents results for the nine studies assessed by JBI Checklist for Quasi-Experimental Studies. To reduce risk of bias, a third-year Trainee Clinical Psychologist acted as an independent reviewer and applied the appropriate quality assessment to six papers, selected at random. Inter-rater reliability was calculated as 83% (\( \kappa = .712 \)). Any disagreements were collaboratively resolved.
<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>True randomization</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Allocation concealed</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>NR</td>
<td>NR</td>
<td>NR</td>
</tr>
<tr>
<td>Similarities at baseline</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>NR</td>
<td>Yes</td>
</tr>
<tr>
<td>Participants blind to group</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>NR</td>
<td>NR</td>
<td>NR</td>
</tr>
<tr>
<td>Person delivering intervention blind to group</td>
<td>No</td>
<td>NR</td>
<td>No</td>
<td>No</td>
<td>NR</td>
<td>NR</td>
<td>NR</td>
</tr>
<tr>
<td>Outcome assessor blind to group</td>
<td>No</td>
<td>NR</td>
<td>Yes</td>
<td>NR</td>
<td>NR</td>
<td>NR</td>
<td>NR</td>
</tr>
<tr>
<td>Groups treated identical</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Completion of Follow-up</td>
<td>No</td>
<td>No</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>No</td>
</tr>
<tr>
<td>Participants analyzed in groups allocated</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>NR</td>
<td>NR</td>
<td>No</td>
</tr>
<tr>
<td>Same outcome measures</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Outcomes measured reliably</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>-----------------------------</td>
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<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>Appropriate analysis</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Appropriate design</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Note: N/A = not applicable; NR = Not reported

<table>
<thead>
<tr>
<th>Table 4: Quasi-Experimental Studies Risk of Bias Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarity of cause and effect variables</td>
</tr>
<tr>
<td>Participants similarities</td>
</tr>
<tr>
<td>Similar treatment out with intervention</td>
</tr>
<tr>
<td>Control group</td>
</tr>
<tr>
<td>Multiple pre-and-post measures</td>
</tr>
<tr>
<td>Completion of follow up</td>
</tr>
<tr>
<td>Same outcome measures</td>
</tr>
<tr>
<td>Outcomes measured reliably</td>
</tr>
<tr>
<td>Appropriate analysis</td>
</tr>
</tbody>
</table>

Note: N/A = not applicable; NR = not reported
Methodological Quality

In general, across all studies, the authors presented a clear rationale with explicit objectives and appropriate conclusions. The samples also appeared to be representative of the populations being considered. The methodological quality of the reviewed studies, however, was generally poor; which will be discussed.

Randomised Controlled Trials (RCTs).

Risk of selection bias was addressed through randomisation of participants to experimental or control group. Randomisation methods included asking participants to pick a number out of a box (Alhassan, 2019), computer generated lists (Bas-Sarmiento et al., 2019; Gür & Yilmaz, 2020), and a randomisation list stratified by sex (Ferri et al., 2019). Three studies did not report randomisation method (Li et al., 2019; Maghsud et al., 2020; Vaghee et al., 2018). Three studies concealed allocation from researchers and participants (Alhassan, 2019; Bas-Sarmiento et al., 2019, Gür & Yilmaz, 2020), and in one study participants were aware of allocation but not researchers (Ferri et al., 2019). Three studies failed to report whether allocation was concealed (Li et al., 2019; Maghsud et al., 2020; Vaghee et al., 2018). All studies attempted to control confounding variables by analysing baseline data and reported no significant differences between groups with respect to demographic data.

Attrition bias throughout studies was generally poor with no studies conducting an intention-to-treat (ITT); which could represent a threat to the internal validity of a study. Four studies reported ‘drop-outs’ at intervention stage and/or at follow-up (Alhassan, 2019; Bas-Sarmiento et al., 2019; Gür & Yilmaz, 2020; Vaghee et al., 2018). Two studies failed to report data relating to attrition (Li et al., 2019; Maghsud et al., 2020) and one reported following “principles of ITT”, however reported having no ‘drop-outs’ (Ferri et al., 2019). Four studies failed to conduct a follow-up to assess sustained effects of outcome (Gür & Yilmaz, 2020; Ferri et al., 2019; Li et al., 2019; Maghsud et al., 2020).
The reviewed studies were assessed on their statistical, conclusive validity: the degree to which conclusions about variable relationships are correct (Lipsey, 2000), with two studies scoring poorly (Ferri et al., 2019; Li et al., 2019). A threat to this type of validity is statistical power, which is the probability of achieving clinically meaningful effects (Cohen, 1992). Four studies (Bas-Sarmiento et al., 2019; Ferri et al., 2019; Li et al., 2019; Vaghee et al., 2018) failed to report power calculations. In addition to poor reporting of statistical power, two studies (Ferri et al., 2019; Li et al., 2019) failed to report effect sizes; the magnitude of the treatment effect (Durlak, 2009).

**Quasi-Experimental Studies**

Three studies used a pretest-postest design with a single-group (Ancel, 2006; Bas-Sarmiento et al., 2017; Beddoe & Murphy, 2004), which could weaken validity of causal inferences (JBI, 2020). The remaining six studies had a control group as a comparator. Only one study conducted a follow-up (Bas-Sarmiento et al., 2017). Two studies reported power calculations (Cunico et al., 2012; Lee et al., 2018). All studies, however, failed to report effect sizes. Four studies had a small sample size (n<50) compared to the other studies; n=16 was the smallest (Beddoe & Murphy, 2004) and n=48 was the highest (Bas-Sarmiento et al., 2017; Kahriman et al., 2016).

**Types of Educational Interventions**

All 16 studies included within this review aimed to improve empathy levels of participants; by educational interventions, and by evaluated pre-and-post empathy levels. The type of training or intervention used throughout studies differed. Eight studies used various elements of both experiential learning and theoretical knowledge teaching, and were consequently classified as ‘mixed’ (Alhassan, 2019; Bas-Sarmiento et al., 2017; Bas-Sarmiento et al., 2019; Cunico et al., 2012; Ding et al., 2020; Kahriman et al., 2016; Lee et
al., 2018; Poyato et al., 2018). Four studies implemented psychotherapy principles (Ancel, 2006; Beddoe & Murphy, 2004; Gür & Yilmaz, 2020; Vaghee et al., 2018); Ancel (2006) used existential psychotherapy to inform training programme, studies Beddoe and Murphy (2004) and Gür & Yilmaz, 2020 used Mindfulness-based training, and Vaghee et al. (2018) used Acceptance and Commitment Therapy (ACT) training with one group of participants. Two studies focused on improving empathy through perspective-taking, by hearing life-experiences from real patients (Ferri et al., 2009; Levett-Jones et al., 2017; Vaghee et al., 2018). Li et al. (2019) implemented evidence based practices to improve therapeutic alliance and empathy. Maghsud et al. (2020) failed to report specific details of the training programme and, consequently could not be classified, which raises replicability concerns. Beddoe and Murphy (2004) and Gür and Yilmaz (2020) required participants to do activities or ‘homework tasks’ in their own time, in addition to the face-to-face training sessions.

Overall, six educational interventions significantly improved empathy with large effect sizes \( (d = .8) \) (Ancel, 2006; Bas-Sarmiento et al., 2017; Bas-Sarmiento et al., 2019; Gür & Yilmaz, 2020; Kahriman et al., 2016; Lee et al., 2018) and three with moderate effect sizes \( (d = .5) \) (Ferri et al., 2009; Levett-Jones et al., 2017; Li et al., 2019). Five of these studies used experiential learning as the basis of training (Bas-Sarmiento et al., 2017; Bas-Sarmiento et al., 2019; Gür & Yilmaz, 2020; Kahriman et al., 2016; Lee et al., 2018). Thus, experiential learning may be the most effective method of improving empathy within nurses.

Participation time for the educational interventions varied from one hour to sixty-four hours, with a mean length of 17 hours (SD = 16.13). Three studies (Alhassan, 2019; Ding et al., 2020; Poyato et al., 2018) failed to report the amount of participation time and were not included in the calculation. Duration of participation time in days ranged from 1 to 16 days, the mean length was 5.14 days (SD = 4.13). Four studies (Beddoe & Murphy, 2004; Lee et
al., 2018; Poyato et al., 2018; Vaghee et al., 2018) failed to report the number of days of intervention and were not included in the calculation.

**Outcome measures**

All studies used a subjective outcome measure to assess empathy levels and three studies used additional objective measures (Lee et al., 2018; Bas-Sarmiento et al., 2017; Bas-Sarmiento et al., 2019). The most commonly used subjective outcome measure was the Jefferson Scale of Empathy (JSE). The most commonly used objective measure was The Consultation and Relational Empathy Measure (CARE). Ten studies used only one outcome measure (Alhassan, 2019; Ancel, 2006; Beddoe & Murphy, 2004; Cunico et al., 2012; Gür & Yilmaz, 2020; Kahriman et al., 2016; Levett-Jones et al., 2017; Li et al., 2019; Maghsud et al., 2020; Poyato et al., 2018; Vaghee et al., 2018), whilst one study used four (Bas-Sarmiento et al., 2019). Most of the subjective measures of empathy were self-reported which can be linked to social desirability bias: “the tendency to respond to self-report items in a way that makes the respondent look good, rather than to respond in an accurate and truthful manner” (Holtgraves, 2004). Objective measures typically involved an external rater assessing the participant’s empathy skills from a patient perspective which reduced the risk of social desirability bias. Studies with both subjective and objective measures and more than one outcome measure were better placed to suggest a more reliable improvement to empathy.

Four studies found their intervention to significantly improve empathy, with moderate effect sizes (Bas-Sarmiento et al., 2019; Gür & Yilmaz, 2020; Maghsud et al., 2020; Vaghee et al. 2018). Bas-Sarmiento et al. (2019) used subjective and objective measures of empathy and reported an improvement to objective measures only. Conversely, the other three studies used only one subjective measure of empathy and observed clinically relevant improvements. All studies apart from Cunico et al. (2012) reported psychometric properties of outcome
measures used. All studies used validated tools to measure empathy. The components of empathy: affective, cognitive, or behavioural (Lam et al., 2011) targeted by each outcome measure is depicted in Table 5. Only three outcome measures assessed all three dimensions of empathy (CARE, CCCS, CSES).

Table 5: Dimensions of Empathy per Outcome Measure

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>Domain</th>
<th>Subjective or Objective</th>
<th>Which Study Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>JSE HPS</td>
<td>Affective &amp; Cognitive</td>
<td>Subjective</td>
<td>1, 3, 4, 7, 8, 9, 11, 13, 16</td>
</tr>
<tr>
<td>ECS-B</td>
<td>Affective &amp; cognitive</td>
<td>Subjective</td>
<td>2</td>
</tr>
<tr>
<td>RES</td>
<td>Behavioural</td>
<td>Objective</td>
<td>3, 4</td>
</tr>
<tr>
<td>CARE</td>
<td>Affective, cognitive, behavioural</td>
<td>Objective</td>
<td>3, 4</td>
</tr>
<tr>
<td>Carkhuff Scale</td>
<td>Cognitive &amp; behavioural</td>
<td>Objective</td>
<td>4</td>
</tr>
<tr>
<td>IRI</td>
<td>Affective &amp; cognitive</td>
<td>Subjective</td>
<td>5, 15, 14</td>
</tr>
<tr>
<td>BEES</td>
<td>Affective &amp; cognitive</td>
<td>Subjective</td>
<td>6, 9</td>
</tr>
<tr>
<td>CCCS</td>
<td>Affective, cognitive, behavioural</td>
<td>Subjective</td>
<td>7</td>
</tr>
<tr>
<td>ESS</td>
<td>Affective and cognitive</td>
<td>Subjective</td>
<td>10</td>
</tr>
<tr>
<td>OSCE</td>
<td>Affective &amp; behavioural</td>
<td>Objective</td>
<td>11</td>
</tr>
<tr>
<td>CSES</td>
<td>Affective, cognitive, behavioural</td>
<td>Subjective</td>
<td>12</td>
</tr>
</tbody>
</table>

JSE-HPS = Jefferson Scale of Empathy-Health Profession-Student Version (Hojat et al., 2002); ECS-B = The Scale for Empathic Communication Scale (Dökmen, 1988); RES = The Reynolds Empathy Scale (Reynolds 2000); CARE = The Consultation and Relational Empathy Measure (Mercer et al., 2004); IRI= Interpersonal Reactivity Index (Davis, 1980); BEES= The Balanced Emotional Empathy Scale (Mehrabian, 1996); CCCS = Clinical Communication Competence Scale (Yang et al., 2010); ESS= The Empathic Skill Scale (Dokmen, 2005); OSCE = Objective Structured Clinical Examination; CSES = Comprehensive State Empathy Scale.
Discussion

Summary of Findings

The aim of the systematic review was to investigate whether educational interventions effectively enhanced empathy levels of nurses or student nurses. Overall the results from the reviewed studies were promising, with only three studies failing to find a significant effect. These findings were consistent with previous reviews, finding that empathy had been enhanced by educational interventions to some extent (Brunero et al., 2010; Fragkos & Crampton, 2020; Kelm et al., 2014; Kiosses et al., 2016; Patel et al., 2019; Winter et al., 2020).

Clinical Relevance of Results

Nine studies reported enhanced empathy skills with large and medium effect sizes, suggesting the interventions used were effective in improving empathy levels of general nurses (Ancel, 2006), paediatric nurses (Kahriman et al., 2016), and student nurses (Bas-Sarmiento et al., 2017; Bas-Sarmiento et al., 2019; Ferri et al., 2009; Gür & Yilmaz, 2020; Lee et al., 2018; Levett-Jones et al., 2017; Li et al., 2019). Out of all the intervention types, experiential learning was the most effective at improving empathy levels within nurses. These findings also support the theory that empathy can be trained (Alligood, 1992). This is an important finding as nurses who have well developed empathy skills, theoretically have better therapeutic relationships with patients (Adams, 2016), which is necessary for successfully delivering PCC.

Quality of Research

In general, the methodological quality of the reviewed studies was poor. Overall, the studies scored poorly on statistical conclusive validity, with only five out of sixteen studies reporting effect sizes. Relying on statistical significance on its own can be problematic due to
the confounding factor of sample size and the increased risk of making a type II error. A statistically significant result could simply mean a large sample size was involved, and a difference that is trivial may be detected. The majority of the studies reviewed had relatively large sample sizes with no effect sizes reported; therefore it was important to calculate the strength of the reported improved empathy effects. Without effect sizes, the clinical relevance of the empathy-enhancing interventions would be unknown. Thus, it would create implications for healthcare services or universities hoping to utilise such interventions.

Most studies used subjective measures of empathy only, which are often linked with social desirability effects (Kelm et al., 2014) and therefore, potentially inaccurate at evaluating changes to behaviour due to the focus on affective and cognitive dimensions of empathy (Bonvicini et al., 2009). Young et al. (2008) recommends the use of objective measures to assess deeper learning and ‘behavioural empathy’ when using different pedagogies, as subjective measures can sometimes yield “short-term surface learning”. Thus, it is suggested that future research should triangulate subjective and objective measures of empathy in order to increase data reliability, and better assess all three components of empathy.

Overall, only four out of sixteen studies conducted a follow-up; the longest length of follow-up was six months (Alhassan, 2019), however no significant improvement to empathy was found at post-test or follow up. Two studies reporting large effect sizes reported sustained effects at one month follow-up (Bas-Sarmiento et al., 2017; Bas-Sarmiento et al., 2019). Not conducting a follow-up reveals a critical methodological weakness as the long-term utility of the interventions is not known. Interestingly, empathy is considered to decrease over time (Hojat et al., 2009; Lor et al., 2015) yet none of the reviewed studies assessed treatment effects beyond six months. Empathy is argued to be the cornerstone of PCC (Satran et al., 2020) and an acquired competency within the nursing field (Doyle et al.,
2014; Kelm et al., 2014). However, not knowing the length of treatment effects from these empathy-enhancing interventions could be problematic and costly to healthcare services or universities hoping to train the workforce. Hojat, Axelrod, Spandorfer and Mangione (2013) suggest enhanced empathy can be sustained when reinforced by supplementary educational activities, such as lectures or case presentations, and watching educational films.

**Generalisability of Findings**

Comparing the reviewed studies was challenging due to the heterogeneity of methodology and study designs. The variety of outcome measures also meant it was not possible to compare results on a common scale. It was therefore problematic to perform evidence synthesis with confidence, using only summary data from individual studies.

Risk of gender bias could be a concern since 83% of participants throughout the reviewed studies were female. According to the Nursing and Midwifery Council (March 2020) however, 89% of permanent registered nurses in the UK identify as female therefore the sample may be representative of the UK nursing population. Research by Baron-Cohen (2002) and Lawson et al. (2004) argues the ability to empathise is influenced by gender, with women typically being more empathic. This finding aligns with two studies within this current review, with females having significantly higher empathy levels at pre-test (Bas-Sarmiento et al., 2017) and at post-test within the intervention group (Cunico et al., 2012). A further challenge is that, the majority of the reviewed studies were conducted within Asia and may not be transferable to Western healthcare settings due to differences in baseline empathy levels or cultural differences.

To discount potential effects of the methodological limitation on outcome, further research is required with standardised methodology. Future research utilising a standardised training programme based on experiential learning would be beneficial to explore treatment
effects further. Future research should be adequately powered and consider implementing more rigorous study designs, such as a longitudinal design to ensure the most conclusive findings.

**Implications of Findings**

Although the training methods differed between studies, one key theme was that nurses were encouraged to reflect. This links in with Kolb’s (1984) experiential learning theory: that learning occurs through reflection of an experience. It also connects with the concept of ‘Reflective Learning’ as the central approach within nursing curricula. Furthermore, this provides support that experiential learning is the most promising method to improve empathy within nurses (Brunero et al., 2010). Interestingly, it is suggested that an individual’s overt ability to mentalize is accessed through reflection, in the context of other relationships (Bateman & Fonagy, 2004). Satran et al. (2020) suggests empathy underpins the capacity to mentalize, which is important for communication skills and the delivery of PCC. Allen (2006) also suggests the two concepts are almost synonymous. This is a strong indicator that the mentalizing skills of the participants were implicitly assessed through the use of reflection during the educational interventions. Recent research by Steinmair, Richter and Loeffler-Stastka (2020) suggests that mentalizing ability following training remained relatively stable over time and was influenced by context. This unusually contradicts the theory that empathy diminishes over time, given the link between empathy and mentalization and the reasonable expectation that both would show the same pattern over time. Further research is required to investigate the relationship between these two concepts by comparing outcome measures pre-and-post empathy training with long-term follow-up.

Nurses consistently work within emotionally-charged situations and there is evidence such situations can negatively impact an individual’s ability to empathise, and ultimately to successfully deliver PCC. Consistent evidence exists of a negative association between
burnout and empathy within healthcare professionals (Wilkinson, Whittington, Perry & Eames, 2017). Different healthcare environments may be more emotionally-charged and difficult to manage, for example, acute psychiatric inpatient wards have twenty times the standard rate of physical violence (Magnavita & Heponiemi, 2012). Nurses may subconsciously rely on defence mechanisms such as avoidance or over-involvement of patients, to manage such emotionally-charged situations (Michaelsen, 2012). Research incorporating feedback from service-users indicates a reciprocal relationship between patients and healthcare professionals which can predict overall care delivery, experience and satisfaction levels for both groups (Woodward et al., 2017). All of these considerations have wider implications on the ability of healthcare services to adequately deliver PCC, a strategic priority of the Scottish Government (Scottish Government, 2020). This review cannot comment on whether empathic skills of nurses are resilient within emotionally-charged situations due to the lack of follow-up; also the lack of assessment of wellbeing and coping strategies. It is likely that improving empathy levels in nurses may be one important component of improving the delivery of PCC, with the added bonus of developing wellbeing, and adaptive coping strategies. One of the studies reviewed (Beddoe & Murphy, 2004) concluded that mindfulness-based training may not have increased empathy levels, but being mindful decreased the nurses tendency to absorb the emotions of others. This psychological therapy may therefore be a good way to improve their ability to cope with emotionally-charged situations, and future research should investigate this further.

Furthermore, most of the studies relied on one self-reported measure of empathy and did not consider the patient’s opinion, despite the accepted opinion that the latter is the best source of reliable evaluations of empathy (Brunero et al., 2010; Cunico et al., 2012). Considering PCC is the current therapeutic approach to nursing, and patients are at the centre
of this approach, patients’ opinions would likely have been invaluable for healthcare services to consider.

**Limitations of Review**

Only the lead researcher was involved in the study selection process, data extraction, and synthesis of data. Having at least two reviewers would have minimised risk of bias and human error. A meta-analysis was not conducted due to heterogeneity of intervention methods and outcome measures. A meta-analytical approach could have provided a precise estimation of intervention effects. Additionally, the majority of studies implemented a quasi-experimental design. Such designs without random allocation can be subject to selection bias and potential overestimation of intervention effects. Nonetheless, quasi-experimental designs can still provide relevant data due to rigorous methodology. Finally, despite the rigorous protocol of this review, the risk of overlooking relevant studies could not be fully eradicated, such as the exclusion of relevant studies in languages other than English.

**Conclusion**

Empathy is considered an important component of PCC. Resilient empathy skills are considered essential to nurses, who often work within emotionally-charged environments. The overall findings from this systematic review are promising for the effectiveness of empathy-enhancing interventions within the nursing field. It is recommended, however, that additional research with standardised interventions and more rigorous study design may be beneficial. Of particular relevance for universities is the potential value of: investing in the sustained treatment effects of such interventions for healthcare services; also the assessment of, and development of coping strategies and wellbeing of nurses to improve resilience and ability to cope with emotionally-charged situations. All of these considerations should theoretically improve outcomes in the successful delivery of PCC.
Declaration of Interest

The authors report no declarations of interest.
References


4. Empirical Paper

*Inferring Prevalence of Mentalization within Registered Mental Health Nurses Working within Acute Psychiatric Wards Using the Critical Incident Technique*

This paper is written in accordance with the author guidelines for the *Journal of Clinical Nursing* (Appendix A).
Abstract

**Background:** The mentalization process may be advantageous in the successful application of sensitive care-giving. Nurses with effective mentalizing skills theoretically are aware of their own and others emotions and behaviours, therefore better prepared to manage difficult and emotionally activating experiences. Nurses tend to work within emotionally-charged environments, which can be a barrier to effective mentalizing. The overt manifestation of capacity to mentalize is referred to as Reflective Functioning (RF). The aim of this study was to investigate this capacity in relation to Registered Mental Health Nurses (RMNs), and the extent to which this could predict wellbeing.

**Methods:** RF ability in RMN’s was assessed through two measures: self-reported on the Reflective Functioning Questionnaire (RFQ); and inferred by means of reflection of a critical incident. The Critical Incident Technique (CIT) was used to prompt reflection and transcripts were coded using the RF manual and computerized text analysis version of reflective function (CRF). Participants also completed the Professional Quality of Life Measure (ProQOL) as a gauge of wellbeing.

**Results:** Three main themes were identified from qualitative data: 1- a pragmatic approach to care; 2- a compassionate approach to care; and 3- organisational barriers to care. From the quantitative data, self-reported high mentalizing ability was a significant predictor of compassion satisfaction (CS). However, narrated RF had no association with self-reported ability, and was not a predictor of wellbeing. Self-reported RF did not predict burnout or secondary traumatic stress.

**Conclusion:** Effective mentalizing skills predicted positive wellbeing, which may, therefore, provide a protective factor for mental health. However, low RF did not predict negative wellbeing which was contradictory to previous research. In addition to managing patient challenging behaviour, RMNs may have to manage organisational barriers. Overall, the study was underpowered therefore the results may be considered preliminary. Future research is required with an adequately powered sample.

