Recovery, Willingness and Causal Attributions: An Exploration of Trainee Psychologists' Perceptions of Mental Health

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Psychological diagnosis, rooted in the medical model, continues to dominate the field of mental health conceptualisation and treatment planning, and attracts stigma from individuals and mental health professionals. The Power Threat Meaning Framework (PTMF) offers an alternative to mental diagnosis by providing a different way to formulate patterns of emotional distress, experiences and behaviour. The aim of this cross-sectional survey study was to use vignettes to compare 107 trainee psychologists' perceptions of a mental health client using a traditional diagnostic framework and the PTMF. Specifically, these included perceptions of willingness to work with the client, perceptions of recovery and the attributions of causal beliefs of the client's difficulties. Results indicated that participants in the diagnostic group were more likely to attribute the client's difficulties to genetic causes and a chemical imbalance, and less likely to attribute these to the client's upbringing. Participants were more willing to work with the client if they believed the client had a better chance of recovery. These findings indicate the need to change how psychology trainees are educated about diagnosis and recovery to include broader interpretations of the causes of mental health difficulties, and to see recovery as more than a reduction of symptoms.

Key words: causal attributions, power threat meaning framework, psychologists, recovery, training, willingness.

Psychology education and training in Australia represents formative years where new trainees are exposed to the profession, learn the craft of practicing psychology, and develop their personal and professional identities (Pakenham & Stafford-Brown, 2012; Turnbull & Rhodes, 2019). Due to the significance of these formative years, the educational and learning process of trainee psychologists is a growing area of research interest. Past research in the area of professional psychology training has primarily focused on how to enhance the training and development of psychologists. For example, studies have focused on competency-based learning (Pachana, Sofronoff, Scott, & Helmes, 2011), the perceptions of directors of training programs (Pachana, O'Donovan, & Helmes, 2006), stress of trainees (Pakenham & Stafford-Brown, 2012) and supervision (see, e.g., Calvert, Crowe, & Grenyer, 2016; Calvert, Deane, & Barrett, 2019; Thomas, Bowie, Hill, & Taknint, 2019). Comparatively, there has been limited research on the overall theoretical frameworks that underpin contemporary post-graduate psychology training. This is significant, in light of the role of post-graduate training in assisting provisional psychologists to understand the prevailing mental health frameworks.

In the Western world, the medical model represents the predominant framework for understanding mental health (Beecher, 2009; McCulloch, Ryrie, & Williamson, 2005). Within this model, mental health difficulties are perceived as disorders characterised by impairments

in brain functioning and the central nervous system, manageable via pharmacological or physical treatments (McCulloch et al., 2005). Accordingly, the medical model aims to identify the aetiology of a disorder by selecting a diagnosis based on genetic and biological causes, subsequently providing treatment to eliminate or manage the disorder (Beecher, 2009). In psychology, the medical model underpins contemporary classification systems such as the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; DSM–5; American Psychiatric Association [APA], 2013) and the *International Statistical Classification of Diseases and Related Health Problems* (10th ed.; ICD-10; World Health Organisation, 2019).

An inherent focus of the medical model relies on physical attributions and causes of mental illness. As a result, this and other subsequent classification systems have been criticised for not taking into account broader contextual and environmental factors that may contribute to the development of mental health difficulties (Bakker, 2008; Johnstone, 2018). Put simply, such approaches have been criticised for focusing on the disorder rather than the person. More recently, a shift away from the biomedical approach has seen health care professionals adopt the bio-psycho-social model which, by definition, takes into consideration the person and the illness (Engel, 1989). This model acknowledges an individual's social and environmental experiences in the development and maintenance of mental health difficulties (Borrell-Carrió, Suchman, & Epstein, 2004). Although many mental health clinicians integrate a combination of biological, psychological, and social determinants of health into their practice, studies have indicated that most implicitly focus on the biological factors (Colombo, Bendelow, Fulford, & Williams, 2003; Ghaemi, 2009). This may be particularly relevant for those trained in clinical psychology, where there is a focus on diagnosis, rather than community psychology models that emphasise social determinants of mental health (Mayers & Agnew, 2019). The medical model continues to dominate mental health throughout Western countries by means of language (e.g., "illness", "symptoms", "disorder"), practice (e.g., "diagnosis", "psychopharmacology", "hospitalisation") and research, which continues to focus on biological and hereditary characteristics of mental health difficulties (Johnstone & Boyle, 2018). Additionally, the medical model underpins contemporary mental health treatment where classifications and diagnosis are often required for access to services.

