Judging Personality Disorder: A Systematic Review of Clinician Attitudes and Responses to Borderline Personality Disorder

Abstract

Background: The diagnosis of BPD is suggested to have particularly stigmatising connotations, particularly within mental health professionals. This paper aims to synthesise quantitative studies investigating the attitudes and responses of clinicians to BPD, and to appraise their methodological quality.

Methods: A systematic search was carried out using MEDLINE Complete; CINAHL Complete; PsychoINFO; PsychARTICLES; Scopus; Social Sciences Citation Index and Academic Search Complete. Study quality was rated using an adapted tool.

Results: 37 papers were included in the review, spanning 8691 participants and consisting of 21 cross-sectional survey studies, 5 studies assessing training workshops, 5 studies assessing counter-transference and 6 experimental studies. Methodological quality was mixed, with many differing measures used with questionable validity.

Conclusions: Negative attitudes towards BPD continue to be a problem in clinical staff groups to differing degrees. While this is most prominent in psychiatric nurses, this review highlights evidence of negative attitudes across all mental health professions and potentially in professionals working in physical health settings. Various clinician-level factors are considered in the development and maintenance of such attitudes. Greater exposure to BPD patients and attendance at training programmes are associated with improved attitudes. Professionals require regular training concerning BPD which is sufficiently evidence-based.

Background

It is suggested that mental health clinicians may form ideas and attributions as to who is a "good patient" and who is a "difficult patient", and preconceptions regarding this affect the perceived legitimacy of patient difficulties and the provision of services (Keokkeok et al, 2011). Judgements as to who is a "difficult patient" seemingly rely heavily on clinician attitudes relating to certain psychiatric diagnoses, more so than differences in patient behaviour (Keokkeok, van Meijel and Hutschemakers, 2006). Specifically, attributions as to how "difficult" patients should be treated may relate closely to presumed adherence to traditional clinician-patient power structures and clinician beliefs regarding the aetiology and course of mental health problems (Breeze and Repper, 1998; Keokkeok et al, 2011). The labelling of a patient as "difficult", even if an unconscious process, may lead to a self-fulfilling cycle of ineffective and invalidating clinician care (Keokkeok et al, 2011). Sulzer (2015) suggests that such "difficult" patients are excluded from clinical care. It is important,

therefore, to consider clinician attitudes which lead to the "difficult patient" labelling process. Where particularly stigmatising ideas exist in clinical culture, this may affect clinicians' a priori expectations of a patient and bias the way in which clinicians may understand their difficulties (Aviram, Brodsky and Stanley, 2006).

Borderline Personality Disorder and clinician attitudes

It has been argued that within clinical practice, Borderline Personality Disorder (BPD) has been synonymous with this "difficult patient" status (Koekkoek, van Meijel and Hutschemakers, 2006; Sulzer, 2015). People with a Personality Disorder (PD) have historically been identified as "the patients psychiatrists dislike" in the title of a seminal paper by Lewis and Appleby (1988). In Lewis and Appleby (1988), psychiatrists judged people within a vignette with a PD as more responsible for their problems, as a "difficult management problem" and annoying, as "in control of suicidal urges", and "less deserving of NHS resources". The question of moral responsibility appears present in the PD concept to a unique extent; indeed it has been argued that certain types of personality disorder, including BPD, have a distinctly moral (rather than clinical) nature and should be treated as such (Charland, 2006). BPD may be the most stigmatised form of PD, and this appears to exist to the strongest extent among healthcare providers (Sansone and Sansone, 2013; Sheehan, Nieweglowski and Corrigan, 2016; Ociskova et al, 2017). Some of this may relate to a historical narrative of untreatability which developed in early psychoanalytic literature (e.g. Wolberg, 1952). From a clinician's perspective, beliefs about negative treatment outcomes may be compounded by the way in which aspects of the borderline personality (such as emotional dysregulation and chronic suicidality) interfere with the therapeutic process and perhaps even undermine it (e.g. Pines, 1980).

Aviram, Brodsky and Stanley (2006) describe a pernicious dynamic between clinicians and patients with BPD, wherein clinicians defensively "emotionally distance" themselves from these patients due to therapeutic challenges and come to see patients with BPD as part of a stigmatised stereotype. This is highlighted by the accounts of nurses in working with people with BPD, in descriptions of a progressive loss of optimism and "starting to see them all as a unified group" (Woolaston and Hixenbaugh, 2008). The concept of clinician distancing has a parallel with what

Koekkoek et al (2011) describe as “ineffective chronic professional behaviour” towards difficult patients, constituting denial of treatment, inaccessibility, overly rigid interpersonal styles, a lack of therapeutic focus and multiple onward referrals. This is particularly problematic with patients with BPD, as it is resonant with core interpersonal difficulties and sensitivities to rejection that characterise the disorder (Aviram, Brodsky and Stanley, 2006). Contemporary accounts of BPD, which emphasise the role of developmental trauma in attachment problems, mentalising difficulties, and epistemic mistrust (Luyten, Campbell and Fonagy, 2020), further indicate how distancing behaviour is likely to be received as invalidating and threatening.

Staff disciplines and BPD attitudes: an unclear picture

While it has been suggested that mental health professionals harbour stigmatising attitudes towards BPD (Sheehan, Nieweglowski and Corrigan, 2016; Aviram, Brodsky and Stanley, 2006), and that these may vary between mental health nurses, psychiatrists, psychologists and psychotherapists (Sansone and Sansone, 2013; Ociskova et al, 2017), the quality of the evidence supporting this narrative is unclear. Both Sansone and Sansone (2013) and Ociskova et al (2017) have considered this question, but do not include a formal quality appraisal within their reviews of the evidence. Additionally, Ockisova et al (2017) present a narrow focus upon the term “stigma” in their literature search, limiting the scope of their review by excluding other terminology such as “attitudes”, as well as potentially related concepts such as counter-transference (McIntyre and Schwartz, 1998). A further review incorporating formal quality assessment is required.

Little is known as to how or why stigmatising attitudes may vary between mental health professionals – whether this relates to education and training (Dickens, Hallet and Lamont, 2016), or attendance to the “distancing” dynamic (Aviram, Brodsky and Stanley, 2006) through reflective practice, clinical supervision or theories of counter-transference.

Additionally, mental health professionals work alongside and interface with other professional groups, such as social workers, occupational therapists, physical health nurses and

emergency department staff, police and criminal justice staff. If a stigmatising "clinical prototype" of BPD exists in the mind of mental health professionals (Aviram, Brodsky and Stanley, 2006), it is not known whether this also exists in other professional groups.

A changing picture?

A further question relates to whether attitudes toward BPD are changing as a function of ongoing research. Stigmatising attitudes are subject to change over time, reflecting changes in the way mental health problems are described and conceptualised (Schomerus and Angermyer, 2016). BPD is increasingly conceptualised in terms of childhood adversity and maltreatment (Ibrahim, Cosgrave and Woolgar, 2018; Winsper, 2018) and neurobiological mechanisms underpinning differences in the capacities of mentalising and attachment (Fonagy, Luyten and Strathearn, 2011). It is unclear whether stigmatising attitudes in clinicians are changing to reflect developments in the theory and evidence base concerning BPD.

The current review

This paper aims to systematically review the quantitative literature from 2000-2019 relating to the attitudes of clinical and non-clinical staff groups toward BPD, who have contact with these patients. This will include psychiatrists, General Practitioners (G.P.'s), other medical staff, clinical psychologists, psychotherapists, mental health nurses, social workers, occupational therapists, physical health nurses, emergency department staff, paramedics, police officers, and criminal justice personnel. Data from obtained studies will be extracted to answer the following questions:

1) To what extent do differing clinical and non-clinical professional groups possess negative or stigmatising attitudes toward BPD?
2) Is there any evidence of a change in in stigmatising attitudes to BPD over time?
3) What differing types of quantitative research design and measurement approach have been used by these studies?
4) What is the quality of the research in this area?

Methods

Search strategy

A systematic review of the literature was conducted using MEDLINE Complete; CINAHL Complete; PsychoINFO; PsychARTICLES; Scopus; Social Sciences Citation Index and Academic Search Complete databases on 03/12/2019. Search terms were refined following scoping searches of the literature and identification of relevant keywords, including both BPD and "Emotionally Unstable Personality Disorder" (though this was rarely used). See Table 1 for search terms used. Hand-searching of reference lists of included studies was also conducted, to determine additional relevant papers.

Selection criteria

The search aimed to identify quantitative primary research focused upon the attitudes and responses of professional staff groups towards people with a diagnosis of BPD. It included staff groups who may commonly come into contact with these individuals, including psychiatrists, clinical psychologists, psychotherapists, psychiatric nurses, occupational therapists and social workers. It also included other staff groups who may come into contact with people with BPD through other forms of healthcare, as part of the emergency services, or as part of the forensic or criminal justice system: General Practitioners; hospital doctors; physical health nurses; paramedics, police and members of the judiciary. The search incorporated all forms of quantitative research methodology, including mixed methods designs. The search included English-language peer-reviewed articles only.

The following exclusion criteria were applied: qualitative studies; studies where attitudes or responses of staff were not a focus; studies which did not focus upon BPD or its relevant wider taxonomy (i.e. "Cluster B" personality disorders – APA 2013); studies focusing upon other dimensions of stigma or attitudes – i.e. internalised or "self-stigma" (Corrigan and Watson, 2002). Where there was a lack of specificity concerning personality disorder type (i.e. studies referencing

attitudes to “personality disorder” alone), studies were included if deemed directly relevant to BPD following full-text scrutiny. Limits were set to include articles published between January 2000-November 2019. As stigmatising attitudes are hypothesised to change over time (Schomerus and Angermyer, 2016), this range was set to explore clinician attitudes within contemporary practice.

Study selection

Searches were carried out using the above criteria. The screening process progressed through stages of title scrutiny, abstract scrutiny, and finally full-text review (see Figure 1).

