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University of Southampton

Faculty of Environmental and Life Sciences

School of Psychology

The Use of Indirect Psychological Interventions in Forensic Services

by

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ORCID ID 0009-0006-1133-0146

Thesis for the degree of Doctorate in Clinical Psychology

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Abstract

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The Use of Indirect Psychological Interventions in Forensic Services

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Kayleigh McMillan

There is a growing evidence base for the use of indirect psychological interventions within inpatient services. Indirect psychological interventions include the use of clinical supervision, formulation, case discussion and reflective practice. All of these offer opportunities for reflection and discussion on clinical practices within inpatient services.

Chapter 1 presents a systematic review and narrative synthesis exploring the use of indirect psychological interventions within forensic inpatient services. Findings from nine included studies found that clinical supervision and reflective practice interventions are currently being offered within some forensic services with positive staff outcomes. However, methodological limitations impacted the strengths of the findings, and a lack of service user outcomes is identified. Recommendations for future research included the need for standardisation in outcome measurement reporting for indirect psychological interventions in order for more complete conclusions to be drawn.

Chapter 2 presents a quantitative study exploring the use of psychological formulation in forensic services. The use of indirect psychological interventions within forensic services is currently under researched. The use of the Comprehend, Cope and Connect formulation within acute mental health services has suggested positive outcomes for both staff and service users. The study aimed to investigate whether formulation impacts staff attitudes and levels of compassion in comparison to a control group, whether these effects are maintained, and if staff attitudes and level of compassion are associated with personality disorder presentations. This study employed a mixed model design with a between-subjects factor of condition (formulation vs control) and a within-subjects factor of time. *The results of this study suggested some perceived benefits from the use of the CCC formulation in clinical practice within forensic services. With those in the formulation condition reporting anticipated usefulness of the model within their practice. Further research is needed with a larger sample size to better understand any potential benefits and uses of the CCC model within forensic services.*

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Research Thesis: Declaration of Authorship

Print name: Kayleigh McMillan

Title of thesis: The Use of Indirect Psychological Interventions in Forensic Services

I declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

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3. Where I have consulted the published work of others, this is always clearly attributed;
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7. None of this work has been published before submission

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Chapter 1 A Systematic Review of Indirect Psychological Interventions in Forensic Mental Health Inpatient Services

Abstract

Introduction: Psychologists are a valued source of support for skilling-up and offering indirect psychological interventions to the multidisciplinary team within forensic mental health inpatient settings. However, there is currently a limited body of research into the use of indirect interventions.

Aim: This study aimed to undertake a systematic review of the indirect psychological interventions used in forensic mental health inpatient settings.

Methods: PsycINFO, MEDLINE and Web of Science were searched for eligible studies and forward-citation searching was undertaken. The quality of studies was assessed using the Mixed Methods Appraisal Tool.

Results: Nine papers were identified as meeting the inclusion criteria for this review. Two categories of indirect psychological intervention were identified involving a range of methodologies and the studies were assessed to be of good to adequate quality. The most common type of indirect intervention used was clinical supervision. Overall, the utilization of indirect psychological interventions within forensic inpatient settings shows promise.

Discussion: There is tentative yet limited evidence for the effectiveness of psychological interventions in forensic mental health inpatient settings. Further larger scale research is required to better understand the role of indirect psychological interventions for this setting.

Implications for Practice: Ongoing work in needed to promote and deliver indirect psychological interventions within forensic mental health inpatient settings. Opportunities for staff to access Indirect psychological interventions should be considered when delivering forensic inpatient care.

Accessible Summary

What is known on the subject?

- Methods of therapy or support that do not involve direct contact with the service user, but focus on helping staff who work with service users can be helpful.
- At the moment there is not enough known about how psychologists can offer this support within forensic services.

What does this paper adds to existing knowledge?

- This paper highlights the need for further research into this area.
- This paper also highlights that offering indirect support within forensic services is seen as valuable by staffing teams.

What are the implications for practice?

- More work is needed to be able to promote and offer indirect psychological interventions within forensic services. Services should consider ways to make indirect interventions available to staffing teams.

1.1 Introduction

1.1.1 Forensic settings

Forensic mental health services are designed to deliver effective care and treatment for people with severe mental disorders who for a time are a danger to others (Kennedy, 2021). Forensic mental health is a specialist area that involves the assessment and treatment of people with a mental disorder and a history of criminal offending, or those who are at risk of offending. Service users often gravitate to forensic services when the nature of their offending, or the apprehension created by their behaviour, is such as to overwhelm the tolerance or confidence of professionals in the general mental health services (Mullen, 2018). Staff working in forensic settings form part of an evolving specialty designed to address the unique, intersecting health and legal needs of service users who are victims, suspects, and perpetrators of trauma (Berishaj et al., 2020). Processing and understanding index offences within forensic settings can be challenging for nurses and frightening and distressing for service users (Askola et al., 2019).

1.1.2 Service models (relational security and recovery)

Forensic inpatient settings have grown and become more complex in structures, processes and pathways. The rationale for dedicated services is that forensic service users would benefit from a therapeutic environment in which to receive necessary mental health care, reduce risk and address criminogenic need (Tomlin & Jordan, 2022). However, the provision of nursing care typical of other practice settings clashes with the restrictive and punitive nature of the forensic setting (Johansson & Holmes, 2022). Legacy customs, practices and changing policy are now organized into formal models of care. These are written accounts of how a health service is delivered, outlining best practice and services for individuals progressing through the stages of their condition and the care and treatment available (Kennedy, 2021). Treatment and care can often be delivered within the coercive framework of imposed assessment and therapy (Ray & Simpson, 2019; Shepherd et al., 2016). To maintain safety, inpatients in forensic settings, whether high, medium or low secure services, are subject to a combination of physical, relational and procedural security. Risk and security are in constant tension with therapeutic activities, and maintaining the right balance between the two is one of the biggest challenges in forensic mental health (Haines et al., 2018). Staff working in these services are tasked with the dual roles of providing compassionate nursing care for service users while also acting as authority figures who enforce the strict rules and expectations of services.

The purpose of security is to create and maintain a safe environment within which care, and treatment can be delivered (Markham, 2022). Thus, security measures and therapeutic issues are closely linked. However, tension and the potential for challenge are inherent in the context of the care and treatment of forensic service users. Policies and protocols concerning physical, procedural and relational security are rooted in distrust and disregard, and service users' legal status conflicts with notions of voluntary treatment (Markham, 2021). Davies et al. (2012) reported the view that relational security is the most important domain among the three domains of security. Relational security refers to the knowledge and detailed understanding that staff have of the people in their care and how this informs the management and de-escalation of incidents (Collins & Davies, 2005; Tighe & Gudjonsson, 2012). Serious incidents within forensic inpatient settings can often be linked to breakdowns of relational security (Chester et al., 2018). There is growing awareness around the importance of relational security, and resources aiming to raise awareness and support the implementation of this are widely available (Department of Health, 2010). Security provides a positive and supportive framework within which clinical care and therapy are safely delivered. Good security and effective therapy should be seen as integrated concepts rather than opposite ends of a spectrum (Seppanen et al., 2018). However, it is recognized that disproportionate risk aversion can lead to service users being deprived of the opportunities they need to progress their recovery (Tickle et al., 2018).

In contrast to traditional rehabilitation and medical models of care, the recovery models shift the focus from pathology, illness and symptoms to health, strengths and wellness (Adshead, 2000). Tools such as the 'good lives' model (Ward & Gannon, 2006) of rehabilitation take a focus beyond offending, emphasizing the personal qualities needed for a good and satisfying life especially the vision that detesting from offending is possible (Dorkins & Adshead, 2011). A unique feature of recovery in forensic terms is that it must include not only feeling better but also 'behaving better': a moral as well as a clinical agenda (Adshead, 2000). Although there is an increasing focus on recovery within forensic inpatient services, there has been limited exploration of the applicability of these principles within forensic services (Mann et al., 2018). An individualised approach to caregiving is an important element of a recovery approach. However, in forensic services adopting an individualised approach can lead to inconsistency as different people are treated in different ways, leading to disagreements, a sense of injustice and uncertainty (Mann et al., 2018).

1.1.3 Role of psychologists

In recent years there has been a shift from a narrative of 'nothing works' in the treatment of forensic service users, to the notion that psychological interventions do positively influence factors such as positive thinking, risk behaviours and recidivism rates (Davies & Nagi, 2017). The Royal College of Psychiatrists (2019) recommends that service users in forensic mental health services are offered evidence based psychological interventions to promote mental health recovery and offending /risk behaviour. However, the inpatient setting continues to present a number of barriers which make the delivery of direct (i.e., with the service user themselves) psychological therapies difficult. These barriers include the restrictive physical environment and treatment options, a service delivery system which is avoidant of emotions and feeling, and working within a team which adopts a predominantly medical approach (Wood et al., 2018). For service users in forensic settings, the process of building trust and rapport is commonly fraught with difficulties, given the attacking and / or neglectful relationships with staff (Ruszczynski, 2010). Individuals are often in crisis and receiving high levels of medication and multiple treatment interventions alongside any psychological input (Small et al., 2018).

The Royal College of Psychiatrists (2019) note that psychological input is required to provide a range of adapted evidence based psychological interventions to meet service users' needs as well as provide indirect input for teams. The use of both direct psychological interventions (including assessment, formulation and therapeutic interventions with service users) and indirect interventions (including training, supervision, consultancy, case formulation and reflective practice with staff) (Ebrahim & Wilkinson, 2021) forms part of an important and valuable skillset offered by practitioner psychologists. Within mental health services practitioner psychologists have asserted the value of a range of direct and indirect interventions (Ebrahim, 2021; Raphael, 2020). Psychological interventions inform indirect, team-based formulations for some service users where coproduction may not be possible to enable compassionate understanding of the person's needs, supervision of psychological interventions and reflective supervision are also valuable (Raphael et al., 2020). Indirect psychological interventions are valuable for promoting person-centred care, which is associated with shared-decision-making, service user empowerment and improving clinical outcomes (Gask & Coventry, 2012; World Health Organization, 2010). Indirect psychological approaches, such as the use of team formulations with staff groups have become an increasingly popular practice within clinical psychology to engage and work collaboratively with teams (Division of Clinical Psychology, 2011). Ward-based indirect psychological interventions ensure the provision of psychologically informed care to help professions care for service users, build therapeutic staff-service user relationships and manage risk (Wood et al., 2021).

1.1.4 Reviews of indirect psychological provision to date

Research to date has mainly focused on direct psychological therapies (Evlat et al., 2021; Raphael et al., 2021) with the usefulness and acceptability of indirect psychological interventions scarce (Man et al., 2022; Summers, A. 2006). Furthermore, few studies have focused specifically on the provision of psychological therapies within forensic inpatient settings (MacInnes & Masino, 2018; Tolland et al., 2019), with evidence suggesting that current practice within forensic settings is based on limited evidence with inconsistent findings (MacInnes & Masino, 2018). Tolland et al., (2019) review looking at a women's forensic service highlighted a lack of theoretical basis for the majority of studies and a need to understand how 'genderspecific' practice recommended by policy, translated into practice. A recent systematic review in acute mental health by Man et al., (2022) found that overall indirect interventions in this setting generated positive constructive attitudes and satisfaction from mental health staff members. This review included ten studies, across 33 services / units (psychiatric wards, psychosis clinics and rehabilitation units) and included responses from 532 participants. This review utilised a robust and systematic approach, following the PRISMA reporting guidelines with a clear and transparent criteria. Positive changes were found in staff perceptions of service users, service user incidents, and staff-service user relationships. The review also suggested that there was some indication that indirect interventions may improve staff burnout. Man et al., (2022) noted that future studies would benefit from incorporating a mixed-method design and measuring outcomes from the service user's perspective. Summers, (2009) study suggested that using formulations may have most to offer if embedded as the core business of the unit, with robust links to service user care planning, and to staff training, personal development and ward duty planning.

1.1.5 The current review

Previous reviews of indirect psychological interventions have mainly focused on acute mental health settings. With reviews of psychological interventions within forensic settings proving inconsistent results. There have been no published reviews examining specifically the use of indirect psychological interventions within forensic settings. Determining the use of indirect psychological interventions in forensic inpatient settings is imperative to support the principle of evidence-based practice in forensic services. Therefore, we wanted to focus on indirect interventions which aimed to offer a psychological perspective to enable staff to reflect collectively on clinical practice or clinical understanding of service users. The main outcomes examined included the quality of the identified studies, types of indirect psychological interventions utilized in forensic mental health inpatient settings and the outcome measures used

to examine their efficacy. Primary outcomes were those being measured, and secondary outcomes were service user related outcomes. As outcome measures were expected to differ across studies, a primary aim of this review was to examine the outcomes utilized within identified studies. If there was enough data available, the most frequently used outcomes would be pooled into a meta-analysis to examine intervention efficacy on both staff-related outcomes (e.g. staff attitudes towards service users, usefulness of indirect psychological intervention practice, willingness to work with service users and staff tolerance) and service-user related outcomes (e.g. willingness to work with staff and presentation of behaviours that may be challenging for staff and others). Therefore, we conducted a systematic review that aimed to answer the following questions:

- What types of indirect psychological interventions are available in forensic mental health inpatient settings?
- What is the quality of the evidence?
- What outcome measures are utilized to examine efficacy?
- What is the efficacy of the interventions on primary and secondary outcomes?

1.2 Method

This review used a systematic approach to understand the current use of indirect psychological interventions in forensic mental health inpatient settings. Guidelines outlined in the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) were followed to structure the study (Page et al., 2021). A review protocol was pre-registered with PROSPERO (CRD42022374298).

1.2.1 Search strategy

An electronic database search of peer reviewed literature was conducted and completed in March 2023 using three databases (MEDLINE, PschINFO and Web of Science). The grey literature was searched through EthOS British Library e-theses online and OpenGrey services. Each database was searched from 2000 until March 2023 using wildcards, truncation and MeSH terms. Searches were limited to English-language publication and use the following search terms "case formu*" OR "Case Conceptuali?ation*" OR "Clin* Super*" OR "Reflective Practice*" OR "Staff Support*" AND "Forensic" OR "Mentally Ill Offend*" OR "Forensic Inpatient*" OR "Forensic Psycho*" OR "Speciali?ed" OR "Special* Service*" OR "Offend*" OR "Forensic Mental Health Service*" OR "Forensic Psychiatric Inpatient*" OR "Forensic Psychiatry" OR "Forensic Nurs*".

1.2.2 Eligibility criteria

Studies were eligible for inclusion if they were of any methodological design and included a sample of forensic inpatient healthcare staff and/or service users. Studies were also required to include a description of an indirect psychological intervention, defined as interventions that offer a psychological perspective to support staff to collectively reflect on their practice or their understanding of service users. Indirect psychological interventions include reflective practice, case formulation and clinical supervision. Studies were also included if they were conducted within a specialized prison mental health service (e.g., personality disorder pathway). Studies were excluded if they were not conducted within an inpatient setting (community forensic teams or probation services). Studies were also excluded if the data analyses did not separate inpatient and community data.