Diagnosis is an essential component within the medical model that attempts to explain an individual's mental health difficulties. Symptoms of thoughts, feelings and behaviours have been categorised and coded as mental disorders in the DSM-5 (APA, 2013), which compares clusters of an individual's symptoms and assigns them to a particular disorder. Research into the impact of diagnosis on consumers has produced mixed findings. While diagnosis can offer individuals relief with an explanation of symptoms (Dinos, Stevens, Serfaty, Weich, & King, 2004; Jutel, 2009), it can also have long-lasting effects by altering one's perception of self. For example, a recent study by Peter and Jungbauer (2019) interviewed people (n=16) living with a mental health diagnosis. Findings indicated that shortly after receiving a diagnosis, participants reported a loss of identity coupled with overwhelming emotions, including confusion, shame and helplessness. Additionally, a multi-phase study which surveyed over 1000 members of the public indicated that lay people perceive mental health diagnosis as isolating and destructive (Holzman & Genn, 2018).

Diagnostic labels can have an impact on attributions of mental health difficulties: that is, the perceived cause of why individuals experience psychological difficulties. Research in this area has highlighted that perceptions of the causal attributions of mental health difficulties

continue to be heavily reliant on biological factors. For example, Link, Phelan, Bresnahan, Stueve and Pescosolido (1999) and Dietrich et al. (2004) utilised vignettes to evaluate participant's responses to a client with schizophrenia, with findings indicating schizophrenia is commonly attributed to stressful life events and a chemical imbalance in the brain. Biological explanations for mental health difficulties can have benefits in that they are often associated with less blame (Loughman & Haslam, 2018). However, biological attributions of mental health are also linked to increased perceptions of danger, greater pessimism, and a perceived need to distance oneself from the person with mental health difficulties (Loughman & Haslam, 2018). To date, research in this area has utilised members of the public and medical practitioners, with no studies examining the perceptions of psychologists. If these perceptions are widespread in the general public, then it is important to ascertain the causal attributions that psychologists make about mental health difficulties. These attributions may lead to the aversion of treating certain individuals with presentations of symptoms that they perceive to have a biological cause. Accordingly, this research will explore psychologists' attributions of mental health and their association with beliefs about recovery and willingness to work with particular clients.

A consistent criticism of diagnosis and the medical model approach to mental health is that it contributes to and increases stigma (Ben-Zeev, Young, & Corrigan, 2010; Corrigan, 2007; Dinos et al., 2004; Schulze & Angermeyer, 2003). Stigma can be defined as attributing negative views or stereotypes about a person whose characteristics and behaviours are considered subordinate to society and what it considers normal (Dudley, 2000). Studies have demonstrated that some mental health professionals hold stigmatising attitudes towards mental health and low perceptions of the ability of people with mental health difficulty to recover (Caldwell & Jorm, 2001; Dinos et al., 2004; Lauber, Anthony, Ajdacic-Gross, & Rössler, 2004; Nordt, Rössler, & Lauber, 2006). Recovery can be understood as the process of growth through the debilitating effects of ill health in which one finds hope, re-establishes identity and self-esteem, derives meaning in life, and takes responsibility for well-being (Andresen, Oades, & Caputi, 2003; Anthony, 1993). Across the globe, studies of mental health professionals in Switzerland, Australia and the United Kingdom (UK) have revealed that mental health professionals consistently hold negative attributions and perceptions of recovery about individuals suffering from mental health difficulties, in particular, schizophrenia and Borderline Personality Disorder (BPD; Caldwell & Jorm, 2001; Lauber et al., 2004; Markham & Trower, 2003; Nordt et al., 2006). Moreover, a study by Bodner, Cohen-Fridel and Iancu (2011) found that greater clinical experience was associated with less anger, frustration, and impatience towards clients with BPD, suggesting that early career mental health professionals may hold more stigmatising beliefs than their experienced counterparts. Mental health professionals who hold lower levels of stigmatisation have been found to have greater optimism about their client's ability to recover from mental health difficulties (Knaak, Modgill, & Patten 2014; Mötteli et al., 2019), highlighting the interconnection between stigma and recovery beliefs. Given the increased stigma and ongoing discrimination against individuals with complex mental health difficulties, in both the wider community and in treatment facilities, psychologists may be less willing to work with individuals with certain diagnoses. Therefore, an important part of this research will directly address the willingness of early-career psychologists to treat an individual experiencing psychosis.

The above-mentioned criticisms have culminated in a recent United Nations report (2017) suggesting the psychology field needs to "target social determinants and abandon the predominant medical model" (p. 19). Given the recognised shortcomings of the medical model, areas such as community psychology have been utilising alternative frameworks for mental health, which are continuing to be developed and expanded upon. A recent alternative framework is the Power Threat Meaning Framework (PTMF), developed by Johnstone and Boyle (2018) in conjunction with the British Psychological Society. The PTMF offers an alternative to mental diagnosis by providing a new framework for formulating patterns of emotional distress, experiences and behaviour. The processes of the PTMF are described in relation to *power, threat, meaning,* and *threat responses*.