Synthesis

A narrative synthesis was performed to summarise the findings of the studies obtained in the review. This review was intended to improve upon the scope of earlier reviews on the topic (Ociskova et al, 2017; Sansone and Sansone, 2013) from terms focusing on “stigma” alone. As it included a greater breadth of concepts relating to clinician attitudes and reactions, a broad range of different studies using variable designs and outcome measures were included. To aid synthesis of findings and accessibility, effect direction plots (Thomson and Thomas, 2013) are used to visually display non-standardised effects across broad outcome domains featured within studies.

Risk of bias in individual studies

Methodological quality was determined using the National Institutes of Health Quality Assessment Tool for Observational, Cohort and Cross-Sectional Studies Tool (NIH, 2014). Modifications were made to the NIH tool to reflect quality appraisal criteria pertinent to experimental studies, with three appraisal items from the JBI Checklist for Randomised Controlled Trials (Joanna Briggs Institute, 2017) included concerning appropriate statistical analysis, outcome measurement consistency, and study design suitability. Meanwhile, two items were removed from the NIH tool,

concerning blinding to exposure status of participants and loss to follow up after baseline, as these were typically not relevant to the research area under study. 15% of papers were second rated by the second author. Any uncertainties were resolved by discussion. There was substantial agreement on studies rated, $k = .81$ (Landis and Koch, 1977).

Results

Obtained studies and participants

The literature search returned 2533 articles (excluding duplicates), of which 256 full-text articles were screened for inclusion (Figure 1). 37 studies were included for review (see Table 3). Across the 37 papers identified, estimated total number of participants was 8196 (mean 234, [SD 221], median 132). Two studies did not report full sample statistics; hence this is a conservative estimate. For summary statistics regarding the professionals featured, please see Table 2. Studies were obtained from a range of countries: the UK (10); Australia (9); the USA (7); Israel (2); Spain, Turkey, Greece, Ireland, Italy, Norway, Denmark, Australia/New Zealand and Nepal (all contributing 1 study). Participants were recruited from a range of settings, including inpatient psychiatry, forensic psychiatry, general hospitals, community mental health clinics, academic centres and training programmes

Overall Quality Summary

See Table 4 for quality appraisal ratings of the included studies. Whilst overall study quality was variable, a main area of weakness in the identified literature concerns the range of measures used to assess stigmatising attitudes, with 24 different measures used. This reflects issues with conceptual clarity, with studies employing a range of terms to describe the reactions, expectations and

behavioural intentions of professionals towards BPD. The proliferation of multiple measures is an identified problem in stigma research (Fox et al, 2017). The result of this heterogeneity of measures is an inability to directly compare stigmatising attitudes across many of the studies. Furthermore, ten studies did not report psychometric validation of measures used, undermining the credibility of their stated results.

21 studies used cross-sectional survey designs, which aimed to assess the prevalence of negative attitudes towards BPD. 5 studies of this kind are rated as Low quality, primarily due to their use of non-validated measures (Cleary et al, 2002; Deans and Meocevic, 2006; James and Cowman, 2007; Little et al, 2010; Tulachan et al, 2018). 7 studies of this type, rated as Medium in quality, generally employ adequate measures and aim to assess differences in attitudes by function of time (Day and Hunt, 2015), occupation (Purves and Sands, 2009; Mason et al 2010b), experience or setting (Giannouli et al, 2009; Huack, Harrison and Montecalvo, 2013) or patient diagnosis (Servais and Saunders, 2007; Mason et al, 2010a; Mason et al, 2010b). 8 studies, rated as high quality, compared occupational subgroups using validated measures and typically large samples across multiple areas (Beryl and Volm, 2018; Black et al, 2011; Bodner, Cohen-Friedel and Iancu, 2011; Bodner et al, 2015; Castell, 2017; Eren and Sahin, 2016; Lanfredi et al, 2019) or analysed the impact of exposure, experience and training in detail (Eren and Sahin, 2016; Egan, Haley and Rees, 2014). A common weakness amongst all these studies is reliance on clinician self-report and the potential of socially-desirable responding. It may also be that clinicians with the most stigmatising attitudes may have been less likely to participate, with several studies having response rates of less than 50% of those approached.

5 studies assessed attitudes following training workshops for clinicians concerning management of BPD (Krawitz, 2004; Commons-Treloar and Lewis, 2008; Shanks et al, 2011; Keuroglian et al, 2016; Masland et al, 2018). These employed pre-post within-subjects designs to assess the impact of the respective workshops upon attitudes. All of these are rated as Medium in quality. Common issues include use of non-validated measures (Krawitz, 2004; Shanks et al, 2011; Keuroglian et al, 2016; Masland et al, 2018), low participation rate or significant loss to follow up

(Commons-Treloar and Lews, 2008); Masland et al, 2018). Additionally, all would have involved clinicians who had signed up to the workshops potentially reflecting a motivational bias.

5 studies assessed clinician responses to working with people with BPD through the concept of counter-transference (Rossberg et al, 2007; Thylstrup and Hesse, 2008; Bourke and Grenyer, 2010; 2013; Liebman and Burnette, 2013). 4 were assessed as Medium in quality, and 1 as low. Common weaknesses among these included small samples of therapists (Rossberg et al, 2007; Bourke and Grenyer, 2010; 2013). These studies did, however, attempt novel means of operationalising the counter-transference concept through validated measures and make interesting contributions to this literature, in helping to explore how negative attitudes might develop during therapeutic contact. While one study employed an experimental design using a large sample, psychometric validation of their proprietary measure was unclear (Liebman and Burnette, 2013). One study was rated as Low, with multiple methodological issues, unclear reporting of the sample used, and significant unaccounted confounds (Thylstrup and Hesse, 2008).

The 6 remaining studies used experimental designs to assess the impact of BPD diagnostic information on the attitudes and decision-making of clinicians. 2 of these studies were rated high in quality (Lam, Salkovskis and Hogg; 2016; Lam et al, 2016). These related studies used a videotape of a patient as study stimuli and assessed attitudes in a manner less subject to obvious demand characteristics, via clinical judgements of patient complexity. 4 other studies used vignette-based study stimuli, and so were less ecologically valid, and used some measures with unclear validity (Markham, 2003; Markham and Trower, 2003; Noblett et al, 2015; Chartonas et al, 2017). These were rated as Medium in quality.

Cross-sectional studies comparing attitudes of occupational groups

Please see Table 5 for a visual display of non-standardised effects across these studies and occupation-specific cross-sectional studies using the effect direction plot (Thomson and Thomas, 2013). A potential trend is identified toward negative attitudes being more prevalent in psychiatric

nurses compared to other featured occupations in several high-quality studies. Across other professional groups, conflicting findings are generally reported with no clear trends towards attitudes being conclusively "better" as a function of occupation.

Several high-quality studies across multiple countries used large samples to compare attitudes between occupational groups (Black et al, 2011; Bodner et al, 2015; Eren and Sahin, 2016; Castell, 2017; Lanfredi et al, 2019). Psychiatric nurses reported the most negative caring attitudes toward BPD in both Black et al (2011) and Lanfredi et al (2019), large studies conducted across multiple health and academic centres. In Black et al (2011), they had lower empathy than social workers, psychiatrists and psychologists, and less optimism regarding psychotherapy relative to social workers and psychologists, and regarding medication efficacy relative to psychiatrists. Similarly, Bodner et al (2015) found nurses and psychiatrists reported lower empathy than psychologists and social workers. Interestingly, psychiatric nurses rated suicide risk and treatment difficulty as higher than the other occupations, but rated necessity of hospitalisation as lower, and report more antagonistic evaluations of BPD. Bodner, Cohen-Freidel and Iancu (2011) report similar occupational differences in terms of empathy and found that ratings of suicidality accounted for a large degree of variance in negative emotion and treatment difficulty scores. In contrast to other studies, Eren and Sahin (2016) report no differences between occupational groups on attitudes, although their attitudinal measure refers to all PD types (and so BPD-specific effects may not have been detected). In terms of difficulty, however, general nurses and psychiatry residents found treatment most difficult, followed by psychiatric nurses, psychologists and psychiatrists. Castell (2017) provide a comparison of primary care and mental health professionals, highlighting that primary health nurses and general practitioners expressed more negative reactions and treatment difficulties. Psychologists and psychiatrists displayed the least negative emotional reactions, and psychologists rated lowest for treatment difficulties.

A few medium-quality studies assessed attitudes between professionals in other clinical settings. Beryl and Völm (2018) report that psychologists, social workers and other allied health professionals reported more positive attitudes than psychiatric nurses in medium and high-security

hospitals. Indeed, as Mason et al (2010b) suggest, psychiatric nurses in forensic settings may perceive PD patients as less "clinically treatable" and as "management issues". While they observe this trend across professions, it was most pronounced in nurses. In another setting dominated by demands of risk management, Purves and Sands (2009) measured attitudes of psychiatric triage and crisis clinicians using the APDQ. They observed that psychiatric nurses again displayed the most negative attitudes in relation to dimensions of enjoyment, enthusiasm, and purpose, although high proportions of all clinicians (including medical and allied health professions) experienced feelings of rejection and futility.

Finally, 1 low quality study examined emotional reactions, attitudes and management concerns between a small sample of mental health staff and a large sample of police officers and criminal justice staff (Little et al, 2010). Police officers reported that people with BPD were a nuisance and felt responsible for their safety. Meanwhile, psychiatric nursing staff felt that people with BPD were responsible for their own actions, and so felt little responsibility towards them. Unfortunately, they do not adequately report the measure developed for the study, and several other methodological limitations affect the generalisability of this study.

Occupation-specific cross-sectional studies

5 studies of medium quality (Servais and Saunders, 2006; Mason et al, 2010a; Huack, Harrison and Montecalvo (2014); Lugboso and Aubeeluck, 2017; Day et al, 2018), and 1 of high-quality (Egan, Haley and Rees, 2014) examined occupation-specific attitudes towards working with BPD.

As in Mason et al (2010b), Mason et al (2010a) found the forensic psychiatric nurses tended not to view people with PD as "mentally ill" and considered them in terms of behavioural issues and security. Aspects of this may be a reflection of setting, as Huack, Harrison and Montecalvo (2014) report more favourable attitudes of psychiatric nurses working in a specialist behavioural unit towards self-harm in BPD than nurses in other studies (Bodner, Cohen-Friedel and Iancu, 2011). Lugboso and

Aubeeluck (2017) suggest that psychiatric nursing students may be optimistic in their attitudes towards BPD, although they observe lower APDQ scores at a later point in training suggesting some detrimental function of contact or experience. A small sample size limits potential conclusions, as does the possible factor of socially desirable responding in a student sample.

