



Citation for published version:

Attwood, J, Wilkinson-Tough, M, Lambe, S & Draper, E 2019, 'Improving attitudes towards personality disorder: is training for health and social care professionals effective?', *Journal of Personality Disorders*, pp. 1-23.
https://doi.org/10.1521/pedi_2019_33_458

DOI:

[10.1521/pedi_2019_33_458](https://doi.org/10.1521/pedi_2019_33_458)

Publication date:

2019

Document Version

Peer reviewed version

[Link to publication](#)

© 2019 Guilford Press. The final publication is available at *Journal of Personality Disorders* via
https://doi.org/10.1521/pedi_2019_33_458

University of Bath

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Improving attitudes towards personality disorder: is training for health and social care professionals effective?

Abstract

Health and social care professionals are more likely to hold negative attitudes towards people with a diagnosis of personality disorder than people with other mental health diagnoses. Negative attitudes have also been found to negatively impact on care and service provision. This review sought to systemically evaluate training aimed at improving professional attitudes towards people with a diagnosis of personality disorder. Electronic databases PsychINFO, PubMed, EMBASE, Web of Science, and PROQUEST were searched and 19 papers were included. Results show that training is effective and that improvements tend to be maintained. The results suggest that 1) co-production with people with personal experience of a personality disorder diagnosis, 2) communicating a psychological model to participants, and 3) teaching participants clinical skills for use in their work improves effectiveness. Further research in the form of randomised controlled trials that use validated measures and follow-up participants for at least 6-months is needed.

Keywords: personality disorder, professional attitudes, mental health stigma, staff training, systematic review

Introduction

‘Personality Disorder’ is a diagnostic construct used to label someone who experiences severe difficulties in self and interpersonal functioning, and who presents with personality traits that are considered pathological in nature (American Psychiatric Association, 2013). National guidelines state that professionals working with people with a personality disorder diagnosis should work in an ‘engaging, open and nonjudgemental manner’ and foster ‘an atmosphere of hope and optimism’ (National Institute for Health and Care Excellence, 2009), however, there is abundant evidence that healthcare professionals often hold negative attitudes (Chartonas, Kyratsous, Dracass, Lee, & Bhui, 2017; Sansone & Sansone, 2013; Westwood & Baker, 2010). For example, several studies have found that people with a diagnosis of personality disorder are often seen by professionals as more difficult (James & Cowman, 2007; Lewis & Appleby, 1988; McGrath & Dowling, 2012) and

less likely to engage in treatment (Lam, Poplavskaya, Salkovskis, Hogg, & Panting, 2016). Studies have also found that negative attitudes can lead to poorer care including less empathic responses (Fraser & Gallop, 1993; McGrath & Dowling, 2012) and inadequate service provision (James & Cowman, 2007; Lam et al., 2016). Negative attitudes have also been found to be associated with reduced staff wellbeing (Taylor, 2011).

Attribution theory (Weiner, 1985) proposes that attitudes towards people are guided by the causal explanations given to events. For example, interpreting events as stable or unchangeable is proposed to result in a loss of hope and decreased helping behaviour e.g. 'why bother, they'll never change'. Similarly, interpreting events as personally controllable is proposed to result in reduced empathy, or anger and punishment, as opposed to help e.g. 'they know what they're doing'. In line with this, research shows that nursing staff attribute the negative behaviours of clients with a personality disorder diagnosis as being more stable and controllable than those with other diagnoses, and report less sympathy and more anger (Forsyth, 2007; Markham & Trower, 2003). It has also been proposed that that signals, such as mental health labels, can alone trigger stereotyped attitudes that then drive discriminatory behavior (Corrigan, 2000). This model applied to attitudes towards personality disorder would suggest that modifying attributions may be an effective way to improve attitudes. Corrigan and Penn (1999) identified three categories of interventions aimed at reducing mental health stigma and discrimination: protest, education, and contact. Research has shown that both developing a better understanding through education and having contact with a person with a mental health diagnosis can improve attitudes in the general population (Corrigan, 2000).

Various training programmes aimed at improving health and social care professionals' attitudes towards people with a diagnosis of personality disorder have been developed and evaluated. These programmes vary in terms of diagnostic group targeted, length of intervention, use of a psychological model, whether there was a skills component, and whether the intervention was co-produced with People with Personal Experience (PPE) of a personality disorder diagnosis. Most studies have found that attitudes improved to some extent following training, however, this poses the question of what components of training are most effective. A previous systematic review of interventions aimed at improving nurses' attitudes towards people with a diagnosis of Borderline Personality Disorder (BPD)

identified nine studies. The authors concluded that formally training nurses to deliver Dialectical Behaviour Therapy (DBT) (Linehan, 1993) appeared to result in improved attitudes, but that the evidence base was too small and weak in methodological quality to reliably suggest that less-intensive training was effective (Dickens, Hallet, & Lamont, 2016). Due to the existence of several additional studies evaluating training aimed at improving attitudes towards personality disorder more broadly, and the fact that this previous review only included training aimed at mental health nurses, a further systemic review is needed to synthesise all the available information. This review aims to address the following questions:

- 1) Is training effective in improving attitudes towards people with a diagnosis of personality disorder?
- 2) Are improvements in attitudes maintained over time?
- 3) Does including a psychological model, skills component, or PPE increase effectiveness?
- 4) Does the length of training influence effectiveness?
- 5) Is the effectiveness of training influenced by gender, professional role, length of experience, prior training, or pre-training attitudes?

Most modern definitions of attitude involve belief and feeling components and how these may help predict people's actions (Hogg & Vaughan, 2014). This review will therefore be interested in beliefs, feelings and behavioural tendencies towards, people with a diagnosis of personality disorder. In line with previous research, this review will be particularly interested in empathy, optimism and motivation to help.

Method

The review was conducted using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher, Liberati, Tetzlaff, & Altman, 2009). Electronic databases PsychINFO, PubMed, EMBASE, Web of Science, and PROQUEST were searched to find relevant titles and abstracts. The searches were initially conducted in August 2017 and repeated in August 2018. The search words were terms to describe the Participants (“Clinician”, “Health Personnel”, “Staff”, “Professional”, “Nurse”, “Doctor”, “Psychologist”, “Worker”, or “Psychiatrist”), in combination with the type of intervention (“Training”, “Teaching”, “Education”, “Psychoeducation”, “Psycho-education”, “Educational Program”, or “Workshop”) and the diagnostic group targeted by the intervention (“Personality Disorder”), and also in combination with terms used to define attitude (“Attitude”, “Empathy”, “Sympathy”, “Compassion”, “Optimism”, “Hopefulness”, “Confidence”, “Motivation”, “Willingness”, or “Enthusiasm”). Syntax were modified as necessary for each database. References were imported into EndNote and duplications were deleted. Titles and abstracts were screened, and the full-texts of any potentially relevant studies were assessed to determine eligibility for inclusion. Reference sections of included studies were also screened for additional papers and authors were contacted via email to request additional published or unpublished studies. A Participants, Intervention, Comparison, and Outcome (PICO) framework was used to determine the selection of studies for inclusion in the review (Table 1). Dissertations were considered for inclusion, but conference abstracts and papers not written or translated into the English language were excluded.

Table 1

PICO inclusion and exclusion criteria for included studies.

	Inclusion Criteria	Exclusion Criteria
Participants	Staff working in health, criminal justice or social care settings	Participants do not include staff working in health, criminal justice or social care settings
Intervention	Training that is primarily aimed at improving attitudes towards personality disorder	Training that is not primarily aimed at improving attitudes towards personality disorder, for example, training primarily aimed at delivery therapy
Comparison	Some statistical exploration of the impact of the training on professional attitudes (either pre and post measures or between group comparisons)	No statistical exploration of the impact of the training on professional attitudes
Outcome	At least one quantitative measure of: <ul style="list-style-type: none"> • overall attitudes • empathy (empathy, sympathy, compassion) • optimism (optimism, hopefulness, confidence) • motivation (motivation, willingness, enthusiasm) towards people with a diagnosis of personality disorder 	No quantitative measure of: <ul style="list-style-type: none"> • overall attitudes • empathy (empathy, sympathy, compassion) • optimism (optimism, hopefulness, confidence) • motivation (motivation, willingness, enthusiasm) towards people with a personality disorder.

Quality assessment

Due to the high proportion of uncontrolled cohort studies identified during preliminary searches the Critical Appraisal Skills Programme (CASP) checklist for cohort studies was chosen to assess the methodological quality of the included studies (Critical Appraisal Skills Programme, 2017). The CASP checklist consists of 12 questions which are rated 'Yes', 'No', or 'Can't Tell'. Questions 1 and 2 are screening questions and a rating of 'No' or 'Can't Tell' for either resulted in exclusion from the review. The original CASP questions and how each was operationalized for the purposes of this review is provided in Table 2. To obtain an overall quality score, each criterion was awarded points (Yes = 1, No = 0, Can't Tell = 0.5) in line with previous systematic reviews using the measure (Lamont, Scott, Jones, & Bhattacharya, 2015).

Table 2

Quality assessment measure

	CASP Question	Review Question
1.	Does the study address a clearly focused issue?	Is the study aimed at evaluating the impact of training on attitudes towards people with a diagnosis of PD/BPD?
2.	Is the recruitment acceptable?	Is the sample representative of people who work with clients with a diagnosis of PD/BPD?
3.	Was the exposure accurately measured?	Is it certain all participants received the exact same intervention?
4.	Was the outcome accurately measured?	Is the measure used valid and reliable?
5.	Has adequate attention been paid to all potential confounding factors?	Gender, experience with client group, professional role, prior training, baseline attitudes.
6.	Is the follow up good enough?	Was the follow up longer or equal to six months and has any loss to follow up been adequately managed?
7.	What are the results of the study?	Are the means, standard deviations, and levels of significance reported?
8.	How precise are the results?	Are the confidence intervals reported?
9.	Are the results believable?	Could the results be due to bias or confounding?
10.	Can the results be applied to the local population?	Can the results be applied to health and social care settings?
11.	Do the results of this study fit with other available evidence?	Do the results fit with other evidence that training is effective in improving attitudes?
12.	What are the implications of this study for practice?	Is the intervention deliverable in clinical practice?

