A systematic review and narrative synthesis of indirect psychological intervention in acute mental health inpatient settings

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Abstract

Objectives: Psychologists frequently deliver indirect psychological interventions in mental health inpatient settings to support staff to reflect upon and improve their clinical practice. However, research into these interventions is sparse. Therefore, this study aimed to undertake a systematic review and narrative synthesis of the indirect psychological interventions used in mental health inpatient settings.

Methods: MEDLINE, PsycINFO and Embase were searched for eligible studies and forward-citation searching was undertaken. A narrative synthesis was undertaken to synthesize results. The quality of studies was assessed using the Mixed Methods Appraisal Tool.

Results: Ten studies were included in the review, and all utilized a small to moderate sample size. We identified five categories of interventions involving a range of methodologies and the studies were assessed to be of good to adequate quality. The most common type of indirect intervention employed was case formulation sessions. Other types of indirect interventions included formal clinical supervision, reflective practice and staff practice-based education sessions. Overall, the utilization of indirect psychological interventions shows promise, particularly case formulation sessions.

Conclusions: The use of indirect psychological interventions within mental health inpatient settings may have benefits for patient care. However, additional larger scale research is required to further develop the evidence base of indirect interventions for this setting.

KEYWORDS

case formulation, indirect psychological interventions, psychiatric inpatient hospital, reflective practice, systematic review
1 INTRODUCTION

Across the last three decades, there has been a shift towards community care and deinstitutionalization internationally meaning that acute mental health inpatient settings only provide care for patients who are experiencing acute mental health difficulties and at the highest risk of harm to themselves or others (Bowers et al., 2005; Sealy, 2012). Experts have identified four key outcomes that are essential to achieve at discharge from inpatient care including reducing suicidality, reducing psychological distress, reducing readmission rates and improving patients’ quality of life (Tyler et al., 2020). Current research demonstrates that there is limited treatment choice, an over-reliance on medication and inadequate access to psychological therapies in inpatient settings, which is the case internationally (Care Quality Commission, 2017; Johnson et al., 2022; Royal College of Psychiatry, 2016). This has arguably resulted in inpatient services receiving criticism for delivering non-therapeutic care and causing feelings of dissatisfaction in patients, families and carers (Berry, 2021; Wood et al., 2021). Due to bed reductions, the thresholds for admission has also increased leading to higher levels of risk and comorbid mental health difficulties in inpatients (McCrone et al., 2008; Royal College of Psychiatry, 2016). A recent study across 22 countries in Europe, North America and Australasia found that bed reductions and consequent increased acuity was a trend across all countries (Sheridan Rains et al., 2020). As a result of increased acuity, there are requirements for strong leadership, interdisciplinary teamwork and psychosocially informed ways of working to ensure effective care delivery in this setting (Ofilaz et al., 2019).

The presence of practitioner psychologists in acute mental health inpatient care is recognized as an integral component of multidisciplinary inpatient care provision (Royal College of Psychiatrists, 2019). Practitioner psychologists can impact the therapeutic culture on acute mental health units which can positively influence clinical outcomes, reduce adverse events and increase staff and patient satisfaction (Berry, 2021; Holmes, 2002). Practitioner psychologists offer an important and valuable skillset that can improve the quality of acute mental health inpatient care. They are trained to offer both direct psychological interventions (including assessment, formulation and therapeutic interventions with patients) and indirect interventions (including training, supervision, consultancy, case formulation and reflective practice with staff) (Ebrahim & Wilkinson, 2021). Ward-based indirect psychological interventions ensure the provision of psychologically informed care to help professionals care for patients, build therapeutic staff–patient relationships and manage risk (Wood et al., 2021). Specifically, indirect psychological interventions are valuable for promoting person-centred care, which is associated with shared decision-making, patient empowerment and improving clinical outcomes (Gask & Coventry, 2012; World Health Organization, 2010).

Research examining the usefulness and acceptability of indirect psychological interventions has been scarce and the focus has mainly been on direct psychological therapies (Evlat et al., 2021; Raphael et al., 2021). However, there are some growing developments examining the usefulness of indirect psychological intervention within the acute mental health inpatient setting (Kerfoot et al., 2012). The majority of the research in the field has come from the United Kingdom, but the evidence base for indirect interventions is emerging across Europe (Allerby et al., 2020; Buus et al., 2013). Some initial findings have demonstrated that indirect interventions can increase staff compassion and understanding, improve team working and patient care (Berry et al., 2009; Taylor & Sambrook, 2012).

Two recent comprehensive systematic reviews (Evlat et al., 2021; Raphael et al., 2021) examined and identified the barriers and facilitators to implementing psychological interventions in inpatient settings. It was outlined that further research is required to develop the evidence base of indirect psychological interventions for inpatient settings. There is a need to understand the impact of indirect psychological interventions on enhancing patient and staff outcomes, such improving the quality of care received and staff–patient relationships (Berry et al., 2016; Summers, 2006). Frequently, for example, difficulties in staff–patient relationships are less likely to be the result of a direct consequence of the patient’s behaviour, but instead the repercussion of a staff member’s appraisal, conceptualization and response to that behaviour (Berry et al., 2016). Therefore, it is important to consider if indirect interventions can help with this. Staff also report positive outcomes as a result of indirect psychological interventions. A recent study interviewed n = 18 multidisciplinary inpatient staff and about their experiences of case formulation sessions (Kramarz et al., 2022) and found positive reported impacts, including improved team working and communication. It would be important to synthesize such subjective outcomes across the qualitative literature in the area to understand impacts further.