Egan, Haley and Rees (2014) found that clinical psychologists on average had similar APDQ scores to other professional groups in earlier studies. Meanwhile, Servais and Saunders (2007) found that clinical psychologists rated people with BPD as less effective, more dangerous, undesirable and highly dissimilar compared to people with depression, members of the public and themselves. While psychologists may tend to be less stigmatising than other disciplines in terms of attitudes in larger comparative research (i.e. Lanfredi et al, 2019), this suggests this is not due to professional training alone.

4 low quality studies investigated the prevalence of negative attitudes towards BPD in psychiatric nurses (Deans and Meocevic, 2006; James and Cowman, 2007;) psychiatrists (Tulachan et al, 2018) and multiple professionals (Cleary et al, 2002; this study did not compare occupational groups). All used non-validated measures and their designs do not allow for demonstration of causality or difference. All report that high proportions of their samples found working with BPD difficult, that generally negative attitudes were found, and that clinicians desired additional training in this area.

Experimental studies assessing impact of BPD label

2 high quality studies assessed the impact of superfluous historical BPD diagnostic information upon clinician judgements of a video of a patient with panic disorder (Lam, Salkovskis

and Hogg, 2016; Lam et al 2016). Lam, Salkovskis and Hogg (2016) compared judgments relating to likely efficacy of treatment, potential risks and complications, and personal attributes of the patient across three conditions. They found that inclusion of the BPD label itself, but not BPD descriptive information, was associated with more negative ratings of the patient and their response to treatment. Interestingly, they found significant group effects for student and qualified psychiatric nurses and psychiatrists, but not for social workers and psychologists. Lam et al (2016), using the same methods, found that clinicians reported significantly less reasons to be optimistic when the BPD label was included. Together, these studies suggest that it is the diagnostic label itself that is stigmatising, rather than descriptions of challenging behaviours. Both have strengths in using more ecologically valid methods than other vignette-based studies.

4 medium quality studies explored the impact of the BPD diagnosis upon clinician perceptions of patients (Markham, 2003; Markham and Trower, 2003; Noblett et al, 2015; Chartonas et al, 2017). Markham (2003) assessed ratings of social rejection and perceived dangerousness towards BPD in psychiatric nurses and health care assistants, finding that nurses expressed higher ratings of both towards BPD than depression and schizophrenia. Markham and Trower (2003) examined the impact of the BPD diagnosis upon causal attributions for challenging behaviour, compared to depression and schizophrenia, using a manipulated patient vignette. They found that a diagnosis of BPD resulted in clinicians judging the patient as more in control of challenging behaviour, and that the causes of this were rated as more stable. In both studies, clinicians were less optimistic regarding BPD than other diagnoses. Noblett et al (2015) explore the attitudes of general hospital doctors, using a vignette-based study comparing a variety of mental health and non-mental health presentations. While negative attitudes were observed towards mental illness as a whole, the most stigmatising attitudes were observed for PD, schizophrenia and criminal behaviour, with people with PD rated as unpredictable and having suspicious motives for presentation. Prior psychiatry rotation did not make a significant difference to these attitudes. Finally, Chartonas et al (2017) assessed the attitudes of psychiatry trainees towards PD in comparison to depression in an online vignette-based study. They found more negative attitudes towards PD using the semantic differential

measure from Lewis and Appleby (1988), but only weak trends towards the same using the APDQ. Specifically, they highlight feelings of futility from clinicians. All 4 studies are limited by use of vignette-based stimuli, self-report of clinicians, and measures requiring comprehensive validation. However, together they appear to further indicate that the presence of the label itself provides a stigmatising effect, galvanising the negative reactions of clinicians.

Attitudes in relation to contact, experience and training

Eighteen studies identified relationships between numbers of BPD patients treated, overall clinical experience and specific training regarding BPD and subsequent attitudes. Please see Table 5 for a visual display of non-standardised effects across these studies. There was a consistent trend across studies toward more favourable attitudes in clinicians with greater contact with BPD patients, and specific training on BPD (Black et al, 2011; Egan, Haley and Rees (2014); Huack, Harrison and Montecalvo, 2014; Eren and Sahin, 2016; Beryl and Völm, 2018; Lanfredi et al, 2019). The exception to this was in psychiatric nurses in Bodner et al (2015), where higher caseload numbers related to increased negative attitudes. For the remaining 4/5 professions included within their study, increased contact was associated with more positive attitudes.

Meanwhile, a few studies assessed potential relationships between restrictive care settings and attitudes (i.e. psychiatric hospital settings: Beryl and Völm, (2018); Eren and Sahin, (2016); Giannouli et al (2009); and a forensic hospital setting in Mason et al (2010a)). There was not a clear pattern of effects in this area, and this requires further study.

Expanding on clinician experiences, Eren and Sahin (2016) found that greater levels of overall education, specific psychotherapeutic education, regular clinical supervision and personal experiences of psychotherapy were associated with reduced difficulties in working with people with BPD, but that these factors were not associated with improved attitudes toward BPD. Liebman and Burnette (2013) similarly report that greater contact with BPD patients is associated with more positive attitudes. This was the only study to assess attitudes in clinicians across psychotherapy

modalities (i.e. specialised CBT, DBT, EMDR, mindfulness), observing that clinicians with these types of training displayed greater empathy, perceived less chronicity and felt people with BPD were more trustworthy than clinicians without psychotherapy training.

Across all obtained studies aiming to assess length of clinical experience and attitudes, there was a mixed pattern of effects. Liebman and Burnette (2013) report that younger clinicians were more likely to perceive BPD patients as presenting with conduct problems, but that they perceived them as less dangerous than more experienced clinicians. Eren and Sahin (2016) report increased difficulties in working with BPD in younger clinicians, but better overall attitudes towards them. Meanwhile, Castell et al (2017) and Black et al (2011) report no clear pattern of differences between novice and experienced clinicians. Lanfredi et al (2019) observe positive associations between caring attitudes and low and medium length of experience, while reporting more negative attitudes among more experienced clinicians.

5 studies of medium quality assessed the impact of training workshops on attitudes towards BPD (Krawitz, 2004; Commons-Treloar and Lewis, 2008; Shanks et al, 2011; Keuroglian et al, 2016; Masland et al, 2018). Shanks et al (2011) provided education as part of a cognitive-behavioural group model, STEPPS (Systems Training for Emotional Predictability and Problem Solving), while Keuroglian et al (2016) and Masland et al (2018) provide a GPM (Good Psychiatric Management) model. The remaining studies provide a more general model of education concerning BPD for public mental health and substance misuse workers (Krawitz, 2004) and emergency and mental health clinicians (Commons-Treloar and Lewis, 2008) respectively. All demonstrate improvements in clinician attitudes towards BPD, including optimism for treatment, confidence in working with these patients, personal dislike and avoidance of BPD patients, and improved attitudes towards self-harm in Commons-Treloar and Lewis (2008). Common weaknesses in these studies include use of measures requiring validation, with just Commons-Treloar and Lewis (2008) reporting on internal consistency of the ADSHQ. Another common problem is participant loss to follow-up, which is particularly prominent in Masland et al (2018) and undermines a conclusion that attitudes improved over 6

months post workshop. It may be that clinicians with more positive attitudes to BPD were both more likely to attend these workshops, and to complete follow-up measures.

Studies examining counter-transference

3 studies of medium quality (Rossberg et al, 2007; Bourke and Grenyer, 2010; 2013;), and 1 of low quality (Thylstrup and Hesse, 2008) examined counter-transference reactions to BPD. Three of these studies examined ratings from therapeutic contact with patients. Rossberg et al (2007) compare the emotional valences of counter-transference reactions from group therapists towards patients with DSM-IV cluster A+B PD's (primarily BPD) compared to cluster C PD's. Therapists reported more negative reactions towards cluster A+B patients, including feeling less confident, overwhelmed, inadequate, rejected and on guard. Bourke and Grenyer (2010) compared responses of clinical psychologists to patients with depression and BPD by categorising and then quantitively analysing therapist narratives. Therapists described BPD patients as withdrawing, critical and rejecting, leading them to feel incompetent and futile, and needing to effortfully control their emotions. The authors expand upon this in Bourke and Grenyer (2013), where further comparisons of therapy experiences with these two patient groups were made. Clinical psychologists rated more hostile, narcissistic, compliant, anxious and sexualised interpersonal responses from BPD patients, and experienced greater stress. Common weaknesses among these studies include convenience/snowball sampling, and small sample sizes of participating therapists/psychologists, with each making multiple ratings within a larger sample of patients from their caseloads. This dovetails with failure to examine the clinician's pre-existing attitudes toward BPD, another weakness of all three. These studies make a valuable contribution to this literature, through examining challenging interpersonal processes in working with

BPD in detail. Together, they suggest that clinicians require a framework of self-reflection to enable recognition of these processes and prevent adverse therapeutic outcomes. This is considered in more detail within the discussion section of this paper.

Finally, Thylstrup and Hesse (2008) examined counter-transference ratings of clinical staff in relation to patients with substance abuse problems. However, the study limitations (not employing patients with diagnosed personality disorder; unreported sample size) means it is hard to be confident in their findings.

Discussion

This systematic review of quantitative literature from 2000-2019 indicates that negative attitudes toward BPD continue to be a problem within professional populations, despite long-term recognition of this issue and the development of psychological treatments with increasing levels of effectiveness. This review drew together a breadth of literature concerning professional reactions to BPD, linking the attitudes literature with the nascent empirical counter-transference literature and experimental studies of clinician judgement. Taken together, the literature highlights the differing potential components of the stigmatisation process. Clinician feelings of futility, difficulty and rejection in therapeutic interactions were a consistent feature across professions. A feature of prejudicial attitudes, present to differing degrees among professions, appeared to be a separate component. Consideration of non-standardised effect directions from cross-sectional studies highlights a potential trend toward this being more prevalent in psychiatric nurses compared to other featured occupations. In the featured experimental studies, negative attitudes were found to be induced by application of the BPD label itself, rather than descriptions of the difficulties it denotes.

