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A Foundation for Change: An Examination of the Stigmatisation of Mental Illness by Mental Health Professionals and Those in Training

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Abstract

Studies indicate that mental health professionals stigmatise mental illness through the endorsement of negative stereotypes, emotions, and behaviours. While this is an important domain of research, existing literature on the stigmatisation of mental illness by mental health professionals and trainees is marked by many weaknesses. The objective of the current dissertation was to rectify several of these weaknesses with a program of research that involved three distinct studies. Study 1, a scoping review, aimed to describe the current state of research on the stigmatisation of mental illness by mental health professionals. Study 2 aimed to explore, through qualitative research, the mental disorders, stereotypes, emotions, and behaviours that are essential to the relative stigmatisation of mental illness by mental health professionals. Study 3 aimed to identify how key stereotypes and mental disorders relate to one another in a sample of trainee mental health professionals.

Study 1 identified that the literature on the stigmatisation of mental illness by mental health professionals is characterised by a number of limitations. Namely, few studies examined the relative stigma of mental illness with a range of mental disorders, there was little research on the emotional and behavioural components of stigmatisation, and not a single study investigated how the three dimensions of stigmatisation relate to one another as a whole. As well, Study 1 did not detect any novel broad findings about the research area, leading to the conclusion that the literature on the stigmatisation of mental illness by mental health professionals is incapable of guiding the reduction of this type of stigmatisation. These limitations may be explained by a lack of integration of established theories and reference to previous work in the field. Support for the latter was supplied by a direct citation analysis which showed that a substantial proportion of the literature is not connected by references.

In Study 2, a theory was derived from unstructured interviews with mental health professionals. This grounded theory outlined crucial aspects of the relative stigmatisation of

mental illness by mental health professionals. Mental health professionals exhibited a variety of positive and stigmatising reactions towards people with mental illness that covered stereotypes (e.g., dangerousness), emotions (e.g., frustration), and behaviours (e.g., helping). Participants reported that these responses to mental illness were influenced by situational variables such as type of mental disorder (i.e., relative stigma) and professional context and specified a range of mental disorders (e.g., borderline personality disorder). Additionally, participants discussed the impact of several individual differences on how they react to mental illness, with familiarity with mental illness being the most prominent.

In the final study, a cluster analysis of survey data showed how 10 mental disorders fitted into four clusters that were distinguished by varying degrees of agreement with four stereotypes. Cluster 1 was made up of affective disorders and anorexia nervosa and broadly elicited low levels of negative stereotyping. Cluster 2, which included personality disorders, schizophrenia, and bipolar disorder, was characterised overall by a moderate degree of negative stereotyping, with a low amount of blame. Cluster 3 comprised paedophilic disorder and Cluster 4 comprised alcohol use disorder. Paedophilic disorder elicited moderate and high levels of negative stereotyping, while alcohol use disorder was characterised by a moderate amount of negative stereotyping.

The findings of the current dissertation provide a basis for much more research on the stigmatisation of mental illness by mental health professionals. Further, the results of Studies 2 and 3 can be used to guide interventions that seek to mitigate the stigmatisation of mental illness by mental health professionals. In particular, these studies highlight the mental disorder stigmas that should be prioritised and the processes that should be targeted to reduce stigmatisation both in general and for specific mental disorders.

Statement of Originality

This work has not previously been submitted for a degree or diploma in any university.

To the best of my knowledge and belief, the thesis contains no material previously

published or written by another person except where due reference is made in the thesis

itself.

(Signed)_____   Date: ___17/05/2023_____
Michael Jauch

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To assist the reader, supporting information relevant to the papers appearing in Chapters 2 to 4 is provided in the appendices, as listed below.

Acknowledgements

Albeit a cliché, if someone told me roughly ten years ago that I would attain a PhD someday, I genuinely wouldn't have believed them. And to be completely honest, I can think of several negative outcomes that seemed much more likely to me. It almost goes without saying, my road to beginning and completing a PhD involved numerous formidable challenges, and there are a number of people I wish to thank for assisting me in this journey.

First and foremost, I want to thank Professor Stefano Occhipinti, my principal supervisor for the majority of these last four years. I still remember when you were my social psychology lecturer. Even then, I knew that I wanted to do a PhD with you, Stefano. You were extremely knowledgeable, quietly enthusiastic, and always happy to answer my questions. As a supervisor, you have continued to show these qualities, but you have also taught me how to navigate the complex and somewhat bizarre world of academia, while simultaneously pushing me to be a better psychological scientist. Although it wasn't easy, I now understand the benefits of a mixed-methods PhD. I would further like to thank Professor Analise O'Donovan and Dr Bonnie Clough. Analise, as my associate supervisor, I very much appreciated your input. Your perspective as both a practitioner and researcher within the field of clinical psychology was indispensable. On top of this, you were often very considerate of my needs and despite having many other commitments, you still made time for me. And Bonnie. You were my principal supervisor for only a small amount of time, but in that time, you were so helpful. I never left a meeting without you providing me with useful resources, and your feedback was specific and encouraging. Additionally, I must thank Dr Robyn Pacey for editing assistance on this thesis. Robyn supplied thorough feedback on formatting and written expression.

Of course, I must thank my friends and family for all their support throughout the years. I owe an enormous debt of gratitude to my faithful partner Renee. Across both my

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Acknowledgement of Papers Included in This Thesis

Section 9.1 of the Griffith University Code for the Responsible Conduct of Research ("Criteria for Authorship"), in accordance with Section 5 of the Australian Code for the Responsible Conduct of Research, states:

> To be named as an author, a researcher must have made a substantial scholarly contribution to the creative or scholarly work that constitutes the research output, and be able to take public responsibility for at least that part of the work they contributed. Attribution of authorship depends to some extent on the discipline and publisher policies, but in all cases, authorship must be based on substantial contributions in a combination of one or more of:
>
> - conception and design of the research project
>
> - analysis and interpretation of research data
>
> - drafting or making significant parts of the creative or scholarly work or critically revising it so as to contribute significantly to the final output.

Section 9.3 of the Griffith University Code ("Responsibilities of Researchers"), in accordance with Section 5 of the Australian Code, states:

> Researchers are expected to:
>
> - Offer authorship to all people, including research trainees, who meet the criteria for authorship listed above, but only those people.
>
> - Accept or decline offers of authorship promptly in writing.
>
> - Include in the list of authors only those who have accepted authorship
>
> - Appoint one author to be the executive author to record authorship and manage correspondence about the work with the publisher and other interested parties.
>
> - Acknowledge all those who have contributed to the research, facilities or materials but who do not qualify as authors, such as research assistants, technical staff, and advisors on cultural or community knowledge. Obtain written consent to name individuals.

Included in this thesis are papers in Chapters 2, 3, and 4 which are co-authored with other researchers. My contribution to each co-authored paper is outlined at the front of the relevant chapter. The bibliographic details (if published or accepted for publication) and status (if prepared or submitted for publication) for these papers including <u>all</u> authors, are:

Chapter 2: Jauch, M., Occhipinti, S., & O'Donovan, A. (2023). The stigmatization of mental illness by mental health professionals: Scoping review and bibliometric analysis. *PLoS ONE*, 18(1), e0280739. https://doi.org/10.1371/journal.pone.0280739

Chapter 3: Jauch, M., Occhipinti, S., O'Donovan, A., & Clough, B. (2023). *A qualitative study into the relative stigmatisation of mental illness by mental health professionals* [Manuscript submitted for publication].

Chapter 4: Jauch, M., Occhipinti, S., O'Donovan, A., & Clough, B. (2023). *Mental illness stereotype content in a sample of trainee mental health professionals* [Manuscript submitted for publication].

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Michael Jauch

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Supervisor: Dr Bonnie Clough

Chapter 1

General Introduction and Overview

In a recent study, a physiotherapist responded to a question about working with people who are overweight by stating "It's just more strain on resources and more time consuming, particularly if they're lower functioning, because you have to use all these other sorts of equipment, like hoists" (Setchell et al., 2016, p. 870). This quote exemplifies a health professional expressing stigmatising reactions within their field of expertise. This kind of stigmatisation is referred to as provider-based stigma and has been observed across a variety of health disciplines, including the field of mental health (Chambers et al., 2012; Nyblade et al., 2019; Setchell et al., 2014; Wahl & Aroesty-Cohen, 2010). Research has identified that mental health professionals stigmatise mental illness by endorsing negative stereotypes, emotions, and behaviours, and it is likely that this has a negative impact on people who suffer from mental illness (Corrigan & Watson, 2002; Nyblade et al., 2019; Werner & Araten-Bergman, 2017). Indeed, organisations such as the Australian Productivity Commission have called on governments to mitigate the stigmatisation of mental illness by mental health professionals (Productivity Commission, 2020).

Several weaknesses exist within the literature on mental health professionals and trainees stigmatising mental illness, and our understanding of this form of stigmatisation is limited. Namely, literature reviews on the stigmatisation of mental illness by mental health professionals supply little clarity regarding the current state of research in this area. Further, there are few rigorous studies on the relative stigma of mental illness across a range of mental disorders and the emotional and behavioural dimensions of stigmatisation. Additionally, there is a dearth of research that can guide studies on the mental disorders, stereotypes, emotions, and behaviours that are fundamental to the relative stigmatisation of mental illness by mental health professionals. Therefore, the current dissertation aimed to address these deficits in the literature by means of a systematic program of research on the stigmatisation of mental

illness by mental health professionals and those in training. To accomplish this objective, three studies using a combination of both qualitative and quantitative methodologies were conducted.

Key Constructs

Stigmatisation is defined as a collective system of negative reactions that are elicited by human attributes (Major & O'Brien, 2005; Pescosolido & Martin, 2015). These reactions comprise of cognitive, affective, and behavioural components, paralleling the classic *tripartite model of attitudes* within social psychology (Fiske et al., 2010). More specifically, stigmatisation reflects *stereotypes* (e.g., dangerousness), *emotions* (e.g., fear), and *discrimination* (e.g., avoidance; Link & Phelan, 2001; Pescosolido & Martin, 2015). The attributes that evoke these negative reactions are called *stigmas*, a term that is often used interchangeably with stigmatisation (Link & Phelan, 2001; Major & O'Brien, 2005). Stigmas can be classified as *character*, *physical*, or *tribal* (Pescosolido & Martin, 2015). Mental illness falls under character stigma, while physical stigmas are features of the body, and tribal stigmas consist of qualities such as race and sexual orientation (Pescosolido & Martin, 2015). However, mental disorders are not all stigmatised to the same degree (Boysen et al., 2014; Crisp et al., 2005; Feldman & Crandall, 2007), a phenomenon that could be called the *relative stigma* of mental illness. Additionally, as stigma is a multifaceted and multidimensional construct, the relative stigma of mental illness can manifest in a range of different stereotypes, emotions, and behaviours. For instance, people with schizophrenia are less likely to be blamed for their mental illness than people with major depressive disorder, but are more likely to be feared than people with major depressive disorder (Angermeyer & Matschinger, 2003).

Historically, stigmas were studied within sociology, and hence, stigmatisation is defined as a group-level phenomenon (Major & O'Brien, 2005). The current dissertation upheld this

definition, yet sought to explore how stigmatisation manifests within individuals, thus adopting a psychological approach. Further, while there are many target variants of stigmatisation (e.g., self-stigma, perceived stigma, received stigma; Pescosolido & Martin, 2015), it was infeasible to address every one of these in the current dissertation. Thus, primary attention was given to *endorsed stigma*, which occurs when people express agreement with stigmatising reactions, and *provider-based stigma*, which arises when occupational groups such as mental health professionals stigmatise the people they are meant to help (Pescosolido & Martin, 2015). Not only is there a need for thorough research on these target variants (Wahl & Aroesty-Cohen, 2010), an examination of endorsed stigma also enables researchers to discover the underlying mechanisms of stigmatisation that are key to reducing the stigmatisation of mental illness by mental health professionals. For the purpose of the current dissertation, *mental health professional* was defined to include psychologists, counsellors, social workers, occupational therapists, psychiatric nurses, psychiatrists, and general medicine practitioners.

Stigmatisation by the General Population

Most of the research on mental illness stigma has concentrated on the general population (Hansson et al., 2013; Schulze, 2007). Mental illness is stigmatised by the general population in several different ways (Corrigan, 2005; Overton & Medina, 2008). The general population negatively stereotypes people with mental illness (Pachankis et al., 2018), with *stereotype content* being a major theoretical structure in the literature on mental illness stigma (Sadler et al., 2015). As examples of negative stereotyping, the general population perceive people with mental illness as disruptive, unattractive, dangerous, unpredictable, incompetent, and to blame for their mental illness (Crisp et al., 2005; Pachankis et al., 2018). Studies with the general population have also provided evidence that people with mental illness elicit negative emotions such as fear and anger, but do not evoke much sympathy or pity

(Angermeyer et al., 2011; Boysen et al., 2014). Further, research indicates that the general population discriminates against people with mental illness (Follmer & Jones, 2017; Yoshioka et al., 2014). Evidence of this has frequently presented in studies investigating behavioural intentions, in which members of the general population expressed intentions to avoid people with mental illness and reported a lack of desire to help them (Angermeyer et al., 2013; Sadler et al., 2015).

In addition to investigating stereotypes, emotions, and behaviours separately, the relationships between these variables have been examined within the general population; theoretical frameworks in this domain tend to incorporate all three components of stigmatisation (Angermeyer et al., 2011; Corrigan et al., 2002; Sadler et al., 2015). For instance, research on *attribution theory* has shown that blaming people for their mental illness is positively associated with stigmatising emotions, and in turn, such emotions are positively correlated with stigmatising behavioural intentions (Weiner, 1995). Studies on the *danger appraisal hypothesis* have also supported the link between the three dimensions of stigmatisation, with this theory focusing more on the stereotype that people with mental illness are dangerous (Corrigan et al., 2002).

When negative stereotypes and emotions are expressed in actual discrimination, it is to the detriment of those who suffer from mental illness, as research suggests that the stigmatisation of mental illness by the general population is associated with a range of negative consequences for people with mental illness (Corrigan & Watson, 2002; Wahl & Aroesty-Cohen, 2010). These negative outcomes include unemployment, social isolation, loss of income, diminished access to housing, health problems, poorer treatment outcomes, and delayed or reduced help-seeking (Hansson et al., 2013; Mohr et al., 2010; Schulze, 2007; Wahl & Aroesty-Cohen, 2010). Additionally, many of these negative consequences reflect *structural stigma*, where the policies of private and governmental organisations either

intentionally or unintentionally restrict the opportunities of people with mental illness (Pescosolido & Martin, 2015).

Stigmatisation by Mental Health Professionals and Those in Training

Although there is less research on stigmatisation by mental health professionals and those in training, current evidence indicates that they too stigmatise mental illness (Carrara et al., 2019; Feldman & Crandall, 2007). On the one hand, some studies have found that mental health professionals endorse positive reactions towards mental illness, especially in comparison to the general population (Carrara et al., 2019; Henderson et al., 2014). However, there is ample evidence that mental health professionals express agreement with many of the same stigmatising stereotypes, emotions, and behavioural intentions as the general population (Reavley et al., 2014; Werner & Araten-Bergman, 2017). Further, stigmatising reactions towards mental illness are present in those in early training to become mental health professionals (Arbanas et al., 2018; Feldman & Crandall, 2007; Wang et al., 2014). For example, a study by Magliano et al. (2017) reported that psychology undergraduates were likely to endorse negative stereotypes about mental disorders such as depression and schizophrenia. Studies such as this exemplify the overlap that exists between research on the general population and literature that is relevant to mental health professionals. In particular, some studies on mental illness stigma use psychology undergraduates to represent the general population (e.g., Feldman & Crandall, 2007; Roehrig & McLean, 2010), but psychology undergraduates are also pertinent to provider-based stigma because many may go on to become mental health professionals.

At first, the stigmatisation of mental illness by mental health professionals seems at odds with research on the *contact hypothesis*, showing that exposure to stigmatised groups reduces stigmatisation towards such groups (Pettigrew & Tropp, 2008). Mental health professionals have frequent contact with people that suffer from mental illness, and hence,

the contact hypothesis would suggest that mental health professionals endorse few if any stigmatising reactions towards people with mental illness. However, more recent interpretations of the contact hypothesis indicate that not all forms of contact reduce stigmatisation. Namely, there is evidence that positive contact decreases stigmatising reactions while negative experiences of contact increase stigmatisation (Corrigan & Nieweglowski, 2019). Applied to mental health professionals, the burden and *associative stigma* attached to working in the mental health field could constitute a type of negative contact with mental illness that in turn causes increased provider-based stigma. As a relevant alternative, the effect of contact on mental illness stigma could be disorder-specific and reflect the relative stigma of mental illness. In particular, exposure to a specific set of mental disorders as part of being a mental health professional may not alleviate the stigmatisation of mental illness in general, but may decrease stigmatisation for the specific mental disorders.

The stigmatisation of mental illness by mental health professionals is also incongruent with expectations of them (for an example of such expectations see Australian Psychological Society, 2007), and this could suggest that trainees are not being appropriately socialized into their professional role. Additionally, provider-based stigma in the mental health field is an important area of research that has wide-reaching implications. Studies on provider-based stigma have shown that this form of stigmatisation is associated with negative repercussions for health care recipients, including poorer quality of life and fewer successful health outcomes (Chambers et al., 2012; Nyblade et al., 2019). Thus, it is likely that the stigmatisation of mental illness by mental health professionals has a negative impact on people with mental illness, as research indicates provider-based stigma has a negative effect on health care receivers (Chambers et al., 2012; Nyblade et al., 2019). The stigmatisation of mental illness by mental health professionals is also likely to have ramifications for people with mental illness because the stigmatisation of mental illness is generally related to

negative consequences for people with mental illness (Corrigan & Watson, 2002). This has been recognised by non-governmental organisations, which have requested government participation in the reduction of mental health professionals stigmatising mental illness (Productivity Commission, 2020; World Health Organization, 2022).

In contrast to research with the general population, literature on the stigmatisation of mental illness by mental health professionals is more recent, and fewer studies have been conducted in this area (Henderson et al., 2014; Schulze, 2007). Though it is possible that this small domain of research is already in a position to guide interventions, the state of literature on the stigmatisation of mental illness by mental health professionals is currently unknown. Existing literature reviews in this area largely outline evidence for the stigmatisation of mental illness by mental health professionals and present very little on how research is being conducted and the areas requiring more examination (e.g., Ahmedani, 2011; Carrara et al., 2019; Henderson et al., 2014). Further, extant literature reviews have been executed in ways that have likely caused many relevant studies to be excluded, and as such, limit accurate interpretation of the literature. Namely, some were not executed with systematic and reproducible methods, and even the literature reviews that did use such methods also employed search strings that were not specific enough to detect most of the relevant research. As well, there are several inconsistencies between existing literature reviews on the stigmatisation of mental illness by mental health professionals, including variability in scope and differences in the number of studies identified.

In addition to this lack of clarity within the field of research, key theoretical structures and variables have often been overlooked. In particular, research on the stigmatisation of mental illness by mental health professionals and trainees has frequently neglected the relative stigma of mental illness. Moreover, of the studies within this domain that have explored the relative stigma of mental illness, many have clear limitations and very few have

covered a wide range of mental disorders. There has also been limited research examining the emotional and behavioural components of the stigmatisation of mental illness by mental health professionals.

These gaps in the literature are striking for a number of reasons. The small subset of studies that have been conducted on relative stigma show that mental health professionals stigmatise mental disorders to different degrees (Fuss et al., 2018; Hsiao et al., 2015; Servais & Saunders, 2007). Therefore, literature on the stigmatisation of mental illness by mental health professionals that fails to account for relative stigma likely has limited generalisability. Additionally, a lack of comprehensive research on the relative stigma of mental illness is in juxtaposition to literature on the general population, as there are numerous studies in this area which have investigated the relative stigma of mental illness across a variety of disorders (e.g., Crisp et al., 2005; Feldman & Crandall, 2007). Finally, research on the relative stigma of mental illness and the emotional and behavioural dimensions of stigmatisation is vital to future initiatives that seek to mitigate the stigmatisation of mental illness by mental health professionals. Such interventions should target the evidence-based processes contributing to the stigmatisation of mental illness and different mental disorders, focusing on the mental disorder stigmas that need intervention the most. This would undoubtedly entail targeting the individual-level processes that constitute stigmatisation, yet may also involve addressing structural impediments within the mental health field. Mental health professionals themselves face structural challenges in the provision of treatment (Schulze, 2007), and this can influence how they respond to mental illness, especially particular types of mental disorders (Cleary et al., 2002; Minkoff, 1987). For example, mental health professionals have limited access to training on borderline personality disorder, which can make treatment more challenging and in turn lead to the stereotype that people with borderline personality disorder are difficult (Cleary et al., 2002).

Another major challenge facing research on the stigmatisation of mental illness by mental health professionals is the question of which mental disorders, stereotypes, emotions, and behaviours are crucial to the relative stigma of mental illness in this domain of the literature. Because of the vast number of individual mental disorders and the many different instantiations of stigmatisation, it is unlikely that studies on the relative stigma of mental illness can include all mental disorders and aspects of stigmatisation (American Psychiatric Association, 2013; Corrigan et al., 2002). Further, there is currently an absence of literature which can direct studies on the mental disorders and facets of stigmatisation that are fundamental to the relative stigmatisation of mental illness by mental health professionals. The measures employed in studies on the stigmatisation of mental illness by mental health professionals are often variable (Wahl & Aroesty-Cohen, 2010), and qualitative research in this area supplies little guidance for studies on the relative stigma of mental illness (e.g., Burroughs et al., 2006; Clemente et al., 2017; Daibes et al., 2017). Thus, before the relative stigmatisation of mental illness by mental health professionals and trainees can be examined comprehensively, research will also need to be conducted to investigate the mental disorders, stereotypes, emotions, and behaviours that are key to these forms of stigmatisation.

Dissertation Aims

The primary aim of the current dissertation was to provide a comprehensive examination of the stigmatisation of mental illness by mental health professionals and trainees. There were three secondary aims. The first was to provide a thorough description of the current state of literature on the stigmatisation of mental illness by mental health professionals. The second was to identify the mental disorders, stereotypes, emotions, and behaviours that are crucial to the relative stigmatisation of mental illness by mental health professionals, and to derive a theory that contains these variables. The third aim was to investigate mental illness stereotype content among mental health professionals in training.

Through this process, it was anticipated that evidence would be generated for the educational needs of trainee mental health professionals with respect to the relative stigma of mental illness. These aims were achieved with a mixed-methods approach that entailed three distinct studies.

The first dissertation aim was accomplished with Study 1. This study was a scoping review that explored available research on the endorsed stigmatisation of mental illness by mental health professionals and also rectified the limitations of previous literature reviews on this topic. To satisfy the second aim, Study 2 involved a series of unstructured interviews with a range of different mental health professionals and a *grounded theory* approach to data analysis. The third aim was realised in Study 3, which utilised a quantitative survey methodology to examine endorsement of stigmatising beliefs among undergraduate university students studying in mental health-related fields.

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Chapter 2

The Stigmatisation of Mental Illness by

Mental Health Professionals: Scoping Review and Bibliometric Analysis

This chapter includes a co-authored paper. The bibliographic details (if published or accepted for publication)/status (if prepared or submitted for publication) of the co-authored paper, including all authors, are:

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My contribution to the paper involved: conceptualisation, methodology, resources, software, project administration, investigation, data curation, formal analysis, visualisation, validation, writing the original draft and manuscript editing.

Note. While this paper was published with a different formatting style and in American English, for consistency across the dissertation, it is included in APA formatting and British English for the current dissertation.

As this paper was published prior to thesis submission, an addendum was added to provide additional clarification to aspects of the method and results.

(Signed) _____ (Date)_____17/05/2023_____

(Countersigned) _____ (Date)_____17/05/2023_____
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(Countersigned) _____ (Date)_____19/05/2023_____
Supervisor: Dr Bonnie Clough

Additional material relevant to this study is appended at the end of this thesis:

- Appendix A - Addendum - Additional Clarification of Scoping Review Method and Results

- Appendix B - Table Notes and Abbreviations

- Appendix C - Table of Included Studies

The Stigmatisation of Mental Illness by

Mental Health Professionals: Scoping Review and Bibliometric Analysis

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Abstract

Although research suggests that mental health professionals stigmatise mental illness, studies on this topic are relatively new. Little is known about the state of this research and existing literature reviews exhibit multiple limitations. Accordingly, a scoping review was performed on the endorsed stigmatisation of mental illness by mental health professionals, with the aim of exploring how research is conducted and whether there are gaps in the literature. Studies were included from any time period if they supplied findings on the endorsed stigmatisation of mental illness by mental health professionals. Research was identified through electronic databases (i.e., PsycINFO, Embase, Medline, Scopus) and other sources (i.e., the Griffith University library, Google Scholar, literature reviews). It was found that the research is characterised by a number of limitations, and little progress has been made in this important domain. Among other limitations, there was a lack of comprehensive studies on the relative stigma of mental illness and how the components of stigmatisation relate to each other. A bibliometric analysis also found that a large proportion of the research is not connected by references. Recommendations were made with respect to future research in this area.