1.2.3 Study Selection

Screening and selection were informed by the PRISMA guidelines (Moher et al., 2009); see Figure 1 for the PRISMA flow diagram. The database searches were exported to reference software Covidence. There were 581 records identified from the search strategy. After removing duplicates the first author used the study selection criteria to screen title and abstracts, 384 records were excluded based on these criteria. Further screening of the remaining 35 full texts led to nine studies being eligible for inclusion. 20% of randomly selected articles were screened by an independent reviewer to determine inter-rater reliability. The inter-rater reliability between the reviewers was good (Cohen's kappa = 0.76). The study was removed when both reviewers agreed on the exclusion. The first author assessed full texts against the eligibility criteria and reference lists were reviewed for any further articles, this did not add any further articles for screening.

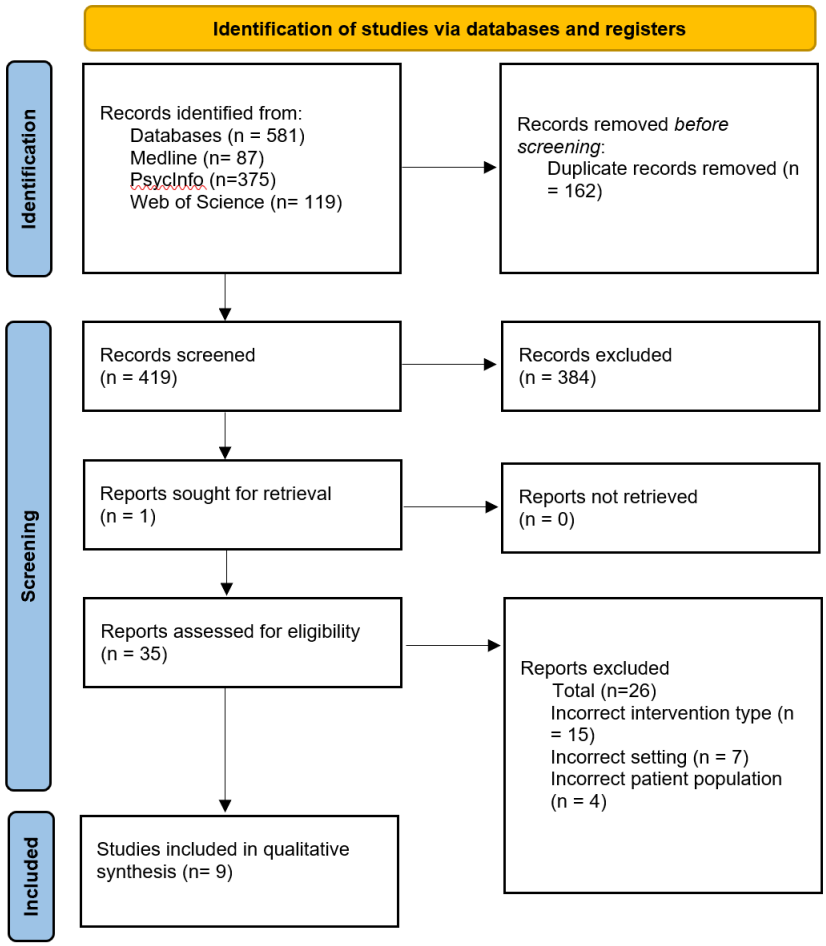

Figure 1.

PRISMA flow diagram (Moher et al., 2009)

1.2.4 Data extraction and synthesis

Information was extracted from the remaining studies using two pre-determined tables (Man et al., 2022). Table 1 details key characteristics of the study including the study aim, method, setting, sample size, response rate, sample demographics (age, gender), staff member profession, intervention type and control condition. Table 2 was used to extract further detailed data on intervention characteristics and study quality.

1.2.5 Quality assessment

The Mixed Methods Appraisal Tool (See Appendix A) is a critical appraisal tool designed for mixed methodologies (MMAT; Hong et al., 2018). The MMAT was used to assess the evidence of the studies using a checklist approach. The tool is made up of two parts: the first required the

first author to decide whether there were clear research questions and if the research questions could be answered by the data collected. The first author then rated the study depending on the design of the study. Several checklists were applied dependent on the type of methodology described in the studies (qualitative research, quantitative non-randomized, quantitative descriptive and mixed-method studies). Twenty-five per cent of the quality assessment were also undertaken by a second independent reviewer to ensure inter-rater reliability.

The qualitative studies were of adequate methodological quality (See Appendix A for quality assessment table). Overall, the assessment of study quality revealed some potential bias across different MMAT domains as well as highlighted some inconsistency in data collection methods. Three of the quantitative studies faced difficulties in relation to sample representativeness. First, one study (Berry & Robertson, 2019) relied on an assumption that all participants were deemed to have had clinical supervision a minimum of six times, due to minimum employment duration for the sample recruited and associated hospital policies and procedures however, this was not confirmed through any checking process and may have affected the validity of the recruited sample. Secondly, another study (Polnay et al., 2022) relied on a small sample size and a third (Rask & Levander, 2009) experienced difficulties with varying response rates across clinical wards, with the percentage of responses varied from 41% - 100%. In the unit with the lowest response rate this was assumed to be due to a misunderstanding of the covering letter, as the unit did not express a negative attitude towards participating in the study.

Three of the included studies utilized mixed methods designs (Aurora et al., 2023; Dale & Storey, 2004; McCarron et al., 2017). Two of the mixed methods designs showed good overall methodological quality and low risk of bias (Aurora et al., 2023; McCarron et al., 2017). The other mixed methods study was judged to be of poor methodological quality because the reasons for conducting a mixed methods study was not clearly explained, the meta-inference interpretations were difficult to interpret, and the qualitative and quantitative components were not individually appraised in a clear format. The MMAT authors discourage excluding studies with low methodological quality from analysis (Hong et al., 2018) therefore, this study was included in the selection. Methodological limitations in the studies selected for the review may be the consequence of challenges in the implementation of indirect psychological interventions within forensic inpatient settings – to exclude studies in this instance may undermine essential research data (Evlat et al., 2021).

1.3 Results

1.3.1 Study Characteristics

The nine eligible studies included two qualitative articles (Cooper & Inett, 2017; Feerick et al., 2020), three mixed-method design (Aurora et al., 2023; Dale & Storey, 2004; McCarron et al., 2017) and four quantitative studies (Berry & Robertson, 2019; Long et al., 2014; Polnay et al., 2022; Rask & Levander, 2009). The study characteristics are summarised in Table 1 and continued in Table 2. Eight of the studies were conducted in the UK and one was conducted in Sweden. Conducted in a range of settings, such as adult and adolescent forensic services with both male and female service users. Studies included low, medium and high secure services and specialist Dialectical Behavioural Therapy (DBT) services. Three studies recruited participants from a range of health professions however, seven of the studies focused their recruitment on nurses and health care support workers.

1.3.2 Characteristics of the indirect interventions

There were two main types of indirect interventions described in the identified studies: clinical supervision and reflective practice. Six studies investigated clinical supervision (Berry & Robertson, 2019; Dale & Storey, 2004; Feerick et al., 2020; Long et al., 2013; McCarron et al., 2017; Rask & Levander, 2009). Two studies looked at experiences of clinical supervision (Long et al., 2013; McCarron et al., 2017). One study focused on the development of a competency framework of nursing (Dale & Storey, 2004). One study looked at perceptions of clinical supervision (Feerick et al., 2020). One study looked at the relationship between burnout, ward environment and effective clinical supervision (Berry & Robertson, 2019). The final study reviewed staff job satisfaction and the relationship between this, and the support given in clinical supervision (Rask & Levander, 2009).

The three studies that looked at reflective practice (Aurora et al., 2023; Cooper & Inett, 2017; Polnay et al., 2021;) reviewed this indirect psychological intervention in relation to a range of healthcare professionals (Psychology, Psychiatry, Nursing, Occupational Therapists). One of the reflective practice studies (Polnay et al., 2021) looked at piloting a new scale, The Relational Aspects of CarE (TRACE) Scale. This measured staff awareness of interpersonal dynamics and other related key areas of importance in a reflective practitioner. One study (Aurora et al., 2023) focused on an adapted Balint Model (Balint, 1985) which is grounded in psychoanalysis and general practice, with the intention of bringing awareness to aspects of transference,

countertransference and the unconscious. The reflective practice program facilitators also followed a similar reflective cycle structure as proposed by Gibbs (1988) and Kolb (1984). The final study took place in the form of a service evaluation which identified reflective practice as a current support procedure in place however, not accessible to all wards (Cooper & Inett, 2017).

Table 1

Key features of included studies

Author (s) and Country	Aims	Methods	Setting	N	Response Rate	Demographics
Aurora et al. (2023) UK	Assess the effectiveness of the Reflective Practice program in improving staff wellbeing, self-efficacy and reflective capacity	Mixed Methods	Secure Forensic Facility	Pre (N=47) Post (N=30)	Pre (12.9%) Post (8.2%)	N/A
Berry & Robertson. (2019) UK	Explore burnout, the perceived effectiveness of clinical supervision and ward environment	Quantitative	Medium Secure Forensic Unit	N=137	87.42%	Staff: Male (N=73), Mean age 36.75
Cooper & Inett. (2017) UK	To explore how staff support procedures in a low secure forensic service impacted on staff recovery	Qualitative Semi-Structured Interviews	Low Secure Forensic Unit	N=11	N/A	Staff: Female (N=8), Mean age 46.27
Dale & Storey. (2004) UK	Yield a theory of nursing in secure environments comprising of statements of competency	Mixed Methods	Secure Mental Health Care	N=276	32.4%	N/A
Feerick et al. (2020) UK	Explore the perceptions of forensic mental health nurses of clinical supervision in terms of their understanding and their perception of its utility within forensic nursing practice	Qualitative Semi-Structured Interviews	Secure Hospital	N=10	5.6%	Staff: Female (N=57); Mean age 39
Long et al. (2013) UK	To explore the importance of clinical supervision in secure psychiatric services for women and the implications for service development	Quantitative	Medium Secure Low Secure Specialist Low Secure DBT	N=128	67%	N/A
McCarron et al. (2017) UK	Increase understanding of nurses' and HCA's experiences of and access to, clinical supervision	Mixed Methods	Secure Adolescent Service	2013 N=69 2016 N=70	2013 29% 2016 36%	N/A
Polnay et al. (2021) UK	Pilot test a new scale, The Relational Aspects of CarE (TRACE) Scale	Quantitative Questionnaire	Male High Secure	N=80	N/A	Staff: Female (N=57); Mean age 39
Rask & Levander. (2009) Sweden	Investigate nurses' satisfaction with nursing care and work in forensic psychiatric nursing	Quantitative Questionnaire	Forensic Psychiatric Unit	N=242	70%	N/A

Table 2

Key features of included studies continued

Author (s) and Country	Intervention facilitator	Staff members profession	Service user diagnosis	intervention
Aurora et al. (2023) UK	Psychologist & Psychiatrist	Pre nursing (N=32) Allied Health (N=6) Psychology (N=6) Psychiatry (N=1) Other (N=2)	N/A	Reflective Practice
Berry & Robertson. (2019) UK	N/A	Healthcare Support Workers (N=51) Senior Healthcare Support Workers (N=29) Registered Mental Health Nurses (N=40) Registered Mental Health Nurses (N=17)	N/A	Clinical Supervision
Cooper & Inett. (2017) UK	N/A	Psychologist (N=1) Ward Manager (N=1) Domestic Staff (N=2) Senior Nurses (N=2) Healthcare Assistants (N=3) Occupational Therapists (N=2)	N/A	Reflective Practice
Dale & Storey. (2004) UK	N/A	Nurses	N/A	Clinical Supervision
Feerick et al. (2020) UK	N/A	Registered Psychiatric Nurses	N/A	Clinical Supervision
Long et al. (2013) UK	N/A	RNs (N=46) HCAs (N=81)	Dual diagnosis with borderline personality disorder as the primary diagnosis	Clinical Supervision
McCarron et al. (2017) UK	Clinical Director of the service Visiting female medical student Clinical assistants	2013 – Nurses (N=20) HCAs (N=49) 2016 – Nurses (N=30) HCAs (N=40)	Schizophrenia, affective disorders, emerging personality disorders and learning disabilities	Clinical Supervision
Polnay et al. (2021) UK	N/A	Clinical staff working in direct contact with service users	N/A	Reflective Practice
Rask & Levander. (2009) Sweden	N/A	Registered nurses	N/A	Clinical Supervision

Table 3

Outcome measures of the included studies evaluating indirect psychological intervention

Author	Reflective Practice	Self-Efficacy	Emotional Wellbeing	Satisfaction	Attitudes to Personality Disorder	Clinical Supervision	Burnout	Competency	Total
Aurora et al., (2023)	RPQ	Occupational Coping Self-Efficacy Questionnaire for Nurses	OWS						3
Polnay et al., (2021)	TRACE				APDQ				2
Rask & Levander, (2009)				SNCW					1
McCarron et al., (2017)						Derived own questionnaire formulated based on anecdotal concerns raised by staff			1
Berry & Robertson, (2019)						MCSS-26	MBI-HSS		2
Dale & Storey, (2004)								Derived own questionnaire based on focus groups and interviews	1
Long et al., (2013)						SUSQ, developed for study using 5 items from the SAQ Partnership Questionnaire for Supervision The Bradford Clinical Supervision Scale			3

Abbreviations : RPQ, Reflective Practice Questionnaire (Priddis & Rogers, 2018), Occupational Coping Self-Efficacy Questionnaire for Nurses (Pisanti et al., 2008). OWS, The Officer Wellbeing scale (Trounson et al., 2019), TRACE, The Relational Aspects of CarE Scale (Polnay et al., 2021), APDQ, Attitudes to Personality Disorder Questionnaire (Bowers & Allan, 2006), SNCW, The Satisfaction with Nursing Care and Work scale (Hallberg, 1997), MBI-HSS, Maslach Burnout Inventory Human Services Survey (Maslach & Jackson, 1981), MSCC-26, Manchester Clinical Supervision Survey-26 (Winstanley & White, 2011), SUSQ, Secure Unit Supervision Questionnaire (Long et al., 2014), SAQ, Supervision Audit Questionnaire (Sloan et al., 2008), Partnership Questionnaire for Supervision (Nicholls, 2007). The Bradford Clinical Supervision Scale: Reported Benefits (Bowles & Young, 1999)

1.3.3 Outcome measures

Seven studies included outcome measures as part of their methodological design to evaluate their intervention (Aurora et al., 2023; Berry & Robertson, 2019; Dale & Storey, 2004; Long et al., 2013; McCarron et al., 2017; Polnay et al., 2021; Rask & Levander, 2009). The number of outcomes used per study ranged from one to three and the outcome measures used by each study are outlined in Table 3. There were no consistent measures used across the studies and none of the identified studies measured impacts on service users. Measures of satisfaction and perception of clinical supervision were most frequently used as outcome measures of the indirect psychological interventions. The Manchester Clinical Supervision Survey-26 (MCSS-26) was used in the Berry & Robertson (2019) study to assess the perceived level of support via clinical supervision. The MCSS-26 has been shown to be reliable and robust in the face of detailed scrutiny of its internal validity and reliability with a Cronbach's alpha of 0.92 (Winstanley & White, 2011). The MCSS-26 comprises three domains of supervision (Normative, Restorative and Formative functions) with two subscales per function. A questionnaire concerning nurses' satisfaction with nursing care and work (SNCW) was used by Rask and Levander (2009). This questionnaire was originally developed for studying general psychiatric nursing in Sweden. The internal consistency of the full scale was fairly high, with a Cronbach's alpha of 0.91 (Hallberg, 1997). The Reflective Practice Questionnaire (RPQ) was used by Aurora et al., (2003) to assess reflective practice capacity. The RPQ assesses four core components of reflective capacity and six associated correlates of reflective practice capacity. All subscales of the questionnaire indicated good internal reliability with Cronbach's alpha's ranging from 0.82 to 0.91 (Priddis & Rogers, 2018). The Occupational Self-Efficacy Questionnaire (OWS) was also used to assess self-efficacy for nurses and has been validated in nursing populations internationally and indicates good internal reliability with Cronbach's alpha's ranging from 0.77 to 0.79 (Pisanti et al., 2008).