Moreover, there is no consensus on which outcome measures should be used to evaluate the impact of indirect psychological interventions. Core outcome sets are recommended when developing the evidence base of a specific field (Kirkham et al., 2017). Therefore, having consensus on how to measure the impact of indirect psychological interventions in inpatient settings is important to strengthen the evidence base. Also, without systematic methods for measuring quality, there is no opportunity to generate improvements.

Key Practitioner Message

- Indirect psychological interventions were generally well received by ward staff. They showed some promise in improving staff perceptions of patients, reducing patient incidents, and improving staff–patient relationships. There was also some indication that it may help improve staff burnout.
- The most commonly delivered indirect interventions are case formulation sessions, reflective practice, clinical supervision and practice-based education sessions.
- Indirect interventions should be considered when delivering mental health inpatient care.
and make recommendations for future studies in the field (Kilbourne et al., 2018).

As a result of these outlined outstanding issues, this study aimed to conduct a systematic review of indirect psychological interventions delivered in mental health inpatient care settings. Specifically, 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 patients. This included group indirect interventions, such as reflective practice, group supervision and case formulations, which have been categorized as specific indirect interventions that should be provided in inpatient settings (Wood et al., 2022). A systematic review of a novel area will have a number of benefits including being able to draw some tentative conclusions about their usefulness and acceptability, identifying research gaps in the field, highlighting methodological concerns and making recommendations for future practice and research (Pericic & Tanveer, 2019). Moreover, it will allow us to specifically scrutinize the helpful components of such interventions and make specific recommendations about their future delivery. Therefore, we conducted a systematic review that aimed to answer the following questions:

- What indirect psychological interventions are offered in acute mental health inpatient settings?
- What is the quality of evidence?
- What outcome measures are used to examine the efficacy of the interventions?
- What is the efficacy, usefulness and acceptability of these interventions on outcomes?

2 | METHODS

2.1 | Study protocol and design

A systematic review and narrative synthesis were undertaken to meet the aims of the study. This study followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines for best-practice standards (Page et al., 2021). A review protocol was pre-registered with PROSPERO (CRD42021258539).

2.2 | Eligibility criteria

Studies were eligible for inclusion if they (a) were of any methodological design, (b) included a sample of mental healthcare staff and/or patients in adult in-patient mental health settings and (c) described an indirect psychological intervention, defined as interventions that offer a psychological perspective to support staff to collectively reflect on clinical practice or clinical understanding of patients. This includes interventions such as consultation, case formulation, group supervision and reflective practice. This definition excluded didactic training sessions that were not psychologically informed and/or did not include reflective component and individual model-specific supervision. Studies were excluded if they (a) were conducted in specialist inpatient settings (including forensic, learning disabilities and later life services), (b) involved statutory and mandatory training or Schwartz rounds and (c) involved interventions to physically improve the ward atmosphere or culture, such as providing a therapeutic environmental space (Barton & Rogerson, 2017).

2.3 | Search strategy

Three electronic databases (MEDLINE, PsycINFO and Embase) were searched in January 2022 (see the Supporting Information for full search strategy). Additional studies were identified by screening the references list of full-text articles and forward-citation searching. The search was restricted to those published between 2000 to date of search to ensure relevancy to current acute mental health inpatient settings. Searches were limited to English-language publications and use the following search terms ‘acute mental health’ OR ‘mental illness’ OR ‘mental disorder’ OR ‘mentally ill’ OR ‘mental difficult’ OR ‘psychiatric’ OR ‘mental health problem’ AND ‘psychiatric hospital’ OR ‘service user’ OR ‘inpatient’ OR ‘psychiatric intensive care’ OR ‘PICU’ OR ‘ward’ AND ‘reflecti’ OR ‘formulation’ OR ‘supervision’ OR ‘consultat’ OR ‘indirect work’ OR ‘collaborat’ OR ‘psychological mind’ OR ‘relationship’ AND ‘psychiatric staff’ OR ‘staff-patient’ OR ‘staff-service user’ OR ‘nurs’ OR ‘professional’ OR ‘multidisciplinary’ OR ‘interdisciplinary’ OR ‘team’.

2.4 | Study selection

The first author independently screened title and abstracts against the study selection criteria. Another independent reviewer screened 20% of randomly selected articles to determine inter-rater reliability. The inter-rater reliability between the reviewers was high (Cohen’s kappa = 0.86). Where both reviewers agreed on exclusion, the study was removed. Disagreements were resolved through arbitration by a third reviewer. The first author independently assessed the full texts against the eligibility criteria. Any uncertainty or conflicts were resolved through discussions with the wider team. The lead author would bring any studies to supervision for further discussion and consideration. Two studies were arbitrated and discussed with the wider team against the eligibility criteria relating to the indirect psychological intervention criteria. Both studies were deemed ineligible for inclusion (Dobie et al., 2016; Hartley et al., 2016). In the case where full-text eligibility could not be determined due to lack of information, the corresponding author was contacted. A total of 10 authors were contacted and only one responded, which led to no further papers being included.

2.5 | Data extraction

Data extraction was guided by two pre-determined tables. The first detailed key study characteristics including the study aim, method,
setting, sample size, response rate, sample demographics (age, gender), staff member profession, patient diagnosis, intervention type and control condition. The second table was used to extract further detailed data on intervention characteristics and study quality. Data were extracted specifically to answer the research questions of interest.

