Received: 8 February 2023 | Revised: 8 June 2023 | Accepted: 12 July 2023

DOI: 10.1111/jpm.12963

REVIEW ARTICLE

WILEY

Mentalizing capacities of mental health nurses: A systematic PRISMA review

Gieke Free[1,2,3] | Wilma Swildens[1,2] | Saskia Knapen[1,3] | Aartjan Beekman[3] | Berno van Meijel[2,3,4]

[1]Altrecht Institution for Mental Health Care, Utrecht, The Netherlands

[2]Inholland University of Applied Sciences, Amsterdam, The Netherlands

[3]Department of Psychiatry, Amsterdam University Medical Centre, Amsterdam Public Health Research Institute, Amsterdam, The Netherlands

[4]Parnassia Psychiatric Institute, Parnassia Academy, The Hague, The Netherlands

Correspondence
Gieke Free, Altrecht Institution for Mental Health Care, Levenspad 8, 3705 WB Zeist, The Netherlands.
Email: g.free@altrecht.nl

Accessible Summary

What is known on the subject?

- Mentalizing is the capacity to understand both one's own and other people's behaviour in terms of mental states, such as, for example, desires, feelings and beliefs.
- The mentalizing capacities of healthcare professionals help to establish effective therapeutic relationships and, in turn, lead to better patient outcomes.

What this paper adds to existing knowledge?

- The personal factors positively associated with the mentalizing capacities of healthcare professionals are being female, greater work experience and having a more secure attachment style. Psychosocial factors are having personal experience with psychotherapy, burnout, and in the case of female students, being able to identify with the female psychotherapist role model during training. There is limited evidence that training programmes can improve mentalizing capacities.
- Although the mentalization field is gaining importance and research is expanding, the implications for mental health nursing have not been previously reviewed. Mental health nurses are underrepresented in research on the mentalizing capacities of healthcare professionals. This is significant given that mental health nurses work closest to patients and thus are more often confronted with patients' behaviour compared to other health care professionals, and constitute a large part of the workforce in mental healthcare for patients with mental illness.

What are the implications for practice?

- Given the importance of mentalizing capacity of both the patient and the nurse for a constructive working relationship, it is important that mental health nurses are trained in the basic principles of mentalization. Mental health nurses should be able to recognize situations where patients' lack of ability to mentalize creates difficulties in the interaction. They should also be able to recognize their own difficulties with mentalizing and be sensitive to the communicative implications this may have.

Abstract

Introduction: Mentalizing capacities of clinicians help to build effective therapeutic relationships and lead to better patient outcomes. Few studies have focused on factors associated with clinicians' mentalizing capacities and the intervention strategies to improve them.

Aim: Present a systematic review of empirical studies on factors associated with healthcare professionals' mentalizing capacities and the effectiveness of intervention programmes designed to improve these capacities.

Method: Following PRISMA-guidelines, a systematic literature search was conducted in PubMed, PsycINFO, Cochrane Library and CINAHL.

Results: Out of a systematic search with 1537 hits, 22 studies were included. Personal factors positively associated with mentalizing capacities of healthcare professionals are being female, greater work experience and having a more secure attachment style. Psychosocial factors are having personal experience with psychotherapy, burnout, and in the case of female students, being able to identify with the female psychotherapist role model during training. Evidence that training programmes improve mentalizing capacities is limited.

Discussion: Mental health nurses are underrepresented in research on mentalizing capacities of healthcare professionals and training programs to improve these capacities are practically absent.

Implications for Practice: For mental health nurses, training in basic mentalizing theory and skills will improve their capacities in building effective working relationships with patients.

KEYWORDS

healthcare professionals, intervention programmes, mental health nursing, mental healthcare, mentalizing capacities

1 | INTRODUCTION

In psychological research, the capacity to understand both one's own and other people's mental states has been operationalized in manifold ways, including through the Theory of Mind (Baron-Cohen et al., 1985) and the concept of mentalization (Baron-Cohen et al., 2001; Choi-Kain & Gunderson, 2008; Frith & Frith, 2003). In psychotherapy, Fonagy and associates have continued to develop the concept of mentalization over the past several decades (Allen et al., 2008; Fonagy, 1991; Fonagy et al., 2002). Mentalizing, or reflective functioning as it is also known, is defined by Fonagy and colleagues as the capacity to understand both one's own and other people's behaviour in terms of mental states, such as, for example, desires, feelings and beliefs. This capacity is acquired progressively over the course of the first several years of life in the context of secure child-caregiver relationships (Fonagy & Target, 2006). Mentalizing enables people to regulate affect and distress (Fonagy et al., 2017; Schwarzer et al., 2021). Based on extant literature, it may be assumed that clinicians' capacity to understand both their own and their patients' mental state, alongside their capacity to self-regulate their emotions and stress, contributes towards the development of the working alliance and, in turn, leads to better patient outcomes. Within healthcare, the quality of the working alliance has been significantly associated with positive treatment outcomes across different areas (Flückiger et al., 2018; Fuentes et al., 2014; Fuertes et al., 2017; Graves et al., 2017; Welmers-Van De Poll et al., 2018). The establishment of a good working alliance between (mental) healthcare professionals and patients can be complicated by the occurrence of strong negative affective feelings from patients towards these professionals, including, amongst other things, anger, verbal or physical aggression, or acute anxiety (Chipidza et al., 2016; Pene & Kissane, 2019; Ronningstam, 2017; Schwartz et al., 2021). The occurrence of these feelings, according to De Vries et al. (2017), can also lead to both heightened levels of emotional distress in clinicians and difficulties in maintaining the therapeutic alliance. They found that cancer patients were less satisfied with the working relationship with their physician when the physician's stress levels were high.

In recent years, much research has focused on psychotherapeutic treatments which include mentalizing as a principal component. These treatments aim to improve patients' mentalizing capacities for

the express purpose of providing them with more constructive ways of learning from social interactions outside of the therapeutic context (Markowitz et al., 2019). Mentalization Based Treatment (MBT) is an example of one of these types of therapy. Although MBT was originally developed and empirically evaluated for borderline personality disorder (Bales et al., 2012; Bateman & Fonagy, 1999, 2000, 2001, 2008, 2009; Paris, 2010), several mentalization-based practices have subsequently been developed and evaluated for other populations and settings, including for patients with a psychotic disorder (Brent, 2009; Brent & Fonagy, 2014; Weijers et al., 2016), anorexia nervosa (Skårderud, 2007), functional somatic disorder (Luyten et al., 2012), high-achieving patients with personality disorders (Bleiberg, 2003), family therapy for children and adolescents (Fearon et al., 2006), a parenting programme for young mothers with complex problems (Sadler et al., 2006) and a programme to prevent school bullying and violence (Twemlow & Fonagy, 2006). The capacity to mentalize is for an important part related to the level of emotional arousal of a person, so it is to be expected that there is also variation amongst (mental) healthcare professionals with respect to their capacity to mentalize (Fonagy & Bateman, 2006). Furthermore, different training priorities in different disciplines will influence these capacities. Also, the worksetting of mental health professionals can be more or less challenging to apply mentalizing capacities. It is important to be aware that (mental) health care professionals are constantly at risk of losing their mentalizing capacity in the face of a non-mentalizing patient (Bateman & Fonagy, 2010). However, few studies have focused on the mentalizing capacities of (mental) healthcare professionals, the factors associated with these capacities, and strategies for improving these capacities. In addition to this, research has hitherto primarily focused on healthcare professionals' mentalizing capacities within the field of psychology. Research in this field is important because the purposeful influence of these factors may result in the better development of the mentalizing capacities of (mental) healthcare professionals. It is also necessary to gain greater insight into both the availability and effectiveness of intervention strategies through which to improve these capacities, insofar as this would help to make better choices regarding effective strategies for (mental) healthcare professionals. In the mental health field, nurses constitute a very large part of the work force and nurses work most closely with patients on a day-to-day basis (De Ruiter et al., 2017; Fricchione et al., 2012; Organisation for Economic Co-operation and Development [OECD], 2013). In the training of mental health nursing personnel there is very little focus on mentalizing. Given the importance of mentalizing capacity of both the patient and the nurse for a constructive working relationship, it is important that mental health nurses are trained in the basic principles of mentalization. Mental health nurses should be able to recognize situations where patients' lack of ability to mentalize creates difficulties. They should also be able to recognize their own difficulties with mentalizing and be sensitive to the communicative implications this may have. Therefore, we expect that the results of our research could contribute to the frame of reference of methods in mental health nursing.

To the best of our knowledge, there has hitherto been no systematic review on these topics. Consequently, the purpose of this systematic review is to gain insight into both the factors that are associated with (mental) healthcare professionals' mentalizing capacities and the effectiveness of intervention programmes to improve these capacities.

2 | METHODS

The research questions for this systematic review are as follows:

1. Which individual and psychosocial factors are associated with (mental) healthcare professionals' mentalizing capacities?
2. How effective are the current intervention programmes at improving the mentalizing capacities of (mental) healthcare professionals?

2.1 | Study design

A systematic literature review in compliance with the Preferred Reporting Items for Systematic Reviews and Meta-analyses Protocols (PRISMA-P) (Moher et al., 2015) was conducted between September 2020 and December 2022.

2.2 | Eligibility criteria

Empirical research studies focused on both general and mental healthcare professionals were deemed to be eligible for the current review if they presented quantitative statistical analyses and/or qualitative analyses or descriptions of (a) personal and social factors associated with (mental) healthcare professionals' mentalizing capacities; (b) intervention programmes designed to improve (mental) healthcare professionals' mentalizing capacities; (c) effects of intervention strategies to improve (mental) healthcare professionals' mentalizing capacities. Additional inclusion criteria were: (1) Publication language: the abstract of the report had to be available in English, French, German or Dutch; (2) Publication language: the full text of the report had to be available in English, French, German or Dutch; (3) Date: the publication date of the study had to be between 1980 and 2022.

With respect to the question of which interventions were effective, we assessed the content of the studies, the outcome and the level of evidence according to the Oxford Centre for Evidence-Based Medicine grading system (Oxford Centre for Evidence-based Medicine, 2009).