1.3.4 Quantitative Studies

Three studies used quantitative methods to evaluate the use of indirect psychological interventions. Berry & Robertson (2019) used quantitative measures to explore burnout, the perceived effectiveness of clinical supervision and ward environment. This study used opportunity sampling and a cross-sectional design, utilising questionnaires with staff working in a medium secure unit. All front-line nursing staff who had been employed for a minimum of one year, in daily contact with service users, working full time on a 24-hour rotational shift pattern were invited to take part. The effectiveness of clinical supervision scores fell within a range where staff

perceived clinical supervision as generally effective, as measured by the self-report Manchester Clinical Supervision Survey (MMCS-26). However, the scores were lower than norms suggested by Winstanley & White (2013). It is suggested that the results of this study are interpreted cautiously as the MMSS-26 assesses only the effectiveness of clinical supervision, a formal means of support. The impact of clinical supervision on levels of burnout appeared minimal, suggesting this may have a limited role in addressing burnout for staff working in a medium secure forensic unit as a stand-alone intervention.

Rask & Levander(2009) also used quantitative methods, looking at nurses' satisfaction with nursing care work in five forensic psychiatric care units in Sweden. Data reflecting work satisfaction, clinical supervision and nursing activities were analysed. Through a randomised procedure, 350 questionnaires were distributed to staff working across the service. Nursing care staff were eligible to participate if they had been permanently employed for more than 6 months. The measure used (SNCW) was modified for the study, originally developed for studying general psychiatric nursing in Sweden. Results of the study indicated that clinical supervision has a relationship with nurses' satisfaction with 'co-operation', 'information', and 'workrole'. It was also found that nurse's personal growth could be positively affected by clinical group supervision.

Polnay et al. (2022) recruited a multi-professional sample of clinicians to pilot The Relational Aspects of CarE (TRACE) scale. This is a 20-item questionnaire used to measure the effectiveness of reflective practice, staff awareness of interpersonal dynamics and other key related areas of importance in a reflective practitioner. The sample included clinicians who had been working for more than six months in direct contact with service users in a 140-bed high secure male unit. Cronbach's alpha for the scale was 0.66, which is considered to be borderline acceptable (Field, 2005). This study noted the potential benefits of reflective practice being offered in services where relational trauma and attachment difficulties are present.

Some benefits were reported across the studies, however due to heterogeneity in the intervention type, samples and outcomes used, the results cannot be generalised across studies but offer promise for some preliminary support for a beneficial effect of these interventions.

1.3.5 Mixed-method studies

Three studies utilised a mixed methods approach (Aurora et al., 2023; Dale & Storey, 2004; McCarron et al., 2017). Aurora et al., (2023) used an exploratory mixed method design to evaluate the impact and acceptability of a structured reflective practice program. The study seeks to address many of the limitations in previous research on the benefit of reflective practice by providing clarity around definitions, model and process. Within this study reflective practice

program sessions were provided monthly for each unit of the hospital, for one hour. The reflective practice sessions adopted an adapted Balint model approach (Balint, 1985), with the intention of bringing awareness to aspects of transference, countertransference and the unconscious. The framework underpinning the Reflective Practice program also incorporated the delivery of wellbeing workshops to promote positive psychological strategies. The inclusion of these workshops within the study allowed the reflective practice team to address the immediate need of clinical staff for solution-focused support. The study found no significant difference observed in the rating of the usefulness of reflective practice between pre and post implementation of the group, with the majority indicating usefulness at both timepoints. Staff confidence in their work, determined by measure of reflective practice capacity (RPQ; Priddis & Rogers, 2018), did significantly improve ($p = .039$) between pre and post implementation. However, no significant difference was observed in the outcome measures (RPQ; Priddis & Rogers, 2018; Self-Efficacy Questionnaire for Nurses; Pisanti et al., 2008; OWS; Trounson et al., 2019) across the number of sessions attended nor the sessions type (reflective practice or wellbeing workshops). Following the implementation of the Reflective Practice program, participating stakeholders all noted a positive response to the program across the hospital. A noticeable improvement in team cohesion was reported, as well as increased communication across the multidisciplinary team. Initially, reluctance to attend the Reflective Practice Program was observed, largely due to concerns around workload or handing over care of complex service users to an unfamiliar clinician.

McCarron et al., (2017) used a mixed methods approach combining grounded theory (Glaser & Strauss, 1967) followed by statistical analysis. This study aimed to increase understanding of nurses' and HCSs' experience of, and access to, clinical supervision within a secure adolescent service. These interventions included raising staff awareness around clinical supervision, using multidisciplinary and group supervision, and improved recording and tracking of supervision rates. However, the specific effectiveness of each intervention was not assessed, with the study relying on subjective measures of improvement. This study was conducted in two phases. The initial phase found that whilst both nurses and HCAs understood the benefits of clinical supervision, each group struggled to access it regularly. Partially informed by the initial phase outcomes, the organisation introduced several interventions to facilitate supervision more readily. Following this, the study was repeated. In the initial phase of the study, there were no significant differences between nurses' and HCAs' concerns. When the study was repeated, significantly more HCAs than nurses raised personal concerns ($p = .028$). In the initial phase, significantly more nurses than HCAs found supervision to be a positive experience ($p = .027$)

however, there were no significant differences between the professions when the study was repeated. The study also identified a range of themes in relation to how inadequate supervision impacts on staff, their ability to do their job and on service user care. This study demonstrated that staff experienced a range of concerns when working in the service, and that they understood the value of clinical supervision. The study notes that services should be mindful of the need to provide effective clinical supervision to health care support workers as well as nurses. Limitations of this study were the lack of generalisability due to the single organisation that it took place in. The study also experienced a low response rate and noted that different disciplines were experiencing different time constraints within the service. It was felt that this may have biased the sample. The study also used different coders at different time points, with the questionnaire not having previously been validated, and no specific training or validation exercises were undertaken prior to coding. It was also acknowledged that the researchers position within the service may have biased their interpretation of the data in favour of noting improvements.

Dale & Storey, (2004) used data from focus groups and interviews to yield a theory of nursing in secure environments. This theory was subsequently translated into a questionnaire that was distributed to staff. Through their research a noticeable difference of opinion emerged between respondents working in high and medium secure environments. Issues of concern common to nurses in all levels included, balancing security and therapy, clinical supervision and boundaries of professional practice. The data from the study identified that clinical supervision for nurses has been sparse in its implementation and absent altogether for many of the secure services involved. The general reason given for a lack of implementation appeared to be lack of resources, both in terms of time and expertise. Previous research (Gournay et al., 2000) noted that working with forensic service users can be anxiety provoking and stressful, therefore an essential part of professional training involves learning how to deal with the emotional by-products of working with this population. Participants involved in this research recognised that clinical supervision could make a significant contribution to clinical risk assessment and management, which is considered to be a core component of working within a secure mental health service. The nurses in the study reported that clinical supervision would allow them to have regular time allocated for reflection on the content and process of their work. Participants also liked the idea of having an opportunity to explore and express personal distress and felt that this would support them to better plan and use their personal and professional resources.

The mixed-method studies within this review all acknowledged some potential benefits of the use of indirect psychological interventions within forensic services. These included improved team cohesion across the multidisciplinary team (Aurora et al., 2022), an improvement in the experience of an access to clinical supervision (McCarron et al., 2017), and providing a space to

reflect, express and explore (Dale & Storey, 2004). However, each of these studies experienced difficulties with a low response, something which they all acknowledge to be a limitation of the research.

1.3.6 Qualitative studies

Two of the included studies used qualitative methods (Cooper & Inett, 2017; Feerick et al., 2020). Both used a semi-structed interview approach as this was felt to most appropriate approach as it offers researchers insight in the participants experiences without transforming the data beyond recognition from the area under scrutiny (Doyle at al., 2020). Feerick et al., (2020) aimed to explore the perceptions of forensic mental health nurses of clinical supervision in terms of their understanding of clinical supervision and their perception of its utility within forensic nursing practice. Their study used a six-stage framework for data analysis (Newell & Burnard, 2011), which involved immersion in the data through reflection, listening to the interviews and reading and rereading the transcripts. A process of open coding followed, and the codes were formed into categories. Through this process they identified three key themes 'participants' perceptions of clinical supervision', 'utility of clinical supervision within the national forensic mental health service' and 'factors influencing the implementation of clinical supervision'. Within the study, participants understanding of clinical supervision was mostly consistent with the literature, with the participants talking about the purpose of clinical supervision in terms of support, reflection and impartial discussions between the supervisor and supervisee. However, within the study twenty percent of the sample had no direct experience of clinical supervision. Clinical supervision was described as a useful way to create a "neutral and safe space" (p. 684) and was considered to be essential for the forensic context. Difficulties were identified due to "the heightened security procedures and service user profile mandated strict staffing levels that might not be as flexible as in other areas" (p.686). Participants also highlighted the need to better promote clinical supervision within the service "for clinical supervision to flourish and become mainstreamed, nursing staff needed to be aware of its existence, purpose and scope" (p. 686). Participants felt that in order for this to be achieved "strong support from nursing management at all grades, particularly those in senior nursing administrative positions" (p. 685) was necessary. With some concerns that "nursing managers may become disconnected from the realities of ward-based nursing and not see the need for supports such as clinical supervision" (p. 685).

Cooper and Inett (2017) study looked at staff support procedures in a low-secure forensic service as part of a service evaluation. The aim of the study was to explore how staff support procedures in one low-secure forensic service impacted on staff recovery. The staff support

procedure within the study was well established within the service and included immediate practical support; follow up psychoeducational support; a one-month period of watchful waiting; follow up support one month after the incident; and a regular programme of formulation driven discussions. Thematic analyses was used to interpret the data and led to the development of four overarching themes; experience of harm, supported recovery, missed opportunities and fractured relationships. Indirect psychological interventions such as reflective practice were described as opportunities in which similar cognitive and emotional responses could be shared, offering a feeling of containment and safety to staff. “In those sessions you do actually feel as though you can say your piece and then nine times out of ten you find out that somebody else is thinking exactly the same thing as you and that always helps” (p. 196). However, participants highlighted unmet needs, including reflective practice not being available on all wards. Building on the findings from this study, an integrated model of staff support was proposed and included reflective practice being fully integrated into the service. The identified aim of this was to maximise staff wellbeing by promoting good psychological health. A limitation of this study, however, is that the staff support procedure evaluated was designed around the needs that were unique to the service, limiting the transferability of the findings.

Collectively both studies reported benefits but also highlighted barriers to indirect interventions that are faced in routine practice.

1.4 Discussion

This review aimed to examine the current use and availability of indirect psychological interventions within forensic mental health inpatient settings. This review highlighted the current gap in the literature with understanding the use of indirect psychological interventions within forensic settings. This review also identified the current use of indirect interventions within forensic services and the potential benefits that these are able to offer to the services. This review noted that staff consider indirect interventions, such as clinical supervision and reflective practice to be beneficial however, these interventions are often difficult to access, perceived benefits appear to differ across job roles and there are some confusions around the perceived utility of them. Nine studies met inclusion criteria. The review identified studies that described the use of clinical supervision and reflective practice as indirect psychological interventions currently being implemented within forensic inpatient settings. The identified studies highlighted the heterogeneous nature of the use and evaluation of indirect interventions within forensic inpatient settings. There was a consistency in the lack of generalisability across the studies, due to the contexts in which the studies took place, with most taking place in single organisations in the UK and one in Sweden. Studies also highlighted a lack of consistency in the delivery of and access to

indirect interventions within forensic inpatient settings (Dale & Storey, 2004; Cooper & Inett, 2017). Indirect psychological interventions for nurses have been sparse in their implementation however, within forensic services they have been absent altogether. This review has identified important clinical implications. First, it has demonstrated that indirect psychological interventions in forensic settings, such as clinical supervision and reflective practice are valued by staff however, there are often challenges in being able to access the support offered. The general reason given for lack of implementation appears to be lack of resources, both in terms of time and expertise (Dale & Storey, 2004). Working as a therapeutic agent within a secure environment creates a tension and for the participants in this study perpetuated that feeling of stress (Feerick et al., 2020). Participants in the McCarron et al., (2017) study reported that inadequate supervision was negatively impactful upon their abilities to do their jobs, including being able to offer best possible care to service users. Service users within forensic services present with a range of complex issues and the provision of nursing care that is recovery orientated poses unique challenges (Feerick et al., 2020). Many of the selected studies experienced a low response rate (McCarron et al., 2017; Aurora et al., 2022; Dale & Storey, 2004; Feerick et al., 2020; Cooper and Inett, 2017). McCarron et al., (2017) explained that those who did not respond may have been motivated by strong feelings about the indirect psychological intervention. It may also have been that those who experience the greatest time and staffing constraints may not have had time engage in the studies.

Several of the studies included within the review acknowledged the role of the wider organisation in improving the access and utility of indirect psychological interventions within forensic services. Mental health services need to make a commitment to providing clinical supervision because it requires time and energy if it is to be effective (Dale & Storey, 2004). Supervisors need to acknowledge the challenges that exist with the development of therapeutic relationships within the forensic services and respond accordingly (Feerick et al., 2020). Aurora et al., (2022) reported a low programme attendance as a significant limitation of their study. It was recognised that a contributing factor of this was nurses shift patterns and high levels of clinical activity impacting availability of staff members to attend. Clinical supervision has long been advocated as a means of support for mental health nurses across a range of environments however, this is still not common practice in forensic services (Feerick et al., 2020). Dale & Storey, (2004) study highlighted the justifiable potential benefits of implementing clinical supervision. These potential benefits included increased job satisfaction, enhanced sense of colleagueship and corporate purpose. They also noted that clinical supervision could lead to an improvement in the

quality of care being provided, creating opportunities for valuing colleagues' strengths and for identifying ways in which their professional needs could be met.