**Key words:** Mentalization; Mentalizing; Reflective Functioning; Mental Health Nurse; Wellbeing
Introduction

Little is known about the mental processes involved in patient care, especially within the field of psychiatric nursing. It is well documented that mental processes are linked with behaviour (Beck & Beck, 2011), therefore it is important to consider those which underpin the ability to provide care. This consideration is paramount since The Scottish Government and NHS Scotland commits to providing the highest quality of care to all service users (National Institute for Health and Care Excellence [NICE], 2020). An increasing body of empirical research suggests the psychological concept of mentalization is crucial for sensitive care giving (Granger, 2008; Ironside, 2012; Schofield & Beek, 2005; Stacks et al., 2014; Vismara, Sechi & Lucarelli, 2021). Research within the context of psychotherapy has also indicated the capacity to mentalize is an important foundation for clinical efficiency and therapeutic techniques (Bateman & Fonagy, 2004; Fonagy, 1999; Goodman, 2013; Ensink et al., 2013).

Mentalization

The construct of mentalization can be understood narrowly as the ability to infer emotional and mental states underlying behaviour (Fonagy, Gergely & Jurist, 2018). Broadly, it is understood as an innate and crucial human function for emotion regulation and social relationships (Fonagy, Steele, Steele, Moran & Higgitt, 1991; Schultheis, Mayes & Rutherford, 2019; Slade, Grienenerger, Bernbach, Levy & Locker, 2005) which can either be automatic or effortful. The capacity to mentalize is a developmentally acquired skill which allows individuals to infer and recognise that behaviours are motivated by internal states, creating realistic models to explain behaviours (Fonagy & Target, 1997; Bouchard et al., 2008). The process of understanding internal states has been examined through various theoretical and methodological frameworks such as: theory of mind (Baron-Cohen, 2000);
mind-mindedness (Meins et al., 2003); and reflective functioning (Slade, 2005).

Mentalization encompasses many of the essential constructs of these theories to advance understanding of the development of intrinsic abilities required for self-regulation and relatedness (Fonagy & Bateman, 2006).

Mentalizing skills, according to theory, develop from early caregiver-infant interactions, particularly when caregivers congruently mirror displays of affections back to infants (Fonagy & Bateman, 2016). This reciprocity supports infants to develop the capacity to understand their own internal states, and ultimately to mentalize independently and infer the internal states of others (Fonagy & Target, 1997; Fonagy & Allison, 2013). Fonagy and Bateman (2004) suggest the ability to mentalize is closely linked to attachment style, with high ability only occurring with secure attachment. The researchers suggest the progression from “assisted to independent observation of the self” depends on secure attachment. This progression relies on adaptive and consistent emotional parent-child interactions. A secure attachment pattern is considered to evolve if the needs of the child are met consistently and a sense of predictability ensues (Gergely, & Unoka, 2008).

An Individual’s ability to mentalize may possibly be accessed: through reflection; in the context of other relationships; through narration; and self-reported methods (Fonagy & Target, 1997). This overt manifestation of an individual’s capacity to mentalize is referred to as Reflective Functioning (RF) (Bateman & Fonagy, 2004). Katznelson (2014) suggests RF “offers an empirically grounded framework for the assessment of mentalization”. The Adult Attachment Interview (AAI) (George, Main, & Kaplan, 1985) is a common method used to elicit such reflection of important relationships and is coded for RF to operationalise the concept of mentalization (Besharat, 2011). ‘Genuine mentalizing’ is characterized by the ability to recognise the opaqueness of mental states, wherein there is modesty about knowing
one’s own and others’ mental states (Fonagy et al., 2016). This combination forms relatively 
accurate models of the mind, both for oneself and for others.

Poorly developed mentalizing skills are associated with insecure attachment and 
pathology of the self (Fonagy & Luyten, 2009). Initially considered as the underlying 
mechanism of personality disorders, mentalization is now considered a transdiagnostic 
concept that can be applied to most mental health conditions such as: trauma; eating 
disorders (EDs); psychosis; and depression (Bateman & Fonagy, 2019). Mentalization-based 
Therapy (MBT) is an evidence based treatment recommended to increase the mentalizing 
capacity of individuals with complex mental health (Bateman, & Fonagy, 2004).

**Assessing Mentalization**

Mentalization is known as an umbrella concept consisting of distinctive dimensions 
(Luyten et al., 2019). Currently, the phrase “mentalizing” is used within clinical practice, 
often as a pre-diagnostic assessment (Luyten et al., 2019). Different psychopathologies show 
particular deficits in the dimensions of RF therefore there is growing interest to examine 
these deficits to inform therapeutic interventions (Choi-Kain & Gunderson, 2008; Luyten et 
al., 2019). The conceptualization of mentalization has developed over the years, with 
researchers proposing the concept is composed of eight dimensions (Fonagy et al., 2012; 
Luyten, Fonagy, Lowyck & Vermote, 2012): automatic (implicit), controlled (explicit), 
toward self, toward others, cognitive, affective, internally focused, and externally based. 
Thus, a “good” capacity to mentalize is the result of equilibrium between the dimension. 
Whilst an imbalance on one or more of the dimensions may imply “problematic”, particularly 
since these dimensions typically represent systems in which a dysfunction at one end can be 
expressed as an excess at the other pole (Fonagy et al., 2012).
Narrative vs Self-Report Measures of RF

Narrative

Transcript-based measures are a common method of assessing a person’s capacity to mentalize, and typically involves a verbal account being narrated and then coded on a particular scale. The AAI (George et al., 1985), a semi-structured interview, prompts individuals to consider their childhood experiences, specifically in relation to their parents. Of particular interest is the individual’s perceived impact and possible explanation of their parent’s behaviour. The AAI provides a comprehensive guide to reviewing the interview transcript using a particular coding scale, all of which requires formal training. The gold standard and validated measure of mentalizing is the Reflective Function Scale (RFS) (Fonagy et al., 1998), which was designed to be used in conjunction with the AAI.

The RFS offers a coding procedure to evaluate the quality of mentalization in the context of attachment relationships, by assessing the individual’s capacity to understand mental states and ability to contemplate these coherently. For each transcribed passage from the AAI, the rater refers to an 11-point scale to code the presence or absence of a reflective stance and a global score is calculated. The RFS promotes the consideration of the context in which a response is elicited; whether RF capacity was directly elicited or occurred spontaneously. Coding procedures rely on a distinction from eight “demand questions” and 12 “permit questions” asked during the AAI. By definition, the former directly prompts reflection on one’s own and other’s mental states, whereas “permit questions” does not probe but allows for individual’s to demonstrate reflective capacity. Responses to demand questions are designed to predominate, as these questions directly elicit RF capacity, however, spontaneous RF responses are still coded.
Interestingly, no significant differences were found between the mean RF values of the eight demand questions (Katznelson, 2014). This implies important considerations within the coding procedure, as it creates the possibility of omitting certain demand questions, without compromising the overall score. This would particularly be useful should the interviewer be short of time. Furthermore, the relationship between the two types of questions was examined with respect to which had more influence over determining the global score. The analysis suggested the global score, which includes responses to both types of question, was higher than the total mean for the demand questions only. Thus, information from “permit questions” is important and contributes to the overall measure.

The potential challenge of measuring RF from verbal narratives elicited from interviews is whether it is measuring individual’s ability to understand the mental states of the self/ others, or how well an individual can coherently and logically describe themselves (Shaw et al., 2020). It raises the question of whether the interviews and coding system are measuring an aspect of intellect or of education, as opposed to RF capacity. A criticism of the RFS is that it generates a single, global score, which raises concerns around construct validity; also whether it fully encompasses the complexity of mentalization (Choi-Kain & Gunderson, 2008; Gullestad & Wilberg, 2011). Katznelson (2014) suggests the RFS risks decontextualising and oversimplifying the mentalization process, and the way in which an individual’s mentalizing capacity is brought into the conversation. The researchers suggest further systematic investigation is required to explore whether RF represents a one-dimensional or multidimensional construct. Additionally, the RFS typically codes transcripts from expensive and time-consuming interviews that require extensive training, which may impede research efforts and limit usability out with research. All of these concerns are unfortunate, considering the rich clinical potential inherent in the assessment of RF.
Nevertheless, the RFS demonstrates high inter-rater reliability and good validity (Fonagy et al., 1991; Fonagy et al., 1996; Fonagy et al., 1998).

**Self-Report Measures**

RF ability can also be assessed by self-report questionnaires, comparatively less time consuming than narrative measures and easier to administer (Shaw et al, 2020). To date self-report measurements are limited, and similar constructs such as empathy and mindfulness are used to assess components of RF (Fonagy et al., 2016).

The Reflective Functioning Questionnaire (RFQ) is the first developed self-report measure (Fonagy et al., 2016). The RFQ is theory driven and constructed based on the concept of RF, and two specific aspects: the certainty; and uncertainty of mental states. Construct validity was satisfactory and was distinguished between healthy controls and individuals with a diagnosis of BPD, which has been replicated in various studies (Badoud et al., 2015; Fonagy et al., 2016; Morandotti et al., 2018). The Mentalization Scale (MentS) is a 28-item self report measure to assess three dimensions of RF: Self-Oriented; Other-Orientated; and Motivation (Dimitrijević et al., 2018). Although it has good psychometric evidence, it lacks convergent validity with the RFS. Both the RFQ and the MentS focus on partial aspects of mentalization but on different dimensions. Thus, while both questionnaires operationalize mentalization, they could detect different aspects of it.

The main challenge with developing a self-report measure of mentalization, is that responders need to be able to take a meta-perspective of their own mental state (Roefs et al., 2011), i.e. they need to rely on their ability to mentalize, to respond to each item within the questionnaire. It is suggested that RF occurs largely outside of conscious control and/or awareness; therefore individuals may have limited access to their ability to function within this domain (Luyten et al., 2012). In addition to this, two broad types of impairment in RF are
considered to be associated with vulnerability for psychopathology (Fonagy et al., 2018; Fonagy & Luyten, 2016): hypomentalizing and hypermentalizing. The former is concerned with an individual’s inability to consider complex models of the mind. Hypomentalizing has been linked with psychopathology: including BPD (Fonagy, Luyten, 2016), Eating Disorders (Skárderud, 2007), and depression (Luyten & Fonagy, 2015). Typically those who are prone to hypomentalizing tend to be aware of their limitations in their understanding of themselves and/or others, and this may impact accurate responding on self-reported measures of RF. The opposite, hypermentalizing is associated with ‘excessive’ mentalizing, i.e. developing mentalistic representations of actions without appropriate evidence to support such models. Those who have a tendency to hypermentalize tend to show biased responses on self-reported measures of RF as they have inaccurate models of the mind and consider themselves to be ‘good mentalizers’ (REF). Overall, self-report questionnaires can be beneficial with respect to efficiency; however like any questionnaire it may be impacted by perceived social desirability effects, and by the accuracy in which the responder can evaluate their own mental processes (Gratz and Roemer, 2004).

Furthermore, Dziobek et al. (2008) suggest self-report measures typically do not consider the interactional context wherein mentalization is considered to occur. It is suggested self-reported measures may fail to demonstrate the complexity of mentalization in everyday situations where individuals may be personally involved and interested in making inferences about their own behaviour, intentions and emotions and those of others. Dziobek et al. (2007) therefore suggest self-reported measures may be limited in their ecological validity, stating that mentalization is viewed as a phenomenon that materializes within a conversation. Luyten et al. (2012) furthers such validity concerns and suggest self-reported measures assess mentalization “offline” that is: occurring outside of social interactions, which does not provide a true measure of the person’s ability to mentalize.
Development of Additional Measures of RF

Consequently, this has influenced finding alternative and cost-effective methods to measure RF. The Brief Reflective Function Interview (BRFI; Rudden, Milrod, and Target 2005), based on the AAI, was developed to use with the RFS scale. The BRFI focuses on questions that prompt reflection about attachment relationships and focus less on episodic memories. It includes “demand questions” which is considered a valid assessment technique of RF. The researchers evaluated construct validity of the BRFI and compared scores with the AAI, and reported a significant correlation between the two. The BRFI was reported to have a significantly shorter administration time compared to the AAI (Rutimann & Meehan, 2012). Thus suggesting, the BRFI could be considered an alternative measure of RF, and reduced administration time makes it more viable for research measuring RF over multiple time points. However, the study was based on a non-clinical sample and to establish full validity of the measure, it would need to replicate the results of previous validity studies that evaluated the AAI.

Additional rating scales have been developed for the assessment of RF, including The Reflective Functioning Rating Scale (RFRS; Meehan, Levy, Reynoso, Hill, & Clarkin, 2009). This observer-based measure can be applied to various data sources, including interviews, but not limited to the AAI. A study by Levy et al. (2006) analysed RF capacity within individuals with a diagnosis of BPD, using the RFRS. The data revealed a factor structure; the correlation between variables that are said to measure a particular construct. These three factors identified were: “(1) a lack of explicit effort to tease out mental states underlying behaviour as evidenced by distortions and defensive reactions; (2) an awareness of the nature of mental states; and (3) recognition of the developmental aspects of mental states.” The researchers correlated the RF scores with those originally collected from the AAI and found significant correlations with factor 1 and 2 only. The researchers suggest the RFRS shows promising
results of assessing RF using more time efficient methods, however similarly to the BRFI, further research is required to evaluate validity and reliability before they can be considered a replacement to the AAI.

Furthermore preliminary results from an innovative study promote the use of computerized text analysis (CRF) (Fertuck, Mergenthaler, Target, Levy & Clarkin, 2012) to measure RF. The CRF rating scale (Fertuck et al., 2012) adds an understanding of the linguistic markers of RF speech. The researchers suggest there are unique markers of high and low RF speech that can be utilised to evaluate narratives for RF level. Fertuck et al. (2012) reported significant associations between CRF and RF in both clinical and non-clinical samples of adults, thus suggesting a computerised RF measure has potential to provide an efficient assessment of RF. Further validation studies would, however, be required. Fentuck et al. (2012) suggest that, until further validity studies are conducted, the CRF should be supplementary rather than a replacement to the RFS.

As mentioned above, although a large number of important theoretical research has been conducted within the topic of mentalization, the literature likely suffers by the use of assessment measures that may not fully assess the full complexity of the construct. These validity concerns could present some limiting disadvantages to their large-scale use.

**Function of Mentalization within Care Systems**

Fonagy and Bateman (2019) propose that caregivers with effective mentalizing skills tend to be aware of their own emotions and behaviour whilst understanding children’s mental states and behaviours (Fonagy et al., 1991). Parents with effective mentalizing skills are better prepared to manage difficult and emotionally activating experiences without becoming overwhelmed and withdrawing from the child (Borelli, St John, Cho & Suchman, 2016). An illustration of caregivers who are required to have effective mentalizing skills is foster carers, as they often care for children who are under extreme physical and emotional stress, and who
require support to recover from trauma (Arnow, 2004). Foster parents with effective mentalizing skills tend to be more tolerable of negative behaviours, less likely to assume negative intentions, and to respond to the child in a compassionate manner (Fonagy & Levinson, 2004; Zeegers, Colonnese, Stams & Meins, 2017). These specific mentalizing skills may help parents regulate themselves emotionally and behaviourally during difficult interactions with children, which in turn are likely to demonstrate emotion regulation to children (Asen & Fonagy, 2012).

Nurses working within acute psychiatric settings also care for individuals experiencing similar difficulties to children within the care system (Robinson, Clements & Land, 2003) such as: behavioural problems with extreme physical and emotional distress (Robinson et al., 2003); poor attachment styles; and complex trauma (Arnow, 2004). Considering the above-mentioned research with foster carers, it could be hypothesised that nurses who can mentalize well would better understand their own emotional states and behaviours and the emotional states and behavioural intentions of patients. Thus, they would provide more compassionate care, (Fonagy et al., 2004) possibly better treatment outcomes, and reduced relapse rates (Arnow, 2004; Zeegers et al., 2017).

**Barriers to Mentalization**

Research by Luyten et al., (2012) suggests low mentalizing ability is associated with high stress levels. Carers with psychological distress, it is suggested, are more likely to perceive challenging behaviours as stressful (Sheinkopf et al., 2005). Emotionally-charged situations can negatively impact an individual’s ability to mentalize, and this is particularly relevant to the nursing field (Satran et al., 2020). It is suggested that psychiatric nurses working within acute psychiatric environments have a twenty times higher rate of physical violence than those working within physical health units (Magnavita & Heponiemi, 2012), and can experience higher rates of patient aggression (Pekurinen et al., 2017). A systematic
review by Cornaggia, Beghi, Pavone and Barale (2011) suggests more incidents of verbal aggression or violence are experienced rather than physical, and significantly poorer physical health and satisfaction levels are reported by psychiatric nurses who experience frequent episodes of abuse. This review also states that previous episodes of aggression and lengths of stays within acute psychiatric in-patient settings are consistent risk predictors of aggressive behaviours. Research incorporating feedback from service-users suggests there is a reciprocal relationship between patients and healthcare professionals, which can predict overall care delivery and experience, and satisfaction levels for both groups (Woodward, Berry & Bucci, 2017).

Research by Johannsson and Eklund (2003) suggests patients utilising psychiatric services consider central features of “good care” as: being supported by nurses who have similar understandings and explanations of their presenting problems; and where care and treatment is designed around the individuals’ unique situation. Interestingly this shared understanding, and explanation for underpinning challenging behaviours, is in line with the concept of mentalization. Coyle (1999) suggests “poor care” can result in patients experiencing ‘personal identity threat’, explained as feeling devalued. Michaelsen (2012) suggests the consequence of emotionally-charged situations, and reduced mentalizing capabilities, is the undesirable response of nurses avoiding or distancing themselves from certain patients. Conversely, nurses may become emotionally over involved. This impaired self-awareness is linked to burnout, compassion fatigue, and emotional burden (Cricco-Lizza, 2014), which consequently impacts delivery and experience of care (Hunt, Denieffe & Gooney, 2017).
Enhancing Mentalizing Abilities

*Parental Reflective Functioning*

There has been recent empirical support for interventions enhancing parental RF, targeting different parenting groups: pregnant young mothers (Slade et al., 2005); mothers serving prison sentences (Sleed, Baradon, & Fonagy, 2013); high risk parents who would typically be hard to reach (Byrne et al., 2018); mothers who use substances (Suchman, DeCoste, Castiglioni, Legow & Mayes, 2008); parents of children with neurodevelopmental disorders (Enav et al., 2019; Sealy & Glovinsky, 2016); and foster carers (Adkins, Reisz, Hasdemir, & Fonagy, 2020; Bammens, Adkins & Badger, 2015). The outcome of the interventions suggests benefits to parents as regards increased RF, but also improvements to child outcomes. However, further research is required to explore the efficacy of this approach, and the sustained treatment effects. Nonetheless, recent research suggests mentalizing ability following training remained relatively stable over time, which is in congruence with attachment styles (Steinmair, Richter & Loeffler-Stastka, 2020).

Recently, group-based intervention programmes have been designed to increase RF of parents to improve sensitive parenting. Within the UK these programmes include: The Nurturing Attachments Parenting Programme (Staines, Golding, & Selwyn, 2019); and the Reflective Fostering Programme (Redfern et al., 2018). Both programmes have preliminary findings that suggest some reduction in parental distress, and improved RF ability and self-efficacy (Midgley et al., 2019; Staines et al., 2019). However, these groups rely on self-reported means which can be influenced by social desirability effects (Kelm et al., 2014) and the lack of comparison groups raises generalisability concerns. Within America, research was conducted to evaluate a group-based psychoeducation intervention directed towards foster carers, called ‘Family Minds’ (Adkins, Luyten & Fonagy, 2018; Bammens et al., 2015). Compared to the control group, who received standard foster-parent training, those in the
intervention group demonstrated significantly improved mentalizing skills and lowered parental stress (Adkins et al., 2018).

**Nursing Field**

Currently, research investigating prevalence of mentalization within the nursing field, or educational interventions to enhance nurses mentalizing skills is in its infancy. Satran et al. (2020) developed a four year holistic programme to enhance the mentalizing capacity of nursing students. The programme reportedly increased participants’ ability to make rational clinical judgements, and reduced the risk of burnout. The researchers however failed to directly measure the effectiveness of the programme, i.e. whether capacity to mentalize was improved, which raises concerns around the validity of the programme. Mentalization-Based Treatment Skills Training (MBT-S) has been used in three studies aiming to improve the capacity of mental health professionals to mentalize (Polnay et al., 2015; Welstead et al., 2018; Williams et al., 2017). Each study found improved scores on the Knowledge and Application of MBT Questionnaire (KAMQ) at post-test. One study found a small improvement of attitudes towards individuals with relational difficulties (Welstead et al., 2018). Qualitative research by Warrender (2015) reported psychiatric nurses found MBT-S empowered skill-set, and contributed to improved attitudes towards individuals with relational difficulties. Unfortunately, the long-term behavioural or attitudinal changes to therapeutic skill of those who received MBT-S are less known. Regular supervision or consultation would likely be required to continuously encourage highly developed mentalizing skills, the provision of which, may unfortunately be challenging for healthcare services (Polnay et al., 2021).

**Study Rationale**

As mentioned, psychiatric nurses who can mentalize efficiently will likely be able to understand their own mental processes by analysing and assessing them, thus helping to
regulate how their own responses impact on the treatment and care of their patients. Theoretically, this will improve wellbeing and job satisfaction for nurses; patient outcomes; and NHS and Scottish Government local and national targets. In particular, staff well-being would likely be maximised and any risks to mental or physical health anticipated, assessed and minimised, including physical risks of violence from patients. Additionally, experiences and outcomes for patients would be more controllable and ultimately better, possibly leading to increased self-management, with less need to access NHS Services, or at least with less frequency. Patients’ individual experiences of care will be more targeted and appropriate to their particular needs, leading possibly to improvements in their mental health symptoms and potentially a reduction in relapse rates. NHS Services would potentially be under less pressure and better able to manage available resources effectively, and meet targets, ensuring improved overall efficiency and reliability: as an organisation, also at a national, local and personal level for staff and patients.

The purpose of this research is to investigate the prevalence of mentalization within the field of mental health nursing, through two overt mediums: self-report; and reflection of a critical incident whilst caring for patients within an acute psychiatric setting. The CIT has been used in a variety of service contexts in recent years assessing the quality of nursing care (Eriksson, Wikström, Fridlund, Årestedt & Broström, 2016; Larsson, Sahlsten, Segesten & Plos, 2011; Lewis, Yarker, Donaldson-Feilder, Flaxman & Munir, 2010) and supporting reflection for student learning (Koskinen, Mikkonen & Jokinen, 2011; Robb, 2014; Steven et al., 2020). The overall aim of the CIT is to improve practice through the use of reflection and self-feedback. For this current study, the aim was that the participant’s RF capacity would be coded through language used when reflecting on such incidents. The CIT has never been used previously to infer RF ability, however the benefit of using it within this study is threefold: it is already used within the nursing field as an effective standardised reflection tool and does
not require training to administer unlike the AAI; 2- it prompts reflection of an incident, within the context of a relationship (nurse and patient), the way in which the AAI assesses RF capacity; and 3- it prompts nurses to consider emotionally-charged incidents thus allowing the opportunity to assess whether RF capacity and stress were related. Schluter, Seaton and Chaboyer (2008) describe the CIT as a “practical method that allows researchers to understand complexities of the nursing role and function”.

Research investigating capacity to mentalize is typically focused on individuals with complex mental health difficulties, rather than healthcare professionals providing care. This research is, therefore, novel. It could infer the extent to which psychiatric nurses can understand thoughts and feelings underpinning challenging presentations, and their ability to respond compassionately. This research could investigate whether staff training is required to enhance the capacity to mentalize, similar to that of foster carers, which theoretically would improve the delivery of compassionate care.

**Research Questions**

1- To what extent can psychiatric nurses RF capacity be inferred when reflecting on CIs?

   It is hypothesised there will be a significant positive relationship between self-reported high RF and narrated high RF scores.

2- To what extent does self-reported and narrated RF predict wellbeing?