Introduction

Studies suggest that health professionals can be just as susceptible to stigmatising attitudes within their respective fields as the general population (Chambers et al., 2012; Setchell et al., 2014; Wahl & Aroesty-Cohen, 2010). Researchers have found both that physiotherapists stigmatise individuals who are overweight and physicians stigmatise lung cancer patients (Chambers et al., 2012; Setchell et al., 2014; Setchell et al., 2016). Of primary relevance to the current paper, provider-based stigma is of significant concern in the domain of mental health, where mental health professionals have been found to express stigmatising reactions towards people with mental illness (Carrara et al., 2019; Henderson et al., 2014; Schulze, 2007; Wahl & Aroesty-Cohen, 2010). For example, a study by Servais and Saunders (2007) found that clinical psychologists perceive people with borderline features to be dangerous, and people with schizophrenia to be undesirable. This is troubling considering that the stigmatisation of mental illness can have a negative impact on people who suffer from mental illness, and provider-based stigma is associated with negative outcomes for health care recipients (Chambers et al., 2012; Corrigan & Watson, 2002; Hansson et al., 2013; Overton & Medina, 2008). The stigmatising of mental illness including that by mental health professionals is also increasingly recognised as a public health concern and there are calls for government-based responses in some jurisdictions (Productivity Commission, 2020). Thus, there is strong impetus for research that can provide insight into how the stigmatisation of mental illness by mental health professionals can be mitigated. Surprisingly, studies on mental health professionals stigmatising mental illness are fairly new and only a relatively limited amount of research has been conducted on this subject (Carrara et al., 2019; Henderson et al., 2014; Schulze, 2007; Wahl & Aroesty-Cohen, 2010). As well, the state of research on mental health professionals stigmatising mental illness is mostly unknown and extant literature reviews on the topic add little clarity to this and are marked by several

limitations (Ahmedani, 2011; Carrara et al., 2019; Henderson et al., 2014; Schulze, 2007; Wahl & Aroesty-Cohen, 2010). Therefore, it is timely for the state of research on mental health professionals stigmatising mental illness to be investigated in a rigorous manner. Accordingly, a scoping review will be undertaken, as this type of literature review serves to describe the state of research in an area, including how studies are conducted and whether there are any gaps in the literature (Arksey & O'Malley, 2005; Levac et al., 2010; Munn et al., 2018).

The Context

A large number of studies have demonstrated that mental illness is stigmatised by the general population (Corrigan, 2005; Hansson et al., 2013; Overton & Medina, 2008; Wahl & Aroesty-Cohen, 2010). *Stigmatisation* is a collective system of negative reactions that are elicited by human attributes (Link & Phelan, 2001; Major & O'Brien, 2005; Pescosolido & Martin, 2015). The components of stigmatisation include negative *stereotypes* (e.g., incompetence), negative *emotions* (e.g., anger), and *discrimination* (e.g., avoidance; Link & Phelan, 2001; Major & O'Brien, 2005). One variant of stigmatisation is *endorsed stigma*, referring to expressed agreement with stigmatising reactions (Pescosolido & Martin, 2015). When endorsed stigma manifests as discrimination against individuals with mental illness, these people encounter a range of negative consequences (Corrigan & Watson, 2002; Schulze, 2007; Wahl & Aroesty-Cohen, 2010). For example, individuals with mental illness experience limited access to housing, unemployment, financial difficulties, health problems, and poor treatment outcomes (Corrigan, 2005; Hansson et al., 2013; Overton & Medina, 2008; Schulze, 2007). In fact, such consequences are in themselves evidence of *structural stigma*. Thus, mental illness causes harm directly, but such harm is also potentiated by the negative consequences associated with stigmatisation (Feldman & Crandall, 2007).

Research suggests that in addition to the general population, mental health professionals also stigmatise mental illness, and this has implications for public health and policy (Carrara et al., 2019; Chambers et al., 2012; Productivity Commission, 2020; Schulze, 2007; Wahl & Aroesty-Cohen, 2010). *Provider-based stigma* occurs when occupational groups endorse the stigmatisation of the people they are meant to help and is related to negative repercussions for health care recipients (Chambers et al., 2012; Pescosolido & Martin, 2015). In the area of mental health, studies indicate that mental health professionals such as clinical psychologists endorse many of the same negative stereotypes, emotions, and behaviours as the general population (Crowe & Averett, 2015; Fuss et al., 2018; Nordt et al., 2006; Reavley et al., 2014; Salime et al., 2019; Servais & Saunders, 2007; Werner & Araten-Bergman, 2017). This is of concern, as the stigmatisation of mental illness is in many ways incompatible with good mental health practice. Given that provider-based stigma can have a negative impact on health care recipients, it is likely that the stigmatisation of mental illness by mental health professionals is also linked to negative consequences for those who suffer from mental illness. Recently in Australia, the Productivity Commission exhibited an awareness of these likely negative outcomes in recommending to the government that action be taken towards reducing the stigmatisation of mental illness by health professionals, which includes mental health professionals (Productivity Commission, 2020). This is an example of institutions becoming more conscious of mental health professionals stigmatising mental illness, and advocating for a change.

Rationale

Despite the noted importance of research on mental health professionals stigmatising mental illness, this topic has only more recently garnered attention from the scientific community, and seemingly only a small body of literature has accumulated in this area (Ahmedani, 2011; Carrara et al., 2019; Henderson et al., 2014; Schulze, 2007; Wahl &

Aroesty-Cohen, 2010). Research on mental health professionals stigmatising mental illness appears to have emerged in the 2000s, with few studies being conducted prior to this time period (Ahmedani, 2011; Carrara et al., 2019; Henderson et al., 2014; Schulze, 2007; Wahl & Aroesty-Cohen, 2010). To our knowledge, by 2014 only about 20 studies had been completed on mental health professionals stigmatising mental illness (Henderson et al., 2014). In comparison to research with mental health professionals, the stigmatisation of mental illness by the general population had been investigated in a number of studies prior to the 2000s, with some research being conducted as far back as the 1950s (Corrigan et al., 2012; Feldman & Crandall, 2007; Parcesepe & Cabassa, 2013; Pescosolido, 2013). Further, the state of research on mental health professionals stigmatising mental illness is currently unknown, as extant literature reviews in this domain mostly summarise findings, and provide little to no information about how research is being conducted and whether there are any gaps in the literature (Ahmedani, 2011; Carrara et al., 2019; Henderson et al., 2014; Schulze, 2007; Wahl & Aroesty-Cohen, 2010).

Existing literature reviews on mental health professionals stigmatising mental illness are also limited in ways that have likely caused literature to be overlooked and make it difficult to draw conclusions about the research area (Ahmedani, 2011; Carrara et al., 2019; Henderson et al., 2014; Schulze, 2007; Wahl & Aroesty-Cohen, 2010). First, not all of these reviews were conducted with systematic and reproducible methods for identifying relevant studies. Further, the literature reviews that did satisfy this level of rigor, arguably did not use search terms with sufficient detail to capture most of the literature on mental health professionals stigmatising mental illness. For the most part, the search terms that were used included two or three variants of the terms *stigmatisation*, *mental illness*, and *mental health professional*, respectively. Although these terms outline the relevant articles generally, they may exclude studies that are more specific, such as those that could be on particular mental

disorders (e.g., schizophrenia, major depression, alcohol use disorder), or particular mental health professions (e.g., psychologists, psychiatric nurses, counselors). There are also several inconsistencies between the literature reviews on mental health professionals stigmatising mental illness. One inconsistency regards the focus of the literature reviews. Specifically, none of the reviews summarised research on just the endorsed stigmatisation of mental illness by mental health professionals (e.g., one review included studies on stigmatisation by the general population), and the reviews differed in the extent to which this was the focus. Possibly related to this, there are inconsistencies between some of the literature reviews with respect to the number of articles included on the endorsed stigmatisation of mental illness by mental health professionals. For instance, despite Wahl and Aroesty-Cohen (2010) including 17 studies in their review, one year later a review by Ahmedani (2011) only included three studies. The last inconsistency between the literature reviews concerns restrictions placed on time periods. Namely, Wahl and Aroesty-Cohen (2010) did not review studies prior to 2004, Carrara et al. (2019) only reviewed studies between 1992 and 2015, and the other reviews did not restrict searches to any time period.

As there are several inconsistencies between the literature reviews on mental health professionals stigmatising mental illness, the literature on this topic itself may be inconsistent. Such inconsistencies are highly likely observable in the manner research is executed, and likely to result in multiple gaps in the literature. With respect to the latter, type of mental disorder is one factor that is of particular interest to the current review. This variable is referred to here as the *relative stigma* of mental illness, or the degree to which mental disorders are stigmatised compared to other mental disorders. Within research on the general population, a number of studies have explored and demonstrated the relative stigma of mental illness with a range of mental disorders (Boysen et al., 2014; Crisp et al., 2005; Crisp et al., 2000; Feldman & Crandall, 2007; Sadler et al., 2015; Sadler et al., 2012). A

second variable, or more accurately system of variables, that is salient to this scoping review, is the components of stigmatisation as they relate to each other. This has been examined in research with the general population, including studies on how the components relate to each other in a complete framework, with emotions mediating the relationship between stereotypes and discrimination (Angermeyer et al., 2011; Angermeyer & Matschinger, 1997; Corrigan et al., 2003; Follmer & Jones, 2017; Sadler et al., 2015). Understanding the relative stigma of mental illness and how the components of stigmatisation relate to each other is crucial to reducing the stigmatisation of mental illness generally and in particular among mental health professionals. Knowledge of which mental disorders are stigmatised more than others provides guidance for interventions on which approaches are appropriate for the different mental disorder stigmas, and which stigmas should be prioritised. Moreover, having a grasp of how the components of stigmatisation relate to each other is necessary for uncovering the mechanisms of change interventions should target to be effective. Inconsistencies in the literature may also impede the identification of broad findings within the research, and could be due to a lack of referencing connections between articles and research being published in lesser-known journals.

Objectives

This scoping review aims to examine the state of available research on the endorsed stigmatisation of mental illness by mental health professionals. In addition to investigating the state of research broadly, this scoping review aims to more precisely elucidate how studies are being conducted and whether there are gaps in the literature, two common scoping review objectives (Arksey & O'Malley, 2005; Munn et al., 2018). As well, the current study aims to appraise whether there are any clear findings in the literature on mental health professionals stigmatising mental illness and explore some of the bibliometric features of the research in this area. *Bibliometrics* can be defined as the study of referencing patterns

amongst the various forms of literature (Greenfield & Greener, 2016; Osareh, 1996), and

bibliometric analyses are finding increasing use in the field of mental illness stigma (e.g.,

Martinez-Martinez et al., 2022). These analyses will supply an indication of referencing

connections between studies and a summary of the types of journals that articles are being

published in.

Method

This scoping review was guided by the methodological framework developed by

Arksey and O'Malley (2005) and is reported as per the Preferred Reporting Items for

Systematic Reviews and Meta-Analyses extension for scoping reviews (PRISMA-ScR)

guideline (S16 Appendix; Tricco et al., 2018).

Eligibility Criteria

Articles were selected if they provided findings on the endorsed stigmatisation of

mental illness by mental health professionals. Literature was also included on mental health

professionals perceiving the stigmatisation of mental illness in other mental health

professionals. As this perceived form of stigma likely reflects endorsed stigma, this literature

was selected as indirect evidence of the endorsed stigmatisation of mental illness by mental

health professionals. Articles were only included if the participants were referred to as mental

health professionals broadly, or if it was clear that particular professional groups were part of

the sample. Providers were considered mental health professionals if they were professionals

from the fields of psychology, counseling/psychotherapy, social work, occupational therapy,

psychiatric nursing, psychiatry, or general/family/primary care medicine. Participants were

also regarded as mental health professionals if they were unspecified physicians working in a

primary care setting, or any type of nurse or physician working in a psychiatric facility.

Research was excluded on the stigmatisation of individual psychological symptoms

(e.g., self-harm, suicide, hallucinations) and subclinical behaviours (e.g., alcohol

consumption), as these attributes alone do not constitute mental illness. Similar to this,

literature was excluded on diagnostic processes (e.g., a symptom of major depressive disorder

is anhedonia), and beliefs regarding society-level decisions about people with mental illness

(e.g., involuntary hospitalisation) that were not explicitly linked to stigmatisation. These

phenomena were excluded as they are not necessarily indicative of stigmatisation, and rather

may reflect an objective assessment. Research was also not included if it was on the

psychometric properties of stigmatisation scales, if the results combined mostly items

irrelevant to stigmatisation with comparatively few stigmatisation items, and if the analyses

compared one sample to a completely different sample. Literature with these characteristics

was excluded because such research either does not add to an understanding of mental health

professionals stigmatising mental illness or is not conducive to unambiguous conclusions.

See Table 1 for the full inclusion and exclusion criteria.

Table 1

Inclusion and Exclusion Criteria

Inclusion Criteria

- The endorsed stigmatisation of mental illness by mental health professionals
- Mental health professionals perceiving the stigmatisation of mental illness in other mental health professionals
- Published in English
- Published in a peer-reviewed journal
- From any time period
- Qualitative or quantitative

Exclusion Criteria

- The stigmatisation of individual psychological symptoms
- The stigmatisation of subclinical behaviours
- Diagnostic processes
- Beliefs regarding society-level decisions about people with mental illness
- The psychometric properties of stigmatisation scales
- Results that combine mostly items irrelevant to stigmatisation with comparatively few stigmatisation items
- Analyses that compare one sample to a completely different sample
- First-person accounts of mental health professionals stigmatising mental illness
- Mental health professionals perceiving the stigmatisation of mental illness in the general population
- Mental health professionals stigmatising mental illness in other mental health professionals
- Mental health professionals stigmatising mental illness in themselves
- Trainee mental health professionals
- Inaccessible articles
- Conference proceedings, books, and literature reviews
- Any non-empirical documents

Search and Information Sources

To access relevant studies via electronic databases, a three-part search string was constructed. This search string consisted of variations of the terms stigmatisation, mental illness, and mental health professional. In addition to these general terms, specific mental disorders and particular professions were incorporated into the search string, to ensure that articles on specific mental disorders and professions were included in this review. Given the infeasibility of accounting for every classified mental disorder in the search string, only certain mental disorders were listed. These classifications were mood disorder, substance use disorder, anxiety disorder, impulse control disorder, depression, and schizophrenia. The first four of these were included because research suggests that globally these mental disorders are the most prevalent (Demyttenaere et al., 2004). Schizophrenia and depression were added based on the observation that these mental disorders are the most commonly specified mental disorders in the literature on mental health professionals stigmatising mental illness (Ahmedani, 2011; Carrara et al., 2019; Henderson et al., 2014; Schulze, 2007; Wahl & Aroesty-Cohen, 2010). Refer to Table 2 for the complete search string in the form of one database search. It is noted that the search string accounts for the inclusion of midwives, despite the decision to only include non-psychiatric nurses if they work in a psychiatric facility. This discrepancy is due to the inclusion criteria being refined after the review process had progressed too far for changes to be made to the search string.

Table 2

Search Query Protocol and Flow for PsycINFO

#1 (stigma* OR attitudes OR stereotyp* OR prejudice OR discrimination)

#2 (mental illness OR mental disorder OR mental disease OR mental health OR psychiatric illness OR psychiatric disorder OR psychological disorder OR psychological illness OR psychiatric disease OR psychological disease OR psychopathology OR abnormal psychology OR depression OR mood disorder OR schizophrenia OR substance OR anxiety OR impulse control)

#3 (provider OR mental health professional OR mental health practitioner OR health professional OR health practitioner OR medical professional OR medical practitioner OR clinician OR psychologist OR therapist OR psychotherapist OR counsellor OR counselor OR psychiatrist OR general practitioner OR GP OR nurse OR occupational therapist OR social worker OR physician OR midwi*)

#4 #1 AND #2 AND #3

#5 Limit #4 to (peer reviewed journal and English language)

The search string was entered into a psychology database, two biomedical databases, and a multidisciplinary database. PsycINFO was the psychology database, Embase and Medline were the biomedical databases, and Scopus was the multidisciplinary database. Searches were carried out on the basis of titles, abstracts and keywords, and all searches occurred for the first time on the 29th of May 2019. These searches were replicated on either the 9th (PsycINFO, Embase) or 10th (Medline, Scopus) of December 2019 to identify any articles that had been added to the databases since the first set of searches. The same set of searches were also conducted for a third time on either the 16th (Scopus, Embase) or 17th (Medline, PsycINFO) of September 2021. In addition to the database searches, relevant studies were found through Google Scholar and the Griffith University library. As the full search string could not be entered into Google Scholar or the Griffith University library, a number of different searches had to be performed for these search engines. These searches involved combining terms from each of the three parts of the database search string (e.g.,

mental health professionals and mental illness stigma), and were executed roughly around the same time as the first database searches. Potentially relevant articles were also screened for in literature reviews on mental health professionals stigmatising mental illness. These reviews were by Wahl and Aroesty-Cohen (2010), Schulze (2007), Henderson et al. (2014), Carrara et al. (2019), and Ahmedani (2011). After studies were located through the first set of database searches, search engines, and literature reviews, the reference lists of relevant studies were inspected to find any articles that were not acquired via the primary sources.

Selection of Sources of Evidence

Relevant literature was identified by screening titles, abstracts, and full texts in a sequential order. In some cases, if the abstracts were either non-existent or too vague, articles were probed further without reading the full text. This phase of the scoping review was conducted by one reviewer. However, to verify that inclusion and exclusion were congruent with the eligibility criteria, an evaluation of inter-reviewer consistency was performed with a second reviewer. This first entailed randomly selecting a quantity of included and excluded literature that corresponded to 10% of the ultimate corpus of relevant articles (not including the second and third database searches). Half of this literature was comprised of included studies from any of the information sources, and the other half covered excluded articles from just the electronic databases. With the eligibility criteria in mind, the second reviewer then chose from this sample the literature that they deemed relevant and irrelevant while being blind to the inclusion and exclusion decisions of the other reviewer. It was found that for 90% of the sampled literature the two reviewers made the same inclusion and exclusion choices, and this level of agreement was considered acceptable. For the remaining 10%, the two reviewers had a discussion about their decisions, and the eligibility criteria were adjusted where necessary. Previous inclusion and exclusion decisions were changed to be consistent with the new eligibility criteria.

Data Charting Process and Data Items

As with the selection of sources of evidence, data charting was also executed by one reviewer. Data items were year of publication, countries the studies were conducted in, research methods, analytical approaches, populations sampled, measures of stigmatisation, mental disorders included, predictors of stigmatisation, component relations, and findings. To clarify, research methods denote the design of the studies, how mental illness was presented and whether an intervention was used, and analytical approaches include either the statistical or qualitative procedures employed to interpret data. Populations sampled refers to the types of mental health professionals that participated in the research, and any irrelevant populations (e.g., the lay population) that were not separated from the mental health professionals in the results. As a final clarification, findings represent the amount of stigmatisation exhibited by the mental health professionals, and what factors do or do not account for variation in stigmatisation, including interventions. For the bibliometric analysis, data were gathered on how frequently articles were cited in other articles, and on the rank (e.g., Q1) of the journals that the studies were published in.

Synthesis of Results and Bibliometric Analysis

Evidence was summarised via narrative form, tables, and illustrations (i.e., a flow-chart and citation network), and the bibliometric analysis followed Bhandari (2022) and Donthu et al. (2021). To examine citation links between articles a *direct citation analysis* was performed with the program VOSviewer (van Eck & Waltman, 2010). In order for VOSviewer to access as many articles as possible, several data sources were considered (i.e., bibliographic database files, supported application programming interfaces). Through this process it was established that compared to other sources Scopus provided access to the highest number of studies. As for the analysis itself, literature was read in through Scopus, citation was selected as the type of analysis, and documents were specified as the unit of

analysis. This produced a citation network and a list of clusters. Each of the nodes within the citation network were weighted by the number of links to other nodes. Conclusions were drawn based on an inspection of the clusters and nodes. Data on the rank of the journals that the articles were published in were obtained through the webpage www.scimagojr.com, and data were collected by documenting the highest and most recent rank the journals had been given.

Results

Selection of Sources of Evidence

The first set of database searches yielded 9310 documents, and 116 articles were identified through other sources (i.e., search engines and literature reviews). These records were then combined, and after removing duplicates the remaining 5938 documents were screened for relevance. Through this, 184 articles were deemed relevant. The reference lists of these studies were then examined, and a further 89 studies were found that met the inclusion criteria. This brought the total number of relevant articles to 273. For the second set of database searches, six new studies were found that fit the inclusion criteria, and for the third set of searches 21 new studies were identified. With these records, the final number of relevant articles was 300 (the complete process of selecting articles is summarised in Figure 1). In addition to excluding documents in accordance with the exclusion criteria, many records were excluded as they were either not focused on stigmatisation (e.g., the effectiveness of a particular type of treatment, the self-efficacy and knowledge of mental health professionals), they were not about attitudes towards mental illness (e.g., attitudes towards evidence-based practice, attitudes towards people with HIV), or they were on stigmatisation by the general population.

Figure 1

PRISMA-ScR Flow-Chart

PRISMA 2009 Flow Diagram
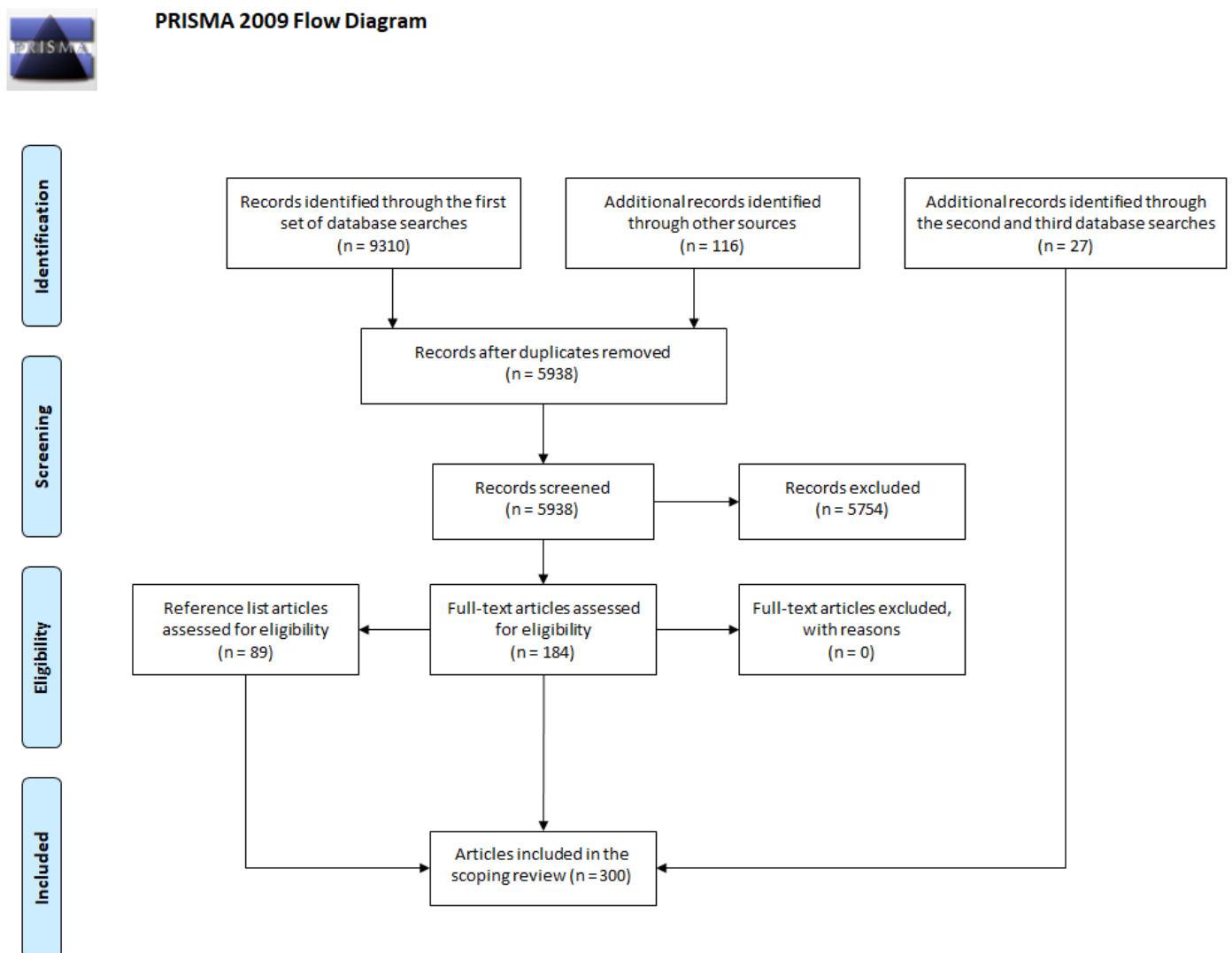
Characteristics of Sources of Evidence and Results of Individual Sources of Evidence

Characteristics of sources of evidence and the results of individual sources of evidence

are presented as supporting information.