Power refers to the ability to acquire personal gains or privileges for oneself or others (Johnstone & Boyle, 2018). While power can be used in a positive way to protect individuals and groups, when used negatively, power can lead to a range of mental health problems as a result of oppression, exclusion and stigma (Holley, Stromwall, & Bashor, 2012). The PTMF aims to discover how power has previously, and continues to, operate in one's life. For example, power may operate in terms of legal issues, economic status, interpersonal relationships, and social and cultural contexts (Johnstone & Boyle, 2018). *Threats* are challenges or situations that are brought about as a consequence of the negative uses of power (Johnstone & Boyle, 2018). For example, threatening situations or challenges may present in the form of difficult or abusive relationships with others, feeling unsafe, being discriminated against and physical illness. When faced with negative operations of power, for an individual or group of people to survive, they adapt by using *threat responses*, be it emotionally, physically, relationally and/or socially (Johnstone & Boyle, 2018). Threat responses may be biologically based (e.g. fight or flight) or conscious responses (e.g. self-blame, anger, distressing thoughts or self-harm). Lastly, the PTMF seeks to understand the role that *meaning* has played in how power, threat, and threat responses are experienced and expressed (Johnstone & Boyle, 2018). When these elements are understood about a person, this can bring together a life story that explains the experience of mental distress (Johnstone & Boyle, 2018).

Theoretically, the PTMF has been posed to reduce the stigma of mental health difficulties by removing diagnostic labels and taking a humanistic approach, through considering the person, their experiences and broader context in which they operate. This framework aims to circumvent the "brain or blame" dichotomy (Boyle, 2013), which reflects common attributions of the cause of mental health difficulties. In the "brain" attribution, mental health difficulties are viewed as a physical disease in which clients are helpless and not in control (Kennedy, 2008; Pitt, Kilbride, Welford, Nothard, & Morrison, 2009), whereas the "blame" attribution views mental health difficulties as being one's fault and something within one's control (Harper, 2013; Pitt et al., 2009). In contrast to this polarisation, the PTMF aims to create a non-diagnostic and non-blaming conceptualisation of one's story. For example, a trainee psychologist that has been primarily trained within a diagnostic framework may treat a person with schizophrenia by focusing on minimising psychiatric symptoms, thus missing other relevant life experiences that played a role in the development and maintenance of such symptoms (e.g. societal and power inequality). In contrast, if provisional psychologists were trained in the PTMF, this may produce a better understanding of the individual's symptoms by assisting them to cope with the threats they have experienced and the broader systemic issues that contribute to their distress. However, no empirical studies have been conducted on how

psychologists make sense of the Power Threat Meaning framework and what capacity it has to reduce stigma and facilitate recovery beliefs.

The current study used vignettes to compare trainee psychologists' perceptions of a mental health client presented using a traditional diagnostic framework and the PTMF. Specifically, we were interested in trainee's perceptions of their willingness to work with the client, perceptions of recovery, and attributions of the causal beliefs of the client's difficulties. Due to the increased stigma associated with schizophrenia (Dinos et al., 2004; Reavley & Jorm, 2011), this study used a vignette with features of psychosis.

Our hypotheses are:

1. The presentation of the client using the PTMF will result in increased willingness to work with the client and higher perceptions of the likelihood of recovery, compared to the diagnostic framework.

2. Biological and individual causal attributions of the client's difficulties (i.e., genetic or inherited, chemical imbalance in the brain, lack of will power) will be higher in the diagnostic presented framework, compared to the PTMF.

3. Social causal attributions of the client's difficulties (i.e., the way the person was raised, stressful life circumstances) will be higher in the client presented within the PTMF, compared to the diagnostic framework.

4. Biological and individual causal attributions of the client's difficulties will be associated with lower perceptions of likelihood of recovery, whereas social causal attributions will be associated with higher perceptions of likelihood of recovery.

Method

Research Design

This research had a cross-sectional survey design, in which participants responded to a series of questions following the review of a clinical vignette. The survey had a mixed-methods design, with qualitative and quantitative questions utilised. A qualitative design is useful for understanding voices, views and thoughts about phenomena, and relies on trustworthiness, transparency, verification and reflexivity (Braun & Clarke, 2013; Hammarberg, Kirkman, & de Lacey, 2016). Specifically, qualitative content analysis is useful in describing characteristics of the content produced by investigating what has been said (Bloor & Wood, 2006). This systematic approach to coding and categorising data is particularly useful with larger quantities of qualitative data and is an effective way to identify trends and patterns, abundance, relationships, and structures in written words (Gbrich, 2007; Mayring, 2000; Pope, Ziebland, & Mays, 2006). Therefore, a quasi-experimental mixed methods study, using content analysis and descriptive and correlational data, was conducted to understand trainee psychologist's perceptions of working with a mental health client.

Participants and Procedure

Participants were eligible to take part in the proposed study if they lived in Australia, were of 18 years of age or over, were proficient in English, held provisional registration as a psychologist with the Australian Health Practitioner Regulation Agency, and were enrolled in

a postgraduate psychology training program. Recruitment consisted of emails to course coordinators of 5th and 6th year Australian psychology programs and via social media posts, including a dedicated Facebook page for the research. All participants provided informed consent by proceeding through the participant information sheet at the commencement of the online survey and by checking the consent box. Prior to commencement, this research was approved to be conducted by the Australian College of Applied Psychology Human Research and Ethics Committee (552020120).