   It is hypothesised positive wellbeing can be predicted by high RF (from self-reported and narrated measures) and negative wellbeing predicted by low RF.
Method

Design

The study utilised a mixed-method, descriptive, cross-sectional, retrospective design. The rationale for combining both quantitative and qualitative approaches was to gain a general picture of the research from the quantitative data, i.e., RMNs well-being and reflective functioning capacity, as measured through self-reported questionnaires. The qualitative data and its analysis however, refine and explain these statistical results (Creswell, 2002; Tashakkori, Teddlie & Teddlie, 1998) by exploring the RMNs narrated reflective functioning capacity in more depth.

The independent variables were the two types of reflective functioning capacity; self-reported and narrated. The dependent variable was the participant’s wellbeing score, which had three levels: 1- compassion satisfaction (CS), 2- burnout (BO), and 3- secondary traumatic stress (STS).

Ethical Approval

Ethical approval was granted from the University of Edinburgh Health in Social Science Research Ethical Committee (Appendix 1). Management approval was granted from the NHS board where research was carried out (Appendix 2). Identifiable information of the NHS board has been blocked out to preserve anonymity of NHS staff. Security policies were adhered to and Participant Consent Forms (Appendix 3) were stored separately from anonymised data. To participate in the study, participants had to consent for their reflections to be audio recorded to allow for information to be transcribed verbatim. Participants were reminded not to disclose any patient identifiable information to maintain patient confidentiality. Transcriptions were anonymised and deleted following completion of the study. All participants had the choice to consent to participate in the research and understood their rights to withdraw at any time.

Two main ethical considerations arose. Firstly, reflecting on a critical incident could potentially evoke emotional distress, as remembering such events could trigger memories of psychological harm. Turner (1974) considers critical incidents as “social dramas” that may not have been satisfactorily resolved in the minds of the participant. It was important therefore to recognise this potential and offer assistance should it occur. RMNs were given time after the reflection to raise any issues and concerns and to reflect on their current emotional state. Any feelings of distress were validated and normalised. RMN’s were
provided with contact information of the researcher to seek further support if necessary. No advice was provided about how RMNs could resolve similar instances in future practice, however they were encouraged to discuss any concerns about their practice with their supervisor or manager at their workplace. Secondly, and in line with Health and Care Professions Council (HCPC) and Nursing & Midwifery Council (NMC) standards, patient safety was a priority. Participants were therefore advised that should information be disclosed that was believed to contravene professional standards of care, this would be documented and disclosed immediately to the senior charge nurse or manager of the relevant ward. No such contraventions were disclosed from any participant.

**Inclusion Criteria**

(1) Registered Mental Health Nurses (RMNs) working within acute psychiatric wards who experienced a critical incident within the past five years.

(2) RMNs aged 18 to 65 years.

**Exclusion Criterion**

(1) Other healthcare professionals working in the acute psychiatric service.

**Data Analysis Plan**

The data analysis plan with hypotheses and relevant statistical analyses is described below (*Table 1*).
<table>
<thead>
<tr>
<th>Variable/Outcome</th>
<th>Research Question</th>
<th>Hypothesis</th>
<th>Method/Outcome Measure</th>
<th>Methods of Analysis</th>
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<tbody>
<tr>
<td>1) Self-reported versus narrated RF capacity</td>
<td>To what extent can RMNs RF capacity be inferred when reflecting on CIs?</td>
<td>1) Positive relationship between RFQ Certainty and High CRF.</td>
<td>RFQ CIT- CRF coding</td>
<td>Pearson’s correlations between:</td>
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<td>Negative relationship between RFQ uncertainty and Low CRF.</td>
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<td>• CRF_Low, CRF_High, RFQ_C, RFQ_U</td>
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<td>2) Effect of RF capacity on wellbeing</td>
<td>To what extent does narrated &amp; self-reported RF predict wellbeing?</td>
<td>2) Positive and negative wellbeing can be predicted by RF ability.</td>
<td>ProQOL</td>
<td>Hierarchical Linear Regression models:</td>
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<td>• Dependent variable = CS, BO, STS</td>
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<td>Predictor variables =</td>
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<td>1- CRF_Low &amp; CRF_High, RFQ_C, RFQ_U</td>
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<td>Three separate models for each DV.</td>
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Note: RF= Reflective Function; CIs = Critical Incident; CIT= Critical Incident Technique; CRF – Computerised text analysis version of RF; RFQ = Reflective Functioning Questionnaire; RFQ_C= Certainty scale; RFQ_U = Uncertainty scale; ProQOL= Professional Quality of Life Scale; CS= Compassion Satisfaction; BO= Burnout; STS= Secondary Traumatic Stress; DV= Dependent Variable
Sample Size

Qualitative Data

This study is novel therefore there are no previous studies with which to compare similar methodology, or to identify similar findings. Cordingley, Webb and Hillier (1997) suggest the aim of qualitative research is to explore subjective accounts, and as such it is not a requirement for the sample to be a representation of a specific population. Field and Morse (1995) suggest the focus on qualitative data is on selecting participants with diverse experiences and perspectives. With respect to the CIT, Butterfield, Borgen, Amundson, and Maglio (2005) argue the size of the sample is determined on the basis of the number of critical incidents and not the number of participants, therefore there is no strict test for sample size. Research utilising the CIT within the nursing field has reported between 25 (Bower, 2007) and 36 (Bassett, Baker & Cross, 2015). critical incidents (CIs), therefore this proposed research aimed to review a minimum of 25 CIs.

Quantitative Power Calculations

Pearson Correlations. The sample size of the participants was based on a power analysis, using G*Power software. The effect size was set to medium (p H1=0.3), using a two-tailed significance test (p = .05), a sample size of 84 resulted in an acceptable power coefficient of .80.

Hierarchical Linear Regression. On G*Power software, the effect size was set to medium ($f^2=0.15$), and the power coefficient was set to .80 to test hypotheses concerning the dependent variable (wellbeing) and four predictor variables (RFQ: Certainty and Uncertainty, and CRF: High or Low). The alpha level was set at .05, and a sample size of 85 was considered acceptable.

Recruitment

The General Manager within the NHS board was asked for permission for the researcher to recruit NHS staff working within the psychiatric inpatient hospital. The Inpatient Service Manager was then asked to circulate a research information poster to Senior Charge Nurses to cascade to their teams. Interested participants were asked to email the lead
researcher to express interest. It was initially hoped the lead researcher would have attended team meetings on the ward to present research, and to place research posters in staff areas, however infection control excluded this possibility in response to national Covid-19 guidelines. This presented challenges to recruitment, and in addition there were increased staff pressures due to local structural changes within the acute psychiatric hospital. Therefore, a total of 13 critical incidents were collected.

**Data Collection**

For each participant general demographic information was collected such as; age range, gender, and length of time in the role at the time of the incident.

**Measure of Wellbeing**

The Professional Quality of Life Measure (ProQOL) Version 5 (Stamm, 2009) was used as a measure of wellbeing. This self-report instrument measures respondents’ experience of Compassion Satisfaction (SC) and Compassion Fatigue (CF) within the past 30 days. CS is characterized by feeling satisfied with one’s job of helping or caring for others. CF relates to negative experiences or traumatic stressors experienced whilst helping or caring for others. CF breaks down further into: burnout (BO) and Secondary Traumatic Stress (STS). Burnout relates to feelings of unhappiness, disconnectedness, and insensitivity to the work environment. STS is related to being pre-occupied with thoughts or memories of traumatic incidents experienced whilst caring for someone. This may involve avoiding activities that may trigger a reminder of the traumatic incident. The instrument has three 10-item subscales assessing CS, BO and STS and items are rated on a 5-point scale (1= never to 5 = very often). Stamm (2010) reported good internal consistency for the subscales, with Cronbach’s alpha values of .88 for CS, .75 for BO, and .81 for STS. Cieslak and colleagues (2014) reported alpha values ranging from .65 to .83 for BO and from .68 to .87 for STS in their meta-analysis. The questionnaire is freely available to download for research purposes at: [https://proqol.org/ProQol_Test.html](https://proqol.org/ProQol_Test.html).

**Measure of Self-Reported Reflective Functioning**

The Reflective Functioning Questionnaire (RFQ) (8 items) (Fonagy et al, 2016) was used as an overt measure of mentalization. Respondents are asked to support or reject each of the eight statements that relate to processes of mentalization. Responses are rated on a 7 point likert scale (1= strongly disagree to 7 = strongly agree). The eight items are double scored for the two scales: 1- certainty about mental states (RFQ_C) and 2- uncertainty about
mental states (RFQ_U). For the RFQ_C scale, ratings are scored as 3, 2, 1, 0, 0, 0, 0 dependent on the respondent’s rating on the 7 point scale. For example, on item 6: “sometimes I do things without really knowing why” a rating of 1 (strongly disagree) would score 3, and a rating of 7 (strongly agree) would score 0. Conversely, for the RFQ_U scale, ratings are scored as 0, 0, 0, 1, 2, 3. Accordingly, a strong rejection for an item would be indicative of high certainty (= 3) on the RFQ_C and low uncertainty (= 0) on the RFQ_U. High certainty is suggested to reflect hypermentalizing, whilst low uncertainty reflects hypomentalizing (e.g., Badoud et al., 2015; Fonagy et al., 2016; Morandotti et al., 2018). Fonagy and colleagues (2016) suggests the RFQ has good construct validity (r = .38; positively correlated with Kentucky Inventory of Mindfulness Skills acting with awareness scales [KIMSac]) and fair internal consistency (Cronbach’s α .64 - .71). The questionnaire is freely available to download for research purposes at: https://www.ucl.ac.uk/psychoanalysis/research/reflective-functioning-questionnaire-rfq.

Critical Incident Technique (CIT)

RMNs were asked to retell a critical incident (CI) experienced within the last five years and were prompted to reflect using the CIT, described diagrammatically by Serrat (2017) (Figure 1). These did not have to be formally reported incidents, but ones that the participants had remembered for being emotionally distressing. The World Health Organisation (WHO) describes a critical incident as: “an event out of the range of normal experience – one which is sudden and unexpected, involves the perception of a threat to life and can include elements of physical and emotional loss”. Participants were supported to reflect not only on CIs but on any difficult or challenging incidents experiences whilst caring for a psychiatric inpatient.
Procedure

Consenting participants were forwarded the RFQ and ProQOL measures, and a Microsoft Teams invitation to attend a semi-structured interview. Government imposed social distance guidelines in response to COVID-19 meant the interviews occurred remotely. During the 15 minute interview, participants were asked for their demographic information and were guided to reflect on a critical/ challenging/difficult incident using the CIT (Serrat, 2017). Interviews were audio-recorded to allow for information to be transcribed verbatim. All participants were specifically reminded before the recording started to refrain from disclosing any identifiable information about patients. During the interview, participants were asked to email their completed questionnaires to the researcher’s email address to reduce the risk of researcher bias. The RMNs were thanked for their participation and debriefed. The researcher then transcribed the interviews and analysed inductively before scoring the outcome measures.

Data Analysis

Qualitative Analysis

To analyse the data from the critical incidents, Cormack’s (1983, 1996) technique was used. According to Cormack the CIT is more preferable to observation due to the practical
difficulties and constraints that can be experienced by researchers within a clinical setting. Additionally, asking participants to reflect on a CI provides a description of actual events, rather than imagined. Therefore, it provides insight into the way in which the participants responded, rather than the way they envisage they would (Cormack 1983; Cormack 1996). This method brings credibility to clinical practice due to its focus on the real, as opposed to the abstract world, whilst acknowledging the limitations encountered. Care (1996) suggests a further advantage is its adaptability as a data collection method and being able to examine a number of research questions. The CIT also included a “demand question” (what sense can you make of the situation?”) which is considered a valid assessment technique of RF. The CIT technique therefore provided a solid foundation for the first research question to be explored.

Cormack (2000) details a ‘guide to analysis’ that was used in previous nursing studies that utilised the CIT (Martin & Mitchell 2001, Mitchell 2001, Narayanasamy et al. 2004). Cormack’s data analysis was used within this current study because it allowed data to be easily examined for similarities and commonalities. Cormack’s technique involves the use of inductive classification of the incidents; the classification system is created as the data is being analyzed, rather than before. Leininger (1985) suggests results are more reliable when themes and patterns are identified as they emerge. In line with Cormack, a Thematic Analysis was conducted wherein major areas were created that related to common themes. Within these areas, smaller categories were identified and within each category there were several sub-categories. When the subcategory was mentioned on multiple occasions by the participant, the number of mentions was put in brackets. Similarities of the incidents and descriptive statements were grouped together to allow for the researcher to identify linkages to concepts and themes (Cormack, 1996). Each critical incident was given an arbitrary number for ease of identification. Agreement and appropriateness of the categorizations and scores were reviewed by the second author.

**Reflexivity.** It was important to consider the concept of reflexivity with regards to the collection and interpretation of the qualitative data. Polit and Beck (2008) refer to reflexivity as: “researchers’ awareness of themselves as part of the data they are collecting. Researchers need to be conscious of the part they play in their own study, and reflect on their own behaviour and how it can affect the data they obtain”. The current study was undertaken with NHS staff within the NHS Health Board where the first author worked. This prompted
reflexivity and critical awareness on the potential impact insider research may have on the collection and interpretation of results. The term ‘insider researcher’ relates to educational researchers investigating within the place they work (Mercer, 2007). This type of research has both advantages and disadvantages. Familiarity with the place of work and ease of access to participants are two significant advantages. Although the first author did not work within the acute psychiatric ward, the familiarity of working as an NHS employee likely prompted trust within the participants, who openly shared their feelings in relation to an emotive experience. A significant disadvantage of insider researcher is participants may be prompted to provide desirable rather than true responses (Williams, 2013). Nonetheless, the participants within this current study appeared authentic and were not inhibited from sharing their true opinions and feelings. This may have been strengthened by the assurances of anonymity.

A further disadvantage of insider research is the potential for interpretation, or reporting of findings to be biased (Saidin, 2016). Namely, the researcher may be less inclined to publish information that may discredit their colleagues or they may have expectations of the results. To minimise the risk of bias, the first author transcribed the data verbatim, then carefully read and re-read the transcripts to promote immersion with the data and to promote accurate interpretation. To ensure authenticity of the participant’s perspectives, the questioning style was open and exploratory, and their own words were presented in the findings. Reflexivity was further enhanced through discussion with the second author who read the transcripts, and agreement of the key themes was achieved.

RF Coding

The narrative task presented by the CIT allowed the opportunity to assess participants’ perceptions of their own, and others thoughts, feelings and intentions. Narratives collected from the open and demand questions of the CIT were assigned a code for inferred RF capacity to allow for quantitative analysis. RF was coded by the second author (MS) who attended training institutes in the coding system. Coding was in accordance with the Reflective-Functioning Manual for Application to Adult Attachment Interviews (Fonagy et al., 1998). The computerized text analysis version of reflective function (CRF) (Fertuck et al., 2012) was also used to provide a more detailed analysis of the codes.

Coding with respect to the RF manual (Fonagy et al., 1998) produced a score on an 11 point scale, ranging from -1 (negative RF) to 9 (exceptional RF). Negative RF relates to narratives devoid of reflective function or grossly distorted perceptions of others mental
states. Exceptional RF relates to a complex or elaborate understanding of mental states. The CRF rating scale (Fertuck et al., 2012) adds an understanding of the linguistic markers of RF speech. The researchers suggest there are unique markers of high and low RF speech that can be utilised to evaluate narratives for RF level. Fertuck et al. (2012) reported significant associations between CRF and RF in both clinical (Spearman rho= .57, p< .0001) and non-clinical samples (Spearman rho= .57, p= .002) of adults. Thus, suggesting a computerised RF (CRF) measure has potential to provide an efficient assessment of RF.

**Statistical Analysis**

Statistical significance was set at .05 and data analysed using Statistical Package for the Social Sciences (SPSS) (IBM Corp, 2020, Version 25). Due to the normal distribution of the data, Pearson’s correlation coefficients were utilised to assess associations between all variables. For the second research question, hierarchical linear regression was used to assess whether the independent variables (self reported RF and coded CRF) explain a statistically significant amount of variance in the dependent variables (CS, BO & STS from ProQOL Measure) after accounting for all other variables. This is a framework for model comparison rather than a statistical method. Three regression models were developed for the three scales of the ProQOL.

**Exploring Research Questions**

1- To what extent can psychiatric nurses RF capacity be inferred when reflecting on CIs?

To measure mentalization capacity of the RMNs, the CIT acted as a narrative measure and the CRF coded for markers of high and low RF speech. The RFQ was used as the self-reported measure of mentalization to allow for a comparison between the two types of RF measures (narrative versus self-report). Considering the stated validity concerns of narrative and self-reported measures of RF, the thematic analysis provided deeper insight into the complexity of mentalization, particularly as the RMNs had a personal stake in the discussion and interest in making inferences about their own and others, behaviour, intentions and emotions (Dziobek et al., 2008).

2- To what extent does self-reported and narrated RF predict wellbeing?
The ProQOL provided a measure of the RMNs wellbeing and the thematic analysis provided richer data on the psychological impact of observing or being involved with the CI, based on the words and phrases used when reflecting on the incident.
Results

Descriptive Statistics collected from participants are depicted in Table 2.

Table 2: Frequencies for Participants Demographic Information

<table>
<thead>
<tr>
<th>Demographic Information</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender:</strong></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>13</td>
</tr>
<tr>
<td><strong>Age Range:</strong></td>
<td></td>
</tr>
<tr>
<td>25 – 34</td>
<td>4</td>
</tr>
<tr>
<td>35-44</td>
<td>5</td>
</tr>
<tr>
<td>45-54</td>
<td>4</td>
</tr>
<tr>
<td><strong>Years in Role:</strong></td>
<td></td>
</tr>
<tr>
<td>0-4</td>
<td>5</td>
</tr>
<tr>
<td>5-10</td>
<td>4</td>
</tr>
<tr>
<td>10-15</td>
<td>2</td>
</tr>
<tr>
<td>15-20</td>
<td>2</td>
</tr>
</tbody>
</table>

Research Question 1: To what extent can RMNs RF capacity be inferred when reflecting on CIs?

Hypothesis: There will be a positive relationship between certainty (self-reported RF) and high CRF (narrated RF), and a negative relationship between uncertainty and low CRF.

Each transcript from the CIT was coded for high and low RF in accordance to the CRF assessment system (Fertuck et al., 2012). An overall RF score and two further variables; the proportion scoring high RF and low RF in each transcript were created. Correlations between self-reported RF scores (certainty or uncertainty) and narrated RF (CRF high or low)
were not statistically significant. Therefore the null hypothesis must be accepted, suggesting there was no association between narrated and self-reported RF capacity.

Table 3 Table of Correlations for Main Variables

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 RFQ Certainty</td>
<td></td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 RFQ Uncertainty</td>
<td>-0.723**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 CRF High</td>
<td>0.269</td>
<td>-0.269</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 CRF Low</td>
<td>0.318</td>
<td>-0.211</td>
<td>0.956**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: CRF= Computerised Reflective Functioning, *p < .05, ** p< .01

Qualitative Data

In addition to the CRF coding, the qualitative data elicited from the CIT provided more of an insight around the language used by participants, to allow for RF capacity to be inferred. Thirteen participants reflected on a CI experienced whilst caring for patients within acute psychiatric wards, including: the Intensive Psychiatric Care Unit (ICPU), adult acute admission and older adult acute admission. Question four on the CIT encouraged participants to mentalize, or infer reasons behind patient behaviour during the CIs: “What sense can you make of the incident?” which is a demand question.

Below is an illustration of the way in which characteristic vocabulary was identified for both High RF and Low RF. This example is from a participant reflecting on a CI wherein there was a serious risk to patient life:
This participant’s full transcript scored the highest CRF total score throughout the full sample. The sample as a whole used more characteristic vocabulary relating to High RF (M= 431.23, SD= 244.82) than Low RF (M= 202.62, SD= 112.17).

**Physical Aggression.** Five participants reflected on an incident that involved patient physical aggression which included acts of threatening behaviour, vandalism and violence. The main emotions experienced were stress, anxiety, fear and sadness. One participant reported feeling angry and frustrated on behalf of the participant that the incident had progressed the way it had (P11). One participant reported feeling traumatised after the incident (P12). Below are two illustrations depicting the transcribe that scored the lowest total RF score (P10) and the narrative scoring the highest RF (P12) within this category:

P10 “Could have been due to his medication. Could have been his environment. It was a different environment from what he was used to before he came in. I’m not making excuses, but he was not a well person. They were not very well at all. That’s why we get them in sometimes. It could be a change, his medication reacting against each other and we see that the environment is a big issue around at the time like. I think he was feeling the lowest of the lowest. Thinking the worst of the worst. And being unable to express what he was feeling at the time. Also he didn’t know how to react at the time and his only reaction was to use his hands. I think it had more to do with this mental state at the time”.

```
P7) She absconded from her time out not because of anything that had happened in the ward. I think it was just the compulsion to take the overdose was just so strong. That is how she copes. And I don’t think she did it because she thought I’m just disregarding them, I’m not listening to them. It was not about that. It was about she was not able to manage her emotions at that time and that was how she coped. And she thought I’m just going to do it because I can’t do it anymore [live] and I think she was in quite a lot of emotional pain. As well in the other sense, I make from the situation is that we had to do it [body search for paracetamol] to keep her safe.
```

The same example but with Low CRF Dictionary items in bold (n=24):

```
P7) She absconded from her time out not because of anything that had happened in the ward. I think it was just the compulsion to take the overdose was just so strong. That is how she copes. And I don’t think she did it because she thought I’m just disregarding them, I’m not listening to them. It was not about that. It was about she was not able to manage her emotions at that time and that was how she coped. And she thought I’m just going to do it because I can’t do it anymore [live] and I think she was in quite a lot of emotional pain. As well in the other sense, I make from the situation is that we had to do it [body search for paracetamol] to keep her safe.
```
P12) I think what we acknowledged was that this was a young lad with an emerging personality disorder who had quite a traumatic upbringing up until that point. I think he liked that environment of the general ward because he felt really looked after. So his behaviours were escalating because he wanted to stay in that environment. I know that although I said earlier that he was really distressed coming back to the mental health hospital, I don’t think it was the coming back to the mental health hospital that was causing the stress it was the fact that we were going to move him out the general hospital. So that sick role, being looked after and x-rays and stuff like that. I think we acknowledged that his behaviours were escalating because he felt like we were taking that away from him, the being looked after.

P10 empathised with the patient and attempted to infer why he acted the way he did, however the interpretation of his thoughts and emotions were vague and she did not infer a specific explanation as to why he was feeling distressed. Conversely, P12 attempted to infer what the patient was thinking and feeling, that may have led to his behaviour, and consequently scored a higher RF score.

**Physical Health Decline.** Five participants reflected on incidents that were categorised as physical health decline, which included death, physical ill health and falls. The main emotions experienced were panic, worry, sadness, and hopelessness. Four participants reported feeling frustrated on behalf of the participant that they had not received the appropriate support from professionals at the general hospital. One participant reported feeling traumatised after the incident (P13). Below are two illustrations depicting the lowest scoring RF score and the highest RF score within this category:

P9) Person was almost like the diagnosis of the patient had a negative effect on the treatment that he received. Probably misconceptions about the patient’s diagnosis made other stuff feel uneasy about their treatment. He likely felt scared, upset physically and mentally upset.