Results

Figure 1 provides a flow chart for the selection of eligible studies. The literature search generated 1570 studies, of which 481 were identified as duplicates. After screening of titles and abstracts, 24 papers were read in full and assessed for inclusion which resulted in the exclusion of 9 papers.

Manual searching of reference lists of included papers and contacting researchers identified a further four papers, and one additional paper was identified from the previous systematic review (Dickens et

al., 2016). Two additional papers were identified when the searches were repeated. Three papers were excluded based on quality as measured by the CASP because they did not address a clearly focused issue. In total, 19 papers were included. To determine inter-rater reliability for inclusion, 15% of the titles and abstracts were selected using a random number generator and screened to full-text reading by a second reviewer (SL). Interrater agreement was very good with Cohen's $k = 0.873$. Any discrepancies were resolved through discussion.

[INSERT FIGURE 1 HERE]

All data was extracted independently by the first author. 100% of the extracted data was then cross-checked for accuracy by a second reviewer (ED). Any discrepancies were resolved by checking against the original article. Missing information was sought by contacting authors using the email addresses provided and alternative email addresses found online. There remains missing data regarding study setting (Polnay et al., 2015; Shanks et al., 2011), professional role of participants (Lamph et al., 2014; Lamph et al., 2018), use of psychological model (Common-Treloar, 2008; Lamph et al., 2018; Miller & Davenport, 1996), whether the intervention included a taught skills component (Davies et al., 2015; Ebrahim et al., 2016; Lamph et al., 2014), and whether videos included PPE (Keuroghlian et al., 2016; Polnay et al., 2015, Shanks et al., 2011). For one study standard deviations were not available (Ebrahim et al., 2016).

Table 3 provides an overview of the study characteristics. Studies were published between 1996 and 2018. Eleven were conducted in the UK, four in the United States of America, three in Australia and New Zealand, and one in Canada. Thirteen were conducted in public health and social care organisations, two in forensic settings, one in a multi-agency setting, one in an educational setting, and two in unknown settings. Fourteen studies used an uncontrolled repeated measures design, two studies were randomised controlled trials (RCT), two were randomised non-controlled trials (RnCT), meaning that all participants were randomised to active interventions, and one was a non-randomised controlled trial (nRCT), with staff from a different service that had not received training acting as a control group. Sample sizes ranged from 16 to 418 and this review includes data from 2582 participants in total.

Nine studies targeted attitudes towards people with a diagnosis of personality disorder and ten targeted attitudes towards people with a diagnosis of BPD specifically. Most studies evaluated face-to-face teaching except for one study evaluating a self-instructional booklet (Miller & Davenport, 1996), one study evaluating e-learning alone (Lamph, Sampson, Smith, Williamson, & Guyers, 2018), and one study evaluating a film screening (Dickens, Lamont, & Stirling, 2018). Three face-to-face interventions also included e-learning between sessions (Davies, Sampson, Beesley, Smith, & Baldwin, 2014; Ebrahim, Robinson, Crooks, Harenwall, & Forsyth, 2016; Lamph et al., 2014). The length of the intervention varied from 63-minutes to 6-days. Eleven interventions were delivered within 1-day (≤ 6 hours), seven were delivered over 2-days or more, and the length of time spent on the booklet is unknown.

Three studies included two different active interventions, making a total of 22 unique interventions. Seventeen interventions were underpinned by a psychological model which was shared with the participants, two were not, and for three interventions this is unknown. The biopsychosocial model (Linehan, 1993) was used in eight interventions. Acceptance and Commitment Therapy (ACT) (Hayes, Strosahl, & Wilson, 1999), Mentalisation Based Therapy (Bateman, Fonagy, & Allen, 2009), Schema Therapy (Young, 1994), and Cognitive Behavioural Theory (Beck, 1976) were each used in two interventions. A psychodynamic model and Behaviour Theory were each used in one intervention. Four interventions included teaching participants clinical skills, for example, therapeutic techniques from DBT, and four interventions included teaching participants self-management skills to help them cope with the personal impact of their work, for example, mindfulness. In terms of including PPE in the training, six interventions included videos of PPE, four interventions were co-produced with PPE, and one intervention included a live personal testimony from someone with personal experience.

A total of 14 different measures of attitude were used. A validated measure of attitudes towards personality disorder broadly was used in five studies, namely the Attitude to Personality Disorder Questionnaire (ADPQ: 5 studies) (Bowers & Allan, 2006). An unvalidated measure of attitudes towards personality disorder broadly was used in five studies, namely the Personality Disorder Knowledge and Skills Questionnaire (PD-KASQ: four studies) (Bolton, Feigenbaum, Jones, &

Woodward, 2010). A validated measure of attitudes towards BPD specifically was used in six studies, namely the Attitudes toward Deliberate Self-Harm Questionnaire (ASDHQ: 2 studies) (McAllister, Creedy, Moyle, & Farrugia, 2002), Borderline Personality Disorder Cognitive and Emotional Attitudes Inventory (BPD-CEAI: 1 study) (Bodner, Cohen-Fridel, & Iancu, 2011; Bodner et al., 2015), Borderline Personality Disorder Questionnaire – Attitudes Subscale (BPDQ-A: 1 study) (Reece, 1988), Opening Minds Scale for Health Professionals revised for BPD (OMS-HC-BPD: 1 study) (Kassam, Papish, Modgill, & Patten, 2012), and Mental Health Locus of Origin scale revised for BPD (MHLO: 1 study) (Hill & Bale, 1980). Unvalidated measures of attitudes towards BPD specifically were used in three studies, namely, the Revised Assessment of Attitudes Questionnaire (RAAQ: 1 study) (McIntosh, 1998), and original questionnaires were used in two studies questionnaires (Krawitz, 2004; Shanks, Pfohl, Blum, & Black, 2011). Additional measures of attitude not specific to personality disorder were also used in some studies: the Helping Alliance Questionnaire (HAQ) (Luborsky et al., 1996), Social Distancing Scale (SDS) (Link, Cullen, Frank, & Wozniak, 1987), and Interpersonal Reactivity Index (IRI) (Davis, 1983). All additional measures were valid and reliable except for the SDS which has poor test-retest reliability.

Secondary outcomes were measured in seven studies. Staff burnout was measured in three studies using the Mashlach Burnout Inventory (MBI) (Maslach, Jackson, & Leiter, 1997), and psychological distress was measured in two studies using the General Health Questionnaire (GHQ) (Goldberg & Hillier, 1979), both of which are valid and reliable measures. Knowledge of MBT was measured in two studies using the Knowledge and Application of MBT Questionnaire (KAMQ) (Williams, Cahill, & Patrick, 2015), knowledge of the biological underpinnings of BPD in one study using an original questionnaire (Clark, Fox, & Long, 2015), and knowledge of BPD in two studies using the Borderline Personality Questionnaire (BPDQ) (Cleary, Siegfried, & Walter, 2002) and the Borderline Personality Disorder Questionnaire – Knowledge subscale (BPDQ-K) (Reece, 1988). None of these measures have been psychometrically evaluated except the BPDQ which demonstrated questionable validity. Psychological flexibility was measured in one study using the Acceptance and Action Questionnaire (AAQ) (Bond et al., 2011) and consistency between actions and values in one study using the Valued Living Questionnaire (VLQ) (Wilson, Sandoz, Kitchens, & Roberts, 2010), both of which are valid

Improving professional attitudes towards personality disorder

and reliable measures. Impact on practice was measured in one study using an unvalidated Likert scale (Krawitz, 2004).

Table 3

Study Characteristics

Authors ; Location	Setting	Study design	Participants		Interventions					Outcomes		
			N	Role	Diagnostic Group	Length	Psychological model	Skills component	PPE	Primary measures	Secondary measures	Follow-up
Clark, Fox & Long (2014); Northampton, UK	FS	RM	34	MDT-MH	BPD	≤ 6 hrs (90 mins)	Y(BPS)	N	N	MHO; IRI	Knowledge' likert scale	Pre, post, 8w
Clarke et al. (2015a); Bournemouth, UK	HS CO	Rn-CT	100	HS C	PD	≥ 2 days (2 days)	Y(ACT)/Y(BPS)	Y(SMS)/Y(CS)	N/N	APDQ; HAQ; SDS	GHQ; MBI; AAQ	Pre, post, 6m
Clarke et al. (2015b); Bournemouth, UK	HS CO	Rn-CT	140	HS C	PD	≥ 2 days (2 days)	Y(ACT)/Y(UNK)	Y(SMS)/N	Y(V)/Y(V)	APDQ; HAQ; SDS	GHQ; MBI, VLQ	Pre, post, 6m
Commons-Treloar & Lewis (2008); Australia & New Zealand	HS CO	RM	99	MH/EM	BPD	≤ 6 hrs (2 hrs)	UKN	N	N	ADSHQ	N/A	Pre, post
Commons-Treloar (2009); Australia & New Zealand	HS CO	RCT	140	MH/EM	BPD	≤ 6 hrs (2hrs)	Y(BPS)/Y(PDy)	N	N/N	ADSHQ	N/A	Pre, post, 6m
Davies et al. (2015); Northwest, UK	HS CO	RM	162	MDT-MH	PD	≥ 2 days (3 days)	Y(BPS/ST)	UKN	Y(CP)	PD-KASQ	N/A	Pre, post, 3m
Dickens et al. (2018); Scotland, UK	ES	RM	66	SN/C	BPD	≤ 6 hrs (63 mins)	N	N	Y(V)	BPD-CEAI	BPDQ	Pre, post

Table 3

Study Characteristics continued.