The final sample included 107 provisional psychologists which consisted of 91 females, 14 males and 2 non-binary persons. The mean age was 30.93 years (SD = 8.88), with participants' ages ranging from 22 to 71 years of age. Of the total sample, 54 participants were in their 5th year of psychology training and 53 were in their 6th year. Sixty-nine participants (64.5%) were enrolled in a program that leads to an area of practice endorsement. Of those, the majority (75%) were enrolled in a clinical master's program (n = 51) with the remainder enrolled in educational and developmental (n = 4), forensic (n = 4) health (n = 7), and community psychology (n = 2). A small number of participants (n = 4; 3.7%) reported that they had received previous training on the PTMF.

Measures

Participants were initially presented with one of two vignettes (at random) describing a mental health client. The two vignettes represented the same client and differ in how they were described. A copy of both vignettes are available in the supplementary materials. The first vignette was adapted from Link et al. (1999) and was presented through a traditional diagnostic framework. The second vignette was constructed based on information provided in the PTMF (Johnstone & Boyle, 2018) to reflect the key elements of the PTMF (i.e. power, threat, meaning and threat response). Participants then responded to a series of questions regarding this client, as described below.

Willingness
Participant were asked to nominate their willingness to work with the client described in the vignette. Responses were recorded on a scale of 0 to 10, where 0 = *not at all willing* and 10 = *very willing* to work with the client. Higher scores indicated more willingness to work with the client. Following this, participants were provided with a free textbox where they were asked to elaborate on their response using their own words.

Recovery
Participants were asked their perception of the likelihood that the client mentioned in the vignette would recover from their mental health difficulties. Responses were recorded on a scale of 0 to 10, where 0 = *not at all likely* and 10 = *very likely* this client will recover. Higher scores indicated that participants perceived the client would be more likely to recover. Following this, participants were provided with a free textbox where they were asked to elaborate on their response using their own words.

Causal Attributions
Participants' attributions of the vignette client's mental health difficulties were assessed by responses to five Likert-type questions, as based on Dietrich et al. (2004) and Link et al. (1999). Questions presented different perceived causes of mental distress, including: (1) genetic; (2) how they were raised (upbringing); (3) stressful circumstances; (4) chemical imbalance; and

(5) will power. Participants were asked to rate the likelihood of each cause on a scale of 0 to 5, where 0 = *definitely not a cause* and 5 = *definitely a cause.* Higher scores indicated that participants attributed the relevant item to be a cause of the client's difficulties. Following this, participants were provided with a free textbox where they were asked to elaborate on their understanding of the causes of the client's current difficulties using their own words.

Demographic Information

Demographic information included the following: gender, age, stage of training (i.e. 5th year student or 6th year student), area of endorsement (if applicable), primary therapeutic orientation (cognitive behavioural, existential/humanistic, family systems, psychodynamic, other), and previous training in the power threat meaning framework.

Analysis

Participants were sorted into two experimental groups: those presented with the diagnostic vignette (n = 54) and those presented with the PTMF vignette (n = 53). In order to ensure randomisation resulted in approximately equivalent groups, participants were compared on demographic variables using between-groups *t*-tests and cross-tabs. Descriptive analysis and Pearson's correlation were performed for each experimental group to determine the relationship between variables. Examination of Q-Q plots and Shapiro-Wilk's test indicated the data displayed deviation from normal distribution, thus non-parametric tests were utilised. Mann-Whitney U tests were conducted to compare willingness, likelihood of recovery and attributional causes between the diagnostic participant group and the PTMF participant group. Analyses were conducted using SPSS 22.0 for Windows.

Qualitative survey responses were coded using thematic content analysis methodology. Due to the lack of established frameworks in this area, an inductive approach was utilised. In the preparation phase, all complete survey comments (n = 50 for diagnostic participants and n = 49 for PTMF participants) were exported to the Nvivo software and read multiple times. Following the preparation phase, open coding was conducted through the addition of nodes next to each participant response, with nodes representing condensed meaning units of the text. Those nodes sharing similar content were then collated under higher order headings for the development of codes, while comparing emerging categories to each other to determine their substance and significance. The first ten surveys for each participant group were coded by both authors, in collaboration, in order to enhance dependability through mutual understanding of what constituted codes (Gibbs, 2007). The remainder of the surveys were then coded by the first author. Categories were determined based on relevance to the research question and salience across participants (minimum 20% of respondents in either participant group). Following completion of the initial coding, the first and second author then met to triangulate their observations of the codes (Palaganas, Sanchez, Molintas, & Caricativo, 2017) and data was clustered into categories. A description for each developed category was generated and key excerpts selected. The proportions of participants endorsing each theme was calculated, with these proportions examined using Chi-square tests to assess for significant differences between the two groups.