P5) I think looking back it was inevitable that illicit substances had been taken prior to coming into the hospital and this presentation was going to come and there was nothing that could have been done about that part. We needed to carry out the interventions that we did. In hindsight we should have pushed harder and got his gentleman to the hospital quicker but I think everything would have happened regardless, but it should have happened earlier in the day. We should have gotten him revived earlier. Because no matter what, it was going to happen. But we didn’t know when medicine was administered we didn’t know that that would lead to his neuro-malignancy. Sometimes I thought that’s me analysing and reflecting on my actions, but I don’t think we could have pushed harder. We were on the phone getting reviews and doing what we could. I think the drugs were a one off, his partner said they had always smoked some drugs – cannabis and heroin – his partner had said they had lost a friend quite recently before he came to hospital. His partners reported that he had decided himself he was coming off the drugs and had bought a bottle of methadone off the street. But since then, that area that gentleman had come from there had been probably 3 deaths and also other people in critical care so it sounds like there has been a bad batch in a certain area. So there was maybe an emotional trigger of losing his friend.
As above, P9 used vague descriptions of what the patient might have been thinking or feeling. Comparatively, P5 provided a potential trigger that may have influenced the patient’s behaviour to consume illicit substances and provided a more detailed understanding of why the incident had occurred.

**Serious Attempts on Life.** Three participants reflected on an incident that was categorised as a serious attempt on patient life. The main emotions experienced by participants were fear, sadness, worry and empathy. All three participants referenced the physiological symptoms of fear as “adrenaline pumping through your body”. One participant was angry and frustrated at the patient (P2). Another was angry at the staff team for not having the correct plan in place and not following her own intuition; and reported experiencing vivid traumatic memories following the incident (P4). All three transcripts within this category scored the highest CRF scores across the full sample. Illustrations of P4 and P2 transcripts are below (P7 is described above in the example of rating high and low CRF):

P4) This patient was very young and had just come into adult services. So her placement prior to ICPU was probably managed very differently and the difference between adult and child services is a huge amount more responsibility put back on the patient and I think recognising that huge change going from children services and a particular way of being managed to adult services and that being completely flipped on its head and being moved out of your local area, meeting people you don’t know in a locked unit under detention I think there was a huge amount of stress and distress and I think that’s where those behaviours came from in that patient, and these times of stress and distress the patient. As I said before this wasn’t an isolated incident so it wasn’t just me, it would have happened to anybody but I think this is where that clear consistent boundaries bit comes into play and that continued nursing part. There’s a bit about testing boundaries with this client group regularly when new people become involved. It’s about seeing how far you can get with that. I think looking back at the skill mix. There was myself and a newly qualified band 5 on the observations and that band 5 probably didn’t have the competence and that’s who I asked. Although, they had been in the ward for several months at that point it’s about knowing that persons capabilities and their ability to manage difficult situations and I went to them and said what do we do when she goes to the toilet? But I think I can make sense of that situation. This wasn’t about me this was more about the patients level of stress and distress and about her being able to demonstrate how distressed she was in a way that allows other people to see that and that’s quite common in that kind of patient group. So I can understand why it happened and it wasn’t just me and the patient has actually gone on and had further incidences like this. So it didn’t stop at that point and it hadn’t started at that point being in the ward there was already incidences like that already.
All three transcripts demonstrated very high levels of RF due to the detailed inferences of the patients’ thoughts and feelings that likely underpinned their behaviour. These high levels are a marked contrast to the majority of the sample. Participants 2 and 7 reflected on their own inner states in relation to the incident, which contributed to scoring the highest RF in the sample.

**Research Question 2:** To what extent does self-reported and narrated RF predict wellbeing?

Hypothesis: Positive and negative wellbeing can be predicted by RF ability.

*Hierarchical Linear Regression*

To approach the second research question, hierarchical linear regression analyses were conducted to evaluate the prediction of wellbeing from self-reported and narrated RF. Three separate regression models were created for the three dependent variables: Compassion Satisfaction (CS), Burnout (BO) and Secondary Traumatic Stress (STS). Potential confounding effects of age; time in the role; and length of reflection were tested but no significant effects were found. These were subsequently removed from the models. All assumptions of normality: homoscedasticity; linearity; independence of errors; and absence of outliers; were achieved. Multicollinearity was tested using the Durbin-Watson test for each model. Values for the three models were between 1.65 and 1.91, suggesting there were no autocorrelations of residuals.

**Compassion satisfaction.** For the first block analysis, the predictor variables CRF High and CRF Low were analysed to identify whether RF ability could predict wellbeing.
The results of the first block revealed a statistically insignificant model ($p > .05$). Additionally, the $R^2$ value (.139) associated with this regression model suggests the predictor variables account for 13.9% of the variation in CS. This means that 86.1% of the variation in CS cannot be explained by CRF High and Low alone. A different outcome was found for the second block analysis, wherein the second predictors RFQ Certainty and RFQ Uncertainty were added. This addition revealed a model to be statistically significant ($p = .003$). Additionally, the $R^2$ change value ($\Delta R^2 = .653$) associated with this regression model suggests the addition of these two predictors to the first block model accounts for 65.3% of the variation in CS [$F (4, 8) = 7.61, p = .008$]. This indicates a strong regression effect. Table 4 depicts further statistical information about the individual variables within the regression model, and suggests RFQ Uncertainty is the strongest predictor of CS.

Overall, the alternative hypothesis can be partially accepted, since one component of self-reported RF (uncertainty) predicted compassion satisfaction (wellbeing). There was a statistically significant negative relationship between these two variables, suggesting low uncertainty scores were associated with high CS. In other words, low scores of uncertainty of mental states is indicative of high RF capacity, thus it is likely that high self-reported RF predicts participants’ wellbeing.

Conversely, the null hypothesis must be upheld for RF certainty and CRF high or low not being predictors of wellbeing, as neither variables were significant predictors; thus suggesting that narrated RF and one component of self-reported RF (certainty) do not predict compassion satisfaction.
Burnout. As with CS, the two hierarchical linear regression models were run to analyse whether RF ability could predict BO. Neither of the two models was statistically significant after the addition of the predictor variables [Model 2: F (4, 8) = 1.82, p > .05]. Table 5 depicts further statistical information about the individual variables within the regression model. The results suggest RFQ Certainty was a significant predictor of BO (p < .05) despite the model not being significant.

The null hypothesis must therefore be upheld: self-reported and narrated RF were not predictors of the burnout measure. By contrast, RFQ Certainty was a significant predictor of burnout, implying that it may be a significant predictor alone, but is insignificant when other independent variables are present.
Table 5: Hierarchical Linear Regression for Burnout

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>SE b</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>24.260</td>
<td>4.435</td>
<td></td>
</tr>
<tr>
<td>CRF High</td>
<td>-.011</td>
<td>.030</td>
<td>-.392</td>
</tr>
<tr>
<td>CRF Low</td>
<td>.012</td>
<td>.066</td>
<td>.192</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>40.085</td>
<td>7.736</td>
<td></td>
</tr>
<tr>
<td>CRF High</td>
<td>-.041</td>
<td>.028</td>
<td>-1.432</td>
</tr>
<tr>
<td>CRF Low</td>
<td>.085</td>
<td>.063</td>
<td>1.367</td>
</tr>
<tr>
<td>RFQ Certainty</td>
<td>-1.221</td>
<td>.477</td>
<td>-1.079*</td>
</tr>
<tr>
<td>RFQ Uncertainty</td>
<td>-1.494</td>
<td>.813</td>
<td>-7.68</td>
</tr>
</tbody>
</table>

Note. Step 1 $R^2 = .047$: Step 2 $\Delta R^2 = .420$ (ps > .05). * p < .05

**Secondary Traumatic Stress.** The two hierarchical linear regression models were also run to analyse whether RF ability could predict STS. The results of the first block revealed a statistically insignificant model ($p > .05$). The $R^2$ value (.222) associated with this regression model suggests the two predictor variables (CRF High and Low) account for 22% of the variation in STS. The second model was statistically significant ($p < .05$). The $R^2$ change value ($\Delta R^2 = .422$) associated with this regression model suggests the addition of these two predictors (RFQ Certainty and Uncertainty) accounts for 44% of the variation in STS [$F (4, 8) = 3.63, p < .05$].

Table 6 depicts further statistical information about the individual variables within the regression model. The results suggest no specific independent variable were significant predictors of STS, although RFQ Uncertainty was the closest predictor to almost reach statistical significance ($p = .064$). Potential reasons for the model being significant but not the predictors are: 1- the study was underpowered and not enough data was available to
detect significant effects; 2- there was high inter-correlation between predictors, despite the accepted multicollinearity and; 3- there was a non-linear relationship between variables, 

The null hypothesis must therefore be upheld with regards to self-reported and narrated RF not being predictors of the secondary-traumatic-stress measure.

Table 6 : Hierarchical Linear Regression for Secondary Traumatic Stress

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<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Constant</td>
<td>23.359</td>
<td>2.936</td>
<td></td>
</tr>
<tr>
<td>CRF High</td>
<td>-.028</td>
<td>.020</td>
<td>-1.336</td>
</tr>
<tr>
<td>CRF Low</td>
<td>.047</td>
<td>.044</td>
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<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Constant</td>
<td>28.389</td>
<td>4.673</td>
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</tr>
<tr>
<td>CRF High</td>
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<td>.017</td>
<td>-1.698</td>
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<tr>
<td>CRF Low</td>
<td>.072</td>
<td>.038</td>
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<tr>
<td>RFQ Certainty</td>
<td>-.620</td>
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<td>-.748</td>
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<tr>
<td>RFQ Uncertainty</td>
<td>-.108</td>
<td>.491</td>
<td>-.076</td>
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</table>

Note. Step 1 $R^2 = .222$: Step 2 $\Delta R^2 = .422$ (ps < .05).
**Thematic analysis**

A thematic analysis was conducted to provide richer data around the wellbeing of the participant, specifically the thoughts, feeling and responses elicited by the CI.

**Pragmatic Approach to Care.** The most prominent of themes across all 13 transcripts was pragmatism which can be defined as: “a focus on the practical and achievable, rather than the theoretical or ideal” (Long, McDermott & Meadows, 2018). Nine of the participants described being able to detach themselves from their own emotions to provide the best care for patients. In the immediate instance of a CI the majority of participants felt “panic”, “fear”, “anger” and physiological symptoms such as having “a racing heart” or “shaky legs”. When dealing with the situation, most were able to put those feelings to one side and effectively manage the incident. Overall, participants were able to manage patient and staff safety whilst facing emotionally-charged situations. Most participants were able to highlight where things went wrong; what they could have done to improve the situation; and could understand factors that lead to the incident occurring. Within this theme there were subcategories of professionalism, detachment of staff emotions and experiential learning.

Two illustrations of a pragmatic approach are illustrated below; P1 reflected on an incident categorised as acute physical decline and P12 an incident of physical aggression.

P1: “It was quite a panicky situation, but I just tried to keep as cool a head as possible and think logically what the next steps were to get this patient seen to.”

P12: “I can remember thinking what about the safety of everyone and backing out the room. Having to get estates up to isolate the oxygen so that wasn’t a risk... we were concerned about our safety, his safety and the public’s safety.”

These excerpts are examples of the main theme pragmatism as the focus is addressing the incidents in a logical and practical manner. The two participants inferred feelings of panic, however they were able to manage the situation practically to ensure patient and staff safety.
Compassionate Approach to Care. Another prominent theme was compassion, which can be defined as: “care given through relationships based on empathy, respect and dignity” (MacArthur, Wilkinson, Gray & Matthews-Smith, 2017). This theme was prevalent in the way in which the participants understood the needs of their patients and the treatment provided. The theme of compassion was inferred from the majority of narratives. Most participants were able to infer patient affect and relate to them. Eight participants were able to apply both a pragmatic and compassionate approach when faced with a challenging incident. Within this theme there were subcategories of professional relationships with patients, empathy and guilt. Two illustrations of compassionate care are below:

P7: “I was also thinking this [body search] is going to be terrible for her, and really distressing for her. And it was. When we had to go through that process with her she was really distressed and I just felt real empathy for her and what she was going through. And I was really worried about how that would impact on our relationship, that I had done that to her.”

P8: “I remember looking at her and feeling quite tearful. I felt really sorry for her and thinking oh my god this is a bad day starting for her. And I just remember feeling sympathetic towards her because she had a look in her eye that I had never seen her have before. It was a desperate look in her eye and I just wanted to help her.”

These excerpts are examples of the main theme compassion as they demonstrate an inference of emotion beyond pragmatic care. These participants were able to identify and articulate the patient’s emotional state at the time of the incident and use that information to better inform care.
Organisational Barriers to Care- Disempowerment. Interestingly, a strong sense of disempowerment was a common theme. The concept of disempowerment and empowerment is elusive to define. Common agreement between conceptualizations is that empowerment refers to change, choice and power (Ganle, Afriyie & Segbefia, 2015). Disempowerment is considered the opposite of this. This theme encompasses a variety of subcategories wherein participants felt “helpless”, “frustrated” and/or “a failure” which came from their inability to action the care and support they felt was necessary. A common reason for this sense of disempowerment was waiting for psychiatrists, or medical professionals outwith the acute psychiatric service to agree to treatment. Common phrases were identified from seven out of thirteen transcripts, for example: “you felt like you were going nowhere and you were trying your best” and “you felt like you were banging your head against a wall”. This frustration and feeling of helplessness was common amongst most of the participants who had a desire to prioritise patients’ wellbeing but felt constrained by organisational systems and procedures. An illustration of this disempowerment and the impact on the participant is below:

P9: “We were sitting in front of the patient who was struggling and you could see that they were struggling... this felt quite hopeless that we couldn’t do anything at that precise time with the patient. It almost felt like a battle with the medical staff at the general hospital to try and seek treatment. It was quite disheartening”.

When asked to consider the way in which one may approach similar incidents in the future, many participants reported they had learned from the incident to be more forthcoming and advocate for the patients. Another common learning point was to be more confident in their beliefs and professional competencies. There was an inference of how aversive the feeling of disempowerment had felt and a determination to prevent this occurring in the future; two illustrations are below:

P3: “For all that she suffered and I felt we had let her down, from her terrible experience I am quicker at getting doctors to allow me to get a palliative review and I have more power behind me to be able to voice my opinion.... I don’t take no from doctors anymore”.

P5: “Made me more confident for if the situation happens again that it gets escalated straight away. It’s definitely made me more determined to make sure the patients are advocated for and they’re safe as they can be and are in the right place for treatment”.
These three excerpts are examples of the main theme of disempowerment as they demonstrate a lack of choice and power over care decisions. A sense of frustration and helplessness may also be inferred.
Discussion

Overall, the predicted outcomes of the two research questions were not fully supported. The results suggest self-reported RF and narrated RF were not significantly associated with one another. Thus, suggesting that validating the self-reported measure with the narrated RF measure was not feasible. Additionally, RF ability did not predict wellbeing, with the exception of self-reported RF being a significant predictor of positive wellbeing (Compassion Satisfaction).

Self-reported versus Narrated RF

It was expected that both of the RF measures would be associated to one another. One possible reason why this was not observed is the small sample size was unable to detect an effect. The sample within this study was significantly less than the suggested figure achieved from a power calculation. The possibility of Types I and II errors therefore cannot be excluded (Raudys & Jain, 1991). In spite of increased recruitment efforts, there was only a small recruited sample, understood to be related to additional staff pandemic related pressures, and local structural changes within the acute psychiatric ward. The likelihood of detecting any effect may have been considerably reduced due to the size of the sample.

Hence, future research is required with larger sample sizes.

Another potential consideration is whether the measures used within this study were valid measures of mentalization. The concept of mentalization is considered to be complex and multidimensional, and literature suggests self-reported and narrated measures risks de-contextualising and oversimplifying the mentalizing process (Katznelson, 2014). Thus, there remains a challenge with respect to validating different methods of RF assessment and caution needs to be applied when considering the application or development of measures of RF. The main self-reported outcome measure used within this study was The RFQ (Fonagy et al., 2016); a subjective measure potentially linked with social desirability effects and low
ecological validity (Gratz and Roemer, 2004). Despite its broad acceptance within the research field, the RFQ has been questioned on its validity as a two dimensional measure of RF (Müller et al., 2022). Müller et al. suggest the measure may be more useful as an indicator of general personality pathology as opposed to a valid measure of RF.

The CIT was used as the main narrative measure, which has never been used before as a means of measuring RF. In comparison to the AAI (George et al., 1985), which consists of 12 permit questions and eight demand questions, the CIT has six questions in total with only one demand question. This type of question is considered a valid assessment technique of RF, however it is possible that having only one demand question may not provide a full assessment of RF capacity. Additionally, the CIT does not provide the opportunity to explore attachment style, of which is considered to be the basis of which an individual’s capacity to mentalize is developed. The CRF manual (Fertuck et al., 2012) was then utilised to score the transcripts from the CIT, as opposed to the Gold Standard; the RFS. Fertuck et al. however suggest the CRF should be used in conjunction with the RFS until further research supports its validity. Due to such validity concerns, future in depth research is required to assess whether the CIT is too simplistic, or whether it could be a more efficient and cost effective measure of RF. Future research could compare data collected from the CIT with that collected from the AAI by utilising the gold standard, RFS to code the data.

Nonetheless, this main focus of this study was to consider more efficient and cost effective alternatives, to the gold standard measures. The RFQ has satisfactory psychometric properties (Badoud et al., 2015), the CIT has been used within the nursing field as an effective research tool to prompt reflection, and the CRF has preliminary support (Fertuck et al., 2012), all of which were deemed suitable alternatives to assess RF capacity. Future, larger scale studies are required to investigate these measures further.
Qualitative data on Narrated RF Ability

Considering the above stated validity concerns, the qualitative data collected within this study provided a deeper insight and inference into RF capacity by the language used by participants. Interestingly, different types of incidents appeared to elicit different levels of RF. Namely, participants who described incidents of acute physical decline of patients had considerably lower CRF scores than those reflecting on ‘serious attempts on life’.

Considering an individual’s ability to mentalize may be accessed through reflection, in the context of other relationships (Bateman & Fonagy, 2004), this may be more difficult to do with physical health decline as opposed to behaviours that challenge. Nonetheless, each participant had more linguistic markers indicative of CRF High speech than CRF Low speech, suggesting the participants demonstrated more effective RF than not.

Wellbeing

The second expectation was that RF capacity would predict wellbeing. The results suggest self-reported effective RF ability was a predictor of positive wellbeing (compassion satisfaction). Research by Ballespí et al. (2021) suggests effective mentalizing skills are indicated in contributing to resiliency by supporting individuals to cope better with stress or poor mental health; rather than as a preventer of poor wellbeing (Ballespí et al., 2021).

Compassion satisfaction is also considered a protective factor for mental health care workers with respect to improved mental wellbeing and lower rates of burnout and compassion fatigue (Ray et al, 2013). The qualitative data from the thematic analysis support this finding as those with the highest CRF scores described feeling acutely stressed by the CI, but were able to provide a ‘compassionate care’ approach.

However, the results fail to support theoretical underpinnings of mentalizing theory: that poor mentalizing capacity is associated with greater mental health difficulties (Bouchard et al., 2008). Nonetheless, research within this field typically assesses the effects of poor
mentalizing capacity within clinical samples, wherein RF capacity would theoretically be lower. Comparatively, this study assessed RF capacity of psychiatric nurses who potentially would have more effective mentalizing capacity, due to them electing to work within a ‘caring role’.

**Thematic Analysis**

The thematic analysis provided richer data around the environment, in which the participants worked, and the thoughts, feelings and responses elicited by the critical incidents. All participants reported experiencing negative emotions throughout the incidents however pragmatism was a common regulating approach. Participants were able to focus on their nursing role rather than their emotions to ensure patient and staff safety, while providing the highest quality care. This is a positive finding, since a pragmatic approach to theory/practice is an implied competency pertinent to nurses, allowing them the application of inventiveness and knowledge to manage everyday challenges (Doane, & Varcoe, 2005). Pragmatic caregivers are likely to balance engagement and detachment of affect whilst setting and adhering to boundaries with patients, and recognising the importance of practising self-care (Cormack, 1997). Participants demonstrated their ability to manage highly emotionally-charged situations in a pragmatic manner. This is an important finding as research suggests common coping strategies when faced with emotionally-charged situations involve avoidance (Michaelsen, 2012); or becoming emotionally overly-involved with patients, which can lead to job dissatisfaction and burnout (Cricco-Lizza, 2014; Hunt et al., 2017).

The second theme was compassionate care. The majority of participants were able to balance both pragmatism and compassion in response to emotionally-charged situations, suggesting they were able to work professionally and efficiently whilst empathising with the patient and adjusting care accordingly. Arguably, the most emotionally-charged incidents were those relating to ‘serious attempts on life’. Interestingly, all three narratives from
participants who reflected on such incidents were coded the highest total CRF scores throughout the full sample. These results relate to research with foster carers, suggesting that those with effective mentalizing skills tend to be less likely to assume negative intentions of behaviour, and are more likely to respond in a compassionate manner (Adkins et al., 2020).

The theme of disempowerment was an interesting finding, as it is typically predicted that patients’ interpersonal challenges (Ford, 2011) and behaviours can be the biggest challenge for nurses (Feo, Rasmussen, Wiechula, Conroy & Kitson, 2017; Poggenpoel, Myburgh & Morare, 2011; Tölli, Partanen, Kontio & Häggman-Laitila, 2017). This theme however, suggests organisational barriers to care can also be challenging; emotionally triggering; and difficult to manage. A similar theme was also observed by Browall et al., (2014) who utilised the CIT to investigate the experience of nurses working within end-of-life-cancer care, and highlighted feelings of powerlessness and insufficiency. This also links in with evidence of hierarchical structures or power imbalances within the nursing field (Suominen et al. 1997, Kuokkanen & Leino-Kilpi 2001). Additionally, this feeling of lack of professional control and insecurity at work was also described by Burns and Rosenberg (2001) who suggested nurses are likely to experience ethical distress and negative outcomes due to factors beyond their control.

**Study Limitations**

A potential study limitation is that participants may have been acutely aware of the potential results of this research, the possible impact to their career and may have been biased in their selection of CIs and descriptions of patients. Of particular interest is the Hawthorne Effect (Sedgwick & Greenwood, 2015) as seen in observational research wherein the presence of an observer can change the behaviour of those being observed. Whilst this study was not observational, this effect could still be relevant due to the participants being NHS employees who may have perceived public backlash if nurses within the study appeared to
have responded to a CI or a patient in an unethical manner. Thus, results should be interpreted cautiously.

**Implications**

This current study focused on the mentalizing ability of a specific nursing group, and considered the impact this had on wellbeing. This was novel as the research base tends to focus on clinical populations and “poor” mentalizing being a predictor of significant mental health difficulties, rather than the protective role of effecting mentalizing. As mentioned previously, research suggests caregivers with effective mentalizing skills are better at regulating their own affect and are more tolerable to behaviours that challenge, which in turn promotes quality of care, provided. Although this study did not meet the predictions set out, this area deserves more of a focus with all health and social care professionals through larger scale research with sound methodology. Having a workforce with effective mentalizing ability, could be beneficial to the NHS as a whole, in terms of patient outcomes, employee job satisfaction and retention, and reduced sickness rates.

This is particularly relevant within the field of Clinical Psychology, as clinicians are required to look both inwards and outward, at their own experiences and make inferences about other’s thoughts and feelings through behaviours (Bhola & Mehrotra, 2021). Research by Barreto and Matos (2018) indicate that therapists’ nuanced awareness of their inner worlds were fundamental in “mentalizing the countertransference”, particularly in working with individuals with a diagnosis of BPD, where reflective processes are more likely to be challenged. Recognition and management of countertransference can help understand psychopathology, anticipate and address ruptures in the therapeutic alliance, track the therapeutic process, and address possible burnout from continued work with challenging presentations (Lonehan, Cochran, Mar, Levensky & Comtois, 2000; Norcross & Wampold, 2011). Additionally, Mentalization Based Therapy (MBT) is becoming an increasingly
popular intervention framework, and considering the reciprocal nature of mentalizing, it is important that clinicians are able to model reflective capacity to support treatment outcomes.