2.6 | Quality assessment

Evidence was assessed using a checklist approach by the Mixed Methods Appraisal Tool (MMAT; Hong et al., 2018). The MMAT is a critical appraisal tool designed for mixed methodologies. The tool comprises two parts: the first part required the first author to decide whether there were clear research questions and if the research questions could be answered by the data collected; then, the first author had to rate the study depending on the study design. Several checklists were utilized dependent on the type of methodology described in the primary papers (qualitative research, randomized controlled trials (RCTs), non-randomized studies, quantitative studies and mixed-method studies). Each checklist comprised a series of questions that were used to appraise the appropriate study. The first author independently rated the quality of the primary papers and consulted the second author when there was any uncertainty. Twenty-five per cent of the quality assessments were also undertaken by a second independent reviewer to ensure inter-rater reliability.

2.7 | Data analysis

Analysis was undertaken by the first author using Popay et al.’s (2006) guidance on the conduct of narrative synthesis. Study characteristics were reported as tabulated data and narratively described. In addition, the intervention characteristics were clustered and narratively explained using interpretive synthesis (Evans, 2002). The outcome measures utilized within the studies were tabulated, and then narratively described. A meta-analysis was not possible due to the diversity in outcome measures used across studies to measure efficacy. Therefore, the findings of individual papers were also narratively described.

An inductive thematic analysis, using Braun and Clarke’s (2008) approach, was undertaken to systematically summarize the themes and concepts of the qualitative data to explore the impacts of the indirect interventions. The results section for each of the qualitative papers was used as data including author text and participant quotes. The data were exported into NVivo12 and used to conduct the analysis. A critical realist approach was taken, and all analysis was conducted from an inductive data driven position. Data were read and re-read by the lead author to achieve familiarity and immersion. Free line-by-line coding was undertaken for individual studies, then collapsed and grouped together across studies. Analytical themes were developed comprising overarching themes and sub-themes, which were discussed with the research team and finalized.

3 | RESULTS

3.1 | Study selection

The study selection process is outlined in Figure 1. There were 6388 records identified from the search strategy. After removing duplicates then screening titles and abstracts, 6342 records were excluded. Further screening of the remaining 46 full texts led to six studies being eligible for inclusion. A further 12 records were identified from forward-citation searching, as a result four studies were eligible for inclusion (see the Supporting Information). In total, a final 10 studies met the eligibility criteria and included in the synthesis.

3.2 | Study characteristics

The 10 eligible studies included five qualitative articles (Berg & Hallberg, 2000; Berry et al., 2017; Buus et al., 2011; Moreno-Poyato et al., 2019; Summers, 2006), two survey studies (Allerby et al., 2020; Berry et al., 2009), one mixed-method design (Taylor & Sambrook, 2012) and two RCTs (Berry et al., 2016; Gonge & Buus, 2015). The study characteristics are summarized in Table 1.

3.3 | Quality assessment

The qualitative studies were of adequate methodological quality (see the Supporting Information for quality assessment table). Overall, the assessment of study quality revealed some potential bias across different MMAT domains as well as highlighting some inconsistency in data collection methods. Two of the qualitative studies faced difficulties in relation to sample representativeness. First, one study faced discrepancies in the attendance of formulation meetings and the author noted that non-participation may have affected the generalizability of the findings due to self-presentation biases, some participants were better accustomed to the meetings (Summers, 2006). Similarly, another study relied on a small sample size where the majority of staff attended less than two clinical supervision sessions (Buus et al., 2011). However, the researchers ensured representativeness of interpretations by utilizing parallel analyses.

Two of the included studies utilized RCT designs (Berry et al., 2016; Gonge & Buus, 2015). One of the RCTs showed good overall methodological quality and low risk of bias (Berry et al., 2016). The other RCT was of adequate quality and demonstrated promising results by involving a 1-year follow-up comparison, but faced a relatively prominent drop-out rate (54.6%), as well as staff members who were non-adherent to the ‘meta-supervision’ intervention group (Gonge & Buus, 2015). The missing data was subsequently omitted and the study did not account for the effect of non-attendants, thus causing potential response bias.

Two of the quantitative descriptive studies were appraised to have good overall methodological quality (Allerby et al., 2020; Berry et al., 2009). The Taylor and Sambrook (2012) study was judged to be...
of poor quality because it did not detail participant demographics nor how they were recruited, therefore it was uncertain whether the sample was representative of the target population. For the purpose of quality assessment, the MMAT authors discourage excluding studies of poor quality from analysis (Hong et al., 2018). In context, this is supported on the basis that methodological limitations may be the consequence of challenges to the implementation of indirect psychological therapies within inpatient settings - to exclude studies in this instance may undermine essential research data (Evlat et al., 2021).

