Staff attitudes towards individuals with Borderline Personality Disorder: can formulation reverse the stigma? An experimental, vignette-based study.

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## Abstract

Staff members working in mental health settings may experience stigmatising attitudes towards individuals with a personality disorder diagnosis. Little is known about how such attitudes may be modified or improved. The purpose of the current study was to investigate the impact of a written psychological formulation on attitudes towards an individual with a diagnosis of personality disorder. The current study had an experimental, vignette-based, between-subjects design and utilised online survey approach. Multidisciplinary staff members (n=141) from two large mental health trusts in the East of England took part in the study being randomly assigned to either the formulation or Non-formulation condition. Both groups read a short extract about the same fictitious patient. Participants in the formulation condition also read a psychological formulation regarding the patient’s presenting difficulties. Attitudes and causal attributions were compared between the two groups. The results of the study suggest that the addition of a psychological formulation, at least one structured along the lines of the 5-P’s framework, did not significantly alter participants’ attitudes towards the individual within the vignette in most domains measured. One domain of the Causal Attributions measure (‘Stability’) showed a change in the direction of increased stigma.

**Keywords:** Borderline Personality Disorder, BPD, personality disorder, attitudes, causal attributions

## Introduction

Borderline Personality Disorder (BPD) is a well-known, but contentious, psychiatric diagnosis. Its validity and reliability have been questioned (Horn, Johnstone, & Brooke, 2007; Miller, 1994). However, the term BPD is frequently used within mental health services and research, with individuals with the diagnosis being understood as experiencing a long-term pervasive pattern of emotional instability, unstable mood, unstable interpersonal relationships and fears of abandonment (Leichsenring et al, 2023).

There is evidence to suggest that stigmatised attitudes towards individuals with mental health difficulties – including BPD – exist both amongst the general public and amongst the individuals themselves (Stiles et al, 2023). Indeed, BPD might be among the most stigmatised psychiatric diagnoses (Hazell et al, 2022). There is substantial evidence suggesting that these attitudes also exist in staff working in psychiatric and clinical settings (Baker and Beazley, 2022; McKenzie et al, 2022). Stigmatised attitudes can lead to rejecting and discriminative behaviour towards the individual or group of individuals (Link & Phelan, 2001), and experimental research has indicated that the BPD term can itself unfairly overshadow clinicial decision-making (Lam et al, 2016).

Lewis and Appleby’s (1988) seminal study investigated the attitudes of psychiatrists towards patients with and without a diagnosis of a personality disorder, using an experimental vignette-based design. The individual described in the vignettes appeared to have traits pertaining to BPD. Some of the conditions included a previous diagnosis of ‘personality disorder’ and were compared with conditions where no diagnosis, or a diagnosis of depression, was included. The results of their study suggested more negative and rejecting attitudes towards individuals with a diagnosis of a personality disorder than an individual with depression, and that such individuals were considered by participants as not mentally unwell. A more recent replication of the study, using the specific term ‘Borderline Personality Disorder’ (Chartonas, Kyratsous, Dracass, Lee, & Bhui, 2017), echoed these findings. Within this study, a difference was also found in the total of the Attitudes towards Personality Disorder Questionnaire (APDQ; Bowers & Allan, 2006) at a rate that was approaching significance.

Stigmatised attitudes towards individuals with BPD may in part come from a perception that individuals with BPD are in control of the behaviours that they engage in (Markham & Trower, 2003). The relevance of control to notions of stigma is underpinned by the attribution theory, which ‘is based upon the premise that people determine causes for events in order to experience a sense of control over their environment’ (Markham & Trower, 2003; p. 245). Markham and Trower (2003) investigated causal attributions made for challenging behaviours in individuals with a diagnosis of BPD compared with schizophrenia or depression in a sample of nurses. They suggested that participants rated the cause of the behaviour as being more stable across similar situations in individuals with BPD, and that individuals with BPD are perceived as being more in control of both their behaviour and the cause for their behaviour. Personal control was also highlighted as relevant in Lewis and Appleby's (1988) study, which suggest that such beliefs likely contribute to the stigma associated with the individual’s diagnosis of a personality disorder.