1.4.1 Critique of the literature

This review has identified a lack of standardisation in the indirect interventions reviewed. Berry & Robertson (2019) identified a limitation in that no standardized measure of informal supervision exists making direct comparisons to previous research difficult. Of the two intervention types included within this review, none described standardised or core components. There was a lack of consistency across theoretical models, lengths and modalities. As a result, there needs to be further investigation into the key components of indirect interventions.

A large number of the included studies did not include participants in their sample if they had been working within the service for less than six-months to one year (Berry & Robertson, 2019; Feerick et al., 2020; McCarron et al., 2017; Polnay et al., 2022; Rask & Levander, 2009). It was unclear how many staff were excluded on this basis, as this information was not captured. Aurora et al (2023) highlighted the need to introduce the process of indirect psychological interventions, such as reflective practice, to clinicians early in their career training to support learning and integrate clinical theory and practice. Long et al (2014) noted that those who engaged in clinical supervision had a positive view of it however, HCAs were significantly less likely to engage in supervision.

Dale & Storey (2004) identified a noticeable difference of opinion between respondents working in high and medium secure environments. Berry & Robertson (2019) found a significant difference between participants' pay bands and their responses to outcome measures. Senior nurses reportedly found clinical supervision to be more effective than support worker and senior support worker. McCarron et al (2017) found that significantly more nurses than HCAs' found supervision to be a positive experience. These findings suggest a need to further explore the differences between staffing groups to better understand these reported significant differences.

A common difficulty highlighted within the identified studies related to issues in being able to access indirect psychological interventions. McCarron et al (2017) found that staff were unable to access clinical supervision due to staffing and ward constraints. Feerick et al (2020) noted a major impediment in that the shortage of nurses put direct pressure on the availability of time and cover to release staff to attend clinical supervision. Long et al (2014) summarised that, in the current climate, two interrelated issues dominate. The first is the practical managerial issues of ensuring that staff have adequate access to clinical supervision. The second is an issue of integrity, is supervision valued accordingly. Aurora et al (2023) explained that the acceptability of indirect

interventions within the inpatient setting relied heavily on the buy-in from senior management and the implementation from the top down. This study highlighted that, providing backfill for staff not only facilitated clinician engagement with the indirect intervention but also promoted skill development, by allowing clinicians to work outside of their usual role and extend their skills while covering for colleagues.

Overall, those who were able to access indirect psychological interventions reported positive outcomes. Participants in Dale & Storey (2004) study reported that clinical supervision could make a significant difference to clinical risk assessment and management. Berry & Robertson (2019) reported that staff in their study perceived clinical supervision as generally effective. Rask & Levander (2009) suggested that clinical group supervision with a focus on the 'nurses' feelings in relation to different service users can have a compensatory effect on mental exhaustion and can increase work satisfaction.

1.4.2 Strengths and limitations of current review

The current review offers a unique contribution to the existing evidence base, highlighting the lack of consistency in current approaches to the use of indirect interventions within forensic services. The review utilised a robust and systematic search criterion, with the inclusion of both qualitative and quantitative methods permitting inferences at group and individual levels.

1.4.3 Future recommendations

Staff in forensic services need to be appropriately prepared for their role and have opportunities that promote good psychological health, including staff reflective practice and clinical supervision (Cooper & Inett, 2017). Ongoing work is needed to improve access to indirect psychological interventions for staff working in forensic settings (McCarron et al., 2017). Participants in the Dale & Storey, (2004) study suggested that the area of secure mental healthcare is a breeding ground for resistance and suspicion. This suggests the need to find ways to offer reassurances about the use of indirect psychological interventions, to overcome the suspicions and to create a positive narrative about the uses and potential benefits. Recognition, acknowledgement and openness about the complexities of working within the forensic services will go some way to easing tensions. With the provision of clinical supervision within a confidential, safe and non-judgemental relationship ultimately improving the therapeutic environment for staff and service users (Feerick et al., 2020). A previous review by Man et al., (2022) recommended the need for standardisation in outcome measurement reporting for

indirect psychological interventions in order for more complete conclusions to be drawn. Dale and Storey, (2004) highlighted the need for consistency with how clinical supervision is implemented. This lack of consistency has led to varying practices being identified and, in their study, participants presented as confused and wary of accepting a practice that appears to have many definitions and interpretations. This review would mirror this recommendation, as this review was also unable to determine this due to the diversity of outcome measures used. The main focus of implementing indirect psychological interventions is to ultimately improve care for service users however, none of the studies included within this review utilised service user reported outcomes. The majority of the research included in this review has been conducted in the United Kingdom, with one study conducted in Sweden however, a common issue within the studies (Aurora et al., 2023; Feerick et al., 2020; McCarron et al., 2017; Dale & Storey, 2004) was reported small sample sizes (Berry & Robertson, 2019; Cooper & Inett, 2017; Aurora et al., 2023; McCarron et al., 2017; Feerick et al., 2020), with study samples also consistently mostly with female participants, therefore generalisability of measures and findings cannot be guarantee. The use of longitudinal studies may allow a richer narrative, as participants may reflect on their experiences as they occur (Cooper & Inett, 2017).

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Chapter 2 The Use of Psychological Formulation in Forensic Services

Abstract

Introduction: The use of indirect psychological interventions within forensic services is currently under researched. The use of the Comprehend, Cope and Connect formulation within acute mental health services has suggested positive outcomes for both staff and service users.

Aim: The study aimed to investigate whether formulation impacts staff attitudes and levels of compassion in comparison to a control group, whether these effects are maintained, and if staff attitudes and level of compassion are associated in relation to others presenting with a personality disorder presentation.

Methods: This study employed a mixed model design with a between-subjects factor of condition (formulation vs control) and a within-subjects factor of time.

Results: This study found no interaction effects between the intervention and time across the measures used. Main effects of time were observed and were across both the control and formulation conditions, with post attitudes and compassion scores higher than pre scores. The results suggested some perceived usefulness of the formulation to clinical practice.

Discussion: Compassion and attitude are important aspects of working in forensic services. The use of the CCC formulation within forensic services needs further explorations to understand any potential benefits of this model within these services.

Implications for Practice: This study suggests the need for developing an improved approach and understanding of the potential benefits to the use of psychological formulation within forensic services.

Accessible Summary

What is known on the subject?

- There is currently only a small amount of research looking into the use of indirect psychological interventions in forensic services.
- The Comprehend, Cope and Connect model is a therapy approach that can be used directly with a service user or indirectly with staffing teams.

What does this paper adds to existing knowledge?

- Those involved in the study expressed some perceived benefits of using the Comprehend, Cope and Connect model in their work.

What are the implications for practice?

- More research is needed to better understand what these perceived benefits of the Comprehend, Cope and Connect model could be.

2.1 Introduction

2.1.1 Forensic Services

Establishing therapeutic relationships can be one of the greatest challenges for staff working in forensic settings. This involves making sense of an incomprehensible world and developing relationships based on empathy, genuineness and compassion (Wyder et al., 2015). Previous research by Dale & Storey (2004) described how service users often bring with them high levels of emotional need and vulnerability and the experience of abuse and manipulation, often compounded by previous dysfunctional relationships, so adding to their tendency to distort and misinterpret the behaviour and signals given out by others. Clinical decisions are often made quickly and within highly charged environments (Feerick et al., 2015). Forensic services are distinct as they care for individuals who are deemed to require an enhanced level of physical, procedural and relational security. Environmental challenges related to forensic services often presents unique challenges to staff. Tension can often arise due to the dual role as therapeutic and custodial agent. Jacob (2012) argues that these tensions may create cognitive dissonance which emerges in response to nurses assimilating security and custodial practices within a therapeutic framework. This challenges staff to maintain security, form and maintain

relationships, be exposed to violence and aggression, be aware of service user index offences, use least restrictive practices and make complex decisions under challenging conditions (Feerick et al., 2020).

The primary focus when dealing with aggressive behaviour should be that of recognition, prevention and de-escalation in a culture that seeks to minimize the risk of its occurrence through effective systems of organisational, environmental and clinical risk assessment and management (Clarke & Wilson, 2009). It can often be difficult to maintain good management of one's own emotions, compassions, and consistency, whilst staying connected to the service user (Hammarstrom et al., 2020). Forensic settings present particularly unique ward dynamics due to service user's complex behavioural and mental health needs, with forensic psychiatric nursing reported as extremely stressful (Elliott & Daley, 2013). The perceived threat of violence felt by staff has been hypothesized to lead to increased stress (Joseph, 1993), thereby affecting their ability to empathise with service users.

2.1.2 High Rates of Personality Disorder

Personality disorder presentations are common within forensic mental health services; they are thought to feature in about 5-10% of the general population and in excess of 50% of the prison and forensic mental health population (National Offender Management Service, 2015). Dale and Storey (2004) described nurses' relationships with personality-disordered (PD) service users as being highly charged and emotionally intense with high levels of anger and hostility. Negative attitudes among mental health workers seem particularly common in response to people diagnosed with borderline personality disorder (BPD) (McKenzie at al., 2022). Forensic service users with personality disorders can present simultaneously as 'fearsome perpetrators and traumatised victims' (Adshead et al., 2008), their vulnerability masked by the threat they simultaneously pose (Schafer & Peternelj-Taylor, 2003). The necessary emphasis on security, safety and, in some cases, retribution, can create invalidating environments that both elicit and reinforce the serious behavioural problems often observed among those with personality disorder, such as self-injury and suicidal behaviour (Chapman & Ivanoff, 2018).

2.1.3 Stigma and Borderline Personality Disorder

Borderline personality disorder (BPD), also sometimes referred to as Emotionally unstable personality disorder (EUPD), is a mental health condition characterised by instability in interpersonal relationships, affect regulation, self-image and impulsivity (Motala & Price, 2022).

Officially introduced as a diagnostic entity only in 1980 with the third edition of the Diagnostic and Statistical Manual of Mental Disorders, the history of the term borderline is extensive and controversial (Lewis & Grenyer, 2009). There remains controversy surrounding the nature of the relationship between BPD and Posttraumatic Stress Disorder (PTSD), with strong arguments that it would be more accurate and less stigmatizing for the former to be considered a trauma spectrum disorder (Lewis & Grenyer, 2009). People with BPD experience significant stigma, particularly at the interface of care delivery (Ring & Lawn, 2019). The stigma associated with BPD may affect how able practitioners are to tolerate the actions, thoughts, and emotional reactions of these individuals (Aviram et al., 2006).

BPD is a common diagnosis in forensic settings (Stewart et al., 2019). Individuals with BPD are overrepresented in civil, criminal, and child custody forensic situations (Reid, 2009). The body of evidence for interventions for people with any diagnosis of personality disorder in forensic settings is currently limited (Stewart, 2019). The diagnosis of personality disorder has often been associated with a degree of therapeutic pessimism. Those with personality disorder are considered by clinicians to be more difficult to manage, less deserving of care, and more in control of their behaviour; thus, they are often viewed in a more judgemental manner than those with other diagnosis (Beryl & Vollm, 2017). A BPD diagnosis is also associated with significant distress and poor physical health, making it important to understand how to tailor interventions in forensic settings (Stewart, 2019).

Research by Lewis & Grenyer (2009) explain how BPD diagnosis remains controversial, with its overly ample boundaries, high comorbidity rates, and lack of consistent proof regarding the reliability and validity of BPD as a diagnostic entity. Research by Lester et al., (2020) highlighted more positive interpretations of the diagnosis communicated by service users, such as its efficacy in providing a clearer understanding of the self, it becoming part of their identity and helping them to make sense of their difficulties and connect with others. Thus, until we actually understand the varying presentations and etiology of BPD, and whether it exists as a unique entity, it seems that little can be achieved by merely changing the name. Thus, for this article, the term BPD will be used to encapsulate presentations involving instability in interpersonal relationships, affect regulation, self-image and impulsivity (Motala & Price, 2022) to be fitting with the existing literature.

2.1.4 CCC as Model of Care in Inpatient

Comprehend, Cope and Connect (CCC) is a third-wave cognitive behavioural approach developed for acute mental health services. The CCC model is a therapy approach that integrates

insights from existing evidence based third wave cognitive behavioural therapies such as DBT and CFT. It aims to help individuals to understand how their past trauma and adversity can be impacting their present coping abilities and how to better manage change using mindfulness and compassion. The CCC model places less emphasis on thoughts and more on the felt sense that the individual is experiencing and causing them distress. The model aims to broaden the role of the psychologist beyond 1:1 working, providing a practical framework for staffing teams working with people experiencing emotional distress. The CCC approach to therapy starts with the development of a psychological formulation which can then be used to inform the thinking of the wider system. The CCC formulation is based on the idea that individuals develop coping strategies in response to intolerable internal states and that these may be caused by past trauma or adversity. Wherever possible, the CCC formulation is collaboratively co-produced, with a weekly formulation clinic facilitated to enable staff to make sense of complex presentations in a validating and compassionate way. Clarke and Wilson (2009) highlight that one or two individuals with extra training in the middle of a team working with a different ethos and a different model cannot be expected to make a significant change. Using formulations with staff groups has become an increasingly popular way of engaging and working collaboratively with teams (Division of Clinical Psychology; DCP, 2011). Although the CCC model is based on evidence-based approaches, the overall model is lacking empirical investigation in clinical settings. The quality of evidence to date is quite poor, with only a few studies and without the use of robust methodology.

CCC emphasises the importance of a whole team approach to understanding the person's experience, their coping strategies and their social support network. Maintaining staff morale and creating a culture of therapy in the inpatient unit is essential for a well-functioning environment (Clarke & Wilson, 2009). When working with an individual, the way in which a relationship is built up before the formulation can be approach is considered crucial. The quality of the relationship is the foundation on which everything must be built, CCC aims to normalise behaviours that individuals may have developed as coping strategies in response to intolerable internal states. This offers a validating and non-pathologizing stance, which places the individual at the centre of the solution (McGuire et al., 2019).

Araci and Clarke (2016) found high feasibility for CCC, significant decrease in distress, and significant increase in confidence in self-management in four acute psychologically informed environments. Paterson et al., (2018) found positive outcomes for self-efficacy and distress using CCC. There is emerging evidence for CCC for people with diagnosis of complex and severe mental health conditions in acute settings (Bullock et al., 2020). Durrant et al. (2007) suggested that the time of crisis, represented by hospital admission, is the right time to facilitate the individual to

take responsibility for their mental health difficulties. Service users involved in the study showed increased self-efficacy and internal locus of control regarding mental health and emotion regulation. However, the small number of completed measures within the study severely limits the scope and any scientific conclusions. The CCC model is formulation based and transdiagnostic, recognising the impact of trauma on current functioning and addresses this, emphasizing strengths, talents and values, leading to clear behavioural goals of therapy. The formulation is designed to condense complex presentations into coherent formulation which lends itself well to presentations typical of forensic settings. Therefore, it was felt that this model would be adaptable to forensic settings. Unlike other models of formulation, the CCC formulation is diagrammatic, and this makes it accessible to a wider variety of audiences.