Results

A series of between groups *t*-tests were conducted to examine significant differences between experimental groups according to participants age and cross-tabs were conducted to explore

any differences between the groups according to gender and stage of training. Results indicated no significant differences on these demographic variables.

Descriptive statistics and correlations for key variables can be found for each participant group in Tables 1 and 2. Across both participant groups, recovery was positively correlated with willingness, $r(54) = .37, p < .01$ (diagnostic group) and $r(53) = .42, p < .01$ (PTMF group). That is, as belief that the client would recover increased, participants indicated that they would be more willing to work with the client. Correlational findings from the PTMF participant group only indicated that recovery was negatively correlated with genetic causes $r(53) = -.33, p < .05$ and chemical imbalance $r(53) = -.36, p < .01$. That is, as attributions of genetic and chemical imbalance causes increased, beliefs about the likelihood of recovery decreased. Additionally, recovery was positively correlated with raised/upbringing, $r(53) = -.55, p < .01$, indicating that as attributions of 'way client was raised' increased, beliefs about the likelihood of recovery increased.

Table 1

Descriptive Statistics and Correlations for participants in diagnostic group (n = 54)

Variable	Mean	SD	2.	3.	4.	5.	6.	7.
1. Willingness	7.06	2.33	.37**	-.05	-.04	.20	-.04	.06
2. Recovery	6.57	1.80	—	-.10	.20	.22	.01	-.03
3. Cause – genetic	4.93	1.49		—	.20	.24	.55**	-.04
4. Causes – raised / upbringing	3.61	1.55			—	.42**	-.01	.07
5. Cause – stress	5.43	1.34				—	.17	.00
6. Cause – chemical Imbalance	4.69	1.75					—	.12
7. Cause – willpower	1.43	0.74						—

* $p < .05$, ** $p < .01$

Table 2

Descriptive Statistics and Correlations for participants in PTMF group (n = 53)

Variable	Mean	SD	2.	3.	4.	5.	6.	7.
1. Willingness	7.23	2.40	.42**	-.16	.21	-.09	-.10	-.06
2. Recovery	6.77	1.68	—	-.33*	.30*	.07	-.36**	.07
3. Cause – genetic	3.55	1.53		—	-.21	-.05	.64**	-.02
4. Causes – raised / upbringing	5.36	1.61			—	.55**	-.22	.15
5. Cause – stress	5.75	1.36				—	.04	.18
6. Cause – chemical Imbalance	3.94	1.74					—	-.00
7. Cause – willpower	1.64	0.96						—

* p < .05, ** p < .01

The Mann-Whitney U test indicated that there was a significant difference in scores on the attributional cause of genetic factors between the two groups. Specifically, participants in the diagnostic group were more likely to rate 'genetic' as a cause for the client's mental health difficulties (*Mdn* = 4.0) than those in the PTMF participant group (*Mdn* = 3.0), $U = 734.50$, $z = -4.49$, $p = .000$. There was a significant difference in scores on the attributional cause of chemical imbalance between the two groups. Specifically, participants in the diagnostic group were more likely to rate 'chemical imbalance' as a cause for the client's mental health difficulties (*Mdn* = 4.0) than those in the PTMF participant group (*Mdn* = 4.0), $U = 1081.50$, $z = -2.23$, $p = .025$. Lastly, there was a significant difference in scores on the attributional cause of 'upbringing' between the two groups, with participants in the diagnostic group less likely to rate 'the way client was raised' as a cause for the client's mental health difficulties (*Mdn* = 4.0) than those in the PTMF participant group (*Mdn* = 6.0), $U = 652.00$, $z = -4.98$, $p = .000$. All other comparisons were non-significant, with no group differences in willingness to work with the client or perceptions of recovery, contrary to our first hypothesis.

Thematic content analysis produced four themes for willingness, recovery and causes of the client's difficulty respectively. As can be seen in Table 3, participant's reflections on their willingness to work with the client primarily focused on expressions of hesitancy, expressions of willingness, references to benevolence as a motivation and references to symptoms of psychosis/schizophrenia. Chi-square tests indicated no significant differences in the proportion of individuals endorsing each theme, however, there were nuanced differences in the language used by participants across the groups. Whilst both participant groups indicated they were equally as willing to work with the client, participants in the PTMF group used more confident language (e.g. "I would be very prepared and comfortable") compared to participants in the diagnostic group (e.g. "I would be willing to have a go"). Furthermore, when referencing symptoms of schizophrenia in their rationale for being willing/not willing to work with the client, participants in the diagnostic group were more likely to use the term 'schizophrenia' itself, whereas participants in the PTMF primarily referred to symptoms of psychosis.

Participants' perceptions of the clients' likelihood of recovery, as seen in Table 4, focused on beliefs that recovery was likely and/or unlikely, the role of medication in

determining the likelihood of recovery, and the role of support in determining the likelihood of recovery. Chi-square tests indicated no significant differences in the proportion of individuals endorsing each theme. Again, there were nuanced differences in the language used by participants across the groups. When describing the likelihood of recovery, the diagnostic group used more tentative language when expressing the perception that the client will recover (e.g. "may show improvements") and more definite language when reporting the client may not recover (e.g. "never recover").