Stigmatised attitudes are suggested to be damaging towards such individuals in a number of ways (e.g.Aviram et al., 2006; Sickel et al, 2014; Rüsch et al, 2018) and therefore present a significant ethical challenge for healthcare providers. There is therefore an impetus to consider potential approaches to reducing stigmatic attitudes or mitigating against their adverse effects.

**Altering Stigmatised Attitudes Amongst Staff Towards BPD**

A small number of studies have explored approaches to develop more positive attitudes towards individuals with a diagnosis of BPD in clinical staff. Much of this research has concerned the approach taken by educational interventions applied to staff groups with the intent to change attitudes. Klein et al (2022) provides the most recent review of this research, focused primarily towards educational interventions. The review indicates that, overall, there is some evidence suggesting that educational interventions are effective in changing attitudes, but that this research is relatively low quality and that more high-quality research is needed. It highlights that a range of disparate approaches to training have been taken, and beyond educational interventions, other approaches are necessary to develop a compassionate clinical workforce.

 Of course, such educational approaches make an assumption that increases in knowledge will result in changes in attitudes. This may not be an entirely safe assumption. For example, Pen, Gunan, Daily, Spalding and Sullivan (1994, as cited in Martin, Lang, & Olafsdottir, 2008) suggested that providing further knowledge on the symptoms of schizophrenia actually increased negative attitudes, a finding which is possibly related to wider research highlighting the potential adverse impact on biogenetic attributions and explanations on stigmatised attitudes (Schomerus et al., 2012). Furthermore, attitude change in interventions of education do not tend to be measured implicitly, and so recorded changes in attitudes on self-report measures may represent social desirability biases at play; moreover, factors such as a self-selection bias may also be important in who attends for training.

 Beyond educational interventions, there may be other approaches to mitigate the impact of stigmatic attitudes towards people with Borderline Personality Disorder. One approach, building on some of the experimental research highlighted earlier, may be to make changes to the way in which information about people with BPD is recorded and/or presented. For example, it is possible that if diagnostic information, or particular symptoms or behaviours, are particularly important in influencing stigmatic judgements, then approaches to consider how these phenomena are described may be fruitful avenues of research. Similarly, it may be possible to identify ways to routinely present additional information that mitigates against underlying stigma created by these descriptors. One such approach may be the integration of psychological formulations into the clinical descriptions of people with BPD.

**Psychological Case Formulation and the Current Study**

Psychological formulations aim to generate an understanding of an individual’s specific mental health difficulties, potentially considering both the development and maintenance of these difficulties, and making links between these difficulties, the client’s experience, and psychological theory (Kinderman, 2005; Tarrier, 2006). Formulations can be used to improve an individual’s understanding of their difficulties and lessen emotional distress (Horowitz, 1997; Ruggiero et al, 2021). More specifically, Berry et al (2009) have indicated that more positive feelings towards individuals with mental health difficulty can be created following the attendance of a formulation consultation meeting regarding specific service users.

There are many different approaches to constructing formulations, however they typically include a narrative of the individual’s difficulties (British Psychological Society, 2011), including factors which are likely to predispose the individual to their difficulties, factors which precipitate (trigger) the individual’s difficulties, factors which perpetuate (maintain) the individual’s difficulties and factors which protect (are helpful) to the individual. This condensed ‘5-P’s’ framework arises from a more detailed framework proposed by Weerasekera (1993), and is commonly used in clinical practice to structure information in a written formulation (see Dudley & Kuyken, 2014 for an overview of its application in contemporary clinical practice). Whilst the development of formulation skills in clinical practice also requires attention towards clinical theory, hypothesis testing and clarity of focus on developmental and maintenance factors, at its heart the 5-P’s framework is a simple structure which allows some contextualisation of a presenting issue within wider developmental causes.