Synthesis of Results

Preliminary Findings

On examining the 300 articles, a proportion were found to contain results that merged

mental health professionals with irrelevant populations. This included members of the general

population and in most cases non-mental health professionals (e.g., teachers, lawyers, engineers). In some instances, this occurred because non-mental health professionals (e.g., social work students, pharmacists, paramedics) were considered to be mental health professionals by the authors. Study findings that mix mental health professionals with irrelevant populations are problematic for the current review, as it is unclear whether these results truly reflect the mental health professionals sampled. Thus, for the remaining results, findings that merged mental health professionals with irrelevant populations, and article details that corresponded to this were excluded. Consequently, 34.33% of studies were completely excluded, 22% of articles were included but only a subset of the applicable characteristics could be used, and 43.33% of studies were included in full. This meant that 197 out of the original 300 articles were the basis of the following analyses.

Most of the studies were published in the 21st century, with 32.49% appearing in the 2000s, and 43.65% emerging in the 2010s and 2020s as a whole. Prior to this, 10.66% of articles were published in the 1990s, small quantities of studies appeared in the 1980s, 1970s, and 1960s, and just one article was published in the 1950s. Regarding geographical region, 30.96% of studies were conducted in North America, and most of this was in the United States. In comparison, only a few studies occurred in Brazil, and no other studies were conducted in South America. A further 25.38% of studies occurred in the United Kingdom, the majority of which were conducted in England. A very small number of studies were conducted in Scandinavia (e.g., Denmark, Norway), whereas 15.23% of studies occurred in other European regions (e.g., France, Italy, Germany). For the rest of the studies, 10.66% were conducted in the Middle East (e.g., Israel, Iran, Turkey), 9.14% occurred in Asia (e.g., China, Japan, India), and 7.61% were conducted in Africa (e.g., Nigeria, Ghana, South Africa). Also, 9.14% of studies occurred in Oceania, most of which were conducted in Australia.

Research Methods and Analytical Approaches

The most common research method by far was the cross-sectional survey. This type of research method was utilised in 68.53% of studies, while only 4.06% and 6.09% of articles reported the use of longitudinal surveys and structured interviews, respectively. Experiments/quasi-experiments were employed in 11.68% of studies, and a few articles acknowledged the use of other quantitative methods (e.g., repertory grid technique, implicit association test, behavioural observation). Additionally, 6.60% of studies explored interventions for reducing stigmatisation (e.g., alcoholism training program, Balint groups, educational workshop on borderline personality disorder). It may also be worth noting here that two of these interventions were not examined through the utilisation of statistical modelling (e.g., test statistics, confidence intervals). Qualitative methods were considerably less common than quantitative methods. More specifically, 9.64% of articles reported the use of semi-structured interviews, and only a small number of unstructured interviews and focus groups were conducted. There was also one structured interview and four cross-sectional surveys that used open-ended questions to collect qualitative data. Across the research methods, mental illness was presented to participants via labels in 90.86% of studies, and for four more articles labels may have been employed but it was unclear. In contrast to labels, only 21.83% of studies made use of vignettes or some other means of portraying mental illness (e.g., short descriptions, audio recordings). Of these, vignettes were utilised the most, and in one article the mode of representing mental illness was not obvious.

A variety of quantitative analyses were used throughout the studies. Many of these were standard statistical procedures (e.g., correlation analysis, ANOVA, t-test, regression analysis) and some were more rarely applied analyses (e.g., McNemar's test, Mantel-Haenszel test, Fisher's exact test). For several articles, the appropriate statistical figures were omitted to some extent, although more noteworthy was the observation that 89.61% of the applicable

studies failed at least partially to correct for family-wise error rate. With respect to qualitative analyses, thematic analysis was employed in 51.35% of articles that included qualitative research. To a much lesser degree, a range of other qualitative analyses were utilised (e.g., contextual semantic interpretation, phenomenological analysis, discourse analysis), but not a single study used an analytical approach that involved making connections between themes (e.g., grounded theory). For both quantitative and qualitative analyses, some articles were not completely clear about the types of analyses, and 21.97% of studies that performed analyses were unable to be fully interpreted with the amount of information provided. These two issues occurred mostly for quantitative analyses.

Types of Mental Health Professionals

Most of the prominent mental health professions were well represented within the corpus of studies. Psychiatrists (including registrars)/psychiatry professionals were in 31.98% of articles, general practitioners/family physicians/primary care physicians participated in 30.46% of studies, and social workers/social work professionals were included in 26.40% of articles. Adding to this, psychologists/psychology professionals were represented in 25.38% of articles, and psychiatric nurses participated in 20.30% of studies. However, counselors/psychotherapists were only included in 7.61% of articles, and occupational therapists/professionals from the field of occupational therapy participated in just 3.05% of studies. There was also one article that included general nurses that work in a psychiatric facility, and another study that included professionals from the field of neurology. To varying degrees, a number of studies were not clear about the types of mental health professionals that participated. Namely, 16.24% of articles included unspecified nurses from psychiatric facilities, 8.63% of studies included unspecified mental health professionals, and a small proportion of articles included unspecified physicians from either primary care or psychiatric settings.

Measures and Scales

A large quantity of different measures were employed to examine stigmatisation both across and often within studies. Of the measures, stereotypes were utilised the most, with 77.16% of articles reporting the use of this type of measure. A small amount of studies investigated stereotypes in general (e.g., an aggregate score of multiple stereotypes), but a plethora of specific stereotypes were also included throughout the articles. The five stereotypes that were used the most were about causal attributions (e.g., mental illness is caused by a lack of will power), prognosis (e.g., people with mental illness will not recover), dangerousness (e.g., people with mental illness are a danger to other patients and staff), difficulty (e.g., people with mental illness are difficult to treat), and incompetence (e.g., people with mental illness are incapable). None of the stereotypes took the form of perceived stigma.

Compared to stereotypes, emotions and behaviours were utilised far less to measure stigmatisation. This was especially true for emotions, as only 23.35% of studies measured this component of stigmatisation, whereas 40.10% of articles included behaviours as a measure of stigmatisation. Similar to stereotypes, some studies explored emotions in general, yet a variety of particular emotions were included within the corpus of articles. The four most frequently measured emotions were fear, frustration, sympathy, and anger. For behaviours, general measures were also employed in several studies, although much fewer specific behaviours were examined in contrast to stereotypes and emotions. Avoidance (e.g., best to avoid people with this problem) and segregation (e.g., mental health facilities should be kept out of residential neighbourhoods) were the two most commonly measured kinds of discrimination. Almost all of the emotions and behaviours reflected endorsed stigma, while just two articles reported perceived emotions (i.e., sympathy, empathy), and three studies measured perceived behaviour (i.e., avoidance). On top of individual components of

stigmatisation, general stigmatisation (e.g., an aggregate score of different components of stigmatisation, I dislike people with mental illness) was investigated in 44.16% of articles. Most of these studies measured endorsed and explicit general stigmatisation, and perceived and implicit general stigmatisation were included in only a few studies. Besides implicit general stigmatisation, no other measures of implicit stigma were used in any of the articles (e.g., implicit stereotypes).

Stereotypes, emotions, behaviours, and stigmatisation in general were either measured with established scales, or with scales that had not been previously validated. Amongst the studies a range of different established scales were utilised (e.g., Attribution Questionnaire, Medical Condition Regard Scale, Attitude to Personality Disorder Questionnaire) and the two most commonly used scales were the Community Attitudes towards Mental Illness questionnaire, and the Depression Attitude Questionnaire. In addition to the variety of such scales, the same scales were not always scored or computed in a consistent way across the articles (e.g., one study scoring the items on a 7-point Likert-type scale and another study scoring the items on a 4-point Likert-type scale; one article computing scores as a mean of all the items and another article using a total of all the items). Whether established scales were employed or not, there were some instances of measures being unclear (e.g., confirming behavioural responses was all the information provided), and in other cases, not enough information was supplied to interpret the measures in the results (e.g., when the meaning of points in a Likert-type scale were not specified). Further, several measures included items that are irrelevant to stigmatisation (e.g., if depressed patients need antidepressants, they are better off with a psychiatrist than a GP), or items that do not match the construct supposedly being measured (e.g., taking care of borderline personality disorder patients can evoke unfamiliar feelings as an item for empathy).

Types of Mental Illness

Mental illness in general (e.g., the mentally ill, patients in a mental hospital, a person who has a mental illness) was included as stimuli for 43.65% of articles. Studies in the current review also elicited responses with a multitude of particular mental disorders (e.g., anxiety disorders, personality disorders, eating disorders). However, most of these mental disorders were present in only a small number of articles, and the majority of studies that presented specific categories of mental illness included the same three mental disorders. These were schizophrenia spectrum disorders, depressive disorders, and addiction/substance use disorders, and they were in 28.93%, 26.40%, and 17.77% of articles, respectively. Additionally, some studies included comorbid disorders, and several articles either did not specify the mental disorders or reported that the participants reacted to broad categories of mental illness (e.g., other psychiatric disorders, other clients). Mental disorders that were not present in any of the studies were sexual dysfunctions, sleep-wake disorders, gender dysphoria, and elimination disorders.

Relative Stigma, Component Relations, and Other Variables

In contrast to articles on the stigmatisation of either mental illness in general or one mental disorder, fewer studies were conducted on stigmatisation as it varies with the type of mental illness. In other words, there was a comparatively small amount of research on the relative stigma of mental illness, with just 19.29% of articles exploring this phenomenon. Further, most of the studies on relative stigma did not compare a wide range of mental disorders. Specifically, 55.26% of studies compared two disorders, 23.68% compared three, 18.42% compared four, one article compared six, and one study compared nine. Adding to this, many of the included mental disorders appeared in only a few articles, and a large proportion of the studies included the same two mental disorders, schizophrenia spectrum disorders and depressive disorders. The former was compared to a minimum of one other

mental disorder in 65.79% of studies, and the latter was included in 63.16% of articles. Excluding the mental disorders already mentioned at the end of the previous subsection, mental disorders that did not appear in any of the research on relative stigma were somatic symptom disorders, impulse control disorders, and neurocognitive disorders. As a final observation regarding the literature on relative stigma, many of the quantitative studies did not utilise statistical modelling either at all or in the appropriate manner (i.e., performing an ANOVA without following up with multiple comparisons). In 36.36% of the relevant articles, these statistical limitations were apparent for all mental disorder comparisons, and for 12.12% of studies, this occurred for at least one comparison.

Amongst the literature, research on how the components of stigmatisation relate to each other was even more scarce than studies on the relative stigma of mental illness, as only 10.66% of articles examined component relations. A number of these studies investigated the effect of stereotypes on emotions and behaviours, whereas there were fewer articles on the relationship between emotions and behaviours. There were also some studies that explored how different stereotypes relate to each other, and one article examined the link between different emotions. However, not one study investigated how the different components of stigmatisation relate to each other as a whole in one framework (e.g., a model with emotions mediating the relationship between stereotypes and behaviours). Despite the little amount of research on relative stigma and component relations, a substantial quantity of articles detailed research on other predictors of stigmatisation. The proportion of studies that included these other predictor variables was 61.91%. Throughout and frequently within these articles there was an enormous variety of different predictors. The majority of these variables were individual differences (e.g., ethnicity, marital status, trait authoritarianism), while a small number of studies explored situational and other variables (e.g., the use of labels, target sex, target age; media influence). The four most common individual differences were profession,

sex, age, and years of professional experience, and the levels of some predictor variables were not specified (e.g., occupational characteristics, professional function). Additionally, although to a lesser extent, several articles that quantitatively examined these other predictors exhibited the same statistical weaknesses present in the research on relative stigma to some degree. Whether relative stigma, component relations, or other predictor variables were being investigated, there were very few studies that did so while explicitly controlling for other variables (i.e., were not merely controlled for as an incidental part of multiple regression analysis).

The State of Evidence

Within the corpus of articles, there was certainly a lot of variability with respect to particular data items. This was especially the case for the measures and variables, and even within categories that ought to be homogeneous, this level of variability was still evident. As a result of this, it was extremely difficult to identify any general findings amongst the literature, and practically impossible to summarise findings for all of the included variables. To increase the feasibility of outlining broad findings, an overview was attempted only for the most prevalent research questions. However, even after narrowing down the research questions, the level of variability between articles was still large enough to hinder the identification of general findings. Further, on examining these studies numerous inconsistencies were found between the articles regarding both the presence and direction of effects.

Bibliometric Analysis

Scopus was unable to access 13 articles, and this meant that 184 or 93.40% of studies were included in the direct citation analysis. Of these articles, VOSviewer identified 57 clusters. 32 of the clusters were individual studies that either did not or were not cited by any other study, and this represented 17.39% of all articles in the direct citation analysis. These

articles can be seen in Figure 2 as the individual nodes that form most of the belt of studies

surrounding the central structure of articles.

Figure 2

Global Citation Network
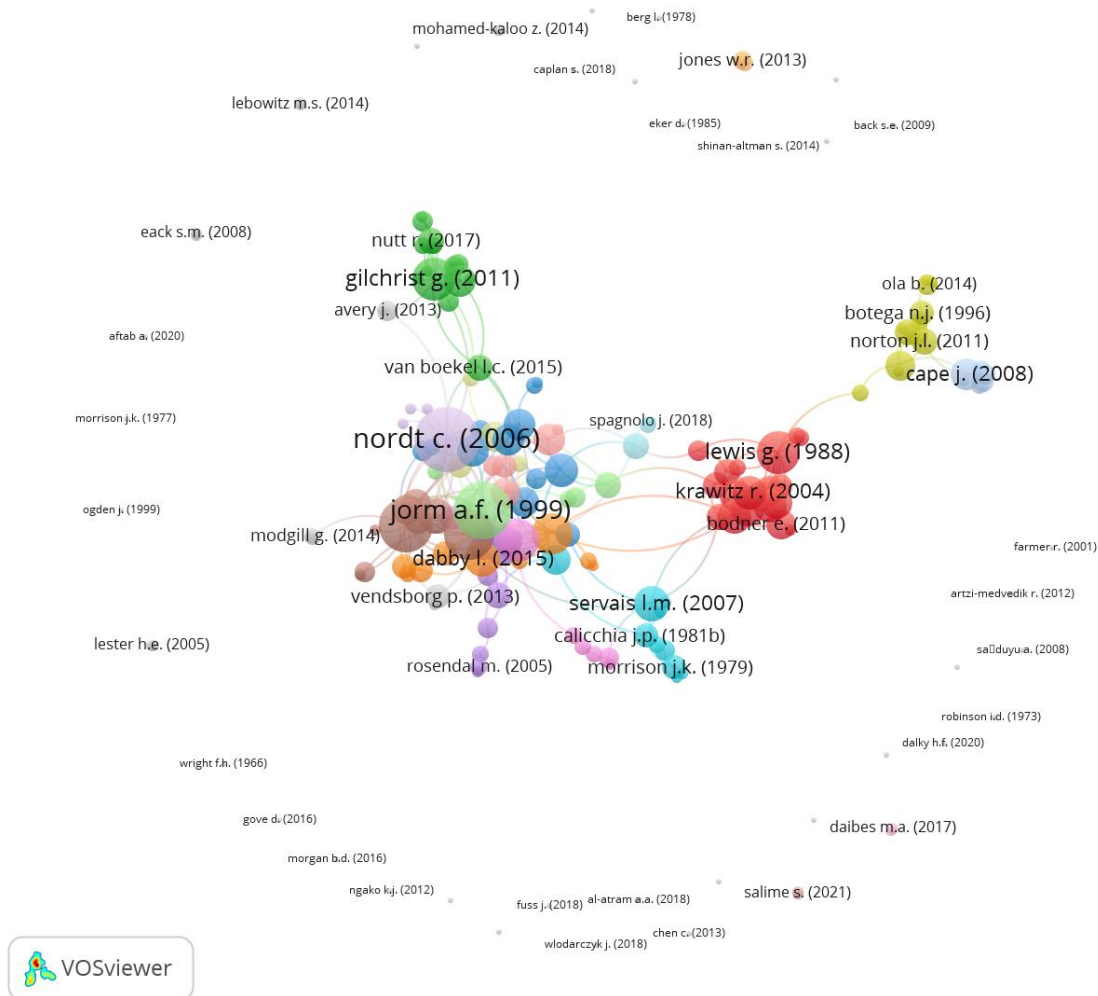
The belt of studies in Figure 2 also contains small clusters of two or more

interconnected articles that are isolated from all other studies. Together, these small, isolated

clusters account for 8.15% of articles. The remaining 137 or 74.46% of studies are all

contained within the central structure articles (see Figure 3 for a more detailed image of the

structure). Although this structure is a dense network of interconnected studies, it also

includes clusters of articles that are mostly disconnected from the rest of the network. The

best examples of this are the green cluster at the top of the network, and the red, yellow, and

blue clusters to the right of the network. As depicted in Figure 3, these peripheral clusters are

only linked to the remainder of the network indirectly via one or a few other articles. The

other studies in the central structure of articles make up the clusters that are closest to each

other. These clusters contain the three authors that were cited the most within the whole

citation network. Beginning with the most references, Nordt et al. (2006) had 27 citations,

Jorm et al. (1999) received 22 references, and Lauber et al. (2004) had 19 citations.

Figure 3

Central Structure of Articles
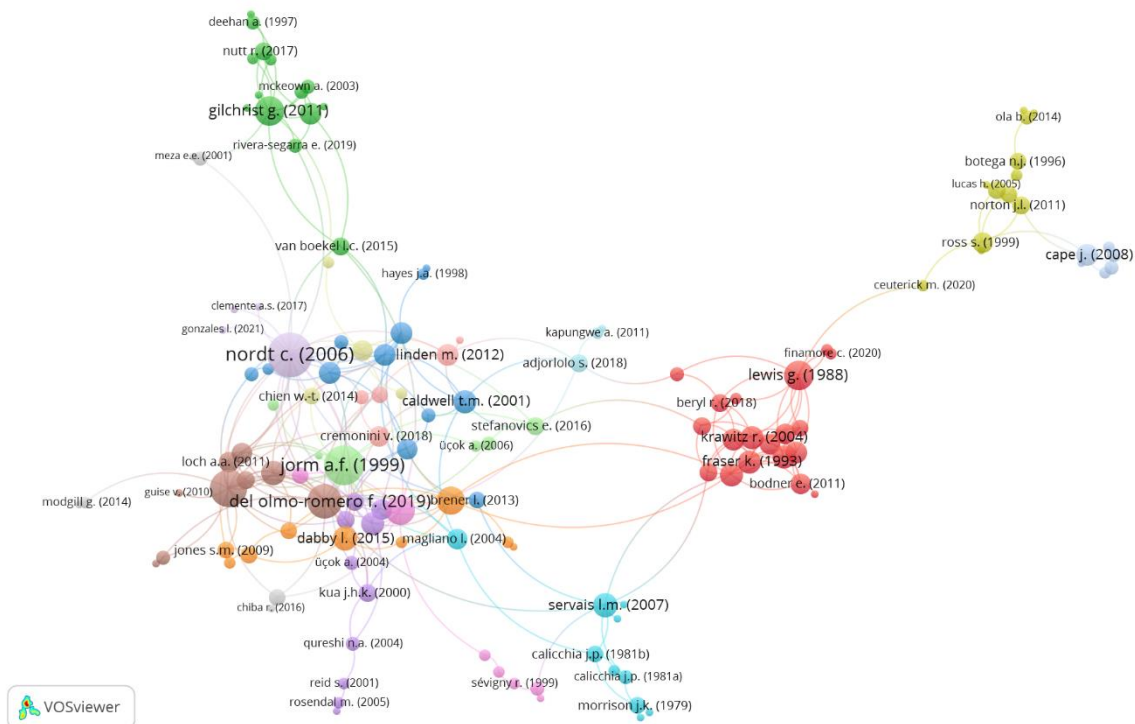
Out of 197 articles, 27 or 13.64% were not found through the scimagojr webpage. For

all other studies, the highest and most recent rank in the majority of cases was either Q1 or

Q2. In particular, 52.76% of articles were published in Q1 journals, and 34.12% of studies

were published in journals with a rank of Q2. In contrast, the highest and most recent rank for

11.76% of articles was Q3, and for 2.36% of studies, it was Q4.

Discussion

It was imperative that a scoping review was performed with the aim of outlining the state of available research on the endorsed stigmatisation of mental illness by mental health professionals. Most of the objectives for this scoping review were concerned with exploring how studies are being conducted, and whether there are any gaps in the research. Of particular importance was the extent to which studies had been carried out on the relative stigma of mental illness and the components of stigmatisation as they relate to each other. As part of a bibliometric analysis, this scoping review also investigated how often articles are connected via a citation, and whether research is being published in well-known journals.

Summary and Interpretation of the Results

Inappropriate Samples

The first major finding of this scoping review was that a substantial proportion of the literature reported results that were based on inappropriate samples. As a result, a subset of the literature was excluded from the subsequent results.

Gaps in the Research

Another key finding of this scoping review was that there are a number of gaps in the literature that constitute weaknesses in the research on mental health professionals stigmatising mental illness. Several gaps that were particularly salient concerned the relative stigma of mental illness and the components of stigmatisation. Many studies examined the stigmatisation of either mental illness in general or one mental disorder, and in contrast, much less research was conducted on the relative stigma of mental illness. Adding to this, the construct of relative stigma was often not adequately covered. Most of the studies on relative stigma did not compare a variety of mental disorders, and mainly included schizophrenia spectrum disorders and depressive disorders.

When inspecting the dimensions of stigmatisation that were investigated, it was found that the emotional and behavioural components of stigmatisation were explored in far fewer studies than stereotypes, and this was especially the case for emotions. This lack of research on emotion is striking when considering there is ample evidence to suggest that emotional processes have a stronger relationship with interpersonal contact than stereotypes (Tropp & Pettigrew, 2005). This is relevant to mental health practice, as contact with others is an integral part of practice within the mental health field. In addition to little research on emotions and behaviour, studies on how the components of stigmatisation relate to each other were lacking. Although some studies explored the impact of stereotypes on emotions and behaviour, again there was less research investigating the effect of emotions on behaviour, and not a single study was conducted on how the components of stigmatisation relate to each other as a whole.

Rather than examining the relative stigma of mental illness or component relations, a large proportion of the studies on mental health professionals stigmatising mental illness were on individual differences (e.g., profession, sex, age). Together with the findings of the previous paragraph, this shows that research in this area has moved little beyond mental illness in general, single mental disorders, stereotypes, and individual differences. This suggests that the literature on mental health professionals stigmatising mental illness is often not informed by existing theory. However, more importantly, the current state of research on this topic does not supply much guidance on how to reduce this stigmatisation and improve the related aspects of mental health practice.

Multiple other gaps were found in the literature on the stigmatisation of mental illness by mental health professionals. For example, counselors and occupational therapists participated in only a small proportion of studies, indicating that knowledge in this domain is far from complete for these professional groups. Also, none of the qualitative studies in this

area employed theory-building analyses (e.g., grounded theory), and most of the research presented mental illness to participants via labels. The literature would likely benefit from qualitative research that can supply guidance on the variables and hypotheses that warrant examination, and studies that use vignettes or something similar.

Other Limitations

On top of the limitations noted in the previous subsections, several other limitations were found within the literature on mental health professionals stigmatising mental illness. These included issues with construct validity, a lack of clarity surrounding aspects of method and results, statistical weaknesses, and inconsistencies with measures and variables. The diversity of measures and variables is more evidence to indicate that established theory is seldom drawn upon and may suggest that variables are frequently selected ad hoc. However, collectively, these limitations likely make it hard to be confident in and comprehend individual articles and the research in general.

The State of Evidence and Bibliometric Analysis

Due to the high level of variability and inconsistency of data items, it was deemed mostly infeasible to derive broad findings from the literature on mental health professionals stigmatising mental illness. As a result, it is unlikely that research on the stigmatisation of mental illness by mental health professionals is in a position to direct the reduction of this stigmatisation, whether in general or with respect to practice. Additionally, given the nature of studies on mental health professionals stigmatising mental illness, it would be difficult if not impossible to conduct either systematic reviews or meta-analyses in this domain.