Author s; Locati on	Sett ing	Stu dy des ign	Participant s		Interventions					Outcomes		
			N	Role	Diagn ostic Group	Len gth	Psycholo gical model	Skills compo nent	PPE	Prim ary meas ures	Seco ndary measu res	Foll ow- up
Ebrahi m et al. (2016); UK	HS CO	RM	181	RM N/ OT	PD	≥ 2 days (3 days)	Y(BPS)	UKN	Y(CP)	PD- KAS Q	N/A	Pre, post , 3m, 6m
Fraser (2001); Arizon a, USA; unpubl ished	HS CO	RC T	60 (I= 30, C= 30)	C/ SW	BPD	≤ 6 hrs (4 hrs)	Y(BPS)	Y(CS)	Y(V)	RAA Q	N/A	Pre, post , 1m
Keurog hlian et al. (2016); USA	HS CO	RM	297	MDT -MH	BPD	≤ 6 hrs (1 day)	N	N	UKN	9- item Q (sam e as Shan ks et al. 2011)	N/A	Pre, post
Knaak et al. (2015); Calgar y, Canada	HS CO	RM	191	MDT -MH	BPD	≤ 6 hrs (3 hrs)	Y(BPS)	Y(CS)	Y(LP T)	OMS -HC (BPD)	N/A	Pre, post
Krawit z (2004); Victori a, Austral ia	HS CO	RM	418	MDT -MH	BPD	≥ 2 days (2 days)	Y(BPS/ PDy/ST)	Y(CS)	Y(V)	6- item Q	Impac t on Practi ce' likert scale	Pre, post , 6 m
Lamph et al. (2014); Warrin gton, UK	MA S	RM	136	UKN	PD	≥ 2 days (3 days)	Y(ST)	UKN	Y(CP)	PD- KAS Q	N/A	Pre, post , 3 mon ths
Lamph et al. (2018); North West, UK	HS CO	RM	80	UKN	PD	≤ 6 hrs (90 mins)	UKN	N	Y(CP/ V)	PD- KAS Q	N/A	Pre, post , 3 mon ths

Table 3

Study Characteristics continued.

Improving professional attitudes towards personality disorder

Authors; Location	Setting	Study design	Participants		Interventions					Outcomes		
			N	Role	Diagnostic Group	Length	Psychological model	Skills component	PPE	Primary measures	Secondary measures	Follow-up
Maltman & Hamilton (2011); Nottingham, UK	FS	RM	67	PS	PD	≤ 6 hrs (2 hrs)	Y(CBT)	N	N	APDQ	N/A	Pre, 2m
Miller & Davenport (1996); Ohio/Texas, USA	HSCO	n-RCT	32 (I=19, C=13)	RMN	BPD	UNK	UNK	N	N	BPDQ	N/A	Pre, 1m
Polnay et al. (2015); Edinburgh, UK	UKN	RM	16	PT	PD	≤ 6 hrs (4 hrs)	Y(MBT)	Y(SMS)	UKN	APDQ	KAMQ	Pre, post
Shanks et al. (2011); Arizona, USA	UKN	RM	271	MDT-MH	BPD	≤ 6 hrs (6 hrs)	Y(CBT)	N	UKN	9-item Q	N/A	Pre, post
Welstead et al. (2017); Scotland, UK	HSCO	RM	92	MDT-MH	PD	≥ 2 days (2 days)	Y(MBT)	Y(SMS)	N	APDQ	KAMQ	Pre, post

Setting: FS = Forensic Setting; ES = Educational Setting; HSCO = Health and Social Care Organisation; MAS = Multi-Agency Setting; UNK = Unknown. *Study Design:* RCT = Randomised-Controlled Trial; RM = Repeated Measures; Rn-CT = Randomised non-Controlled Trial; non-Randomised Controlled Trial = n-RCT. *N:* I = Intervention; C = Control; *Role:* PPS = Probation Premises Staff; MDT-MH = Multidisciplinary Mental Health Clinicians; SN/C = Student Nurses/Counsellors; HSC = Health and Social Care staff; MH/EM = Mental Health and Emergency Medicine clinicians; RM/OT = Mental Health clinicians and Occupational Therapists; C/SW = Counsellors and Social Workers; PS = Prison Staff; RMN = Mental Health Nurses; PT = Psychiatry Trainees; GPMHW = Graduate Primary Mental Health Workers; UNK = Unknown. *Psychological model:* BT = Behaviour Theory; BPS = Biopsychosocial; ACT = Acceptance and Commitment Therapy; UNK = Unknown; PDy = Psychodynamic; ST = Schema Theory; CBT = Cognitive Behavioural Theory; Mentalisation Based Therapy. *Skills component:* Y = Yes; N = No; CS = Clinical Skills; SMS = Self-Management Skills; UNK = Unknown. *PPE:* PPE = People with Personal Experience; Y = Yes; N = No; V = Video; CP = Co-production; LPT = Live Personal Testimony. *Primary measure(s) of attitude:* MHLO = Mental Health Locus of Origin Scale; IRI = Interpersonal Reactivity Index; APDQ = Attitudes towards Personality Disorder Questionnaire; HAQ = Helping Alliance Questionnaire; SDS = Social Distancing Scale; ADSHQ = Attitudes towards Deliberate Self Harm Questionnaire; PD-KASQ = Personality Disorder Knowledge and Skills Questionnaire; BPDCEAI = Borderline Personality Disorder Cognitive and Emotional Attitudes Inventory; RAAQ = Revised Assessment of Attitudes Questionnaire; OMS-HC (BPD) = Opening Minds Scale for Health Professionals revised for Borderline Personality Disorder; Q = Questionnaire; BPDQ = Borderline Personality Disorder Questionnaire; *Secondary measures:* MBI = Maslach's Burnout Inventory; GHQ = General Health Questionnaire; AAQ = Attitudes and Actions Questionnaire; VLQ - Valued Living Questionnaire; BPDQ = Borderline Personality Disorder Questionnaire; Knowledge and Application of Mentalisation Based Therapy Questionnaire.

Table 4 provides an overview of the study outcomes. Effect sizes were calculated where possible but adequate information was not available for one study (Ebrahim et al., 2016). The guidance provided by Dunlap et al. (1996) was followed and the pooled standard deviation was used so as not to inaccurately inflate effect size. Due to the wide variability in the methodologies and outcome measure used by the studies, a meta-analysis would not have been appropriate and a narrative synthesis incorporating effect sizes and study quality was selected as an alternative. Using Cohen's guidelines, effect sizes of 0.2 and above were considered small, between 0.5 and 0.8 moderate, and above 0.8 large (Cohen, 1988).

1. Is training effective in improving attitudes?

All the 19 included studies reported improvements on at least one measure of attitude. Both RCTs found that attitudes were improved significantly for the intervention but not control groups post-intervention with small/moderate (Commons-Treloar, 2009) and large (Fraser, 2001) effect sizes. Both RnCTs found that attitudes were improved in both groups post-intervention with small (Clarke, Taylor, Lancaster, & Remington, 2015) and small/moderate (Clarke, Taylor, Bolderston, Lancaster, & Remington, 2015) effect sizes. The nRCT found significant improvements in attitudes for the intervention but not control group post-intervention with a moderate effect size (Miller & Davenport, 1996). Of the studies that used an uncontrolled repeated measures design, four studies showed large effect sizes for improved attitudes towards people with a diagnosis of personality disorder following training (Davies et al., 2014; Dickens et al., 2018; Lamph et al., 2014; Lamph et al., 2018). One study showed a moderate effect size for attitude towards personality disorder generally (Polnay, MacLean, Lewington, & Patrick, 2015) and one showed a moderate effect size for attitudes towards BPD (Knaak, Szeto, Fitch, Modgill, & Patten, 2015). The remaining studies all showed significant improvements with small effect sizes post-intervention (Clark et al., 2015; Commons-Treloar & Lewis, 2008; Keuroghlian et al., 2016; Krawitz, 2004; Maltman & Hamilton, 2011; Shanks et al., 2011; Welstead et al., 2018), or significant improvements with unknown effect sizes (Ebrahim et al., 2016). Non-significant findings were shown for empathic concern in one study which targeted attitudes towards BPD in a forensic setting (Clark et al., 2015).

2. Are improvements maintained over time?

Seven studies had a follow-up period of less than 6-months. Of these seven, five found that improvements in attitudes were maintained (Clark et al., 2015; Fraser, 2001; Lamph et al., 2018; Maltman & Hamilton, 2011; Miller & Davenport, 1996). In both Davies et al. (2014) and Lamph et al. (2014), the improvement for the PD-KASQ ‘capabilities’ subscale (PD-KASQ-C) was not maintained at 3-months. In Lamph et al. (2014) scores on the PD-KASQ ‘emotional reactions’ subscale (PD-KASQ-ER) had significantly reduced to below pre-training levels at follow up. Five studies had a follow-up period of 6-months or more. Of these five, three found that improvements in all measures of attitudes were maintained (Clarke et al, 2015a; Clarke et al., 2015b; Krawitz, 2004). Like previous studies using the PD-KASQ, Ebrahim et al. (2016) found that improved scores on the PD-KASQ-C were not maintained at 6-month follow-up. In Commons-Treloar (2009), improvement was maintained at 6-months for psychoanalytically orientated training but not for CBT-based training.