2.3 | Information sources

For the current review, a search strategy was developed in collaboration with an information specialist who has expertise in systematic review searches. The search strategy was piloted to

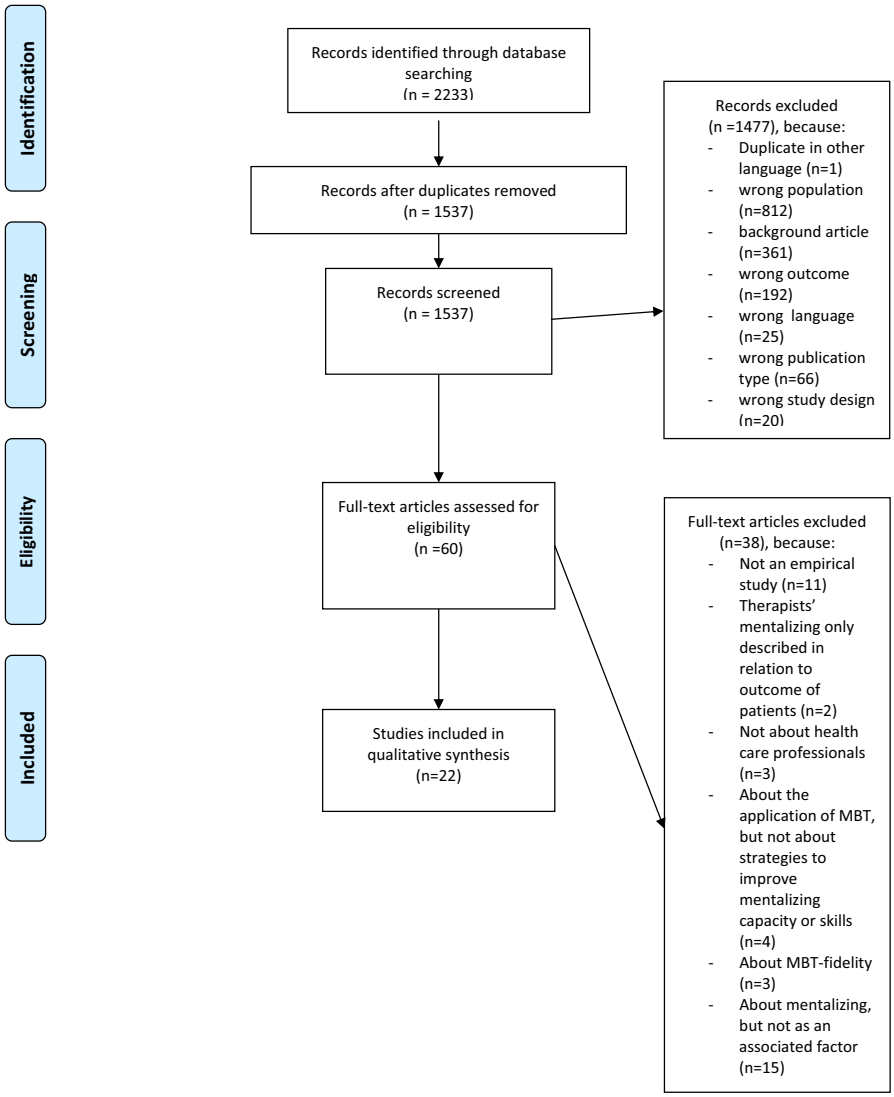

FIGURE 1 PRISMA flowchart, inclusion process.

enhance the specificity and sensitivity of the search. A systematic database search was conducted in PubMed, Cochrane Library, PsychINFO and CINAHL. The following search string was applied in PubMed: "Theory of Mind"[Mesh] OR mentalizing*[tiab] OR mentalization*[tiab] OR mentalized[tiab] OR mentalizing*[tiab] OR mentalization*[tiab] OR mentalized[tiab] OR theory of mind*[tiab] OR reflective function*[tiab] AND "Professional-Patient Relations"[Mesh] OR "Health Personnel"[Mesh] OR health personnel*[tiab] OR health professional*[tiab] OR healthcare worker*[tiab] OR health care worker*[tiab] OR healthcare provider*[tiab] OR health care provider*[tiab] OR nurse*[tiab] OR therapist*[tiab] OR psychotherapist*[tiab] OR physician*[tiab] OR clinician*[tiab] OR psychiatrist*[tiab] OR psychologist*[tiab] OR social worker*[tiab] OR healthcare professional*[tiab] OR health care professional*[tiab] OR nursing staff*[tiab] OR case manager*[tiab] OR case manager*[tiab] OR caregiver*[tiab] OR general practitioner*[tiab] OR GP's[tiab] OR family doctor*[tiab] OR patient–nurse relation*[tiab] OR patient-physician relation*[tiab]. Similar search terms were used in each of the subsequent databases. The search was re-run immediately prior to the final analysis and any further studies were retrieved for inclusion. The full search strategy is available on request from the first author.

2.4 | Selection process

Figure 1 shows the PRISMA flowchart for the inclusion process. After removing duplicates, two authors (GF, WS) independently screened the titles and abstracts of the selected papers against the inclusion criteria. After this initial screening and selection process, full reports were obtained of the selected papers. The same two authors then screened the full text reports and established whether these met the inclusion criteria. If necessary, additional information from the authors of selected papers was obtained to resolve questions concerning their eligibility. Reviewers GF and WS resolved any disagreements via discussion. A third reviewer (BvM) adjudicated unresolved disagreements pertaining to three articles. The reasons for excluding studies were recorded. The reference management software tools Endnote and Rayyan were used.

2.5 | Data extraction

Data extraction was conducted by the first author (GF) and double-checked by the second author (WS). Two data extraction forms

TABLE 1 Overview of the included studies regarding the factors associated with (mental) healthcare professionals' mentalizing capacities.

Author (Year), Country	Research design and data collection methods (time-frame)	Main research objective	Sample and setting	Age in years of the sample	Gender (*N*)	Key outcomes on therapists/professionals	Level of evidence[a]	Methodological quality[b]
Bálint et al. (2014) Hungary	Quantitative descriptive (time-frame not reported)	Examine the influence of the patient-centeredness (positive vs. negative) and gender of film-presented practitioner role-models on mentalization responses	University psychology students	Range: 22–33 Mean: 23.6 (SD 2.76)	Male: 14 Female: 15	Male students, watching therapist-patient sessions, showed lower levels of mentalizing capacities than females Female psychology students – in contrast to male students – showed a higher level of mentalizing capacities when confronted with a female practitioner role-model than with a male one Students observing opposite gender practitioner role models, expressed more mentalizing remarks in response to the non-patient centered role model than to the patient-centered one Female students' mentalization capacities were higher with female role models than with male role models	2c	***

(Continues)

TABLE 1 (Continued)

Author (Year), Country	Research design and data collection methods (time-frame)	Main research objective	Sample and setting	Age in years of the sample	Gender (*N*)	Key outcomes on therapists/professionals	Level of evidence[a]	Methodological quality[b]
Bhola and Mehrotra (2021) International, eight countries, Europe, US and Asia mainly	Cross-sectional (time-frame not reported)	Examine the relationship between therapist perceptions of their ability to mentalize, in relation to both self and others, and countertransference reactions	Clinical psychologists (83.8%) and other mental health clinicians in private practice or doctoral training	Range: 24–70 Mean: 36.4 (SD = 10.64)	Male: 26 Female: 91	Clinical psychologists and other mental health clinicians with higher levels of mentalizing capacities were less burdened by negative countertransference experiences towards patient with borderline personality disorder Clinical psychologists and other mental health clinicians with less motivation to mentalize and more difficulties in mentalizing others' actions, thoughts and feelings had more sexualized countertransference reactions and less nurturing and protective responses towards clients with borderline personality disorder	2c	****
Bordoagni et al. (2021) Italy	Case–control, cross-sectional (3 months)	Examine the interrelationship between attachment style, mentalization and burnout in the nursing workforce	Nursing students and professional nurses of a university hospital	Nursing students: Mean: 22.43 (SD = 2.62) Professional nurses: Mean: 47.21 (SD = 7.69)	Male: 25 Female: 103	Nursing students with lower levels of mentalization capacity had a preoccupied attachment pattern, which is a form of insecure attachment style	2c	****

TABLE 1 (Continued)

Author (Year), Country	Research design and data collection methods (time-frame)	Main research objective	Sample and setting	Age in years of the sample	Gender (N)	Key outcomes on therapists/professionals	Level of evidence[a]	Methodological quality[b]
Brugnera et al. (2021) Italy	Cross-sectional (3 years)	Examine the influence of attachment insecurity and self-reported mentalizing capacity on well-being of psychotherapists, and if mentalizing capacity mediates the relationship between attachment insecurity and well-being	Psychotherapists of differing settings	Range: not reported Mean: 43.94 (SD = 10.37)	Male: 85 Female: 331	Lower mentalizing capacities of psychotherapists was associated with greater attachment insecurity	2c	****
Cohen et al. (2022) Israel	Quasi-experimental	Examine the associations between nursing aides' mentalization, expressed emotion and observed sensitivity towards residents with dementia, and whether nursing aides' mentalization and expressed emotion are relational constructs that vary with residents' characteristics and behaviour	Nursing aides ($n = 20$) of three wards of a long-term care-facility for older adults with dementia	Range: not reported Mean: 48.50 (SD = 11.99)	Male: 8 Female: 12	Higher levels of mentalizing capacities of nursing aides towards residents classified as "easy" were related to more years of employment as a nursing aide Higher levels of mentalizing capacities of nursing aides were related to higher sensitivity of these nursing aides towards residents. This was consistent across residents' classified levels of difficulty, ranging from "easy" to "difficult"	2c	*****
Cologon et al. (2017) Australia	Cross-sectional (time-frame not reported)	Examine the relationship between reflective functioning, attachment style and psychotherapeutic effectiveness of therapists	Psychologists ($n = 23$) and social workers ($n = 2$) at a university counselling centre	Range: 24–56 Mean: 41. 9 (SD = 9.7)	Male: 4 Female: 21	Psychologists and social workers with higher levels of better mentalizing capacities had secure attachment styles	2c	*****

(Continues)

TABLE 1 (Continued)

Author (Year), Country	Research design and data collection methods (time-frame)	Main research objective	Sample and setting	Age in years of the sample	Gender (*N*)	Key outcomes on therapists/professionals	Level of evidence[a]	Methodological quality[b]
Goldfeld et al. (2008) Brazil	Empirical study with the use of clinical vignettes in writing (time-frame not reported)	Compare the mental states and countertransference responses of therapists presented with two clinical vignettes: mourning and rape trauma	Psychotherapists of differing settings	Range: unknown Mean: 38.89 (SD = 12.03)	Male:46 Female:46	In response to a mourning vignette, the expert-rated mentalizing capacities of male psychotherapists were significantly lower than the mentalizing capacities of female psychotherapists The self-reported mentalizing capacities of female psychotherapists were significantly higher than those of male psychotherapists	2c	*****
Klasen et al. (2019) Germany	Cross-sectional (2 years)	Analyse the relation between adverse childhood experiences, attachment representations and reflective functioning of therapists	Psychotherapy trainees	Range: 24–55 Mean: 31.2 (SD 6.0)	Male: 16 Female: 74	Trainees of three different psychotherapeutic orientations (cognitive behavioural, psychodynamic and analytical psychotherapy) had higher levels of mentalizing capacity when securely attached and with lower levels of adverse childhood experiences	2c	*****
Maheux et al. (2016) Canada	Empirical study with the use of videotaped clinical vignettes (time-frame not reported)	Examine the mentalisation capacity of trainee and experienced therapists	Psychology students at university or medical institution setting	Range: 19–57 Mean: 28 (SD = 8.9)	Male: 30 Female: 77	Experienced therapists had higher levels of mentalizing capacities than therapists without clinical experience	2c	*****

TABLE 1 (Continued)

Author (Year), Country	Research design and data collection methods (time-frame)	Main research objective	Sample and setting	Age in years of the sample	Gender (*N*)	Key outcomes on therapists/professionals	Level of evidence[a]	Methodological quality[b]
Reading et al. (2019) USA	Cross-sectional (time-frame not reported)	Examine therapists' mentalizing capacities as a predictor of process and outcome of psychotherapy	Clinical psychology trainees and psychiatry residents in clinical mental health setting	Range: not reported Mean: not reported	Male: 8 Female: 35	With clinical psychology trainees and psychiatry residents, higher levels of mentalizing capacities were associated with better working alliance Clinical psychology trainees and psychiatry residents with relatively high levels of mentalizing capacities were more capable of addressing and resolving ruptures in the working alliance	2c	****
Rizq and Target (2010a) UK	Qualitatively-driven mixed-methods (10 months)	Examine the role of attachment status and mentalizing capacities in how personal therapy is experienced and deployed within counselling psychologists' clinical practice	Psychologists in clinical or private practice	Range: 35–65 Mean: not reported	Male: 3 Female: 9	Mentalizing capacities of psychologists with secure/earned secure attachment patterns were higher than the mentalizing capacities of those with insecure attachment patterns Psychologists with higher levels of mentalizing capacities were more capable of emotionally identifying with the client's role and experiences Psychologists with lower levels of mentalizing capacities appeared to identify with their clients at a more intellectual or concrete level, and tended to avoid discussing difficult issues or strong emotions with clients	2c	***