In prior subsections, it was proposed that variability in the literature and research not moving far beyond mental illness in general, single mental disorders, and individual differences, could be accounted for by studies not drawing upon existing theory. Another possible explanation for this could be that research is disconnected, and the authors of articles

on mental health professionals stigmatising mental illness are not considering other studies in the area. Empirical support for the literature being fragmented in this way was obtained via a direct citation analysis, which showed that close to half of the literature is comprised of individual studies and small systems of research that are isolated to some extent from the rest of the literature. Further, clusters of interconnected articles that were either completely or predominantly disconnected from the remainder of the research were often characterised by a theme (e.g., studies on just borderline personality disorder or personality disorders in general). These results may be due to authors not knowing that research on specific mental disorders or professions sits within a broader literature on mental health professionals stigmatising mental illness. A third potential explanation for the current state of research could be that studies are not being published in well-known journals. However, it was found that a large proportion of the research was published in Q1 and Q2 journals.

Recommendations

Based on the findings of this scoping review, recommendations are made regarding prospective research on the endorsed stigmatisation of mental illness by mental health professionals.

To reduce stigmatisation and improve the relevant facets of mental health practice, a comprehensive understanding of this type of stigmatisation needs to be achieved. Namely, studies must focus on the relative stigma of mental illness, multiple dimensions of stigmatisation, and how all three components of stigmatisation relate to each other in one framework. Moreover, the construct of relative stigma should be sufficiently covered by addressing a range of mental disorders, and research should include all types of mental health professionals.

In order for conclusions to be easily and confidently drawn from this research, studies need to employ procedures that are standard of all good research. However, the current

review has shown that this standard of research is often not reached, and studies are not being conducted with a systematic approach. Thus, to have high-quality research the time has come to address studies on the stigmatisation of mental illness by mental health professionals programmatically. In particular, many of the limitations within this area of research can likely be overcome with multisite studies.

Limitations of the Current Scoping Review

While the search string for the current scoping review was far more comprehensive than that of previous literature reviews, a number of studies may have still been overlooked. More specifically, it was impractical to include all classified mental disorders in the search string, and as such articles on mental disorders not in the search string may have been missed in the search. Although, the search string did in fact yield studies on mental disorders that were not part of the search string (e.g., borderline personality disorder, somatic symptom disorder). Another limitation of the current review was that only one reviewer selected the sources of evidence. Consequently, the inclusion and exclusion of articles may not have been entirely consistent with the eligibility criteria. However, an evaluation of inter-reviewer consistency with a second reviewer found a high level of agreement between reviewers, and disagreement led to refinement of the eligibility criteria. A final limitation of the current scoping review pertains to the direct citation analysis. In this analysis, 13 studies were unable to be included due to these articles not being accessible through Scopus. This means that the citation network produced by the direct citation analysis may have looked different with these studies incorporated, though it is unlikely that the overall findings of this analysis would have changed.

Conclusion

Mental health professionals, including clinical psychologists, have been found to endorse stigmatising reactions towards mental illness (Fuss et al., 2018; Nordt et al., 2006;

Reavley et al., 2014; Schulze, 2007; Servais & Saunders, 2007). Despite the importance of research in this domain, the current scoping review found that literature on mental health professionals stigmatising mental illness is marked by an array of limitations. Notably, multiple gaps were found within the research and the literature has become stagnant. Amongst the gaps in research was a dearth of studies thoroughly exploring the relative stigma of mental illness and how the components of stigmatisation relate to each other. As a result of some of these limitations, novel broad findings were unable to be discerned from the literature, and thus research on mental health professionals stigmatising mental illness is likely not capable of informing the reduction of this stigmatisation. It was suggested that several of the limitations in this area may be explained by researchers not drawing on relevant theory and the finding that literature on this topic is partially disconnected. In accordance with the findings of this scoping review, recommendations were proposed for future research on the endorsed stigmatisation of mental illness by mental health professionals.

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Chapter 3

A Qualitative Study Into the Relative Stigmatisation of

Mental Illness by Mental Health Professionals

This chapter includes a co-authored paper. The bibliographic details (if published or accepted for publication)/status (if prepared or submitted for publication) of the co-authored paper, including all authors, are:

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for publication].

My contribution to the paper involved: conceptualisation, methodology, resources, software, project administration, investigation, data curation, formal analysis, visualisation, validation, writing the original draft and manuscript editing.

(Signed) _____ (Date)____17/05/2023_____
Michael Jauch

(Countersigned) _____ (Date)____17/05/2023_____
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(Countersigned) _____ (Date)____19/05/2023_____
Supervisor: Dr Bonnie Clough

Additional relevant material is appended at the end of this thesis.

- Appendix D - Consolidated Criteria for Reporting Qualitative Research Checklist

- Appendix E - Interview Consent Form

- Appendix F - Full Interview Schedule

A Qualitative Study Into the Relative Stigmatisation of Mental Illness

by Mental Health Professionals

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Abstract

Objectives. Mental health professionals stigmatise mental illness, which has significant ramifications for public health and policy. Within this domain, there is a lack of comprehensive research on relative stigma, emotions, and behaviours, and an absence of literature that can guide research on these topics. The current study sought to address these limitations.

Design. Qualitative study.

Method. Unstructured interviews were conducted with 22 mental health professionals (e.g., psychologists, social workers, general practitioners), and data were analysed using a grounded theory approach. Participants were recruited online via personal and professional networks.

Results. The current study identified a collection of mental disorders (e.g., borderline personality disorder), stereotypes (e.g., dangerousness), emotion-related responses (e.g., fear), and behaviours (e.g., helping) as being key to the relative stigmatisation of mental illness by mental health professionals. The results also suggested that professional context and familiarity with mental illness decrease the stigmatisation of mental illness by mental health professionals. These variables and constructs were combined to form a grounded theory of mental health professionals stigmatising mental illness.

Conclusion. The current study has implications for the direction of future research on the stigmatisation of mental illness by mental health professionals and interventions that strive to mitigate this type of stigmatisation.

Keywords: stigma, mental health, health professionals

Introduction

Mental illness is stigmatised by the general population in many cultures and contexts (Corrigan, 2005; Hansson et al., 2013). *Stigmatisation* can be defined as a collective system of negative reactions that are elicited by human attributes. The components of stigmatisation are *stereotypes* (e.g., belief that people with mental illness are dangerousness), *emotions* (e.g., fear), and *behaviours* (e.g., avoidance; Link & Phelan, 2001; Pescosolido & Martin, 2015). Although these responses have positive forms (e.g., belief that people with mental illness can recover), it is the negative stereotypes, emotions, and behaviours that constitute stigmatisation. When people express agreement with stigmatising reactions, this is referred to as *endorsed stigma* (Pescosolido & Martin, 2015). From financial difficulties to health problems, the stigmatisation of mental illness is related to a variety of negative outcomes for those who suffer from mental illness (Hansson et al., 2013; Schulze, 2007). Stigmatisation is one of the main barriers that prevent or delay individuals from accessing mental health care when needed, and this likely increases burden of disease and treatment costs over time (Hansson et al., 2013; Mohr et al., 2010). Recently, the World Health Organization and the Organisation for Economic Co-operation and Development made recommendations to improve mental health globally. Of importance was the recommendation that focus be given to the reduction of mental illness stigma (Organisation for Economic Co-operation and Development, 2021; World Health Organization, 2022).

Studies further indicate that mental health professionals stigmatise mental illness by endorsing negative stereotypes, emotions, and behaviours (Reavley et al., 2014; Schulze, 2007; Werner & Araten-Bergman, 2017). This type of stigmatisation is called *provider-based stigma* (Pescosolido & Martin, 2015). Mental health professionals stigmatising mental illness, as a specific case of provider-based stigma, is not only inconsistent with expectations about the role of a mental health professional, but may exacerbate the negative outcomes

experienced by people with mental illness (Chambers et al., 2012). A recent scoping review

identified that there are few studies that have extensively investigated the *relative*

stigmatisation of mental illness by mental health professionals, or the degree to which mental

disorders are stigmatised compared to other mental disorders (Jauch, Occhipinti, &

O'Donovan, 2023). Additionally, compared to the number of studies on mental health

professionals stereotyping mental illness (i.e., beliefs about mental illness) there is much less

consideration given to the emotional and behavioural components of stigmatisation (Jauch,

Occhipinti, & O'Donovan, 2023). Such knowledge will be critical to the development and

specification of targets for any evidence-based intervention to reduce the stigmatisation of

mental illness by mental health professionals. That is, an understanding of relative stigma is

needed to identify which interventions should be used for different mental disorder stigmas

and which mental disorder stigmas require the most intervention. Further, without knowledge

of the emotional and behavioural dimensions of mental health professionals stigmatising

mental illness, interventions will likely overlook important mechanisms of change. Taken

together, this knowledge may help inform the mental health services most likely to require

additional training or intervention for staff, as well as how interventions may be best

delivered.

While a comprehensive understanding of relative stigma, emotions, and behaviours is

crucial to reducing the stigmatisation of mental illness by mental health professionals, it is

unclear as to which mental disorders and aspects of stigmatisation should be examined. In the

domain of psychopathology, there is a plethora of specific mental disorders and the

components of stigmatisation present in a number of ways, especially in the case of

stereotypes (American Psychiatric Association, 2013; Angermeyer et al., 2011; Corrigan et

al., 2003). As such, it is not feasible to conduct research on the stigmatisation of mental

illness by mental health professionals that captures all mental disorders and instantiations of

stigmatisation. Therefore, literature is required that can provide direction on which disorders and processes are fundamental. Yet, research on the stigmatisation of mental illness by mental health professionals is highly inconsistent in terms of measures of stigmatisation (Jauch, Occhipinti, & O'Donovan, 2023; Wahl & Aroesty-Cohen, 2010). Adding to this, qualitative studies which could guide research have either placed little emphasis on relative stigma, emotions, and behaviours, or were too structured for key disorders and processes to arise from the data naturally (e.g., Burroughs et al., 2006; Clemente et al., 2017; Daibes et al., 2017).

The above qualitative studies also utilised analytical approaches which did not allow for links to be made between variables (e.g., *thematic analysis*), such as the connection between mental disorders and stigmatisation. An appropriate solution to this could involve the analytical approach of *grounded theory* (Strauss & Corbin, 1990). Rather than merely summarise observations, grounded theory allows relationships between variables to be found.

Aims

Accordingly, the current study's aim was to identify the mental disorders, stereotypes, emotions, and behaviours essential to the relative stigmatisation of mental illness by mental health professionals. Additionally, the current study aimed to generate a theory to outline what these constructs are and how they relate to each other. These aims were achieved through a series of unstructured interviews with mental health professionals and by taking a grounded theory approach to data analysis. It was anticipated that such an approach would elicit more honest responses from participants and go some way to addressing key limitations in the field of mental health professionals stigmatising mental illness.

Method

This study was reported in accordance with the Consolidated Criteria for Reporting Qualitative Research checklist (Tong et al., 2007).

Interviewer Characteristics and Relationship with Participants

Interviews were conducted by the first author. The interviewer was a male graduate student at the host university. Pilot testing was performed by the interviewer, who conducted practice interviews and received feedback from the second author (an experienced researcher and interviewer). Other than email correspondence to organise a time to administer the interview, the interviewer and participants had no relationship prior to the interviews, with the exception that one of the participants was a previous lecturer of the interviewer. Whether previously acquainted or not, all participants knew that the interviewer was operating at the host university, and some participants would have been aware that the interviewer was doing the research as part of a PhD dissertation study.

Study Design

Participant Selection

A purposive sampling method was used to select participants, who were deemed eligible if they were a mental health professional aged 18 years or older. Full registration with the Australian Health Practitioner Regulation Agency or an equivalent regulatory agency was required (e.g., Australian Association of Social Workers), unless participants were counsellors (for whom registration is not mandated in Australian jurisdictions). The primary goal of sampling was to obtain a selection of representatives spanning a broad range of professions in which mental health services are provided (i.e., psychology, psychiatry, general medicine, psychiatric nursing, occupational therapy, counselling, social work). Participants were notified of the study by advertisements that were distributed online through the professional networks and personal Facebook pages of research team members, as well as professional Facebook groups and email bulletins. From these sources, participants could access an expression of interest survey that screened for eligibility. Once participants completed this survey, they were informed that they would be contacted via email if they were eligible for further participation.

In total, 22 mental health professionals were interviewed. The sample consisted of seven psychologists, one psychiatrist, one psychiatric registrar, two general practitioners (GPs), three psychiatric nurses, two occupational therapists, three counsellors, and three social workers. A third psychiatric nurse agreed to participate in the study, but an interview could not be scheduled owing to the individual's work obligations. This was the only instance of participant drop out. All social workers were registered with the Australian Association of Social Workers and all other professionals except counsellors were registered with the Australian Health Practitioner Regulation Agency. The mean age of the sample was 43.32 years ($SD = 11.11$) and 77.30% of participants identified as female, while the remainder identified as male. Of the sample, 81.80% ($n = 18$) of participants identified as Caucasian, two as Asian, one as Middle Eastern, and one as mixed Caucasian, Asian, and Polynesian ethnicity.

Data Collection and Setting

The interview protocol received human research ethics approval from the host university (GU Ref. No: 2020/584). Participants were emailed a consent form, and at the commencement of each interview, the interviewer summarised the study information and gained verbal consent. Before conducting the interviews, an early version of the interview protocol was discussed and role played with expert colleagues who were clinical psychology graduate students and a registered general nurse. Consequently, the interview was revised before again being role played with further graduate students. It was determined that the second version of the interview was sufficient for achieving the aims of the current study and was used as the final interview protocol. All interviews were conducted via the telecommunications application *Zoom*. Data were collected by audio recording the interviews which were later converted into text with the transcription service *Microsoft Azure*. For the interviews, participants were either at their place of residence or in an office at their

workplace. The majority of participants were alone for the duration of the interview; however, for one interview the participant's son was present intermittently.

To ensure the recruitment of mental health professionals that stigmatise mental illness, the study was framed in a neutral manner with the term stigma being completely omitted. Interviews began with the interviewer reiterating to the participants that the research team were seeking to better understand how mental health professionals respond to people with mental illness and to do this they would like to ask the participants about their experience with mental illness. Subsequently, participants were asked "What's the first thing that comes to mind" and then, once this phase of the interview was over, "What's it like for you when you are around people with mental illness". In the final phase of the interview, participants were asked, "Looking back over what we have been talking about, would you have responded any differently with particular mental illnesses".

By Interview 12, no new major categories were emerging from the data and saturation had been reached. However, at this point in data collection, not one counsellor or GP had been interviewed and only one representative had been interviewed from psychiatry, psychiatric nursing, and occupational therapy. Thus, to complete the purposive sample, data collection continued until at least two professionals had been interviewed from each type of mental health profession. Mean interview duration was 32.96 minutes ($SD = 15.50$). Repeat interviews were not carried out with any of the participants, there were no field notes, and transcripts were not returned to participants for their input.

Theoretical Framework

The analytical orientation employed in the current study was the grounded theory approach of Strauss and Corbin (1990, 1998). With this framework, researchers formulate novel theory by iteratively classifying qualitative data at varying levels of abstraction. Compared to other forms of grounded theory (e.g., Charmaz, 2014; Glaser & Strauss, 1967),

Strauss and Corbin's grounded theory was chosen because it is an approach that allows for prior knowledge to influence data analysis and provides a systematic procedure for linking constructs.

Data Analysis and Reporting

The first author read through the first 12 transcripts once to gain familiarity with the data, before independently coding the interviews. Data analysis was verified by agreement with the second author on the coding of five randomly selected transcripts and involved three types of coding. First, *open coding* was used to group similar features of the data into preliminary categories or concepts. Once categories were identified with open coding, *axial coding* was utilised to classify the initial categories into higher-order categories that represented types of variables within a theory (i.e., *phenomenon*, *actions/interactions*, *causal conditions*, *contextual conditions*, *intervening conditions*, *consequences*). Finally, *selective coding* was employed to unify the categories under one core category and to resolve any inconsistencies in the theory. These processes were executed without the use of specialized data management software, and participants were not asked to supply feedback on the results.

As the interview questions were constructed based on existing stigma theory and with the intention of eliciting particular responses from the participants, several categories were expected to arise from the data. It was intended that, in addition to relative stigma, the interview questions would prompt responses revealing positive and stigmatising reactions to mental illness (i.e., stereotypes, emotions, behaviour). As such, it was anticipated that these constructs would emerge from the data as broad categories. However, unexpected attributes of the data were still coded, and constructs were only coded if they were present in the data. There were many participant responses, many of which were not relevant to endorsed provider-based stigma. These responses are summarised briefly at the beginning of the Results section but are not included as major categories. Constructs were coded as major

categories if they occurred commonly in the data. Quotations are presented in the Results

section to illustrate the major categories and subcategories identified with open coding, and

quotations are labelled with participant numbers where necessary (e.g., Psychologist 1).

Results

Figure 1 provides a visual representation of the full grounded theory. The major

categories and subcategories derived from the data with open coding are displayed in Table 1.

Other than responses that were relevant to endorsed provider-based stigma, participants spoke

about various other topics related to mental illness. Some participants responded by talking

about systemic barriers to accessing treatment for mental illness and the stigmatisation of

mental illness by the general population and by other types of professionals. Some

participants expressed their beliefs about different treatments for psychopathology and about

what constitutes a mental illness.

Figure 1

A Theory of Mental Health Professionals Stigmatising Mental Illness
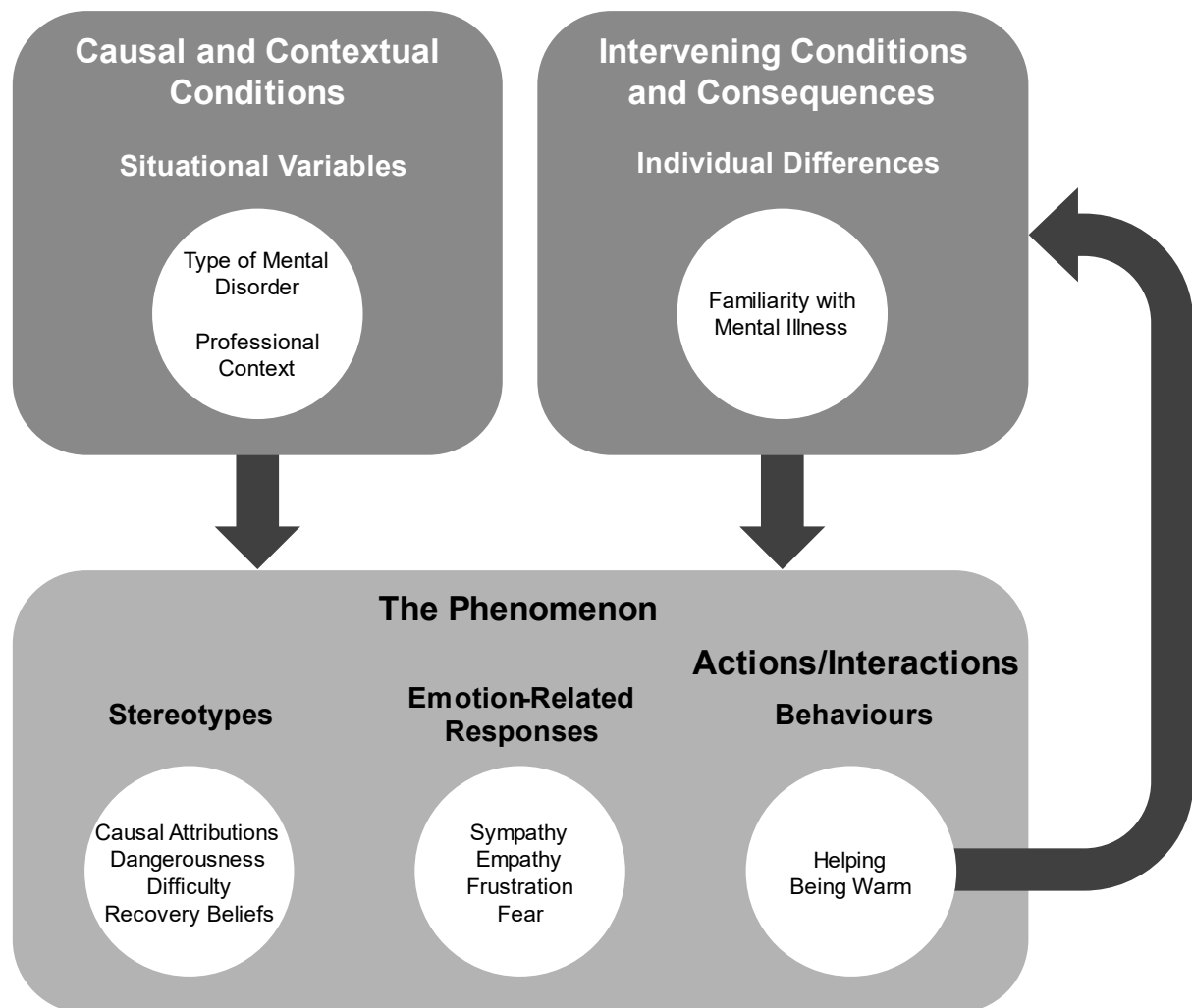
Table 1

Major Categories and Subcategories Identified with Open Coding

Category/Subcategory	Illustrative Quotes
Stereotypes	
Causal Attributions	
Less Blame	"I think a lot about socioeconomic factors … I guess I do see a lot of people coming from that social disadvantage and so that's what I think about, the role and impact of that" (Psychiatrist)
	"Whether it's genetic or whether it's environmental, I think both contribute" (Occupational therapist 2)
More Blame	"There's this resiliency factor that a lot of people don't seem to have" (Social worker 1)
Dangerousness	"Reality is you're also dealing with a lot of risk … You have to be thinking about their … risk of hurting other people" (Psychiatric registrar)
Difficulty	"It's almost like you're … dealing with children or teenagers who are just really argumentative and difficult" (Psychologist 6)
Positive Recovery Beliefs	"So look there's, you know there's times … you know you actually feel like people are able to make changes in their life" (Social worker 3)
Emotion-Related Responses	
Sympathy	"It can certainly trigger feelings of compassion and sympathy, and also great sadness to be talking with someone and getting an understanding of how difficult it can be for them" (Counsellor 3)
Empathy	"I think I have a real strong empathy for all them, and struggles that they may be going through" (Psychologist 3)
Frustration	"It's very, it can be really frustrating" (Psychiatric nurse 1)

Table 1 Continued

Category/Subcategory	Illustrative Quotes
Emotion-Related Responses	
Fear	"It gets to the point where that when there's people sort of in the street that I come across that … are going through something … that kind of gets a bit of like a fear" (Counsellor 2)
Not Fearful	"It would make my radar go on, but it would not trigger fear" (Psychologist 2)
Behaviour	
Helping	"Because you want to do the right thing for the person … so that they are able to get some relief from whatever is happening for them" (Psychiatric nurse 2)
Being Warm	"Just approaching each person with my compassion and empathy. And then just going from there, I guess" (Psychiatric registrar)
Relative Stigma	"Yeah so, pretty much most of the well I'd say all the patients that are admitted, they're like acutely psychotically unwell … but I guess then there's also the I guess personality kind of side of things as well. So you kind of meet them, they're very unwell and then you kinda gotta wait over time to kind of see what they're like at baseline, and even at baseline they often still have challenging behaviours … I think when someone's really acutely psychotically unwell, they're more unpredictable, whereas versus if it's like personality like that usually has a pattern of behaviour, so you can kind of predict it in a way" (Social worker 2)
	"And it also depends on what mental illness specifically, we talk about something like bipolar ah sorry, borderline personality disorder for example. Hate it. It always makes me cranky yeah. I try to avoid working with it as much as I can. Because I get really frustrated with it. But if we're talking about something like depression, or anxiety, maybe like depression or if we're talking trauma type stuff. Then that's more, there's a level of calmness" (Psychologist 6)

Table 1 Continued

Category/Subcategory	Illustrative Quotes
Professional Context	"Then in work, sort of, it's a bit of both in terms of doing what I can and problem solving … and then like I was saying if there's people that are kind of on the street when I'm not sort of prepared or people that I'm talking to outside of those contexts, I definitely act a lot more scared or like a lot more sort of not wanting to talk about it, not wanting to go into it, sort of ignoring" (Counsellor 2)
Familiarity with Mental Illness	"You know if someone came up on the street and you know and I could tell that their, you know they've got a mental illness, I wouldn't be running away on the other side and that sort of side of things, but I think that's, you know, I think that's cause I work in the field" (Psychiatric nurse 1)

With respect to endorsed provider-based stigma, several participants expressed general positive reactions towards people with mental illness, and some participants endorsed general stigmatising reactions towards people with mental illness. However, more commonly than general reactions, participants conveyed specific reactions to mental illness that consisted of stereotypes, emotion-related responses, and behaviours.