On face value, these components may interact with and reinforce each other, although further high-quality research is required in this area. Implications of these elements are discussed in further detail, together with strengths and limitations of this review and directions for future research.

Strengths and Limitations

This review updates and expands upon earlier reviews of the topic (Sansone and Sansone, 2013; Ociskova et al, 2017) through updated evidence and quality appraisal of the literature. This quality appraisal provides indications for necessary development of the field in future research, as many issues were identified in relation to dominance of exploratory cross-sectional designs and use of non-validated measures. However, the review did not systematically appraise the measures used. The review offers strengths and limitations in terms of the breadth of studies included. As studies in this field considered professional responses to BPD using differing, poorly demarcated concepts (attitudes, stigma, emotional reactions, counter-transference), synthesis of these differing areas allows for consideration of this issue across diverse professional groups, where prior reviews have featured mental health professionals alone. This has also meant that the focus of this review is more diluted. This review did not synthesise effect sizes for relevant study designs, due to the range of outcomes and measures used, although it presents non-standardised summaries of effect directions within obtained cross-sectional studies, to aid interpretation of tentative trends of effect.

Professional stigma across occupations

Psychiatric nurses, as the most studied professional group, have previously been recognised as displaying some of the most negative attitudes towards BPD (Sansone and Sansone, 2013; Dickens, Hallet and Lamont, 2015), a finding that was partially supported by the evidence obtained within this review (see Table 6), with generally negative or conflicting patterns of effects across studies. This finding is partly contrasted however by the evidence from other medical health specialties, such as General Practitioners, primary health nurses and hospital doctors (Noblett et al, 2015; Eren and Sahin, 2016; Castell, 2017) who also appeared to report very negative BPD. However, only two high-quality studies compared mental health and non-mental health specialties directly (Eren and Sahin, 2016; Castell, 2017) and therefore there is insufficient evidence to make conclusions in this area, highlighting a substantial need for research. The implications of these nascent findings are that people with this diagnosis may encounter barriers to effective healthcare.

Furthermore, literature relating to the other mental health professions depicts a more nuanced and unclear picture. In higher-quality cross-sectional studies comparing professional attitudes, there is no clear trend of effects for social workers or clinical psychologists (Table 5). In Black et al (2011), Bodner et al (2015) and Beryl and Volm (2018) social workers and psychologists seemed most optimistic about treatment, and most empathetic towards BPD, although social workers were less empathetic in Lanfredi et al (2019), and psychologists were similarly capable of prejudicial attitudes in Servais and Saunders (2007) and Egan, Haley and Rees (2014). Furthermore, psychologists show a range of difficult emotions in therapeutic treatment of BPD (Bourke and Grenyer 2010; 2013). Historically, psychiatrists have been identified as holding particularly negative views of BPD (Lewis and Appleby, 1988), though Chartonas et al's (2017) study of psychiatric trainees did not comprehensively confirm this finding, and in Black et al (2011) they were most optimistic regarding medication and overall treatment efficacy. Most featured studies including psychiatrists reported no clear direction of effects relating to positive or negative attitudes (Table 5). Taken together, this would suggest that occupational training does not wholly determine the nature of professional attitudes to BPD.

Clinician attitudes in relation to types of training, exposure, and types of experience.

Studies which explored associations between attitudes and clinician-level factors (training, exposure, and types of experience) were more illuminative. Less negative attitudes were frequently found among clinicians with higher BPD caseload numbers/overall exposure, and regular or recent BPD training (Black et al, 2011; Huack, Harrison and Montecalvo, 2014; Egan, Haley and Rees, 2014; Eren and Sahin, 2016; Beryl and Völm, 2018; Lanfredi et al, 2019) (see Table 6). Either of these factors, or both, could help to dispel negative stereotypes about the diagnosis. These were the factors with the clearest trend of effects (Table 6). Other factors, relating to mental health experience, level of education, psychotherapy training and experience of restrictive treatment settings, displayed

conflicting findings and no clear pattern of effects. For example, Eren and Sahin (2016) highlight that clinicians found inpatient work with BPD more difficult, compared to community-based work, but that this corresponded to more favourable attitudes. Meanwhile, Liebman and Burnette (2013) found that younger clinicians displayed more positive reactions to BPD patients, linking this to recency of training and intensity of supervision, although they perceived greater conduct problems than more experienced clinicians.

Liebman and Burnette (2013) propose the importance of the theoretical perspective by which professionals conceptualise BPD, suggesting that psychiatrists (and perhaps psychiatric nurses) are more likely to adhere to a medical model of conceptualisation, with more emphasis upon prototypical diagnostic features and difficult elements of risk. Supporting this view, Lam, Salkovskis and Hogg (2016) observed that psychiatrists and psychiatric nurses endorsed statements of treatment complexity and non-adherence to the greatest extent when a BPD label was applied to a patient. In Mason et al (2010a; 2010b) PD appeared to be very conceptually distinct from clinically treatable "mental illness" in these staff groups. The findings of Markham and Trower (2003) suggest that the result of this distinction is attributions of greater control over behaviour, and therefore a greater degree of perceived responsibility for difficulties. Endorsement of differing conceptualisations of BPD and the relationship to endorsement of negative stereotypes of BPD is not clear and requires further study.

An interesting question arises as to what experiences help clinicians make sense of the "interpersonal ambivalence" and "push-pull" features of the therapeutic dynamic (Bourke and Grenyer, 2010). This could be clinical experience and specialist training (Liebman and Burnette, 2013; Egan, Haley and Rees, 2014), long-term psychotherapy training/supervision or personal psychotherapy experience (Eren and Sahin, 2016). This may provide a personal framework for recognition and management of negative emotional reactions that occur during treatment (Bourke and Grenyer 2010; 2013) and prevent defensive "therapeutic distancing" of clinicians which, it has been suggested, maintains negative attitudes over time (Aviram, Brodsky and Stanley, 2006). Keokkeok et al (2011) found that if therapeutic contact is perceived as interpersonally challenging, patients are labelled as "difficult", leading to distant and invalidating clinician care.

Further research is required to establish what clinician-level factors determine an ability to sensitively and skilfully navigate challenging aspects of the therapeutic relationship in treating BPD. This could include study of clinician training, theoretical orientation, propensity toward reflective practice, use of clinical supervision, personality traits, age, clinical experiences and personal experience of mental health difficulties.

Training programmes

Perceptions of personal futility, ineffective treatment and a need for training were a common finding among staff groups, indicating a need for high-quality training programmes for professionals. While the workshops reviewed show promise, there was insufficient evidence to support the conclusion that the workshop-based educational interventions featured are effective in improving attitudes – particularly over the long-term, given the methodological limitations shared by this literature. Across the literature featured, simple pre-post measures indicated that training led to a positive effect upon attitudes to BPD (i.e. Egan, Haley and Rees 2014), however it is not clear whether short-term workshops of this type produce enduring changes in attitudes. Further research in this area should focus upon comparison of educational interventions against suitably matched controls and provide longer-term follow-up.

Implications: development of a particularly stigmatising label?

Across studies comparing attitudes to BPD and other diagnoses, BPD attracted more negative responses (Markham, 2003; Markham and Trower, 2003; Servais and Saunders, 2007; Noblett et al 2015; Chartonas et al, 2017). This confirms prior assertions that BPD is a particularly stigmatised diagnosis (Sansone and Sansone, 2013; Sheehan, Nieweglowski and Corrigan, 2016). Furthermore, aspects of negative judgment may be induced by the label itself, rather than descriptions of its symptomatology (Lam, Salkovskis and Hogg, 2016; Lam et al, 2016). If the label, not the difficulties it denotes, is a source of negative preconceptions, should mental health professions continue to adopt it? Tyrer (2009) suggests abandonment of the terminology, suggesting it is “neither borderline nor a personality disorder”.

With development of the ICD-11 classification of personality disorders, the wider terminology around personality disorder is instead evolving (e.g. Tyrer et al, 2019). PD will be described using levels of severity, from "personality difficulty", to "Mild", "Moderate" and "Severe". It will also use trait-specifiers including, after some controversy, "borderline pattern" (Tyrer et al, 2019). This is not dissimilar to the approach taken within the DSM-5 'alternative hybrid' model of personality disorder (Oldham, 2015). Speculative implications of this development are that more people may be diagnosed with a form of PD or "difficulty" (Tyrer et al, 2014); and people with the highest levels of difficulty may be diagnosed with "Severe Personality Disorder" incorporating a "Borderline Pattern". As the ICD-11 framework becomes established within clinical practice, future research must explore the potential effect of this new terminology upon clinician attitudes and responses to patients with this diagnosis. This must consider, too, that the impact on stigma of changes in diagnostic systems may not be spread equally around the globe, given the fact that DSM and ICD are adopted to different degrees in different jurisdictions. Furthermore, this must go hand-in-hand with continued research that considers the wider impact of more effective treatments of BPD on potential public stigma; so far there seems little evidence that increasing effectiveness of therapies has done much to reduce such public stigma, but this remains a possibility as access and uptake of psychological interventions becomes more widespread.

Recommendations

- Research into stigmatising attitudes in clinicians must utilise standardised, psychometrically validated measures and use these consistently to allow comparison of outcomes.
- These studies should employ ecologically valid methods (i.e. Lam, Salkovskis and Hogg, 2016) to avoid common limitations concerning self-report.
- Studies should explore clinician-level variables and their impact upon management of therapeutic difficulty in patients with BPD, reflection upon personal emotional states, and endorsement of unhelpful clinical stereotypes.
- Research concerning attitudes toward BPD in general health professionals and other areas of the public sector should be prioritised.

- Rigorous research is required to establish the effect of existing educational interventions for clinicians, and to aid their development.
- Where validated by evidence, educational programmes should form a regular and mandatory component of ongoing professional education, across occupational groups who have contact with BPD patients. This should particularly be the case for psychiatric nursing staff, who are regularly identified as having the most negative attitudes.