2.1.5 Role of Formulation

A successful inpatient intervention needs to teach new behaviours, thoughts, feelings and physiological responses in the inpatient context and then enable transfer of these new skills to the natural environment in which the service user normally exists (Clarke & Wilson, 2009). An influential approach suggests that challenging behaviour is the manifestation of a person's unmet needs and distress (Kramarz et al., 2023). According to NHS protect (2014), effective prevention of challenging behaviour involves developing a unified multidisciplinary understanding of the reasons for service user' behaviour and developing personalised strategies to meet needs and minimise distress (Kramarz et Al., 2023). Previous research has reported that nurse's relationships with service users can be superficial with an emphasis on the creation of boundaries that may be counterproductive to the engagement that is required for meaningful dialogue (Goodman et al., 2020). Psychological formulation can be defined as the process of co-constructing a hypothesis or "best guess" about the origins of a person's difficulties in the context of their relationships, social circumstances, life events and sense that they have made of them (Johnstone, 2017). Shared formulation is seen as an intervention, which can be effective at many levels, from the individual service user, through staff thinking, to organisational structure and power relations (Clarke & Wilson, 2009).

A traditional team formulation has been broadly described as the '*process of facilitating a group of professionals to construct a shared understanding of service user's difficulties*' (Johnstone & Dallos, 2014, p5). In order to develop a shared understanding, it is important that all key figures in the service users ward environment are included. Team formulation is widely encouraged, from clinical psychology training (British Psychological Society, 2015) to consultancy level (Skinner & Toogood, 2010). If hospital admission represents a crisis in someone's life that requires reflection and reappraisal, it could be argued that the institution itself is in crisis and could similarly use

reflection and reappraisal (Clarke & Wilson, 2009). Feerick et al., (2020). Found that the secure environment and issues such as the service users index offence can create difficulties in forming and maintaining a therapeutic relationship. A formulation can provide a structure for thinking together with the service user about how to understand their experiences and how to move forward. Often, drawing on two equally important sources of evidence; the clinician brings knowledge derived from theory, research, and clinical experience, while the service user brings expertise about their own life and the meaning and impact of their relationships and circumstances. Service users in the Durrant et al., (2007) paper were engaged with the program through individual, Emotion Focused Formulation.

The CCC formulation 'Comprehend' lies at the heart of the model and was designed to be developed collaboratively with someone experiencing mental health crisis, in one-to-one session. This conceptualizes mental health problems as means of coping with overwhelming affect/unmanageable experiences in way that work well in the short term but prove dysfunctional in the long term (Araci & Clarke, 2016). The CCC approach hinges on a simple formulation grounded firmly in felt sense and emotion, and factoring in life events, situations and past trauma, naming strengths and values, before homing in on the vicious cycles that need to be breached if the individual is to break free of mental anguish, and in most cases, break free of the past (Clarke, 2022). According to the Department of Health (2002), Clinical Psychology input needs to be increased to assist ward staff with the acquisition and practice of the necessary skills, including the training and supervision of staff. Previous research on the use of CCC in acute mental health services showed that in most participating teams, emotion-base formulations were utilized, and a variety of groups were running, facilitated by a range of staff, demonstrating the feasibility of the approach in routine practice.

2.1.6 What's Missing

Team formulation is viewed as one of the key recommendations for best practice in acute inpatient settings, however, this is currently under researched within forensic services. Team formulation is commonly implemented in acute inpatient settings; however, approaches vary widely in terms of theoretical models used, frequency of meetings and their structure (Berry et al., 2016; Raphael et al., 2021). Team case formulation has potential to offer benefits to staff wellbeing and team communication (DCP, 2011). The current study aimed to explore whether psychological formulation impacts health care staff's attitudes and levels of compassion towards a person who presents with traits consistent with a personality disorder. Research has demonstrated that attitudes to people with BPD can be improved through staff training (Krawitz, 2004). If shared collaboratively with the service user and multidisciplinary team, a formulation can

encourage the emergence of a compassionate narrative which is validating for the service user and staff and allows the individual to be active in changing the situation (Clarke & Wilson, 2008). Mental Health Professionals with more positive attitudes are likely to develop better therapeutic relationships with clients with BPD, impacting on the quality of care they receive (Arora, 2016). The study aims to ascertain whether formulation impacts staff attitudes and levels of compassion in comparison to a control group, whether these effects are maintained, and if staff attitudes and level of compassion are associated in relation to others presenting with a personality disorder presentation.

This study will explore whether psychological formulation has an effect on health care staff's attitudes towards a person who presents with traits consistent with a personality disorder and levels of compassion towards others. The objectives are to ascertain whether formulation impacts staff attitudes and levels of compassion, whether these effects are maintained, and if staff attitudes and levels of compassion are associated in relation to others presenting with a personality disorder presentation. The research questions of this study are:

- Does psychological formulation impact attitudes and levels of compassion towards service users with a presentation consistent with personality disorder?
- Are effects maintained at one week follow up?
- Do baseline levels of compassion predict attitudes towards a person presenting with personality disorder traits?

The hypotheses of the study are:

- Levels of compassion and positive attitudes towards service users with a presentation consistent with personality disorder will increase in the formulation group compared with a control group.
- Effects will be maintained at one week follow up.
- Baseline levels of compassion will predict positive attitudes towards a person presenting with personality disorder traits.

2.2 Method

2.2.1 Ethical considerations

This study received ethical approval from the University of Southampton Ethics and Research Governance Committee (ERGO Ethics ID 72102; See Appendix C) and Health Research

Authority (IRAS ID 317176; See Appendix D). Informed consent was gained from all participants via an online consent statement (See Appendix E).

2.2.2 Setting

This study was conducted with employees across two NHS Trusts in the United Kingdom. Both trusts offer a range of adolescent and adult forensic mental health services (inpatient and community) including low secure, medium secure and community forensic mental health services to both male and female service users from ages 12+.

2.2.3 Participants

The study recruited 56 participants (42 females, 12 males; age range 18-64 years). All clinical staff, including bank and agency staff (psychology, occupational therapy, social work, nurses, health care support workers, psychiatrists) working within NHS forensic mental health services across two NHS trusts were invited to participate.

2.2.4 Design

To investigate the primary research question of whether psychological formulation has an effect on health care staff's attitude and compassion towards service users, this study employed a mixed model design with a between-subjects factor of condition (formulation vs control) and a within-subjects factor of time.

2.2.5 Materials

2.2.5.1 Demographic Questionnaire

The Demographic Questionnaire (See Appendix F) was used to capture information relating to the participants' personal characteristics (e.g., age, gender) and occupational information (e.g., occupational role, years working in setting and previous relevant training to working with service users with personality disorder or psychological formulation).

2.2.5.2 Compassionate Engagement and Action to Others Scale

The Compassionate Engagement and Action (CEAS) to Others (See Appendix G) (Gilbert at al., 2017) is a 13-item scale which measures two aspects of compassion, "engagement" and "actions". The scale uses a 10-point Likert scale (1 =" never" to 10 = "always") to assess the frequency of each item's occurrence. Within the original development study, the CEAS showed

reasonable construct validity (including convergent validity) with other established measures of compassion and demonstrated good internal reliability (Cronbach's α from .67 to .94; ref). Internal reliability in the current sample was α=0.79.

2.2.5.3 Attitudes to Borderline Personality Disorder Questionnaire

The Attitudes to Borderline Personality Disorder Questionnaire (ABPDQ) (See Appendix H) (Arora & Spendlow, 2016) was developed based on comprehensive literature review and consultation with service users/carers and mental health professionals. The measure is grounded in real life knowledge and experience through the involvement of service users, mental health professionals and experts in its development (Arora, 2016). The preliminary measure was assessed to have good face and content validity by a panel of experts in the field of personality disorder. Exploratory factor analysis (EFA) was conducted as a data reduction technique and to establish construct validity on a large sample (N=289). The ABPDQ was demonstrated to have excellent reliability (internal consistency, α=0.9).

2.2.5.4 Bespoke Questionnaire

The bespoke scale (Bennetts & Southwood, under review) (See Appendix I) was one of several scales developed to evaluate the impact of team case formulation sessions on staff ratings of understanding, compassion, options for and skills in working with service user discussed, and the perceived utility of the session on their practice. The scale was found to have good reliability, and results from previous research (Bennetts & Southwood, under review) indicated a significant improvement in confidence, knowledge and perceived usefulness in relation to psychological approaches from teaching sessions. Case formulations sessions demonstrated a significant increase in understanding, compassion and perceived skill to work with service users. The bespoke scale demonstrated good reliability of > .70 using Cronbach's α analysis.

2.2.5.5 Case Summary

All participants were presented with a case summary (See Appendix J) of a fictional individual who presented with traits consistent with a personality disorder presentation. This was developed with agreement from the authors based on their collective clinical experiences of presentations of service users within forensic mental health services. The case summary was originally developed by the main author before feedback and suggestions on amendments were sought from the other authors. Final agreement on the case summary between all authors was established before a final version was agreed.

2.2.6 Procedure

The study invited all staff (including bank and agency) who have contact with service users as part of their role to take part in the study. Participants were recruited using an advertisement email and poster (See Appendix F) that was sent to all employees of forensic services across both participating trusts. The advertisement email included a link to further study information and a link to the online questionnaire (using 'Qualtrics'). Those who consented to take part in the study were invited to complete the demographic section of the questionnaire before being directed to the baseline measures.

The study was administered by computer with instructions and the study aim displayed to participants. After providing informed consent, participants completed a demographic questionnaire, The Attitudes Towards Borderline Personality Disorder Questionnaire (ABPDQ) and Compassion and Engagement to Others Scale (CEAS). Following this all participants were presented with the same written case summary of an individual to read. After reading the case summary participants completed the bespoke measure before being randomly assigned into either the control or the formulation condition.

In the control condition, participants were presented with the same case summary as previously displayed, but in a verbal format. This was read aloud by accompanying audio to allow for consistent timings across the two conditions.

In the formulation condition, participants saw the previously presented case summary described verbally using the Comprehend, Cope and Connect (CCC) model approach. This was described in a formulated way (See Appendix K) to enable the participants to make sense of the individuals' presentation and the development and maintenance of this. Consideration being given to the intolerable internal state and the cycles of behaviour that may serve to maintain this feeling.

Following this, all participants were asked to complete the three measures again (ABPDQ, CEAS and Bespoke). Participants were also offered the opportunity to enter into a prize draw to win one of ten £25 Amazon gift vouchers. Participants could opt into a follow-up aspect of the study, designed to see if any effects from the study were maintained after one week. Those who opted in to the follow up were contact via email after seven days to complete the three measures again. Those participants were also given another opportunity to enter into the Amazon gift voucher prize draw.

2.2.7 Analytic strategy

Data analysis was completed using SPSS (v.27; IBM Corporation). Total scores and subscale scores were calculated for each variable. Prior to analysis, preliminary checks were conducted (Field, 2018) and all assumptions were met, unless otherwise stated. Due to the small sample size, missing data were prorated by calculating the mean of the completed data from the relevant scale or subscale (as appropriate) and entering this value as the value for the missing item, rather than being deleted. Data for all measures were subject to scrutiny for normal distribution and outliers across group and time point by use of Kolmogorov-Smirnov test (pre and post data) and by use of the Shapiro-Wilk test (due to small sample size; Mayers, 2013) for the follow-up data. Z-scores were computed of skew and kurtosis (Field, 2009), and inspection of histograms and scatter plots to permit broad pattern inspection alongside statistical inferences of normality.

2.2.8 Data distribution

Violations of the assumptions of normality were assessed by either Z score exceeding 1.96 for skew or kurtosis (Field, 2009), a significant Shapiro-Wilk / Kolmogorov-Smirnov test, or the presence of outliers being identified. Numerous violations were identified however, as ANOVA is considered robust enough to detect differences even when assumptions have been violated and there are equal groups (Field, 2009), mixed model ANOVAs were carried out.

2.2.9 Demographic questionnaire analysis

The majority of the sample was female (75%) and over the age of 25 years old (92.9%). The sample consisted of Health Care Assistants (N=9), Psychiatrists (N=3), Support Workers (N=11), Occupational Therapists (N=7), Psychologists (N=13), Nurses (N=10), Social Worker (N=1) and Other (N=2). The majority of participants had worked in secure settings for between one to ten years (73.2%). Nearly half (55%) of participants had received specific training related to formulation and/or working with personality disorder. However, only a small percentage of these (14%) had received any specific training within the last 12 months.

Table 4: *Sample characteristics*

Age Group	Total	%
18 to 24	3	5.4
25 to 34	25	44.6
35 to 44	14	25.0
45 to 54	11	19.6
55 to 64	3	5.4
Total	56	100

2.3 Results

2.3.1 Descriptive statistics

Table 5 shows descriptive statistics for the baseline Attitudes to Borderline Personality Disorder Questionnaire (ABPDQ) and the Compassion Engagement and Action to Others Scale (CEAS). A total of 56 participants completed the baseline measures (42 females and 14 males). Table 5 shows that mean scores for the baseline measures increased for those in the formulation and the control condition after exposure to the case summary. Table 6 shows descriptive statistics for the baseline measures at the pre / post and follow up timepoint, for those who completed the follow up aspect of the study. A total of 26 participants participated in the follow up aspect of the study. Table 6 shows that the follow up scores for the ABPDQ remained higher than the pre scores for both the formulation and control conditions. However, these scores were slightly lower than the post scores for both conditions. The CEAS scores did not remain increased for the formulation condition, when compared to post scores, having reduced to their pre mean score. The CEAS scores for the control condition had reduced since follow up and were slightly lower than the pre scores. Table 7 shows the pre and post scores for the bespoke questionnaire that was completed after all participants has viewed the case summary and before being randomised into the control or the formulation conditions. The bespoke questionnaire was then completed again after the randomisation and exposure to either the control or the formulation condition. Table 7 shows that post scores increased for all of the questions for those in the formulation condition. For those in the control condition, question one (I understand this person's presentation) and question four (I have the skills to manage this situation more effectively) increased with the post score. However, question three (I think there are

opportunities for change with this person) and question five (how useful do you anticipate this session being to your practice) decreased from pre to post scores. Table 8 shows the pre / post and follow up scores for the bespoke questionnaire. This table shows that for those in the formulation condition, increased scores were not maintained at follow up. For those in the control condition, increased scores on questions at the pre stage of the study were also not maintained at follow up.