Stereotypes

Of the specific reactions to mental illness, stereotypes were the most prevalent and often took the form of causal attributions (i.e., particular degrees of blame). On the positive end of the causal attribution spectrum, a lot of participants attributed less blame to people for their mental illness. For example, Psychologist 1 stated "I think about how so often mental health is shoehorned into this idea that it's a health issue. Whereas I see it more often as a social issue". Further, when highlighting how they help clients understand their mental illness, Counsellor 1 said "I give them information about the three parts of the brain. So, I focus on the amygdala, the reptilian brain, and the prefrontal cortex". On the stigmatising end

of the spectrum, a number of participants attributed higher levels of blame to people for their mental illness. For instance, Psychologist 5 stated:

> My view is that the strategy we adopt is the thing that results in a mental illness diagnosis. So, if my response to my discomfort is to never leave my house, I have agoraphobia. If my response to my discomfort is to be very organised and ordered and make sure everything is as it should be, my diagnosis would be OCD

Two other common stereotypes were that people with mental illness are dangerous and people with mental illness are difficult. As an example of the dangerousness stereotype, Psychologist 6 was asked to elaborate on what they meant by risk and replied, "If we're talking risk, we're talking risk to yourself". Regarding the difficulty stereotype, while talking about counselling over the phone, Counsellor 3 said "If there's an impediment in there due to a mental health condition, then it becomes yeah, challenging and at times exhausting". The final stereotype that was coded as a major subcategory was recovery beliefs. In particular, almost half the participants expressed positive recovery beliefs through a view that people with mental illness can recover. For example, GP 2 stated "But you know, you get the people who are then in that recovery phase. They've had their acute presentation and they're, you know, recovering".

Emotion-Related Responses

Among a range of emotion-related responses, two of the most common were sympathy and empathy. For example, Psychiatric Nurse 1 said "You talk to them and you're trying to figure out what's going on and then you can get that quite, you know, feel a bit sad and feel a bit, you know, upset that they've gone through so much" and the Psychiatric Registrar commented "I actually feel like I have a lot of empathy". On the other hand, there were many instances within the data of stigmatising emotions. One of the most prevalent was frustration. For example, GP 2, when asked if they had any more feelings to add, stated "Sometimes it's

just that little bit of frustration". A number of participants expressed fear towards people with mental illness as well. For instance, Occupational Therapist 1 said "So my thoughts and feelings on particular illnesses, mental illnesses, I always find it's really scary". However, some participants (including some who expressed fear) stated that they did not fear people with mental illness. For example, Psychologist 3 commented "Like I'm not, I'm not scared of it. I'm not intimidated by it. I'm not threatened by it".

Behaviour

Participants endorsed behaviours towards people with mental illness by either describing their actual behaviour or by expressing behavioural intentions. Further, most of the endorsed behaviours were positive and none of the negative behaviours were coded as major subcategories. Participants frequently endorsed helping people with mental illness and being warm towards them. As an example of helping, Social Worker 1, when asked if they had any more feelings to add, commented "Yeah, just those desires you know, the desire to help". In regard to being warm towards people with mental illness, Occupational Therapist 2 stated "Potentially I think one thing that I do notice is that my behaviour will be ah, probably a bit more empathetic, like when I'm around people with mental illness".

Relative Stigma and Other Situational Variables

Whether prompted or not, most participants expressed relative stigma at some point in the interview. Further, while participants were either expressing relative stigma or more broadly talking about whether they would have responded differently for particular mental illnesses, the major individual stereotypes, emotion-related responses, and behaviours remained prominent. When explicitly asked if they would have responded any differently to particular mental illnesses, many participants replied in the affirmative. For example, GP 2 replied:

> Probably, so the schizophrenics … I also understand that they're more unpredictable. So, I tend to have some safety things in place with my reception staff. So, we use instant messaging between reception and the doctors in between all the doctors' rooms, so that we have a code

Additionally, Psychiatric Nurse 1 answered:

> Yeah, I think I would … I was actually just at a workshop yesterday around eating disorders, borderline personality disorder, and it's very, it can be really frustrating, and I know some of my behaviours in the past haven't always been the greatest towards these types of people

While a large number of participants stated that they would not respond differently for particular mental illnesses, most had demonstrated relative stigma earlier in the interview.

While either expressing relative stigma or replying to whether they would have responded differently for particular mental illnesses, participants made reference to a range of mental disorders. The main mental disorders were: depressive disorders; anxiety and related disorders (e.g., obsessive compulsive disorder, posttraumatic stress disorder); schizophrenia spectrum disorders; bipolar disorder; personality disorders; substance use disorder; and eating disorders (i.e., eating disorder in general and anorexia nervosa). Of the personality disorders, participants frequently referred to personality disorder in general; the most common individual personality disorders were borderline personality disorder and narcissistic personality disorder. Other mental disorders that were noted less frequently included antisocial personality disorder, autism spectrum disorder, dissociative identity disorder, and paedophilic disorder. In regards to the specific pattern of relative stigma, participants were often more positive and less stigmatising towards people with depressive disorders and anxiety and related disorders, compared to people with the other main mental disorders. No other clear pattern of relative stigma was evident within the data.

In addition to relative stigma, there were several other situational variables that emerged from the data as having an impact on stigmatisation, although, the only one that was coded as a major subcategory was professional context. A number of participants described how they are more positive towards people with mental illness in a professional context in contrast to a personal context, and instances of this were outlined for stereotypes, emotion-related responses, and behaviour. As an example of the effect of professional context, when asked what it is like being around people with mental illness, Psychologist 7 said:

> Okay, it's going to depend on where that is. If I'm passing someone in the street … I think I have normal amounts of concern for my own safety … because of the unpredictable nature of someone who's probably unmanaged and not well stabilised

When asked how they behave when around people with mental illness, the same psychologist stated "I'm going to say normal. Yeah, in a professional setting.".

Individual Differences and Familiarity with Mental Illness

A final type of variable that emerged from the data as having an effect on stigmatisation was individual differences. The most common of these variables was familiarity with mental illness. Participants expressed that their professional and personal experience (including lived experience) with mental illness was associated with being more positive towards people with mental illness in general and with respect to stereotypes, emotion-related responses, and behaviour. For example, when asked to elaborate on what they meant by their personal experience informing practice, Social Worker 2 reported how their personal experiences influenced their attitude and empathy towards people with mental illness by saying:

> I just try and remember you know what they're going through, and I guess like, think, reflect on my experience and how I was feeling at the time or how I was reacting at the time and how you know they're not fully in control of what's going on … not necessarily consciously, but I guess unconsciously kind of tapping into those

experiences and just having a broader understanding as opposed to just kind of

judging someone by their behaviour or what they're doing, more kind of considering

what's going on behind that and having more empathy to their situation, yeah

Discussion

Mental health professionals stigmatise mental illness (Henderson et al., 2014; Schulze,

2007). The current study aimed to delineate the set of mental disorders, stereotypes,

emotions, and behaviours that are critical to the relative stigmatisation of mental illness by

mental health professionals. The current study also aimed to derive a theory that depicted

these constructs and the relationships between them.

Key Findings

A theory was generated on the stigmatisation of mental illness by mental health

professionals. This theory supplies a novel contribution to the literature through its

integration of the three components of stigmatisation, relative stigma, other situational

variables, and individual differences. At the heart of this theory were the reactions, both

positive and stigmatising, encompassing stereotypes, emotions, and behaviours, that

participants expressed towards people with mental illness. These responses are consistent

with both existing research on the stigmatisation of mental illness by mental health

professionals and with the three dimensions of stigmatisation outlined by contemporary

stigma theory (Carrara et al., 2019; Link & Phelan, 2001; Major & O'Brien, 2005).

The main stereotypes that emerged from the data were causal attributions, varying from

less blame to more blame; dangerousness; difficulty; and recovery beliefs, which involved

more positive beliefs. The major emotion-related responses that were identified within the

data were sympathy, empathy, frustration, and fear. The behaviour categories were helping

people with mental illness and being warm towards them. While empathy and being warm

are frequently overlooked in the literature on mental health professionals (Wahl & Aroesty-

Cohen, 2010), many of these responses to mental illness are often examined within research on the general population (Angermeyer et al., 2011; Corrigan et al., 2003; Feldman & Crandall, 2007). In particular, several of the above reactions are part of two leading theories of mental illness stigma, *attribution theory* (Weiner, 1995) and the *danger appraisal hypothesis* (Corrigan et al., 2002). Both theories frame discrimination towards people with mental illness as the result of an emotional response that is triggered by a stereotype. The former focuses on causal attributions and sympathy, and the latter emphasises dangerousness and fear.

One stereotype that was not classified as a major subcategory in the current study was beliefs about the competence of people with mental illness. This stereotype is commonly investigated in research on mental illness stigma (Jauch, Occhipinti, & O'Donovan, 2023; Sadler et al., 2015) and is one of the two dimensions in the *stereotype content model* of mental illnesses delineated by Sadler et al. (2012). The absence of this stereotype could have been influenced by where participants tended to offer treatment for mental illness (e.g., community contrasted with non-community settings). However, as the setting that participants worked in was unclear, it was difficult to explain the absence of competence beliefs with the current data, and this is a question that could be addressed in future research. A further striking feature of the results was the lack of participants endorsing avoidance of people with mental illness. Whereas attribution theory emphasises helping people with mental illness, avoidance is the focus within the danger appraisal hypothesis, and there is a wealth of literature on this form of discrimination (Corrigan et al., 2002; Schulze, 2007). Avoidance may not have been classified as a major subcategory in the current study because mental health professionals often work in contexts where overt avoidance is not possible and more subtle kinds of avoidance are less likely to emerge in unstructured interviews.

Indeed, context was another crucial aspect of the theory derived in the current study, and numerous participants noted the impact of situational variables on their responses to mental illness. Participants often reported different reactions for individual mental disorders and commonly stated that they were more positive towards people with mental illness in professional contexts than in personal contexts. Although situational variables are frequently excluded from research on mental illness stigma, these findings are congruent with literature on the relative stigma of mental illness and social psychology's focus on the *situation* as an important factor in understanding mind and behaviour (Deaux & Snyder, 2018; Fiske et al., 2010; Sadler et al., 2012). Granted, there is research on stigma from a social psychological perspective (Major & O'Brien, 2005), but traditionally stigma research has taken a sociological approach (Link & Phelan, 2001; Pescosolido & Martin, 2015). The results of the current study suggest that a social psychological perspective is warranted, and future research could explore the distinction between psychological and sociological approaches. One neglected sociological concept that could be investigated in future studies is that of the *sick role* (Parsons, 1951). In the case of provider-based stigma, people with particular mental disorders (e.g., borderline personality disorder) may be less likely than others (e.g., dependent personality disorder) to conform to the sick role (e.g., engage with treatment), and consequently, may elicit more frustration or perceived difficulty.

With the inclusion of relative stigma, the theory generated in the current study is similar to the *behaviours from intergroup affect and stereotypes map* (BIAS map) by Sadler et al. (2015). This BIAS map covers the relative stigmatisation of mental illness as it manifests in stereotypes, emotions, and behaviour and, like other BIAS maps, concentrates on the general population (Cuddy et al., 2007; Sadler et al., 2015). The current study provides evidence that the BIAS map framework which has been applied to the general population is also relevant to mental health professionals, despite expectations about their professional role.

When expressing relative stigma, participants mentioned a variety of mental disorders. Although many of these are common in research on the relative stigmatisation of mental illness by mental health professionals, several (e.g., borderline personality disorder, eating disorders) are rare in this area of the literature based on the studies included in literature reviews (e.g., Schulze, 2007; Wahl & Aroesty-Cohen, 2010). Two mental disorders that were conspicuously missing from the current dataset were antisocial personality disorder and paedophilic disorder. The little research that exists indicates that these mental disorders are generally among the most stigmatised forms of mental illness (Boysen, 2017; Feldman & Crandall, 2007; Fuss et al., 2018). However, as antisocial personality disorder has a very low prevalence (Lenzenweger et al., 1997), and it is unclear if paedophilic disorder should be labelled a mental illness (Balon, 2013; De Block & Adriaens, 2013), it is possible that these disorders are less salient to mental health professionals.

The last piece of the theory derived in the current study was individual differences. Participants noted several individual differences played a role in how they respond to mental illness; the major individual differences variable was familiarity with mental illness. It was reported by participants that their familiarity with mental illness, both professionally and personally, was related to being more positive towards people with mental illness. The effect of familiarity with mental illness on stigmatisation has been investigated extensively and is consistent with literature on the *contact hypothesis*, or the notion that intergroup contact reduces prejudice (Angermeyer et al., 2011; Pettigrew & Tropp, 2008). However, participants did not report whether personal familiarity with mental illness had more of an impact on stigmatisation than professional familiarity. This is striking, as it is clear from the current study and previous research that professional familiarity does not necessarily reduce stigmatisation (Corrigan & Nieweglowski, 2019). Research showing that professional familiarity does not necessarily correlate with less stigmatisation brings into question the

contact hypothesis, yet could be accounted for by a number of explanations (e.g., only positive contact leads to reduced stigmatisation). A potential perspective that is especially relevant could be that the relative stigma of mental illness is being overlooked. Specifically, it is possible that both personal and professional contact decrease the stigmatisation of mental illness, but only for the specific mental disorders that professionals are familiar with. Assuming this point of view, general professional contact with mental illness is unlikely to reduce stigmatisation for all mental disorders, and interventions should increase familiarity with several particular mental disorders.

Implications

The current study increases our understanding of the mental disorders, stereotypes, emotion-related responses, and behaviours that are fundamental to the relative stigmatisation of mental illness by mental health professionals. Additionally, this study highlights professional context and familiarity with mental illness as key to the stigmatisation of mental illness by mental health professionals. Although many of these constructs either already have a presence in the research on mental health professionals or are part of existing theory, a number of these constructs have been overlooked within this domain (e.g., empathy, being warm, borderline personality disorder). Not only do these observations underscore the need for qualitative studies such as the current study, they also suggest that the methods currently being used in this area to identify key constructs are limited. To this end, the current study provides an empirical basis regarding the mental disorders, stereotypes, emotion-related responses, and behaviours that are important to the stigmatisation of mental illness by mental health professionals. As such, the findings of the current study can direct interventions on the mental disorder stigmas that should be prioritised and the variables that should be targeted to bring about change. However, the theoretical framework derived within the current study will

likely need to be quantitively tested and explored, at least partially, before it can be properly

utilised by interventions.

Limitations and Future Directions

The quality of the data within the current study could have been influenced by the social

desirability bias associated with stigmatising mental illness. While this response bias could

have been reduced by the confidential nature of the interviews, social desirability bias is

inherent to research on the stigmatisation of mental illness and may have affected the

accuracy of the reports. As another limitation of the current study, participants were not

explicitly asked to report whether they deliver mental health services in community or non-

community settings. Considering that mental health practice can differ across these contexts,

the current study would have benefited from a question that revealed the settings that

participants worked in. As well as more subtle forms of avoidance, intersectional stigma is

also less likely to emerge in unstructured interviews, and these are two more limitations of

the current study. Finally, as qualitative research involves delineating broad themes or

categories, the exact relationship between type of mental disorder and each aspect of

stigmatisation was not able to be determined within the current study. Thus, the framework

generated in the current study may be better described, at least partially, as a model rather

than a theory.

Future research should rectify these limitations and quantitatively examine the

theoretical framework derived within the current study. In particular, the exact relationship

between type of mental disorder and each of the three components of stigmatisation should be

inspected. This should be executed with the mental disorders, stereotypes, emotion-related

responses, and behaviours that the current study identified as central to relative stigmatisation

of mental illness by mental health professionals. Additionally, an extension of this could

entail investigating how the stereotypes, emotion-related responses, and behaviours fit

together within a causal model. Further, the stability of this model should be investigated with mental health professionals from different levels of experience and training. Such research would help guide interventions at each stage of a mental health professional's training and ongoing career development.

Conclusion

The current study used interview data to derive a theory of mental health professionals stigmatising mental illness. Participants responded to the questions about mental illness by endorsing a range of stereotypes, emotion-related responses, and behaviours. Most participants demonstrated the relative stigma of mental illness, and a variety of mental disorders were key to this relative stigma. The current study indicates that for this group of mental health professionals, stigmatisation decreases in a professional context, and relative stigmatisation is modified by familiarity with mental illness, such that familiarity is associated with more positive reactions. It is hoped that these findings and the proposed theory may further research in this area and inform approaches to reduce stigma among this population. As a likely outcome of this, it is expected that health access and interactions for those experiencing mental illness will be improved.

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Chapter 4

Mental Illness Stereotype Content in a Sample of Trainee

Mental Health Professionals

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Note. While this paper was submitted in American English, for consistency across the dissertation, it is included in British English for the current dissertation.

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Additional relevant material is appended at the end of this thesis:

- Appendix G - Vignettes

- Appendix H - Familiarity with Mental Illness Scale

- Appendix I - ANOVA Results Comparing Clusters for Each Stereotype

Mental Illness Stereotype Content in a Sample of

Trainee Mental Health Professionals

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Abstract

Mental health professionals stigmatise mental illness, and this has negative consequences for people who suffer from mental illness. This stigmatisation is also inconsistent with the role of a mental health professional and could indicate a need for more specialised training. To inform such an approach, knowledge of the relative stigmatisation of mental illness by trainee mental health professionals is needed. The aim of the current study was to investigate the relative stigma of mental illness among a sample of mental health professionals in training by examining stereotype content. A cross-sectional survey asked 478 relevant undergraduates (e.g., psychology students, social work students, biomedical students) to express their level of agreement with four stereotypes towards 10 mental disorders. A cluster analysis of stereotypes revealed four clusters of disorders. Cluster 1, consisting of affective disorders and anorexia nervosa, generally elicited low levels of negative stereotyping. Cluster 2, including personality disorders, schizophrenia, and bipolar disorder, was characterised by a moderate degree of negative stereotyping with low levels of blame. Clusters 3 and 4 contained paedophilic disorder and alcohol use disorder, respectively. Paedophilic disorder elicited moderate and high degrees of negative stereotyping, whereas alcohol use disorder was characterised by a moderate amount of negative stereotyping. These results may be used to guide the development of training programs and reduce the stigmatisation of mental illness by mental health professionals.

Introduction

Similar to the general population, some health professionals stigmatise health conditions within their respective disciplines (i.e., *provider-based stigma*; Chambers et al., 2012; Nyblade et al., 2019; Pescosolido & Martin, 2015). One target of stigma that has been neglected until recently is that of mental health (Carrara et al., 2019; Schulze, 2007; Wahl & Aroesty-Cohen, 2010). Evidence indicates that mental health professionals stigmatise mental illness, which likely leads to a number of negative outcomes for people with mental illness (Corrigan & Watson, 2002; Nyblade et al., 2019; Reavley et al., 2014). In light of this, organisations such as the World Health Organization and the Organisation for Economic Co-operation and Development have called for strategies to reduce the stigmatisation of mental illness by the general population and mental health professionals (Organisation for Economic Co-operation and Development, 2021; World Health Organization, 2022). Thus, there is a need for research that can guide efforts to mitigate the stigmatisation of mental illness by mental health professionals.

Given that stigmatisation is incongruent with what is expected of mental health professionals (e.g., American Counseling Association, 2014; American Nurses Association, 2015; American Psychological Association, 2017), it is possible that trainees in the area of mental health are not being properly socialised into their role. Hence, it is important to understand how trainee mental health professionals are stigmatising mental illness so that they can be trained accordingly and go on to fulfil their professional role. For such intervention to be effective, an accurate grasp of the relative stigmatisation of mental illness by trainee mental health professionals would be required. As this knowledge is lacking in the literature, the current study aimed to thoroughly explore mental illness stereotype content with a sample of trainee mental health professionals, to provide evidence for how relative stigma is expressed in this population (Fiske et al., 2002; Sadler et al., 2012).

The Stigmatisation of Mental Illness

The stigmatisation of mental illness by the general population has been the subject of much research, and although there have been efforts to reduce negative reactions towards people with mental illness, the stigmatisation of mental illness by the public remains prevalent (Angermeyer & Dietrich, 2006; Boysen et al., 2020; Johnstone, 2001). *Stigmatisation* is defined as a collective system of negative reactions that are elicited by human attributes (Link & Phelan, 2001; Major & O'Brien, 2005; Pescosolido & Martin, 2015). There are many variants of stigmatisation, but the basic components are negative *stereotypes* (e.g., people with mental illness are difficult), *emotions*, (e.g., frustration) and *behaviours* (e.g., avoidance; Link & Phelan, 2001; Major & O'Brien, 2005). Two variants that should be distinguished are *endorsed stigma*, which occurs when people express agreement with stigmatisation, and *perceived stigma*, which in comparison refers to the belief that others stigmatise (Pescosolido & Martin, 2015). The stigmatisation of mental illness is also related to an array of negative consequences for individuals who suffer from mental illness (Corrigan, 2005; Overton & Medina, 2008). For instance, mental illness stigma is associated with limited access to housing, loss of income, health issues, and not seeking treatment for mental illness (Hansson et al., 2013; Overton & Medina, 2008; Schulze, 2007).

By contrast to research with the general population, the stigmatisation of mental illness by mental health professionals has only more recently gained attention from the scientific community (Schulze, 2007). However, this literature has demonstrated that mental health professionals are also prone to stigmatising people with mental illness (Reavley et al., 2014; Schulze, 2007; Wahl & Aroesty-Cohen, 2010). Additionally, the stigmatisation of mental illness by mental health professionals compounds the negative outcomes that are linked to mental illness stigma (Chambers et al., 2012; Nyblade et al., 2019). In general, provider-based stigma is associated with negative consequences for health care receivers, including

diminished access to diagnosis and treatment, and fewer successful health outcomes (Chambers et al., 2012; Nyblade et al., 2019). Therefore, the stigmatisation of mental illness by mental health professionals is likely an added impediment to the well-being of people with mental illness. Indeed, the World Health Organization and the Organisation for Economic Co-operation and Development recently recommended that action be taken towards reducing the stigmatisation of mental illness (Organisation for Economic Co-operation and Development, 2021; World Health Organization, 2022). This recommendation was made with the goal of improving the mental health of people around the world and pertains to both the general population and mental health professionals.

Understanding Provider-Based Stigma in the Mental Health Field

The stigmatisation of mental illness by mental health professionals is also in direct contrast to the professional role of this population (e.g., American Counseling Association, 2014; American Nurses Association, 2015; American Psychological Association, 2017). This suggests that despite the education they receive, mental health professionals may require more specialised training to target stigmatisation. Thus, it is crucial to identify which aspects of mental illness stigma need to be addressed for trainee mental health professionals to be appropriately socialised into their professional role. Further, early training may provide the most feasible avenue for educational intervention, and such intervention may also be key to improving stigmatisation whilst trainee mental health professionals continue to develop their sense of professional identity and approach to healthcare practices.

To understand the stigmatisation of mental illness, including that by mental health professionals in training, it is important to have knowledge of the *relative stigma* of mental illness or the degree to which mental disorders are stigmatised compared to other mental disorders (Jauch, Occhipinti, & O'Donovan, 2023). Although often neglected in the research on provider-based stigma towards mental illness, relative stigma has been thoroughly

examined as a key theoretical structure with the general population (Crisp et al., 2005; Feldman & Crandall, 2007; Sadler et al., 2015). Moreover, it is expected that a detailed understanding of this construct would be useful to those seeking to mitigate the stigmatisation of mental illness. Interventions that endeavour to reduce this type of stigmatisation would benefit from knowing which mental illness stigmas should be prioritised and which aspects of stigmatisation should be targeted for different mental disorder stigmas.

While research exists on the relative stigmatisation of mental illness by trainee mental health professionals, many of these studies were limited in ways that hinder conclusions about trainees in the mental health field (Feldman & Crandall, 2007; Fernando et al., 2010; Mukherjee et al., 2002; Naeem et al., 2006). For example, such research has typically only sampled psychology and medical students or reported results that mixed trainee mental health professionals with non-mental health professionals. Additionally, these studies offered little to no information about the level of familiarity participants had with mental illness. Research on stigma within the mental health discipline should include a description of familiarity with mental illness because this variable can have an impact on stigmatisation (Angermeyer et al., 2011; Pettigrew & Tropp, 2008) and varies greatly across different levels of training.