(Continues)

TABLE 1 (Continued)

Author (Year), Country	Research design and data collection methods (time-frame)	Main research objective	Sample and setting	Age in years of the sample	Gender (*N*)	Key outcomes on therapists/professionals	Level of evidence[a]	Methodological quality[b]
Rizq and Target (2010b) UK	Qualitatively-driven mixed-methods (10 months)	Examine the role of attachment status and reflective function in counselling psychologists' accounts of personal therapy, focusing specifically on aspects of the therapeutic relationship with the therapist	Psychologists in clinical or private practice	Range: 35–65 Mean: not reported	Male: 3 Female: 9	Mentalizing capacities of psychologists with secure/earned secure attachment patterns were higher than the mentalizing capacities of those with insecure attachment patterns	2c	***
Safiye et al. (2022) Serbia	Cross-sectional (July 2021–February 2022)	Examine whether resilience and capacity for mentalizing can explain the degree of burnout in healthcareworkers during the COVID-19 pandemic in Serbia	Doctors ($n = 141$) and nurses ($n = 265$), working at a University Clinical Center	Range: 26–62 (doctors) and 19–61 (nurses) Mean: 40.11 ($SD = 9.41$)	Male: 139 Female: 267	Higher level of hypermentalizing (which is a form of non-mentalizing) was associated with higher level of experience of personal accomplishment at work, and lower level of emotional exhaustion and depersonalization Higher level of hypomentalizing (which is a form of non-mentalizing) was associated with higher level of emotional exhaustion and depersonalization, and with lower level of the experience of personal accomplishment at work	2c	*****

TABLE 1 (Continued)

Author (Year), Country	Research design and data collection methods (time-frame)	Main research objective	Sample and setting	Age in years of the sample	Gender (*N*)	Key outcomes on therapists/professionals	Level of evidence[a]	Methodological quality[b]
Steinmair et al. (2020) Austria	Matched case-control, cross-sectional (time-frame not reported)	Examine the relationship between reflective functioning, setting/context and mentalisation training	Psychotherapy trainees at a psychotherapeutic training institute and mental health clinicians at a psychiatric inpatient clinic	Range: 23–61 Mean: 44.8 (SD = 5.061)	Male: 19 Female: 31	Higher level of mentalizing capacity of psychotherapy trainees was associated with working in private practice when compared with working in a psychiatric inpatient clinic Psychotherapy trainees undergoing psychotherapy had higher levels of mentalizing capacities than trainees without psychotherapy	2c	****

Note: Scores are presented using stars (*) as descriptors: ***** (100% quality criteria met), **** (80% quality criteria met), *** (60% quality criteria met), ** (40% quality criteria met).

[a] Level of evidence according to the Oxford Centre of Evidence Based Medicine grading system (Oxford Centre for Evidence-based Medicine, 2009).

[b] Methodological quality according to the Mixed Methods Appraisal Tool (MMAT) version 2018 (Hong et al., 2018).

TABLE 2 Overview of the included studies regarding the effectiveness of current intervention strategies to improve the mentalizing capacities of (mental) healthcare professionals.

Author (Year), Country	Research design and data collection methods(time-frame)	Main research objective	Setting and sample	*N*	Age (years)	Gender (*N*)	Duration or frequency of the intervention-strategy	Effects and effect sizes[a]	Key outcomes	Level of evidence[b]	Methodological quality[c]
Ensink et al. (2013) Canada	Randomized controlled trial (6 months)	Examine whether a brief experiential mentalization training program, designed to improve therapists' reflective function about patients with borderline personality disorder (BPD), is effective in helping novice therapists develop these capacities	Psychology students in university setting 26 mentalising intervention, 15 active control	48 26–15	Range: 23–50 Mean: 26.50	Male: 8 Female: 40	Weekly 90-min training sessions over 20 weeks (38 h in total)	$F(2, 127) = 15.143$; $p = .000$ Cohens $D = 1.2617$ 95% CI = 0.57–1.9534	Mentalization training increased psychology students' mentalizing capacities towards patients with borderline personality disorder, whereas training-as-usual resulted in a decrease of these capacities	1b	***
Georg et al. (2022) Germany	Quasi-experimental within-subject design with repeated measures (T0, T1, T2, T3) (7 weeks)	Investigate the effect of a mentalizing skills training on the quality of the working relationship between home visitors and families within an early childhood intervention program, and the effect of this training on home visitors' empathy, self-efficacy, and mentalizing capacities	Home visitors in early childhood intervention programs, including midwives paediatric nurses and lay volunteers	73	Range: 29–66 Mean: 50.82 (SD = 8.01	Male: 2 Female: 71	A literature-based condition (10-page brochure about mentalizing) followed by a one-day (8 h) mentalizing skills training	$\beta = 0.11$, 95% CI = 0–0.21, $p = .046$ $\beta = 0.84$, 95% CI = 0.28–1.39, $p = .003$ $\beta = 2.64$, 95% CI = 1.05–4.24, $p = .001$ $\beta = 11.19$, 95% CI = 4.29–18.08, $p = .001$	Home visitors' interest in mentalization increased after mentalizing skills training and at follow-up Home visitors' capacity to mentalize family members increased after mentalizing skills training Home visitors' capacpity to take on a mentalizing stance in challenging situations with family members increased after mentalizing skills training and at follow-up	2c	*****
Lee et al. (2022) UK	Pretest-posttest (time-frame not reported)	Examine whether a brief training using a Mentalization Based Treatment model is effective in improving attitudes of trainee psychiatrists towards patients with personality disorder	Trainee psychiatrists in clinical setting	65	Range: not reported Mean: not reported	Male: 34 Female: 31	Two three-hours training sessions	$Z = 3.961$, $p = .001$, $r = .35$	Training improved trainee psychiatrists' attitudes towards patients with personality disorder to a small to moderate degree After training, none of the trainee psychiatrists demonstrated interventions for the pretend mode, which is one of the non-mentalizing modes in MBT that needs to be addressed by the therapist	2c	****

TABLE 2 (Continued)

Author (Year), Country	Research design and data collection methods(time-frame)	Main research objective	Setting and sample	*N*	Age (years)	Gender (*N*)	Duration or frequency of the intervention-strategy	Effects and effect sizes[a]	Key outcomes	Level of evidence[b]	Methodological quality[c]
Polnay et al. (2015) UK	Pretest-posttest (2 months)	Examine whether a brief teaching program in mentalizing skills, based on a Mentalization Based Treatment- Skills Package is effective in improving trainee psychiatrists' attitudes towards personality disorder	Trainee psychiatrists in clinical mental health setting	16	Range: not reported Mean: not reported	Male: not reported Female: not reported	Four one-hour weekly sessions	SMD 0.72 (95% CI 0.01–1.44) SMD 1.83 (95% CI 0.98–2.67)	Attitudes of trainee psychiatrists towards patients with personality disorder improved after the teaching program The teaching program improved trainee psychiatrists' knowledge of Mentalization Based Treatment theory and practice	2c	****
Simkin-Tran et al. (2020) Australia	Qualitative with the use of an interpretative phenomenological approach	Understand Maternal and Child Health Nurses' experiences towards infants-mother dyads when using the Newborn Behavioural Observations (NBO), and their views regarding the NBO as a support for their own mentalization processes	Practicing Maternal and Child Health Nurses (MCHN's) from metropolitan and regional locations		Range: 31–66 Mean: not reported	Male: 0 Female: 10	Two days (theoretical introduction on the Newborn Behavioural Observations (NBO), practice administration of the NBO, NBO role play, observation of and discussion about a complete NBO and NBO recording, theory on implementing the NBO in practice, and case studies	Not applicable	Mentalizing capacities of Maternal and Child Health Nurses were promoted by the use of the Newborn Behavioural Observations during their practice	2c	*****
Suchman et al. (2018)	Randomized efficacy trial (5 months)	Examine whether reflective function of addiction counsellors increases after participating in Mothering from the Inside Out training	Addiction counsellors in addiction treatment setting	15	Range: 43.40 Mean: 15.60	Male: 4 Female: 4	20 weeks (eight weekly 2-h didactic and experiential training sessions, followed by 12 weekly 2-h group supervision sessions)	$t = 3.05$, $p < .05$, Cohens $D = 0.99$	Improvement in clinical mentalizing capacities of addiction counsellors occurred after the training	1b	****

(Continues)

TABLE 2 (Continued)

Author (Year), Country	Research design and data collection methods(time-frame)	Main research objective	Setting and sample	N	Age (years)	Gender (N)	Duration or frequency of the intervention-strategy	Effects and effect sizes[a]	Key outcomes	Level of evidence[b]	Methodological quality[c]
Trowell et al. (2008) UK	Pretest-posttest (4 years)	To explore whether engaging in regular individual or small group supervision and work discussion enhances an individual's capacity for reflection and for reflective practice, which would reduce the personal stress of the work and so enhance well-being	Mental health clinicians, social workers and teachers in mental health training institute setting	56	Range: 22–55 Mean: not reported	Male: 8 Female: 48	Two years (theoretical lectures and work discussion seminars, combined with individual or small group supervision, with the aim to enhance participants' understanding of the symptoms and behaviour of their clients, and strengthen participants' thought-processes about the impact of their work on themselves)	Mean mentalizing capacity was 3.56; (SD 1.16) at beginning of training and 4.81 (SD 1.15) at 2-year follow up Cohens *D* 1.08	Mentalizing capacities of participants improved after the course	2c	**
Welstead et al. (2018) UK	Pre-posttest (2 years)	To examine whether Mentalization Based Treatment Skills teaching improves clinicians' understanding of Mentalizing and attitudes towards personality disorder	Mental health clinicians in clinical mental health setting	92	Range: not reported Mean: not reported	Male: not reported Female: not reported	Two days, separated by a few weeks	Mean within-person increase of 11.6 points (95% CI 10.0–13.3) from baseline to end-of-programme, Cohens *D* 1.2. Mean within-person increase from baseline to end-of-programme of 4.0 points (95% CI 1.8–6.2), effect size Cohens *D* 0.2	Mentalization Based Treatment Skills teaching improved knowledge of Mentalization Based Treatment and knowledge of how to apply Mentalization Based Treatment-techniques in a mixed group of mental healthcare professionals Attitudes of mental health care professionals with a medical or psychological background towards personality disorder, improved to a lesser degree after the teaching compared with nurses, possibly due to a ceiling effect	2c	**

Note: Scores are presented using stars (*) as descriptors: ***** (100% quality criteria met), **** (80% quality criteria met), *** (60% quality criteria met), ** (40% quality criteria met).

[a] Effect sizes as reported in the study.

[b] Level of evidence according to the Oxford Centre of Evidence Based Medicine grading system (Oxford Centre for Evidence-based Medicine, 2009).