Participants' perceptions of the causes of the client's difficulty, as seen in Table 5, focused on biological attributions, the role of traumatic experiences, the role of stress and the impact of interpersonal relationships. Chi-square tests indicated there was a significant difference in the proportion of participants endorsing biological causes, with participants in the diagnostic group more likely to reference biological causes than participants in the PTMF group, X^2 (1, N = 99) = 20.15, $p < .001$. There was a significant difference in references to traumatic experience, with participants in the PTMF group more likely to reference trauma than participants in the diagnostic group, X^2 (1, N = 99) = 30.58, $p < .001$. There was a significant difference in references to interpersonal causes, with participants in the PTMF group more likely to reference interpersonal difficulties than participants in the diagnostic group, X^2 (1, N = 99) = 4.38, $p < .05$. There was no significant difference in references to stress between the two participant groups.

Table 3

Content Analysis of Willingness to Work with the Client

Themes	Diagnostic vignette (n = 50)		Power threat meaning framework vignette (n = 49)	
	Number endorsing (%)	Examples (Participant number)	Number endorsing (%)	Examples (Participant number)
1. Hesitant to work with client	25 (50%)	"I would be concerned about my level of training and experience to best support him." (12) "My concern is that it may be outside my area of competency at this time." (19)	18 (36.7%)	"I am hesitant because I do not feel I have the competency to work with John at this stage in my career." (20) "I don't feel I have enough knowledge or experience to confidently work with such a complex presentation." (48)
2. Willing to work with client	20 (40%)	"I would be willing to have a go and develop my experience with working with John." (46) "I would be willing to learn and work with John within my abilities." (24)	12 (24.5%)	"I feel I have adequate training and experience in the right areas of psychology to be competent and able to help John." (14) "I would be very prepared and comfortable supporting a client like John." (41)
3. Good will	14 (28%)	"He's a good person who wants and deserves help." (6) "I think everyone deserves a chance to get treatment." (37)	18 (36.7%)	"I would want him to believe that there is hope and a way forward through all of this." (38) "I feel empathy for John and want to support him through and out of this difficult phase of his life." (32)
4. Schizophrenia	9 (18%)	"I would prefer to work with a client without such a complicated diagnosis." (42) "Schizophrenia is difficult to work with." (4)	11 (22.4%)	"I am not sure I would be the best fit for John, considering the complexity of his case and the current severity of his disorder." (35) "I would be mostly not willing to work with John because I understand the difficulties that might be presented in psychotherapy with a seemingly psychotic patient." (44)

Table 4

Content Analysis of Recovery

Themes	Diagnostic vignette (n = 50)		Power threat meaning framework vignette (n = 49)	
	Number endorsing (%)	Examples (Participant number)	Number endorsing (%)	Examples (Participant number)
1. Recovery likely	22 (44%)	"John may show improvements but he may continue to experience these symptoms of psychosis on and off." (1)	25 (51%)	"I believe with the right approach John could recover from his condition." (18)
		"He will likely make gains and recover." (3)		"I believe that John is very likely to recover from his current mental health difficulties." (38)
2. May not recover	14 (28%)	"Client can never recover." (30)	7 (14.3%)	"Psychosis is often not fully curable." (12)
		"He will never recover as there is no cure for schizophrenia." (7)		"I'm wondering whether his symptoms are along the lines of schizophrenia and thus as far as modern treatment full recovery is not likely." (22)
3. Role of Medication	14 (28%)	"Schizophrenia appears to rely heavily on medical intervention for significant change." (18)	9 (18.4%)	"John will likely be able to better manage his symptoms with a combination of both medication and therapy." (4)
		"Schizophrenia is commonly a chronic condition that can be controlled by medication." (24)		"I do not know much about medication for psychotic symptoms, but if this could be effectively delivered as an adjunct to therapy then I believe it would also improve his prognosis." (43)
4. Role of support	11 (22%)	"With the right support and therapy, I believe it is highly likely that John will recover." (28)	9 (18.4%)	"He may well recover with appropriate treatment and support." (39)
		"With the right combination of support John will be able to "recover" from his difficulties." (23)		"With the right support…around him, recovery is possible." (46)