The Current Study

The current study aimed to investigate mental illness *stereotype content* with a diverse sample of undergraduate mental health professionals in training and across a variety of mental disorders (Fiske et al., 2002; Sadler et al., 2012). It was intended that this would supply evidence for how the relative stigma of mental illness manifests in this population. Measuring stereotypes is a common method of examining stigmatisation that involves tapping into the cognitive dimension of stigmatisation (Pescosolido & Martin, 2015). Beginning with cognitions is consistent with how relative stigma and prejudice have been investigated in the wider literature and serves as an appropriate basis for further research on

the emotional and behavioural components of stigmatisation (Cuddy et al., 2007; Sadler et al., 2015). A secondary aim of the current study was to summarise how familiar participants were with mental illness.

To achieve these objectives, an online cross-sectional survey was administered to university undergraduates from a range of mental health-related degrees. This survey introduced participants to a range of different mental disorders with short vignettes and asked them to indicate to what degree they endorsed a set of stereotypes for each of the mental disorders. Traditionally, stereotype content research has utilised cluster analysis to examine how particular social groups differ in accordance with a set of stereotype dimensions (Fiske et al., 2002; Sadler et al., 2012). The current study continued this practice by using cluster analysis to investigate how people with certain mental disorders differ with respect to four stereotypes.

Due to the exploratory nature of the current study, specific predictions were not made about the number of emerging clusters or stereotype content. However, based on studies about the relative stigma of mental illness (Feldman & Crandall, 2007; Reavley et al., 2014; Sadler et al., 2012), it was generally hypothesised that groups of mental disorders or single mental disorders would form distinct clusters that would be distinguished by levels of agreement with each of the stereotypes.

Method

Participants

Participants were recruited in accordance with a purposive sampling method. To be eligible for the current study, individuals had to be aged 18 years or over as this is required for registration with a regulatory agency. Potential participants also had to be enrolled as a university undergraduate in a degree that could lead to becoming a mental health professional (e.g., psychology, nursing, biomedical science, social work, occupational therapy,

counselling). The intended outcome of sampling was to acquire a sample of undergraduates representing a variety of mental health professions (e.g., psychology, psychiatric nursing, psychiatry, general medicine, social work, occupational therapy, counselling). Participation in the current study was voluntary. Of the 716 individuals who clicked on the survey link, the core questions on stereotypes were completed in full by 534 people. Of these, two did not provide details required for eligibility screening (i.e., age, degree), and 54 were not eligible as they were either too young or not enrolled in a relevant undergraduate degree. The remaining 478 participants comprised the final sample.

Materials

The survey was created and distributed with the open source, online survey application *LimeSurvey* (ver. 2.59).

Vignettes

There were 10 short vignettes, each portraying a different mental disorder: bipolar disorder, borderline personality disorder, narcissistic personality disorder, major depressive disorder, generalised anxiety disorder, schizophrenia, alcohol use disorder, anorexia nervosa, antisocial personality disorder, and paedophilic disorder. The first eight of these are in line with the disorders that were found, in a recent study by Jauch, Occhipinti, O'Donovan, et al. (2023), to be key to the relative stigmatisation of mental illness by mental health professionals. The first three have an identical match among the disorders in the study, and the other five were selected as concrete representations of the classifications in the study that were quite broad (e.g., anxiety and related disorders, substance use disorder, eating disorders). These disorders were chosen because they had characteristics typical of the wider category that they fall under (American Psychiatric Association, 2013). Anorexia nervosa was also selected as it was the only specific eating disorder noted by participants in the above study. Alcohol use disorder was chosen to represent substance use disorder because alcohol is

likely the drug most familiar to the participants (Slade et al., 2009). In addition to the first

eight mental disorders, antisocial personality disorder and paedophilic disorder were

included, because research with both the general population and mental health professionals

suggests that these disorders are stigmatised more than any other (Boysen & Logan, 2017;

Feldman & Crandall, 2007; Fuss et al., 2018).

For each of the vignettes, participants were introduced to a hypothetical person with one

of 10 gender-neutral names (i.e., Jackie, Cameron, Taylor, Jordan, Morgan, Reese, Sam,

Alex, Shannon, Jessie) and a diagnosis of one of the 10 mental disorders. The vignettes also

contained a brief description of the diagnosis that the hypothetical person had received. See

below for an example vignette and refer to supporting information for all 10 vignettes.

Cameron has Major Depressive Disorder. This means that for the majority of the day

Cameron is in a depressed mood, has little desire to engage in most activities, and

finds little pleasure in previous interests.

For nine of the mental disorders, the brief descriptions were based on the general

features of these disorders as outlined in the 5th edition of *The Diagnostic and Statistical

Manual of Mental Disorders* (American Psychiatric Association, 2013). However, the general

description of antisocial personality disorder was unable to be used, as this description

explicitly characterises antisocial personality disorder as dangerous. Thus, specific features of

the disorder were employed that meet the criteria for a diagnosis but did not portray antisocial

personality disorder as objectively dangerous.

Measures

Familiarity with Mental Illness. To measure familiarity with mental illness, an

adapted version of the familiarity with mental illness scale used by Corrigan et al. (2003) was

utilised. This involved asking participants to specify their level of familiarity with severe

mental illness by marking which of eight statements were applicable to them (e.g., "A friend

of the family has a severe mental illness"). As the scale utilised by Corrigan et al. (2003) did

not have a statement for the lived experience aspect of familiarity with mental illness, an

eighth statement was added to account for lived experience while keeping with the wording

of the other statements (i.e., "I have or have had a severe mental illness"). Participants

responded on a scale where *true = 1* and *false = 0* and these were summed to form an index

ranging from 0 to 8, where higher scores indicated greater familiarity (see supporting

information for the complete measure of familiarity with mental illness).

    Stereotypes. The stereotypes investigated in the current study were also selected based

on the findings of the study by Jauch, Occhipinti, O'Donovan, et al. (2023). The stereotypes

were blame, dangerousness, difficulty, and recovery beliefs. Blame and dangerousness were

measured by using a combination of modified and unchanged items from the Attribution

Questionnaire, a scale that is often employed in research on the stigmatisation of mental

illness (Corrigan et al., 2003). For example, participants were asked "How responsible do you

think Jackie is for their present condition", and "How dangerous do you think Jackie is",

respectively. As there did not appear to be any commonly employed measures of difficulty

and recovery beliefs, the current study used items for these stereotypes that were constructed

in line with the qualitative data from the study by Jauch, Occhipinti, O'Donovan, et al. (2023)

and the wording of items in the Attribution Questionnaire. To measure difficulty and

recovery beliefs, participants were asked, for instance "How difficult do you think Jackie

would be to interact with" and "How likely do you think Jackie is to recover from their

present condition", respectively. Congruent with the Attribution Questionnaire, participants

responded to all of the stereotype items on a nine-point semantic-differential type scale (1 =

not at all, 9 = *very much*).

Design and Procedure

The survey link and advertisement were shared with the professional networks and social media pages of research team members, and were further disseminated through student Facebook groups and university email bulletins. Additionally, the study was advertised to first-year psychology and counselling students via online boards for research participation. These first-year students received partial course credit in exchange for participation and this was the only instance of incentivisation.

After clicking on the survey link, participants provided online informed consent (GU Ref. No: 2020/584). Participants then answered demographic questions, completed the measure of familiarity with mental illness, and read how to complete the survey. Following this, participants read all 10 vignettes and answered the four stereotype questions for each of the vignettes. Using computer-generated allocation, the order of the vignettes was randomised and one of the 10 gender-neutral names was randomly assigned to each of the vignettes. At the end of the survey, participants were provided a space to share anything else they had to say about the study. Psychology and counselling students reported their student details to obtain course credit.

Statistical Analysis

Data were analysed with SPSS software (ver. 27). Recovery beliefs were reverse coded so that higher scores corresponded with more stigmatisation. As the current study aimed to obtain a representative sample of trainee mental health professionals, but not to compare stereotyping across different degrees, focal analyses were only performed on the total sample. To examine mental illness stereotype content, a two-step cluster analysis was employed, following the analytical approach of Fiske et al. (2002) and Sadler et al. (2012). The cluster solution was validated based on recommendations made by Blashfield and Aldenderfer (1988). In the first step, hierarchical cluster analysis using Ward's method was conducted to ascertain the number of clusters that had the best fit for the data (i.e., the point in the

agglomeration schedule in which adding more clusters contributed little to reducing error variance). In the second step, *k*-means cluster analysis was employed to determine which mental disorders belonged to which clusters. To validate the solution, two procedures were employed. First, the dataset was randomly split into two groups, and both types of cluster analyses were performed on each group to demonstrate consistency. Second, stereotype means, standard deviations, and confidence intervals were generated for each cluster and compared using one-way repeated measures analyses of variance (ANOVAs). To control for family-wise error rate, a Bonferroni correction was executed and a significance level of $p = .002$ was established.

Results

An overview of demographic variables is reported in Table 1. The level of familiarity with mental illness present in the sample was generally low. Participants stigmatised the mental disorders the least in terms of blame, whereas there was a moderate amount of agreement with the other three stereotypes (summarised in Table 2).

Table 1

Demographic Factors for the Whole Sample

Characteristics	*n*	*%*
Degree		
Double degree	122	25.52
Psychology	346	72.38
Counselling	30	6.28
Nursing	41	8.60
Social work	19	4.00
Occupational therapy	20	4.20
Biomedical science	24	5.02

Table 1 Continued

Characteristics	*n*	*%*
Intention to apply for medical school		
Yes	13	54.16
No	8	33.33
Did not specify	3	12.50
Criminology	79	16.53
Business	21	4.30
Law	11	2.30
Other (e.g., paramedicine, sociology)	10	2.10
Gender		
Male	82	17.20
Female	382	79.90
Non-binary in general	12	2.50
Gender fluid	2	0.40
Ethnicity		
Caucasian	376	78.70
African	8	1.70
Asian	41	8.60
Aboriginal or Torres Strait Islander	11	2.30
Other (e.g., Native American, Polynesian).	19	4.10
Mixed	13	2.70
Did not specify	10	2.10

Note. Two participants were completing two mental health-related degrees (i.e., psychology and biomedical science, psychology and counselling). Mean age was 23.63 ($SD = 8.39$).

Table 2

Descriptive Statistics and 95% Confidence Intervals for Psychology Students, Other Students, and the Full Sample

Measure	Psychology students				Other students				Full sample			
	n	*M*	*SD*	95% CI	*n*	*M*	*SD*	95% CI	*n*	*M*	*SD*	95% CI
Familiarity with mental illness	343	2.87	1.68	[2.69, 3.04]	132	3.14	1.90	[2.82, 3.47]	477	2.95	1.75	[2.80, 3.11]
Stereotype												
Blame	344	3.23	1.36	[3.09, 3.38]	132	3.27	1.52	[3.00, 3.53]	478	3.24	1.40	[3.12, 3.37]
Dangerousness	344	4.40	1.26	[4.27, 4.53]	132	4.26	1.31	[4.04, 4.49]	478	4.36	1.27	[4.25, 4.47]
Difficulty	344	4.97	1.33	[4.83, 5.11]	132	4.81	1.36	[4.58, 5.05]	478	4.93	1.34	[4.81, 5.05]
Recovery beliefs	344	5.41	1.18	[5.28, 5.53]	132	5.19	1.29	[4.97, 5.42]	478	5.35	1.21	[5.24, 5.46]

Note. Statistics were generated separately for psychology students and other students as there were more of the former. The two participants who were enrolled in psychology and another relevant degree were excluded from this table. The familiarity with mental illness row does not include a participant who did not complete this measure.

A four-cluster solution was deemed appropriate. This result was found for both halves of the sample ($n_1 = 239$, $n_2 = 239$) and this supplied initial validation for the cluster solution. Subsequently, k-means cluster analysis was used to uncover the mental disorders that fit into each of the clusters.

Cluster 1 comprised major depressive disorder, generalised anxiety disorder, and anorexia nervosa. This cluster was characterised by moderate negative recovery beliefs and low levels of the other stereotypes. Cluster 2 consisted of borderline personality disorder, narcissistic personality disorder, antisocial personality disorder, schizophrenia, and bipolar disorder. For this cluster, the amount of blame was low and similar to that of Cluster 1, with a moderate degree of agreement with the other stereotypes. The final two clusters both contained a single mental disorder. Paedophilic disorder was the disorder for Cluster 3 and Cluster 4 contained alcohol use disorder. Cluster 3 was characterised by moderate blame and difficulty and high levels of dangerousness and negative recovery beliefs. This cluster elicited especially high levels of agreement with dangerousness, and this was the area in which participants expressed the most stigmatisation. Cluster 4 was typified by a moderate degree of agreement with all of the stereotypes, elicited a similar amount of blame to Cluster 3, and evoked a similar level of agreement with negative recovery beliefs as Cluster 1. The results of the k-means cluster analysis were consistent across the two halves of the sample (see Table 3 and Figure 1).

Table 3

Descriptive Statistics and 95% Confidence Intervals for Stereotypes by Cluster

	Cluster 1			Cluster 2			Cluster 3			Cluster 4		
Stereotype	*M*	*SD*	95% CI	*M*	*SD*	95% CI	*M*	*SD*	95% CI	*M*	*SD*	95% CI
Blame	2.86	1.61	[2.72, 3.01]	2.79	1.37	[2.67, 2.91]	4.83	2.56	[4.06, 5.07]	5.07	2.32	[4.86, 5.28]
Dangerousness	2.37	1.52	[2.23, 2.50]	4.71	1.55	[4.57, 4.85]	7.87	1.51	[7.74, 8.01]	5.08	2.12	[4.89, 5.27]
Difficulty	3.58	1.52	[3.44, 3.72]	5.50	1.53	[5.36, 5.63]	6.13	2.49	[5.91, 6.36]	4.92	2.12	[4.73, 5.11]
Recovery beliefs	4.32	1.46	[4.19, 4.45]	5.92	1.40	[5.79, 6.04]	6.59	1.90	[6.42, 6.76]	4.36	1.75	[4.21, 4.52]

Note. Cluster 1 = major depressive disorder, generalised anxiety disorder, and anorexia nervosa. Cluster 2 = borderline personality disorder, narcissistic personality disorder, antisocial personality disorder, schizophrenia, and bipolar disorder. Cluster 3 = paedophilic disorder. Cluster 4 = alcohol use disorder.

Figure 1

Diverging Bar Graph for the Four-Cluster Solution
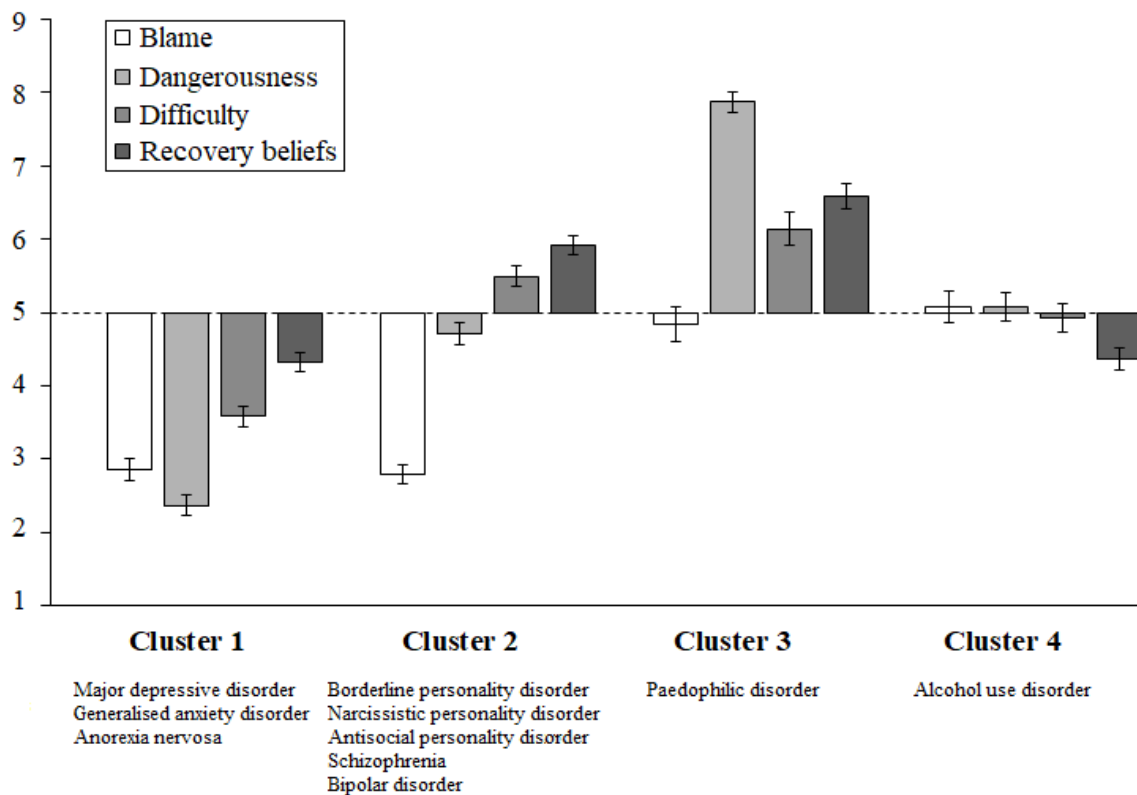
Note. Error bars show standard errors of the mean.

The final validation of the cluster solution involved 24 one-way repeated measures ANOVAs that examined differences between the clusters on all four of the stereotypes. To control for family-wise error rate, a Bonferroni correction was executed and a significance level of $p = .002$ ($\alpha = .05/24 = .002$) was established. Of the 24 ANOVAs, 21 were significant. Clusters 1 and 2 did not differ significantly on blame, $F(1, 477) = 2.50$, $p = .02$, $\eta_p^2 = .005$, and neither did Clusters 3 and 4 on blame, $F(1, 477) = 0.40$, $p = .53$, $\eta_p^2 = .01$. Clusters 1 and 4 were not significantly different on recovery beliefs, $F(1, 477) = 2.50$, $p = .11$, $\eta_p^2 = .001$. All other between clusters differences for each stereotype were significant (all ps $< .001$; refer to supporting information for the complete set of ANOVA values). These

results validate the cluster solution by providing support for the distinguishing features of the

clusters in comparison to each other.

Discussion

Mental health professionals stigmatise mental illness through the endorsement of

negative stereotypes, emotions, and behaviours (Ahmedani, 2011; Carrara et al., 2019;

Schulze, 2007). The purpose of the current study was to investigate mental illness stereotype

content among trainee mental health professionals and across a range of mental disorders.

Relative Stigma Clusters

It was hypothesised that groups of mental disorders or individual disorders would fall

into clusters characterised by different degrees of endorsement with four stereotypes. This

prediction was supported, with a four-cluster solution reliably being the best fit for the

stereotype data. Although the current study was unique in terms of the combination of mental

disorders, stereotypes, and analysis, there were several noteworthy similarities and

differences between the findings of the current study and previous research. To begin with, a

four-cluster solution is consistent with research on the relative stigma of mental illness which

has shown that stigmatisation varies in relation to type of disorder for trainee mental health

professionals and mental health professionals (Arbanas et al., 2018; Feldman & Crandall,

2007; Servais & Saunders, 2007).

Cluster 1 consisted of major depressive disorder, generalised anxiety disorder, and

anorexia nervosa. While this cluster elicited a moderate degree of negative recovery beliefs,

overall Cluster 1 was distinguished from the other clusters by low levels of negative

stereotyping. This is congruent with research on the relative stigmatisation of mental illness

by both trainee and mental health professionals, showing that major depressive disorder and

anxiety-related disorders are stigmatised less in general than disorders such as borderline

personality disorder, schizophrenia, and substance use disorders (Arbanas et al., 2018; Hsiao

et al., 2015; Servais & Saunders, 2007). Further, previous research has reported that psychology undergraduates and mental health professionals together perceive borderline personality disorder and schizophrenia to be more dangerous than major depressive disorder (Hugo, 2001; Jorm et al., 1999; Magliano et al., 2017; Servais & Saunders, 2007). It is likely that these observations reflect how these mental disorders are portrayed in the media (Stout et al., 2004). For instance, people with schizophrenia are often depicted by the media as dangerous and this could be why trainee mental health professionals and mental health professionals view them as such (Owen, 2012).

Cluster 2, although similar to Cluster 1 in terms of blame, was characterised by a moderate level of negative stereotyping. The disorders included in this cluster were borderline personality disorder, narcissistic personality disorder, antisocial personality disorder, schizophrenia, and bipolar disorder. Unlike the current study, research with the general population has found that major depressive disorder, anxiety disorders, and anorexia nervosa elicit blame to a different degree than disorders such as antisocial personality disorder and schizophrenia (Boysen et al., 2014; Boysen & Logan, 2017; Wood et al., 2014). This could be explained by the education that trainee mental health professionals receive and particularly, training on the *diathesis-stress model* of psychopathology. This etiological model accounts for mental illness with an interaction between vulnerability to psychopathology and a triggering event and is a major part of education in the mental health field (Hankin & Abela, 2005; Kring et al., 2010; Rieger, 2017). It is plausible that participants in the current study expressed a similar amount of blame towards Clusters 1 and 2 because this was an extension of the education they had received about mental illness. By contrast, the general population are less likely to be familiar with transdiagnostic models of mental illness, and consequently, more likely to endorse various degrees of blame for different mental disorders.

Cluster 3 contained paedophilic disorder and elicited a moderate level of blame and difficulty and a high degree of dangerousness and negative recovery beliefs. As such, Cluster 3 was clearly differentiated from Clusters 1 and 2 with respect to blame and all of the clusters in terms of dangerousness and recovery beliefs. Although there is little research on the relative stigma of paedophilic disorder, these findings are consistent with a study by Fuss et al. (2018) who reported that mental health professionals blame people with paedophilic disorder more and perceive them as more dangerous than people with schizophrenia. Again, this could be attributable to how paedophilia is portrayed by mass media. While schizophrenia tends to be presented as dangerous, the negative depiction of paedophilia in the media is extreme and people with paedophilic disorder are specifically portrayed as predatory sex offenders (Stelzmann et al., 2020).

Finally, Cluster 4 included alcohol use disorder and was characterised by a moderate level of agreement with all four stereotypes. This cluster was very similar to Cluster 2, except that Cluster 2 elicited a low degree of blame. It is noted that both Clusters 3 and 4 elicited more blame than Clusters 1 and 2. On the surface, this is at odds with the notion that education on the diathesis-stress model of mental illness results in a similar amount of blame across mental disorders. However, this discrepancy can be accounted for by highlighting that paedophilic disorder and alcohol use disorder clearly violate social norms. The moralisation of these disorders is pertinent as people are more likely to attribute mental illness to intention, and less likely to apply biological or psychological models, when mental disorders go against social norms (Giosan et al., 2016; Haslam et al., 2007; Haslam & Giosan, 2002). Hence, participants in the current study could have disregarded a diathesis-stress explanation of Clusters 3 and 4, and blamed these disorders more, because paedophilic disorder and alcohol use disorder are defined by attributes that are moralised.

Implications

The current study uncovered how, in a diverse sample of trainee mental health professionals, a range of mental disorders and four key stereotypes relate to each other. The current study has implications for interventions that seek to reduce the stigmatisation of mental illness by mental health professionals. That is, the current study may provide a basis for reducing the stigmatisation of mental illness by mental health professionals, with a focus on mitigating relative stigma during early training programs. In particular, the current study highlights which mental disorders are most in need of intervention and which stereotypes should be targeted to reduce stigmatisation towards specific mental disorders. For example, the current study suggests that Cluster 2 mental disorders should be prioritised over Cluster 1 disorders and that interventions which strive to mitigate the stigmatisation of Cluster 2 disorders should focus on dangerousness, difficulty, and recovery beliefs. Such interventions would require further examination in future research but may be able to form part of standard educational approaches in the training of mental health professionals, particularly in undergraduate programs. However, as the training curriculum is already crowded, care must be given to the placement of interventions within the levels of training. For instance, interventions that focus on mental disorders such as paedophilic disorder would be better suited to specialised programs and ongoing career development, rather than undergraduate or postgraduate training.

Limitations and Future Directions

There were limitations of the current study that should be addressed in future research. Although the current study accounted for a range of different university degrees, most of the participants were psychology students, and the quantity of participants included for each of the other degrees was comparatively small. This limits the generalisability of the current study to non-psychology students and mental health professionals who did not study

psychology. Future research could focus on investigating the stability of the cluster model across disciplines and levels of training and experience. Some participants in the current study also commented that they were uncertain about how to interpret the stereotype items. Interestingly, the item which participants commented on the most was the dangerousness item taken from the Attribution Questionnaire, in which participants reported being unsure about whether the target was a danger to themself or others. Future research would benefit from providing more specific guidance and instruction for stereotype items. As a final limitation, the current study could have utilised more of a systematic approach to sampling. To avoid the potential for selection bias, future research should sample in accordance with a pre-established frame that targets specific universities, courses, and levels of training (e.g., first year, second year).