Conclusion

Overall, this study aimed to develop a more efficient and cost effective method of assessing RF. Although significant validity concerns were raised, it is hoped this study can generate awareness of the protective nature effective mentalizing can provide, particularly within a health and social care role. Extensive research is required before any of the assessments used within this study can replace the gold standard assessment of RF.

Declaration of Interest

The authors report no declarations of interest.
References


5. Thesis Appendices

Table of Appendices

<table>
<thead>
<tr>
<th>Appendix No</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Author Guidelines: <em>Journal of Clinical Nursing</em></td>
</tr>
<tr>
<td>B</td>
<td>Quality Review Tool RCT</td>
</tr>
<tr>
<td>C</td>
<td>Signed HiSS Ethical Approval Application</td>
</tr>
<tr>
<td>D</td>
<td>Research Protocol</td>
</tr>
<tr>
<td>E</td>
<td>Participant Information Sheet</td>
</tr>
<tr>
<td>F</td>
<td>Participant Consent Form</td>
</tr>
</tbody>
</table>
Appendix A
Author Guidelines: Journal of Clinical Nursing

Journal of Clinical Nursing Author Guidelines

1. SUBMISSION
2. AIMS AND SCOPE
3. MANUSCRIPT CATEGORIES AND REQUIREMENTS
4. PREPARING YOUR SUBMISSION
5. EDITORIAL POLICIES AND ETHICAL CONSIDERATIONS
6. AUTHOR LICENSING
7. PUBLICATION PROCESS AFTER ACCEPTANCE
8. POST PUBLICATION
9. EDITORIAL OFFICE CONTACT DETAILS

1. SUBMISSION
Thank you for your interest in the Journal of Clinical Nursing. Note that submission implies that the content has not been published or submitted for publication elsewhere except as a brief abstract in the proceedings of a scientific meeting or symposium. See Cover letter in Section 4 Preparing Your Submission for further details.

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Data Sharing and Data Availability
This journal expects data sharing. Review Wiley’s Data Sharing policy where you will be able to see and select the data availability statement that is right for your submission.

Data Citation
Please review Wiley’s Data Citation policy.

2. AIMS AND SCOPE
The Journal of Clinical Nursing (JCN) is an international, peer reviewed, scientific journal that seeks to promote the development and exchange of knowledge that is directly relevant to all spheres of nursing practice. The primary aim is to promote a high standard of clinically related scholarship which advances and supports the practice and discipline of nursing. The Journal also aims to promote the international exchange of ideas and experience that draws from the different cultures in which practice takes place. Further, JCN seeks to enrich insight into clinical need and the implications for nursing intervention and models of service delivery. Emphasis is placed on promoting critical debate on the art and science of nursing practice.

JCN is essential reading for anyone involved in nursing practice, whether clinicians, researchers, educators, managers, policy makers, or students. The development of clinical practice and the changing patterns of inter-professional working are also central to JCN's scope of interest. Contributions are welcomed from other health professionals on issues that have a direct impact on nursing practice.

We publish high quality papers from across the methodological spectrum that make an important and novel contribution to the field of clinical nursing (regardless of where care is provided), and which demonstrate clinical application and international relevance.

Topics include but are not limited to:

- Development of clinical research, evaluation, evidence-based practice and scientific enquiry;
- Patient and family experiences of health and health care; illness and recovery;
- Nursing research to enhance patient safety and reduce harm to patients;
- The nature of nursing need, intervention, social interaction and models of service delivery;
- Clinical nursing leadership;
- Examination of clinical decision-making;
● Exploration of organisational or systemic factors that enhance or impede the provision of effective, high-quality nursing care;
● Application and dissemination of clinical knowledge and theory;
● Role development and inter-disciplinary working, exploring the scope and changing boundaries of clinical nursing; and
● Cultural comparisons and evaluations of nursing practice in different health sectors, social and geographical settings.

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3. MANUSCRIPT CATEGORIES AND REQUIREMENTS

i. Original Articles
Pilot studies are not suitable for publication as original articles.
Word limit: 8,000 words maximum (quotations are included in the overall word count of articles, and abstract, references, tables and figures are excluded).

Abstract: 300 words maximum, no abbreviations. Structured under the sub-headings: Aims and objectives; Background (stating what is already known about this topic); Design; Methods (for both qualitative and quantitative studies state n); Results (do not report p values, confidence intervals and other statistical parameters); Conclusions (stating what this study adds to the topic); Relevance to clinical practice. Trial registration details (if required).

Main text structure: Introduction (putting the paper in context - policy, practice or research); Background (literature); Methods (design, data collection and analysis); Results; Discussion; Conclusion; Relevance to clinical practice.

References: 50 maximum
Impact Statement: should contain 2-3 bullet points under the heading 'What does this paper contribute to the wider global clinical community?'

Research Reporting Checklist: May be required. Please see Section 5.

ii. Review Articles
Literature reviews on any area of research relevant to clinical nursing are welcomed. We encourage authors to prospectively register their reviews with a registry such as PROSPERO (https://www.crd.york.ac.uk/prospero/) or the Joanna Briggs Institute (https://joannabriggs.org/ebp/systematic_review_register).

Word limit: 8,000 words maximum (quotations are included in the overall word count of
articles, and abstract, references, tables and figures are excluded).

*Main text structure:* Review Articles should be structures, under the sub-headings: Introduction, Aims, Methods, Results, Discussion, Conclusion, and Relevance to Clinical Practice.

*References:* 50 maximum

*Research Reporting Checklist:* Required. Please see Section 5.

**iii. Discursive Articles**
*Word limit:* 8,000 words maximum.
*Main text structure:* Aims; Background; Design (stating that it is a position paper or critical review, for example); Method (how the issues were approached); Conclusions, Relevance to clinical practice.

**iv. Special Issue Articles**
Authors interested in submitting a paper for a forthcoming Special Issue must contact the Editorial Office to discuss and agree submission of the paper with the designated Special Issue Guest Editor before submission to the journal takes place. Upon submission, Authors must indicate that the paper is to be considered for a Special Issue.

**v. Registered Report**
Journal of Clinical Nursing is now considering submissions of Registered Reports. Registered Reports are a new form of empirical article in which the methods and proposed analyses are pre-registered and reviewed prior to research being conducted. For more information please refer to our Registered Reports guidelines.

**vi. Commentaries**
The Journal accepts two types of commentaries, with the first being preferable:

- Written in response to a paper published in the Journal, offering expert opinion from one or more people (who may agree or disagree) on a current understanding/status of an area, or how practice should be undertaken. No abstract; limit references to 5 or less; 2,000 words maximum.
- Expert opinion from one or more people (who may agree or disagree) on a current understanding/status of an area, or how practice should be undertaken. No abstract; limit references to 5 or less; 2,000 words maximum.

**vii. Letter to the Editor**

- Reserved for discussion about published papers.
- No abstract; four or less references.
- The Editorial Board reserves the right to accept or reject, edit, and condense letters for publication and to publish an author or editor response to letters.
- If a Letter to the Editor is accepted for publication, the authors of the article you are writing about will have an opportunity to review their Letter and respond with a Letter
to the Editor of their own in response if they wish. You will not be given another opportunity to respond to the author’s response to you.
e. Letters to the Editor undergo review, but they do need to have a full standard peer review. The Editor-in-Chief might choose to accept or reject the Letter themselves, or consult with board members, or send the letter out for full peer review.
f. Letters by article authors in response to Letters to the Editor disputing their articles are usually accepted for publication after the same type of review described above in e.
g. If a Letter to the Editor is accepted for publication, the Editor-in-Chief will decide when and how it will be published.

viii. Editorial
To convey an opinion, or overview of an issue, by the Editor or someone invited by the editor. No abstract; limit references to four or less; 1,500 words maximum.

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All manuscripts submitted to Journal of Clinical Nursing should include a covering letter stating on behalf of all the authors that the work has not been published and is not being considered for publication elsewhere. Any previous submission of the work, in any form, must be declared. If the study that is being submitted is similar in any way to another study previously submitted/published or is part of multiple studies on the same topic, a brief sentence explaining how the manuscript differs and that there is no identical material should be stated in the cover letter upon submission. Manuscripts undergo a similarity check when submitted and your article may be returned to you, if the above has not been adhered to.

Parts of the Manuscript
The manuscript should be submitted in separate files: title page; main text file; figures.

Title Page:
The title page should be submitted separately to the main file and contain:

i. A short informative title that contains the major key words. The title should not contain abbreviations (see Wiley’s best practice SEO tips).
ii. A short running title of less than 40 characters
iii. The full names of the authors
iv. The authors’ institutional affiliations at which the work was carried out
v. Corresponding author’s contact email address and telephone number
vi. Acknowledgements.
vii. Conflict of Interest Statement
viii. Funding or sources of support in the form of grants, equipment, drugs etc.
ix. Clinical Trial Registration Number (if applicable)

The present address of any author, if different from that where the work was carried out, should be supplied in a footnote.


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**Acknowledgments**
Contributions from individuals who do not meet the criteria for authorship should be listed, with permission from the contributor, in an Acknowledgments section. Financial and material support should also be mentioned. Thanks to anonymous reviewers are not appropriate.

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Authors will be asked to provide a conflict of interest statement during the submission process. See ‘Conflict of Interest’ section in Editorial Policies and Ethical Considerations for details on what to include in this section. Authors should ensure they liaise with all co-authors to confirm agreement with the final statement.

**Main Text File and Figures**
The main text file should be presented in the following order:

i. Title, abstract and key words;
ii. Main text;
iii. References;
iv. Tables (each table complete with title and footnotes);
v. Figure legends;
vi. Appendices (if relevant).

Figures and supporting information should be supplied as separate files.

**Title**
The title must contain both a descriptive and concise title of the paper. Country names are only to be included in titles where it is made clear the content is being compared and contrasted to the International arena.

**Keywords**
Please provide up to 10 keywords. When selecting keywords, Authors should consider how readers will search for their articles. Keywords should be taken from those recommended by the US National Library of Medicine’s Medical Subject Headings (MeSH) browser list at [https://www.nlm.nih.gov/mesh/](https://www.nlm.nih.gov/mesh/).

**Main Text**

- As papers are double-blind peer reviewed, the main text file should not include any information that might identify the authors.
- All articles must be relevant to an international audience. Authors should explain policies, practices and terms that are specific to a particular country or region; outline the relevance of the paper to the subject field internationally and also its transferability into other care settings, cultures or nursing specialities; placed discussions within an international context any papers exploring focussed cultural or other specific issues, and that clinical issues are put into context to other geographical regions and cultural settings.
The journal uses British/US spelling; however, authors may submit using either option, as spelling of accepted papers is converted during the production process.

Footnotes to the text are not allowed and any such material should be incorporated into the text as parenthetical matter.

References

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References should be prepared according to the Wiley APA Manual Style. Detailed guide and examples can be found here: https://authorservices.wiley.com/author-resources/Journal-Authors/Prepare/manuscript-preparation-guidelines.html/index.html

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Tables should be self-contained and complement, not duplicate, information contained in the text. They should be supplied as editable files, not pasted as images. Legends should be concise but comprehensive – the table, legend, and footnotes must be understandable without reference to the text. All abbreviations must be defined in footnotes. Footnote symbols: †, ‡, §, ¶, should be used (in that order) and *, **, *** should be reserved for P-values. Statistical measures such as SD or SEM should be identified in the headings.

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Legends should be concise but comprehensive – the figure and its legend must be understandable without reference to the text. Include definitions of any symbols used and define/explain all abbreviations and units of measurement.

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Although we encourage authors to send us the highest-quality figures possible, for peer-review purposes we are happy to accept a wide variety of formats, sizes, and resolutions. Click here for the basic figure requirements for figures submitted with manuscripts for initial peer review, as well as the more detailed post-acceptance figure requirements.

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Additional Files
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**General Style Points**

The following points provide general advice on formatting and style.

- **Abbreviations:** In general, terms should not be abbreviated unless they are used repeatedly and the abbreviation is helpful to the reader. Initially, use the word in full, followed by the abbreviation in parentheses. Thereafter use the abbreviation only.

- **Units of measurement:** Measurements should be given in SI or SI-derived units. Visit the Bureau International des Poids et Mesures (BIPM) website at www.bipm.fr for more information about SI units.

- **Numbers:** Numbers under 10 are spelt out, except for: measurements with a unit (8mmol/l); age (6 weeks old), or lists with other numbers (11 dogs, 9 cats, 4 gerbils).

- **Trade Names:** Chemical substances should be referred to by the generic name only. Trade names should not be used. Drugs should be referred to by their generic names. If proprietary drugs have been used in the study, refer to these by their generic name, mentioning the proprietary name and the name and location of the manufacturer in parentheses.

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Appeals should be filed within 28 days of notification of the decision. The appeal should be in the form of a letter addressed and submitted to the *Journal of Clinical Nursing* Editorial Office. The letter should include clear and concise grounds for the appeal, including specific points of concern. The appeal will then be assessed by the *Journal of Clinical Nursing* management team, led by the Editorial Office, and informed by the subsequent editorial communications.

You will be informed of the outcome of the appeal in writing, normally within 28 days. The decision will be final.

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When citing or making claims based on data, authors must refer to the data at the relevant place in the manuscript text and in addition provide a formal citation in the reference list. We recommend the format proposed by the [Joint Declaration of Data Citation Principles](#): Authors; Year; Dataset title; Data repository or archive; Version (if any); Persistent identifier (e.g. DOI).

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For manuscripts reporting medical studies involving human participants, we require a statement identifying the ethics committee that approved the study, and that the study conforms to recognized standards, for example: *Declaration of Helsinki*; *US Federal Policy for the Protection of Human Subjects*; or *European Medicines Agency Guidelines for Good Clinical Practice*.

Images and information from individual participants will only be published where the authors have obtained the individual's free prior informed consent. Authors do not need to provide a copy of the consent form to the publisher, however in signing the author license to publish authors are required to confirm that consent has been obtained. Wiley has a [standard patient](#).
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The journal requires that clinical trials are prospectively registered in a publicly accessible database such as [http://clinicaltrials.gov/](http://clinicaltrials.gov/) and clinical trial registration numbers should be included in all papers that report their results. Authors are asked to include the name of the trial register and the clinical trial registration number at the end of the title page. If the trial is not registered, or was registered retrospectively, the reasons for this should be explained.

The ICMJE defines a clinical trial as any research project that prospectively assigns people or a group of people to an intervention, with or without concurrent comparison or control groups, to study the relationship between a health-related intervention and a health outcome. Health-related interventions are those used to modify a biomedical or health-related outcome; examples include drugs, surgical procedures, devices, behaviour treatments, educational programs, dietary interventions, quality improvement interventions, and process-of-care changes. Health outcomes are any biomedical or health-related measures obtained in patients or participants, including pharmacokinetic measures and adverse events. The ICMJE does not define the timing of first participant enrollment, but best practice dictates registration by the time of first participant consent.

Research Reporting Guidelines
Accurate and complete reporting enables readers to fully appraise research, replicate it, and use it. For Original Articles, Review Articles and Special Issue submissions, we require authors to adhere to the relevant EQUATOR research reporting checklist.

For each item in the checklist, please state the manuscript page number on which this aspect of the guidelines has been addressed. Should your manuscript be accepted for publication, your completed checklist will be published alongside the manuscript as a supporting information file; when preparing your manuscript draft please therefore include the checklist as a “supporting file for review and online publication”. Please state in your manuscript abstract which checklist you have used using the short title (eg. CONSORT), where available, and cite the checklist as a supporting file in the Methods section using the full title (eg. Guidelines for reporting parallel group randomised trials (Supplementary File 1)).

EQUATOR checklists include:

- **CONSORT** checklist for reports of randomised trials and cluster randomised trials
- **TREND** checklist for non-randomised controlled trials
- **PRISMA** guidelines for systematic reviews and meta-analyses
- **STROBE** checklist for observational research
- **COREQ** checklist for qualitative studies
- **SQUIRE** checklist for quality improvement
- **TRIPOD** checklist for prediction model development and/or validation
- **CHEERS** guidelines for economic evaluations
- **SPIRIT** checklist for study protocols
- **AGREE** checklist for clinical practice guidelines

You can find the full list of EQUATOR checklists here.
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- The position of reporting guidelines in qualitative nursing research
- Transparency in the reporting of nursing research

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The list of authors should accurately illustrate who contributed to the work and how. All those listed as authors should qualify for authorship according to the following criteria:

1. Have made substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data;
2. Been involved in drafting the manuscript or revising it critically for important intellectual content;
3. Given final approval of the version to be published. Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content; and
4. Agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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**Proofs**
Authors will receive an e-mail notification with a link and instructions for accessing HTML page proofs online. Page proofs should be carefully proofread for any copyediting or typesetting errors. Online guidelines are provided within the system. No special software is required, all common browsers are supported. Authors should also make sure that any renumbered tables, figures, or references match text citations and that figure legends correspond with text citations and actual figures. Proofs must be returned within 48 hours of receipt of the email. Return of proofs via e-mail is possible in the event that the online system cannot be used or accessed.

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further changes to your article are possible. Your Early View article is fully citable and carries an online publication date and DOI for citations.

8. POST PUBLICATION

Access and sharing
When your article is published online:

- You receive an email alert (if requested).
- You can share a link to your published article through social media.
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For queries about submissions, please contact [JCN@wiley.com](mailto:JCN@wiley.com)
**JBI Critical Appraisal Checklist for Randomized Controlled Trials**

Reviewer: ________________________________  
Date: ________________________________  
Author: ________________________________  
Year: ________  
Record Number: ________

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13. Was the trial design appropriate, and any deviations from the standard RCT design (individual randomization, parallel groups) accounted for in the conduct and analysis of the trial? □ □ □ □

Overall appraisal: Include □ Exclude □ Seek further info □

Comments (Including reason for exclusion)

________________________________________________________________________________________

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Appendix C

Signed HiSS Ethical Approval Application

University of Edinburgh, School of Health in Social Science
Research Ethics, Integrity and Governance

The forms required when seeking ethical approval in the School of Health and Social Sciences have now been merged into this single electronic document. The sections you are required to complete will depend on the nature of your application. Please start to complete the form from the beginning and proceed as guided. On completion the entire document should be submitted electronically to your section’s ethics administrator using the email addresses detailed on the final page.

Applications submitted without appropriate documentation will be returned.

Please work your way through this form, reading the questions and accompanying information carefully. Sections highlighted in yellow are mandatory, so you must answer all the questions in these sections.

Aside from the mandatory questions you won’t always need to answer all of the questions in the form. Section 1 “your project details” includes a set of filter questions that determine the rest of the questions you need to answer. Please read the notes carefully to make sure you answer the right questions. The notes contain hyperlinks so you can jump directly to the relevant section.

Sections highlighted in yellow are mandatory. These must be completed for every application.

Section 1: Introduction
Section 2: Your project details
Section 3: Description of the research
Section 4: Potential risks to participants and researchers
Section 5: Participants and data subjects
Section 6: Participants or data subject information and consent
Section 7: Confidentiality and handling of data
Section 8: Security sensitive material
Section 9: Copyright
Section 10: Good conduct in collaborative research
Section 11: Good conduct in publication research
SECTION 1: Introduction

This is a:

New application for ethical approval – first submission ☐
A resubmission following reviewer comments ☐
A resubmission with requested amendments ☐

Please select your School:
☐ School of Health in Social Science

Please select your subject area

☐ CPASS
☐ Clinical Psychology
☐ Nursing Studies

It is each researcher’s responsibility to check whether their project requires Sponsorship, Caldicott Approval, R&D approval, and/or IRAS. https://www.ed.ac.uk/health/research/ethics/sponsorship-and-governance

If the project requires any of these, these need to be secured prior to submitting this application.

Please tick the relevant box before proceeding:

I have checked and this project does not require Sponsorship, Caldicott, R&D and/or IRAS approval ☐
My project requires Sponsorship ☐ Sponsorship letter attached ☐

My project requires Caldicott approval ☐ Caldicott approval letter/e-mail attached ☐

My project requires R&D approval ☐ R&D approval letter/e-mail attached ☐

My project requires IRAS approval ☐ IRAS approval letter/e-mail attached ☐
External Research Ethics Approval

Does your research project require the approval of any other institution and/or ethics committee, nationally or internationally?

Please state the name of the review body and the current status of your application (for example, submitted, approved, deferred, or rejected)? Please include any known submission/approval timelines.

N/A

SECTION 2: Your project details

2.1 Project details

Your name: Christine McMahon

please enter your project title: Inferring Prevalence of Mentalization within Registered Mental Health Nurses Working within Acute Psychiatric Wards Using the Critical Incident Technique

Proposed Project Start Date: 09/11/2020
Proposed Project End Date: 01/03/2021

Q1. Are you a member of staff or a student?

☐ Staff member

Supplementary questions for staff members only:

List the names and institutions of any Co-Investigators working with you on the project.

☐ Student

Supplementary questions for students only:

What type of student are you?

Postgraduate student

Please provide your course title or programme name

Doctorate in Clinical Psychology

Who is your supervisor?

Prof Matthias Schwannauer
Q2. Please indicate any external ethical guidance your project has to adhere to. For example, the British Psychological Society (BPS), the British Academy, the British Association of Sport and Exercise Sciences (BASES)

The proposed study has been constructed in line with the British Psychological Society ‘Code of Human Research Ethics’ (2014) and the Data Protection Act (2018). The principles of Good Clinical Practice (GCP) Training have been considered and adhered to following training completed by the researcher.

2.2 Participants

Q3. Will you be collecting or generating any new data (including autoethnographic writings)?

☐ Yes
☐ No

Q4. Will you be extracting, re-coding or using existing data that contains sensitive information (i.e., identifiable information)?

☐ Yes
☒ No

If the answers to both Q3 and Q4 are ‘no’ you are not required to complete:
Section 4: Potential risks to participants and researchers
Section 5: Participants and data subjects
Section 6: Participant or data subject information and consent

2.3 Security-Sensitive Material

Q5. Does your research project fit into any of the following security-sensitive categories?

☐ Your research project is commissioned by the military.

☐ Your research project is commissioned under an EU security cell.
☐ Your research project involves the acquisition of security clearances.
☐ Your research project concerns groups which may be construed as terrorist or extremist

If you answer ‘yes’ to any of the questions above you must complete Section 8 Security Sensitive Material. You must answer all questions in the section.

2.4 Good Conduct in Collaborative Research
Q6. Will your research project involve collaborative work?

☐ Yes
☐ No

Selecting "Yes" to this question means you must complete Section 10 "Good conduct in collaborative research" later in the form. You must answer all questions in the section.

2.5 Project Funding
Q7. Is funding required for your research project? (To be completed by staff only)

Please indicate how the project will be financially supported.

2.6 Knowledge Exchange and Impact
Q8. Will there be any knowledge exchange and impact activities associated with this project? (To be completed by staff only)

2.7 Consultancy Potential
Q9. Could your research project lead to potential consultancy activities in the future? (To be completed by staff only)

SECTION 3: Description of the research
Q10: Please use the box below to describe your research; including a background summary, rationale, research questions and hypotheses, methodology, procedures. If you have identified ethical considerations that are not addressed in other parts of the form, please outline and discuss them here.
Background

Care and compassion is the cornerstone of The Scottish Government’s Nursing 2030 Vision, which is suggested to “reflect a long-held nursing approach that focuses not only on the immediate perceived problem, but also takes into account the person’s wider physical, psychological, social, family and community life to make a real and lasting difference to their health and wellbeing”. Research investigating psychological theories underpinning compassionate care within health and social care, particularly within acute psychiatric settings is limited. Research with foster carers however suggests that compassionate care is underpinned by the psychological concept mentalization; the ability to understand the thoughts and emotions that underlie an individual’s behaviour, or the ability to “put yourself in their shoes”. Foster carers typically care for children who are under extreme physical and emotional stress and often require support to recover from trauma (Arnow, 2004). Foster carers who are able to mentalize well are considered to be more tolerable to challenging behaviours, be less likely to assume negative intentions, and respond in a compassionate manner. Research proposes training for foster parents that focuses on enhancing capacity to mentalize (Timmer et al., 2006; Suchman et al., 2010; Midgley & Vrouva, 2013) as improving a parent’s capacity to mentalize should theoretically improve the child’s ability to mentalize and express and manage emotions effectively (Fonagy et al., 2010).