 The British Psychological Society (2011) cite formulation as being useful for helping the individual and their care team work collaboratively and “increasing team understanding, empathy and reflectiveness” (British Psychological Society, 2011; p. 9). The use of formulation fits in with a broader trend in recommendations for services to move away from an exclusively diagnostic model of understanding complex mental health presentations (Allen, 2004; Berthoud, Kramer, de Roten, Despland, & Caspar, 2013).

A small number of studies suggest the usage of formulations amongst staff may increase empathy towards individuals. For example, Whitton, Small, Lyon, Barker, and Akiboh (2016) suggests that both understanding and empathy towards service users with intellectual disabilities increased following the process of constructing a formulation for the patient via team consultation. A small number of small-scale studies have been conducted on the use of formulation as a means of altering attitudes towards individuals with a personality disorder, mostly within a forensic setting. For example, Ramsden, Lowton, and Joyes (2014) completed a small-scale study on the use of formulation focused case consultation with staff working with offenders with personality disorders. This study indicated a positive change in attitudes towards personality disorders. Similarly, Knauer, Walker, and Roberts (2017) carried out a study with 60 members of staff working with offenders. This study found that following formulation consultation meetings, staff members’ attitudes towards individuals with a personality disorder were more positive. It is possible therefore that the use of formulation, at least when linked to a case consultation meeting, may be one avenue for reducing stigmatised attitudes towards BPD.

**The Current Study**

As an extension of Lewis and Appleby (1988) and Chartonas et al.'s (2017) studies, the current study uses psychological formulation as an independent variable. The diagnosis of a personality disorder is given in the first line of the vignette in order to elicit underlying attitudes towards personality disorder and any underlying stigma, if present. The clinical characteristics within the vignette were intended to describe some of the broad characteristics of a presentation of Borderline Personality Disorder (BPD). Participants were experimentally manipulated to either a formulation condition (where a developmental formulation is added) or not. Standardised measures were then used to measure stigmatised attitudes and the causal attributions made in regard to the behaviour of the individual in the vignette.

The current study hypothesised a difference between the two groups in regard to attitude, with those in the Formulation condition demonstrating less stigmatised attitudes than those in the Non-formulation condition. Furthermore, the current study hypothesised that there would be a difference between the two conditions on the specific causal attribution dimension of controllability. This is based upon both the findings of Markham and Trower's (2003) and Jones et al.’s (1984 as cited in Ahmedani, 2011) controllability construct of stigma. It was thought that the additional psychological contextual information would be likely to impact upon how causal attributions are made, with participants who receive the formulation being more likely to see the cause of the patient’s behaviour as being outside of the patient’s control than participants who do not receive the psychological formulation.

## Methods

**Participants**

Participants were clinical staff members working in secondary mental healthcare services within two mental health NHS trusts in Eastern England. They were recruited directly from both community services and inpatient services. Any member of staff who worked in a clinical role was eligible to take part. There was no minimum requirement for the length of time the participant had been working in a clinical role, and there was no minimum qualification requirement.

In total, 141 participants took part in the study. A further 89 participants started to complete the survey but did not finish and are not included in any part of the analysis. Participants comprised of 40 nursing staff, 36 support practitioners, 30 psychology staff and 10 social workers. 4 staff were from a medical background. The remaining staff were from a range of other clinical backgrounds. Participants had between <1 and 35 years of experience. The mean amount of practice years of experience was 10.55 years. Out of 141 participants, 10 participants (7%) reported working in specialist personality disorder services, and 57 participants (40%) identified themselves as having received specialist personality disorder training.