[c] Methodological quality according to the Mixed Methods Appraisal Tool (MMAT) version 2018 (Hong et al., 2018).

were used to extract data from the selected studies. The first form (see Table 1) refers to the level of mentalizing capacities of (mental) healthcare professionals and associated factors, while the second (see Table 2) pertains to the effectiveness of intervention strategies to improve (mental) healthcare professionals' mentalizing capacities. In instances in which Cohen's d was not mentioned in the study, it was then calculated if the necessary information was available. A meta-analysis of these studies was not possible due to the lack of homogeneity amongst the studies in terms of design and comparators.

2.6 | Risk of bias within the individual studies

To facilitate the assessment of the potential risk of bias within each study, all included studies were critically evaluated by both the first (GF) and second author (WS), using standardized critical appraisal instruments. Due to the heterogeneity of the study designs amongst the included articles, methodological quality was assessed through the use of the Mixed Methods Appraisal Tool (MMAT) version 2018 (Hong et al., 2018). The MMAT was designed for use in systematic mixed studies reviews. It includes five core quality criteria for each of the following five categories of study designs: (a) qualitative, (b) randomized controlled, (c) nonrandomized, (d) quantitative descriptive, and (e) mixed methods. For each study, an overall quality score was calculated using the MMAT version 2018. Scores are presented using stars (*) as descriptors: 5***** (100% quality criteria met), 4**** (80% quality criteria met), 3*** (60% quality criteria met), 2** (40% quality criteria met), 1* (20% quality criteria met) (see Tables 1 and 2).

The level of evidence was classified according to the Oxford Centre for Evidence-Based Medicine grading system (Oxford Centre for Evidence-based Medicine, 2009). The studies were classified as follows. High level of evidence: 1a (=systematic review of randomized controlled trials [RCTs]), 1b (=individual RCT), 1c (=all other RCTs). Moderate level of evidence: 2a (=systematic review of cohort studies), 2b (=cohort study or low quality RCT), 2c (=outcome research or ecological studies), 3a (=systematic review of case–control studies), 3b (=case–control study). Low level of evidence: 4 (=case series). Very low level of evidence: 5 (=expert opinion) (Table 1). The authors of the studies were contacted in the event of a lack of clarity over the data presented in the paper. The narrative synthesis explores the relationship and findings, both within and between the included studies, as per the guidance from the Centre for Reviews and Dissemination (2009).

3 | RESULTS

The identification, selection, screening, and inclusion or exclusion of papers are described in the flow chart (Figure 1). The database search produced 1537 records. 1477 studies were excluded on the grounds of failing to meet the inclusion criteria (see Flowchart). The remaining 60 articles were retrieved for full-text screening, with 38 subsequently being excluded due to not meeting the inclusion criteria. In total, 22 studies were included in the final review. The publication dates of the included studies ranged from 2008 to 2022. They were carried out in the field of psychology, mental healthcare, social work, addiction treatment or general healthcare. The majority of the studies ($n=17$) concerned the domain of mental healthcare. Fourteen studies focused on the one hand, on the association between the personal and psychosocial characteristics of (mental) healthcare professionals, and on the other hand, on their mentalizing capacities. Eight studies investigated the effects of intervention strategies, namely in terms of improving the mentalizing capacities of (mental) healthcare professionals.

3.1 | Level of evidence and quality of the studies

To assess the level of evidence presented in the 22 studies, the study designs are specified in Tables 1 and 2. The level of evidence varied between 1b ($n=2$) to 2c ($n=19$). All included studies were scored with the use of the MMAT version 2018 as having either a 5***** ($n=10$), 4**** ($n=6$), 3*** ($n=4$) or a 2** ($n=2$) level of overall methodological quality. Twelve studies reported unclear information related to the criteria of the MMAT, which resulted in a score of 'cannot tell'. Such a score was considered as a "no" (0). A table presenting the ratings for each of the studies can be obtained upon request from the first author.

3.2 | Sample

The sample characteristics of all the included studies are presented in Tables 1 and 2. The included studies examined a wide variety of (mental) healthcare or educational professionals in a wide range of settings. The majority of the 22 included studies comprised a sample of psychologists/psychotherapists ($n=9$), psychology students ($n=3$), (trainee-) psychiatrists ($n=3$) or other mental health clinicians ($n=3$). Other disciplines represented included nursing students/professional nurses ($n=3$) or doctors ($n=1$) in general healthcare, social workers ($n=2$), addiction counsellors ($n=1$), nursing-aides ($n=1$), family midwives, paediatric nurses or lay volunteers, who were working as paediatric home visitors ($n=1$), and teachers ($n=1$). The ages of the study participants ranged from 19 to 70. The studies were conducted in various countries in Europe (Italy [$n=2$], Germany [$n=2$], Austria [$n=1$], Hungary [$n=1$], the United Kingdom [$n=6$] and Serbia [$n=1$]), and in the United States of America (USA [$n=2$], Canada [$n=2$], Brazil [$n=1$], Israel [$n=1$] and Australia [$n=2$]). One study was conducted with participants from different countries spread across Europe, the USA and Asia.

3.3 | Measurements of the studies

Mentalizing capacity was assessed from two perspectives (expert-rated performance [$n=14$] or self-report [$n=8$]) with different measures in 20 out of the 22 included studies.

Eight studies used the Reflective Functioning Scale (RFS) to measure mentalizing capacity (Bálint et al., 2014; Cologon et al., 2017;

Fonagy et al., 1998; Klasen et al., 2019; Reading et al., 2019; Rizq & Target, 2010a, 2010b; Steinmair et al.'s, 2020; Trowell et al., 2008). Two studies used the Therapist's Mental Activity Scale (TMAS) (Ensink et al., 2013; Maheux et al., 2016; Normandin et al., 2012). The Mental States Rating System (MSRS) was used in one study (Bouchard et al., 2001; Goldfeld et al., 2008). One study used the Clinical Reflective Functioning Task (CRFT) (Suchman et al., 2017, 2018). In one study the Three-Minutes Speech Sample – Mentalization (TMSS-M) was used (Cohen et al., 2022; Koren-Karie & Oppenheim, 2004), while one study used the Five-Minutes Speech Samples: Mind-Mindedness (FMSS-MM) (Georg et al., 2020, 2022). The RFS, TMAS, MSRS, CRFT, TMSS-M and FMSS-MM are expert-rated performance measures.

The Mental States Rating System Self-Report (MSRS-Self-Report) was used to measure mentalizing capacity in one study (Goldfeld et al., 2008; Goldfeld & Bouchard, 2004). Four studies used the Reflective Functioning Questionnaire (RFQ) (Bordoagni et al., 2021; Brugnera et al., 2021; Fonagy et al., 2016; Georg et al., 2022; Safiye et al., 2022). The Knowledge and Application of MBT Questionnaire (KAMQ) was used in two studies (Polnay et al., 2015; Welstead et al., 2018; Williams et al., 2015). One study used the Mentalization Scale (MentS) (Bhola & Mehrotra, 2021; Dimitrijević et al., 2018). The Attributional Complexity Scale (ACS) (Fletcher et al., 1986) and the Metacognition Self-Assessment Scale (MSAS) (Pedone et al., 2017) were also used in one study (Georg et al., 2022). The MSRS-Self-Report, RFQ, KAMQ, MentS, ACS and MSAS are self-report measures.

3.4 | Factors associated with healthcare professionals' mentalizing capacities

3.4.1 | Gender-related mentalizing capacities

Male psychology students, who were observing therapist-patient sessions (performed by professional actors), showed lower levels of mentalizing capacities than females (Bálint et al., 2014). This study used a quantitative descriptive study design while mentalizing capacity was measured via the use of the RFS. In their study, Goldfeld et al. (2008) used clinical vignettes to assess the mentalizing capacities of psychotherapists. In response to a mourning-related vignette, the expert-rated mentalizing capacities of male psychotherapists were found to be significantly lower than the mentalizing capacities of female psychotherapists. In the same study, the self-reported mentalizing capacities of female psychotherapists were significantly higher than those of male psychotherapists. In this study, mentalizing capacity was measured using the MSRS and the MSRS-Self-Report.

3.4.2 | Mentalizing capacities related to work setting

In Steinmair et al. (2020) study, a higher level of mentalizing capacity amongst psychotherapy trainees was associated with working in private practice in comparison to a psychiatric inpatient clinic. According to the authors, these results suggest that clinicians with higher mentalizing capacities as related to self-consciousness might prefer working in private practice. It might also suggest that the care setting and organizational variables (social context, working conditions, working hours, patient selection) might influence the development of mentalizing capacities for both work settings. Moreover, in this study, for psychotherapy trainees working in the inpatient clinic, a higher level of mentalizing capacity was associated with working full time compared to part time (no data were available for the trainees working in private practice). According to the authors, one explanation for these results is that the trainees treat more patients when working full time, and, as such, gain more clinical experience and enhance their mentalizing capacities. Based on these results, the authors argue that it is plausible that mentalizing capacities can be improved through training. This study used a matched case–control, cross-sectional study design. Mentalizing capacities were measured via the use of the RFS.

3.4.3 | Mentalizing capacities related to work experience

In an RCT conducted by Ensink et al. (2013), novice psychologists started their training with a rudimentary level of mentalizing capacity according to the criteria for different levels of mentalizing capacity outlined in the manual of the TMAS. Moreover, their mentalizing capacity was characterized by average levels of rational mental activity (comprehension of clinical material in a rational way) and low to average levels of reactive mental activity (emotional response based on little self-awareness). Similarly, in the aforementioned study of Goldfeld et al. (2008), it was shown that experienced psychoanalytically-oriented psychotherapists had higher levels of mentalizing capacity than beginners. These findings are consistent with those of Maheux et al. (2016), who found that experienced therapists also had higher levels of mentalizing capacity than trainees without clinical experience. This paper was grounded in an empirical study design and used videotaped clinical vignettes. Mentalizing capacity was measured through the use of the TMAS. These findings are also consistent with Cohen et al.'s (2022) study, where the higher levels of mentalizing capacities shown by nursing aides towards older residents with dementia classified as “easy” were related to more years of employment as a nursing aide. In this study, the classification “easy” was based on ease of communication with the resident, low levels of neuropsychiatric symptoms, and the cooperation of the resident in routine care tasks. This study adopted a quasi-experimental design, while level of mentalizing capacity was measured through the use of the TMSS-M.

3.4.4 | Mentalizing capacities related to undergoing psychotherapy

In Steinmair et al.'s (2020) study, psychotherapy trainees undergoing psychotherapy had higher levels of mentalizing capacities (measured

with the RFS) than trainees who had not undergone psychotherapy. This study used a matched case–control, cross-sectional study design. In a study of Trowell et al. (2008) that used a pretest-post-test design, mental health clinicians, social workers and teachers undergoing psychotherapy (whether currently or previously) at the start of post-graduate mental health courses also displayed higher levels of mentalizing capacity (measured with the RFS) than therapists who were not (or had not previously been) in psychotherapy. However, according to the authors, this result should be interpreted with caution insofar as only one-third of the total trainee group took part in the study, which means that selection bias is likely.