Table 5: *Descriptive Statistics for baseline measures*

Measure	Condition	N	Pre		Post	
			M	SD	M	SD
	Formulation	30	99.73	11.49	103.10	12.12
	Control	26	101.69	13.99	103.88	13.91
	Total	56	100.64	12.63	103.46	12.87
	Formulation	30	79.20	9.06	81.10	9.61
	Control	26	80.54	8.50	81.77	8.76
	Total	56	79.82	8.75	81.41	9.15

Table 6: *Descriptive Statistics for pre, post and follow up measures*

Measure	Condition	N	Pre		Post		Follow Up	
			M	SD	M	SD	M	SD
ABPDQ	Formulation	14	102.29	11.08	105.21	12.13	105.00	15.48
	Control	12	108.83	14.98	110.92	13.97	109.42	14.17
	Total	26	105.31	13.81	107.85	13.07	107.04	14.28
CEAS	Formulation	14	82.29	6.00	85.07	6.73	82.29	8.06
	Control	12	83.25	6.33	85.67	7.09	82.83	8.29
	Total	26	82.73	6.05	85.35	6.76	82.54	8.01

Table 7: *Descriptive Statistics for Bespoke Measure*

Bespoke Measure	Condition	N	Pre		Post	
			M	SD	M	SD
Question 1	Formulation	30	7.53	1.59	8.17	1.05
	Control	26	7.27	1.54	7.69	0.97
	Total	56	7.41	1.56	7.95	1.03
Question 2	Formulation	30	8.57	1.16	8.63	1.24
	Control	26	8.35	1.32	8.35	1.16
	Total	56	8.46	1.23	8.50	1.21
Question 3	Formulation	30	8.83	1.11	8.93	1.23
	Control	26	8.62	1.06	8.42	1.10
	Total	56	8.79	1.09	8.70	1.19
Question 4	Formulation	30	7.23	1.22	7.53	1.28
	Control	26	6.92	1.57	7.00	1.52
	Total	56	7.09	1.39	7.29	1.41
Question 5	Formulation	30	7.27	1.60	7.93	1.23
	Control	26	7.08	1.74	6.85	1.78
	Total	56	7.18	1.65	7.43	1.59

Table 8: *Descriptive Statistics for Bespoke Follow Up*

Bespoke Measure	Condition	N	Pre		Post		Follow up	
			M	SD	M	SD	M	SD
Question 1	Formulation	14	7.79	1.31	8.50	0.94	8.00	0.78
	Control	12	7.67	0.78	7.92	0.79	7.67	0.78
	Total	26	7.73	1.08	8.23	0.91	7.85	0.78
Question 2	Formulation	14	8.86	1.17	9.00	1.11	8.64	1.15
	Control	12	8.33	1.50	8.58	0.79	8.50	1.24
	Total	26	8.62	1.33	8.81	0.98	8.58	1.17
Question 3	Formulation	14	9.14	0.95	9.21	1.05	8.29	1.20
	Control	12	8.83	0.94	8.75	0.87	7.75	1.54
	Total	26	9.00	0.94	9.00	0.98	8.04	1.37
Question 4	Formulation	14	7.64	1.01	7.93	1.50	7.64	1.15
	Control	12	7.08	1.56	7.42	1.50	7.00	0.85
	Total	26	7.38	1.30	7.69	1.15	7.35	1.06
Question 5	Formulation	14	7.36	1.34	8.21	0.89	7.86	1.46
	Control	12	7.17	1.70	6.92	1.78	6.92	1.08
	Total	26	7.27	1.48	7.62	1.50	7.42	1.36

2.3.2 2x2 ANOVA Attitudes to Borderline Personality Disorder Questionnaire

There was no statistically significant interaction between the intervention and time on Attitudes to Borderline Personality Disorder, $F(1, 54) = .939$, $p = .337$, partial $\eta 2 = .017$. The main effect of time showed a statistically significant difference in mean Attitudes to Borderline Personality Disorder scores at the different time points, $F(1, 54) = 21.034$, $p <$

.001, partial η2 = .280. Post ABPDQ mean scores were statistically significantly higher 2.78, 95% CI [1.56, 3.99] than pre scores, p < .001. No statistically significant difference was found for the main effect of condition on Attitudes to Borderline Personality Disorder scores, F (1, 54) = 0.164, p = .687, partial η2 = .003.

2.3.3 2x3 ANOVA Attitudes to Borderline Personality Disorder Questionnaire

There was no statistically significant interaction between the intervention and time on Attitudes to Borderline Personality Disorder, F (2, 48) = .650, p = .526, partial η2 = .026. The main effect of time showed a statistically significant difference in mean Attitudes to Borderline Personality Disorder scores at the different time points, F (2, 48) = 3.666, p < .033, partial η2 = .133. Post ABPDQ mean scores were statistically significantly higher 2.51, 95% CI [0.30, 4.71] than pre scores, p < .001. No statistically significant difference was found for the main effect of condition on Attitudes to Borderline Personality Disorder scores, F (1, 24) = 1.144, p = .295, partial η2 = .045.

2.3.4 2x2 ANOVA Compassionate Engagement and Action to Others

There was no statistically significant interaction between the intervention and time on Compassionate Engagement and Action to Others, F (1, 54) = .268, p = .607, partial η2 = .005. The main effect of time showed a statistically significant difference in mean Compassionate Engagement and Action to Others scores at the different time points, F (1, 54) = 5.873, p = .019, partial η2 = .098. Post CEAS mean scores were statistically significantly higher 1.56, 95% CI [0.270, 2.86] than pre scores, p = .019. No statistically significant difference was found for the main effect of condition on Compassionate Engagement and Action to Others scores, F (1, 54) = 0.186, p = .668, partial η2 = .003.

2.3.5 2x3 ANOVA Compassionate Engagement and Action to Others

There was no statistically significant interaction between the intervention and time on Compassionate Engagement and Action to Others scores, F (2, 48) = .029, p = .971, partial η2 = .001. The main effect of time showed a statistically significant difference in mean Compassionate Engagement and Action to Others scores at the different time points, F (2, 48) = 5.547, p < .007, partial η2 = .188. Post CEAS mean scores were statistically significantly higher 2.60, 95% CI [0.15, 5.05] than pre CEAS scores. (Assessed by Bonferroni in Pairwise Comparisons). Post CEAS mean scores were statistically significantly higher 2.81, 95% CI [0.46, 5.16] than follow up CEAS scores.

No statistically significant difference was found for the main effect of condition on Compassionate Engagement and Action to Others scores, F (1, 24) = 0.074, p = .788, partial η2 = .003.

2.3.6 2x2 ANOVA Bespoke measure

There was no statistically significant interaction between the intervention and time on responses to question 1 of the bespoke measure, F (1, 54) = 0.308, p = .328, partial η2 = .006. The main effect of time showed a statistically significant difference in mean responses to question 1 at the different time points, F (1, 54) = 8.285, p = .006, partial η2 = .133. Post bespoke question 1 mean scores were statistically significantly higher 0.528, 95% CI [0.16, 0.90] than pre scores, p = .006. No main effect of group was detected, F (1, 54) = 1.490, p = .228, partial η2 = .027.

There was no statistically significant interaction between the intervention and time on responses to question 2 of the bespoke measure, F (1, 54) = 0.062, p = .804, partial η2 = .001. The was no main effect of time in mean responses to question 2 at the different time points, F (1, 54) = 0.062, p = .804, partial η2 = .001. No main effect of group was detected, F (1, 54) = 0.717, p = .401, partial η2 = .013.

There was no statistically significant interaction between the intervention and time on responses to question 3 of the bespoke measure, F (1, 54) = 0.992, p = .324, partial η2 = .018. The was no main effect of time in mean responses to question 3 at the different time points, F (1, 54) = 0.992, p = .324, partial η2 = .018. No main effect of group was detected, F (1, 54) = 2.077, p = .155, partial η2 = .037.

There was no statistically significant interaction between the intervention and time on responses to question 4 of the bespoke measure, F (1, 54) = 0.566, p = .455, partial η2 = .010. The was no main effect of time in mean responses to question 4 at the different time points, F (1, 54) = 1.615, p = .209, partial η2 = .029. No main effect of group was detected, F (1, 54) = 1.507, p = .225, partial η2 = .027.

There was a statistically significant interaction between the intervention and time on responses to question 5 of the bespoke measure, F (1, 54) = 7.641, p = .008, partial η2 = .124. There was a statistically significant difference in responses to the post bespoke question 5 between conditions, F (1, 54) = 7.213, p = .010, partial η2 = .118. Responses to post bespoke question 5 were statistically significantly greater in the formulation condition (M = 1.09, SE = 0.40, P = .010) compared to the control condition. The was no main effect of time in mean responses to question 5 at the different time points, F (1, 54) = 1.803, p =

.185, partial η2 = .032. No main effect of group was detected, F (1, 54) = 2.628, p = .111, partial η2 = .046.

2.3.7 2x3 ANOVA Bespoke measure

There was no statistically significant interaction between the intervention and time on responses to question 1 of the bespoke measure, F (2, 48) = 0.706, p = .499, partial η2 = .029. The main effect of time showed a statistically significant difference in mean responses to question 1 at the different time points, F (2, 48) = 3.350, p = .043, partial η2 = .122. No significant results found on pairwise comparison. No main effect of group was detected, F (1, 24) = 1.445, p = .241, partial η2 = .057.

There was no statistically significant interaction between the intervention and time on responses to question 2 of the bespoke measure, F (2, 48) = 0.512, p = .602, partial η2 = .021. No main effect of time was shown in mean responses to question 1 at the different time points, F (2, 48) = 0.775, p = .466, partial η2 = .031. No main effect of group was detected, F (1, 24) = 0.797, p = .381, partial η2 = .032.

There was no statistically significant interaction between the intervention and time on responses to question 3 of the bespoke measure as assessed by Greenhouse-Geisser, F (2, 48) = 0.179, p = .733, partial η2 = .007. The main effect of time showed a statistically significant difference in mean responses to question 3 at the different time points, F (2, 48) = 16.724, p <. 001, partial η2 = .411 Pre bespoke question 3 scores were statistically significantly higher 0.970, 95% CI [0.42, 1.52] than follow up scores, p <. 001.Post bespoke question 3 scores were statistically significantly higher 0.964, 95% CI [0.35, 1.75] than follow up scores, p < .001. There was no significant difference between pre and post scores 0.006, 95% CI [-0.24, 0.26], p = 1.00. No main effect of group was detected, F (1, 24) = 1.344, p = .258, partial η2 = .053.

There was no statistically significant interaction between the intervention and time on responses to question 4 of the bespoke measure as assessed by Greenhouse-Geisser, F (2, 48) = 0.075, p = .890, partial η2 = .003. No main effect of time in responses to question 4 at the different time points, F (2, 48) = 2.527, p = .104, partial η2 = .095. No main effect of group was detected, F (1, 24) = 1.744, p = .199, partial η2 = .068.

There was no statistically significant interaction between the intervention and time on responses to question 5 of the bespoke measure, F (2, 48) = 1.823, p = .172, partial η2 = .071. No main effect of time in mean responses to question 5 at the different time points, F (2, 48) = 0.532,

p = .591, partial η2 = .022. No main effect of group was detected, F (1, 24) = 3.526, p = .073, partial η2 = .128.

2.3.8 Linear regression for baseline compassion and attitude scores

A scatterplot of baseline Compassionate Engagement and Action to Others scores against baseline Attitudes to Borderline Personality Disorder scores was plotted. Visual inspection of this scatterplot indicated a linear relationship between the variables. There was independence of residuals, as assessed by a Durbin-Watson statistic of 2.366. There was homoscedasticity, as assessed by visual inspection of a plot of standardized residuals versus standardized predicted values. Residuals were normally distributed as assessed by visual inspection of a normal probability plot. Baseline levels of Compassion accounted for 24% of the variation in Attitudes to Borderline Personality Disorder with adjusted R2 = 22.6%, a medium size effect according to Cohen (1988). Baseline levels of Compassion statistically significantly predicted Attitudes to Borderline Personality Disorder, F (1, 54) = 17.048, p < .001.

2.4 Discussion

This study aimed to explore the use of psychological formulation within forensic settings. To date, a limited body of research exists looking at the use of indirect psychological interventions within forensic settings. The Comprehend, Cope and Connect Model uses a collaborative formulation as a way of allowing service users and staffing teams to 'comprehend' the presenting problem in a validating and compassionate way (Clarke & Wilson, 2009). The formulation focuses on developing an understanding of the intolerable emotional state that is perpetuating behaviours that challenge. The formulation can be seen as a tool for capturing this information, developing rapport and sharing psychological information with staff teams.

A hypothesis of the current study was that baseline levels of compassion would predict attitudes towards a person presenting with personality disorder traits. The results of the linear regression provide support for this hypothesis, with baseline levels of compassion significantly predicting attitudes towards the individual depicted in the case summary. Baseline levels of compassion accounted for 24% of the variation in attitudes to borderline personality disorder, which is considered to be a medium effect size (Cohen, 1998). Barriers to the proportionate deployment of relational as opposed to more restrictive and oppressive forms of security and way of working with and relating to service users could include negative attitudes, competing organizational priorities, and organizational inertia

(Markham, 2021). Future research may benefit from further exploring this to better understand the relationship between attitudes and compassion. Previous research has suggested that to mitigate barriers to reducing restrictive practices posed by staff perceptions and attitudes, the introduction of staff training, which utilizes a co-creation approach has been shown to be beneficial (Markham, 2021). The use of indirect psychological interventions could be included with such approaches.

A second hypothesis was that levels of compassion and attitudes towards service users with a presentation consistent with personality disorder will increase in the formulation condition compared with a control. Previous research (Krawitz, 2004) demonstrated that attitudes towards individuals with BPD can be improved through staff training. Mckenzie et al., (2022) reported that negative attitudes among mental health workers seem particularly common in response to individuals with BPD. The results of this study suggested that there was no interaction effect between the intervention and time. Both the Attitudes to Borderline Personality Disorder scale and the Compassionate Engagement and Action to Others scores increased across both conditions, suggesting a common factor may have been responsible for these changes. One such factor may be the case details that all participants were exposed to regardless of condition. The format of the study meant that all participants read through the same case summary before being allocated into either the control or the experimental condition. Those in the control condition were then presented with the case summary once again, however, this was in a verbal format which was read aloud via accompanying audio. It may be that, due to this repeated exposure of the case summary, those in the control condition were able to develop a sense of compassion for the fictional individual. It may also have been that due to the dual formats in which the case summary was presented, those in the control group had time to process and make sense of the information that they were presented with, potentially improving their attitude towards the individual.

A third hypothesis of the study was that effects will be maintained at a week follow up. The results of this study suggested that effects were not maintained at follow up. It is of note that the follow up aspect of this study was considered to be under powered due to the small sample size, which may have impacted the results.

The bespoke scale used within the study was developed to examine the impact of case formulation sessions on staff ratings of understanding, compassion, options for and skills in working with service users discussed, and the perceived utility of the session on their practice. The results of this study suggested that across both conditions, staff members

understanding of the individuals presentations increased. However, this effect was not maintained at follow up. As the follow up aspect of this study is considered to be under powered due to the small sample size, further exploration of this would be suggested for future research. Those in the formulation condition reported that they anticipated the session as being useful to their practice. It is of note that this is a perceived benefit and further exploration of this with a larger sample size would be suggested to better understand these results. The results of the current study also suggested that across both conditions, participants felt that there were opportunities for change with the individual depicted in the study. However, this effect was also not maintained over time and should be interpreted with caution due to the underpowered aspect of the follow up.