Table 5

Content Analysis of Causes of the Client's Difficulty

Themes	Diagnostic vignette (n = 50)		Power threat meaning framework vignette (n = 49)	
	Number endorsing (%)	Examples (Participant number)	Number endorsing (%)	Examples (Participant number)
1. Biological	43 (86%)	"An underlying genetic predisposition." (15) "May have had predisposing factors such as a chemical imbalance in the brain that he had a genetic propensity for." (43)	21 (42.9%)	'There is potential for John's presentation to be a genetic or predisposed biological issue' (20) 'Possible chemical imbalance' (3)
2. Traumatic experience	10 (20%)	"A history of adverse experiences growing up." (11) "Childhood trauma may play a large role" 17	37 (75.5%)	"John's complex developmental trauma has likely predisposed him to being vulnerable to mental health difficulties." (14) "Trauma - loss of significant family member and ongoing abuse from caregiver." (15)
3. Stress	27 (54%)	"Perhaps a particularly stressful life circumstance triggered his first psychotic episode." (19) "Acute or chronic stress may have led to John's difficulties." (51)	19 (38.8%)	"Changes in symptoms and functioning may indicate stress/other life events" (6) "The current episode may have been triggered by a stressful situation." (35)
4. Interpersonal	9 (18%)	"John's withdrawal from his social networks …as he no longer has access to any support structures he previously had in place." (51) "John's difficulties largely stem from his social interactions." (48)	18 (36.7%)	"Lack of social support (especially during his childhood and teenage years) leading to withdrawal to social life." (102) "Difficult relationships in his life." (7)

Discussion

This study aimed to use vignettes to compare trainee psychologists' perceptions of a mental health client using a traditional diagnostic framework and the PTMF. Contrary to our hypothesis, the participant groups did not differ in terms of their willingness to work with the client or their perceptions of the likelihood that the client would recover. This indicates that the presentation of the client using the PTMF or diagnostic framework alone may not have influenced willingness to work with the client or perceptions of the likelihood that they would recover. Rather, it was the interpretation of the causes of the client's difficulties that held most weight. Our research design presented one client vignette, and measured willingness and recovery perceptions using single item scales. Thus, participants may have responded differently if given a choice between multiple clients and asked to rate their willingness and perceptions of recovery on validated multiple item measures. Although there were no statistically significant differences between the groups according to Mann-Whitney U and Chi-square tests, there were notable differences in language used by participants in the qualitative findings, with the diagnostic group participants using more tentative language when describing their willingness to work with the client and perceptions that they would recover. Further research using a qualitative design, such as focus groups or interviews, may assist in unpacking these potential differences further.

Results of the Mann-Whitney U tests indicated significant between group differences on the casual attributions of mental health difficulties, with participants in the diagnostic group more likely to endorse genetic causes and chemical imbalance, and less likely to endorse upbringing, than participants in the PTMF group. Thus, the presence of a diagnostic label (schizophrenia) was associated with biological causes. The PTMF vignette which displayed the same symptoms without a diagnosis present, was most commonly attributed to the client's upbringing. These results align with previous findings regarding the 'brain or blame' dichotomy; with diagnosis known to attract 'brain' attributions (McCulloch et al., 2005).

Correlational findings indicated that participants in the PTMF group who endorsed a greater causal attribution to genetic causes, or a chemical imbalance had lower perceptions of the likelihood that the client would recover. While there is a strong genetic basis for the development of psychotic symptoms (Lichtermann, Karbe, & Maier, 2000), these results are concerning, given that mental health professionals who are less optimistic about recovery are more likely to hold stigmatising beliefs about their clients (Mötteli et al., 2019). Additionally, stigma has the ability to cause distress, prevent people from disclosing their difficulties, affect how a psychiatric diagnosis is accepted, whether treatment will be adhered to and may reduce opportunities for recovery (Dinos et al., 2004; Pitt et al., 2009).

The association between biological causes of mental health difficulties and low perceptions of recovery, highlights the need for further education on contemporary recovery frameworks. For example, this could include information on personal recovery, including consumers stories of their own recovery process from conditions such as schizophrenia. Unlike clinical recovery, which is based on a reduction of symptoms, personal recovery is a subjective process which focuses on the development of a meaningful life with or without the presence of mental health difficulties (Ballesteros-Urpi, Slade, Manley, & Pardo-Hernandez, 2019). Through this lens, psychologists may focus less on the symptoms the client is experiencing and more on the person in front of them. Given that the PTMF takes a humanistic approach that

considers the person, their lived experiences, and the broader systems in which they operate (Johnstone & Boyle, 2018), education on the PTMF may be one way of facilitating a broader recovery-oriented perspective with psychology trainees.

Perceptions that the client would recover increased when participants in the PTMF group attributed the client's difficulties to their upbringing. This assumption is aligned with current research, as disorders such as schizophrenia have been linked to childhood trauma (Khavari & Cairns, 2020). In addition, for all participants, perceptions that the client would recover increased with willingness to work with the client. That is, trainee psychologists reported that they were more willing to work with the client if they perceived that the client had a better chance at recovery, or vice versa. Within the qualitative findings, more therapists exposed to the diagnostic framework reported that they were not as willing to work with the client and this was primarily attributed to a lack of competency. Therefore, psychology training programs need to not only focus on broadening perspectives on recovery, but also to incorporate trauma-informed practice which may reduce stigma and facilitate psychologist's willingness to work with complex presentations.