**Sampling**

The study was carried out via an online survey, with eligible staff being able to access the survey via a link from electronic study advertisement. Efforts were made to ensure that the study advertisement reached all clinical staff members within both NHS sites (e.g. through including in a newsletter emailed to all staff). The contact from each service then emailed the advert out to clinical staff intermittently over a period of approximately five months. Additionally, the primary author attended ten team meetings in order to explain the study and answer any questions.

**Ethical Considerations**

Ethical approval was gained for the current study from University of East Anglia Faculty of Medicine and Health Sciences ethics committee. Additionally, given the recruitment of staff from the NHS, the study was also approved by the Health Research Authority (IRAS Reference 229975).

In order to thank participants for their participation they were given the option to take part in a prize draw to win one of five £25 vouchers.

**Sample Size, Power and Precision**

Prior to data collection, a power analysis (using G\*Power) indicated that the minimum number of participants required for this study was 126. This would enable the carrying out of two-tailed t-tests with a medium effect size of 0.5 and a power of 0.8 (Cohen, 1969). The obtained sample of 141 was therefore sufficient to carry out the required analyses with adequate power.

**Measures**

**22 Sematic Differentials(Lewis & Appleby, 1988).** This 22-item scale is measured along a 6-point bipolar scale. It is a measure of attitudes towards personality disorders, asking participants to rate their response to a fictitious individual presented in the vignette. The scores are summed to give an overall measure of attitude, with higher scores indicating a more rejecting attitude. The rationale for choosing this measure is that it has been used in the two key previous studies (Chartonas et al., 2017; Lewis & Appleby, 1988) which have a similar design to the current study. A previous factor analysis revealed three factors (Chartonas et al., 2017). However, two of the factors (each with three items) did not demonstrate clear conceptual distinctions. Therefore, only the items from factor 1 will be analysed within the current study. A small number of the items (five) were not considered suitable for the current study, as they were written exclusively for participants who are psychiatrists. These were therefore removed from the current study (with permission being sought from the authors to do so). Cronbach’s alpha (Cronbach, 1951) has not previously been calculated for this measure but was calculated at 0.66 in the current study.

**Attitudes towards Personality Disorder Questionnaire (APDQ; Bowers & Allan, 2006).** The APDQ is a 35-item questionnaire which measures attitudes towards personality disorders. Each item is rated on a 6-point Likert scale. The items are comprised of different feelings and reactions towards individuals with a personality disorder. This measure has good test-retest validity amongst nurses, and high internal consistency (*α* = 0.94) (Bowers & Allan, 2006). Bowers and Allan carried out a principal components factor analysis, identifying five factors: enjoyment/loathing, security/vulnerability, acceptance/rejection, purpose/futility, and enthusiasm/exhaustion. In the current study, alterations were made to the wording of the items to make direct reference to the individual within the vignette (with permission from the author of the APDQ), e.g. ‘I like *patients* *like Louise’* instead of ‘I like PD Patients’ as in the original. Higher scores indicate more positive attitudes. The rationale for utilising the APDQ is that validation of psychometric properties has taken place (Bowers & Allan, 2006), and this measure was also used in Chartonas et al.'s (2017) study. Cronbach alphas reported in the current study were high for the individual factors (0.75-0.93) and for the total score (0.95).

**Causal Attribution Scale (Heider, 1958, as cited in Markham & Trower, 2003)** The Causal Attribution Scale (Heider, 1958, as cited in Markham & Trower, 2003) was used to measure how participants explain (make causal attributions for) the behaviour of the individual within the vignette. The way it was used was based upon Markham and Trower's (2003) adaptation of Dagnan, Trower and Smith’s (1998, as cited in Markham & Trower, 2003) modified version of the Attribution Style Questionnaire (Peterson, et al., 1982, as cited in Markham & Trower, 2003). A series of five behaviours about the individual in the vignette was presented to the participant – for instance ‘Louise was verbally aggressive and physically violent towards another patient within the service’. For each, the participant specified a cause for the behaviour, and then rated the cause along 7-point bipolar scales for each of the dimensions of internality, stability, globality, controllability (comprised of control of the cause and control of the event). The behaviours presented are based upon those used within Markham and Trower's (2003) study. The scores for each dimension across situations were then reversed and summed to give an overall score for that dimension. Higher scores indicated that the cause is thought to be more internal to the patient (internality); that the same things would be more likely to happen in a similar occurring event (stability); that the cause would influence how the patient behaves in other events (globality), that the patient was in control of the cause (control of the cause) and the patient was in control of the event (control of the event). Markham and Trower (2003) did not report Cronbach’s alpha scores within their study; however, within the present study these were all high (between 0.81 and 0.85).