3. Does including a psychological model, skills component, or PPE increase effectiveness?

Only two studies were identified that were not underpinned by a psychological model that was shared with participants. Keuroghlian et al. (2016) targeted BPD and taught Good Practice Management (GPM) to multi-disciplinary mental health professionals and found significant improvements with small effect sizes for eight out of nine questionnaire items. Dickens et al. (2018) also targeted BPD and showed participants a film made by an individual with the diagnosis and found a significant improvement on two out of five subscales with a large effect size. All 17 studies reporting the use of a psychological model reported an improvement in attitude apart from Clark et al. (2015), who failed to find an improvement in empathic concern after delivering training focused on the biological component of the biopsychosocial model. Four studies included a clinical skills component. All led to improved attitudes with effect sizes ranging from small (Krawitz, 2004), to small/moderate (Clarke et al., 2015a), to moderate (Knaak et al., 2015), to large (Fraser, 2001). Four studies include a self-management skills component. All led to improved attitudes with effect sizes ranging from small (Clarke et al., 2015b; Welstead et al., 2018), to small/moderate (Clarke et al., 2015a), to moderate (Polnay et al., 2015). Ten studies were known to not include a skills component at all. Of these ten, all led to improved attitudes with effect sizes ranging from small (Clark et al., 2015; Clarke et al., 2015b; Commons-Treloar, 2009; Commons-Treloar & Lewis, 2008; Keuroghlian et al., 2016; Maltman & Hamilton, 2011; Shanks et al., 2011) to moderate (Lamph et al., 2018; Miller & Davenport, 1996;

Shanks et al., 2011; Commons-Treloar, 2009), to large (Dickens et al., 2018; Lamph et al., 2018). Four studies evaluated an intervention that was co-produced with PPE. Of these four, all showed significant improvements in attitude with moderate to large (Lamph et al., 2018), large (Davies et al., 2014; Lamph et al., 2014), or unknown (Ebrahim et al., 2016) effect sizes. Six studies included videos of PPE. Of these six, all showed significant improvements in attitudes with small (Clarke et al., 2015b; Krawtitz, 2004), to moderate (Lamph et al. 2018), to large (Dickens et al., 2018; Fraser, 2001; Lamph et al., 2018) effect sizes. All studies that included no PPE had small or moderate effect sizes.

4. Does the length of training influence effectiveness?

Eleven interventions were delivered within 1-day (≤ 6 hours). All led to some improvement in attitudes, the majority of which demonstrated small effect sizes except for Knaak et al. (2015) and Polnay et al. (2015) who demonstrated moderate effect sizes, and Fraser et al. (2001), Dickens et al. (2018), and Lamph et al. (2018) who demonstrated large effect sizes. Seven interventions were delivered over 2-days or more. All led to some improvement in attitudes, the majority of which demonstrated small effect sizes except for Davies et al. (2014) and Lamph et al. (2014) who demonstrated large effect sizes.

5. Is the effectiveness of training influenced by gender, professional role, length of experience, prior training, or pre-training attitudes?

Two studies explored if gender had an influence on outcome. Of these two, Knaak et al. (2015) found no interaction whereas Commons-Treloar & Lewis (2008) found that only females improved significantly. Four studies explored if professional role had an influence on outcome. Of these four, three found no effect (Clark et al., 2015; Krawitz, 2004; Miller & Davenport, 1996) and one found that nurses' attitudes improved more than doctors and psychologists, however, also cite more positive baseline attitude scores for doctors and psychologists (Welstead et al., 2018). Four studies explored if length of clinical experience influenced outcome. Of these five, three found no effect (Clark et al., 2015; Knaak et al., 2015; Miller & Davenport, 1996), one found that attitudes did not improve for participants with more than or equal to 16 years clinical experience (Commons-Treloar & Lewis, 2008), and one found that fewer years clinical experience was related to greater improvement in feeling competent and empathic (Keuroghlian et al., 2016). Three studies explored if prior training

influenced outcome. Of these three, two found no effect (Miller & Davenport, 1996; Commons-Treloar & Lewis, 2008) and one found that participants who had not attended previous BPD training improved more in their perspective taking (Clark et al., 2015).

In terms of secondary outcomes, two studies measured staff wellbeing. Clarke et al. (2015b) found no significant differences in burnout or psychological distress between or within groups, however, Clarke et al. (2015a) found an increased burnout score post-intervention for the ACT group but not the DBT group with a moderate effect size, though this was not maintained at 6-months. Six studies measured knowledge. Of these six, two found that knowledge of mentalisation techniques was improved post-intervention with large effect sizes (Polnay et al., 2015; Welstead et al., 2018), one found that knowledge of the 'biological underpinnings' of BPD was improved post-intervention and maintained at 2-month follow-up with a small effect size (Clark et al., 2015), one found that knowledge of BPD was improved 1-month post-intervention for the intervention group only with a large effect size (Miller & Davenport, 1996), one found significant improvements in knowledge with a small effect size (Krawitz, 2004), and one found a significant increase in the incorrect knowledge 'BPD can progress to schizophrenia' (Dickens et al., 2018). Clarke et al. (2015a) measured psychological flexibility and found that this was reduced post-intervention for ACT group only with a moderate effect size, however, this was not maintained at 6-month follow-up, and Clarke et al. (2015b) measured consistency between actions and values and found an improvement post-intervention for both the ACT and psychoeducation groups, neither of which were maintained at 6-month follow-up. Krawitz (2004) did not report the results from the Impact on Practice Likert scale.

Table 4

Study outcomes

Study	Primary measure(s) of attitudes	ES	Loss to f-up (%); analysis
Clark, Fox & Long (2014)	↑ MHLO* : pre to post ($p<.017$, $d=.32$) & pre to f-up ($p<.017$, $d=.25$) (pre = 68(6.75), post = 72.5(7.5), f-up = 73(11)) ↑ IRI Perspective Taking* : post to f-up ($p<.017$, $d=.31$) (post = 20(6), f-up = 21(4)) NON SIG: IRI-Empathic Concern: pre to post or pre to f-up (pre = 21.5(6), post = 19.5(5), f-up = 20(4)); Perspective Taking: pre to post (pre = 21(6), post = 20(6))	S	NR
Clarke et al. (2015a)	↑ APDQ*** : main effect of time ($F(2,63.76)=8.79$, $p<.001$); <i>ACT group</i> - pre to post ($p<.001$, $d=.25$) & pre to f-up ($p<.002$, $d=.22$) (pre = 137.9(17.09), post = 142.23(16.93), f-up = 142.05(20.52)); <i>DBT group</i> - pre to post ($p<.001$, $d=.43$) & pre to f-up ($p<.002$, $d=.26$) (pre = 143.49(18.74), post = 151.17(16.93), f-up = 147.96(15.31)) ↑ HAQ*** : main effect of time ($F(2,64.47)=11.20$, $p<.001$); <i>ACT group</i> - pre to post ($p<.001$, $d=.19$) & pre to f-up ($p=0.005$, $d=.30$) (pre = 80.01(9.32), post = 81.68(8.38), f-up = 82.45(9.47)); <i>DBT group</i> - pre to post ($p<.001$, $d=.51$) & pre to f-up ($p=.005$, $d=.36$) (pre = 78.92(8.06), post = 82.67(6.47), f-up = 81.78(7.83)) ↓ SDS*** : main effect of time ($F(2,65.45)=12.10$, $p<.001$); <i>ACT group</i> - pre to post ($p<.001$, $d=.51$) & pre to f-up for ($p=.001$, $d=.29$) (pre = 12.02(3.62), post = 10.25(3.30), f-up = 10.97(3.66)); <i>DBT group</i> - pre to post ($p<.001$, $d=.22$) & pre to f-up ($p=.001$, $d=.55$) (pre = 12.00(4.07), post = 11.09(4.05), f-up = 9.65(4.43)) NON SIG: APDQ, HAQ, SDS: group x time interactions	S/M	<i>ACT</i> - 38%; <i>DBT</i> - 49%; ITT
Clarke et al. (2015b)	↑ APDQ** : main effect of time ($F(2,76.44)=7.68$, $p=.001$); <i>ACT group</i> - pre to post ($p=.001$, $d=.22$) & pre to f-up ($p=.004$, $d=.32$) (pre = 143.09(21.17), post = 148.00(23.66), f-up = 150.34(23.43)); <i>PET group</i> - pre to post ($p=.001$, $d=.30$) & pre to f-up ($p=.004$, $d=.46$) (pre = 144.64(19.84), post = 150.44(21.57), f-up = 153.33(17.64)) ↑ HAQ** main effect of time ($F(2, 65.37)=5.59$, $p=.006$); <i>ACT group</i> - pre to post ($p=.011$, $d=.21$) & pre to f-up ($p=.003$, $d=.28$) (pre = 80.64(11.17), post = 83.10(11.72), f-up 83.72(10.83)); <i>PET group</i> - pre to post ($p=.011$, $d=.26$) & pre to f-up ($p=.003$, $d=.47$) (pre = 79.41(11.90), post = 82.34(10.96), f-up = 84.16(7.67)) ↑ SDS* main effect of time ($F(2,76.08)=3.75$, $p=.028$); <i>ACT group</i> - pre to post ($p=.039$, $d=.26$) & pre to f-up ($p=.019$, $d=.26$) (pre = 11.46(3.73), post = 10.47(3.86), f-up = 10.39(4.42)); <i>PET group</i> - pre to post ($p=.039$, $d=.04$) & pre to f-up ($p=.019$, $d=.36$) (pre = 11.16(3.64), post = 11.00(4.20), f-up = 9.68(5.06)) NON SIG: APDQ, HAQ, SDS: group x time interactions	S	<i>ACT</i> - 53%; <i>PET</i> - 60%; ITT
Commons Treloar & Lewis (2008)	↑ ADSHQ*** : pre to post for whole sample ($p<.001$, $d=.40$); pre to post for emergency medicine ($n=33$) ($p=.002$, $d=.43$) (pre = 88.33 (6.80), post = 91.42 (7.40), & pre to post for mental health ($n=66$) ($p=.000$, $d=.42$) (pre = 93.99(5.55), post = 96.47(6.17))	S	N/A
Commons Treloar (2009)	↑ ADSHQ** : <i>PA group</i> - pre to post ($p<.01$, $d=.53$) & pre to f-up ($p<.05$, $d=.26$) (pre = 92.34(5.98), post = 95.52 (5.93), f-up = 94.54(6.26)); <i>CBT group</i> - pre to post ($p=.02$, $d=.43$) (pre = 94.68(5.38), post = 97.58(7.70)) NON SIG: <i>CBT group</i> - pre to f-up (pre = 94.86(5.38), f-up = 95.72(7.70)); <i>Control group</i> - pre to f-up (pre = 92.23(7.34), f-up = 92.45(5.43))	S/M	54%; No ITT
Davies et al. (2015)	↑ PD-KASQ-U*** : pre to post ($p<.001$, $d=.1.80$) (pre = 18.09(3.38), post = 23.28(2.30)), & pre to 3 m f-up ($p<.001$, $d=1.57$) (pre = 18.10(3.16), f-up = 22.80(2.83)) ↑ PD-KASQ-ER** : pre to post ($p<.001$, $d=.87$) (pre = 20.49(3.42), post = 23.10(2.53)) & pre to 3m f-up ($p<.01$, $d=.83$) (pre = 20.47(2.77), f-up = 22.60(2.35)) ↑ PD-KASQ -C*** : pre to post ($p<.001$, $d=.73$) (pre = 18.09(2.71), post = 19.98(2.46)) NON SIG: PD-KASQ-C: pre to 3 m f-up (pre = 18.53(3.07), f-up = 19.91(3.31))	L	91%; No ITT
Dickens et al. (2018)	↑ Value of mixed approaches*** : pre to post ($p<.001$, $d=1.21$) (pre = 22.3(5.3), post = 28.2(4.4)) ↑ Deserving of treatment*** pre to post ($p<.001$, $d=1.12$) (pre = 23.2(4.6), post = 28.5(4.9)) NON SIG: Inpatient treatment legitimacy; Suicidal behaviour; Perceived manipulation	L	N/A

Table 4

Study outcomes continued.