3.4.5 | Mentalizing capacities related to attachment style

Cologon et al. (2017) found in a correlational study with psychologists and social workers at a university counselling centre that there was a positive relationship between better scores on mentalizing capacity (measured with the RFS) and better scores on secure attachment style. In a sample of nursing students, lower levels of mentalizing capacity (measured with the RFQ) were associated with a preoccupied attachment pattern. Such a pattern is a form of an insecure attachment style (Bordoagni et al., 2021). This study used a case–control, cross-sectional design. These results are consistent with Brugnera et al.'s (2021) study, where a lower mentalizing capacity by psychotherapists was associated with greater attachment insecurity. The study of Klasen and colleagues shows that trainees from three different psychotherapeutic orientations (cognitive behavioural, psychodynamic, and analytical psychotherapy) had higher levels of mentalizing capacity when they were securely attached and had lower levels of adverse childhood experiences (Klasen et al., 2019). These aforesaid findings are also in line with the studies of Rizq and Target (2010a, 2010b), who found that the mentalizing capacity of counselling psychologists with securely attached/earned secure attachment patterns was higher than the mentalizing capacity of those with insecure attachment patterns. Counselling psychologists with the combination of ordinary or marked levels of mentalizing capacity and securely attached/earned secure attachment patterns, were qualitatively measured as being better equipped to identify, acknowledge, and work with the psychological aspects of themselves that they observed in their clients. These counselling psychologists also spoke explicitly about the way in which their training therapy had helped them to both cope with difficult clients and manage complex process-related issues in their clinical work.

3.4.6 | Mentalizing capacities related to the working alliance

In Reading et al.'s (2019) study that adopted a cross-sectional design, associations were found between higher levels of mentalizing capacity amongst clinical psychology trainees and psychiatry residents (measured with the RFS) and better self-reported working alliances. Moreover, clinical psychology trainees and psychiatry residents with a relatively high level of mentalizing capacity were more capable of both addressing and resolving ruptures in the working alliance.

3.4.7 | Mentalizing capacities related to countertransference-reactions

In the cross-sectional study of Rizq and Target (2010a), counselling psychologists with higher levels of mentalizing capacity (measured with the RFS) were found to be more capable of emotionally identifying with their clients' role and experiences. Conversely, counselling psychologists with lower levels of mentalizing capacity appeared to identify with their clients on a more intellectual or concrete level. They also tended to avoid discussing difficult issues or strong emotions with their clients. In Bhola and Mehrotra's (2021) study, clinical psychologists, and other mental health clinicians with higher levels of mentalizing capacity (measured with the MentS) were less burdened by negative countertransferential experiences towards patients with borderline personality disorder. These countertransferential experiences comprised feeling helpless, inadequate, unappreciated, dismissed or devalued, a sense of being disengaged, being overwhelmed by negative feelings, and wishing to either avoid or flee the interaction. These mental healthcare professionals were also less burdened with countertransferential experiences in the form of an overconcerned, overinvolved stance or having parental feelings towards these patients. Conversely, in this same study, mental healthcare professionals who had less motivation to mentalize and experienced greater difficulties in mentalizing the actions, thoughts and feelings of others, experienced more sexualized countertransferential reactions and less nurturing and protective responses towards their clients with borderline personality disorder (Bhola & Mehrotra, 2021). In a study of Goldfeld et al. (2008) using clinical vignettes, psychoanalytically-oriented psychotherapists' observer-rated mentalizing capacities were better in response to a mourning vignette compared to a vignette pertaining to a rape trauma. According to the authors, these results suggest that mental healthcare professionals find it easier to deal with the pain of loss and successive sadness, than the aggressive assault, violence and traumatic consequences associated with rape. In this study, mentalizing capacity was measured with the MSRS and the MSRS-Self-Report. Finally, in a study by Cohen et al. (2022) with a quasi-experimental design, higher levels of mentalization by nursing aides were related to higher sensitivity on the behalf of these nursing aides towards older residents with dementia, whether classified as “easy” or “difficult”. Residents were classified as “difficult” based on difficulty in communication, high levels of neuropsychiatric symptoms and being uncooperative. The TMSS-M was used in this study to measure mentalizing capacity.

3.4.8 | Mentalizing capacities related to practitioner role models

In Bálint et al.'s (2014) study, female psychology students – in contrast to male students – showed a higher level of mentalizing capacity when confronted with a female practitioner role model than with a male one. In addition to this, the authors found that psychology students observing practitioner role models of the opposite gender to their own expressed greater mentalizing remarks in response to the non-patient centred role model than to the patient-centred one. The gender of the role model had no strong effect on the male students' mentalizing capacity, while the mentalizing capacity of the female students was higher with female role models than with male role models. This indicates that females' mentalization capacities are more sensitive to the gender of the role model. This study adopted a quantitative descriptive design, while mentalizing capacity was assessed via the use of the RFS.

3.4.9 | Mentalizing capacities related to burnout

In the cross-sectional study of Safiye et al. (2022), lower levels of mentalizing capacity in the form of hyper-mentalizing of doctors and nurses working at a university clinical centre, were associated with higher levels of experience of personal accomplishment at work, and lower levels of emotional exhaustion and depersonalization. According to Maslach et al. (1997), experiencing personal accomplishment, emotional exhaustion and depersonalization constitute the three dimensions of burnout. Hyper-mentalizing refers to making too many assumptions about intentional mental states, some of which are uncritically accepted as true, despite this not being the case (Fonagy et al., 2016). According to the authors, these results can be explained by interpreting the hyper-mentalizing subscale in this sample as a high degree of confidence of these health care professionals in their own capability to accurately assess mental states. Moreover, in this study lower levels of mentalizing capacity in the form of hypo-mentalizing on the behalf of these professionals were associated with higher levels of emotional exhaustion and depersonalisation, and lower levels of experiencing personal accomplishment at work. Hypo-mentalizing refers to the lack or absence of consideration of the phenomena of mental life that determines behaviour (Fonagy et al., 2016). The authors explain these results by positing that hypo-mentalizing reduces the ability of healthcare professionals to understand both their own and other people's behaviour at work, which, in turn, can lead to interpersonal misunderstandings, professional frustrations and treating colleagues and patients in a cynical manner. In this study, mentalizing capacity was measured via the use of the RFQ.

3.5 | Effectiveness of intervention strategies designed to improve the mentalizing capacities of healthcare professionals

We found eight studies evaluating the effectiveness of intervention strategies to improve the mentalizing capacities of healthcare professionals. Only one study also reported follow-up data pertaining to the effect of training programmes after their termination (Georg et al., 2022). Hence, it remains unclear how long any of the improvements cited in most of the studies will last.

The studies generally showed that interventions had positive effects upon the mentalizing capacities of healthcare professionals. The effect sizes varied from small (SMD/Cohen's $d < .2$) to large (SMD/Cohen's $d > .8$).

3.5.1 | Effect on mentalizing capacities

First, in the randomized efficacy trial conducted by Suchman et al. (2018), there was a significant improvement in the clinical mentalizing capacities of addiction counsellors after undergoing a 20-week-long training programme on delivering an individual parenting therapy named Mothering from the Inside Out. In the controls, there was no improvement. Mentalizing capacity was measured through the CRFT (Suchman et al., 2017). Second, a study by Trowell et al. (2008) showed that the mentalizing capacity of a mixed group of professionals (mental health nurses, doctors, psychologists, social workers and teachers) improved after they participated in postgraduate mental health courses. The courses comprised theoretical lectures and work discussion seminars, along with individual or small group supervision. The aim of these courses was to enhance participants' understanding of the symptoms and behaviour of their clients and strengthen their thought processes concerning how their work impacted upon themselves. This study used a pretest-posttest study design, while mentalizing capacity was measured with the RFS (Fonagy et al., 1998). Third, in qualitative research by Simkin-Tran et al. (2020), the mentalizing capacities of Maternal and Child Health Nurses (MCHNs) were promoted through using the Newborn Behavioural Observations in their practice. The Newborn Behavioural Observations is a relationship-based tool that offers individualized information to parents about their baby's communication strategies and overall development, with a view to strengthening the parent-infant relationship (Nugent et al., 2007; Newborn Behaviour International [NBI], n.d.). Promotion of the mentalizing capacities of MCHNs was discernible in this study across three of the four identified main themes, namely: (1) MCHNs' reflections on the mother and infant; (2) MCHNs' personal reflections; and (3) MCHNs' reflections on their actions. Following Smith and Osborn (2008), this study adopted an interpretative phenomenological approach to gain insight into MCHNs' mentalization processes. Finally, Georg et al. (2022), in their quasi-experimental within-subject design study with repeated measures, showed that in the case of home visitors in early childhood intervention programmes, mentalizing skills training increased their interest in mentalization as well as their capacity to adopt a mentalizing stance in challenging situations with family members. Furthermore, these results were still visible at follow-up. The training also enhanced home visitors' capacity to mentalize the members of the families they visited. The training consisted of a literature-based intervention (reading a 10-page brochure about mentalizing) and a one-day long mentalizing skills training workshop, which was

delivered in a group setting with a mixed format and combined didactic teaching, guided reflections, experiential and simulation-based training, and video clips. In this study, mentalizing capacity was measured via the ACS, the MSAS, the RFQ and the FMSS-MM.

3.5.2 | Effect on mentalizing capacities towards (borderline) personality disorder

First, in Ensink et al.'s (2013) RCT, the training programme increased psychology students' mentalizing capacity towards patients with borderline personality disorder, whereas training-as-usual resulted in a decrease of these same capacities. According to the authors, this indicates that the mentalizing capacities of mental healthcare professionals do not develop spontaneously, but rather in order to develop these capacities, it is necessary to specifically target them. In this study, mentalizing capacity was measured through the TMAS. Second, in Polnay et al.'s (2015) study with a pretest-posttest design, the attitudes of trainee psychiatrists towards patients with personality disorders improved after participating in a teaching programme on mentalizing skills that was based on a MBT Skills (MBT-S) package developed by the Anna Freud Centre (Bateman & Treliving, 2012). Attitudes were measured through the Attitude to Personality Disorder Questionnaire (Bowers & Allan, 2006). This programme also improved participants' knowledge of MBT theory and practice, as measured by the Knowledge and Application of MBT Questionnaire (KAMQ). This corresponds to Welstead et al.'s (2018) study, which showed that MBT-S improved attitudes towards personality disorders in a mixed group of mental healthcare professionals. However, the attitudes of professionals with a medical or psychological background towards personality disorders, as measured by the Attitude to Personality Disorder Questionnaire, improved to a lesser degree compared with the nurses. According to the authors, this was possibly due to a ceiling effect. Finally, Lee et al.'s (2022) study with a pretest-posttest design found that brief training improved the attitudes of trainee psychiatrists towards patients with personality disorders to a small to moderate degree. The training consisted of theory on personality disorders and MBT, combined with practicing MBT-skills using role-play. Attitudes towards personality disorders were measured using the Attitude to Personality Disorder Questionnaire. Remarkably, after training, none of the trainees demonstrated interventions for the pretend mode, which is one of the non-mentalizing modes in MBT that needs to be addressed by the therapist. According to the authors, this result is consistent with the clinical experience that the pretend mode is the most difficult mentalizing vulnerability in patients, both in terms of detection and effectively responding to it.

3.5.3 | Effect on knowledge of MBT

In Polnay et al.'s (2015) study with a pretest-posttest design, trainee psychiatrists knowledge of MBT theory and practice, as measured by the Knowledge and Application of MBT Questionnaire (KAMQ), improved after participating in a teaching programme on mentalizing skills that was based on a MBT Skills (MBT-S) package developed by the Anna Freud Centre (Bateman & Treliving, 2012). This corresponds to Welstead et al.'s (2018) study, which showed that MBT-S improved knowledge of both MBT and how to apply MBT-techniques in a mixed group of mental healthcare professionals. This study also showed that participants with a medical or psychological background had more prior knowledge of MBT than mental health nurses, as measured by the KAMQ.