### 3.4 Characteristics of the indirect interventions

Overall, there were four main types of indirect interventions utilized in the identified studies: case formulation groups, formal clinical supervision, reflective practice and staff practice-based education sessions. Five studies used a case formulation group (Berry et al., 2009, 2016, 2017; Summers, 2006; Taylor & Sambrook, 2012). Case formulation is a clinical skill used by mental health practitioners to integrate all the details of a patient into a unified and related set of ideas, including information about the onset, development, maintenance and treatment of a problem (Sturmey, 2009). Three studies (Berry et al., 2009, 2016, 2017) focused on a single patient at each group case formulation meeting, whereas the other two studies focused on multiple patients at each meeting (Summers, 2006; Taylor & Sambrook, 2012), respectively. Four of the case formulation studies allowed staff to select which patient they would find most helpful to discuss (Berry et al., 2009; Berry et al., 2016, 2017; Summers, 2006). The final study formulated staff–patient relationships, and the researcher observed and conceptualized a range of interactions to inform the formulation meetings (Taylor & Sambrook, 2012). In terms of underpinning theoretical models, the majority were informed by cognitive theory. One of the case formulation groups was informed by cognitive theory and attachment theory (Berry et al., 2009), one by cognitive theory (Berry et al., 2016), one by the cognitive–behavioural theory and object relations theory (Summers, 2006) and two by the cognitive interpersonal model (Berry et al., 2017; Taylor & Sambrook, 2012). In addition, three studies involved producing summative reports which were discussed during team meetings (Berry et al., 2016, 2017) to increase staff’s understanding (Berry et al., 2016) and to develop patients’ treatment plans (Summers, 2006). All formulation meetings aimed to help staff to understand the psychological factors that might be involved in the progression and safeguarding of problems to promote improved positive relationships.

Three studies investigated the use of formal staff group supervision (Buus et al., 2011; Gonge & Buus, 2015). For two studies (Buus et al., 2011; Gonge & Buus, 2015), the aim of supervision was to allow staff members to reflect on personal and organizational aspects of their clinical practice. Proctor’s (1987) model of clinical supervision was used in Buus et al. (2011). The third study used
<table>
<thead>
<tr>
<th>Author(s) and country</th>
<th>Aims</th>
<th>Methods</th>
<th>Setting</th>
<th>N</th>
<th>Response rate</th>
<th>Demographics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allerby et al. (2020), Sweden</td>
<td>To compare patient-related outcomes of an educational intervention</td>
<td>Quantitative questionnaire</td>
<td>Four inpatient psychosis clinics</td>
<td>Pre-implementation ($N = 50$), post-implementation ($N = 50$)</td>
<td>100%</td>
<td>Patients: Females ($N = 23$); mean age 48.0; 20–78 years age range; involuntary care ($N = 35$)</td>
</tr>
<tr>
<td>Berg and Hallberg (2000), Sweden</td>
<td>To explore psychiatric nurses’ lived experiences of systematic clinical group supervision combined with supervised individually planned nursing care</td>
<td>Open ended qualitative interviews</td>
<td>Psychiatric ward within a clinic</td>
<td>22</td>
<td>95%</td>
<td>Psychiatric nurses: Females ($N = 16$); mean age 39.7</td>
</tr>
<tr>
<td>Berry et al. (2009), United Kingdom</td>
<td>To develop formulations with staff teams and explore the effects on staff appraisals</td>
<td>Quantitative questionnaire</td>
<td>Psychiatric rehabilitation units</td>
<td>30</td>
<td>100%</td>
<td>Staff: Females ($N = 15$); mean age 39.9</td>
</tr>
<tr>
<td>Berry et al. (2016), United Kingdom</td>
<td>To evaluate a ward-based psychological intervention to improve staff–patient relationships and outcomes</td>
<td>Single blind cluster RCT</td>
<td>NHS and private sector psychiatric rehabilitation units</td>
<td>Patients ($N = 51$) and staff ($N = 85$)</td>
<td>Patients = 70.6%; staff = 87.1%</td>
<td>Patients: Female ($N = 10$); mean age 42 years. Staff: Female ($N = 55$); mean age 42 years</td>
</tr>
<tr>
<td>Berry et al. (2017), United Kingdom</td>
<td>To identify the effects of formulation on practice</td>
<td>Semi-structured interviews</td>
<td>Ten NHS and private sector psychiatric rehabilitation units</td>
<td>Patients ($N = 20$) and staff ($N = 57$)</td>
<td>100%</td>
<td>Patients: Female ($N = 7$); mean age 36.2. Staff: Female ($N = 38$); mean age 41.7</td>
</tr>
<tr>
<td>Buus et al. (2011), Denmark</td>
<td>To explore psychiatric nursing staff members’ reflections on participating in group-based clinical supervision</td>
<td>Semi-structured interviews</td>
<td>Nine general psychiatric wards</td>
<td>22</td>
<td>100%</td>
<td>Staff: Females ($N = 20$); mean age 46.8 years</td>
</tr>
<tr>
<td>Gonge and Buus (2015), Denmark</td>
<td>To test meta-supervision intervention of psychiatric nursing staff</td>
<td>RCT</td>
<td>Three general psychiatric wards</td>
<td>83</td>
<td>55.40%</td>