Study	Primary measure(s) of attitudes	ES	Loss to f-up (%); analysis
Ebrahim et al. (2016)	<p>↑PD-KASQ total**: pre to post (p<.001), pre to 3m f-up (p<.001), & pre to 6m f-up (p<.003) (pre = 64.8, post = 80.6, 3m f-up = 77.4, 6m f-up = 77.9) ↑PD-KASQ-U***: pre to post (p<.001), pre to 3m f-up (p<.001), & pre to 6m f-up (p<.001) (pre = 22.6, post = 28.8, 3m f-up = 28.8, 6m f-up = 27.8) ↑PD-KASQ-ER***: pre to post (p<.001), pre to 3m f-up (p<.001), & pre to 6m f-up (p<.001) (pre = 14.7, post = 18.9, 3m f-up = 16.9, 6m f-up = 16.7) ↑PD-KASQ-C**: pre to post (p<.003) & pre to 3m f-up (p<.003) (pre = 18.7, post = 21.7, 3m f-up = 21.5) [No SDs] NON SIG: PD-KASQ-C: pre to 6m f-up (pre = 18.7, 6m f-up = 21.0) [No SDs]</p>	UKN	66% at 3m; 73% at 6m; No ITT
Fraser (2001)	<p>↑RAAQ***: main effect of group (F=132.49, d=.70); main effect of time (F=476.64, d=.89); group x time interaction (F=486.73, d=.89); <i>Intervention group</i> - pre to post (p<.001, d = 4.45) & pre to f-up (p<.001, d = 4.43) (pre = 45.07(3.45), post = 57.90(2.17), f-up = 58.00(2.26)) NON SIG: <i>Control group</i> - pre to post & pre to f-up (pre = 46.17(2.80), post = 46.17(2.80), f-up = 46.03(2.82))</p>	L	0%
Keuroghlian et al. (2016)	<p>↓'If I had a choice, I would prefer to avoid caring for a BPD patient'***: pre to post (p<.001, d =.39) (pre = 3.87(1.84), post = 3.23(1.73)); ↑'I feel professionally competent to care for BPD patients'***: pre to post (p<.001, d = .41) (pre = 4.27(1.50), post = 4.86(1.40)); ↓'I dislike BPD patients'***: pre to post (p=.005, d = .27) (pre = 2.92(1.62), post = 2.51(1.46)); ↑'I believe the BPD patient has low self-esteem'***: pre to post (p=.022, d =.19) (pre = 5.59(1.50), post = 5.87(1.47)); ↑'I feel I can make a positive difference in the lives of BPD patients'***: pre to post (p<.001, d =.37) (pre = 4.94(1.47), post = 5.46(1.32)); ↓'The prognosis for BPD treatment is hopeless'***: pre to post (p<.001, d =.47) (pre = 2.33(1.38), post = 1.74(1.14)); ↑'Some psychotherapies are very effective in helping patients with BPD'***: pre to post (p<.001, d =.32) (pre = 5.66(1.35), post = 6.08(1.31)); ↓'I would like more training in the management to treatment of BPD patients'***: pre to post (p<.001, d=.36) (pre = 6.15(1.25), post = 5.65(1.51)) NON SIG: 'BPD is an illness that causes symptoms that are distressing to the BPD individual': pre to post (p=0.08) (pre = 6.36(1.16), post = 6.56(1.02))</p>	S	N/A
Knaak et al. (2015)	<p>OMS-HS(BPD)/OMS-HS(original)***: main effect of time (F=72.46, p<.001, r=.53) (pre = 33.96(4.48), post = 31.05(6.36)), survey type x time interaction (F=28.71, p<.001); OMS-HS(BPD)*** - pre to post (p<.001, d =.73) (pre = 37.56(6.50), post = 32.83(6.40)); OMS-HS (original*) - pre to post (p = .03, d =.17) (pre = 30.35(6.30), post = 29.28(6.20))</p>	M	N/A
Krawitz (2004)	<p>↑Willingness**: pre to post (p<0.01, d =.31) & pre to f-up (p<0.01, d =.13) (pre = 3.88(0.70), post = 4.09(0.65), f-up = 3.97(0.68)) ↑Optimism**: pre to post (p<0.01, d = .50) & pre to f-up (p<0.01, d =.15) (pre = 3.68(0.57), post = 3.98(0.63), f-up = 3.77(0.63)) ↑Enthusiasm**: pre to post (p<0.01, d =.43) & pre to f-up (p<0.01, d =.14) (pre = 3.67(0.64), post = 3.95(0.65), f-up = 3.76(0.66)) ↑Confidence**: pre to post (p<0.01, d = .41) & pre to f-up (p<0.01, d =.24) (pre = 3.57(0.58), post = 3.81(0.58), f-up = 3.72(0.60)) ↑Clinical Skills**: pre to post (p<0.01, d =.23) & pre to f-up (p<0.01, d =.24) (pre = 3.54(0.59), post = 3.67(0.56), f-up = 3.68(0.58))</p>	S	38%; No ITT
Lamph et al. (2014)	<p>↑PD-KASQ-U*: pre to post (p =.017, d = 3.58) & pre to f-up (p =.017, d = 2.06) (pre = 2.59(0.41), post = 3.94(0.34), f-up = 3.30(0.27)); ↓PD-KASQ-U*: post to f-up (p=.017, d = 2.08); ↑PD-KASQ-ER*: pre to post (p=.017, d = 1.06) (pre = 3.61(0.46), post = 4.08(0.43)) ↓PD-KASQ-ER*: pre to f-up (p =.017, d = 1.50) & post to f-up (p =.017, d = 2.83) (f-up = 3.03(0.30)); ↑PD-KASQ-C*: pre to post (p=.017, d = 1.24) (pre = 3.27(0.38), post = 3.68(0.27)); ↓PD-KASQ-C*: post to f-up (p=.017, d = 1.07) (f-up = 3.39(0.27)) NON SIG: PD-KASQ-C: pre to f-up</p>	L	80%; No ITT
Lamph et al. (2018)	<p>↑PD-KASQ-U*: pre to post (p<.017, d = 1.84) & pre to f-up (p<.017, d = 2.14) (pre = 2.64(0.68), post = 3.71(0.46), f-up = 3.79(0.34)) ↑PD-KASQ-C*: pre to post (p<.017, d = .68) & pre to f-up (p<.017, d = 1.47) (pre = 3.21(0.36), post = 3.47(0.40), f-up = 3.77(0.40)) ↑PD-KASQ-E*: pre to post (p<.017, d = 0.67) & pre to f-up (p<.017, d = 0.89) (pre = 3.60(0.54), post = 3.92(0.40), f-up = 4.04(0.44))</p>	M/L	85%, No ITT

Table 4

Study outcomes continued.