**Research Design**

The current study had a quantitative, between-subjects, experimental vignette-based design, with two conditions: Formulation and Non-Formulation. Participants in both conditions read the same background narrative about a fictitious patient ‘Louise’, including the diagnosis of a personality disorder in the first line. The purpose of the diagnosis was to activate a stigmatised attitude towards the patient within the vignette. However, the Formulation group had an additional psychological formulation of the patient, taking the form of a 5-P structure. The vignettes were developed by the primary author and reviewed by a panel of clinical psychologists working within personality disorder services, to ensure that the narrative presented in the vignettes was clinically realistic of a BPD presentation (see Supplementary Information for full copies of the vignettes).

**Procedure**

Participants were randomly assigned to either condition (Formulation or Non-formulation) by the online software (Qualtrics). Participants read the extract about the fictitious patient before completing the measures. The extract was displayed at the bottom of each online page for the participants’ reference.

The demographics collected following completion of the measures were job title, number of years’ experience working in mental health, whether the participant worked in a specialist personality disorder service, and whether the participant considered themselves to have received specialist training in personality disorders.

The median completion time was 19 minutes and 61 seconds.

**Data Analysis**

The primary analysis sought to compare the means of the two conditions for factor 1 of the Semantic Differentials measure, the total of the APDQ, each of the five factors of the APDQ and each dimension of the Causal Attribution Scale.

## Results

Prior to completing the primary analysis, t-tests were calculated to compare the current sample to reference samples (Chartonas et al., 2017; Lewis & Appleby, 1988; Markham & Trower, 2003). In regard to the Semantic Differentials there was a significant difference for seven out of the seventeen items, with participants in the current study demonstrating less rejecting attitudes (see Supplementary Table 1). For the APDQ, participants in the current study broadly displayed less rejecting attitudes than a sample of acute psychiatric staff from Bowers and Allan’s (2006) validation study (Supplementary Table 2). For the causal attribution dimensions, there were differences in the ‘controllability’ domain compared to the reference sample (Markham and Trower, 2003). This suggests that participants in the current study viewed the cause of the individual’s behaviour and the cause of the event as being less within the individual’s control than participants in the previous sample (Supplementary Table 3).

### Primary Analysis

There was no significant difference between factor 1 of the Semantic Differentials, the total of the APDQ and each of the five factors of the APDQ.

In regard to the causal attributions, there was a significant difference between the two groups on the stability dimension only (there was a significant difference in the Globality domain at the 0.05 level, but this did not survive Holm adjustment), with participants in the Formulation group scoring higher than participants in the Non-formulation group, indicating that those in the Formulation group attribute the cause of the individual’s behaviour to be one that is more stable across similar situations than participants in the Non-formulation group. There was no difference between the two groups. The results of the primary analysis are presented in Table 1.