4 | DISCUSSION

This systematic review investigated which personal and social variables are related to (mental) healthcare professionals' mentalizing capacities. The second research question concerned which intervention programmes improve the mentalizing capacities of (mental) healthcare professionals.

Overall, the review included 22 studies, of which all but four pertained to the domain of mental healthcare. The main findings of our review are that the personal factors associated with better mentalizing capacities of (mental) healthcare professionals are being female, greater work experience, and having a more secure attachment style. We also found psychosocial factors that are associated with higher mentalizing capacities, namely having personal experience with psychotherapy, female psychology students identifying with female therapist role models, and the application of mentalization within a non-residential therapy setting. Furthermore, higher mentalizing capacities of mental healthcare professionals is associated in the studies with a good patient-therapist working alliance. Moreover, a psychological associated factor is countertransference: higher levels of mentalizing capacity are associated with less countertransferential reactions in therapy. Finally, lower levels of mentalizing capacity in the form of hyper-mentalizing are associated with lower levels of burnout, while lower levels of mentalizing capacity in the form of hypo-mentalizing are associated with higher levels of burnout. With respect to the intervention strategies described in eight of the studies, which are designed to improve the mentalizing capacities of healthcare professionals, we found that all the studies reported favourable results.

The number of studies we found investigating (mental) healthcare professionals' mentalizing capacities and associated individual and psychosocial factors was rather small in comparison to the substantial number of studies exploring these capacities in patients. However, our results are consistent with these studies focused on patients. For example, we found a number of studies on patients that were consistent with our findings on (mental) health professionals, such as, for example, the relation between being female and higher levels of mentalizing, and the relation between lower levels of mentalizing and insecure attachment (Cortés-García et al., 2021; Navarra-Ventura et al., 2018). The number of studies we found that supported the effectiveness of intervention programmes for

improving the mentalizing capacities of (mental) healthcare professionals was also small in comparison to the substantial number of studies examining how intervention programmes promote these capacities in patients. However, the results of the studies we found for the effectiveness of intervention strategies in terms of improving the mentalizing capacities of healthcare professionals, were consistent with the studies examining the effectiveness of interventions amongst patients (Meier et al., 2022). Furthermore, we did not find any papers that met our inclusion criteria published between 1980 and 2008, which might indicate that the topic of mentalizing has gained increasing interest outside the psychotherapeutic treatment setting only in more recent years. A remarkable finding of this review is that none of the studies assessed mentalizing capacity in 'real-life' treatment settings with 'real-life' patients. Therefore, it remains unclear whether the results of the studies can be generalized to the field of mental healthcare.

4.1 | Strengths and limitations

Our review process has several strengths. First, to the best of our knowledge, it is the first systematic review describing both the factors associated with (mental) healthcare professionals' mentalizing capacities and the effectiveness of intervention programmes that seek to improve these capacities. Furthermore, to promote the assessment of the potential risk of bias within each paper, all included studies were critically evaluated using a standardized critical appraisal instrument, specifically designed for use in systematic experimental, qualitative and mixed studies reviews. Further, they were all rated as being of sufficient methodological quality. It is worthwhile to stress that our study looked only at associations, so we cannot draw any causal conclusions. This is most evident with respect to our findings on, first, the relation between the mentalizing capacity of therapists and the patient-therapist working alliance (Reading et al., 2019), and second, the relation between the mentalizing capacities of therapists and countertransferential reactions (Bhola & Mehrotra, 2021; Cohen et al., 2022; Goldfeld et al., 2008; Rizq & Target, 2010a). We do not know what comes first: better mentalizing capacities of therapists, or being able to establish a better working relationship, and experience less countertransferential reactions. A methodological weakness of our review process is that we did not search the grey literature on mentalizing capacities of healthcare professionals, as it can be expected that this kind of literature would also contain relevant information on this topic.

The studies we examined also had some weaknesses. For instance, in four of the studies (Bordoagni et al., 2021; Brugnera et al., 2021; Georg et al., 2022; Safiye et al., 2022) the RFQ (Fonagy et al., 2016) was used to assess the mentalizing capacity of healthcare professionals. This instrument was originally developed to assess the mentalizing capacity of people with severe mental health problems and, as a result, using the RFQ in a non-clinical population could lead to ceiling-effects. This is especially the case for mental health professionals, who already have high levels of mentalizing capacity (Rogoff et al., 2021). Further, in a number of the studies it is unclear whether the interventions studied were delivered as intended (Ensink et al., 2013; Polnay et al., 2015; Suchman et al., 2018; Trowell et al., 2008). Therefore, it remains largely unclear in this review which elements of the training served to improve the participants' mentalizing capacities, as there was scarce attention paid in the studies to which specific elements of the intervention contributed to the results.

5 | IMPLICATIONS FOR PRACTICE

In the mental health field, nurses constitute a very large part of the work force and nurses work most closely with patients on a day-to-day basis. In the training of mental health nursing personnel there is very little focus on mentalizing. Given the importance of mentalizing capacity of both the patient and the nurse for a constructive working relationship, it is important that mental health nurses are trained in the basic principles of mentalization. They should be able to recognize situations where patients' lack of ability to mentalize creates difficulties. They should also be able to recognize their own difficulties with mentalizing and be sensitive to the communicative implications this may have.

6 | CONCLUSIONS

The number of studies we found exploring the important topic of the mentalizing capacities of (mental) healthcare professionals was modest. Future research should seek to evaluate the impact of training programmes designed to improve the mentalizing capacities of (mental) healthcare professionals by employing more longitudinal and experimental designs to ensure more conclusive results. Also, research should seek to evaluate how the improved mentalizing capacities of (mental) healthcare professionals impacts upon both the working alliance and patient outcomes. Furthermore, research into mentalization appears to be focused primarily on (student) psychologists and psychotherapists, and we feel that due attention needs to be paid to mental healthcare workers with a professional background such as mental health nurses and social workers. The fact that these professions are underrepresented in previous research is problematic given that they constitute a very large part of the workforce in mental healthcare provision for patients with mental illness. In addition to this, mental health nurses work closest to patients and thus are more confronted with patients' complex behaviour compared to other health care professionals. Working knowledge of recent developments in mentalization theory and practice is extremely important for mental health nurses because a decrease of mentalizing capacity can lead to iatrogenic nursing interventions. Also, mentalizing capacities of health care professionals, including mental health nurses, help to build effective therapeutic relationships. In the UK, mental health nurses and social workers are trained in Mentalization Based Treatment at the Anna Freud Centre in London (Anna Freud

Centre, 2023). Furthermore, in the Netherlands, the importance of training mental health nurses in communications skills is increasingly agreed upon, leading to choosing mentalizing as a method for this.

ACKNOWLEDGEMENTS

The authors would like to thank Caroline Planting, a medical information specialist at GGZ inGeest, Amsterdam, The Netherlands, for her extensive support in the development of a search strategy for this systematic review.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ETHICS STATEMENT

In accordance with the PRISMA-P guidelines, our systematic review protocol was registered with the International Prospective Register of Systematic Reviews (PROSPERO) on 1-3-2021 and was last updated on 23-12-2022 (registration number CRD42021208886). The work belongs to a broader research project considering the subject of mentalization (particularly in the nursing profession) and that was approved by the Scientific Quality Committee of the Amsterdam Public Health research institute (Protocol Number: SQC2019-061, date: 18th September 2019). All authors confirm that they have no conflicts of interests to report. All authors had full access to the data in the study and take responsibility for the integrity of the reviewing procedure. All authors reviewed the results and approved the final version of the manuscript. The authors confirm the following specific contribution to the paper: study conception and design: GF, WS and BvM; data collection: GF and WS; analysis and interpretation of results: GF, WS and BvM; draft manuscript preparation: GF, WS, BvM, AJB and SK.

ORCID

Gieke Free https://orcid.org/0000-0003-1232-5614

REFERENCES

Allen, J. G., Fonagy, P., & Bateman, A. W. (2008). *Mentalizing in clinical practice*. American Psychiatric Publishing.

Anna Freud Centre. (2023). *Mentalization-based treatment: Basic training*. Consulted on May 24th, from https://www.annafreud.org/training/training-and-conferences-overview/online-training-live-and-self-directed-courses/mentalization-based-treatment-basic-training/.

Bales, D., van Beek, N., Smits, M., Willemsen, S., Busschbach, J. J., Verheul, R., & Andrea, H. (2012). Treatment outcome of 18-month, day hospital mentalization-based treatment (MBT) in patients with severe borderline personality disorder in The Netherlands. *Journal of Personality Disorders*, *26*(4), 568–582. https://doi.org/10.1521/pedi.2012.26.4.568

Bálint, K., Nagy, T., & Csabai, M. (2014). The effect of patient-centeredness and gender of professional role models on trainees' mentalization responses. Implications for film-aided education. *Patient Education and Counseling*, *97*(1), 52–58. https://doi.org/10.1016/j.pec.2014.06.005

Baron-Cohen, S., Leslie, A. M., & Frith, U. (1985). Does the autistic child have a "theory of mind"? *Cognition*, *21*(1), 37–46. https://doi.org/10.1016/0010-0277(85)90022-8

Baron-Cohen, S., Wheelwright, S., Hill, J., Raste, Y., & Plumb, I. (2001). The "Reading the mind in the eyes" test revised version: A study with normal adults, and adults with Asperger syndrome or high-functioning autism. *Journal of Child Psychology and Psychiatry*, *42*(2), 241–251.

Bateman, A., & Fonagy, P. (1999). Effectiveness of partial hospitalization in the treatment of borderline personality disorder: A randomized controlled trial. *American Journal of Psychiatry*, *156*(10), 1563–1569. https://doi.org/10.1176/ajp.156.10.1563

Bateman, A., & Fonagy, P. (2001). Treatment of borderline personality disorder with psychoanalytically oriented partial hospitalization: An 18-month follow-up. *American Journal of Psychiatry*, *158*(1), 36–42. https://doi.org/10.1176/appi.ajp.158.1.36

Bateman, A., & Fonagy, P. (2008). 8-year follow-up of patients treated for borderline personality disorder: Mentalization-based treatment versus treatment as usual. *American Journal of Psychiatry*, *165*(5), 631–638. https://doi.org/10.1176/appi.ajp.2007.07040636

Bateman, A., & Fonagy, P. (2009). Randomized controlled trial of outpatient mentalization-based treatment versus structured clinical management for borderline personality disorder. *American Journal of Psychiatry*, *166*(12), 1355–1364. https://doi.org/10.1176/appi.ajp.2009.09040539

Bateman, A., & Fonagy, P. (2010). Mentalization based treatment for borderline personality disorder. *World Psychiatry: Official Journal of the World Psychiatric Association (WPA)*, *9*(1), 11–15. https://doi.org/10.1002/j.2051-5545.2010.tb00255.x

Bateman, A., & Treliving, L. (2012). *Mentalizing for mental health professionals*. Anna Freud Centre.