<td>Staff: Females ($N = 72$); mean age 43.7 years; 25–62 years age range</td>
</tr>
<tr>
<td>Moreno-Poyato et al. (2019), Spain</td>
<td>To explore the implementation of evidence-based practice with respect to therapeutic relationship through participatory action research</td>
<td>Qualitative method</td>
<td>Two psychiatric units</td>
<td>9</td>
<td>100%</td>
<td>Nurses: Female ($N = 5$); aged 28–38 ($N = 6$), aged 39–49 ($N = 2$), aged &gt;50 ($N = 1$)</td>
</tr>
<tr>
<td>Summers (2006), United Kingdom</td>
<td>To describe a qualitative study of staff views using psychological formulations with patients with severe mental illness</td>
<td>Semi-structured interviews</td>
<td>A high-dependency rehabilitation service ward</td>
<td>25</td>
<td>100%</td>
<td>N/A</td>
</tr>
<tr>
<td>Taylor and Sambrook (2012), United Kingdom</td>
<td>To investigate the value of the cognitive interpersonal model in formulating staff–patient relationships to improve the culture on the unit</td>
<td>Mixed methods</td>
<td>Adult in-patient unit</td>
<td>28</td>
<td>Before intervention = 64.29%; after intervention = 42.86%</td>
<td>N/A</td>
</tr>
<tr>
<td>Author(s) and country</td>
<td>Intervention facilitator</td>
<td>Staff members profession</td>
<td>Patients' diagnosis</td>
<td>Intervention</td>
<td>Control</td>
<td></td>
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</tr>
<tr>
<td>Allerby et al. (2020), Sweden</td>
<td>Clinical psychologist</td>
<td>Across all professions and roles, including psychiatrists</td>
<td>Schizophrenia spectrum disorder (F20–F29, ICD-10)</td>
<td>Person-Centred Psychosis Care (PCPC)</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Berg and Hallberg (2000), Sweden</td>
<td>Registered nurse teacher (specifically trained in psychotherapeutic methods)</td>
<td>Registered nurse (N = 10), licensed mental practical nurse (N = 10), licensed practical nurse (N = 1) and nurse aid (N = 1)</td>
<td>Psychotic disorders or borderline personality disorders (APA, DSM-IV)</td>
<td>Systematic clinical group supervision (CGS) in combination with supervised individualized planned nursing care (IPNC)</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Berry et al. (2009), United Kingdom</td>
<td>Clinical psychologist</td>
<td>Registered mental health nurses (N = 16) and mental health support workers (N = 14)</td>
<td>Schizophrenia</td>
<td>Group formulation meetings</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Berry et al. (2016), United Kingdom</td>
<td>Clinical psychologist and an accredited therapist</td>
<td>Registered mental health nurse (N = 44), support workers (N = 43), occupational therapists (N = 4) and ward managers (N = 2)</td>
<td>Schizophrenia (N = 44), schizoaffective disorder (N = 3) and bipolar disorder (N = 3)</td>
<td>Group formulation meetings</td>
<td>Treatment as usual</td>
<td></td>
</tr>
<tr>
<td>Berry et al. (2017), United Kingdom</td>
<td>Clinical psychologist</td>
<td>Registered nurses (N = 25), support workers (N = 28) and other (N = 4)</td>
<td>Schizophrenia, schizoaffective disorder and bipolar disorder</td>
<td>Group formulation meetings using cognitive interpersonal model</td>
<td>Treatment as usual</td>
<td></td>
</tr>
<tr>
<td>Buus et al. (2011), Denmark</td>
<td>Clinical psychologist</td>
<td>Registered nurses and occupational therapists (N = 11); nursing assistants and social- and healthcare assistants (N = 11)</td>
<td>N/A</td>
<td>Group-based clinical supervision</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Gonge and Buus (2015), Denmark</td>
<td>Clinical psychologist</td>
<td>Nurses (N = 31), auxiliary nurses (N = 51) and social worker (N = 1)</td>
<td>N/A</td>
<td>Group clinical ‘meta-supervision’</td>
<td>Usual supervision</td>
<td></td>
</tr>
<tr>
<td>Moreno-Poyato et al. (2019), Spain</td>
<td>Research author (mental health nurse and academic professor)</td>
<td>Nurses (N = 7) and mental health nursing specialty nurses (N = 2)</td>
<td>Psychiatric pathology, mainly psychotic and affective disorders</td>
<td>Reflective practice groups</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Summers (2006), United Kingdom</td>
<td>Accredited therapist (either clinical psychologist or a specialist registrar training in psychoanalytic therapy)</td>
<td>Nurses (N = 9), support workers (N = 11), doctors (N = 2), occupational therapist (N = 1), social worker (N = 1) and drama therapist (N = 1)</td>
<td>N/A</td>
<td>Psychological case formulation</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Taylor and Sambrook (2012), United Kingdom</td>
<td>Clinical psychologist</td>
<td>Mental health nurses, healthcare support workers and occupational therapists</td>
<td>Schizophrenia, personality and substance misuse problems</td>
<td>Formulation of staff–patient relationships using the cognitive interpersonal model</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>
systematic clinical group supervision in combination with supervised individualized planned nursing care (Berg & Hallberg, 2000). This intervention was used to provide guidance for nursing practices and to support the focus of each patient’s needs to help staff carry out their professional tasks effectively (Berg & Welander Hansson, 2000).