Table 1

*Comparisons (t-tests) Between the Formulation and Non-formulation Group Carried out for each measure*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Formulation(n=67) | Non-Formulation(n=74) | MeanDifference | StandardError Difference | t-test | Confidence Intervals (95%) |
|  | Mean | Standard Deviation | Mean | Standard Deviation |  |  |  |  |
| Semantic Differentials Factor1 | 32.67 | 5.12 | 33.77 | 6.46 | 1.10 | 0.99 | *t*(139)=1.11, *p*=0.268 | -0.86, 3.05 |
| APDQ Total | 154.96 | 19.33 | 148.96 | 23.03 | -5.10 | 3.60 | *t*(139)=-1.67, *p*=0.098 | -13.12, 1.13 |
| APDQ Factor 1 | 59.67 | 12.44 | 55.73 | 11.95 | -3.94 | 2.06 | *t*(139)=-1.92, *p*=0.057 | -8.01, 0.12 |
| APDQ Factor 2 | 47.25 | 5.80 | 46.61 | 7.56 | -0.65 | 1.14 | *t*(139)=-0.57, *p*=0.573 | -2.91, 1.62 |
| APDQ Factor 3 | 26.37 | 2.60 | 25.81 | 3.17 | -0.56 | 0.49 | *t*(139)=-1.14, *p*=0.255 | -1.53, 0.41 |
| APDQ Factor 4 | 14.18 | 2.12 | 13.59 | 2.92 | -0.59 | 0.43 | *t*(133)=-1.35, *p*=0.173 | -1.43, 0.26 |
| APDQ Factor 5 | 7.48 | 1.80 | 7.22 | 1.77 | -0.26 | 0.30 | *t*(139)=-0.87, *p*=0.386 | -0.86, 0.33 |
| Causal Attribution Internality | 26.57 | 4.91 | 25.00 | 5.32 | -1.57 | 0.87 | *t*(139)=-1.81, *p*=0.072 | -3.28, 0.14 |
| Causal Attribution Stability\* | 26.52 | 4.46 | 24.57 | 4.99 | -1.96 | 0.80 | *t*(139)=-2.44, *p*=0.016 | -3.54, -0.37 |
| Causal Attribution Globality | 27.09 | 4.67 | 25.45 | 5.16 | -1.64 | 0.83 | *t*(139)=-1.98, *p*=0.050 | -3.29, 0.00 |
| Causal Attribution Controllability (Cause) | 21.72 | 6.75 | 21.27 | 5.84 | -0.45 | 1.06 | *t*(139)=-0.42, *p*=0.674 | -2.54, 1.65 |
| Causal Attribution Controllability (Event) | 20.24 | 5.61 | 21.92 | 6.21 | 1.68 | 1.00 | *t*(139)=1.68, *p*=0.095 | -0.30, 3.66 |
| \*Significant difference demonstrated with *p* values adjusted using the Holm correction method (Holm, 1979). |

### Summary of Results

In summary there was no significant difference between the Formulation and Non-formulation groups on factor 1 of the Semantic Differentials, the total and each of the five factors of the APDQ and the causal attribution dimensions of internality, globality and controllability. However, there was a significant difference between the two groups on the causal attribution dimension of stability, with participants in the Formulation group rating the cause of the patient’s behaviour as more likely to occur in similar situations.

**Discussion**

The aim of this study was to investigate whether including a formulation alongside a vignette describing a client with symptoms of BPD would result in lower stigma and changes in causal attributions towards the individual made towards the individual described in the vignette. Broadly, the results of this study reveal no significant difference between the Formulation and Non-formulation conditions on most of the outcome measures including both factor 1 of the Sematic Differentials (Lewis & Appleby, 1988), the total and each of the five factors of the APDQ (Bowers & Allan, 2006), and three of the four dimensions on the Causal Attribution Scale (Heider, 1958, as cited in Markham & Trower, 2003). If taken at face value, this appears to indicate that the presence of a formulation does little alter staff attitudes towards an individual with a diagnosis of personality disorder or the way in which staff make causal attributions about their behaviour.