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Chapter 5

General Discussion

The stigmatisation of mental illness by mental health professionals and those in training is an important field of research that is growing in relevance (Productivity Commission, 2020; Wahl & Aroesty-Cohen, 2010; World Health Organization, 2022). Despite the significance however, this domain of the literature is characterised by numerous limitations. Thus, the current dissertation aimed to address these with three studies. In Study 1, a scoping review was conducted with the aim of investigating the nature of available literature on the endorsed stigmatisation of mental illness by mental health professionals. The primary focus of Study 1 was on how research was being conducted and the areas requiring greater examination in future research. Building on the weaknesses identified in the scoping review, Study 2 was a qualitative examination of the relative stigmatisation of mental illness by mental health professionals. The aim of this study was to delineate the mental disorders, stereotypes, emotions, and behaviours that are fundamental to this type of stigma and to generate a theory that outlines these variables and the relationships between them. Finally, to understand the educational needs that trainees require to develop an identity that is consistent with their role as mental health professionals, a third study was conducted. Drawing upon the findings of Studies 1 and 2, Study 3 aimed to cross-sectionally explore stereotype content in a sample of undergraduates from mental health-related degrees.

Summary and Interpretation of the Findings

The scoping review found that research on the stigmatisation of mental illness by mental health professionals was characterised by many limitations. Specifically, studies in this area exhibited a number of methodological weaknesses, and the literature was marked by a lack of consistent usage of measures and variables across studies. The scoping review also showed that a considerable quantity of articles were not linked by a citation and existing theoretical frameworks were seldom drawn upon to guide studies.

One key theoretical framework that received minimal attention in the literature was the *relative stigma* of mental illness. Rather than investigating relative stigma, the majority of the research concentrated on either mental illness in general or a single mental disorder. Further, the studies that did account for relative stigma rarely covered a range of mental disorders and often compared just two (i.e., depressive disorders and schizophrenia spectrum disorders). Although research on mental health professionals stigmatising certain disorders (e.g., personality disorders, substance use disorders) suggests an awareness of relative stigma within this literature (e.g., Finamore et al., 2020; Hayes et al., 2004), many of these studies were justified with literature external to research with mental health professionals (e.g., studies on the general population).

It is not uncommon for research to overlook the relative stigma of mental illness, with many studies on mental illness stigma viewing psychopathology as a homogenous concept (Boysen, 2017). A lack of focus on relative stigma is, however, surprising, as research has supplied strong evidence for this construct across a variety of populations (Crisp et al., 2005; Reavley et al., 2014; Sadler et al., 2012). Qualitative support for the occurrence of relative stigma among mental health professionals was provided in Study 2. Participants in this study frequently expressed relative stigma and while doing so, listed various mental disorders. A possible explanation for the relative stigma of mental illness among mental health professionals could be work-related stressors associated with certain mental disorders. Given that mental health professionals encounter individual (e.g., large caseloads) and structural-level (e.g., insufficient training for particular mental disorders) sources of stress (Posluns & Gall, 2020) and psychological stress can increase stigmatisation (Friedland et al., 1999), work-related stressors may worsen the stigmatisation of mental illness in general and specific mental disorders. Moving forward, research and interventions that seek to reduce the

stigmatisation of mental illness by mental health professionals should consider the effect of work-related stressors.

Studies have also demonstrated the relative stigma of mental illness with mental health professionals in training (Feldman & Crandall, 2007; Fernando et al., 2010; Naeem et al., 2006). Echoing this research, Study 3 showed that in a diverse sample of undergraduates from mental health-related fields, stereotypes varied with type of mental disorder. Given the evidence for the relative stigma of mental illness, demonstrated across the studies of the current dissertation, it is clear that future research should examine this phenomenon more closely.

Some of the mental disorders that have been found to be stigmatised more than others include antisocial personality disorder, paraphilic disorders, and substance use disorders (Feldman & Crandall, 2007; Fuss et al., 2018; Hsiao et al., 2015). While studies with mental health professionals have compared the stigmatisation of schizophrenia and substance use disorders to other disorders, the scoping review identified that comparisons with personality disorders and paraphilic disorders are much less common. Among other disorders, participants in Study 2 often mentioned schizophrenia and substance use disorder. Borderline personality disorder and narcissistic personality disorder were also frequently noted, but antisocial personality disorder and paedophilic disorder appeared to be less salient to the mental health professionals sampled. In contrast, Study 3 participants stigmatised a group of mental disorders that included antisocial personality disorder more than other disorders and overall, stigmatised paedophilic disorder more than any other disorder. The former additionally contained other personality disorders, schizophrenia, and bipolar disorder, and was generally stigmatised to a similar degree as alcohol use disorder. These findings highlight the mental disorders that should be prioritised to reduce stigmatisation among trainee mental health professionals and may suggest the same for mental health professionals.

An aspect of stigmatisation that was prominent in the literature with mental health professionals was stereotypes about mental illness. Stereotypes are a major part of research on stigma and prejudice, and *stereotype content models* represent a key theoretical structure within these domains of the literature (Fiske et al., 2002; Pachankis et al., 2018; Sadler et al., 2012). Two stereotype dimensions that commonly feature in such models are warmth and competence (e.g., Fiske et al., 2002; Sadler et al., 2012). Similar to warmth, the scoping review found that dangerousness was one of the most widespread stereotypes examined within the research. Incompetence was another prevalent stereotype amongst the studies as well as causal attributions, difficulty, and recovery beliefs. Supporting the focus on most of these stereotypes, participants in Study 2 often mentioned dangerousness and the latter three stereotypes. These stereotypes were also included in Study 3 and the two stereotypes that generated the most variability across mental disorders were blame and dangerousness. Most of the mental disorders in Study 3 formed clusters that elicited a low level of blame, while paedophilic disorder and alcohol use disorder were blamed to a moderate degree. Concurrently, affective disorders and anorexia nervosa elicited a low level of dangerousness, whereas paedophilic disorder was perceived as highly dangerous. These results support *attribution theory* and the *danger appraisal hypothesis* (Corrigan et al., 2002; Weiner, 1995) and point to the stereotypes that should be altered to mitigate the stigmatisation of particular mental disorders. Further, although certain findings in Study 3 likely reflect socialisation in the mental health field, Study 3 indicates that like the general population, trainee mental health professionals can also be susceptible to how mental disorders are portrayed by mass media (Stout et al., 2004).

In comparison to stereotypes, there was a lack of research on the emotional and behavioural reactions of mental health professionals towards mental illness. Emotions and behaviours are fundamental to stigmatisation, and discrimination is directly associated with

many negative consequences for people with mental illness (Angermeyer et al., 2011; Corrigan et al., 2003; Corrigan & Watson, 2002). Moreover, participants in Study 2 noted several emotion-related responses and behaviours when discussing mental illness. These covered positive reactions such as sympathy, empathy, helping, and being warm, and negative responses such as frustration and fear. While these variables can be targeted to reduce stigmatisation, Study 2 did not show how the emotional and behavioural responses of mental health professionals relate to stereotypes or how all three components of stigmatisation connect in one framework. Unfortunately, existing literature does not shed much light on this, with the scoping review finding that few studies examined relationships between stigmatisation components and not a single study had explored how all three components fit together as a whole. Research with the general population suggests that stereotypes activate emotional responses which in turn trigger behaviours (Corrigan et al., 2002; Cuddy et al., 2007; Sadler et al., 2015). This perspective is crucial to a number of models on stigma and prejudice with the *behaviours from intergroup affect and stereotypes map* being a well-known example (Cuddy et al., 2007; Sadler et al., 2015). These theories stand out as a gap in the literature on mental health professionals stigmatising mental illness, a limitation that will likely need to be overcome in order to uncover key mechanisms of change.

Much of the research included in the scoping review sought to comprehend the stigmatisation of mental illness by mental health professionals with individual differences such as professional subtype, sex, and age. Individual differences play a major role in psychological research (Chamorro-Premuzic et al., 2011) and many participants in Study 2 spoke about the impact of individual differences on how they respond to mental illness. In particular, participants frequently discussed how their personal and professional familiarity with mental illness influenced them to respond more positively towards people with mental

illness. Familiarity with mental illness certainly has a place within the literature on mental illness stigma (Angermeyer et al., 2011; Angermeyer & Matschinger, 1997), but an understanding of individual differences alone is insufficient for a complete knowledge of this phenomenon. Indeed, researchers have stressed the importance of taking a multifaceted and multilevel approach to comprehending and reducing stigmatisation (Link & Phelan, 2001; Pescosolido & Martin, 2015). Congruent with this viewpoint, Study 2 produced a grounded theory that brought together multiple dimensions of stigmatisation, individual differences, and situational factors such as type of mental disorder and professional context. This theory exemplifies the complexity inherent in the stigmatisation of mental illness by mental health professionals and outlines the various constructs that should be addressed by research and anti-stigma interventions.

Implications

The current dissertation provides a basis for a great deal of further research on the stigmatisation of mental illness by mental health professionals. The scoping review summarised weaknesses in the literature and made recommendations for how research could improve. It was mainly suggested that research concentrate on relative stigma across a range of mental disorders, multiple dimensions of stigmatisation, and how all three components of stigmatisation relate to each other. It was also recommended that a high standard of research be achieved through a systematic approach that utilises multisite research. Studies that are conducted over multiple sites could rectify many current limitations by having each location focus on certain mental disorders, forms of stigmatisation, and professions, together adequately covering these important constructs.

Additionally, Studies 2 and 3 provide a foundation for more in-depth exploration of the stigmatisation of mental illness by mental health professionals. Study 2 in particular highlights the aspects of stigmatisation, mental disorders, other situational variables,

individual differences, and the relationships between these variables that can be examined in prospective research. As well, Studies 2 and 3 can serve as the basis for interventions that strive to lessen the stigmatisation of mental illness by mental health professionals. One type of intervention could be an educational program with mental health professionals or trainees that disconfirms misconceptions about particular mental disorders (e.g., people with schizophrenia are dangerous). Research has shown that education can reduce stigmatisation (Rusch et al., 2005), and hence, education may be a viable means of mitigating the stigmatisation of mental illness by mental health professionals. Another intervention could involve positive contact with several of the most stigmatised mental disorders. Contact is an effective anti-stigma intervention that can not only decrease stereotyping, but also directly reduce the negative emotions that trigger discriminatory behaviours (Pettigrew & Tropp, 2008; Rusch et al., 2005; Tropp & Pettigrew, 2005). These suggestions could also guide the Australian National Mental Health Commission in the development of the National Stigma and Discrimination Reduction Strategy (National Mental Health Commission. (2023). One of the objectives for the Strategy is to "take steps towards eliminating structural stigma and discrimination towards those affected by mental health issues in identified settings", and the noted interventions could contribute to this goal by reducing stigmatisation within the mental health system.

Limitations and Future Directions

A number of limitations should be considered within the current body of research. Because of the large number of mental disorders and facets of stigmatisation, the current dissertation was unable to cover all constructs pertinent to the stigmatisation of mental illness by mental health professionals. Further, database-controlled vocabulary terms were not employed in the scoping review. Although this was addressed by drawing upon relevant literature to direct the scoping review search string and by utilising qualitative research to

identify important constructs, many crucial mental disorders and variables could have been neglected. Another limitation is the possible impact of social desirability bias. Especially for mental health professionals and trainee mental health professionals, it is socially undesirable to endorse the stigmatisation of mental illness, and as a result, the participants in Studies 2 and 3 could have underreported their stigmatising reactions. Alternatively, the stigmatisation observed in Studies 2 and 3 could have been exacerbated by the presence of the COVID-19 pandemic. Beginning in 2019, this ongoing global pandemic is considered a universal stressor that has led to an increased need for mental health professionals (Hannemann et al., 2022; Pfeifer et al., 2021; Santomauro et al., 2021). As psychological stress is positively correlated with negative stereotyping (Friedland et al., 1999), it is possible that additional stress caused by the COVID-19 pandemic increased the stigmatisation reported in Studies 2 and 3. Together, social desirability bias and stress associated with the COVID-19 pandemic represent two competing factors that may have individually or jointly affected the quality of data in Studies 2 and 3.

Future studies should build upon the current research and continue to develop knowledge that can inform efforts to alleviate the stigmatisation of mental illness by mental health professionals. Researchers should proceed systematically with a high degree of methodological rigour, drawing on relevant theory and literature that is related to the stigmatisation of mental illness by mental health professionals. Studies should include both mental health professionals and trainee mental health professionals and account for the multilevel and multifaceted nature of stigmatisation. In particular, research should address the relative stigma of mental illness, along with other contextual factors, all major dimensions of stigmatisation, and individual differences. Additionally, future research should examine how the variables addressed by the current dissertation relate to other target variants of stigmatisation (e.g., self-stigma, stigmatisation towards other mental health professionals that

have a mental illness), including contribution from those that have lived experience with mental illness. An understanding of such constructs should be used to create interventions to reduce the stigmatisation of mental illness by mental health professionals. Further, the efficacy of these interventions should be thoroughly tested and to maximise the potential for these interventions to be effective, they should be examined both individually and in combination.

Conclusion

There is ample evidence to indicate that mental health professionals stigmatise mental illness (Schulze, 2007; Wahl & Aroesty-Cohen, 2010). While this is a meaningful area of research, literature on the stigmatisation of mental illness by mental health professionals is characterised by certain limitations. The current dissertation aimed to address these limitations through a series of three related studies. The body of work in this thesis, although not exhaustive, represents a considerable addition to the field in terms of new knowledge and quality of methodologies. It also provides researchers, educators, and policymakers with a useful, evidence-based foundation for the development of interventions to reduce the stigmatisation of mental illness by mental health professionals. Such efforts are crucial to improving the lives and experiences of those with mental illness, and it is hoped that the current dissertation will drive further thought, investigation, and efforts to achieve this aim.

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Appendix A

Addendum - Additional Clarification of Scoping Review Method and Results

Journals were ranked in accordance with the SCImago Journal Rank Indicator. A SCImago Journal Rank expresses the impact of a journal with the average number of weighted citations received in the selected year by the documents published in the journal in the three previous years.

As many articles were published after previous literature reviews were executed, it is possible that the increased number of articles in this scoping review could be attributable to a general increase in research. To demonstrate that the increased number of articles can be attributed to the search string used, and not just a general increase in research, a direct comparison was made between previous literature reviews and this scoping review. Collectively, previous literature reviews identified 28 studies. These studies covered the period of 1987 to 2015. In contrast, the current literature review identified an additional 111 articles from this time period (139 in total).

Established scales were either validated with the general population, health professionals in training, or health professionals. Most established scales were validated with the general population (e.g., Community Attitude Toward Mental Illness, Attribution Questionnaire), and some established scales were validated with health professionals in training (e.g., Medical Condition Regard scale) and health professionals (e.g., Opening Minds Scale for Health Care Providers).

Another potential explanation for the current state of research could be a lack of funding. To investigate this possibility, data were gathered on whether the studies in this scoping review received external funding. The results of this examination showed that for most of the articles a funding statement could not be located, with 69% of studies (136) fitting this category. For the remaining articles, 26% (51) received external funding and 5%

(10) did not receive funding. On inspecting this 26% of studies more closely, it was found that many of these articles had the same limitations as all other studies, suggesting that funding is not a good explanation for the current state of research.

Appendix B

Table Notes and Abbreviations

- The term psychiatrist refers to psychiatric registrars or full psychiatrists.

- In the analytical approaches column, a dash specifies when analytical approaches were not utilised.

- Specific mental disorders were reported in line with the terms used in the studies. If several different terms were employed for the same mental disorder, just one of these terms was used within the table.

- In the disorders column, the way that mental disorders were presented to participants was included in parentheses. Mental disorders were either presented with a "label" (e.g., borderline personality disorder) or by portraying the features of mental illness in some way (e.g., with a vignette). In the table, the latter was denoted by either the term "description" or "presentation".

- Where necessary, the variables and measures column included factors, items, and predictor variable levels for clarity. The factors, items, and levels appear under the variables and measures in the form of hierarchical indentations. Factors and items are included only once throughout the table for identical scales.

- In English, some items had grammatical errors likely due to some articles being translated from another language to English. The errors in these items were corrected in the table for intelligibility.

Mental Disorders

- ADHD = Attention deficit hyperactivity disorder
- BPD = Borderline personality disorder
- GAD = Generalized anxiety disorder
- MDD = Major depressive disorder
- MUS = Medically unexplained symptoms
- OCD = Obsessive compulsive disorder
- PTSD = Posttraumatic stress disorder
- SUD = Substance use disorder

Scales

- ADSHQ = Attitudes towards Deliberate Self-Harm Questionnaire
- AMI = Attitude towards Mental Illness
- AMIQ = Attitudes of Mental Illness Questionnaire
- APDQ = Attitude to Personality Disorder Questionnaire
- ASMI = Attitudes to Severe Mental Illness
- AQ = Attribution Questionnaire
- ASQ = The Attitudes and Skills Questionnaire
- ATAMHS = Attitudes Toward Acute Mental Health Scale
- BMI = Beliefs Toward Mental Illness
- CAMI = Community Attitude Toward Mental Illness
- CAMI-I = Italian version of the Community Attitudes towards the Mentally Ill inventory
- CAQ = Client Attitude Questionnaire
- CASA = Community Attitudes Toward Substance Abusers
- CLAS-MI = Community Living attitudes Scale-Mental Illness
- DAQ = Depression Attitude Questionnaire
- DSS = Depression Stigma Scale
- FABI = Fear and Behavioural Intentions toward the mentally ill questionnaire
- GNAT = Go/No-Go Association Task
- GSD =Greek Social Distance
- IAT = Implicit Association Test
- IDR-R = Insanity Defence Attitude-Revised
- IMI = Impact Message Inventory
- IRI = Interpersonal Reactivity Index
- MCRS = Medical Condition Regard Scale
- MISM-P = Mental Illness Microaggression Scale-Perpetrator Version
- OMI = Opinions about Mental illness
- OMS-HC = Opening Minds Scale for Health Care Providers
- QMEE = Questionnaire Measure of Emotional Empathy
- RAQ = Recovery Attitudes Questionnaire
- RIBS = Reported and Intended Behavior Scale
- SAAS = Substance Abuse Attitude Survey
- SAPDI = Staff Attitude to Personality Disorder Interview

- SAS = Stress Appraisal Scale
- SDSJ = Japanese language version of the Social Distance Scale

Other

- MHA = Mental Health Act
- GPs = General practitioners
- USA = United States of America

Appendix C

Table of Included Studies

Authors (year)	Populations (countries)	Research methods	Analytical approaches	Disorders	Variables and measures	Findings
Adams et al. (2016)	Clinical psychology professionals Counselling psychology professionals School/educational psychology professionals Social work professionals Marriage and family therapists Pastoral counsellors Unspecified medical professionals Management professionals Art therapists Other unspecified professionals					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Adewuya et al. (2017)	Unspecified physicians from primary care centres Unspecified nurses from primary care centres Midwives	Cross-sectional survey A vignette was used	-	Depression (description)	Causal attributions Perceived dangerousness to other patients and staff Social distance	Physicians were most inclined to attribute cause to psychosocial factors (e.g., lack of willpower), followed by biological factors (e.g., brain injury), followed by supernatural factors (e.g., god's will).

						More than half the physicians did not believe that the target would be a danger to other patients and staff. For physicians, social distance increased with the level of intimacy required from the specified relationships. Less than half of the physicians displayed high overall social distance. Other relevant findings were excluded from this table as they were not reported for physicians separately.
	Community health officers and community health extension workers (Nigeria)					

Adjorlolo (2018)	Mental health nurses
	
	(Ghana)
		Cross-sectional survey
		
		A schizophrenia vignette was included
			Correlation analysis	Mental illness in general (label)	CAMI questionnaire
					  Open-minded and pro-integration
					    Residents should accept the location of mental health facilities in their neighbourhood to serve the needs of the local community
					
					    Most persons who were once patients in a mental hospital can be trusted as babysitters
					
					    Locating mental health services in residential neighbourhoods does not endanger local residents
					
					    Mental health facilities should be kept out of residential neighbourhoods
					
					    Having mental patients living within residential neighbourhoods might
						Participants displayed more positive than negative attitudes on the CAMI.
						
						CAMI total scores were significantly negatively correlated with punitiveness. CAMI total scores were not found to be significantly correlated with IDA-R total scores and conviction proneness.
						
						Individual CAMI factors were not found to be significantly associated with every other variable. However, each factor of the IDA-R, punitiveness, and conviction proneness were found to be significantly correlated with at least one factor of the CAMI. The only exception to this was unprofessional behaviour and safety concern. This factor of the IDA-R was not found to be significantly correlated with any factors of the CAMI.

					be a good therapy, but the risks to the residents are too great
					
					Local residents have good reason to resist the location of mental health services in their neighbourhood
					
					Mental illness is an illness like any other
					
					We need to adopt a far more tolerant attitude towards the mentally ill in our society
					
					The mentally ill are far less of a danger than most people suppose
					
					Fear and avoidance
					
					Community mental health ideology (lack of intention to segregate people with mental illness)
					
					IDA-R questionnaire
					    Strict liability (agreement with punishing people who commit criminal acts, regardless of their degree of mental disturbance)
					
					    Unprofessional behaviour and safety concern (criminals are acquitted dishonestly due to the insanity defence, and these criminals are a threat to the public)	

					Expression of sympathy (the opposite of strict liability) Punitiveness (amount of punishment deemed appropriate for offenders) Conviction proneness (likelihood of convicting or acquitting suspects)	

Aftab et al. (2020)	Professionals from the following fields
	    Psychiatry
	    Psychology
	    Family medicine
	    Neurology
	    Neuroscience
	    Geriatric medicine
	    Other unspecified
	
	Unspecified nurses from psychiatry units
	
	Social workers
	
	Trainee psychiatrists
	
	Trainee psychologists
	
	Trainee family medicine practitioners
	
	Trainee neurologists
	
	Trainee neuroscientists
	
	Other research trainees
	
	Medical students
	
	(USA)
		Cross-sectional survey	-	Mental illness in general (label)	All mental disorders are diseases	The nurses and social workers agreed slightly more that all mental disorders are diseases.
						
						Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.

Ahmead et al. (2010)	A psychologist
	
	Social workers
	
	Occupational therapists
	
	Unspecified nurses working in a psychiatric hospital
	
	Unspecified physicians working in a psychiatric hospital
	
	Other unspecified mental health professionals
	
	(Palestine)
		Cross-sectional survey	-	Mental illness in general (label)
				
				Substance and alcohol abuse (label)
				
				Schizophrenia (label)
					ATAMHS 33 (only items relevant to stigmatisation were included in this table)
					  Safe-dangerous semantic differential
					
					  Adult-child semantic differential
					
					  Mature-immature semantic differential
					
					  Optimistic-pessimistic semantic differential
					
					  Cold hearted-caring semantic differential
					
					  Polite-rude semantic differential
					
					  Harmful-beneficial semantic differential
					
					  Clean-dirty semantic differential
					
					  Psychiatric illness deserves as much attention as physical illness
					
					  Mental illnesses are caused by genetic factors
					
					  Mental illness is the result of adverse social circumstances
					
					  Many normal people would become mentally ill if they
						Proportions of negative responses to the semantic differentials ranged from less than half to more than half (neutral responses were available).
						
						Most participants agreed that psychiatric illness deserves as much attention as physical illness (neutral responses were available).
						
						Most participants agreed that mental illness is caused by genetic factors, adverse social circumstances, and stressful situations (neutral responses were available).
						