Bateman, A. W., & Fonagy, P. (2000). Effectiveness of psychotherapeutic treatment of personality disorder. *The British Journal of Psychiatry*, *177*(2), 138–143. https://doi.org/10.1192/bjp.177.2.138

Bhola, P., & Mehrotra, K. (2021). Associations between countertransference reactions towards patients with borderline personality disorder and therapist experience levels and mentalization ability. *Trends in Psychiatry and Psychotherapy*, *43*, 116–125. https://doi.org/10.47626/2237-6089-2020-0025

Bleiberg, E. (2003). Treating professionals in crisis: A framework focused on promoting mentalizing. *Bulletin of the Menninger Clinic*, *67*((3 Special Issue)), 212–226. https://doi.org/10.1521/bumc.67.3.212.23435

Bordoagni, G., Fino, E., & Agostini, A. (2021). Burnout, attachment and mentalization in nursing students and nurse professionals. *Healthcare*, *9*(11), 1576. https://doi.org/10.3390/healthcare9111576

Bouchard, M. A., Audet, C., Picard, C., Carrier, M., & Milcent, M. P. (2001). *The mental states rating system. Scoring manual* [Unpublished manuscript]. Département de Psychologie. Université de Montréal, Montréal, Québec, Canada.

Bowers, L., & Allan, T. (2006). The attitude to personality disorder questionnaire: Psychometric properties and results. *Journal of Personality Disorders*, *20*(3), 281–293. https://doi.org/10.1521/pedi.2006.20.3.281

Brent, B. (2009). Mentalization-based psychodynamic psychotherapy for psychosis. *Journal of Clinical Psychology*, *65*(8), 803–814. https://doi.org/10.1002/jclp.20615

Brent, B. K., & Fonagy, P. (2014). A mentalization-based treatment approach to disturbances of social understanding in schizophrenia. In P. H. Lysaker, G. Dimaggio, & M. Brüne (Eds.), *Social cognition and metacognition in schizophrenia. Psychopathology and treatment approaches* (pp. 245–259). Elsevier.

Brugnera, A., Zarbo, C., Compare, A., Talia, A., Tasca, G. A., de Jong, K., Greco, A., Greco, F., Pievani, L., Auteri, A., & Lo Coco, G. (2021). Self-reported reflective functioning mediates the association between attachment insecurity and well-being among psychotherapists. *Psychotherapy Research: Journal of the Society for Psychotherapy Research*, *31*(2), 247–257. https://doi.org/10.1080/10503307.2020.1762946

Centre for Reviews and Dissemination. (2009). *Systematic reviews. CRD's guidance for undertaking reviews in health care*. Consulted on March 12th 2021, from https://www.york.ac.uk/media/crd/Systematic_Reviews.pdf.

Chipidza, F., Wallwork, R. S., Adams, T. N., & Stern, T. A. (2016). Evaluation and treatment of the angry patient. *The Primary Care Companion for CNS Disorders*, *18*(3). https://doi.org/10.4088/PCC.16f01951

Choi-Kain, L. W., & Gunderson, J. G. (2008). Mentalization: Ontogeny, assessment, and application in the treatment of borderline personality disorder. *American Journal of Psychiatry*, *165*(9), 1127–1135. https://doi.org/10.1176/appi.ajp.2008.07081360

Cohen, L., Sher-Censor, E., Oppenheim, D., Dassa, A., Ayalon, L., & Palgi, Y. (2022). Nursing aides' mentalization, expressed emotion, and observed interaction with residents with dementia: A quasi-experimental study. *Geriatric Nursing*, *45*, 100–107. https://doi.org/10.1016/j.gerinurse.2022.03.002

Cologon, J., Schweitzer, R. D., King, R., & Nolte, T. (2017). Therapist reflective functioning, therapist attachment style and therapist effectiveness. *Administration and Policy in Mental Health and Mental Health Services Research*, *44*(5), 614–625. https://doi.org/10.1007/s10488-017-0790-5

Cortés-García, L., McLaren, V., Vanwoerden, S., & Sharp, C. (2021). Attachment, mentalizing, and eating disorder symptoms in adolescent psychiatric inpatients and healthy controls: A test of a mediational model. *Eating and Weight Disorders-Studies on Anorexia, Bulimia and Obesity*, *26*(4), 1159–1168. https://doi.org/10.1007/s40519-020-01017-z

De Ruiter, G., Van Greuningen, M., & Luijk, R. (2017). *Zorgthermometer ggz. Inzicht in de Geestelijke Gezondheidszorg*. Consulted on December 8th 2021, from https://www.vektis.nl/uploads/Publicaties/Zorgthermometer/Zorgthermometer%20Inzicht%20in%20de%20ggz%202017.pdf.

De Vries, A. M. M., Gholamrezaee, M. M., Verdonck-de Leeuw, I. M., Passchier, J., Despland, J. N., Stiefel, F., & De Roten, Y. (2017). Patient satisfaction and alliance as a function of the physician's self-regulation, the physician's stress, and the content of consultation in cancer care. *Psychooncology*, *26*(7), 927–934. https://doi.org/10.1002/pon.4233

Dimitrijević, A., Hanak, N., Altaras Dimitrijević, A., & Jolić Marjanović, Z. (2018). The Mentalization Scale (MentS): A self-report measure for the assessment of mentalizing capacity. *Journal of Personality Assessment*, *100*(3), 268–280. https://doi.org/10.1080/00223891.2017.1310730

Ensink, K., Maheux, J., Normandin, L., Sabourin, S., Diguer, L., Berthelot, N., & Parent, K. (2013). The impact of mentalization training on the reflective function of novice therapists: A randomized controlled trial. *Psychotherapy Research*, *23*(5), 526–538. https://doi.org/10.1080/10503307.2013.800950

Fearon, P., Target, M., Sargent, J., Williams, L. L., McGregor, J., Bleiberg, E., & Fonagy, P. (2006). Short-term mentalization and relational therapy (SMART): An integrative family therapy for children and adolescents. In J. G. Allen & P. Fonagy (Eds.), *Handbook of mentalization-based treatment* (pp. 201–222). John Wiley & Sons.

Fletcher, G. J., Danilovics, P., Fernandez, G., Peterson, D., & Reeder, G. D. (1986). Attributional complexity: An individual differences measure. *Journal of Personality and Social Psychology*, *51*(4), 875–884.

Flückiger, C., Del Re, A. C., Wampold, B. E., & Horvath, A. O. (2018). The alliance in adult psychotherapy: A meta-analytic synthesis. *Psychotherapy*, *55*(4), 316–340. https://doi.org/10.1037/pst0000172

Fonagy, P. (1991). Thinking about thinking: Some clinical and theoretical considerations in the treatment of a borderline patient. *International Journal of Psycho-Analysis*, *72*, 639–656.

Fonagy, P., & Bateman, A. W. (2006). Mechanisms of change in mentalization-based treatment of BPD. *Journal of Clinical Psychology*, *62*(4), 411–430. https://doi.org/10.1002/jclp.20241

Fonagy, P., Gergely, G., Jurist, E. L., & Target, M. (2002). *Affect regulation, mentalization and the development of the self*. Other Press.

Fonagy, P., Luyten, P., Allison, E., & Campbell, C. (2017). What we have changed our minds about: Part 1. Borderline personality disorder as a limitation of resilience. *Borderline Personality Disorder and Emotion Dysregulation*, *4*(1), 1–11. https://doi.org/10.1186/s40479-017-0061-9

Fonagy, P., Luyten, P., Moulton-Perkins, A., Lee, Y. W., Warren, F., Howard, S., Ghinai, R., Fearon, P., & Lowyck, B. (2016). Development and validation of a self-report measure of mentalizing: The reflective functioning questionnaire. *PLoS One*, *11*(7), e0158678. https://doi.org/10.1371/journal.pone.0158678

Fonagy, P., & Target, M. (2006). The mentalization-focused approach to self pathology. *Journal of Personality Disorders*, *20*(6), 544–576. https://doi.org/10.1521/pedi.2006.20.6.544

Fonagy, P., Target, M., Steele, H., & Steele, M. (1998). *Reflective-functioning manual, version 5.0, for application to adult attachment interviews*. UCL Press. Consulted 13th of November 2020, from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.466.3207&rep=rep1&type=pdf.

Fricchione, G. L., Borba, C. P., Alem, A., Shibre, T., Carney, J. R., & Henderson, D. C. (2012). Capacity building in global mental health: Professional training. *Harvard Review of Psychiatry*, *20*(1), 47–57. https://doi.org/10.3109/10673229.2012.655211

Frith, U., & Frith, C. D. (2003). Development and neurophysiology of mentalizing. *Philosophical Transactions of the Royal Society of London B: Biological Sciences*, *358*(1431), 459–473. https://doi.org/10.1098/rstb.2002.1218

Fuentes, J., Armijo-Olivo, S., Funabashi, M., Miciak, M., Dick, B., Warren, S., Rashiq, S., Magee, D. J., & Gross, D. P. (2014). Enhanced therapeutic alliance modulates pain intensity and muscle pain sensitivity in patients with chronic low back pain: An experimental controlled study. *Physical Therapy*, *94*(4), 477–489. https://doi.org/10.2522/ptj.20130118

Fuertes, J. N., Toporovsky, A., Reyes, M., & Osborne, J. B. (2017). The physician-patient working alliance: Theory, research, and future possibilities. *Patient Education and Counseling*, *100*(4), 610–615. https://doi.org/10.1016/j.pec.2016.10.018

Georg, A., Bruno, L., Taubner, S., & Hausschild, S. (2020). *Manual Mind-Mindedness Kodierung von Reflexionsaufgaben (Version 2.6)* [unpublished manuscript]. Universitätsklinikum Heidelberg.

Georg, A., Hauschild, S., Schröder-Pfeifer, P., Kasper, L., & Taubner, S. (2022). Improving working relationships with families in German early childhood intervention home visitors: A quasi-experimental training study. *BMC Psychology*, *10*, 302. https://doi.org/10.1186/s40359-022-01009-x

Goldfeld, P., & Bouchard, M. A. (2004). *The mental states rating system – self-report version* [Unpublished manuscript]. Federal University of the Rio Grande Do Sul.

Goldfeld, P., Terra, L., Abuchaim, C., Sordi, A., Wiethaeuper, D., Bouchard, M. A., Mardini, V., Baumgardt, R., Lauerman, M., & Ceitlin, L. H. (2008). Mental states as part of countertransference responses in psychotherapists facing reports of traumatic events of mourning and sexual violence. *Psychotherapy Research: Journal of the Society for Psychotherapy Research*, *18*(5), 523–534. https://doi.org/10.1080/10503300801968640

Graves, T. A., Tabri, N., Thompson-Brenner, H., Franko, D. L., Eddy, K. T., Bourion-Bedes, S., Brown, A., Constantino, M. J., Flückiger, C., Forsberg, S., Isserlin, L., Couturier, J., Paulson Karlsson, G., Mander, J., Teufel, M., Mitchell, J. E., Crosby, R. D., Prestano, C., Satir, D. A., Simpson, S., … Thomas, J. J. (2017). A meta-analysis of the relation between therapeutic alliance and treatment outcome in eating disorders. *The International Journal of Eating Disorders*, *50*(4), 323–340. https://doi.org/10.1002/eat.22672

Hong, Q. N., et al. (2018). *Mixed methods appraisal tool (MMAT), version 2018*. Registration of copyright (#1148552), Canadian Intellectual Property Office, Industry Canada.