Registered Mental Health Nurses (RMNs) working within acute psychiatric inpatient services also care for individuals experiencing similar difficulties to children within the care system (Robinson et al., 2003) such as behavioural problems with extreme physical and emotional distress, poor attachment styles and complex trauma (Arnow, 2004). Considering research with foster carers, it could be suggested that RMNs who can mentalize well would be better at understanding patients’ emotional states and behavioural intentions, and provide more compassionate care (Fonagy et al., 2004) which should result in better treatment outcome and reduced relapse rates (Zeegers et al., 2017). Additionally, RMNs who can mentalize well theoretically would have better therapeutic relationships with patients, as they could apply more patience and understanding to patients with poor interpersonal skills (Borelli et al., 2016). Welstead and colleagues (2018) investigated whether training staff members on mentalisation-based-treatment-skills could improve attitudes and understanding of mentalising, particularly towards personality disorders. The researchers found that overall attitudes improved and suggested that deeper learning around patients’ mental and emotional states had occurred, which ultimately improved quality of care delivered to individuals. Research into this area is in its infancy, however and requires further investigation.

Poorly developed mentalizing skills are associated with insecure attachment and pathology of the self (Fonagy & Luyten, 2009). Initially considered as the underlying mechanism of personality disorders, mentalizing is now considered a transdiagnostic concept that can be applied to most mental health conditions (Bateman & Fonagy, 2019). Mentalization-based Therapy (MBT) is often recommended for individuals with complex mental health problems to increase mentalizing capacity (Bateman, & Fonagy, 2004). Patients experiencing complex mental health difficulties theoretically have not developed effective mentalizing capacity therefore it could be deemed crucial for the development of emotion regulation and social relationships, to develop this capacity as an adult through interactions with their care-givers (RMNs). Furthermore, it could be suggested that observing RMNs model effective mentalizing skills, and engaging with MBT could act as a two-pronged approach and potentially increase the likelihood of the patient developing effective mentalizing skills and better patient outcomes.
An individual’s ability to mentalize is suggested to be accessed through reflection, in the context of other relationships which can be elicited through narratives and self-report methods. The Critical Incident Technique (CIT) is a tool often used to facilitate reflection of retrospective events. The CIT “consists of a set of procedures for collecting direct observations of human behavior in such a way as to facilitate their potential usefulness in solving practical problems and developing broad psychological principles” (Flanagan, 1954). Schluter et al. (2007) describes the CIT as a “practical method that allows researchers to understand complexities of the nursing role and function”. The CIT has been used in a variety of service contexts in recent years assessing the quality of nursing care (Lewis et al., 2010; Larsson et al., 2011; Eriksson et al., 2016) and supporting reflection for student learning (Koskinen et al., 2011; Robb, 2014; Steven et al., 2020).

Rationale

The purpose of this research is to investigate the prevalence of mentalization within the field of mental health nursing. Research investigating capacity to mentalize within healthcare professionals is limited therefore this research is novel. This research could infer the extent to which RMNs can understand thoughts/feelings underpinning challenging behaviour and their ability to respond compassionately. This research could investigate whether staff training is required to enhance capacity to mentalize as recommended with foster carers, which theoretically could increase the delivery of compassionate care.

This study hypothesises that: (1) RMNs have effective mentalizing skills, measured by words or phrases used whilst reflecting on a critical incident. These skills can be negatively impacted by the well-being of the RMN in terms of burnout and compassion fatigue. (2): RMNs who rate highly on the overt self-reported measure of mentalization will use compassionate/understanding phrases whilst reflecting on critical incidents.

Methodology

A descriptive, cross-sectional, retrospective design will be used. Registered Mental Health Nurses (RMNs) who have experienced critical/challenging/difficult incidents within the past five years whilst caring for patients within acute psychiatric wards within Dumfries and Galloway (D&G) will be recruited. The World Health Organisation (WHO) describes a critical incident (CI) as: “an event out of the range of normal experience – one which is sudden and unexpected, involves the perception of a threat to life and can include elements of physical and emotional loss”.

RMNs capacity to mentalize will be inferred through two overt measures: 1- self-reported through the Reflective Functioning Questionnaire (RFQ) (46 items) (Fonagy et al, 2016) and 2- through reflecting on incidents using the Critical Incident Technique (Serrat, 2017). RMNs will be supported to reflect not only on a CI but any emotionally arousing experiences when caring for psychiatric inpatients. These do not have to be incidents that have been formally reported but instead incidents that the RMNS have remembered for being emotionally distressing. The overall aim of the critical incident technique is to improve practice through the use of reflection and self-feedback. For this proposed research, the aim is that the RMNs capacity to mentalize will be inferred through language used when reflecting on such incidents. The critical incident technique has 6 stages: 1) Description - What
happened? 2) Feelings- What were you thinking? 3) Evaluation- What was good and bad about the experience? 4) Analysis- What sense can you make of the situation? 5) Conclusion- What else could you have done? 6) Action plan- If the situation arose again, what would you do?

RMNs will also be asked to complete the Professional Quality of Life Measure (ProQOL) Version 5 (Stamm, 2009) as a measure of wellbeing and burnout. This self-report instrument measures respondents’ experience of Compassion Satisfaction (SC) and Compassion Fatigue (CF) within the past 30 days. CF breaks down further into: burnout (BO) and Secondary Traumatic Stress (STS).

Procedure

The General Manager within NHS Dumfries & Galloway will be asked for permission for the researcher to contact ward managers to request participation. Ward managers will be asked for permission to recruit RMNs and to circulate a poster explaining the background and rationale of the study and inviting RMNs to participate if they fit the inclusion criteria. It is hoped that the poster will be displayed in staff areas and emailed via NHS email accounts from amin to RMNs. Interested RMNs will be asked to email the researcher's NHS email address to arrange participation. All RMNs who contact the researcher will be asked to read through the patient information sheet and to sign their consent electronically, which includes consenting to the use of audio recording, and to send this back via email. Consenting RMNs will then be emailed an invitation to attend a semi-structured interview and will be forwarded and asked to complete the RFQ and ProQOL for the interview. Due to government social distance guidelines in response to COVID-19, the interviews will occur remotely over Microsoft Teams or Skype.

During the interview, RMNs will be asked demographic information, and will then be guided to reflect on two critical/challenging/difficult incidents using the Critical Incident Technique. Interviews will be audio-recorded to allow for information to be transcribed verbatim. RMNs will also be asked to email their completed ProQOL and RFQ to the researcher’s email address to reduce scoring ahead of the interview and possible researcher bias. In total, participation time should be around 95 minutes and no identifiable patient information will be shared or recorded. The RMNs will be thanked for their participation and debriefed. The researcher will then transcribe the interviews and analyse inductively before scoring the ProQOL and RFQ.

SECTION 4: Potential risks to participants and researchers

Q11. Is your research project likely or possible to induce any psychological stress or discomfort in the participants or others, indirectly associated with the research?

☐ Yes
☐ No

If “yes” state the types of risk and what measures will be taken to deal with such problems
Reflecting on a critical incident could potentially evoke emotional distress, as remembering such events could trigger memories of psychological harm. Turner (1974) considers critical incidents as ‘social dramas’ that may not have been satisfactorily resolved in the minds of the participant. It is important therefore to recognise this potential and offer assistance should it occur. RMNs will be provided time after the interview to raise any issues and concerns and to reflect on their current emotional state. Any feelings of distress will be validated and normalised. RMN’s will be provided contact information of the researcher whereby they could seek further support if necessary. No advice will be provided about how RMNs could resolve similar instances in future practice, however they will be encouraged to discuss any concerns about their practice with their supervisor or manager at their workplace.

Furthermore, an important ethical principle is the right to privacy and confidentiality. Due to the content of this research, RMN’s may be concerned about the impact this research may have on their employment. Assurances around confidentiality and anonymity will be provided which should assure RMN’s there will be no consequence of participating in this research on their employment. Privacy will be maintained by assigning a pseudo-name to each participant during content analysis, and only two people; researcher and research supervisor, will have access to the anonymised written accounts of the critical events. Quotes from the written descriptions of critical events will not be included in the writing of the thesis if identifiable information of the RMN, colleague or patient could be exposed.

Q12. Does your research project require any physically-invasive or potentially physically harmful procedures?

☐ Yes
☒ No

If “yes” give details and outline procedures to be put in place to deal with potential problems.

Q13. Does your research project require the use of privacy-invasive technology, such as CCTV, biometrics, facial recognition, vehicle tracking software?

☐ Yes
☒ No

If “yes” - Give details and outline procedures to be put in place to deal with potential problems.

Q14. Does your research project involve the investigation of any illegal behaviour or activities?

☐ Yes
☒ No
If “yes” - Give details of any illegal behaviour or activities you may investigate

Q15. Is it possible that your research project will lead to awareness or the disclosure of information about child abuse or neglect?

☐ Yes
☒ No

If “yes” - Indicate the likelihood of disclosure and the procedures to be followed if you become aware that a child has been or may be at risk of harm

Q16. Is it likely that dissemination of research findings or data could adversely affect participants or others indirectly associated with the research?

☐ Yes
☒ No

If “yes” - Describe the potential risk for participants/data subjects of this use of the data. Outline any steps that will be taken to protect participants.

Q17. Could participation in this research adversely affect participants and others associated with the research in any other way?

☐ Yes
☒ No

If “yes” - Describe the possible adverse effects and the procedures to be put in place to protect against them.

Q18. Is this research expected to benefit the participants, directly or indirectly?

☒ Yes
☐ No

If “yes” - Give details of how this research is expected to benefit the participants.

The research won’t benefit the participant directly, but will help the researcher and the University to better understand potential psychological principles underlying compassionate nursing care which could benefit patient care. Participants may derive some satisfaction from their inclusion in research intended to improve future patient care.
Q19. Will the true purpose of the research be concealed from the participants/data subjects?

☐ Yes
☒ No

If “yes” - Explain what information will be concealed and why.

Q20. Will participants/data subjects be debriefed at the conclusion of the study?

☒ Yes
☐ No

If “no” – Why will participants / data subjects not be debriefed?

Q21. At any stage in this research could researchers’ safety be compromised, or could the research induce emotional distress in the researchers?

☐ Yes
☒ No

If “yes” - Give details and outline procedures to be put in place to deal with potential problems.

Please tick to confirm you agree with the following:

I will adhere to School guidance on risk assessment and health and safety and will seek advice on project and travel insurance prior to project commencement.

☒ I agree
☐ I do not agree
☐ Not applicable

SECTION 5: Participants and data subjects. For autoethnographic research also include those who may feature in your writings.

Q22. How many participants or data subjects are expected to be included in your research project?

The aim of qualitative research is to explore subjective accounts therefore it is not pertinent that the sample is representative of a particular population (Cordingley et al., 1997). The focus rather, is selecting participants who have diverse perspectives and experiences (Field & Morse, 1985). Butterfield et al. (2005) argue the size of the sample is determined on the basis
of the number of critical incidents and not the number of participants, therefore there is no strict test for sample size. Similar research has reported between 25 (Bower, 2007) and 36 (Bassett, 2015) critical incidents, therefore this proposed research aims to review a minimum of 25 critical incidents. Participants will be asked to reflect on two critical incidents therefore this study hopes to recruit a minimum of 13 RMNs.

Unfortunately because this proposed study is novel, there are no previous studies with similar methodology to compare to or to detect similar findings. Green (1991) suggests a sample size of \( N >104 + m \) (where \( m \) is the number of independent variables needed). Attributing this formula to the proposed study which has five subscales (RFQ = 2, and ProQOL = 3) indicates a required sample size of 109 participants. It is anticipated that the likelihood of gaining such a sample size will not be possible; this is a recognised potential limitation of this study. It may be appropriate to consider this research as a pilot study due to this research being in its infancy.

Q23. What criteria will be used in deciding on the inclusion and exclusion of participants/data subjects in your research project?

Inclusion criteria:

1) Registered Mental Health Nurses (RMNs) who have experienced incidents within the past five years, whilst caring for patients that were considered critical or difficult or challenging.

(2) RMNs aged 18 to 65 years.

Exclusion criteria:

1) Other healthcare professionals working in the acute psychiatric inpatient service.

Q24. Are any of the participants or data subjects likely to be under 16 years of age?

☐ Yes

☐ No

If “yes” - Explain and describe the measures that will be used to protect and/or inform participants/data subjects.

Q25. Are any of the participants or data subjects likely to be children in the care of a Local Authority?

☐ Yes

☐ No

If “yes” - Explain and describe the measures that will be used to protect and/or inform participants/data subjects.
Q26. Are any of the participants or data subjects likely to be known to have additional support needs?

☐ Yes
☒ No

If “yes” - Explain and describe the measures that will be used to protect and/or inform participants/data subjects.

Q27. In the case of participants with additional support needs, will arrangements be made to ensure informed consent?

☐ Yes
☐ No

If “yes” – What arrangements will be made?
If “no” – Please explain why not

Q28. Are any of the participants or data subjects likely to be physically or mentally ill?

☐ Yes
☒ No

If “yes” - Explain and describe the measures that will be used to protect and/or inform participants/data subjects.

Q29. Are any of the participants or data subjects likely to be vulnerable or likely exposed to harm in other ways?

☐ Yes
☒ No

If “yes” - Explain and describe the nature of the vulnerability and the measures that will be used to protect and/or inform participants/data subjects.

Q30. Are any of the participants or data subjects likely to be unable to communicate in the language in which the research is conducted?

☐ Yes
☒ No

If “yes” - Explain and describe the measures that will be used to protect and/or inform participants/data subjects.
Q31. Are any of the participants or data subjects likely to be in a relationship (i.e., professional, student-teacher, other dependent relationship) with the researchers?

☐ Yes
☐ No

If “yes” - Explain and describe the measures that will be used to protect and/or inform participants/data subjects.

The researcher is not known within the acute psychiatric inpatient services within Dumfries & Galloway. Despite working in the same board, the researcher and participants are not colleagues nor ever had a professional relationship.

Q32. Are any of the participants or data subjects likely to have difficulty in reading and/or comprehending any printed material distributed as part of the study?

☐ Yes
☐ No

If “yes” - Explain and describe the measures that will be used to protect and/or inform participants/data subjects.

Q33. Describe how the sample will be recruited.

Ward managers will be approached by the researcher and asked to disseminate a recruitment poster to RMNs working within acute psychiatric wards via email and displaying in staff areas. The researcher will not have contact information for any RMN, instead interested participants will be asked to contact the researcher via NHS email.

Q34. Will participants receive any financial or other material benefits as a result of participation?

☐ Yes
☐ No

If “yes” - What benefits will be offered to participants and why?

Section 6: Participant or data subject information and consent

Q35. Will written consent be obtained from all participants or data subjects?

☐ Yes
☐ No

If “yes” – attach participant information sheet and consent form

If “no” – explain why not and how consent is obtained (e.g. orally), and/or if consent cannot or should not be sought for some reason, please provide a clear case and rationale for this
Please see attachment. Researcher will electronically sign the ‘name of person receiving consent’ section i.e. CMcMahon.

Q36. Have you made arrangements to tell participants what information you will hold about them and for how long?

☐ Yes
☐ No

If “yes” - what arrangements have been made?

The Participant Information Sheet details that the study is projected to finish around March 2021 and the researcher plans to publish the results within a doctoral thesis. Furthermore, the participant will not be identifiable in the thesis or any publication. Anonymised data is proposed to be retained for 5 years after this projected end date as University examiners and/or journal referee's may request additional data analysis or clarification and require access to study data after March 2021.

Q37. Have you made arrangements to tell participants whether you will disclose the information to other organisations?

☐ Yes
☐ No

If “yes” - What arrangements have been made?

Q38. Have you made arrangements to tell participants whether you will combine that information with other data?

☐ Yes
☐ No

If “yes” - What arrangements have been made?

Q39. In the case of children participating in the research, will the consent or assent of parents be obtained?

☐ Yes
☐ No

If “yes” - Explain how this consent or assent will be obtained

If “no” – Please explain why you won’t be obtaining consent
Q40. Will the consent or assent of children participating in the research be obtained?

☐ Yes
☐ No

If “yes” - Explain how this consent or assent will be obtained

If “no” – Please explain why not

Q41. In the case of participants who are not proficient in the language in which the research is conducted, will arrangements be made to ensure informed consent?

☐ Yes
☐ No

If “yes” – What arrangements will be made?

If “no” – Please explain why not

Q42. Does the activity involve using cookies or tracking individual’s activity on a website or the Internet in general?

☐ Yes
☐ No

If “yes” – Describe the arrangements, you have put in place to obtain informed consent for the use of these tools?

SECTION 7: Confidentiality and handling of data

Q43. What information about participants/data subjects will you collect and/or use?

Participants’ name will be recorded on the Consent Form but will be kept on a separate master list, with a corresponding unique identification number. This master list will remain on site at all times and kept electronically within a secure NHS drive. Only the principal investigator (CMc) will have access to this master list. A separate electronic database will be kept which includes remaining data in relation to the unique identification number to ensure anonymity of data. This data will include generic demographic information such as: age range, gender, number of years experience and number of years in present position, ProQOL and RFQ score, and transcribed narratives. Both the PI and Chief Investigator (MS) will have access to this anonymised data.
Q44. Will you collect or use NHS data?

☐ Yes

☐ No

If “yes” – what NHS data will you collect or use?

Registered Mental Health Nurses (RMNs) working for the NHS will be providing verbal accounts of incidents experienced whilst caring for patients. No patient information will be collected. To reduce the risk of GDPR breach, personal information will only be collected for consent purposes. Participants will be attributed a pseudo-name and will be advised not to disclose any identifiable information such as names of colleagues, patients, hospital names etc. during interviews. No identifiable information will be recorded or published in direct quotes in the write up of the research.

In line with Health and Care Professions Council (HCPC) and Nursing & Midwifery Council (NMC) standards, during the interview if an NHS employee discloses information that is believed to contravene professional standards of care, this would be documented and disclosed immediately to the research clinical supervisor (Dr Katie Whyte, Consultant Clinical Psychologist) and to the senior charge nurse of the relevant ward or relevant manager.

Q45. What training will staff who have access to the data receive on their responsibilities for its safe handling? Have all staff who have access completed the mandatory data protection training on the self-enrolment page of Learn?

To protect the rights, safety and wellbeing of study participants the Good Clinical Practice (GCP) training was completed by the PI, Christine McMahon, on 09/01/2019. Additionally, Data Protection Training was completed by the PI on 04/08/2020.

Q46. Will the information include special categories of personal data (health data, data relating to race or ethnicity, to political opinions or religious beliefs, trade union membership, criminal convictions, sexual orientations, genetic data and biometric data)

☐ Yes

☑ No

If “yes” – Explain what safeguards e.g. technical or organisational you have in place; including any detailed protocols if this requires special and/or external processing, storage, and analysis.

If you answered “no” to this question, please skip Q56 and continue answering the rest of the questions..

Q47. Please indicate how your research is in the public interest:

☑ Your research is proportionate
☐ Your research is subject to a governance framework
☐ Research Ethics Committee (REC) review (does not have to be a European REC)
☐ Peer review from a funder
☐ Confidentiality Advisory Group (CAG) recommendation for support in England and Wales or support by the Public Benefit and Privacy Panel (PBPP) for Health and Social Care in Scotland
☐ Other

Q48. It is essential that you identify, and list all risks to the privacy of research participants. You will then need to consider the likelihood of the risks actually manifesting and the severity of harm if the risks actually manifest.

Risk

Likelihood of risk manifesting

Severity of harm

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</table>
Please use this text box to record any other risks and the likelihood of them occurring, along with the severity of harm.

Please identify measures you could take to reduce or eliminate risks identified as possible/significant or probable/severe.

Q49. Will information containing personal, identifiable data be transferred to, shared with, supported by, or otherwise available to third parties outside the University?

☐ Yes
☐ No

If “yes” - Please explain why this necessary and how the transfer of the information will be made secure. If the third party is based outside the European Economic Area please obtain guidance from the Data Protection Officer.

Q50. Other than the use by third parties, will the data be used, accessed or stored away from University premises?

☐ Yes
☐ No

If “yes” - Describe the arrangements you have put in place to safeguard the data from accidental or deliberate access, amendment or deletion when it is not on University premises, including when it is in transit, and (where applicable) it is transferred outside the EEA.

Data will be stored within an NHS encrypted laptop which will be password protected and stored within a secured home office space. Personal data will not be accessible to any other individual.

The anonymised data will be accessible to the PI and CI. The data generated spreadsheet will be analysed on SPSS systems on an NHS encrypted laptop or on a laboratory computer at the University of Edinburgh. This will be accessed using a secure, sharepoint drive. SPSS will exist within the researcher's password protected secure network and will be only accessible by the researcher. The SPSS database will be secured by further password entry, accessible only by the research team.

NVivo, a qualitative data analysis computer software package available via the University of Edinburgh will be used to store, organize and analyze qualitative data collected during the CIT.

Q51. Will feedback of findings be given to your research project participants or data subjects?

☐ Yes
☐ No

If “yes” - How and when will this feedback be provided?
Should participants be interested in feedback on the outcome of research, a summary sheet of the findings will be provided. The researchers email address will be provided for participants who request further information.

If “no” - Please provide rationale for this.

Q52. How do you intend to use/disseminate the results of your research project?

It is intended that the proposed research is written up as a doctoral thesis and submitted for peer-review and publication. It is hoped the findings will be presented at a conference, providing funding is achieved. Locally, the findings will be presented to ward staff and service managers to encourage the implementation of service development strategies and continued Care Assurance. Additionally, it is intended the findings will be presented at departmental CPD events and local poster sessions, and disseminated to other NHS boards either by presentation, or by summary.

SECTION 8: Security

The Terrorism Act (2006) outlaws the dissemination of records, statements and other documents that can be interpreted as promoting or endorsing terrorist acts.

Q53. Does your research involve the storage on a computer of any such records, statements or other documents?

☐ Yes
☐ No

If “yes” - Please tick 'Yes' to indicate that you agree to store all documents on that file store

Q54. Might your research involve the electronic transmission (for example, as an email attachment) of such records or statements?

☐ Yes
☐ No

If “yes” - Please tick ‘Yes’ to indicate that you agree not to transmit electronically to any third party documents stored in the file store

Q55. Will your research involve visits to websites that might be associated with extreme, or terrorist, organisations?

☐ Yes
☐ No

If “yes” - You are advised that such sites may be subject to surveillance by the police. Accessing those sites from University IP addresses might lead to police enquiries. Please acknowledge that you understand this risk by ticking ‘Yes’
By submitting to the ethics process, you accept that your School Research Ethics Officer and the convenor of the University’s Compliance Group will have access to a list of titles of documents (but not the contents of documents) in your document store. Please acknowledge that you accept this by ticking ‘Yes’.

Please confirm that you have contacted your School Research Ethics Officer to discuss security-sensitive material by ticking ‘Yes’.

☐ Yes, I have contacted my School’s Research Ethics Officer

☐ No, I have not contacted my School’s Research Ethics Officer

Section 9: Copyright

Q56. Does your project require use of copyrighted material?

☐ Yes

☐ No

If “yes” please give further details

Section 10: Good conduct in collaborative research

Q57. Does your project involve working collaboratively with other academic partners?

☐ Yes

☐ No

If “yes” - Is there a formal agreement in place regarding a collaborative relationship with the academic partner(s)?

If “no” - Please explain why there is no formal agreement in place?

Student project for doctoral thesis.

Q58. Does your project involve working collaboratively with other non-academic partners?