2.4.1 Strengths and limitations

To our knowledge, this study represents the first attempt to describe and evaluate the implementation of the CCC model formulation (comprehend) in forensic services. It was ambitious in its scope, extending across two NHS trusts and the forensic services within them. However, given that the study sample included only staff from across two neighboring NHS Trusts in the United Kingdom, it has limited generalizability. The sample size and response rate for the study are relatively low, especially for the follow up aspect and future research should give consideration for other methods that could be utilized in an attempt to improve these.. It is also important to consider any potential impacts of gender differences on the study outcomes, as the majority of the recruited sample (75%) consisted of females. Representation within the sample was sought from varying professional backgrounds however future research with larger sample sizes could look to examine any potential differences in perceptions of team formulation within the varying professions, particularly in relation to psychological mindedness. Research suggests that higher levels of psychological mindedness are associated with greater case formulation skill (Hartley et al., 2016). It is also important to note that a high percentage of those who engaged with this study identified themselves as working in the profession of psychology, which may have unintentionally biased the sample.

This study did not gain feedback from service users' or experts by experience as part of the design or implementation. A key research priority is gaining a better understanding of the most suitable way to involve service users in team case formulation and to investigate their subjective experience of this approach (Johnstone, 2017). Future research may benefit from considering ways to include service users within the development of formulations.

The ABPDQ has been suggested as a useful tool for self-reflection and in supervision to facilitate discussion about attitudes, particularly if there are difficulties in therapeutic relationships. Although the ABPDQ has been demonstrated as suitable for use in research and clinical practice (Arora, 2016). It is suggested that further research is required particularly in relation to confirmation of the factor structure of the measure. The ABPDQ focuses specifically on staff attitudes to people with borderline personality disorder (BPD) and at present there remains a limited understanding of the theoretical constructs of attitudes to BPD.

Training received by staff in relation to formulation and/or working with personality disorder was not consistent across the sample. The impact of this on outcomes was beyond the scope of this research. However, future research may benefit from further exploring the impact of indirect training and teaching on staff members attitudes and levels of compassion towards service users.

The formulation used within this study was developed in collaboration with the authors, who all have experience of working with psychological models and perspectives. A traditional team formulation is developed collaboratively with staffing teams who come from a variety of backgrounds and levels of psychological understanding. Therefore, a limitation of this study is the lack of collaboration in the development of the formulation. This may have impacted on participants ability to feel a sense of compassion or understanding for the presentation that was depicted within the case summary and accompanying CCC formulation. The formulation was developed with consideration of the clinical experiences of the authors, and this may not have been reflective of the experiences of the recruited sample. The sample recruited participants from adolescent forensic services as well as adult services, therefore those who have only worked with adolescents may have found it difficult to consider the ability for change within the individual described in the case summary and accompanying formulation. As both conditions were exposed to a detailed case history, effects might have been as a result of this, as opposed to the formulation. Whilst designed to control for the effects of the diagrammatic formulation itself, may have represented a level of understanding of a person that is beyond what some staff are typically exposed to.

A final limitation to consider with the study is the online aspect of this. Participants may have been less willing to participate in this due to this aspect. It may have been difficult for participants to fully engage in the formulation, due to this not being the traditional way that participants may have experienced formulation sessions. The high levels of clinical activity within forensic units may also have made it difficult for participants to dedicate the time to the study.

2.4.2 Conclusions

In conclusion, the use of the CCC formulation in forensic services would benefit from further exploration to better understand any perceived and potential benefits that this approach may offer both staff and service users. As both conditions yielded effect, interventions in which reality of service users' life experiences is shared with staff may in and of itself serve to improve attitudes and compassion.

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Appendix A Mixed Methods Appraisal Tool (MMAT) Version 2018

What is the MMAT?
The MMAT is a critical appraisal tool that is designed for the appraisal stage of systematic mixed studies reviews, i.e., reviews that include qualitative, quantitative and mixed methods studies. It permits to appraise the methodological quality of five categories to studies: qualitative research, randomized controlled trials, non-randomized studies, quantitative descriptive studies, and mixed methods studies.

How was the MMAT developed?
The MMAT was developed in 2006 (Pluye et al., 2009a) and was revised in 2011 (Pace et al., 2012). The present version 2018 was developed on the basis of findings from a literature review of critical appraisal tools, interviews with MMAT users, and an e-Delphi study with international experts (Hong, 2018). The MMAT developers are continuously seeking for improvement and testing of this tool. Users' feedback is always appreciated.

What the MMAT can be used for?
The MMAT can be used to appraise the quality of empirical studies, i.e., primary research based on experiment, observation or simulation (Abbott, 1998; Porta et al., 2014). It cannot be used for non-empirical papers such as review and theoretical papers. Also, the MMAT allows the appraisal of most common types of study methodologies and designs. However, some specific designs such as economic and diagnostic accuracy studies cannot be assessed with the MMAT. Other critical appraisal tools might be relevant for these designs.

What are the requirements?
Because critical appraisal is about judgment making, it is advised to have at least two reviewers independently involved in the appraisal process. Also, using the MMAT requires experience or training in these domains. For instance, MMAT users may be helped by a colleague with specific expertise when needed.

How to use the MMAT?
This document comprises two parts: checklist (Part I) and explanation of the criteria (Part II).

1. Respond to the two screening questions. Responding 'No' or 'Can't tell' to one or both questions might indicate that the paper is not an empirical study, and thus cannot be appraised using the MMAT. MMAT users might decide not to use these questions, especially if the selection criteria of their review are limited to empirical studies.
2. For each included study, choose the appropriate category of studies to appraise. Look at the description of the methods used in the included studies. If needed, use the algorithm at the end of this document.
3. Rate the criteria of the chosen category. For example, if the paper is a qualitative study, only rate the five criteria in the qualitative category. The 'Can't tell' response category means that the paper do not report appropriate information to answer 'Yes' or 'No', or that report unclear information related to the criterion. Rating 'Can't tell' could lead to look for companion papers, or contact authors to ask more information or clarification when needed. In Part II of this document, indicators are added for some criteria. The list is not exhaustive and not all indicators are necessary. You should agree among your team which ones are important to consider for your field and apply them uniformly across all included studies from the same category.

How to score?
It is discouraged to calculate an overall score from the ratings of each criterion. Instead, it is advised to provide a more detailed presentation of the ratings of each criterion to better inform the quality of the included studies. This may lead to perform a sensitivity analysis (i.e., to consider the quality of studies by contrasting their results). Excluding studies with low methodological quality is usually discouraged.

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For dissemination, application, and feedback: Please contact mixed.methods.appraisal.tool@gmail.com
For more information: http://mixedmethodsappraisaltoolpublic.pbworks.com/

Table A. 1

Mixed Methods Appraisal Tool (MMAT, version 2018) adapted from Evlat, Wood and Glover (2021).

	Screening questions (for all types)		**Qualitative**					**Quantitative Randomised Controlled Trial**					**Quantitative Non-Randomised**					**Quantitative Descriptive**					**Mixed Methods**				
Studies	**S. 1**	**S. 2**	**1. 1**	**1. 2**	**1. 3**	**1. 4**	**1. 5**	**2. 1**	**2. 2**	**2. 3**	**2. 4**	**2. 5**	**3. 1**	**3. 2**	**3. 3**	**3. 4**	**3. 5**	**4. 1**	**4. 2**	**4. 3**	**4. 4**	**4. 5**	**5. 1**	**5. 2**	**5. 3**	**5. 4**	**5. 5**
Aurora et al. (2023)	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	Y	Y	Y	Y
Berry & Robertson (2019)	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	C	C	Y	Y	Y	-	-	-	-	-
Cooper & Inett (2017)	Y	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dale & Storey (2004)	C	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N	Y	N	N	N
Feerick *et al.* (2021)	Y	Y	Y	Y	Y	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long et al. (2013)	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	Y	Y	Y	Y	-	-	-	-	-
McCarron *et al.* (2017)	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	Y	Y	Y	Y
Polnay *et al.* (2022)	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N	N	Y	N	Y	-	-	-	-	-
Rask & Levander (2009)	Y	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	N	Y	Y	Y	-	-	-	-	-

Note. Y = Yes. N = No. C = Can't Tell.

Note. MMAT = Mixed Methods Appraisal Tool. Y = Yes. N = No. C = Can't Tell. S.1 = Are there clear research questions? S.2 = Do the collected data allow to address the research questions? 1.1 = Is the qualitative approach appropriate to answer the research question? 1.2 = Are the

Appendix B ERGO Ethics Approval

UNIVERSITY OF Southampton

11 August 2022

Project title: The Use of Psychological Formulation in Forensic Settings

ERGO submission number: 72102

This letter is to confirm that the University of Southampton has agreed to act as Sponsor for the above research study under the terms of the UK Policy Framework for Health and Social Care Research (2017). We encourage you to become fully conversant with the terms of this Policy Framework (UKPF):

https://www.hra.nhs.uk/planning-and-improving-research/policies-standards-legislation/uk-policy-framework-health-social-care-research/

Sponsorship will remain in effect until the completion of the study and the ongoing responsibilities of the Chief Investigator have been met. Should the Chief Investigator fail to notify the Research Integrity and Governance Team of an amendment to the study, this may result in incorrect indemnity or sponsorship cover and may invalidate our agreement to sponsor.

If your study has been designated a Clinical Trial of an Investigational Medicinal Product, I would like to remind you of your responsibilities under the Medicines for Human Use Act regulations (2004/2006), The Human Medicines Regulations (2012) and EU Directive 2010/84/EU regarding pharmacovigilance. If your study has been designated a 'Clinical Investigation of a Medical Device' you also need to be aware of the regulations regarding conduct of this work.

Further guidance can be found:

http://www.mhra.gov.uk/

The University of Southampton fulfils the role of Sponsor in ensuring management, monitoring and reporting arrangements for research. As the Chief Investigator you are responsible for the daily management for this study, and you are required to provide regular reports on the progress of the study to the Research Integrity and Governance Team on this basis.

Please also familiarise yourself with the Terms and Conditions of Sponsorship attached, including reporting requirements of any Adverse Events to the Research Integrity and Governance Team and the hosting organisation.

If your project involves NHS patients or resources please send us a copy of your NHS REC and Trust approval letters when available. Please also be reminded that you may need a Research Passport to apply for an honorary research contract of employment from the hosting NHS Trust: https://intranet.soton.ac.uk/sites/researcherportal/Lists/Services1/testing.aspx?ID=607&RootFolder=%2A

Research & Innovation Services, University of Southampton, Highfield Campus, Southampton SO17 1BJ United Kingdom Tel: +44 (0)23 8059 5058 www.southampton.ac.uk
Version 2. May 2019

Appendix C HRA Approval

Ymchwil Iechyd a Gofal Cymru
Health and Care Research Wales

NHS
Health Research Authority

Dr Alison Bennetts
University of Southampton
University Road
Southampton
SO17 1BJN/A

Email: approvals@hra.nhs.uk
HCRW.approvals@wales.nhs.uk

14 October 2022

Dear Dr Bennetts

HRA and Health and Care Research Wales (HCRW) Approval Letter

Study title:	**The use of Psychological Formulation in Forensic Settings.**
IRAS project ID:	**317176**
Protocol number:	**72102**
REC reference:	**22/HRA/3748**
Sponsor	**University of Southampton**

I am pleased to confirm that **HRA and Health and Care Research Wales (HCRW) Approval** has been given for the above referenced study, on the basis described in the application form, protocol, supporting documentation and any clarifications received. You should not expect to receive anything further relating to this application.

Please now work with participating NHS organisations to confirm capacity and capability, in line with the instructions provided in the "Information to support study set up" section towards the end of this letter.

How should I work with participating NHS/HSC organisations in Northern Ireland and Scotland?
HRA and HCRW Approval does not apply to NHS/HSC organisations within Northern Ireland and Scotland.

If you indicated in your IRAS form that you do have participating organisations in either of these devolved administrations, the final document set and the study wide governance report (including this letter) have been sent to the coordinating centre of each participating nation. The relevant national coordinating function/s will contact you as appropriate.

Appendix D Consent Form

UNIVERSITY OF Southampton

CONSENT FORM

Study title: **The use of Psychological Formulation in Forensic Settings**

Researcher name: Kayleigh McMillan
ERGO number: 72102
IRAS ID: 317176
Participant Identification Number (if applicable):

Please read the following statements and proceed to the next page if you are consenting to participate in this study.

I have read and understood the information sheet (*insert date /version no. of participant information sheet*) and have had the opportunity to ask questions about the study.
I agree to take part in this research project and I understand that my data to be used for the purpose of this study.
I understand that if I withdraw from the study that it may not be possible to remove the data once my personal information is no longer linked to the data.

[20th June 2022] [Version Number 1] [Ethics: 72102]

Appendix E Recruitment Poster

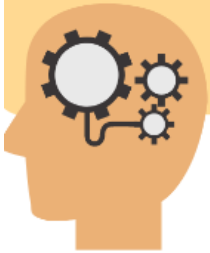
DO YOU WORK IN FORENSIC MENTAL HEALTH?

Online Research Study

20 – 30 minutes of your time

The Chance to Win One of 10 £25 Amazon Vouchers

Looking at the Impact of Psychological Formulation



The University of Southampton Research Ethics Committee has granted ethical approval for this study
ERGO number: 72102
IRAS number: 317176
Online Advert Version 1
20.06.22

UNIVERSITY OF Southampton

Scan QR code or Contact km2n20@soton.ac.uk

Appendix F Demographic Questionnaire

Version 1, 22nd July 2022, IRAS ID - 317176

Demographic Questionnaire

Please tick the box which is most relevant to you for each question.