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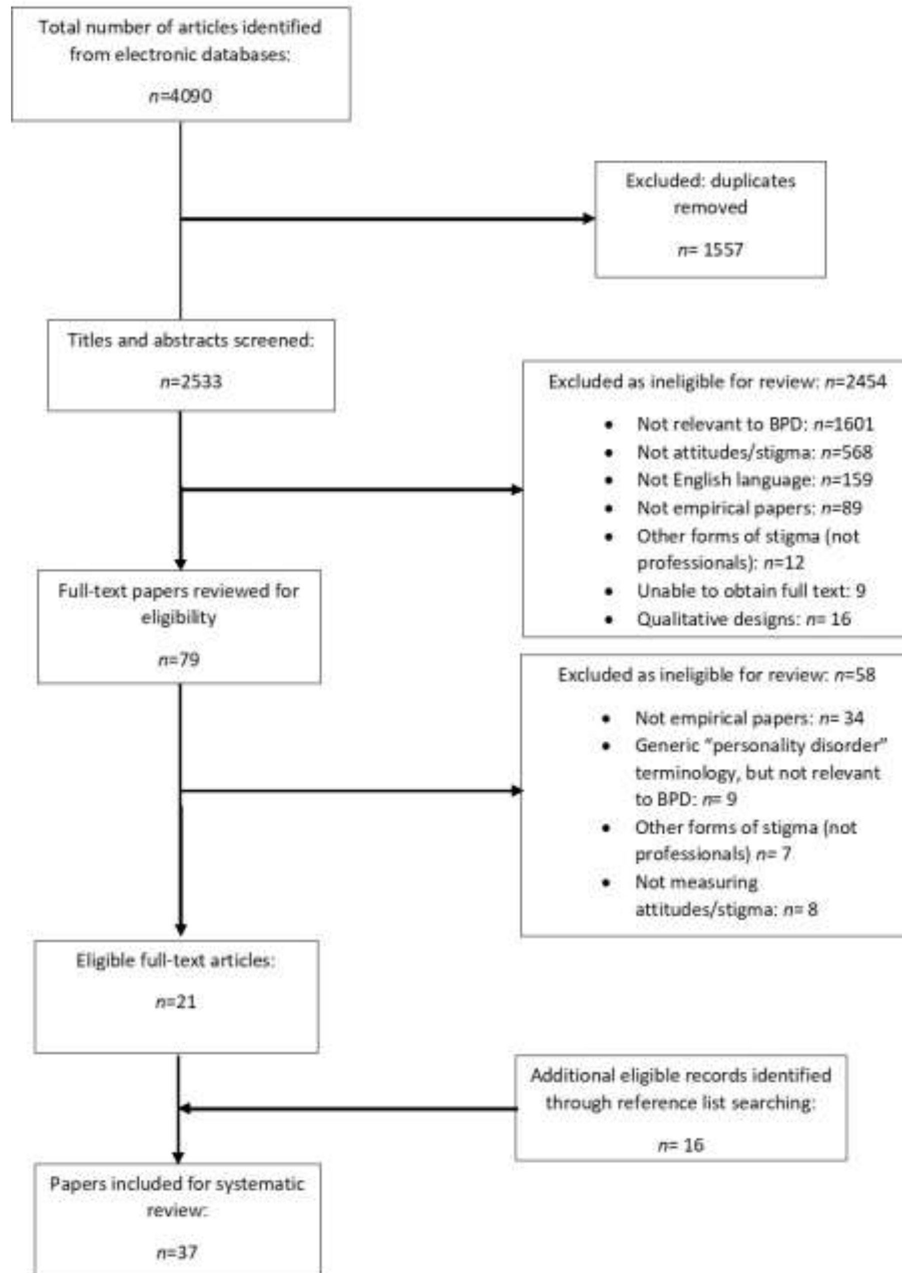
Figure 1.

PRISMA flowchart of literature searching and study selection.



Total number of articles identified from electronic databases:
n=4090
Excluded: duplicates removed
n= 1557
Titles and abstracts screened:
n=2533
Excluded as ineligible for review: n=2454
Not relevant to BPD: n=1601
Not attitudes/stigma: n=568
Not English language: n=159
Not empirical papers: n=89
Other forms of stigma (not professionals): n=12
Unable to obtain full text: 9
Qualitative designs: n= 16
Full-text papers reviewed for eligibility
n=79
Excluded as ineligible for review: n=58
Not empirical papers: n= 34
Generic "personality disorder" terminology, but not relevant to BPD: n= 9
Other forms of stigma (not professionals) n= 7
Not measuring attitudes/stigma: n= 8
Eligible full-text articles:
n=21
Additional eligible records identified through reference list searching:
n= 16
Papers included for systematic review:
n=37

Figure 1: A flow chart documenting the literature searching and screening undertaken for the current systematic review.

Table 1

Systematic review search terms.

Borderline Personality Disorder	Stigma/attitudes	Professional groups
personality disorder	stigma	psychia*
borderline personality	attitude	psychol*
borderline personality disorder	stereotype	nurs*
BPD	social distance	social worker
emotionally unstable personality disorder	empathy	occupational therapist
EUPD	exclusion	general practitioner
	mental health literacy	GP
	causal belief	doctor
	causal attribution	police
	stereotype	probation
	social distance	offender
	disattribution	paramedic
	burnout	emergency
	counter-transference	healthcare

	countertransference	NHS
		jury
		judiciary
		criminal justice system
		forensic

Table 2. Breakdown of participants across obtained studies by occupational group.

Professional Group	*N*	Number of studies
Psychiatric Nurse	3191	25
Psychiatrist	1372	19
Clinical Psychologist	1425	21
Social Worker	734	14
Psychotherapist	163	3
Occupational Therapist	69	3
General Practitioner	122	3
Adult/General Nurse	189	4
Misc. Allied Health Professions	175	5

Hospital Doctor	56	2
Counsellor	57	2
Student Psychiatric Nurse	145	3
Police	210	1
Unregistered Nursing Staff	21	1

Table 3. Studies investigating aspects of professional stigma toward Borderline Personality Disorder.

Author(s) and date	Country	Study aims	Sample/population	Design and methodology	Aspect of stigma studied	Key findings
Beryl and Völm (2018)	• UK	• Assess attitudes toward personality disorder in staff working in high security and medium security hospitals.	• *n*=132 • Psychiatric Nurse: 70 • Allied Health Professionals: 29 • Psychologists: 23 • Psychiatrists: 3 • Social Workers: 3	• Survey-based design, using the APDQ	• Clinician attitudes toward working with personality disorder (unspecified). • Factors of APDQ: enjoyment, security, acceptance, purpose and enthusiasm.	• Nurses and psychiatrists held the most negative attitudes. • Psychologists, social workers and allied health professionals held more positive attitudes. • Positive attitudes associated with specific BPD training, and non-nursing background.
Black et al (2011)	• USA	• Assess attitudes toward BPD among clinicians across various academic centres in USA	• *n*=706 • Psychiatrist/Psychiatry resident: 353 • Social worker: 98 • Psychiatric nurse: 97 • Psychologist: 89 • Nurse practitioner/physician assistant: 17 • Other: 52	• Survey-based design using proprietary measure: unnamed 30 item inventory	• Attitudes toward treating patients with BPD • Scales of measure: empathy; treatment optimism; caring attitudes	• Nurses had lowest ratings for caring attitudes, empathy and treatment optimism. The remaining professions were optimistic about differing aspects of treatment. • Positive ratings associated with

						greater number of BPD patients treated in past 12 months.
Bodner, Cohen-Friedel and Iancu (2011)	• Israel	• Develop and factor analyse a measure of attitudes toward BPD; compare attitudes of various clinicians toward BPD	• *n*=57 • Psychiatric nurses: 25 • Psychiatrists: 19 • Psychologists: 13	• Survey based design using proprietary measures: a Cognitive Attitudes Inventory and the Emotional Attitudes inventory	• Attitudes toward treating patients with BPD – clinical judgements (cognitive aspects) and emotional reactions • Identified factors of measure: suicidal tendencies, antagonistic judgement; required treatment (cognitive items); negative emotions; difficulties in treatment; empathy (emotional items).	• Suicidal tendency ratings explained large degree of variance in negative emotion and treatment difficulty scores. While there were some occupational differences regarding antagonistic judgements and empathy, there were no significant main occupational group differences. •
Bodner et al (2015)	• Israel	• Assess attitudes of clinicians toward hospitalisation and treatment of patients with BPD, compared with depression	• *n*=691 • Psychiatric Nurses: 262 • Psychiatrists: 167 • Clinical Psychologists: 162 • Social workers: 100	• Survey-based design using measures developed in Bodner, Cohen-Friedel and Iancu (2011), and a “Implicit Attitudes	• Attitudes toward treating patients with BPD (cognitive and emotional aspects) • Ratings of suitability of hospitalisation	• Nurses rated more negative cognitive attitudes and less empathy than social workers and psychologists. Ratings of empathy were similar across

		or generalised anxiety disorder		Inventory" containing a case vignette with experimental manipulation of diagnosis	(comparison by diagnosis) • Ratings of perceived traits of patient, i.e. wise-stupid; selfish-unselfish (comparison by diagnosis).	nurses and psychiatrists.
Bourke and Grenyer (2010)	• Australia	• Examine the emotional and cognitive responses of therapists to patients with BPD compared to those with depression	• *n*=20 • Clinical Psychologists: 20	• Mixed-methods design using categorisation of interview data and quantitative analysis of these categories.	• Responses of clinicians relating to aspects of the therapeutic relationship. Categories of: wishes for self/other for self/other; responses of other for other/self; responses of self for self/other.	• Emotional responses of psychologists were more negative towards patients with BPD, and they felt less satisfied in their work.
Bourke and Grenyer (2013)	• Australia	• Assess the experiences of psychotherapists treating people with BPD, in comparison to people with major depressive disorder	• *n*=20 • Clinical Psychologists: 20	• Mixed-methods design using a questionnaire (PRQ) designed to investigate appraisals of patients and the therapeutic relationship	• Operationalised countertransference responses from therapists to BPD patients. • Factors of PRQ: hostile; narcissistic; compliant/anxious; positive working alliance; avoidant/dismissing and sexualised	• Psychologists expressed greater clinical stress in working with patients with BPD compared to those with depression. • They perceived BPD patients to exhibit higher hostile, narcissistic compliant, anxious and sexualised dimensions of response during psychotherapy.