☐ Yes

☐ No

If “yes” - Is there a formal agreement in place regarding a collaborative relationship with the non-academic partner(s)?
If “no” - Please explain why there is no formal agreement in place.

Not applicable as student project for doctoral thesis.

Q59. Does your project involve employing local field assistants (including guides/translators)?

☐ Yes
☐ No

If “yes” - Is there a formal agreement in place regarding the employment of local field assistants (including guides and translators)?

If “no” - Please explain why there is no formal agreement in place.

The Code of practice on the English language requirement for public sector workers (UK Government, 2016) outlines all employees with patient/public facing roles must speak and understand English to an appropriate standard. No arrangements should therefore be necessary.

Q60. Will care be taken to ensure that all individuals involved in implementing the research adhere to the ethical and research integrity standards set by the University of Edinburgh?

☐ Yes
☐ No

If “no” - Please explain why care will not be taken.

Q61. Have you reached agreement relating to intellectual property?

☐ Yes
☐ No

If “no” - Please explain why you have not reached agreement.

Section 11: Good conduct in publication practice

In publication and authorship, as in all other aspects of research, researchers are expected to follow the University’s guidance on integrity.

By ticking yes, you confirm that full consideration of the items described in this section will be addressed as applicable.

☐ Yes
☐ No
Subsequent to submission of this form, both the applicant and their supervisor should review any alterations in the proposed methodology of the project. If the change to methodology results in a change to any answer on the form, then a resubmission to the Ethics subgroup is required.

The principal investigator is responsible for ensuring compliance with any additional ethical requirements that might apply, and/or for compliance with any additional requirements for review by external bodies.

ALL forms should be submitted in electronic format. Digital signatures or scanned in originals are acceptable. The applicant should keep a copy of all forms for inclusion in their thesis.

Christine McMahon  
CMcMahon  
01/10/2020

Applicant’s Name  
Applicant’s Signature  
Date signed

__Matthias Schwannauer  
9.11.20

Supervisor¹ Name  
Supervisor’s Signature  
Date signed

*NOTE to Supervisor: Ethical review will be based only on the information contained in this form. If countersigning this check-list as truly warranting all ‘No’ answers, you are taking responsibility, on behalf of the HSS and UoE, that the research proposed truly poses no ethical risks.

ISSUES ARISING FROM THE PROPOSAL

Thank you for submitting your application. It has now been reviewed by two independent reviewers. The review process has revealed a couple of questions that require further clarification or consideration. Please discuss these with your supervisor, revise the application and related documents (highlight revisions throughout).

Please also provide a note underneath each comment letting us know how you have addressed them.

We would be grateful if you could address the following points:

- Hypotheses – these refer to burnout and compassion fatigue which aren’t assessed in the study so there seems to be a disconnect here with methods – which is accurate?

- Professional Quality of Life Measure (ProQOL) Version 5 (Stamm, 2009) mentioned throughout application as a measure of compassion fatigue and burnout. Added more information about this questionnaire to Q10.

¹ Not required for staff applications.
- Sample size – given that one hypothesis is about comparing those who are low vs high in self-reported mentalisation, this should be accounted for in sample size considerations?

- Calculated sample size and looked at past research. Added comment to Q22.

- It will be important to clarify whether there are any circumstances under which confidentiality will be breached with participants, e.g., disclosures of serious malpractice, and how this will be handled if so.

- Checked HCPC and NMC standards and added information to Q44.

- Q31 – it seems likely that participants might be in a professional relationship with the researcher as MDT colleagues? If so, this needs to be addressed. If not, it should be clarified that although these participants work in the same health board they are not colleagues.

- Clarified in Q31 that researcher is not known within the acute psychiatric inpatient services and has never had a professional relationship with employees in inpatient services.

- Q50 – this suggests the analysis will be conducted within SPSS but it’s not clear how this relates to the qualitative methodology?

Researched software packages available for qualitative research and found UoE recommended NVivo. Added to Q50.

- Consent form – given that this will be done electronically, it’s not clear who will complete the ‘name of person receiving consent’ section?

- The researcher will complete this section and use online signature, i.e. CMcMahon. Added to Q35

Signature: Ingrid Obsuth (sig)
Position: Ethics & Integrity Lead
Date: 11 Jan 2021

APPLICANT’S RESPONSE (If required)

Signature: CMcMahon
Date: 15/01/2021

CONCLUSION TO ETHICAL REVIEW (if required)

The applicant’s response to our request for further clarification or changes has now satisfied the requirements for ethical practice and the application has therefore generated a favorable opinion.

Signature: Ingrid Obsuth (sig)
Position: Ethics & Integrity Lead
Date: 21 Jan 2021

AMENDMENT/S: REQUEST FOR APPROVAL

Signatures:

Date:

CONCLUSION TO ETHICAL REVIEW OF AMENDMENT

The applicant’s response to our request for further clarification or amendments has now satisfied the requirements for ethical practice and the application has therefore been approved.

Signature:

Position:

Date:

Acronyms / Terms Used

NHS: National Health Service

SHSS: School of Health in Social Science

IRAS: Integrated Research Applications System

Section: The SHSS is divided into Sections or subject areas, these are; Nursing Studies, Clinical Psychology, C-PASS.

Ethics Administrators

Nursing Studies: nursing@ed.ac.uk

Counselling, Psychotherapy and Applied Social Science: CPASS.ethics@ed.ac.uk

Clinical Psychology: Submitting.Ethics@ed.ac.uk

MA in Health, Science and Society: mahssug@ed.ac.uk
Appendix D

Research Protocol

Non-CTIMP Study Protocol
Inferring Prevalence of Mentalization within Registered Mental Health Nurses Working within Acute Psychiatric Wards Using the Critical Incident Technique

The University of Edinburgh
College of Arts, Humanities and Social Sciences
55 George Square
Edinburgh
EH8 9JU

Protocol authors  Christine McMahon
Chief Investigator  Prof Matthias Schwannauer
IRAS ID
289409
Sponsor Number  CAHSS2009/05
Version Number and Date  V1. 20/08/2020

CONTENTS

1 INTRODUCTION  7
1.1 BACKGROUND  7
1.2 RATIONALE FOR STUDY  10
1.3 OBJECTIVES 11
1.3.1 Primary Objective  11
1.3.2 Secondary Objectives 11
2 STUDY DESIGN 11

Ethical approval 13

3 STUDY POPULATION 14

3.1 NUMBER OF PARTICIPANTS 14

3.2 INCLUSION CRITERIA 14

3.3 EXCLUSION CRITERIA 14

4 PARTICIPANT SELECTION AND ENROLMENT 14

4.1 IDENTIFYING PARTICIPANTS 14

4.2 CONSENTING PARTICIPANTS 14

4.2.1 Withdrawal of Study Participants 15

5 STUDY ASSESSMENTS 15

5.1 STUDY ASSESSMENTS 15

6 DATA COLLECTION 15

6.1 Source Data Documentation 16

7 DATA MANAGEMENT 16

7.1.1 Personal Data 16

7.1.2 Transfer of Data 16

7.1.3 Data Controller 16

7.1.4 Data Breaches 17

8 STATISTICS AND DATA ANALYSIS 17

8.1 SAMPLE SIZE CALCULATION 17

8.2 PROPOSED ANALYSES 17

9 RISKS 18

10 OVERSIGHT ARRANGEMENTS 18

10.1 INSPECTION OF RECORDS 18

10.2 STUDY MONITORING AND AUDIT 18

11 GOOD CLINICAL PRACTICE 19

11.1 ETHICAL CONDUCT 19

11.2 INVESTIGATOR RESPONSIBILITIES 19
11.2.1 Informed Consent 19
11.2.2 Study Site Staff 20
11.2.3 Data Recording 20
11.2.4 Investigator Documentation 20
11.2.5 GCP Training 20
11.2.6 Confidentiality 20
11.2.7 Data Protection 20

STUDY CONDUCT RESPONSIBILITIES 21

11.3 PROTOCOL AMENDMENTS 21

11.4 MANAGEMENT OF PROTOCOL NON COMPLIANCE 21

11.5 SERIOUS BREACH REQUIREMENTS 21

11.6 STUDY RECORD RETENTION 21

11.7 END OF STUDY 22

11.8 INSURANCE AND INDEMNITY 22

12 REPORTING, PUBLICATIONS AND NOTIFICATION OF RESULTS 22

12.1 AUTHORSHIP POLICY 22

13 REFERENCES 23

LIST OF ABBREVIATIONS

ACCORD Academic and Clinical Central Office for Research & Development - Joint office for The University of Edinburgh and Lothian Health Board

CI Chief Investigator

CIs Critical Incidents

CIT Critical Incident Technique

CRF Case Report Form

D&G Dumfries & Galloway

GCP Good Clinical Practice

ICH International Conference on Harmonisation

PI Principal Investigator
1 INTRODUCTION

1.1 BACKGROUND

Compassionate Care

Care and compassion are the cornerstone of The Scottish Government Nursing 2030 Vision, which is suggested to “reflect a long-held nursing approach that focuses not only on the immediate perceived problem, but also takes into account the person's wider physical, psychological, social, family and community life to make a real and lasting difference to their health and wellbeing” (Scottish Government, 2017). The Scottish Government and NHS Scotland are committed to providing the highest quality of care to all service users (National Institute for Health and Care Excellence [NICE], 2011). The ‘Healthcare Quality Strategy for NHS Scotland’ (Scottish Government, 2020) was developed to ensure consistent, person centred, safe, and clinically effective care, which acts as the foundations of all healthcare services. The strategy was developed based on service-users’ expectations of the NHS, which were categorised into six dimensions: “1- caring and compassionate staff, 2- clear communication and explanation about conditions and treatment, 3- effective collaboration, 4- clean and safe, 5-continuity of care, and 6- clinical excellence”. The Healthcare Quality Strategy highlights that compassionate care is central to the values of NHS Scotland. Furthermore, the ambition of The Mental Health Strategy 2017-2027 (Scottish Government, 2017) is that mental health problems must be prevented and treated with “the same commitment, passion and drive” as is done with physical health problems.

Research by Johannsson and Eklund (2003) suggests that service-users within psychiatric services, consider central features of “good care” as feeling understood by staff and developing high quality relationships with healthcare professionals. The researchers suggest that important components of these features include staff members having similar understandings and explanations for service users’ presenting problems and that care and treatment are designed around the individuals’ unique situation. Coyle (1999) suggests that ‘poor care’ can result in patients experiencing ‘personal identity threat’, which is explained as feeling devalued and not being treated as an equal human being. Research incorporating service-users feedback suggests that there is a reciprocal relationship between patients and
healthcare professionals which can predict overall care delivery/ experience and satisfaction levels for both groups (Woodward et al., 2017).

**Psychological Underpinning of Compassionate Care**

Research investigating psychological theories underpinning care and compassion within health and social care, particularly within acute psychiatric settings are limited. Research with foster carers however, suggests the psychological concept mentalization; in layman terms is the ability to “put yourself in someone else’s shoes”, underpins compassionate care. The construct of mentalization can be understood narrowly as the ability to infer emotional and mental states underlying behaviour. Broaedly, it is understood as an innate and crucial human function for emotion regulation and social relationships (Fonagy et al., 1991; Fonagy et al., 2002; Slade, 2005) which can be automatic or effortful. The capacity to mentalize is a developmentally acquired skill which allows individuals to infer and recognise that behaviours are motivated by internal states which creates realistic models of reasons underpinning behaviour (Fonagy & Target, 1997; Bouchard et al., 2008). The mentalizing approach to development is a theory that integrates ideas within the fields of psychoanalysis, developmental psychology and cognitive neuroscience (Fonagy, Steele, Steele, Moran, & Higgitt, 1991). The process of understanding internal states has been examined through various theoretical and methodological frameworks such as theory of mind (Baron-Cohen, 2000), mind-mindedness (Meins et al., 2003), and reflective functioning (Slade, 2005). Mentalization encompasses many of the constructs underpinning these theories to advance understanding of the development of intrinsic abilities required for self-regulation and relatedness during early childhood.

**Mentalization & Attachment**

Mentalising skills are theorised to develop from early caregiver-infant interactions, particularly when caregivers congruently mirror displays of affections back to infants. This reciprocity supports infants to develop the capacity to understand their own internal states and ultimately mentalize independently and infer others’ internal states (Fonagy & Target, 1997; Fonagy et al., 2002). Fonagy and Bateman (2004) suggest the ability to mentalize is closely linked to attachment style, with high ability only occurring with secure attachment. The researchers suggest that the progression from assisted to independent observation of ‘the self’ depends on secure attachment, as this progression relies on a healthy and consistent emotional interaction between children and caregivers. Fonagy and Target (2002) suggested that attachment is mediated by key self-regulation functions, such as regulation of the stress response and attention, and the mentalizing function. A secure attachment pattern is considered to evolve if the needs of the child are met consistently and a sense of predictability ensues.

**Function of Mentalization**

Fonagy and Bateman (2019) propose that caregivers with effective mentalizing skills tend to be aware of their own emotions and behaviour whilst understanding their children’s mental states and behaviours (Fonagy et al., 1991). Research suggests it is a critical aspect of sensitive caregiving and important for understanding the emotions that influence behaviour and drive interactions between parent and child (Fonagy & Levinson, 2004; Zeegers et al.,
Mentalizing is believed to be important for healthy psychological functioning and sensitive care giving as parents with effective mentalizing skills are better prepared to manage difficult and emotionally activating experiences without becoming overwhelmed and withdrawing from the child (Borelli et al., 2016). Caregivers who have insightful understanding of children's experience and who provide children with feedback are said to model the process of mentalizing.

An illustration of caregivers who are recommended to have effective mentalizing skills is foster carers as they often care for children who are under extreme physical and emotional stress and require support to recover from trauma (Arnow, 2004). Foster parents with effective mentalizing skills tend to be more tolerable of negative behaviours, be less likely to assume negative intentions, and respond to the child in a compassionate manner. These specific mentalizing skills may help parents regulate themselves emotionally and behaviourally during difficult interactions with children, which likely demonstrates good emotion regulation skills to children (Asen & Fonagy, 2012). Research proposes training for foster parents that focuses on enhancing capacity to mentalize (Timmer et al., 2006; Suchman et al., 2010; Midgley & Vrouva, 2013) as improving a parent’s capacity to mentalize should theoretically improve the child’s ability to mentalize and express and manage emotions effectively (Fonagy et al., 2010).

Mentalizing & Mental Health Problems

Poorly developed mentalizing skills are associated with insecure attachment and pathology of the self (Fonagy & Luyten, 2009). Initially considered as the underlying mechanism of personality disorders, mentalizing is now considered a transdiagnostic concept that can be applied to most mental health conditions, such as trauma, eating disorders, psychosis and depression (Bateman & Fonagy, 2019).

Personality disorders, namely Borderline Personality Disorder (BDP) are characterized by difficulties with interpersonal functioning (King-Casas & Chiu, 2012) which could potentially be the consequence of limited capacity to mentalize (De Meulemeester, 2017). Mentalization-based Therapy (MBT) is often recommended for individuals with complex mental health problems to increase mentalizing capacity (Bateman, & Fonagy, 2004).

Considering Care and Compassion is the cornerstone of the Scottish Government Nursing 2030 Vision, there is limited research investigating psychological principles which underpin nurses providing ‘compassionate care’ within an acute psychiatric inpatient setting. Registered Mental Health Nurses (RMNs) working within this setting however, care for individuals experiencing similar difficulties to children within the care system (Robinson et al., 2003) such as behavioural problems with extreme physical and emotional distress (Robinson et al., 2003), poor attachment styles and complex trauma (Arnow, 2004). Taking into account research with foster carers mentioned above, it could be suggested that RMNs who can mentalize well would be better at understanding patients’ emotional states and behavioural intentions, and provide more compassionate care (Fonagy et al., 2004) which should result in better treatment outcome and reduced relapse rates (Arnow, 2004; Zeegers et al., 2017). Additionally, RMNs who can mentalize well theoretically would have better therapeutic relationships with patients, as they could apply more patience and understanding to patients with poor interpersonal skills (Borelli et al., 2016). Welstead and colleagues (2018) investigated whether training staff members on mentalisation-based-treatment-skills could improve attitudes and understanding of mentalising, particularly towards personality disorders. The researchers found that overall attitudes improved and suggested that deeper
learning around patients’ mental and emotional states had occurred, which ultimately improved quality of care delivered to individuals. Research into this area is in its infancy however and requires further investigation.

Psychiatric nurses working within acute psychiatric environments have a 20 times higher rate of physical violence than those working within physical health units (Magnavita & Heponiemi, 2012) and experience higher rates of patient aggression (Pekurinen et al., 2017). A systematic review by Cornaggia et al. (2011) suggests that more incidents of verbal aggression or violence are experienced rather than physical, and that significantly poorer physical health and satisfaction levels are reported by RMNs who experience frequent episodes of abuse. This review also states that previous episodes of aggression and lengths of stays within acute psychiatric in-patient settings are consistent predictors of risk of aggressive behaviours. Considering the role of reciprocity mentioned above, both nurses and patients’ satisfaction levels and quality of interactions are likely impacted similarly by incidences of violence and aggression.

Considering research with foster carers mentioned above, it could be suggested that RMNs who can mentalize well, may be better at understanding patients’ emotional states and behavioural intentions, and provide more sensitive care (Fonagy et al., 2004; Zeegers et al., 2017). Additionally, as mentioned above, patients experiencing complex mental health difficulties likely did not develop the capacity to mentalize as a child therefore it could be deemed crucial for the development of emotion regulation and social relationships, to develop this capacity as an adult through interactions with their care-givers (RMNs). Furthermore, considering the power of reciprocity for the development of mentalization and quality of interactions it could be suggested that observing RMNs model effective mentalizing skills, and engaging with MBT could act as a two-pronged approach and potentially increase the likelihood of the patient developing effective mentalizing skills and better patient outcomes.

Measure of Mentalization

An individual’s ability to mentalize is suggested to be accessed through reflection, in the context of other relationships which can be elicited through narratives and self-report methods. This overt manifestation of an individual’s capacity to mentalize is referred to as Reflective Functioning (RF) (Bateman & Fonagy, 2004). Katznelson (2014) suggests that RF “offers an empirically grounded framework for the assessment of mentalization”. The Critical Incident Technique (CIT) is a tool often used to facilitate reflection of retrospective events. The CIT “consists of a set of procedures for collecting direct observations of human behaviour in such a way as to facilitate their potential usefulness in solving practical problems and developing broad psychological principles” (Flanagan, 1954). Schluter et al. (2008) describes the CIT as a “practical method that allows researchers to understand complexities of the nursing role and function”. The CIT has been used in a variety of service contexts in recent years assessing the quality of nursing care (Lewis et al., 2010; Larsson et al., 2011; Eriksson et al., 2016) and supporting reflection for student learning (Koskinen et al., 2011; Robb, 2014; Steven et al., 2020).

1.2 RATIONALE FOR STUDY
The purpose of this research is to investigate the prevalence of mentalization within the field of mental health nursing, through two overt mediums: self-report and reflection of a critical/challenging/difficult incident whilst caring for patients within an acute psychiatric setting. Research investigating capacity to mentalize is typically focused on individuals with complex mental health difficulties, rather than healthcare professionals providing care, therefore this research is novel. This research could infer the extent to which RMNs can understand thoughts/feelings underpinning challenging behaviour and their ability to respond compassionately. This research could investigate whether staff training is required to enhance capacity to mentalize as recommended with foster carers, which theoretically would increase the delivery of compassionate care.

This study hypothesises that:

H1: RMNs have effective mentalizing skills, measured by words or phrases used whilst reflecting on a critical incident. These skills can be negatively impacted by the well-being of the RMN in terms of burnout and compassion fatigue.

H2: RMNs who rate highly on overt self-reported measures of mentalization will use compassionate/understanding phrases whilst reflecting on critical incidents.

STUDY OBJECTIVES

1.3 OBJECTIVES

1.3.1 Primary Objective

To what extent can Registered Mental Health Nurses (RMNs) capacity to mentalize be inferred when reflecting on critical incidents experienced when caring for psychiatric inpatients?

1.3.2 Secondary Objectives

In what ways do overt measures of mentalization compare (self reported versus narrated)?

2 STUDY DESIGN

Design

Registered Mental Health Nurses (RMNs) working within the acute psychiatric ward in NHS Dumfries and Galloway will be asked to discuss two retrospective critical incidents. A descriptive, cross-sectional, retrospective design will be used as this provides an opportunity to explore and infer the healthcare professional’s capacity to mentalize.

Participants

RMNs working within the acute psychiatric service within NHS Dumfries and Galloway who have experienced a critical incident whilst working with acute psychiatric inpatients will be invited to participate.

Recruitment

The General Manager within NHS Dumfries & Galloway will be asked for permission for the researcher to contact ward managers to request participation.
Ward managers will be asked for permission to recruit RMNs and to circulate a research information poster inviting RMNs to participate if they fit the inclusion criteria. Interested RMNs will be asked to email the PI (CMc) NHS email address to request further information via the participant information sheet. All interested RMNs who contact the PI will be sent a participant information sheet to read. RMNs will have the option of a telephone call to discuss this further with the PI and to ask any questions. RMNs will be advised that participating in the research is completely voluntary and their employment will not be affected in any way whether participation occurs or not. Assurances will be provided around anonymity being preserved, particularly no identifiable information being disclosed within the write-up of the research. Furthermore, RMNs will be advised of their right to cease participation at any point without explanation required but will be made aware that their data will still be used within the study. Participants will be asked to electronically sign the consent form to confirm their participation and use of audio-recording.

Data Collection

Participant Information

General demographic information such as: age, gender, number of years’ experience and number of years in present position will be collected for each participant.

Measure of Staff Well-being

Consenting RMNs will be asked to complete the Professional Quality of Life Measure (ProQOL) Version 5 (Stamm, 2009) as a measure of staff wellbeing and burnout. This self-report instrument measures respondents’ experience of Compassion Satisfaction (SC) and Compassion Fatigue (CF) within the past 30 days. CF breaks down further into: burnout (BO) and Secondary Traumatic Stress (STS). The instrument has three 10-item subscales assessing CS, BO and STS and items are rated on a 5-point scale (1 = never to 5 = very often). The questionnaire is freely available to download for research purposes at: https://proqol.org/ProQol_Test.html.

Measure of Mentalization

Consenting RMNs will be asked to complete the Reflective Functioning Questionnaire (RFQ) (8 items) (Fonagy et al, 2016) as a measure of mentalization. The eight items are rated on a 7-point scale (1 = strongly disagree to 7 = strongly agree) and medium-scored for the calculation of both the certainty and uncertainty scales. The questionnaire is freely available to download for research purposes at: https://www.ucl.ac.uk/psychoanalysis/research/reflective-functioning-questionnaire-rfq

Critical Incident Technique

Through the style of a semi-structured interview, RMNs will be asked to retell two critical incidents (CIs) experienced within the last five years and will be prompted to reflect using the Critical Incident Technique (CIT) described diagrammatically by Serrat (2017) (see below). These do not have to be incidents that were formally reported but instead incidents that the RMNs have remembered for being emotionally distressing. The World Health Organisation (WHO) describes a critical incident as: “an event out of the range of normal experience – one which is sudden and unexpected, involves the perception of a threat to life and can include elements of physical and emotional loss”. RMNs will be supported to reflect not only on CI but any emotionally arousing experiences when caring for psychiatric inpatients. The overall aim of the critical incident technique is to improve practice through the use of reflection and
self-feedback. For this proposed research, the aim is that the RMNs capacity to mentalize will be inferred through language used when reflecting on such incidents.

Process

All RMNs who have contacted the researcher will be asked to read through the patient information sheet and, if they agree to take part, to sign their consent electronically, which includes consenting to the use of audio recording, and send back to the researcher via email. Consenting RMNs will then be emailed an invitation to attend a semi-structured interview and will be forwarded and asked to complete the RFQ for the interview. Due to government social distance guidelines in response to COVID-19, the interviews will occur remotely over Microsoft Teams.