Study	Primary measure(s) of attitudes	ES	Loss to f-up (%); analysis
Maltman & Hamilton (2011)	↑ APDQ 'security/vulnerability subscale' *: pre to f-up (p=.019, d=.20) (pre = 48.54(6.27), post = 51.00(6.90)) NON SIG: APDQ total: pre to f-up (pre = 135.46(17.37), f-up = 140.99(19.47)); APDQ 'enjoyment/loathing', 'acceptance/rejection', 'purpose/futility', & 'enthusiasm/exhaustion' subscales: pre to f-up; 'enjoyment/loathing' (pre = 40.46(10.17), f-up = 42.22(11.82)); 'acceptance/rejection' (pre = 25.65(3.08), f-up = 26.31(3.22)); 'purpose/futility' (pre = 12.96(4.32), f-up = 13.27(2.66)); 'enthusiasm/exhaustion' (pre = 7.85(1.71), f-up = 8.19(1.33))	S	59%; No ITT
Miller & Davenport (1996)	↑ BPDQ-A** : main effect of group (F=7.8, p<.01); <i>Intervention group</i> - pre to f-up (p<.01, d = .56) (pre = 17.8(3.7), f-up = 19.7(3.1)) NON SIG: <i>Control group</i> - pre to f-up (pre = 16.8(4.1), f-up = 15.4(5.7))	M	NR
Polnay et al. (2015)	↑ APDQ* : pre to post (95% confidence interval = 0.01 to 1.44, d=.72) (pre = 124.5(14.3), post = 135.3(14.9))	M	N/A
Shanks et al. (2011)	↓ 'If I had a choice, I would prefer to avoid caring for a BPD patient'*** : pre to post (p<.000, d =.35) (pre = 3.92(1.58), post = 4.45(1.47)); ↑ 'I feel professionally competent to care for BPD patients'*** : pre to post (p<.000, d =.36) (pre = 4.05(1.43), post = 3.55(1.32)); ↓ 'I dislike BPD patients'*** : pre to post (p<.000, d =.23) (pre = 4.78(1.57), post = 5.12(1.36)); ↑ 'I feel I can make a positive difference in the lives of BPD patients'*** : pre to post (p=.004, d =.18) (pre = 3.30(1.19), post = 3.09(1.18)); ↓ 'The prognosis for BPD treatment is hopeless'*** : pre to post (p<.000, d =.42) (pre = 5.30(1.25), post = 5.80(1.15)); ↑ 'I would like more training in the management to treatment of BPD patients'*** : pre to post (p<.000, d=.57) (pre = 1.71(1.06), post = 2.42(1.42)); ↑ 'BPD is an illness that causes symptoms that are distressing to the BPD individual'*** : pre to post (p=.000, d =.26) (pre = 2.61(1.43), post = 2.25(1.29)) NON SIG: 'I believe the BPD patient has low self-esteem', 'Some psychotherapies are very effective in helping patients with BPD': pre to post	S	N/A
Welstead et al. (2017)	↑ APDQ* : pre to post (95% confidence interval = 1.8 to 6.2, d =.20) (pre = 148.7(12.3), post = 152.7(no SDs))	S	N/A
Study	Secondary measure(s) of attitudes	ES	Loss to f-up (%); analysis
Clark, Fox & Long (2014)	↑ Knowledge* : pre to post (p<.017, d =.48) & pre to f-up (p<.017, d =.46) (pre = 5(2), post = 8(2), f-up = 9(3)) NON SIG: post to f-up (post = 8(2), f-up = 9(3))	S	NR
Clarke et al. (2015a)	↑ MBI* : main effect of time (p =.012); group x time interaction (p<.001); <i>ACT group</i> - pre to post (p<.001, d =.54) (pre = 19.74(10.89), post = 26.20(12.91), f-up = 20.94(14.35)) ↓ AAQ** : main effect of time (p =.003); group x time interaction (p =.002); <i>ACT group</i> - pre to post (p <.001, d =.50) (pre = 38.44(5.70), post = 35.34(6.68), f-up = 37.85(6.76)). NON SIG: MBI: <i>DBT group</i> - (pre = 21.91, post = 20.46, f-up = 24.00); AAQ: <i>DBT group</i> - (pre = 39.40, post = 39.04, f-up = 38.95); GHQ: main effect of time or group x time interactions: <i>ACT group</i> - (pre = 17.51, post = 17.30, f-up = 21.27), <i>DBT group</i> - (pre = 18.28, post = 16.82, f-up = 17.04)	ACT = M; DBT = N/A	ACT - 38%; DBT - 49%; ITT
Clarke et al. (2015b)	↑ VLQ* main effect of time (p =.04); <i>ACT group</i> : pre to post (p =.01, d =.48) (pre = 1.99(1.77), post = 1.23(1.35), f-up = 1.68(1.44)); <i>PET group</i> - pre to post (p = .01, d =.05) (pre = 2.14(1.89), post = 2.05(1.49), f-up = 2.25(1.45)) NON SIG: GHQ; MBI: main effect of time or group x time interactions); VLQ: pre to f-up	ACT = S; PET = N/A	ACT - 53%; PET - 60%; ITT

Table 4

Study outcomes continued.

Study	Secondary measure(s) of attitudes	ES	Loss to f-up (%); analysis
Dickens et al. (2018)	↑ BPD can progress to schizophrenia (incorrect)*** : pre to post ($p < .001$) (pre = 51, post = 30) NON SIG: Knowledge: 'Diagnosis of borderline personality disorder is characterized by unstable mood with rapid shifts (correct); Diagnosis of BPD is characterized by a grandiose sense of self-importance (incorrect); Diagnosis of BPD is characterized by impulsive, self-destructive, behaviour (correct); Patients with a BPD diagnosis should not be hospitalized (incorrect); Short term psychotherapy can be useful in managing crisis in patients with BPD (correct); Antidepressant medication is of no benefit in treating depression in people with BPD (incorrect); Total knowledge change.	UNK	N/A
Krawitz (2004)	↑ Theoretical Knowledge** : pre to post ($p < .01$, $d = .44$) & pre to f-up ($p < .01$, $d = .29$) (pre = 3.56(0.58), post = 3.81(0.56), f-up = 3.80(1.0))	S	38%; No ITT
Miller & Davenport (1996)	↑ BPDQ-K*** : main effect of group ($p < .01$, $d = 1.27$); <i>Intervention group</i> - pre to f-up (pre = 54.5(8.5), f-up = 64.1(6.5)) NON SIG: <i>Control group</i> - pre to f-up (pre = 53.3(8.9), f-up = 53.4(8.4))	L	NR
Polnay et al. (2015)	↑ KAMQ* : pre to post (95% confidence interval = 0.98 to 2.67, $d = 1.86$) (pre = 97.1(7.7), post = 112.5(8.8))	L	N/A
Welstead et al. (2017)	↑ KAMQ* : pre to post (95% confidence interval = 10.0 to 13.3, $d = 1.2$) (pre = 74.7, post = 86.3)	L	N/A

Primary measures: PD-KASQ = Personality Disorder Knowledge & Skills Questionnaire; MHLO - Mental Health Locus of Origin scale; IRI = Interpersonal Reactivity Index; APDQ = Attitudes towards Personality Disorder Questionnaire; HAQ = Helping Alliance Questionnaire; SDS = Social Distancing Scale; ADHSQ = Attitude towards Deliberate Self Harm Questionnaire; PD-KASQ-U = Understanding subscale; PD-KASQ-ER = Emotional Reaction subscale; PD-KASQ-C = Capabilities subscale; RAAQ = Revised Assessment of Attitudes Questionnaire; OMS-HC-BPD = Opening Minds Scale for Health Professionals -revised for Borderline Personality Disorder; OMS-HC-Original = Opening Minds Scale for Health Professionals - original version; BPDQ-A = Borderline Personality Disorder Questionnaire - Attitude subscale
Secondary measures: MBI = Maslach's Burnout Inventory; AAQ = Acceptance and Action Questionnaire; GHQ = General Health Questionnaire; VLQ = Valued Living Questionnaire; BPDQ-K = Borderline Personality Disorder Questionnaire - Knowledge subscale; KAMQ = Knowledge and Application of MBT Questionnaire (MBT = Mentalisation Based Therapy)

N.B: sig. = significant; m = months; f-up = follow up; SD = Standard Deviation; * = $p < .05$; ** = $p < .01$; *** = $p < .001$; ES = Effect Size; S = Small ($d \geq 0.2$); M = Moderate ($d \geq 0.5$); L = Large ($d \geq 0.8$); I = Intervention; C = Control; NR = Not Reported

Table 5 provides an overview of the quality assessment for each study. All studies were judged as having addressed a clearly focused issue and having recruited a sample of professionals who are likely to come in to contact with people with a diagnosis of personality disorder. Only one study was judged as having accurately measured the exposure because all participants watched the same film screening (Dickens et al., 2018). Nine studies were judged as having accurately measured the outcome because a validated measure of attitudes was used. Eight studies did not use a validated measure and two studies used a measure of attitudes towards self-harm (Commons-Treloar & Lewis, 2008; Commons-Treloar (2009). Only two studies were judged as having adequately controlled for the potential confounding variables of gender, length of experience, professional role, prior training, and baseline attitudes (Commons-Treloar & Lewis, 2008; Fraser, 2001). Only five studies had a follow-up period that was longer than six-months and only two studies were judged as having adequately controlled for loss to follow-up in the analysis (Clarke et al. 2015a; 2015b). All were judged as having adequately reported the results except study one that did not report standard deviations (Ebrahim et al. 2016). No studies reported confidence intervals which meant that they were all judged as being unclear in terms of preciseness. Most studies were not judged as believable due to high risk of bias or confounding. Most studies were judged as being generalisable to a health and social care setting except for four studies that took place in forensic, education, or multi-agency settings (Clark, Fox & Long, 2014; Dickens et al., 2018; Lamph et al., 2018; Maltman & Hamilton, 2011), and two studies that took place in an unknown setting (Polney et al., 2015; Shanks et al., 2011). All studies were judged as fitting with other evidence that training is effective in improving attitudes. All interventions and therefore studies were judged as being translatable to practice. To determine inter-rater reliability for the quality assessment, 15% of the included articles were selected using a random number generator and assessed using the CASP by a second reviewer (SL). Interrater agreement was good with Cohen's $k = 0.882$ and any disagreements were resolved through discussion.

Table 5

Study quality

Improving professional attitudes towards personality disorder

	Clear Focus	Acceptable recruitment	Accurate Exposure	Accurate Measurement	Attention to Confounders	Follow up	Results	Preciseness	Believability	Generability	Fit with other evidence	Translatable in to practice	Overall quality score
Clark, Fox & Long (2014)	Y	Y	?	Y	N	N	Y	?	N	N	Y	Y	7
Clarke et al. (2015a)	Y	Y	?	Y	N	Y	Y	?	Y	Y	Y	Y	10
Clarke et al. (2015b)	Y	Y	?	Y	N	Y	Y	?	Y	Y	Y	Y	10
Commons Treloar & Lewis (2008)	Y	Y	?	N	Y	N	Y	?	N	Y	Y	Y	8
Commons Treloar (2009)	Y	Y	?	N	N	N	Y	?	N	Y	Y	Y	7
Davies et al. (2015)	Y	Y	?	N	N	N	Y	?	N	Y	Y	Y	7
Dickens et al. (2018)	Y	Y	Y	Y	N	N	Y	?	N	N	Y	Y	7.5
Ebrahim et al. (2016)	Y	Y	?	N	N	N	N	?	N	Y	Y	Y	6
Fraser (2001)	Y	Y	?	N	Y	N	Y	?	N	Y	Y	Y	8
Keuroghlian et al. (2016)	Y	Y	?	N	N	N	Y	?	N	Y	Y	Y	7
Knaak et al. (2015)	Y	Y	?	Y	N	N	Y	?	N	Y	Y	Y	8
Krawitz (2004)	Y	Y	?	N	N	N	Y	?	N	Y	Y	Y	7
Lamph et al. (2014)	Y	Y	?	N	N	N	Y	?	N	Y	Y	Y	7
Lamph et al. (2018)	Y	Y	?	N	N	N	Y	?	N	N	Y	Y	6
Maltman & Hamilton (2011)	Y	Y	?	Y	N	N	Y	?	N	N	Y	Y	7
Miller & Davenport (1996)	Y	Y	?	Y	N	N	Y	?	N	Y	Y	Y	8
Polnay et al. (2015)	Y	Y	?	Y	N	N	Y	?	N	?	Y	Y	7.5
Shanks et al. (2011)	Y	Y	?	N	N	N	Y	?	N	?	Y	Y	6.5
Welstead et al. (2017)	Y	Y	?	Y	N	N	Y	?	N	Y	Y	Y	8

N.B. Y = Yes; N = No; ? = Can't Tell.