1) What is your gender? Male ☐ Female ☐ Other ☐

2) What is your age? 18-24 ☐ 25-34 ☐ 35-44 ☐ 45-54 ☐ 55-64 ☐ 65+ ☐

3) Which of the following best describes your profession?
Health care assistant ☐ Occupational therapist ☐ Psychiatric nurse ☐
Psychiatrist ☐ Psychologist ☐ Social worker ☐
Support worker ☐ Other _____

4) Are you still in training in this profession? Yes ☐ No ☐

5) What setting do you work in?
Low Secure ☐
Medium Secure ☐
Community Team ☐ Other_____

6) How much experience do you have in working in forensic settings?
Less than 1 year ☐ 1-5 years ☐ 6-10 years ☐ 11-15 years ☐ 16+ years ☐

7) Who is your employing trust?
Dorset Healthcare ☐ Southernhealth NHS Foundation Trust ☐

8) Have you ever had any specific training in formulation and / or working working with people with Personality Disorder?
Yes ☐ No ☐

9) If yes what was this training?_____

10) Have you had any specific training on working with people with PD in the last year?
Yes ☐ No ☐

11) If yes what was this training?_____

Appendix G Compassionate Engagement Measure

THE Compassionate Mind FOUNDATION

Compassion to others

When things go wrong for other people and they become distressed by setbacks, failures, disappointments or losses, we may cope with their distress in different ways. We are interested in the degree to which people can be **compassionate to others**. We define compassion as "a sensitivity to suffering in self and others with a commitment to try to alleviate and prevent it." This means there are two aspects to compassion. The *first* is the ability to be motivated to engage with things/feelings that are difficult as opposed to trying to avoid or supress them. The *second* aspect of compassion is the ability to focus on what is helpful. Just like a doctor with his/her patient. The first is to be motivated and able to pay attention to the pain and (learn how to) make sense of it. The second is to be able to take the action that will be helpful. Below is a series of questions that ask you about these two aspects of compassion. Therefore read each statement carefully and think about how it applies to you when **people in your life** become distressed. Please rate the items using the following rating scale:

Never **Always**
1 2 3 4 5 6 7 8 9 10

Section 1 – These are questions that ask you about how motivated you are, and able to engage with other people's distress when they are experiencing it. So:

When others are distressed or upset by things…

1. I am *motivated* to engage and work with other peoples' distress when it arises.
Never **Always**
1 2 3 4 5 6 7 8 9 10

2. I *notice* and *am sensitive* to distress in others when it arises.
Never **Always**
1 2 3 4 5 6 7 8 9 10

(r)3. I avoid thinking about other peoples' distress, try to distract myself and put it out of my mind.
Never **Always**
1 2 3 4 5 6 7 8 9 10

4. I am *emotionally moved* by expressions of distress in others.
Never **Always**
1 2 3 4 5 6 7 8 9 10

5. I *tolerate* the various feelings that are part of other people's distress.
Never **Always**
1 2 3 4 5 6 7 8 9 10

THE Compassionate Mind FOUNDATION

6. I *reflect on* and *make sense* of other people's distress.

Never **Always**

1 2 3 4 5 6 7 8 9 10

(r)7 I do not tolerate other peoples' distress.

Never **Always**

1 2 3 4 5 6 7 8 9 10

8. I am *accepting, non-critical and non-judgemental* of others people's distress.

Never **Always**

1 2 3 4 5 6 7 8 9 10

Section 2 – These questions relate to how you actively respond in compassionate ways when other people are distressed. So:

When others are distressed or upset by things…

1. I direct *attention* to what is likely to be helpful to others.

Never **Always**

1 2 3 4 5 6 7 8 9 10

2. I *think about and come up* with helpful ways for them to cope with their distress.

Never **Always**

1 2 3 4 5 6 7 8 9 10

(r)3. I don't know how to help other people when they are distressed.

Never **Always**

1 2 3 4 5 6 7 8 9 10

4. I take the *actions* and *do the things* that will be helpful to others.

Never **Always**

1 2 3 4 5 6 7 8 9 10

5. I express feelings of *support, helpfulness and encouragement* to others.

Never **Always**

1 2 3 4 5 6 7 8 9 10

NOTE FOR USERS: REVERSE ITEMS (r) ARE NOT INCLUDED IN THE SCORING

Appendix H Attitudes to Personality Disorder Measure

Version 1, 20th June 2022, IRAS ID - 317176

Appendix V Final measure
Attitudes to borderline personality disorder questionnaire (preliminary)

This questionnaire consists of a number of statements about your thoughts, feelings and actions towards people with borderline personality disorder (BPD). People with borderline personality disorder might experience intense but fluctuating emotions such as anger, difficulties maintaining relationships, an unstable sense of identity, impulsivity, fear of abandonment and self-harmful and risk taking behaviours. While each person with borderline personality disorder has their own unique difficulties please try to respond to these questions *generally*, rather than thinking about a particular individual you have worked with.

Please try to answer these questions as honestly as you can. There are no right or wrong answers. Please read the following statements carefully and indicate how strongly you agree or disagree with each statement (by ticking the relevant box). Your responses to this questionnaire are anonymous. We do not ask for any identifying details. Try not to spend too long thinking about each question, your initial reactions about your experiences in general are important.

		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1	People with BPD rarely respond to psychological therapies					
2	I avoid thinking about clients with BPD on my caseload					
3	People with BPD are more manipulative than other client groups					
4	People with BPD are difficult to work with					
5	I feel drained by people with BPD					
6	I believe people with BPD can change					
7	People with BPD waste resources needed by other client groups					
8	In comparison with other client groups people with borderline personality disorder (BPD) are demanding					
9	People with BPD make me feel hopeless					
10	People with BPD are interesting to work with					
11	If I had the choice I would accept the referral of a client with depression over a client with BPD					
12	People with BPD make me feel angry					
13	I easily lose my temper with people with BPD					
14	In comparison with other client groups people with BPD are attention seekers					

Appendix I Bespoke Measure

Complex case formulation Version 1, 20th June 2022, IRAS ID - 317176

PRE

I understand this person's presentation (please circle)

1	2	3	4	5	6	7	8	9	10
Not at all									Completely

I feel compassionate towards this person (please circle)

1	2	3	4	5	6	7	8	9	10
Not at all									Completely

I think there are opportunities for change with this person (please circle)

1	2	3	4	5	6	7	8	9	10
Not at all									Completely

I have the skills to manage this situation more effectively (please circle)

1	2	3	4	5	6	7	8	9	10
Not at all									Completely

How useful do you anticipate this session being to your practice? (please circle)

1	2	3	4	5	6	7	8	9	10
Not helpful at all									Very helpful

Appendix J Case Summary

Version 1, 20th June 2022, IRAS ID - 317176

Ben is a 32 year old male who has recently been transferred from prison to hospital on a section 48/49 pending further psychiatric assessment. Whilst in prison Ben has made several threats of harm towards himself and others, including threats to end his life. Most recently Ben had harmed himself by pouring scolding hot water onto his legs. He reports difficulty sleeping and has been observed to be responding to unseen stimuli on several occasions.

Ben is currently being held on remand whilst he await sentencing for aggravated burglary and domestic violence. Ben has pleaded not guilty to both of these offences. Ben has been described by the officers as a quiet man who keeps his head down and does what he is told.

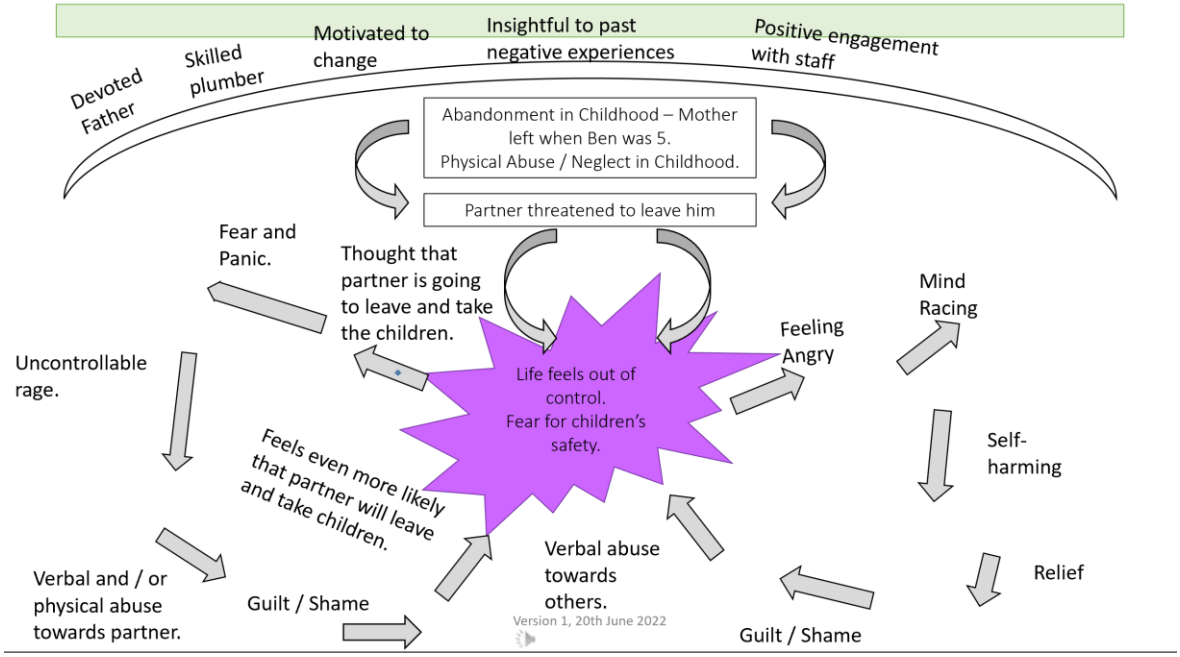
Prior to his arrest Ben was living with his partner Sarah who is also the Mother to his twin daughters. Lucy and Lilly are 3 years old and Ben has consistently reported that he is concerned about their welfare and has requested that social services go and check on them. Social services have made checks on the family with no concerns raised.

Ben has described a break down in his relationship about 6 months prior to his arrest with suspicion that Sarah was having an affair. Ben also described a history of poor relationships with women and wanting more than anything to work things out with Sarah for the benefit of his daughters. Ben described his relationship with Sarah as difficult at times, reporting that they have both struggled to trust each other and have acted violently towards each other in the early stages. Ben insists that this all stopped when daughters were born.

When talking about his own childhood Ben reports that when he was 5 years old he and his younger brother, Ash, were taken into care due to physical abuse and neglect within the home. Ash was placed with a foster family shortly after being taken into care and Ben reports that he never felt able to look after his brother.

Ben remained in care until the age of 16, moving between foster homes with a reported 9 placements over 11 years. At the age of 16 Ben was provided with his own supported accommodation and worked as a plumbers apprentice. Ben reports that he enjoys being a plumber and described this as his one consistent thing in life, until he met Sarah and had his daughters.

Appendix K Formulation Condition



This image shows an Emotion Focused Formulation for Ben, which is part of the Comprehend, Copeand Connect (CCC) approach by Isabel Clarke. An emotion focused formulation places the individuals felt sense at the centre with maintenance cycles demonstrating how and why patterns of behavoiur continue and ultimately maintain the individual's distress.

The purple shape in the centre is referred to as the 'intollerable internal state'. This state is triggered when a recent event activates the threat from a person's significant early experiences. This state is what Ben is primarily trying to cope with.

Ben's formulation shows that his current intolerable internal state is that he feels that life is out of his control and he is also feeling fearful for the safety of his children. This is intolerable for Ben because (as shown in the top box) when Ben was younger he experienced abandonment, with his Mother leaving the family home when Ben was 5 years old. This may have caused Ben to become sensitive to signs of potential abandonment as an adult. Ben is also reported to have experienced physical abuse and neglect in his childhood, threat experiences perhaps retriggered now, and which may have shaped views that violence is an acceptable means of coping.

Understandably, Ben attempts to try and escape this intolerable state, by using strategies that temporarily provide short term relief. However, these strategies often fail to address the underpinning problem. When experiencing an intense emotion, often accompanied by a state of high or low arousal, it can be difficult for an individal to distinguish between a current threat as opposed to a threat of the past.

Ben's recent trigger (which is shown in the smaller box) is that his partner and the mother of his children threatened to leave him following an argument they had. This current distress can be linked back to Ben's past experiences.

The strengths bow (arch across the top of the image) reflects that there is more to Ben than just the presenting problems that have brought him into forensic services. Including strengths within the formulation encouraged us to consider Ben as a whole, as opposed to just a presenting problem. These include his relationship with his children and being a devoted father to them. Ben

is also a skilled plumber and he is motivated to make positive changes in his life. He appears to be insightful into his past experiences and he has formed some positive relationships with the staff.

Ben's current maintenance cycles (which are illustarted by the grey arrows) show that when feeling stress or fear, his earlier experiences of abandonment intrude into the present and he experiences fear that his partner will leave him. In an attempt to escape this uncomfortable experience, Ben may then engage in self-harming behaviours which temporarily relieve the distress. However, he then experiences feelings of guilt and shame which can themselves be difficult emotions to manage. As a result of these uncomfortable emotions, Ben can switch from 'flight' mode to 'fight' mode and become verbally abusive towards others which can feel more bearable in the short term however, perpetuates his feeling of being out of control.Another maintenance cycle for Ben is that he has been experiencing thoughts that his partner is going to leave him and that she will also take his children away from him. When Ben notices these thoughts, he feels fearful and panics . As he does not have the skills to manage these feelings, they manifest as uncontrollable rage, verbal and physical abuse. Again, he will then experience feelings of guilt and shame and thoughts that his partner is going to leave him intensify. These cycles demonstrate how Ben's attempts to manage his difficult experiences with strategies that offer short term relief, but do not ultimately address the source of his distress, serve to continue the pattern of violence to self and others and Ben's intolerable internal experiences. Once Ben is able to develop an awareness of these cycles, it should be clearer what he needs to work on to allow himself to cope different, breaking the cycles and starting to escape the trap that he is in.

Appendix L Authors Guidelines

3. MANUSCRIPT CATEGORIES AND REQUIREMENTS

i. Original Research
Word limit: 5,000 words maximum, excluding abstract and references.
Abstract: 200 words maximum; must be structured under the sub-headings: Introduction; Aim/Question; Method; Results; Discussion; Implications for Practice.

Accessible Summary: 250 words maximum; the purpose is to make research findings more accessible to non-academics, including users of mental health services, carers and voluntary organisations. The Accessible Summary should be written in straightforward language, structured under the following sub-headings, with 1-2 bullet points under each: What is known on the subject; What the paper adds to existing knowledge and What are the implications for practice.

Description: The journal welcomes methodologically, ethically and theoretically rigorous original research (primary or secondary) which adds new knowledge to the field and advances the development of policy and practice in psychiatric and mental health nursing.

Relevance Statement: Only papers relevant to mental health nursing practice will be considered for publication in the Journal of Psychiatric and Mental Health Nursing. We require that corresponding authors submit a statement that-in 100 maximum, sets out the relevance of the work to mental health nursing practice. If authors do not convince the Editor in Chief of this, the work will not be considered for publication.
Reporting Checklist: Required - see Section 5.

ii. Review Articles
Word limit: 7,000 words maximum, excluding abstract and references.
Abstract 200 words maximum; must be structured under the sub-headings: Introduction; Aim/Question; Method; Results; Discussion; Implications for Practice.
Accessible Summary: 250 words maximum; the purpose is to make research findings more accessible to non-academics, including users of mental health services, carers and voluntary organisations. The Accessible Summary should be written in straightforward language, structured under the following sub-headings, with 1-2 bullet points under each: What is known on the subject; What the paper adds to existing knowledge; What are the implications for practice.
Structure: See below specific details for the type of review article. *Research Reporting Checklist:* Required - see Section 5.

The Journal accepts four types of scholarly reviews:

- Meta-analyses
- Systematic review
- Qualitative evidence syntheses
- Integrative reviews

The Journal would consider accepting other reviews such as rapid reviews, realist reviews and scoping reviews if they are accompanied by a strong scholarly rationale e.g., a rapid review might be conducted to up-date the literature from a previous systematic review. A realist review that focuses on what works for whom and in what circumstances would be considered if it is clearly related to the application of the intervention in mental health nursing practice.

Critical, narrative and rapid reviews are not usually considered sufficiently comprehensive for publication in this Journal unless there is a very good scientific rationale as to why a more systematic or comprehensive review was not undertaken. These could be restructured into a scholarly argument and submitted as an essay and debate paper.