Castell (2017)	• Spain	• Assess negative attitudes towards BPD patients in clinicians across general and mental health settings.	• *n*= 310 • Primary health nurse: 65 • General Practitioner: 66 • Psychiatric Nurse: 56 • Psychologist: 62 • Psychiatrist: 61	• Survey-based design, using the Emotional Attitudes Inventory from Bodner et al (2011), and a proprietary measure to assess potential use of electronic application	• Attitudes towards treating patients with BPD	• Primary care professionals rated factors of negative emotions and treatment difficulties as higher than the mental health professionals. Empathy was rated similarly across the groups. Psychologists and Psychiatrists scored lowest for negative emotions, and Psychologists were lowest for treatment difficulties.
Chartonas et al (2017)	• UK	• Assess negative attitudes towards patients with BPD in psychiatry trainees	• *n*=76 • Psychiatry trainees with varying years of experience	• Experimental design using case vignettes, with experimental manipulation of diagnosis used and patient race. Attitudes captured using 22 semantic differentials questionnaire from Lewis and Appleby (1988) and APDQ.	• Attitudes towards BPD patients compared to depression	• A weak trend toward more negative attitudes regarding BPD using the APDQ was non-significant. There appeared to be less sense of purpose when working with BPD.

Cleary, Siegfried and Walter (2002)	• Australia	• To assess clinician experiences, knowledge and attitudes toward BPD	• *n*=229 • Psychiatric nurse: 151 • Psychiatrist/psychiatry registrar: 35 • Psychologist: 15 • Social worker: 18 • Occupational therapist: 6 • Other: 3	• Survey-based design using a proprietary questionnaire. Between-group ratings were not compared.	• Knowledge regarding BPD and level of confidence in working with them. Attitudes towards providing people with BPD with services.	• 80% of clinicians surveyed felt that BPD patients were difficult to work with. Most participants held constructive attitudes towards further training.
Commons-Treloar and Lewis (2008)	• Australia and New Zealand	• To assess impact of targeted clinical education on clinician attitudes toward self-harm in BPD	• *n*=99 • Emergency Medicine clinicians: 33 • Mental Health clinicians: 66 • Nursing: 75 • Allied health: 20 • Medical: 4	• Pre-post within-subjects design concerning attendance at an education session. Attitudes toward self-harm captured using ADSHQ measure designed for study.	• Attitudes towards deliberate self-harm in BPD. • Factors of ADSHQ: confidence in assessment/referral; ability to work effectively; use of empathetic practice; confidence in use of policy.	• The education session improved ratings regarding confidence in management. There was minimal impact upon ratings of empathetic treatment, and no differences between occupational areas.
Day et al (2018)	• Australia	• To assess clinician attitudes toward BPD over a 15-year period	• *n*=66 • Psychiatric Nurses (33 in 2000; 33 in 2015).	• Mixed-methods longitudinal design using the short-form APDQ, ADSHQ and the ASQ alongside semi-structured interviews.	• Attitudes towards BPD and deliberate self-harm. • ASQ items: willingness; optimism; enthusiasm; confidence; theoretical knowledge and clinical skills.	• Scores on the ADPQ were significantly more positive in the 2015 sample.

Deans and Meocevic (2006)	• Australia	• Assess clinician attitudes towards BPD.	• *n*=65 • Psychiatric Nurses	• Exploratory survey-based design using a questionnaire developed in an earlier study.	• Attitudes toward BPD, management of patients, and clinician emotional reactions.	• High proportions of the survey sample rated patients with BPD as manipulative, emotionally blackmailing and responsible for their difficulties.
Egan, Haley and Rees (2014)	• Australia	• Assess the attitudes of clinical psychologists toward PD, in relation to training and caseload number	• *n*=81 • Clinical Psychologists	• Exploratory survey-based design using the APDQ. Scores were assessed in relation to training, proportion of caseload with PD, and years of experience using regression.	• Attitudes towards working with PD, incorporating enjoyment/loathing; security/vulnerability; acceptance/rejection; purpose/futility; enthusiasm/exhaustion	• 92% of sample had completed specialist training in the past. However, mean scores were comparable to other studies using the APDQ with other occupational groups. • There were significant positive relationships between positive APDQ ratings, higher caseload numbers recency of training.

Eren and Sahin (2016)	• Turkey	• Assess clinician attitudes and perceived difficulties in working with people with PD.	• *n*=332 • Psychiatrists and psychiatric residents: 70 • Psychiatric Nurses: 140 • Nurses: 88 • Clinical Psychologists: 30 • Social Workers: 4	• Survey-based design using three measures (PIQ, PD-DWS, PD-APS).	• Attitudes towards PD in general, emotional reactions, and perceptions of difficulty while working with people with PD.	• Greater levels of education, length of experience, psychotherapy education, personal experience of psychotherapy and clinical supervision were associated with lower perceived difficulties in working with PD, but did not consistently result in better attitudes
Giannouli et al (2009)	• Greece	• Assess clinician knowledge, attitudes and experience concerning patients with BPD, and compare these across differing hospital settings.	• *n*=127 • Psychiatric Nurses: 127, 64 of which were based in psychiatric hospitals, with 63 based in psychiatric outpatient departments in general hospitals.	• Descriptive survey-based design, using the questionnaire developed by Cleary, Siegfried and Walter (2002).	• Knowledge regarding BPD and level of confidence in working with them. Attitudes towards providing people with BPD with services.	• 80% of those surveyed felt that working with BPD was very difficult. Many rated services as inadequate and displayed contradictory views on whether assessment/treatment was part of their role.

Huack, Harrison and Montecalvo (2013)	• USA	• Assess clinician attitudes toward patients with BPD exhibiting deliberate self-harm.	• *n*=83 • Psychiatric Nurses: 83	• Descriptive survey-based design, using an adapted version of the ADSHQ	• Negative attitudes toward deliberate self-harm in patients with BPD.	• Greater years of experience and a desire to pursue further training were correlated with more positive attitudes towards self-harm.
James and Cowman (2007)	• Ireland	• Assess clinician knowledge, experience and attitudes toward patients with BPD	• *n*=157 • Psychiatric Nurses: 157	• Descriptive survey-based design, using the questionnaire developed by Cleary, Siegfried and Walter (2002).	• Clinician knowledge and confidence toward BPD, and perceived role in assessment/treatment.	• Replicated finding of 80% of clinicians rating care of BPD as difficult. Most felt confident in working with BPD, felt that assessment/treatment was their role and wanted to pursue training.
Keuroghlian et al (2016)	• USA	• Assess the effect of a Good Psychiatric Management workshop upon clinician attitudes toward BPD.	• *n*=297 • Counsellors/Social Workers: 88 • Psychiatrists and Psychiatry Residents: 91 • Psychiatric Nurses: 67 • Psychologists: 37 • Primary care Physicians/Physician Assistants: 14	• Pre-post within subjects design assessing impact of training session on attitudes, using unnamed questionnaire developed by Shanks et al (2011).	• Clinician attitudes toward BPD, it's prognosis and treatment.	• Improved ratings are reported across a range of attitudes toward BPD patients, reflecting increased empathy and awareness of distress.
Krawitz (2004)	• Australia	• Assessing effect of a training workshop on attitudes of clinicians towards BPD	• *n*=418 • Psychiatric Nurses: 192 • Psychologists: 59 • Social Workers: 59 • Occupational Therapists: 33 • Psychiatrists: 21	• Pre-post within subjects design assessing impact of training session on attitudes, measured by a proprietary questionnaire.	• Clinician attitudes towards working with people with BPD. • Items related to: willingness; optimism; enthusiasm; confidence;	• Significant differences found following the workshop. Medium effect sizes are reported for most items, with a large effect noted for optimism.

			• 13% of sample unreported		theoretical knowledge; clinical skill	
Lam, Salkovskis and Hogg (2016)	• UK	• Evaluate experimentally whether clinician judgements about a patient with panic disorder were influenced by a historical BPD diagnosis.	• *n*=265 • Psychiatrists: 30 • Clinical/Counselling Psychologists: 69 • Social Workers: 55 • Psychiatric Nurses: 65 • Mental health students: 46	• Experimental, randomised design with three conditions, assessing impact of BPD descriptive information and diagnostic label on clinical judgements of a video of a woman with panic disorder.	• Clinician judgements relating to optimism, responses to interventions and presumed difficulties, as influenced by superfluous BPD descriptive information and diagnostic label.	• The BPD label was associated with more negative evaluations of the patient and her response to interventions.

Lam et al (2016)	• UK	• Evaluate experimentally whether inclusion of superfluous BPD terminology affects clinician optimism regarding current panic disorder treatment.	• As in Lam, Salkovskis and Hogg (2016a).	• As in Lam, Salkovskis and Hogg (2016a), although clinician optimism was measured qualitatively. Responses were categorised and quantitatively analysed.	• Clinician optimism and pessimism concerning treatment of uncomplicated panic disorder, as influenced by BPD descriptive and diagnostic information.	• Insertion of the BPD label resulted in significantly fewer reasons to be optimistic regarding treatment.
Lanfredi et al (2019)	• Italy	• Assess caring attitudes towards BPD among a large sample of mental health professionals across 70 public health sites.	• *n*=860 • Psychiatrists: 225 • Psychologists and Psychotherapists: 74 • Social Workers: 35 • Psychiatric Nurses: 420 • "Social Health Educators"*: 110	• Exploratory survey-based design using two measures: the BPD-SAS from Black et al (2011), and the MICA 4.	• Clinician attitudes towards BPD, with reference to negative attitudes toward severe mental illness in general. • Specific factor of BPD-SAS described as "Caring Attitudes". • MICA 4 factors described as "negative attitudes toward mental illnesses".	• Social workers and nurses scored significantly lower on caring attitudes toward BPD than psychiatrists, psychologists and SHE's. A higher caseload of BPD patients, attendance at training and moderate clinical experience were associated with higher caring attitudes.