Discussion

This systematic review aimed to investigate the effectiveness of training aimed at improving health and social care professionals' attitudes towards people with a diagnosis of personality disorder. The evidence suggests that training can be effective, however, effect sizes tended to be small overall. Many studies were judged low-quality and used unvalidated measures, however improved attitudes towards both personality disorder and BPD specifically were found in studies judged as higher in quality with moderate to large effect sizes (Clake et al., 2015a; Dickens et al., 2018; Fraser (2001); Knaak et al., 2015; Miller & Davenport, 1996; Polnay et al., 2015). The evidence also suggests that improvements in attitudes tend to be maintained over time, however, there is some evidence to suggest that feelings of capability may be more difficult to sustain than feelings of empathy long-term (Davies et al., 2014; Ebrahim et al., 2016). It also seems that feelings of empathy may be more difficult to maintain in a multi-agency setting (Lamph et al., 2014), and when training does not address trauma (Commons-Treloar, 2009). Most studies included a psychological model and the evidence does not suggest that any are more effective, however, there is some evidence to suggest that training that uses a reductionist, biologically based, model (Clark et al., 2015) is less effective. There was a slight trend that interventions that included a clinical skills component, such as teaching DBT skills to use with clients, were more effective than interventions that included a self-management skills component. such as mindfulness, and interventions that included no skills component. A key finding is that all studies that were co-produced with PPE demonstrated moderate to large effect sizes where available, and effect sizes for interventions that were not co-produced tended to be smaller with some exceptions. Including videos of PPE also appears to improve effectiveness, however, it appears that PPE videos not developed for or supported by training may be misunderstood (Dickens et al., 2018). There was no evidence to suggest that the length of training had any influence on effectiveness.

The review followed the PRISMA guidelines (Moher et al., 2009) and meets all necessary criteria for a systematic review. There was good inter-rater agreement for the abstract and full-text reading stage.. There was also good inter-rater agreement for the quality assessment. All extracted data was

independently cross-checked by a second author which means that the possibility of errors is unlikely. Unfortunately, some pieces of information could not be gathered by contacting authors which means that data is incomplete for nine studies. In terms of limitations, some studies included multiple measures of attitudes, which raises the chance that significant effects will have been found. It is possible that this review could have been made of higher quality by removing some of these additional measures from the analysis. It is also possible that the review would have been improved by removing more of the lower quality studies, for example, those that did not use validated outcome measures. The decision to include all the available information was made in both cases because it was felt necessary to create a broad overview of how research is currently being conducted in this area and make recommendations for improvements.

In terms of future directions, more high-quality research is needed in this area. Further studies should consist of randomised controlled trials that use validated measures and include a follow-up period of at least 6-months. In particular, a randomised controlled trial comparing training that is co-produced with PPE against training that is delivered by professionals only is needed to definitively answer the question of whether co-production improves effectiveness over education delivered by professionals only. Many of the studies in this review used the NHS recommended PD-KASQ, and further studies should also seek to either validate the measure or use the APDQ as a valid and reliable alternative. Given the evidence that negative attitudes are associated with reduced staff wellbeing (Taylor, 2011), it is also important that further studies measure this, however, it will also be important to explore this relationship longitudinally. Providing care for people with a diagnosis can be personally challenging for professionals, however, it is also possible that reduced staff wellbeing, perhaps due to external or organisational pressures, negatively impacts attitudes. Future research should also investigate whether reported improvements in attitudes translate into improved clinical practice, perhaps via observational methods or service user report.

The findings suggest that service providers wishing to improve health and social care professionals' attitudes towards personality disorder should deliver training. The findings also suggest that including a psychological model, a clinical skills component, and PPE involvement is likely to improve effectiveness. Given the evidence that personality disorder diagnoses tend to overlap in practice, and

the comparable effectiveness of training aimed at personality disorder broadly or BPD specifically, it seems sensible to suggest that training should be kept broad so that the benefits can be generalised to a larger client population. The findings also suggest that additional intervention may be required to maintained feelings of capability in healthcare settings, and feelings of empathy in multi-agency settings, perhaps in the form of clinical supervision. From the limited evidence available, it does not appear that training is an effective route to improving staff wellbeing, even when it is aimed at teaching self-management skills such as mindfulness, which again suggests that additional support such as that provided by supervision is required alongside training.

References

- American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders (5th Ed.)*. Arlington, VA: Author.
- Bateman, A., Fonagy, P., & Allen, J. G. (2009). Theory and practice of mentalization-based therapy. In *Textbook of psychotherapeutic treatments*. (pp. 757-780). Arlington, VA, US: American Psychiatric Publishing, Inc.
- Beck, A. T. (1976). *Cognitive therapy and the emotional disorders*. Oxford, England: International Universities Press.
- Bodner, E., Cohen-Fridel, S., & Iancu, I. (2011). Staff attitudes toward patients with borderline personality disorder. *Comprehensive Psychiatry*, *52*(5), 548-555. doi:10.1016/j.comppsy.2010.10.004
- Bodner, E., Cohen-Fridel, S., Mashiah, M., Segal, M., Grinshpoon, A., Fischel, T., & Iancu, I. (2015). The attitudes of psychiatric hospital staff toward hospitalization and treatment of patients with borderline personality disorder. *BMC Psychiatry*, *15*. doi:10.1186/s12888-014-0380-y
- Bolton, W., Feigenbaum, J., Jones, A., & Woodward, C. (2010). Development of the PD-KASQ (Personality Disorder – Knowledge, Attitudes and Skills Questionnaire). In
- Bond, F. W., Hayes, S. C., Baer, R. A., Carpenter, K. M., Guenole, N., Orcutt, H. K., . . . Zettle, R. D. (2011). Preliminary psychometric properties of the Acceptance and Action Questionnaire–II: A revised measure of psychological inflexibility and experiential avoidance. *Behavior Therapy*, *42*(4), 676-688. doi:10.1016/j.beth.2011.03.007

- Bornstein, R. F. (1998). Reconceptualizing personality disorder diagnosis in the DSM-V: The discriminant validity challenge. *Clinical Psychology: Science and Practice*, 5(3), 333-343. doi:10.1111/j.1468-2850.1998.tb00153.x
- Bowers, L., & Allan, T. (2006). The attitude to personality disorder questionnaire: Psychometric properties and results. *Journal of Personality Disorders*, 20(3), 281-293. doi:10.1521/pedi.2006.20.3.281
- Chartonas, D., Kyratsous, M., Dracass, S., Lee, T., & Bhui, K. (2017). Personality disorder: still the patients psychiatrists dislike? *Psychiatric Bulletin*, 41(1), 12-17. doi:10.1192/pb.bp.115.052456
- Clark, C. J., Fox, E., & Long, C. G. (2015). Can teaching staff about the neurobiological underpinnings of borderline personality disorder instigate attitudinal change? *Journal of Psychiatric Intensive Care*, 11(1), 43-51. doi:10.1017/S1742646414000132
- Clarke, S., Taylor, G., Bolderston, H., Lancaster, J., & Remington, B. (2015). Ameliorating patient stigma amongst staff working with personality disorder: Randomized controlled trial of self-management versus skills training. *Behavioural and Cognitive Psychotherapy*, 43(6), 692-704. doi:10.1017/S1352465814000320
- Clarke, S., Taylor, G., Lancaster, J., & Remington, B. (2015). Acceptance and commitment therapy–based self-management versus psychoeducation training for staff caring for clients with a personality disorder: A randomized controlled trial. *Journal of Personality Disorders*, 29(2), 163-176. doi:10.1521/pedi_2014_28_149
- Cleary, M., Siegfried, N., & Walter, G. (2002). Experience, knowledge and attitudes of mental health staff regarding clients with a borderline personality disorder. *International Journal of Mental Health Nursing*, 11(3), 186-191. doi:10.1046/j.1440-0979.2002.00246.x
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences*, 2nd Edition. Hillsdale, N.J.: Lawrence Erlbaum.
- Commons-Treloar, A. (2009). Effectiveness of education programs in changing clinician's attitudes towards treating borderline personality disorder. *Psychiatric Services*, 60(8), 1128-1131. doi:10.1176/appi.ps.60.8.1128
- Commons-Treloar, A. J., & Lewis, A. (2008). Targeted clinical education for staff attitudes towards deliberate self-harm in borderline personality disorder: Randomized controlled trial.