Klasen, J., Nolte, T., Möller, H., & Taubner, S. (2019). Adverse childhood experiences, attachment representations and mentalizing capacity of psychotherapists in training. *Zeitschrift für Psychosomatische Medizin Und Psychotherapie*, *65*(4), 353–371. https://doi.org/10.13109/zptm.2019.65.4.353

Koren-Karie, N., & Oppenheim, D. (2004). *Insightfulness procedure administration and coding manual* [Unpublished manuscript]. University of Haifa, Haifa, Israel.

Lee, T., Grove, P., Garrett, C., Whitehurst, T., Kanter-Bax, O., & Bhui, K. (2022). Teaching trainee psychiatrists a mentalization-based treatment approach to personality disorder: Effect on attitudes. *BJPsych Bulletin*, *46*(5), 298–302. https://doi.org/10.1192/bjb.2021.50

Luyten, P., van Houdenhove, B., Lemma, A., Target, M., & Fonagy, P. (2012). A mentalization-based approach to the understanding and treatment of functional somatic disorders. *Psychoanalytic Psychotherapy*, *26*(2), 121–140.

Maheux, J., Normandin, L., Parent, K., Ensink, K., & Sabourin, S. (2016). Acitivités mentales lors de l'écoute thérapeutique: établissement de profils et influence de caractéristiques personelles. *Revue québécoise de Psychologie*, *37*(3), 217–234.

Markowitz, J. C., Milrod, B., Luyten, P., & Holmqvist, R. (2019). Mentalizing in interpersonal psychotherapy. *American Journal of Psychotherapy*, *72*(4), 95–100. https://doi.org/10.1176/appi.psychotherapy.20190021

Maslach, C., Jackson, S. E., & Leiter, M. P. (1997). *Maslach burnout inventory*. Scarecrow Education.

Meier, A. F., Zeeck, A., Taubner, S., Gablonski, T., Lau, I., Preiter, R., Gläser, H., Zipfel, S., Herzog, W., Wild, B., Friederich, H. C., Resmark, G., Giel, K., Teufel, M., Burgmer, M., Dinkel, A., Herpertz, S., Löwe, B., Tagay, S., von Wietersheim, J., … Hartmann, A. (2023). Mentalization-enhancing therapeutic interventions in the psychotherapy of anorexia nervosa: An analysis of use and influence on patients' mentalizing capacity. *Psychotherapy Research: Journal of the Society for Psychotherapy Research*, *33*(5), 595–607. https://doi.org/10.1080/10503307.2022.2146542

Moher, D., Shamseer, L., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., Shekelle, P., Stewart, L. A., & PRISMA-P Group. (2015). Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Systematic reviews*, *4*(1), 1. https://doi.org/10.1186/2046-4053-4-1

Navarra-Ventura, G., Fernandez-Gonzalo, S., Turon, M., Pousa, E., Palao, D., Cardoner, N., & Jodar, M. (2018). Gender differences in social cognition: A cross-sectional pilot study of recently diagnosed patients with schizophrenia and healthy subjects. *The Canadian Journal of Psychiatry*, *63*(8), 538–546. https://doi.org/10.1177/0706743717746661

Newborn Behavior International (NBI). (n.d.). *Newborn Behaviors Observations (NBO)*. Consulted 18th May 2022, from https://www.newbornbehaviorinternational.org/nbo-1

Normandin, L., Ensink, K., & Maheux, J. (2012). *Therapist's mental activity scale (TMAS): A revision of the countertransference rating scale (CRS)* [Unpublished manuscript]. Université Laval, Québec, Canada.

Nugent, J. K., Keefer, C. H., Minear, S., Johnson, L. C., & Blanchard, Y. (2007). *The newborn behavioral observations (NBO) system handbook*. Paul H Brookes Publishing.

Organisation for Economic Co-operation and Development (OECD). (2013). Psychiatrists and mental health nurses. In *Health at a glance 2013: OECD indicators*. OECD Publishing. https://doi.org/10.1787/health_glance-2013-26-en

Oxford Centre for Evidence-based Medicine. (2009). *Oxford Centre for Evidence-based Medicine – Levels of Evidence (March 2009)*. Geraadpleegd op 30 oktober 2020, van https://www.cebm.ox.ac.uk/resources/levels-of-evidence/oxford-centre-for-evidence-based-medicine-levels-of-evidence-march-2009

Paris, J. (2010). Effectiveness of different psychotherapy approaches in the treatment of borderline personality disorder. *Current Psychiatry Reports*, *12*(1), 56–60. https://doi.org/10.1007/s11920-009-0083-0

Pedone, R., Semerari, A., Riccardi, I., Procacci, M., Nicolò, G., & Carcione, A. (2017). Development of a self-report measure of metacognition: The metacognition self-assessment scale (MSAS). Instrument description and factor structure. *Clinical Neuropsychiatry*, *14*(3), 185–194.

Pene, C. T. H., & Kissane, D. (2019). Communication in cancer: Its impact on the experience of cancer care: Communicating with the angry patient and the patient in denial. *Current Opinion in Supportive and Palliative Care*, *13*(1), 46–52. https://doi.org/10.1097/SPC.0000000000000410

Polnay, A., MacLean, C., Lewington, E., & Patrick, J. (2015). A pilot before-and-after study of a brief teaching programme for psychiatry trainees in mentalizing skills. *Scottish Medical Journal*, *60*(4), 185–191. https://doi.org/10.1177/0036933015608125

Reading, R. A., Safran, J. D., Origlieri, A., & Muran, J. C. (2019). Investigating therapist reflective functioning, therapeutic process, and outcome. *Psychoanalytic Psychology*, *36*(2), 115–121.

Rizq, R., & Target, M. (2010a). 'If that's what I need, it could be what someone else needs.' Exploring the role of attachment and reflective function in counselling psychologists' accounts of how they use personal therapy in clinical practice: A mixed methods study. *British Journal of Guidance & Counselling*, *38*(4), 459–481.

Rizq, R., & Target, M. (2010b). "We had a constant battle". The role of attachment status in counselling psychologists' experiences of personal therapy: Some results from a mixed-methods study. *Counselling Psychology Quarterly*, *23*(4), 343–369.

Rogoff, S., Moulton-Perkins, A., Warren, F., Nolte, T., & Fonagy, P. (2021). 'Rich' and 'poor' in mentalizing: Do expert mentalizers exist? *PLoS One*, *16*(10), e0259030. https://doi.org/10.1371/journal.pone.0259030

Ronningstam, E. (2017). Intersect between self-esteem and emotion regulation in narcissistic personality disorder-implications for alliance building and treatment. *Borderline Personality Disorder and Emotion Dysregulation*, *4*(1), 1–13. https://doi.org/10.1186/s40479-017-0054-8

Sadler, L. S., Slade, A., & Mayes, L. C. (2006). Minding the baby: A mentalization-based parenting program. In J. G. Allen & P. Fonagy (Eds.), *Handbook of mentalization-based treatment* (pp. 271–288). John Wiley & Sons.

Safiye, T., Vukčević, B., Gutić, M., Milidrag, A., Dubljanin, D., Dubljanin, J., & Radmanović, B. (2022). Resilience, mentalizing and burnout syndrome among healthcare workers during the COVID-19 pandemic in Serbia. *International Journal of Environmental Research and Public Health*, *19*(11), 6577. https://doi.org/10.3390/ijerph19116577

Schwartz, R. A., Chambless, D. L., Milrod, B., & Barber, J. P. (2021). Patient, therapist, and relational antecedents of hostile resistance in cognitive–behavioral therapy for panic disorder: A qualitative investigation. *Psychotherapy*, *58*(2), 230–241. https://doi.org/10.1037/pst0000308

Schwarzer, N. H., Nolte, T., Fonagy, P., Griem, J., Kieschke, U., & Gingelmaier, S. (2021). The relationship between global distress, mentalizing and well-being in a German teacher sample. *Current Psychology*, *42*, 1–10.

Simkin-Tran, K., Harman, B., & Nicolson, S. (2020). Mentalisation amongst maternal and child health nurses using the newborn behavioural observations with infant-mother dyads: A qualitative study. *Journal of Pediatric Nursing*, *53*, e21–e27. https://doi.org/10.1016/j.pedn.2020.01.018

Skårderud, F. (2007). Eating one's words: Part III. Mentalisation-based psychotherapy for anorexia nervosa—An outline for a treatment and training manual. *European Eating Disorders Review*, *15*(5), 323–339. https://doi.org/10.1002/erv.817

Smith, J. A., & Osborn, M. (2008). Interpretative phenomenological analysis. In J. A. Smith (Ed.), *Qualitative psychology: A practical guide to research methods* (2nd ed., pp. 53–80). Sage Publications.

Steinmair, D., Richter, F., & Löffler-Stastka, H. (2020). Relationship between mentalizing and working conditions in health care. *International Journal of Environmental Research and Public Health*, *17*(7), 2420. https://doi.org/10.3390/ijerph17072420

Suchman, N. E., Borelli, J. L., & DeCoste, C. L. (2018). Can addiction counselors be trained to deliver mothering from the inside out, a mentalization-based parenting therapy, with fidelity? Results from a community-based randomized efficacy trial. *Attachment & Human Development*, *22*(3), 332–351. https://doi.org/10.1080/14616734.2018.1559210

Suchman, N. E., Carlone, C., & Borelli, J. L. (2017). *The clinical reflective functioning task* [Unpublished document]. Yale University School of Medicine.

Trowell, J., Davids, Z., Miles, G., Shmueli, A., & Paton, A. (2008). Developing healthy mental health professionals: What can we learn from trainees? *Infant Observation*, *11*(3), 333–343.

Twemlow, S. W., & Fonagy, P. (2006). Transforming violent social systems into non-violent mentalizing systems: An experiment in schools. In J. G. Allen & P. Fonagy (Eds.), *Handbook of mentalization-based treatment* (pp. 289–306). John Wiley & Sons.

Weijers, J., ten Kate, C., Eurelings-Bontekoe, E., Viechtbauer, W., Rampaart, R., Bateman, A., & Selten, J. P. (2016). Mentalization-based treatment for psychotic disorder: Protocol of a randomized controlled trial. *BMC Psychiatry*, *16*(1), 191.

Welmers-Van De Poll, M. J., Roest, J. J., van der Stouwe, T., van Den Akker, A. L., Stams, G. J. J. M., Escudero, V., Overbeek, G. J., & de Swart, J. J. W. (2018). Alliance and treatment outcome in family-involved treatment for youth problems: A three-level meta-analysis. *Clinical Child and Family Psychology Review*, *21*(2), 146–170. https://doi.org/10.1007/s10567-017-0249-y

Welstead, H. J., Patrick, J., Russ, T. C., Cooney, G., Mulvenna, C. M., Maclean, C., & Polnay, A. (2018). Mentalising skills in generic mental healthcare settings: Can we make our day-to-day interactions more therapeutic? *BJPsych Bulletin*, *42*(3), 102–108. https://doi.org/10.1192/bjb.2017.29

Williams, A., Cahill, C., & Patrick, J. (2015). *The knowledge and application of MBT questionnaire* [Unpublished manuscript].

How to cite this article: Free, G., Swildens, W., Knapen, S., Beekman, A., & van Meijel, B. (2023). Mentalizing capacities of mental health nurses: A systematic PRISMA review. *Journal of Psychiatric and Mental Health Nursing*, *00*, 1–24. https://doi.org/10.1111/jpm.12963