However, there was one exception to this broad picture – the domain of ‘stability’ on the Causal Dimension measure. Participants in the Formulation group perceived the cause of imagined patient’s ‘challenging’ behaviour to be more stable across similar events than the participants in the non-formulation group. In terms of the actual questionnaire, this means that participants were more likely to indicate that their hypothesised cause for the behaviours outlined in the Causal Dimension measure ‘means that the same thing would happen in a similar occurring event’, i.e. the introduction of the formulation was associated with *more* stigma in this specific regard. Quite possibly, the provision of a psychological formulation which includes developmental information resulted in people perceiving the patient to be less capable of change in similar events, perhaps by indicating or highlighting a lack of change in behaviour over time. Similarly, whilst the differences were not significant (at least after correction for multiple comparisons), the direction of effect for the elements of *Internality* and *Globality* on the same measure were in the same direction as that for *Stability*, i.e. consistent with an *increase* in stigma.

From one perspective, the inability of the structured formulation to exert much change (and possibly even an adverse one in some respects) is perhaps surprising, particularly given that the additional material added was actually quite substantial – basically doubling the length of the material presented and introducing a range of potential explanatory factors – and including, for instance, the important context of early sexual and physical abuse. How can this be understood? There are several possibly explanations, and each will be considered in turn. The most obvious argument is that a developmental formulation simply may not activate a sufficiently powerful alternative explanatory framework to overcome the stigma invoked by the presence of the diagnosis, and that stigma, by itself, might be quite hard to change. Alternatively, the developmental factors may themselves have been stigmatised and so added to the cumulative picture of stigma experienced by the raters. Sample characteristics, or the possible change in stigmatic attitudes over time, might have also influenced the result. A further possibility is that the actual structure of the formulation used in the ‘5-P’s approach is itself specifically problematic. However, it would also seem reasonable to rule out a basic explanation of inattentiveness to the study materials; the median length of time taken to complete the questionnaire suggests that participants generally reviewed the materials carefully.

In weighing up these explanations, Martin et al. (2008)’s FINIS (Framework Integrating Normative Influences on Stigma) may be relevant. This involves viewing the cause of stigmatised attitudes as occurring from an interaction between both an individual’s beliefs and experiences and the wider organisation and societal context. . The proposed framework highlights the complexity of stigmatised attitudes, adding weight to the argument that it may simply be fundamentally difficult to alter stigmatic attitudes, given the fact that they are so deeply embedded within cultural norms, social structures and institutional practices. The fact that evidence for anti-stigma interventions has generally indicated small effect sizes with limited long term effects further supports this view (Moran et al, 2018; Sreeram et al, 2022). The present study hints at the additional risk of potentially reinforcing stigmatic attitudes in the process of trying to improve them.

 However, there are some other considerations that must be borne in mind. First, in terms of sample characteristics, we noted above that the sample was, overall, relatively less stigmatised towards personality disorders than the reference samples. Around half of the comparisons between the Markham & Trower (2003) sample and the present sample indicated subscales had moved in the direction of reduced stigma. This could be interpreted in two ways. First, given the anticipated difficulties in changing stigma, one could reasonably point to these differences as , a rather positive finding. . In this context, such differences could possibly reflect some tentative evidence of a shift in attitudes over time, potentially reflecting gradual developments in the attitudes towards mental health conditions across society and in the wider mental health workforce. In turn, such changes might be argued to reflect the cumulative effects of the sorts of anti-stigma campaigns and training programmes considered in numerous research studies (Morgan et al, 2018; Sreeram et al, 2022) as well as the ongoing evolution of psychiatric and mental health vocational training and education. On the other hand, one might reasonably reflect that given these broad changes, it is a surprise that changes in stigmatic attitudes are not even more prominent than we observed; the inverse finding is of course that around half of the subscales did not demonstrate any change over time; and so these same data might equally be reasonably seen as pointing towards the thesis that changing stigma is fundamentally difficult to change. In terms of making sense of the findings, however, the changes over time were not so stark that it would be unreasonable to expect an experimental manipulation to have ‘room’ to invoke a between-groups difference. Moreover, such an explanation is less credible in the light that in some cases at least, the formulation seemed to invoke *increased* stigma.