Liebman and Burnette (2013)	• USA	• Assess counter-transference reactions of clinicians towards a vignette describing BPD characteristics, across client and clinician-specific factors.	• *n*=560 • Psychologists: 257 • Psychiatrists: 81 • Psychotherapists/ Social Workers: 231 • 348 of these practitioners had some form of "special training" – i.e. DBT/CBT/Mindfulness	• Quasi-experimental between-subjects design, with client age and gender manipulated. Clinicians assigned a diagnosis (i.e. BPD, Bipolar) and made attitudinal judgements. Clinician reactions measured by proprietary measure based on earlier stigma-based measures.	• Counter-transference/stigma reactions. • Scale items: empathy; chronicity; conduct problems; distrust; interpersonal efficacy and dangerousness.	• The BPD label was associated with negative counter-transference reactions, especially in the adolescent condition. It was associated with lower levels of empathy, lower trustworthiness, and increased dangerousness. • Psychotherapists, psychologists, those with training specific to BPD, and those with higher proportions of BPD clients were more positive. Older clinicians were more negative, as were psychiatrists.

Little et al (2010)	• Australia	• Assess emotional reactions, concerns and attitudes toward management of BPD in police, criminal justice, support and health staff.	• *n*=378 • Police: 210 • Court Official: 6 • General Practitioner: 42 • Nurses: 19 • Social Workers: 19 • Child Protection Workers: 12 • Welfare workers: 10 • Psychiatric Nurses: 34 • Psychiatrists/Medical Officers: 13 • Psychologists: 1	• Exploratory survey-based design using a proprietary measure.	• Attitudes towards people with BPD and their management across a range of service providers including emergency and criminal justice services. • Items within measure: emotional reactions; concerns; management.	• Police were more likely to regard people with BPD as a nuisance and felt responsible for their safety. Mental health staff were more likely to perceive a person with BPD as being responsible for their own actions, i.e. crime or suicide
Lugboso and Aubeeluck (2017)	• UK	• Examine negative attitudes towards BPD in psychiatric nursing students	• *n*=53 • First-year students: 30 • Final-year students: 23	• Quasi-experimental design, with student year as independent variable, measuring attitudes using the APDQ.	• Attitudes towards working with people with BPD.	• First-year students made slightly more positive ratings than final-year students who had recently completed PD education sessions. Enjoyment was significantly less in the final year.

Markham (2003)	• UK	• Assess the effect of the BPD label on staff attitudes and perceptions.	• *n*=71 • Psychiatric Nurses: 50 • Health Care Assistants: 21	• Experimental within-subjects design.Attitudes assessed using three measures from earlier studies, adapted for the study: social distance scale; beliefs about dangerousness scale; staff optimism scale	• Attitudes towards BPD in comparison with those towards schizophrenia and depression. Levels of sympathy across conditions and optimism for change.	• Nurses were more socially rejecting, perceived greater dangerousness, and were less optimistic towards BPD than schizophrenia. HCA's made no distinctions between conditions.
Markham and Trower (2003)	• UK	• Assess effect of BPD label on perceptions and attributions for challenging behaviours.	• *n*=48 • Psychiatric Nurses: 48	• Experimental within-subjects design.Dependent variables were assessed using three measures: a causal attribution questionnaire, and sympathy and optimism measures from Markham (2003).	• Attributions made regarding challenging behaviours in people with BPD, compared to those with depression or schizophrenia. Levels of sympathy towards each patient group, and optimism for change. • Causal attribution dimensions: internality, stability, globality and controllability of behaviour.	• The BPD vignette attracted more negative responses than the other conditions. Causes of negative behaviour were rated as stable, and more controllable in this condition. Clinicians reported lower optimism and negative working experiences with this client group.

Masland et al (2018)	• USA	• Assess whether the effects of a Good Psychiatric Management workshop upon clinician attitudes toward BPD are sustained after 6 months.	• *n*=52 • Psychiatrists: 18 • Social Workers: 18 • Psychiatric Nurses: 6 • Psychologists: 5 • Other mental health workers: 4 • Counsellors: 1	• Pre-post within subjects design assessing impact of training session on attitudes over three time points, using adapted version of unnamed questionnaire developed by Shanks et al (2011).	• Clinician attitudes toward BPD, it's prognosis and treatment.	• While some attitudinal improvements were noted immediately post-workshop, some negative attitudes persisted. However, there was a notable drop in these attitudes at 6 months, with respondents reporting greater comfort and empathy with these patients.
Mason et al (2010a)	• UK	• Assess clinician perceptions of clinical and management issues involving patients with PD (unspecified) in high, medium and low security forensic psychiatric settings.	• *n*=416 • Psychiatric Nurses (various grades): 317 • Dual Qualification Psychiatric - General Nurses: 43 • Dual Qualification Psychiatric - Learning Disabilities Nurses: 56	• Exploratory survey-based design. Clinician perceptions assessed using a 20 item questionnaire designed in an earlier study.	• Clinician perceptions as to whether PD constituted a "management" issue and whether this was "clinically treatable".	• A PD diagnosis led to greater perceptions of being a "management issue" compared to forms of mental illness, which were viewed as more clinically treatable. These factors were more pronounced in medium and high security settings.
Mason et al (2010b)	• UK	• As in Mason (2010a), while examining differences between clinician occupational groups.	• *n*=545 • Psychiatric Nurses (various grades): 416 • Psychiatrists: 33 • Psychologists: 45 • Social Workers: 21 • Occupational Therapists: 30	• As in Mason et al (2010a).	• As in Mason et al (2010a), but across clinician occupational groups.	• People with PD were more of a "management" or security issue, and less clinically treatable, across occupations. There were significant differences between nursing and non-

						nursing professions, with this trend more pronounced in the nursing group.
Noblett, Lawrence and Smith (2015)	• UK	• Examine the attitudes of general hospital doctors towards patients with comorbid mental illness (including PD).	• *n*=52 • Medical staff (foundation doctors years 1 and 2, and core trainees): 52 • 27 of these had experienced a 6 month psychiatry rotation	• Experimental within-subjects design, concerning attitudes towards a series of short vignettes. Attitudes measured using the AMIQ.	• Attitudes of clinicians towards a range of mental health conditions, including PD. • AMIQ scale items: comfortable seeing on own; hard to talk to; dangerous; unpredictable; suspicious of reason for attending.	• The least positive attitudes were toward patients with personality disorder, schizophrenia, and people labelled as “criminals”.
Purves and Sands (2009)	• Australia	• Assess the attitudes of psychiatric triage and crisis clinicians towards people with PD.	• *n*=61 • Allied Health: 12 • Medical: 10 • Psychiatric Nursing: 38	• Exploratory survey-based design. Attitudes towards PD measured with the APDQ.	• Attitudes of clinicians towards PD (unspecified).	• Psychiatric triage and crisis clinicians were found to have negative attitudes towards PD.
Rossberg et al (2007)	• Norway	• Assess differences in counter-transference reactions between cluster A+B (mainly BPD) and C PD’s, and the relation of these	• Psychotherapists *n*=11, rating reactions toward 71 patients.	• Observational design with counter-transference reactions assessed using the FWC-58. These were obtained from therapist	• Counter-transference reactions of clinicians toward patients with various forms of PD. • Dimensions of FWC-58: important; confident; rejected; on guard; bored;	• Psychotherapists reported feeling less confident, more rejected, on guard, overwhelmed and inadequate regarding cluster A+B patients (predominantly BPD). There was greater variance in

		reactions to outcome.		experiences of group psychotherapy.	overwhelmed; inadequate.	this area, indicating disagreement between therapists.
Servais and Saunders (2007)	• USA	• Assess attitudes of clinical psychologists towards people with BPD, depression and schizophrenia	• *n*=306 • Clinical Psychologists: 306	• Exploratory survey-based design. Attitudes toward mental disorders rated using a proprietary measure.	• Attitudes of clinicians towards BPD, depression and schizophrenia. • Scales of measure: effectiveness; understandability; safety; worthiness; desirability; similarity to rater	• Greatest ratings of dissimilarity obtained for BPD and schizophrenia. People with BPD were rated as more dangerous, and as undesirable by 42% of the sample.
Shanks et al (2011)	• USA	• Determine whether attendance at a STEPPS BPD group workshop improved clinician attitudes toward BPD.	• *n*=271 • Does not report full sample statistics • Social Workers: 104 • Counsellors: 56 • Psychologists: 25 • Others included Psychiatrists, Probation Officers, Substance Abuse Counsellors at low proportions of sample	• Pre-post within subjects design assessing the impact of the workshop upon clinician attitudes, using a proprietary measure.	• Clinician attitudes toward BPD, its treatment and likely prognosis. • Items of measure: avoidance of BPD patients; feeling competent in care; whether BPD is an illness that cause distress; helping motivation; prognosis; desire for training.	• Significant improvements are reported across attitudes of clinicians, representing improved awareness, empathy and optimism towards BPD.

Thylstrup and Hesse (2008)	• Denmark	• Assess clinician emotional reactions to personality disorder features.	• Does not report sample statistics • Staff included addiction counsellors, social workers, nurses and psychologists • Patients were users of a substance misuse service.	• Exploratory survey-based design, where patient self-rated PD features and staff reactions were measured using the FWC-58.	• Counter-transference/ emotional reactions of staff members toward features of differing PD's.	• Self-rated BPD features (of patients) were not associated with any emotional reactions (in staff).
Tulachan et al (2018)	• Nepal	• Assess attitudes toward PD in Nepalese psychiatrists.	• *n*=36 • Psychiatrists: 36	• Exploratory survey-based design using a proprietary measure.	• Clinician attitudes toward PD (majority cluster B) concerning behavioural intentions (i.e. avoidance), difficulty in treating and feelings competence.	• Findings paralleled those from Western studies. 75% of participants found PD patients difficult, and that they didn't feel competent in treating them. Two-thirds reported that they wouldn't avoid such patients.

Key: AMIQ: Attitudes to Mental Illness Questionnaire; APDQ: Attitudes to Personality Disorder Questionnaire; ADHSQ: Attitudes toward Deliberate Self Harm Questionnaire; BPD-SAS: Borderline Personality Disorder – Staff Attitude Survey; CAQ: Clinical Assessment Questionnaire; FWC-58: Feeling-Word Checklist – 58; MICA 4: Mental Illness Clinicians' Attitudes Scale 4; PIQ: Personal Information Questionnaire; PD-DWS: Difficulty of Working with Personality Disorders Scale; PD-APS: Attitudes towards Patients with Personality Disorders Scale. See Appendix D for further information regarding measures.