The PTMF offers a unique way to conceptualise trauma through the concepts of "threat" and "threat responses" (Johnstone & Boyle, 2018). In the qualitative findings, there was a significant difference in the frequency of trauma as a reported cause/attribution of the client's difficulties. Within the PTMF participant group, 75.5% of the sample noted the role of traumatic experiences in the development of the client's mental health difficulties, compared to 20% of the sample in the diagnostic group. These results support the utility of the PTMF in highlighting the role of trauma as a cause of mental distress. Moreover, the utilisation of the PTMF, particularly in the treatment of culturally diverse groups, provides psychologists with a framework where such threats can be explicitly incorporated as part of the perpetuating factors that may be contributing to an individual's mental health presentation. While certain responses to threats may be seen within the medical model as "symptoms", clustered together to form a diagnosis (e.g. schizophrenia), the PTMF steers away from diagnosis to recognise that all people experience reactions to threats and employ survival strategies (Johnstone & Boyle, 2018). Trauma-informed approaches promote recovery and prevent further trauma through creating safe environments and relationships that facilitate this (Sweeney, Filson, Kennedy, Collinson, & Gillard, 2018). The medical model and associated interventions undervalue the impact of meaningful relationships, which play a vital role in minimising the impact of trauma (Van der Kolk, 2005). However, the PTMF can support trauma-informed care by providing a framework in which psychologists ascertain "What has happened / is happening to you?", rather than the traditional, "What is wrong with you?".

This research is not without its limitations. Currently, there are over five and a half thousand provisional psychologists in Australia (Psychology Board of Australia, 2020), making our sample size relatively small by comparison. Our sample was predominantly female (85%), reflective of the Australian psychology workforce (Psychology Board of Australia, 2020). Future research should aim to capture a wider audience of trainee psychologists. The cross-sectional design of the research methodology also limits the results to a static time point in each participant's training. The use of single-item measures for beliefs about recovery and

willingness to work with the client is recognised as a limitation of the design of this study; however, no appropriate scales were available at the time.

The utilisation of a vignette design is limited to measuring intent, which does not equate to a behaviour being performed, as people often engage in self-preservation of their identity (Carraro & Gaudreau, 2013; Conner, Gaston, Sheeran, & Germain, 2013). There were also subtle differences between the vignettes which may partially account for participants' responses. For example, the vignette presented to the diagnostic participant group included the statement, "Up until a year ago, life was pretty okay for John". This may imply an absence of adverse childhood events and/or trauma, potentially influencing the likelihood of participants endorsing upbringing as a potential cause of the client's difficulties. Additionally, the vignettes presented were limited to one type of mental health presentation, based on a male with schizophrenia. As current theories into the causes of psychosis suggest that there is an inherited genetic vulnerability for this disorder (Carr & McNulty, 2016), results may have differed if another set of symptoms were presented that have less of a genetic loading, for example, depression or anxiety (Bienvenu, Davydow, & Kendler, 2010). Taking this into account, future researchers could implement a design with a larger sample size that compares trainee psychologist's perceptions across different diagnoses and multiple types of mental health presentations utilising a gender-neutral vignette.

Despite the above limitations, this research is the first of its kind to explicitly explore Australian trainee psychologist's perceptions of mental health from the perspective of the PTMF. Findings indicate the need for psychology training programs to broaden their education on recovery and to incorporate trauma-informed care as part of their practice which may reduce mental health stigma and support mental health professionals working with complex presentations. The PTMF may offer one way in which trainee psychologists may be encouraged to shift their focus from the biological causes of mental distress and consider the wider contributing factors of mental health.

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Supplementary Material

Vignette A – DSM Diagnosis Presentation

John is a 24 year old Caucasian man with a secondary education. Up until a year ago, life was pretty okay for John. But then, things started to change. He thought that people around him were making disapproving comments and talking behind his back. John was convinced that people were spying on him and that they could hear what he was thinking. John lost his drive to participate in his usual work and family activities and retreated to his home, eventually spending most of his day in his room. John started hearing a female voice even though no one else was around. The voice told him that he was dirty and evil. He has been living this way for six months. John recently sought help from the local mental health service, and received a diagnosis of schizophrenia.

Vignette B – PTMF Presentation

John is a 24 year old Caucasian man with a secondary education. John had a happy childhood until his father died at age eight. Following this, John moved in with his mother, who was verbally and physically abusive. John felt powerless in the presence of his mother, and did not feel able to confide in anyone. John left home at the age of sixteen and started an apprenticeship. Up until a year ago, life was pretty okay for John. But then, things started to change. He thought that people around him were making disapproving comments and talking behind his back. John was convinced that people were spying on him and that they could hear what he was thinking. John lost his drive to participate in his usual work and family activities and retreated to his home, eventually spending most of his day in his room. John started hearing a female voice even though no one else was around. The voice told him that he was dirty and evil. This seemed to express how the abuse made John feel, and it also reminded John of things that his mother said to him. He has been living this way for six months.

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