Out of the remaining two studies, one study investigated a group reflective practice intervention (Moreno-Poyato et al., 2019). The aim was to improve the therapeutic relationship between staff and patients by providing a neutral and protected space where nurses could discuss emotionally challenging events and concerns affecting their clinical practices. Consequently, allowing them to suggest circumstances to improve the care they provide by developing upon self-awareness and self-knowledge. Another study implemented an educational intervention, namely, the Person-Centred Psychosis Care (PCPC), which involved two components: learning to increase the person-centredness approach followed by staff-initiated implementation projects (Allerby et al., 2020).

All interventions were attended by a range of healthcare professionals and unqualified staff members. The majority of studies were facilitated to nursing staff, such as registered nurses and support workers (Berg & Hallberg, 2000; Berry et al., 2009, 2016, 2017; Buus et al., 2011; Moreno-Poyato et al., 2019; Summers, 2006; Taylor & Sambrook, 2012). Seven studies recruited MDT professionals including psychiatrists, managers, occupational therapists and social workers (Allerby et al., 2020; Gonge & Buus, 2015; Summers, 2006; Taylor & Sambrook, 2012). Six of the interventions were facilitated for no longer than two hours (Berg & Hallberg, 2000; Berry et al., 2009, 2016, 2017; Gonge & Buus, 2015; Moreno-Poyato et al., 2019; Summers, 2006) and one for three hours (Berg & Hallberg, 2000). The other utilized an educational intervention requiring six days of attendance (Allerby et al., 2020). Two studies implemented interventions during ad hoc activities or informal discussions; therefore, there was no specified session duration (Allerby et al., 2020; Taylor & Sambrook, 2012).

3.5 | Outcome measures used to examine the efficacy of the interventions

Five studies included outcome measures as part of their methodological design to evaluate their intervention (Allerby et al., 2020; Berry et al., 2009; Berry et al., 2016; Gonge & Buus, 2015; Taylor & Sambrook, 2012). The number of outcomes used per study ranged from one to nine and the outcome measures by each study are outlined in Table 2. The primary outcome measures differed substantially, with two studies measuring staff well-being (Berry et al., 2016; Taylor & Sambrook, 2012). The most consistent measurement tool used to assess staff well-being was the Maslach Burnout Inventory (MBI; Maslach & Jackson, 1981) and variations of this tool (MBI-GS; Maslach et al., 1996). This tool is commonly used to self-assess whether there is a risk to burnout—the tool explores exhaustion, depersonalization and personal achievement (Maslach et al., 1996).

Only two studies measured impacts on patients, one study used measurement tools to assess patient functioning (Berry et al., 2016) and the other collected patient incident report data to investigate the effect on challenging behaviours (Taylor & Sambrook, 2012). The findings suggest that measures of staff burnout and self-reported perceived effectiveness of the intervention were most frequently used as outcome measures of the indirect psychological interventions.

3.6 | Efficacy of the interventions on the outcomes

3.6.1 | Quantitative studies

Four studies evaluated the implementation of interventions using a quantitative methodology. Two studies investigated the implementation of case formulation meetings (Berry et al., 2009, 2016). Berry et al. (2009), utilizing a pre-post design which found significant changes in staff perceptions on all outcome domains. Post-intervention, staff self-reported feeling more in control over the patient’s mental health problems and perceived the patient to be more in control over their problems. There was a reduction in the extent that staff associated the patient’s mental health being caused by their own behaviour. Ratings for the likely duration of problems shortened and their perception of treatment efficacy increased. Confidence in working with the patient improved, as well as feeling more understanding about the patient’s problems. Staff also rated the patients less negatively than before the intervention. Berry et al. (2016), utilizing a cluster RCT design that found no significant differences on any measures on staff or patient perspectives between participants in team-based formulation and the treatment-as-usual group. However, formulation was found to be useful in improving patients’ perceptions of therapeutic relationships and in the general organization of the ward.

Gonge and Buus (2015), utilizing an RCT, found an increase in the attendance of clinical supervision sessions across the three wards in three months but did not find a change in the staff evaluations regarding the effectiveness or benefit post-intervention as measured by the self-report Manchester Clinical Supervision Scale. Following the implementation of the PCPC intervention (Allerby et al., 2020), utilizing a pre-post design, it was found that the patients’ self-reported empowerment findings did not reach significance post-intervention. However, the consumer satisfaction rating post-intervention was significantly higher, although this effect size was small.

3.6.2 | Mixed-method studies

Taylor and Sambrook (2012) found that staff well-being, determined by a measure of staff burnout (MBI-GS; Maslach et al., 1996), did improve as the reported rates reduced over the course of the study, however due to staff turnover and changes within the members of the staff group statistical analysis was not feasible. They also found a
<table>
<thead>
<tr>
<th>Author</th>
<th>Empowerment</th>
<th>Illness perceptions</th>
<th>Therapeutic alliance</th>
<th>Expressed emotion</th>
<th>Predicting relapse</th>
<th>Ward atmosphere perceptions</th>
<th>Staff well-being</th>
<th>Patient functioning</th>
<th>Consumer satisfaction</th>
<th>Clinical supervision effectiveness</th>
<th>Benefits of clinical supervision</th>
<th>Total outcomes</th>
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</thead>
<tbody>
<tr>
<td>Allerby et al. (2020)</td>
<td>RES</td>
<td>-</td>
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<td>-</td>
<td>UKU-CONSAT&lt;sup&gt;*&lt;/sup&gt;</td>
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<tr>
<td>Berry et al. (2009)</td>
<td>-</td>
<td>Derived own questionnaire based on Brief IPQ and the IPQS&lt;sup&gt;*&lt;/sup&gt;</td>
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<td>Berry et al. (2016)</td>
<td>-</td>
<td>WAI</td>
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<td>GHQ and MBI</td>
<td>PANSS, GAF and SBS</td>
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<td>Gonge and Buus (2015)</td>
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<tr>
<td>Taylor and Sambrook (2012)</td>
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<td>-</td>
<td>MBI-GS</td>
<td>Incident reports&lt;sup&gt;*&lt;/sup&gt;</td>
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<tr>
<td>N (%) studies examining outcome</td>
<td>1 (0.01)</td>
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Abbreviations: Brief IPQ, Brief Illness Perception Questionnaire (Broadbent et al., 2006); COPSOQ, Copenhagen Psychosocial Questionnaire (Kristensen et al., 2005); CSQ, Coping Styles Questionnaire (Elklit, 1996); GAF, Global Assessment of Functioning Scale (Hall, 1995); GHQ, General Health Questionnaire (Goldberg & Hillier, 1979); IPQS, Illness Perception Questionnaire for Schizophrenia (Lobban et al., 2005); KIMS, Kentucky Inventory of Mindfulness Skills (Baer et al., 2004); MBI, Maslach Burnout Inventory (Maslach & Jackson, 1981); MBI-GS, Maslach Burnout Inventory—General Survey (Maslach et al., 1996); MCSS-26, Manchester Clinical Supervision Scale (Winstanley, 2000); PANSS, Positive and Negative Syndrome Scale (Kay et al., 1987); PCS, Perceived Criticism Scale (Hooley & Teasdale, 1989); RES, Rogers' Empowerment Scale (Rogers et al., 1997); SBS, Social Behaviour Schedule (Wykes & Sturt, 1986); SF-36, 36-Item Short Form Survey (Bjørner et al., 1997); UKU-CONSAT, UKU-Consumers Satisfaction Rating Scale (Ahlfors et al., 2000); WAI, Working Alliance Inventory (Tracey & Kokotovic, 1989); WAS, Ward Atmosphere Scale (Moos, 1974).<sup>*</sup>Statistically significant at p < .05.
significant reduction in the frequency of challenging behaviours from baseline (124 incidents over an 8-month period) to post-intervention (78 incidents over the consecutive 8-month period; \( p = .011 \)).