Table 4. Quality appraisal ratings of included studies.

Author(s) and date	Clear research question	Specified population	Participation >50% (survey) OR loss to follow up > 30% (pre-post)	Sample power calculations	Exposure to BPD measured?	Outcome assessed in relation to exposure?	Outcome measures valid/reliable	Accounting for confounds	Consistent measurement of outcomes	Suitable statistical analysis	Study design suitable	Overall quality
Beryl and Völlm (2018)	X	X	O	O	X	X	X	X	X	X	X	High
Black et al (2011)	X	X	O	X	X	X	X	X	X	X	X	High
Bodner et al (2011)	X	X	CD	O	X	X	X	X	X	X	X	High
Bodner et al (2015)	X	X	CD	O	X	X	X	X	X	X	X	High
Bourke and Grenyer (2010)	X	X	N/A	O	X	O	X	X	X	X	X	Medium
Bourke and Grenyer (2013)	X	X	N/A	O	X	O	X	O	X	X	X	Medium
Castell (2017)	X	X	X	O	X	X	X	X	X	X	X	High
Chartonas et al (2017)	X	X	O	O	X	O	X	X	X	X	X	Medium
Cleary (2002)	X	X	O	O	X	O	O	O	X	X	O	Low
Commons-Treloar and Lewis (2008)	X	X	O	O	X	O	X	O	X	X	X	Medium
Day et al (2018)	X	X	O	O	X	X	X	O	X	X	X	Medium
Deans and Meocevic (2006)	X	X	X	O	X	O	O	O	X	O	O	Low
Egan et al (2014)	X	X	O	X	X	X	X	X	X	X	X	High
Eren and Sahin (2016)	X	X	X	O	X	O	X	X	X	X	X	High
Giannouli et al (2009)	X	X	X	O	X	X	O	X	X	X	O	Medium
Huack et al 2013	X	X	X	O	X	X	X	O	X	X	X	Medium

Author(s) and date	Clear research question	Specified population	Participation >50% (survey) OR loss to follow up > 30% (pre-post)	Sample power calculations	Exposure to BPD measured?	Outcome assessed in relation to exposure?	Outcome measures valid/reliable	Accounting for confounds	Consistent measurement of outcomes	Suitable statistical analysis	Study design suitable	Overall
James and Cowman (2007)	X	X	O	O	X	O	O	O	X	X	O	Low
Keuroghlian et al (2016)	X	X	CD	O	X	X	O	X	X	X	X	Medium
Krawitz (2004)	X	X	X	O	X	O	O	O	X	X	X	Medium
Lam, Salkovskis and Hogg (2016)	X	X	N/A	O	X	X	X	X	X	X	X	High
Lam et al (2016)	X	X	N/A	O	X	X	X	O	X	X	X	High
Lanfredi et al. (2019)	X	X	X	X	X	X	X	X	X	X	X	High
Liebman and Burnette (2013)	X	X	CD	O	X	X	O	X	X	X	X	Medium
Little et al (2010)	X	O	O	O	O	O	O	O	X	O	O	Low
Lugboso and Aubeeluck (2017)	X	O	X	O	O	X	X	O	X	O	X	Medium
Markham (2003)	X	X	CD	O	X	O	O	O	X	X	X	Medium
Markham and Trower (2003)	X	X	CD	O	X	O	O	X	X	X	X	Medium
Masland et al (2018)	X	X	O	O	O	O	O	X	X	X	X	Medium
Mason et al (2010a)	X	X	O	O	X	O	X	O	X	X	X	Medium
Mason et al (2010b)	X	X	O	O	X	X	X	O	X	X	X	Medium
Noblett et al (2015)	X	X	O	O	X	X	O	O	X	X	X	Medium
Purves and Sands (2009)	X	X	O	O	O	X	X	O	X	O	X	Medium
Rossberg et al (2007)	X	X	X	O	X	X	X	O	X	O	X	Medium

Servais and Saunders (2007)	X	X	O	X	O	O	O	X	X	X	X	Medium
Shanks et al (2011)	X	X	N/A	O	X	O	O	X	X	X	X	Medium
Thylstrup and Hesse (2008)	X	O	CD	X	O	O	X	O	X	X	O	Low
Tulachan et al. (2018)	X	X	O	O	O	O	O	X	X	X	O	Low

Key: X: Yes; O: No; CD: Cannot Determine; N/A: Not Applicable given design of study. Studies rated as "High" score over 9/11 criteria as Yes and do not display obvious confounds, report psychometric validation of measures and use appropriate statistical methods. Those rated as "Medium" score between 6-9 and report adequate statistical methods, some psychometric validation or discussion thereof, and some confounds may be present but accounted for. Those rated as "Low" score <=5 and present with significant methodological issues relating to measures, statistics, unaccounted confounds or are very limited in scope.

Table 5: Effect direction plot summarising non-standardised effects of clinician attitudes in relation to occupational group from cross-sectional studies.

Study	Overall sample	Psychiatric Nurses	Clinical Psych.	Psychiatrists	Social Worker	Psychothera-pists	Misc. Allied Health	Adult/ General Nurses	G.P.'s	Hosp. Doctors	Police
High Quality											
Lanfredi et al. (2019)	860	▼	▲	▲	▼	---	▲	---	---	---	---
Castell (2017)	310	◀▶	▲	▲	---	---	---	▼	▼	---	---
Eren and Sahin (2016)	332	◀▶	◀▶	◀▶	◀▶	---	---	---	---	---	---
Beryl and Völlm (2018)	132	▼	▲	◀▶	◀▶	---	▲	---	---	---	---
Black et al (2011)	706	▼	◀▶	◀▶	◀▶	---	◀▶	---	---	---	---
Bodner et al (2011)	57	◀▶	◀▶	◀▶	---	---	---	---	---	---	---
Bodner et al (2015)	691	▼	▲	◀▶	▲	---	---	---	---	---	---
Egan et al (2014)	81	---	◀▶	---	---	---	---	---	---	---	---
Medium Quality											
Mason et al (2010a)	416	▼	---	---	---	---	---	---	---	---	---
Mason et al (2010b)	545	◀▶	---	---	---	---	◀▶	---	---	---	---
Liebman and Burnette (2013)	560	---	◀▶	◀▶	---	◀▶	---	---	---	---	---
Servais and Saunders (2007)	306	---	▼	---	---	---	---	---	---	---	---
Huack et al (2013)	165	◀▶	---	---	---	---	---	---	---	---	---
Purves and Sands (2009)	61	< >	< >	---	---	---	< >	---	---	< >	---
Low Quality											
Cleary et al (2002)	516	< >	---	---	---	---	---	---	---	---	---
Deans and Meocevic (2006)	65	< >	---	---	---	---	---	---	---	---	---
James and Cowman (2007)	65	< >	---	---	---	---	---	---	---	---	---
Little et al (2010)	387	< >	< >	< >	< >	---	< >	< >	< >	---	V
Tulachan et al (2018)	80	---	---	< >	---	---	---	---	---	---	---

Key: sample size in specified group large arrow ▲ >200; medium arrow ▲ 50-200; small arrow ▲ <50. Effect direction: ▲ = positive effect of occupation upon attitudes; ▼ = detrimental effect; ◄► = unclear or conflicting findings. ▲ or ▼ reported where >70% of outcomes report consistent direction and statistical significance. ◄► reported where <70% of outcomes report consistent direction of effects and statistical significance. Unshaded arrows indicate descriptive statistics only, or incomplete reporting of other statistical methods. Abbreviations: Clin. Psych = Clinical Psychologists; G.P.'s = General Practitioners; Hosp. Doctors = medical doctors working in acute hospital specialties/settings. Method reported in Thomson and Thomas (2013).

Table 6. Effect direction plot summarising non-standardised effects of clinician attitudes in relation to types of training, exposure, and types of experience.

Study	Overall sample	BPD training (short)	MH experience	Exposure to BPD patients	Level of education	Psychotherapy training	Restrictive setting
High Quality							
Lanfredi et al. (2019)	860	▲	◄►	▲	---	---	---
Castell (2017)	310	---	◄►	▲	---	---	---
Eren and Sahin (2016)	332	---	---	---	◄►	◄►	◄►
Beryl and Völlm (2018)	132	▲	◄►	▲	---	---	◄►
Black et al (2011)	706	---	◄►	▲	---	---	---
Bodner et al (2015)	691	---	---	▲ [1]	---	---	---
Egan et al (2014)	81	▲	---	▲	---	---	---
Medium Quality							
Liebman and Burnette (2013)	560	▲	◄►	▲	---	▲	---
Huack et al (2013)	165	---	◄►	◄►	◄►	---	---
Day et al (2018)	66	◄►	◄►	---	◄►	---	---
Keuroghlian et al (2016)	297	▲	---	---	---	---	---
Mason et al (2010a)	416	---	---	---	---	---	▼
Shanks et al (2011)	271	▲	---	---	---	---	---
Commons-Treloar and Lewis (2008)	99	▲	▲	▲	▲	---	---
Giannouli et al (2009)	127	---	---	◄►	---	---	◄►
Purves and Sands (2009)	61	---	---	---	▲	---	---
Lugboso and Aubeeluck (2017)	53	---	◄►	---	---	---	---
Krawitz (2004)	669	▲	---	---	---	---	---

Key: sample size in specified group large arrow ▲ >200; medium arrow ▲ 50-200; small arrow ▲ <50. Effect direction: ▲ = positive effect of factor upon attitudes; ▼ = detrimental effect; ◄► = unclear or conflicting findings. ▲ or ▼ reported where >70% of outcomes report consistent direction and statistical significance. ◄► reported where <70% of outcomes report consistent direction of effects and statistical significance. Method reported in Thomson and Thomas (2013).

[1]Bodner et al (2015) report consistent positive effect direction for 4/5 professional groups for BPD exposure; however, in psychiatric nurses they report a negative effect for exposure.