Australian and New Zealand Journal of Psychiatry, 42(11), 981-988. doi:

10.1080/00048670802415392

- Corrigan, P. W. (2000). Mental health stigma as social attribution: Implications for research methods and attitude change. *Clinical Psychology: Science and Practice*, 7(1), 48-67. doi:10.1093/clipsy/7.1.48
- Corrigan, P. W., & Penn, D. L. (1999). Lessons from social psychology on discrediting psychiatric stigma. *American Psychologist*, 54(9), 765-776. doi:10.1037/0003-066X.54.9.765
- Critical Appraisal Skills Programme. (2017). CASP Cohort Study Checklist. Retrieved from http://docs.wixstatic.com/ugd/dded87_5ad0ece77a3f4fc9bcd3665a7d1fa91f.pdf
- Davies, J., Sampson, M., Beesley, F., Smith, D., & Baldwin, V. (2014). An evaluation of knowledge and understanding framework personality disorder awareness training: Can a co-production model be effective in a local NHS mental health trust? *Personality and Mental Health*, 8(2), 161-168. doi:10.1002/pmh.1257
- Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology*, 44(1), 113-126. doi:10.1037/0022-3514.44.1.113
- Dickens, G. L., Hallett, N., & Lamont, E. (2016). Interventions to improve mental health nurses' skills, attitudes, and knowledge related to people with a diagnosis of borderline personality disorder: Systematic review. *International Journal of Nursing Studies*, 56, 114-127. doi:10.1016/j.ijnurstu.2015.10.019
- Dickens, G. L., Lamont, E., & Stirling, F. J. (2018). Student health professionals' attitudes and experience after watching "Ida's Diary", a first-person account of living with borderline personality disorder: Mixed methods study. *Nurse education today*, 65, 128-135. doi:10.1016/j.nedt.2018.03.003
- Ebrahim, S., Robinson, S., Crooks, S., Harenwall, S., & Forsyth, A. (2016). Evaluation of awareness level knowledge and understanding framework personality disorder training with mental health staff: impact on attitudes and clinical practice. *Journal of Mental Health Training Education and Practice*, 11(3), 133-143. doi:10.1108/jmhtep-07-2015-0030

- Forsyth, A. (2007). The effects of diagnosis and non-compliance attributions on therapeutic alliance processes in adult acute psychiatric settings. *Journal of Psychiatric and Mental Health Nursing, 14*(1), 33-40. doi:10.1111/j.1365-2850.2007.01036.x
- Fraser, K., & Gallop, R. (1993). Nurses' confirming/disconfirming responses to patients diagnosed with borderline personality disorder. *Archives of Psychiatric Nursing, 7*(6), 336-341. doi: 10.1016/0883-9417(93)90051-W
- Fraser, S. R. (2001). *The impact of training on the attitudes of mental health professionals toward borderline personality disorder*. (62), ProQuest Information & Learning, US.
- Goldberg, D. P., & Hillier, V. F. (1979). A scaled version of the General Health Questionnaire. *Psychological Medicine, 9*(1), 139-145. doi:10.1017/S0033291700021644
- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (1999). *Acceptance and commitment therapy: An experiential approach to behavior change*. New York, NY, US: Guilford Press.
- Hill, D. J., & Bale, R. M. (1980). Development of the Mental Health Locus of Control and Mental Health Locus of Origin scales. *Journal of Personality Assessment, 44*(2), 148-156. doi: 10.1207/s15327752jpa4402_5
- Hogg, M. A., & Vaughan, G. M. (2014). *Social Psychology* (7th ed.). Harlow: Pearson Education Limited.
- James, P. D., & Cowman, S. (2007). Psychiatric nurses' knowledge, experience and attitudes towards clients with borderline personality disorder. *Journal of Psychiatric and Mental Health Nursing, 14*(7), 670-678. doi:10.1111/j.1365-2850.2007.01157.x
- Kassam, A., Papish, A., Modgill, G., & Patten, S. (2012). The development and psychometric properties of a new scale to measure mental illness related stigma by health care providers: The Opening Minds Scale for Health Care Providers (OMS-HC). *BMC Psychiatry, 12*. doi: 10.1186/1471-244X-12-62
- Keuroghlian, A. S., Palmer, B. A., Choi-Kain, L. W., Borba, C. P. C., Links, P. S., & Gunderson, J. G. (2016). The effect of attending Good Psychiatric Management (GPM) workshops on attitudes toward patients with borderline personality disorder. *Journal of Personality Disorders, 30*(4), 567-576. doi:10.1521/pedi_2015_29_206
- Knaak, S., Szeto, A. C. H., Fitch, K., Modgill, G., & Patten, S. (2015). Stigma towards borderline personality disorder: effectiveness and generalizability of an anti-stigma program for

- healthcare providers using a pre-post randomized design. *Borderline Personality Disorder and Emotion Dysregulation*, 2, 9. doi:10.1186/s40479-015-0030-0
- Krawitz, R. (2004). Borderline personality disorder: attitudinal change following training. *Australian and New Zealand Journal of Psychiatry*, 38(7), 554-559. doi:10.1111/j.1440-1614.2004.01409.x
- Lam, D. C. K., Poplavskaya, E. V., Salkovskis, P. M., Hogg, L. I., & Panting, H. (2016). An experimental investigation of the impact of personality disorder diagnosis on clinicians: Can we see past the borderline? *Behavioural and Cognitive Psychotherapy*, 44(3), 361-373. doi:10.1017/S1352465815000351
- Lamont, K., Scott, N. W., Jones, G., & Bhattacharya, S. (2015). Risk of recurrent stillbirth: Systematic review and meta-analysis. *BMJ*, 350, [3080]. <https://doi.org/10.1136/bmj.h3080>
- Lamph, G., Latham, C., Smith, D., Brown, A., Doyle, J., & Sampson, M. (2014). Evaluating the impact of a nationally recognised training programme that aims to raise the awareness and challenge attitudes of personality disorder in multi-agency partners. *Journal of Mental Health Training, Education and Practice*, 9(2), 89-100.
- Lamph, G., Sampson, M., Smith, D., Williamson, G., & Guyers, M. (2018). Can an interactive e-learning training package improve the understanding of personality disorder within mental health professionals? *Journal of Mental Health Training Education and Practice*, 13(2), 124-134. doi:10.1108/jmhtep-03-2017-0023
- Lewis, G., & Appleby, L. (1988). Personality disorder: The patients psychiatrists dislike. *The British Journal of Psychiatry*, 153, 44-49. doi:10.1192/bjp.153.1.44
- Linehan, M. M. (1993). *Cognitive-behavioral treatment of borderline personality disorder*. New York, NY, US: Guilford Press.
- Link, B. G., Cullen, F. T., Frank, J., & Wozniak, J. F. (1987). The social rejection of former mental patients: Understanding why labels matter. *American Journal of Sociology*, 92(6), 1461-1500. doi:10.1086/228672
- Luborsky, L., Barber, J. P., Siqueland, L., Johnson, S., Najavits, L. M., Frank, A., & Daley, D. (1996). The revised Helping Alliance questionnaire (HAq-II): Psychometric properties. *Journal of Psychotherapy Practice & Research*, 5(3), 260-271.

- Maltman, L., & Hamilton, L. (2011). Preliminary evaluation of personality disorder awareness workshops for prison staff. *The British Journal of Forensic Practice*, 13(4), 244-256. doi: 10.1108/14636641111190006
- Markham, D., & Trower, P. (2003). The effects of the psychiatric label 'borderline personality disorder' on nursing staff's perceptions and causal attributions for challenging behaviours. *British Journal of Clinical Psychology*, 42(3), 243-256. doi:10.1348/01446650360703366
- Maslach, C., Jackson, S. E., & Leiter, M. P. (1997). Maslach Burnout Inventory: Third edition. In *Evaluating stress: A book of resources*. (pp. 191-218). Lanham, MD, US: Scarecrow Education.
- McAllister, M., Creedy, D., Moyle, W., & Farrugia, C. (2002). Nurses' attitudes towards clients who self-harm. *Journal of Advanced Nursing*, 40(5), 578-586.
- McGrath, B., & Dowling, M. (2012). Exploring Registered Psychiatric Nurses' Responses towards Service Users with a Diagnosis of Borderline Personality Disorder. *Nursing research and practice*, 2012, 601918-601918. doi:10.1155/2012/601918
- McIntosh, K., R. (1998). *Beliefs and Attitudes of Practicing Clinicians Towards Borderline Personality Disorder*. Unpublished Master's Thesis. California State University. Dominguez Hills, CA.
- Miller, S. A., & Davenport, N. C. (1996). Increasing staff knowledge of and improving attitudes toward patients with borderline personality disorder. *Psychiatric Services*, 47(5), 533-535. doi:10.1176/ps.47.5.533
- Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *British Medical Journal*, 339(b2535), 332-336.
- National Institute for Health and Care Excellence. (2009). Borderline personality disorder: recognition and management. Retrieved from <https://www.nice.org.uk/guidance/cg78/resources/borderline-personality-disorder-recognition-and-management-pdf-975635141317>
- 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. doi:10.1177/0036933015608125
- Reece, B. (1988). *Reece's Questionnaire on Borderline Personality Disorder*.

- Sansone, R. A., & Sansone, L. A. (2013). Responses of mental health clinicians to patients with borderline personality disorder. *Innov Clin Neurosci*, *10*(5-6), 39-43.
- Shanks, C., Pfohl, B., Blum, N., & Black, D. W. (2011). Can negative attitudes toward patients with borderline personality disorder be changed? The effect of attending a STEPPS workshop. *Journal of Personality Disorders*, *25*(6), 806-812. doi:10.1521/pedi.2011.25.6.806
- Taylor, G. (2011). *Understanding and ameliorating stigma towards clients with a personality disorder: an acceptance and commitment therapy-based approach*. (U562098 Ph.D.), University of Southampton (United Kingdom), Ann Arbor. ProQuest Dissertations & Theses: UK & Ireland database.
- 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 Bull*, *42*(3), 102-108. doi:10.1192/bjb.2017.29
- Westwood, L., & Baker, J. (2010). Attitudes and perceptions of mental health nurses towards borderline personality disorder clients in acute mental health settings: A review of the literature. *Journal of Psychiatric and Mental Health Nursing*, *17*(7), 657-662. doi:10.1111/j.1365-2850.2010.01579.x
- Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review*, *92*(4), 548-573. doi:10.1037/0033-295X.92.4.548
- Williams, A., Cahill, C., & Patrick, J. (2015). *The Knowledge and Application of MBT Questionnaire*.
- Wilson, K. G., Sandoz, E. K., Kitchens, J., & Roberts, M. (2010). The Valued Living Questionnaire: Defining and measuring valued action within a behavioral framework. *The Psychological Record*, *60*(2), 249-272.
- Young, J. E. (1994). *Cognitive therapy for personality disorders: A schema-focused approach*, Rev. ed. Sarasota, FL, US: Professional Resource Press/Professional Resource Exchange.