### 3.6.3 Qualitative studies

The usefulness and applicability of indirect psychological interventions were associated to three overarching key themes that emerged from the data: ‘Reflection on practice’, ‘Trust, feeling valued and empowerment’ and ‘Readiness and resistance towards change’. Sub-themes and exemplar quotations are presented in the Supporting Information.

#### Theme 1.0: Reflection on practice

Four studies identified that reflection is fundamental to promote care planning, positive staff–patient relationships and staff satisfaction; to solve difficult situations; and to encourage better team collaboration (Berg & Hallberg, 2000; Berry et al., 2017; Buus et al., 2011; Summers, 2006). Reflection refers to a process that deepens learning and links information that we have learnt to our values and social identity—such as enabling us to understand different perspectives, challenge assumptions and view issues within established patterns of behaviour (Chartered Institute of Personnel and Development, 2021).

Following staff formulation interventions, staff reported an increase in their emotional awareness and empathy which generated a positive effect on the relationship with patients (Berry et al., 2017). In addition, they valued having a space to explore ideas and adopt new ideas, making associations with their practice and implementing adaptations to their ways of working (Summers, 2006). Staff also appreciated being able to reflect upon their working relationship with patients and finding ways of making it more therapeutic after the group supervision and individually planned nursing care intervention (Berg & Hallberg, 2000).

In addition, in the study by Buus et al. (2011), mental health staff gave responses to an interview following participation in clinical supervision. These responses were found to fit into three corresponding themes: the purpose and benefits of clinical supervision; difficulties related to participation; and alternative strategies for finding the benefits associated with participating in supervision. The most prominent problem reported by the participants was the threat of being caught in a clinical deadlock. The researchers described a clinical deadlock to be a situation where a patient, a case or a clinical situation does not change despite staff’s best efforts and caring aspirations—this type of situation was reported to be cognitively challenging and emotionally frustrating. Therefore, the participants utilized reflective skills during supervision sessions to develop new perspectives, and learn ways to manage clinical deadlocks.

#### Theme 2.0: Trust, feeling valued and empowerment

Staff reported that they valued being with their team in a group environment to be able to have their say (Summers, 2006) and that they appreciated having the opportunity to transform differences in opinion into more productive ideas (Berry et al., 2017). Specifically, following reflective practice, staff members were motivated in the opportunity to introduce improvements and create unification of objectives within the team (Moreno-Poyato et al., 2019).

Clinical supervision was intended to provide a safe space for staff to express their feelings and opinions in order to initiate development and change on the ward (Berg & Hallberg, 2000). This was supported by findings in Buus et al. (2011) as staff rejected the idea that supervision was to exert control on staff but rather for progressive and restorative purposes. For supervision to be useful, participants needed to feel supported—the confirmation of shared problems allowed for professional development (Berg & Hallberg, 2000). Buus et al. (2011) highlight that trusting colleagues is important for supervision to be beneficial, this translates into how participants in the Berg and Hallberg (2000) study reported how not trusting their team led to a lack of openness.

#### Theme 3.0: Readiness and resistance towards change

It was found that non-adherence (Summers, 2006) and a lack of prioritization for the interventions was influenced by time restraints and a lack of awareness. Staff reported becoming impatient and less enthusiastic towards group supervision when improvements were not immediate so were less inclined to take the intervention seriously (Berg & Hallberg, 2000). At first, the staff had high expectations for the intervention to solve their working problems and for instantaneous changes in nursing practice to occur. Similar effects were found in the study by Buus et al. (2011) where staff believed that supervision had minimal influence on daily nursing care and that tunnel vision by an internal supervisor was negatively impacting the ability to form a new perspective on clinical practice.

### 4 DISCUSSION

This review aimed to examine the available indirect psychological interventions offered in acute mental health inpatient settings. Ten studies met inclusion criteria. Interventions were largely varied and featured a diverse range of outcome measures. The most frequently described intervention was case formulation and clinical supervision. In general, the quality of the studies ranged from good to adequate, although every intervention was implemented with some quality concerns. Consequently, direct comparisons in the efficacy of the intervention categories should be interpreted tentatively.