Of course, it is quite possible that the differences in attitudes between the two samples may not reflect temporal changes at all and may instead reflect other differences in the two samples. It is, for example, noted that Chartonas et al and Lewis and Appleby’s studies were focused on samples of psychiatrists, whereas in the present case we recruited a mixed clinical sample. Some studies (e.g. Nordt et al, 2006) have indicated that stigmatic attitudes towards people with mental illness may be higher in psychiatrists than in other professionals and members of the population, although in a wider review by Baker & Beazley, 2022, the picture was found to be more nuanced, although some differences between professional groups were identified . Regardless, there were very few medical staff within the current sample, and this needs to be taken into account when comparing with other studies which have primarily used medical staff. A future direction of research to answer the question of differences in stigmatic judgements between professional groups may be to systematically review and apply principles of meta-analysis to studies which have adopted the same measure, and conduct comparisons between different sets of samples. In terms of the relevance to the present study, it is possible that some staff groups may respond differently to information about background history and development identified in the formulation, though there are no obvious reasons why the present sample would be particularly insensitive to the effects of such information.

Another consideration in interpreting the results relates to the approach taken to formulation. It is recognised that there is not a clear agreement on what a formulation ‘is’ and the ‘5 -P’s’ model adopted here is arguably more of a structured framework than a classical formulation. It is also possible that specific facets of the 5-P’s approach actually unintentionally reinforced stigma – for example the heading ‘perpetuating’ may be misunderstood to imply that change was unlikely. Moreover, the 5-P’s approach does not by itself connect the presenting problems to wider clinical theory which provides an explanation for why the observed difficulties occur, a key step in clinical formulation in practice. Describing precipitating factors such as abuse and trauma may be implicitly understood to be relevant to understanding a person’s presentation, but without additional theoretical perspectives, they could equally be considered as aggravating factors, suggesting that the person’s presentation was fixed or unchanging. Psychological theory may be important therefore in providing a more salient, credible and detailed explanation of why, rather than ‘what’ has occurred in a person’s life, and may therefore be more likely to invoke a compassionate explanation associated with lower stigma. Other approaches to formulation – perhaps those which might have more collaboratively and directly involved the team in discussing the importance of developmental factors in explaining symptoms and clinical patterns, or those which rely more heavily on the use of credible psychological theory to provide an explanation for a person’s presenting problems, may well have been more effective.

However, alternatively, the current research raises the need to consider the risk that structured approaches to formulation could also paradoxically increase stigma. Similarly, one might reflect that perhaps the goal in using a formulation to reduce stigma is simply the wrong one, and that the task of formulation is simply a clinical task in itself. For instance, we note that a study by Brown, Beeley, Patel, and Völlm (2016), with the primary aim of teaching case formulation skills to offender managers, did not result in a reduction of negative attitudes despite there being an improvement in participants’ ability to formulate cases.

In conclusion, the present study adds to a small but growing literature around the use of formulation in practice. In the present study, we have indicated that use of the structured 5-P’s approach alongside a vignette describing somebody with characteristics of BPD did not make much overall impact on staff members’ ratings of relevant stigma measures, and in one case appeared to result in increased stigma. Future research needs to continue to explore; a. how stigma towards people with personality disorder is changing over time; b. the extent to which professional groups demonstrate differences in stigma towards personality disorder, and c. the potential for developmental explanations for stigmatised psychopathology to add to – rather than take away from - the person’s stigmatic attitudes, and whether this is because of added stigma associated with these developmental experiences, or whether it is because the addition of such information makes the person’s psychopathology seem more enmeshed with the person’s identity and thus less amenable to change. We hope the present article serves as a starting point for further replications of similar projects considering approaches to reducing stigma associated with BPD in mental health staff.

**Declaration of interest statement:**

The authors have no declarations of interest.

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