During the interview, RMNs will be asked demographic information such as age, gender, length of time in post at time of incident, and will then be guided to reflect on a critical/challenging/difficult incident using the Critical Incident Technique (Serrat, 2017). Interviews will be audio-recorded to allow for information to be transcribed verbatim. During the interview, RMNs will be asked to email their completed RFQ to the researcher’s email address to reduce the researcher scoring the RFQ ahead of the interview and possible researcher bias. The RMNs will be thanked for their participation and debriefed. The researcher will then transcribe the interviews and analyse inductively before scoring the RFQ.

Ethical approval

A favourable ethical opinion will be sought from The University of Edinburgh, School of Health in Social Science. NHS Management Approval will also be sought as research recruitment will be carried out within NHS sites. Electronic, written informed consent and permission to audio record the interview will be obtained. All consenting participants will be specifically asked and reminded throughout the process not to mention any identifiable information about patients discussed during recall of critical incidents.

3 STUDY POPULATION

3.1 NUMBER OF PARTICIPANTS

This research aims to recruit around 20 Registered Mental Health Nurses (RMNs). The recruitment period will last around 2 – 4 weeks. Due to Covid-19 and Scotland Government social distancing guidelines the research will occur over video call on Microsoft Teams.

3.2 INCLUSION CRITERIA

(1) Registered Mental Health Nurses (RMNs) who have experienced any incident within the past five years, whilst caring for patients that was considered critical or difficult or challenging.

(2) RMNs aged 18 to 65 years.

3.3 EXCLUSION CRITERIA

(1) Other healthcare professionals working in the acute psychiatric service.
4 PARTICIPANT SELECTION AND ENROLMENT

4.1 IDENTIFYING PARTICIPANTS

The General Manager within NHS Dumfries & Galloway will be asked for permission for the researcher to contact ward managers within the acute psychiatric inpatient setting to request participation. Ward managers will be asked for permission to recruit RMNs and to circulate a research information poster via NHS email and placing in staff areas, inviting RMNs to participate if they fit the inclusion criteria. Interested RMNs will be asked to email the PI NHS email address to request a participant information sheet.

4.2 CONSENTING PARTICIPANTS

An electronic information sheet and consent form will be emailed to any interested participant who has contacted the PI. The consent form will ask the participant to consent to participate in the research and to consent for the use of audio recording during the interview. The participant will be asked to read over the information, electronically sign the consent form and email this back to the researcher. Interested individuals will have seven days to consider participation before a follow up email will be sent. Researcher will electronically sign the ‘name of person receiving consent’ section on the consent form. During the interview consent will be revisited and the participant will be asked to verbally consent to continue with participation.

The researcher is not known within the acute psychiatric inpatient setting within NHS Dumfries & Galloway therefore there should be no expectation or pressure for RMNs to apply and will be completely voluntary. Despite working in the same board, the researcher and participants are not colleagues nor ever had a professional relationship.

4.2.1 Withdrawal of Study Participants

Participants are free to withdraw from the study at any point or a participant can be withdrawn by the Investigator. The participant will have the option of withdrawal from all aspects of the trial but there will be continued use of data collected up to that point. To safeguard rights, the minimum personally-identifiable information possible will be collected.

5 STUDY ASSESSMENTS

5.1 STUDY ASSESSMENTS

Assessment When & Who

Professional Quality of Life Measure (ProQOL) Version 5 (30 items) Self-reported by participant completed before interview; participant signs consent form, and is then emailed ProQOL along with invitation for interview and asked to complete for interview

The Reflective Functioning Questionnaire (RFQ-8) Self-reported by participant completed before interview, as described above.
Critical Incident Technique

Information collected during semi-structured interview. Only one interview will be done per participant.

6 DATA COLLECTION

The PI will collect the data during informal interview with participant. The Reflective Functioning Questionnaire will be completed by the participant ahead of the interview, and data will be collected whilst individual reflects on critical incidents experienced. If the participant has not completed the questionnaire for the interview, they will be asked to take 10 minutes during the interview to complete to maximise completeness of data collection.

6.1 Source Data Documentation

Source documents are those in which information is recorded and documented for the first time.

- The ProQOL (Stamm, 2009) and the RFQ-8 (Fonaghy, 2016) will be used to record participants’ self-reported responses. Scores will not be noted in medical files, but will be stored within an SPSS file that will be secured within an NHS encrypted laptop.

- The Critical Incident Technique (Serrat, 2017) model shown above will be shown to the participant to demonstrate the reflective process, and the PI will document responses on a password protected Microsoft word document for each step of the process. No identifiable information will be recorded on this document; instead a unique identification number/pseudoname will be used for each participant.

- NVivo, a qualitative data analysis computer software package available via the University of Edinburgh will be used to store, organize and analyze qualitative data collected during the CIT.

7 DATA MANAGEMENT

7.1.1 Personal Data

The following personal data will be collected as part of the research:

- Name
- Age range
- Gender

A list of the participant names will be kept on a separate master list, with a corresponding unique identification number. This master list will remain on site at all times and kept electronically within a secure NHS drive. Only the principal investigator (CMc) will have access to this master list. A separate electronic database will be kept which includes the remaining data in relation to the unique identification number. This ensures anonymity of the data.
7.1.2 Transfer of Data

Data collected or generated by the study (including personal data) will not be transferred to any external individuals or organisations outside of the Sponsoring organisation(s).

7.1.3 Data Controller

A data controller is an organisation that determines the purposes for which, and the manner in which, any personal data are processed.

The University of Edinburgh is the data controller along with any other entities involved in delivering the study that may be a data controller in accordance with applicable laws (e.g. the site).

7.1.4 Data Breaches

Any data breaches will be reported to the University of Edinburgh and NHS Dumfries and Galloway Data Protection Officers who will onward report to the relevant authority according to the appropriate timelines if required.

8 STATISTICS AND DATA ANALYSIS

8.1 SAMPLE SIZE CALCULATION

The aim of qualitative research is to explore subjective accounts therefore it is not pertinent that the sample is representative of a particular population (Cordingley et al., 1997). The focus rather, is selecting participants who have diverse perspectives and experiences (Field & Morse, 1985). Butterfield et al. (2005) argue the size of the sample is determined on the basis of the number of critical incidents and not the number of participants, therefore there is no strict test for sample size. Similar research has reported between 25 (Bower, 2007) and 36 (Bassett, 2015) critical incidents, therefore this proposed research aims to review a minimum of 25 critical incidents.

Unfortunately because this proposed study is novel, there are no previous studies with similar methodology to compare to or to detect similar findings. Green (1991) suggests a sample size of \(N > 104 + m\) (where \(m\) is the number of independent variables needed). Attributing this formula to the proposed study which has five subscales (RFQ = 2, and ProQOL = 3) indicates a required sample size of 109 participants. It is anticipated that the likelihood of gaining such a sample size will not be possible; this is a recognised potential limitation of this study. It may be appropriate to consider this research as a pilot study due to this research being in its infancy.

8.2 PROPOSED ANALYSES

This study proposes to use a mixed methods design. The rationale for combining both quantitative and qualitative approaches is that the quantitative data and results provide a
general picture of the research, i.e., RMNs well-being and overt capacity to mentalize, as measured through self-reported questionnaires, whilst the qualitative data and its analysis will refine and explain these statistical results (Tashakkori & Teddlie, 1998; Creswell, 2002) by exploring the RMNs overt mentalization capacity in more depth.

Study objective:

1a) To what extent can RMNs overt capacity to mentalize be inferred when reflecting on critical incidents experienced whilst caring for psychiatric inpatients?

The RMNs overt capacity to mentalize (reflective functioning) will be the main variable extracted from the Critical Incident Technique (CIT). The qualitative data collected during this process will be assigned a score for inferred narrated RF capacity.

Cormack’s technique for analyzing data has been used in previous research using the critical incident approach (Martin & Mitchell 2001; Narayanasamy et al. 2004). Qualitative data collected from the open-ended questions during the CIT will be analyzed inductively, through inductive classification of the incidents; the classification system is constructed as the data is analysed rather than before. This data will be coded and categorized according to similar themes using a grounded theory interview framework. According to Speziale and Carpenter (2003), researchers categorize themes to give organized meaning to qualitative data. Cormack recommends creating three major areas with categories, and several subcategories within each major area. Similarities of the incidents and descriptive statements will be grouped together to allow for the researcher to identify linkages to concepts and themes. Agreement and appropriateness of the categorizations and scores will be reviewed by the CI.

1b) To what extent does the well-being of the RMN relate to this overt capacity to mentalize?

The ProQOL has three subscales; compassion satisfaction, burnout and compassion fatigue, the total scores for each subscale will be correlated with the narrated RF score.

2- In what ways do overt measures of mentalization compare (self-reported vs narrated)?

To measure the extent to which the RMNs self-reported and narrated RF scores relate, the narrated RF scores from the CIT will be correlated with the overall score of the RFQ.

9 RISKS

There is no direct contact with patients therefore the level of risk posed is considered minimal. The risk is also considered minimal towards NHS nurses participating in the proposed research as there are no physical measures used that could be considered harmful.

In line with Health and Care Professions Council (HCPC) and Nursing & Midwifery Council (NMC) standards, during the interview if an NHS employee discloses information that is believed to contravene professional standards of care, this would be documented and disclosed immediately to the research clinical supervisor (Dr Katie Whyte, Consultant Clinical Psychologist) and to the senior charge nurse of the relevant ward or relevant manger.
10 OVERSIGHT ARRANGEMENTS

10.1 INSPECTION OF RECORDS

Investigators and institutions involved in the study will permit trial related monitoring and audits on behalf of the sponsor, REC review, and regulatory inspection(s). In the event of audit or monitoring, the Investigator agrees to allow the representatives of the sponsor direct access to all study records and source documentation. In the event of regulatory inspection, the Investigator agrees to allow inspectors direct access to all study records and source documentation.

10.2 STUDY MONITORING AND AUDIT

The ACCORD Sponsor Representative will assess the study to determine if an independent risk assessment is required. If required, the independent risk assessment will be carried out by the ACCORD Quality Assurance Group to determine if an audit should be performed before/during/after the study and, if so, at what frequency.

Risk assessment, if required, will determine if audit by the ACCORD QA group is required. Should audit be required, details will be captured in an audit plan. Audit of Investigator sites, study management activities and study collaborative units, facilities and 3rd parties may be performed.

11 GOOD CLINICAL PRACTICE

11.1 ETHICAL CONDUCT

The study will be conducted in accordance with the principles of the International Conference on Harmonisation Tripartite Guideline for Good Clinical Practice (ICH GCP).

Before the study can commence, all required approvals will be obtained and any conditions of approvals will be met.

11.2 INVESTIGATOR RESPONSIBILITIES

The Investigator is responsible for the overall conduct of the study at the site and compliance with the protocol and any protocol amendments. In accordance with the principles of ICH GCP, the following areas listed in this section are also the responsibility of the Investigator. Responsibilities may be delegated to an appropriate member of study site staff.

11.2.1 Informed Consent

The Investigator is responsible for ensuring informed consent is obtained before any protocol specific procedures are carried out. The decision of a participant to participate in clinical research is voluntary and should be based on a clear understanding of what is involved.

Participants must receive adequate oral and written information – appropriate Participant Information and Informed Consent Forms will be provided. The oral explanation to the participant will be performed by the Investigator or qualified delegated person, and must cover all the elements specified in the Participant Information Sheet and Consent Form.

The participant must be given every opportunity to clarify any points they do not understand and, if necessary, ask for more information. The participant must be given sufficient time to consider the information provided. It should be emphasised that the participant may
withdraw their consent to participate at any time without loss of benefits to which they otherwise would be entitled.

The Investigator or delegated member of the trial team and the participant will sign and date the Informed Consent Form(s) to confirm that consent has been obtained. The participant will receive a copy of this document and a copy filed in the Investigator Site File (ISF) and participant’s medical notes (if applicable).

11.2.2 Study Site Staff

The Investigator must be familiar with the protocol and the study requirements. It is the Investigator’s responsibility to ensure that all staff assisting with the study are adequately informed about the protocol and their trial related duties.

11.2.3 Data Recording

The Principal Investigator is responsible for the quality of the data recorded in the CRF at each Investigator Site.

11.2.4 Investigator Documentation

- The Principal Investigator will ensure that the required documentation is available in local Investigator Site files ISFs.

11.2.5 GCP Training

For non-CTIMP (i.e. non-drug) studies all researchers are encouraged to undertake GCP training in order to understand the principles of GCP. However, this is not a mandatory requirement unless deemed so by the sponsor. GCP training status for all investigators should be indicated in their respective CVs.

GCP training was completed by PI, Christine McMahon, on 09/01/2019.

11.2.6 Confidentiality

All evaluation forms, reports, and other records must be identified in a manner designed to maintain participant confidentiality. All records must be kept in a secure storage area with limited access. Clinical information will not be released without the written permission of the participant. The Investigator and study site staff involved with this study may not disclose or use for any purpose other than performance of the study, any data, record, or other unpublished information, which is confidential or identifiable, and has been disclosed to those individuals for the purpose of the study.. Prior written agreement from the sponsor or its designee must be obtained for the disclosure of any said confidential information to other parties.

11.2.7 Data Protection

All Investigators and study site staff involved with this study must comply with the requirements of the appropriate data protection legislation (including the General Data Protection Regulation and Data Protection Act) with regard to the collection, storage, processing and disclosure of personal information.

Computers used to collate the data will have limited access measures via user names and passwords.
Published results will not contain any personal data and be of a form where individuals are not identified and re-identification is not likely to take place.

11.3 PROTOCOL AMENDMENTS

Any changes in research activity, except those necessary to remove an apparent, immediate hazard to the participant in the case of an urgent safety measure, must be reviewed and approved by the Chief Investigator.

Amendments will be submitted to a sponsor representative for review and authorisation before being submitted in writing to the appropriate REC, and local R&D for approval prior to participants being enrolled into an amended protocol.

11.4 MANAGEMENT OF PROTOCOL NON COMPLIANCE

Prospective protocol deviations, i.e. protocol waivers, will not be approved by the sponsors and therefore will not be implemented, except where necessary to eliminate an immediate hazard to study participants. If this necessitates a subsequent protocol amendment, this should be submitted to the REC, and local R&D for review and approval if appropriate.

Protocol deviations will be recorded in a protocol deviation log and logs will be submitted to the sponsors every 3 months. Each protocol violation will be reported to the sponsor within 3 days of becoming aware of the violation. All protocol deviation logs and violation forms should be emailed to QA@accord.scot.

Deviations and violations are non-compliance events discovered after the event has occurred. Deviation logs will be maintained for each site in multi-centre studies. An alternative frequency of deviation log submission to the sponsors may be agreed in writing with the sponsors.

11.5 SERIOUS BREACH REQUIREMENTS

A serious breach is a breach which is likely to effect to a significant degree:

(a) the safety or physical or mental integrity of the participants of the trial; or

(b) the scientific value of the trial.

If a potential serious breach is identified by the Chief investigator, Principal Investigator or delegates, the co-sponsors (seriousbreach@accord.scot) must be notified within 24 hours. It is the responsibility of the co-sponsors to assess the impact of the breach on the scientific value of the trial, to determine whether the incident constitutes a serious breach and report to research ethics committees as necessary.

11.6 STUDY RECORD RETENTION

All anonymised study documentation will be kept for a minimum of 5 years from the protocol defined end of study point. When the minimum retention period has elapsed, study documentation will not be destroyed without permission from the sponsor.
11.7 END OF STUDY

The end of study is defined as the last participant’s last visit.

The Investigators or the co-sponsor(s) have the right at any time to terminate the study for clinical or administrative reasons.

The end of the study will be reported to the R+D Office(s) and sponsor within 90 days, or 15 days if the study is terminated prematurely. The Investigators will inform participants of the premature study closure and ensure that the appropriate follow up is arranged for all participants involved. End of study notification will be reported to the co-sponsors via email to resgov@accord.scot

11.8 INSURANCE AND INDEMNITY

The sponsor is responsible for ensuring proper provision has been made for insurance or indemnity to cover their liability and the liability of the Chief Investigator and staff.

The following arrangements are in place to fulfil the co-sponsors’ responsibilities:

- The Protocol has been designed by the Chief Investigator and researchers employed by the University and collaborators. The University has insurance in place (which includes no-fault compensation) for negligent harm caused by poor protocol design by the Chief Investigator and researchers employed by the University.
- Sites participating in the study will be liable for clinical negligence and other negligent harm to individuals taking part in the study and covered by the duty of care owed to them by the sites concerned. The sponsor requires individual sites participating in the study to arrange for their own insurance or indemnity in respect of these liabilities.
- Sites which are part of the United Kingdom's National Health Service will have the benefit of NHS Indemnity.
- Sites out with the United Kingdom will be responsible for arranging their own indemnity or insurance for their participation in the study, as well as for compliance with local law applicable to their participation in the study.

12 REPORTING, PUBLICATIONS AND NOTIFICATION OF RESULTS

12.1 AUTHORSHIP POLICY

Ownership of the data arising from this study resides with the study team.

13 REFERENCES


Field P A, Morse J M 1985 Nursing research: the application of qualitative approaches. Croom Helm, London


Appendix E

Participant Information Sheet

Inferring Prevalence of Mentalization within Registered Mental Health Nurses Working within Acute Psychiatric Wards Using the Critical Incident Technique

You are invited to take part in a research study. To help you decide whether or not to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. Talk to others about the study if you wish. Contact us if there is anything that is not clear, or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of the study?

Care and compassion is the cornerstone of The Scottish Government’s Nursing 2030 Vision, which is suggested to “reflect a long-held nursing approach that focuses not only on the immediate perceived problem, but also takes into account the person’s wider physical, psychological, social, family and community life to make a real and lasting difference to their health and wellbeing”. Research investigating psychological theories underpinning compassionate care within health and social care, particularly within acute psychiatric settings are limited. Research with foster carers however, suggests the psychological concept mentalization; the ability to understand the thoughts and emotions that underlie an individual’s behaviour, or the ability to “put yourself in their shoes”, underpins compassionate care. Foster carers who are able to mentalize well are considered to be more tolerable to challenging behaviours, be less likely to assume negative intentions, and respond in a compassionate manner. The purpose of this research is to investigate the prevalence of mentalization within the field of mental health nursing. This research hopes to interview around 20 Registered Mental Health Nurses to informally discuss challenging incidents experienced whilst caring for acute psychiatric inpatients.

Why have I been invited to take part?

You have been invited to take part as you are a Registered Mental Health Nurse who has experienced a challenging or difficult incident whilst caring for patients within an acute psychiatric setting.

Do I have to take part?

No, it is up to you to decide whether or not to take part. You have up to seven days to read through this information and decide if you want to participate. If you are happy to participate in the study please return the electronically signed consent form to the researcher, Christine McMahon.

If you decide to take part you are still free to withdraw at any time and without giving a reason. Deciding not to take part or withdrawing from the study will not affect your occupation, the healthcare that you receive, or your legal rights.
What will happen if I take part?
What are the possible benefits of taking part?

There are no direct benefits to you taking part in this study, but the results from this study might help to improve the healthcare of patients in the future by helping the researcher and the University to better understand potential psychological principles underlying compassionate nursing care.

What are the possible disadvantages of taking part?

Taking part in this study will take up to 95 minutes of your time. We will try our best to schedule the interview at a time and date that suits you. Reflecting on a critical incident could potentially evoke emotional distress, as remembering such events could trigger memories of psychological harm. Although this is not expected to happen, if you do experience any feelings of distress this will be dealt with sensitively and you will be allocated time after the interview to receive support to manage distress. You will also be provided contact information of the researcher to seek further support as necessary.

What if there are any problems?

If you have any concerns about any aspect of this study please contact Christine McMahon, on email: christine.mcmahon3@nhs.scot who will do her best to answer your questions.

In the unlikely event that something goes wrong and you are harmed during the research and this is due to someone’s negligence then you may have grounds for a legal action for compensation against NHS Dumfries & Galloway but you may have to pay your legal costs. The normal National Health Service complaints mechanisms will still be available to you (if appropriate).

What will happen if I don’t want to carry on with the study?

Participation is voluntary and you are entitled to withdraw consent at any time. By withdrawing consent this means you would not be expected to take any further active part in the research.

Any data that has been collected from you, before you withdrew consent, will be used anonymously in the analysis of the study, and so you are advised to contact the research team at the earliest opportunity should you wish to withdraw from the study.

What happens when the study is finished?

The study is projected to finish around May 2021 and the researcher plans to publish the results within a doctoral thesis. You will not be identifiable in the thesis or any publication. Identifiable data is proposed to be retained between 6 to 12 months after this projected end date as University examiners and/or journal referee’s may request additional data analysis or clarification and require access to study data after May 2021. Your anonymised data will be kept for 5 years.

Will my taking part be kept confidential?

Participation will be kept confidential but please note, in line with Health and Care Professions Council (HPC) and Nursing & Midwifery Council (NMC) standards, the researcher has a duty of care for patients. In the event of information being disclosed that is
considered to contravene professional standards of care, this confidentiality will be breached and information will be shared with relevant professionals, and an investigation may be pursued.

Your data will be processed in accordance with Data Protection Law. All information collected about you will be kept strictly confidential. Your data will be referred to by a unique participant number rather than by name. Audio recordings will be destroyed once they have been transcribed. Please note you will not be able to take part in this study if you do not consent to interviews being audio recorded. Your data will only be viewed by the researcher/research team. All electronic data will be stored on a password-protected computer file. Your consent information will be kept separately from your responses in order to minimise risk.

The University of Edinburgh is the sponsor for this study based in Scotland. We will be using information from you in order 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 Edinburgh will keep identifiable information about you for a minimum of 6-12 months after the study has finished.

For general information about how we use your data go to: https://www.ed.ac.uk/records-management/privacy-notice-research

What will happen to the results of the study?

This study will be written up as a publication but you will not be identifiable from any published results. You will be asked to consent to your anonymised data being used in future ethically approved research; please note you will not be able take part in this study without consenting to this.

A summary sheet of the findings will be made available. You can request a copy by contacting Christine McMahon, on email:

Who is organising and funding the research?

This study has been organised by Christine McMahon and sponsored by the University of Edinburgh.

Who has reviewed the study?

The study proposal has been subject to an academic review process within the University of Edinburgh. A favourable ethical opinion has been obtained from The University of Edinburgh, School of Health in Social Science. NHS Management Approval has also been given.

Researcher Contact Details

If you have any further questions about the study please contact Christine McMahon on 01387244495 or email on: christine.mcmahon3@nhs.scot

If you would like to discuss this study with someone independent of the study please contact Dr Charles Marley, on
Complaints

If you wish to make a complaint about the study please contact:

Patient Experience Team

Mountainhall Treatment Centre, Bankend Road, Dumfries, DG1 4AP

01387 272 733

For feedback contact:  dg.feedback@nhs.net

For complaints contact:  dg.complaints@nhs.net
Appendix F

Participant Consent Form

CONSENT FORM

Inferring Prevalence of Mentalization within Registered Mental Health Nurses Working within Acute Psychiatric Wards Using the Critical Incident Technique

1. I confirm that I have read and understand the information sheet (20 Aug 2020, v1) for the above study. I have had the opportunity to consider the information, ask questions and have had these questions answered satisfactorily.

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 employment being affected.

3. I understand that data collected about me during the study will be converted to anonymised data.

4. I understand that relevant sections of data collected during the study may be looked at by individuals from the Sponsor (the University of Edinburgh) or from the/other NHS Board(s) where it is relevant to my taking part in this research. I give permission for those individuals to have access to my records

5. I agree to my anonymised data being used in future studies.

6. I agree to my interview being audio recorded.

8. I agree to take part in the above study.

Please type your signature to provide consent:

Name of Person Giving Consent   Date   Signature

Name of Person Receiving Consent   Date   Signature