Overall, the indirect interventions generated positive constructive attitudes and satisfaction from mental health staff members. Positive changes were found in staff perceptions of patients, patient incidents, and staff-patient relationships. Burnout was also examined but there was less convincing evidence that indirect interventions impacted on this outcome due to high levels of missing data (Taylor & Sambrook, 2012). These findings tentatively support the use of indirect interventions to reduce patient incidents, improve staff-patient relationships and to instil more hopeful staff attitudes towards the treatment of patients (Berry et al., 2009; Lobban et al., 2005).

Our review supports previous research that outlines the importance of mental health practitioners increasing their understanding of...
patients in order to improve care delivery (Mankiewicz, 2014). For example, case formulation was found to increase the awareness of patients' previous experiences which allowed staff to increase their capacity to act with empathy (Berry et al., 2017; Summers, 2006). Equally, implementing clinical supervision increased the time staff spent with patients and led them to feeling more confident in engaging with the patient's own interests (Berg & Hallberg, 2000). The nurses taking part in the reflective practice group felt more secure in their occupational role following the intervention (Summers, 2006). This demonstrates the role indirect interventions can have in improving staff-patient relationships.

Our review has identified important clinical implications. First, it has demonstrated that indirect psychological interventions such as case formulations, group supervisions and reflective practice are valued by staff and there is tentative evidence that they may improve staff outcomes and broader care delivery (Berry et al., 2009; Summers, 2006). A recently developed competency framework for the delivery of acute mental health inpatient care has outlined that such interventions should be a routine part of inpatient care delivery (Wood et al., 2022). Moreover, the review has demonstrated that case formulation sessions which draw upon cognitive theory and relational-focused theory may be of particular use as these interventions demonstrated helpful outcomes. The qualitative data allowed some insight into the potential mechanisms that may bring about change from utilising indirect interventions. It was identified that having the opportunity to reflect and learn, being valued and empowered and having protected time were key to the delivery (Berg & Hallberg, 2000; Buus et al., 2011).

As a methodological strength, this current synthesis unites the importance of quantitative descriptive and qualitative methods in the feasibility research of interventions (Medical Research Council, 2008). By involving a mixed-method approach to understand and analyse the narratives of staff and patients, we were able to identify the contextual factors that implicate on the usefulness of the interventions (Berry et al., 2017). The inclusion of qualitative studies allowed for a more in-depth exploration about the perceived effectiveness and acceptability of the interventions from the perception of mental health staff. Moreover, the forward-citation search primarily represents a strength of this review, as comparatively, similar research did not utilize this within the methodology (Evlat et al., 2021). In terms of limitations, the robustness of the conclusions may be challenged due to methodological problems related to incomplete outcome data and participants non-adherence to the entirety of the interventions (Berry et al., 2016; Gorge & Buus, 2015; Taylor & Sambrook, 2012). However, research within psychiatric hospitals tends to face this ongoing challenge (Evlat et al., 2021). Another limitation was that four studies were found through forward citation which may mean that the search terms were not inclusive enough and other additional studies were missed. This may suggest that future reviews should consider searching more databases or using broader search terms to identify papers. A further limitation was the exclusion of specialist inpatient services because the number of studies included in this review was limited.

We wanted to draw conclusions on indirect intervention delivery in general acute settings, but excluding specialist settings may have omitted studies with important findings. Finally, our definition of indirect psychological interventions excluded training interventions which are typically considered under this umbrella. We wanted to focus on reflective group-based indirect interventions which led to direct impact on clinical practice which is important given the lack of research in this field. However, excluding such indirect interventions may have limited the scope of the review and future reviews may want to include such interventions.

The review has identified a lack of standardization in the indirect interventions reviewed. A variety of interventions were included and none described standardized or core components. All offered different theoretical models, lengths and modalities. As a result, there needs to be further investigation into the key components of indirect interventions. Future research should also detail their logic model to ensure the reader can understand the mechanisms of change and intended impact on outcomes. There were also full-text papers where the reporting of the methodology and intervention lacked appropriate detail which meant ten studies could not be appropriately screened for eligibility. Future studies of indirect interventions should ensure reporting in line with relevant guidelines such as the Consolidated Standards for Reporting Trials (CONSORT; Schulz et al., 2010) and the Template for Intervention Description and Replication checklist (TIDIER; Hoffmann et al., 2014). Further research is needed to understand the impact of indirect psychological interventions on staff-related outcomes. Recommendations for standardization in outcome measurement reporting for indirect psychological interventions are required in order for more comparable conclusions to be drawn. However, this current review is unable to determine this due to the diversity of outcome measures found. Also, it was beyond the scope of this review to critically assess the reliability and validity of the outcome measures involved. In addition, only four studies utilized patient-reported outcomes. This is an area for future research because the main focus of implementing indirect interventions is to ultimately improve the care for patients. All research included in this review has been conducted in Europe, with the majority of studies being conducted in the United Kingdom. Future research should explore the application of indirect psychological interventions in other international settings.

5 | CONCLUSION

In conclusion, the findings generally support the provision of indirect psychological interventions in acute mental health inpatient settings. Indirect psychological interventions were beneficial to reduce patient incidents, improve staff perceptions of patients as well as improve staff-patient relationships. There was also some indication that they may improve staff burnout. Future studies would benefit from incorporating a mixed-method design and measuring outcomes from the patient’s perspective.
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**SUPPORTING INFORMATION**

Additional supporting information can be found online in the Supporting Information section at the end of this article.