						Most participates responded negatively to the remaining items (neutral responses were available). However, the last 9 items listed under ATAHMHS 33 showed divided opinion (i.e., either a large proportion of neutral responses or little difference in the proportions of negative and positive responses).

					had to live in a very stressful situation. Alcohol abusers have no self-control Members of society are at risk from mentally ill people Mentally ill patients have no control over their emotions Patients who abuse substances should not be admitted to acute wards Patients with chronic schizophrenia are incapable of looking after themselves Depression occurs in people with a weak personality The cause of many psychological problems is bad nerves Patients with mental illnesses are more likely to harm someone else than themselves Those with a psychiatric history should never be given a job with responsibility Violence mostly results from mental illness Psychiatric patients are generally difficult to like	

					People are born vulnerable to mental illness It is hard to help patients who are emotionally disturbed	
Ahn et al. (2009)	Psychologists Psychiatrists Social workers Psychology interns and clinical graduate students Social work fellows (USA)	Cross-sectional survey	Correlation analysis Between-groups ANOVA	Mental retardation (label) Schizophrenia (label) Bipolar I disorder (label) GAD (label) Alcohol abuse (label) MDD (label) Adjustment disorder (label) Narcissistic personality disorder (label) Bulimia nervosa (label) A range of unspecified mental disorders (labels) Autistic disorder (label) Asperger disorder (label)	Causal attributions Importance of the different causal attributions Profession	For the relevant participants and the first nine mental disorders in the disorders column, some of the mental disorders were attributed more to biological causes (e.g., mental retardation, schizophrenia), and some were attributed more to psychological and environmental causes (e.g., adjustment disorder, narcissistic personality disorder). Inferential statistics were not applied to differences between these mental disorders. For the relevant participants and the first nine mental disorders in the disorders column, beliefs about the biological cause (e.g., heredity/genetics) of mental illness were significantly negatively correlated with beliefs about psychological causes (e.g., personality factors) and environmental causes (e.g., stressful life events). Beliefs about the psychological causes of mental illness were significantly positively correlated with beliefs about environmental causes. Also, beliefs about the importance of biological causes of mental illness were significantly negatively correlated with beliefs about the importance of psychological causes and environmental causes. Beliefs about the importance of psychological causes of mental illness were significantly positively correlated with beliefs about the importance of environmental causes. For all of the disorders, psychiatrists and psychologists rated the cause of mental illness to be significantly more biological than social workers. Statistics for multiple

				Pervasive developmental disorders (label)			comparisons were not reported. No significant differences were found by profession for psychological or environmental causal attributions. Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.
				Dementia of the Alzheimer's type (label)			
				Dementia (label)			
				Bipolar II disorder (label)			
				Delirium (label)			
				Schizoaffective disorder (label)			
				ADHD (label)			
				Cyclothymic disorder (label)			
				OCD (label)			
				Alcohol dependence (label)			
				Substance dependence (label)			
				Opioid dependence (label)			
				Cocaine dependence (label)			
				Cannabis dependence (label)			
				Conduct disorder (label)			

				Schizotypal personality disorder (label)		
				Dysthymic disorder (label)		
				Panic disorder with agoraphobia (label)		
				Schizoid personality disorder (label)		
				Substance abuse (label)		
				Opioid abuse (label)		
				Cannabis abuse (label)		
				Cocaine abuse (label)		
				Hallucinogen abuse (label)		
				Obsessive compulsive personality disorder (label)		
				Paranoid personality disorder (label)		
				Oppositional defiant disorder (label)		
				Antisocial personality disorder (label)		
				BPD (label)		
				Anorexia nervosa (label)		

				PTSD (label)		
				Social phobia (label)		
				Avoidant personality disorder (label)		
				Histrionic personality disorder (label)		
				Dependent personality disorder (label)		
				Adjustment disorder with mixed anxiety and depressed mood (label)		
				Adjustment disorder with depressed mood (label)		
				Bereavement (label)		
Al-Atram (2018)	Family medicine practitioners GPs Unspecified medical specialists (Saudi Arabia)	Cross-sectional survey	-	Anxiety and depression (label)	Attitudes (items were not specified)	Family medicine practitioners expressed positive attitudes. Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.

Album et al. (2017)	GPs
	
	Other physicians
	    Hospital doctors
	    Administrators
	    Professors
	
	Medical students
						Nothing more was reported for this study as findings were not reported for GPs separately.

Album & Westin (2008)	GPs
	
	Other physicians
	    Hospital consultants
	
	    Chiefs of service
	
	    Hospital administrators
	
	Medical students
	
	(Norway)
		Cross-sectional survey	-	Schizophrenia (label)
				
				Anorexia (label)
				
				Depressive neurosis (label)
				
				Anxiety neurosis (label)
					Perceived general prestige in the medical community	For the GPs the mental disorders had little prestige.
						
						The following mental disorders are listed from least to most prestigious for the GPs.
						    Anxiety neurosis
						    Schizophrenia
						    Depressive neurosis
						    Anorexia
						None of the differences reported between mental disorders were analysed with inferential statistics.
						
						Other relevant findings were excluded from this table as they were not reported for GPs separately.

Allen et al. (2019)	Family physicians Internists					Nothing more was reported for this study as findings were not reported for family physicians separately.
Almeida et al. (2021)	Psychiatrists GPs Trainee psychiatrists Trainee GPs					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

Araten-Bergman & Werner (2017)	Social workers
	
	(Israel)
		Cross-sectional survey
		
		A vignette was used
			Correlation analysis
			
			Independent samples t-test
			
			Multiple regression analysis
				Dual diagnosis of schizophrenia and intellectual disability (label)	Causal attributions
					
					Perceived personal responsibility
					
					Perceived dangerousness
					
					Emotions
					    Anger
					    Fear
					    Pity
					
					Behavioural intentions
					    Segregation
						Participants were most inclined to attribute cause to biology, followed by how the target was raised, followed by internal or personal factors (e.g., lack of willpower).
						
						Participants attributed little responsibility to the target for their mental disorders.
						
						Participants perceived little danger in the target.
						
						Participants experienced more pity towards the target than fear or anger.

| | | | | | Avoidance
Coercion
Helping

Sex

Age

Years of education (both general education and tertiary education in social work)

Ethnicity

Familiarity with individuals with disabilities | The findings suggest inconsistent patterns of behavioural intentions (e.g., participants were inclined to help, but also be coercive).

All causal attributions were significantly positively correlated with each other.

Biological attributions were a significant predictor of more pity. Biological attributions were not found to be a significant predictor of perceived personal responsibility, perceived dangerousness, behavioural intentions, or any other emotions. Internal attributions were a significant predictor of more perceived personal responsibility, and perceived dangerousness, but where not found to be a significant predictor of emotions or behavioural intentions. Attributing cause to how the target was raised was not found to be a significant predictor of perceived personal responsibility, perceived dangerousness, emotions, or behavioural intentions.

Perceived personal responsibility was not found to be a significant predictor of perceived dangerousness, any emotions, or any behavioural intentions.

Perceived dangerousness was a significant predictor of more anger, fear, segregation, avoidance, and coercion. Perceived dangerousness was not found to be a significant predictor of pity or helping.

Pity was not found to be significantly correlated with anger or fear. However, fear was significantly positively correlated with anger.

Anger was found to be a significant predictor of less helping, but was not found to be a predictor of any other behavioural intention. Fear was not found to be a significant |

						predictor of any behavioural intentions. Pity was found to be a significant predictor of more coercion and more helping, but was not found to be a significant predictor of segregation or avoidance. Sex was not found to have a significant impact on any of the stigmatisation constructs. Age and years of education were not found to be significant predictors of any of the stigmatisation constructs (causal attributions were not included in the regression). Non-Jewish participants, compared to Jewish participants, reported significantly more agreement with internal causation. Ethnicity did not have a significant impact on the other causal attributions. Being non-Jewish was a significant predictor of decreased perceived personal responsibility and increased perceived dangerousness and segregation. Being non-Jewish was not found to be a significant predictor of any emotional reactions or any of the other behavioural reactions. Familiarity with individuals with disabilities did not have a significant impact on any of the stigmatisation constructs.
Arbanas et al. (2019)	Unspecified nurses from a general hospital and a psychiatric hospital Unspecified medical doctors from a general hospital and a psychiatric hospital Lay people					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

Artzi-Medvedik et al. (2012)	Female psychiatric nurses Female midwives from general medical and psychiatric centres Female postpartum nurses from general medical and psychiatric centres (Israel)	Cross-sectional survey A vignette was used	-	Schizophrenia (description and a possible label)	AQ-27 (items were not specified) 　Familiarity with mental 　illness 　Perceived personal 　responsibility 　Pity 　Anger 　Fear 　Helping 　Coercion-segregation Attitudes towards breastfeeding among women with schizophrenia (items were not specified)	Most of the psychiatric nurses displayed an overall lack of stigmatisation towards the target on the AQ-27, and positive attitudes towards breastfeeding among women with schizophrenia. Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.
Arvaniti et al. (2009)	Psychiatrists Internists Surgeons Doctors working in laboratories Unspecified nurses Other unspecified health professionals Medical students					Nothing more was reported for this study as findings were not reported for psychiatrists separately.
Avery et al. (2013)	Psychiatrists (USA)	Cross-sectional survey	Independent samples t-test	Schizophrenia (label) Polysubstance dependence (label)	MCRS 　I prefer not to work with 　patients like this	Overall, participants displayed more positive than negative attitudes towards all the mental disorders on the MCRS. The only exceptions to this were community psychiatrists

| | | | | Between-groups ANOVA | Major depression (label)

Comorbid polysubstance dependence and schizophrenia (label)

Other unspecified patients (label) | Patients like this irritate me

I enjoy giving extra time to patients like this

Patients like this are particularly difficult for me to work with

Working with patients like this is satisfying

I feel especially compassionate toward patients like this

I wouldn't mind getting up on call nights to care for patients like this

I can usually find something that helps patients like this feel better

There is little I can do to help patients like this

Insurance plans should cover patients like this to the same degree that they cover patients with other conditions

Treating patients like this is a waste of medical dollars

Prognosis

Specialty
    Community psychiatrists
    Addiction psychiatrists | responded neutrally to three items for polysubstance dependence, and displayed a more negative attitude on the item I wouldn't mind getting up on call nights to care for patients like this for polysubstance dependence (scores for each individual item were only reported for polysubstance dependence and schizophrenia).

The following are the mental disorders listed from least positive attitudes to most positive attitudes on the MCRS for community psychiatrists.
    Polysubstance dependence

    Comorbid polysubstance dependence and schizophrenia

    Depression

    Schizophrenia
The difference between comorbid polysubstance dependence and schizophrenia, and schizophrenia was statistically significant.
The other differences were not assessed with inferential statistics.

The following are the mental disorders listed from least positive attitudes to most positive attitudes on the MCRS for addiction psychiatrists.
    Schizophrenia

    Polysubstance dependence and depression

    Comorbid polysubstance dependence and schizophrenia
The only item on which schizophrenia and polysubstance dependence elicited the same score, was insurance plans should cover patients like this to the same degree that they |

						cover patients with other conditions. The difference between comorbid polysubstance dependence and schizophrenia, and polysubstance dependence was statistically significant. The other differences were not assessed with inferential statistics.
						Community psychiatrists had significantly more positive attitudes towards schizophrenia, and addiction psychiatrists had significantly more positive attitudes towards polysubstance dependence. However, not all individual items were statistically significant. Speciality was not found to have a significant impact on attitudes for the other mental disorders.
						Prognosis was assessed with schizophrenia and polysubstance dependence only.
						Participants were more optimistic about the way people with schizophrenia and people with polysubstance dependence would respond to treatment.
						Community psychiatrists were less optimistic regarding how people with polysubstance dependence would respond to treatment, compared to people with schizophrenia. This was the opposite for addiction psychiatrists. These differences between mental disorders were not assessed with inferential statistics.
						Addiction psychiatrists were significantly more optimistic about the way people with polysubstance dependence would respond to treatment. Speciality was not found to have an impact on prognosis for schizophrenia.
Back et al. (2009)	Psychiatrists Social workers	Cross-sectional survey	Between-groups ANOVA Correlation analysis	SUD (label) PTSD (label)	Perceived difficulty in treating the particular diagnoses	Generally, SUD and PTSD were perceived as not difficult to treat, whereas a dual diagnosis of SUD and PTSD was perceived as either

	Counsellors Clinical psychologists Unspecified nurses from mental health organisations Other unspecified physicians from mental health organisations Other unspecified clinicians from mental health organisations (USA)			Dual diagnosis of SUD and PTSD (label)	Gratification experienced when treating the particular diagnoses	not difficult to treat or a great deal difficult to treat. PTSD was perceived as the least difficult to treat, followed by SUD, followed by a dual diagnosis of SUD and PTSD. Type of mental disorder was found to have a significant impact on perceived difficulty. However, multiple comparisons were not applied. There was a significant negative relationship between gratification and perceived difficulty for all mental disorders.
Bailey (1969)	Social workers (USA)	Longitudinal survey An intervention was used	-	Alcoholism (label)	Causal attributions An alcoholic is harder to relate to than an individual whose illness is not self-inflicted It is hard to be truly accepting of alcoholics, when one considers how seriously they damage their children Prognosis with treatment The immediacy of an alcoholic's demands makes it very difficult to maintain a professional relationship with him It is difficult to be treatment-minded with alcoholics, because so much of their behaviour is narcissistic	Participants attributed alcoholism to a range of causes with varying proportions. Underlying emotional problems and lack of will power were endorsed more frequently than physiological disposition. Before the alcoholism training program roughly half of the participants agreed that an alcoholic is harder to relate to than an individual whose illness is not self-inflicted. Before the alcoholism training program just under half of the participants agreed that it is hard to be truly accepting of alcoholics, when one considers how seriously they damage their children. Before alcoholism training, most participants agreed that the majority of alcoholics can recover with treatment. Before alcoholism training about half of the participants agreed that the immediacy of an alcoholic's demands makes it very difficult to maintain a professional relationship with him.

						Before alcoholism training less than half of participants agreed that it is difficult to be treatment-minded with alcoholics, because so much of their behaviour is narcissistic. Following alcoholism training, stigmatisation decreased for some measures and increased for others. None of the differences between before and after training were assessed with inferential statistics.

Baker et al. (2005)	Unspecified nurses from mental health facilities
	
	(England)
		Cross-sectional survey	-	Mental illness in general (label)
				
				Alcohol abuser (label)
				
				Substance abusers (label)
				
				Chronic schizophrenia (label)
				
				Depression (label)
					ATAMHS 33
					   Care or control
					      Alcohol abusers have no self-control
					
					      Patients with chronic schizophrenia are incapable of looking after themselves
					
					      Members of society are at risk from the mentally ill
					
					      Mentally ill patients have no control over their emotions
					
					      Nurses should not talk to patients about their delusions
					
					      Deliberate self-harm more often happens when other people are around
					
					      Depression occurs in people with a weak personality
						The only score from the ATAMHS 33 that was interpretable with the information provided was the hard to help factor score. For this factor, participants expressed roughly neutral responses.

					The cause of many psychological problems is bad nerves Patients with mental illnesses are more likely to harm someone else than themselves Acute wards are little more than prisons Mental illness is the result of adverse social circumstances Many normal people would become mentally ill if they had to live in a very stressful situation Semantic differentials 　Polite-rude 　Harmful-beneficial 　Cold-hearted-caring 　Clean-dirty 　Mature-immature 　Optimistic-pessimistic 　Safe-dangerous Therapeutic perspective 　Those with a psychiatric history should never be given a job with responsibility 　Those who attempt suicide leaving them with serious liver damage should not be given treatment	

					Violence mostly results from mental illness	
					Psychiatric patients are generally difficult to like	
					Patients who abuse substances should not be admitted to acute wards	
					Psychiatric treatments cause patients to worry too much about their symptoms	
					Hard to help It is difficult to negotiate care plans with patients in acute environments	
					It is hard to help patients who are emotionally disturbed	
					Psychiatric drugs are used to control disruptive behaviour	
					Mental illnesses are genetic in origin	
					Positive attitudes Psychiatric illness deserves as much attention as physical illness	
					The manner in which you talk to patients affects their mental state	

					People are born vulnerable to mental illness Adult–child	

Bander et al. (1987)	Psychiatrists
	
	Surgeons
	
	Internists
	
	(USA)
		Cross-sectional survey	-	Alcoholism (label)	A measure of attitudes towards alcoholism that uses semantic differentials
					  Tense-relaxed
					
					  Immoral-moral
					
					  Weak willed-strong willed
					
					  Immature-mature
					
					  Easily recognised based on appearance-not easily recognised based on appearance
					
					  Foolish-wise
					
					  Undependable-dependable
					
					  Patient does not want help-patient does wants help
					
					  Patient is not treatable-patient is treatable
					
					  Patient is not curable-patient is curable
					
					  Patient is not motivated for recovery-patients is motivated for recovery
					
					  Pessimistic about treatment-optimistic about treatment
						Relevant participants stigmatised alcoholism more with some items and less with other items.
						
						Other relevant findings were excluded from this table as they were not reported for psychiatrists separately.

Bayar et al. (2009)	Psychiatrists Psychiatry residents					Nothing more was reported for this study as findings were not reported for psychiatrists separately.

Beaulieu et al. (2017)	Family physicians
	
	(Canada)
		Experiment
		
		An intervention was used
			Multilevel modelling
			
			Correlation analysis
			
			Moderation analysis
				Mental illness in general (label)	OMS-HC
					  Negative attitudes
					    I am more comfortable helping a person who has a physical illness than I am helping a person who has a mental illness
					
					    Despite my professional beliefs, I have negative reactions towards people who have mental illness
					
					    There is little I can do to help people with mental illness
					
					    More than half of people with mental illness don't try hard enough to get better
					
					    Health care providers do not need to be advocates for people with mental illness
					
					    I struggle to feel compassion for a person with a mental illness
					
					Health professionals' own willingness to disclose or seek help for a mental illness
						In general, participants expressed positive attitudes towards mental illness at pre-test.
						
						Findings regarding health professionals' own willingness to disclose or seek help for a mental illness were not included in this table as this factor does not reflect endorsed provider-based stigma.
						
						Overall participants did not express a preference for greater social distance at pre-test.
						
						While controlling for size of practice, a significant interaction effect of time (i.e., pre and post training) and condition (i.e., intervention and control) was not found for negative attitudes.
						
						While controlling for size of practice, there was a significant interaction between time and condition for social distance. For the skill-based training group, social distance decreased from pre-test to post-test and for the control group, social distance increased. This was all that was reported.
						
						Confidence in managing mental illness was significantly negatively correlated with stigmatisation on the OMS-HC. This was moderated by sex, such that the relationship was stronger for males compared to females. This was all that was reported.

					Preference for greater social distance	
					Confidence in managing mental illness	
					Sex	
					Size of the practice participants worked in (control variable)	
Berg et al. (1978)	Social workers Unspecified nurses from medical clinics and alcohol treatment agencies Unspecified physicians and PhDs from medical clinics and alcohol treatment agencies Case aides and counsellors Aides Health aides (USA)	Cross-sectional survey	-	Mental illness in general (label)	OMI scale Authoritarianism (characterised by the following) A view of the mentally ill as a class inferior to normals requiring coercive handling Submission to and respect for authority are important virtues Benevolence (characterised by the following) Kindness toward unfortunates Mental patients are not failures but more like children who must be watched Mental patients are the responsibility of society Mental hospitals are like prisons Mental hygiene ideology (characterised by the following)	Social workers and unspecified nurses from alcohol treatment agencies mostly expressed positive attitudes. However, these participants had less positive attitudes for the mental hygiene ideology factor. Social workers and unspecified nurses from alcohol treatment agencies disagreed more with interpersonal aetiology. Compared to social workers, nurses from alcohol treatment agencies expressed more positive attitudes for benevolence and mental hygiene ideology, and expressed more negative attitudes for authoritarianism and social restrictiveness. Also, nurses from alcohol treatment agencies agreed more with interpersonal aetiology compared to social workers. These differences were not examined with inferential statistics. Social workers from alcoholism treatment agencies expressed more positive attitudes than social workers from medical clinics for two OMI factors. However, social workers from alcoholism treatment agencies expressed more negative attitudes than social workers from medical clinics for the other two OMI factors. These differences were not examined with inferential statistics for social workers separately.

					Mental illness is an illness like any other
					
					The mentally ill are capable of skilled labour
					
					The mentally ill should not be in prison-like institutions
					
					Social restrictiveness (characterised by the following)
					    Small children should not be allowed to visit people with mental illness
					
					    A woman would be foolish to marry a man who has had a severe mental illness
					
					    All patients in mental hospitals should be prevented from having children
					
					Interpersonal aetiology (characterised by the following)
					    Mental illness arises from interpersonal experience
					
					    Successful people rarely become mentally ill
					
					Profession
					
					Agency type
						Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.

Beryl & Vollm (2018)	Psychologists
	
	Psychiatrists
	
	Social workers
	
	Forensic psychiatric nurses
	
	Unspecified education professionals and other unspecified allied health professionals
	
	(England)
		Cross-sectional survey	Between-groups ANOVA	Personality disorder (label)	APDQ
					    Enjoyment/loathing (warmth, liking and interest)
					
					    Security/vulnerability (fears, anxieties, and helplessness)
					
					    Acceptance/rejection (anger and a sense of difference)
					
					    Purpose/futility (pessimism)
					
					    Enthusiasm/exhaustion
					
					Profession
						Mental health professionals expressed more overall negative attitudes towards personality disorder.
						
						Nurses and psychiatrists had significantly more negative overall attitudes than psychologists and social workers. Nurses and psychiatrists were not compared, and nor were psychologists and social workers.
						
						Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.

Bjorkman et al. (2008)	Psychiatric care nurses and assistant nurses Somatic care nurses and assistant nurses					Nothing more was reported for this study as findings were not reported for psychiatric nurses separately.
Black et al. (2011)	Psychiatrists Psychologists Social workers Unspecified nurses Physician assistants Psychiatry residents Other unspecified clinicians (USA)	Cross-sectional survey	-	BPD (label)	If I had a choice, I would prefer to avoid caring for a BPD patient BPD patients intentionally manipulate others It is easy for me to stereotype patients with BPD I dislike BPD patients The prognosis for BPD treatment is hopeless Profession	Across the measures, mental health professionals mostly expressed more positive attitudes. However, psychiatrists and psychologists expressed more agreement with avoiding a BPD patient, psychologists expressed roughly neutral responses to BPD patients intentionally manipulating others, and psychiatrists expressed roughly neutral responses to stereotyping patients with BPD. Social workers consistently expressed less stigmatisation across the measures compared to psychiatrists and psychologists. Also, psychologists expressed less stigmatisation than psychiatrists across all measures except one. In this case, psychiatrists expressed less stigmatisation than psychologists. Differences between the professions were not examined

						with inferential statistics for the mental health professionals separately. Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.
Blundell et al. (2012)	Psychiatric nurses (England)	Semi-structured interviews Repertory grid technique	Hierarchical cluster analysis Principle components analysis	Depression (label) Psychosis (label) Personality disorder (label)	Stereotypes (e.g., good mother, dependent, unpredictable, difficult to get on with)	For most participants all of the mental disorders were construed as being closer to a pole that was characterised by negative stereotypes. The three mental disorders differed with respect to how close they were to different stereotypes. These differences were not quantified and were therefore unable to be interpreted clearly. The only difference between the mental disorders that could be clearly examined regarded whether people with the specified mental disorders could be good mothers. Personality disorder overlapped the most with good mothers, followed by psychosis, followed by depression. These differences were not assessed with inferential statistics.

Bodner et al. (2011)	Psychologists
	
	Psychiatrists
	
	Psychiatric nurses
	
	(Israel)
		Cross-sectional survey	MANOVA
			
			Stepwise multiple regression analysis
				BPD (label)	Empathy
					  I feel empathy toward BPD patients
					
					  Taking care of BPD patients can evoke unfamiliar feelings
					
					  Patients with BPD evoke parental emotions in me
					
					  I would like to relieve the suffering of BPD patients
					
					  Treating a BPD patient is one of the most difficult treatments
						In general, participants empathised with people with BPD.
						
						Descriptive statistics for negative emotions and experienced treatment difficulties were not reported. Descriptive statistics were also not reported for the items of antagonistic judgements that were relevant to stigmatisation.
						
						Controlling for seniority, nurses had significantly less empathy than psychiatrists and psychologists.
						Whether there was a significant difference between psychiatrists and psychologists was not reported.

					Negative emotions
					    Anger
					
					    Lack of empathy
					
					    Impatience
					
					    Embarrassment
					
					    Helplessness
					
					    I do not like to treat BPD patients because they always tell me how miserable they are
					
					    When a BPD patient tries to harm himself/herself, I feel that the patient violates the therapeutic contract
					
					Experienced treatment difficulties
					    It is easier for me to treat schizophrenic patients than BPD patients
					
					    Treating BPD patients can wear me out
					
					    It's difficult for me to treat BPD patients
					
					    Treatment sessions with BPD patients make me easily angry
					
					    I do not enjoy treating BPD patients because it is difficult to help them
					
					    I rarely pity BPD patients
						Controlling for seniority, no significant differences were found between professions for negative emotions and experienced treatment difficulties.
						
						No significant differences were found between the levels of seniority for empathy or experienced treatment difficulties.
						Seniority was a significant predictor of deceased negative emotions.
						
						Perceiving people with BPD as being at risk of suicide was a significant predictor of negative emotions (controlling for wishing to improve treatment skills and seniority) and experiencing increased difficulty in treating people with BPD (controlling for familiarity with other therapies).
						
						Wishing to improve treatment skills was a significant predictor of negative emotions (controlling for perceptions of suicidal tendencies and seniority).
						
						Being familiar with other therapy methods was a significant predictor of experiencing increased difficulty in treating people with BPD (controlling for perceptions of suicidal tendencies).
						
						Being a female, compared to being a male, was a significant predictor of increased empathy (controlling for antagonistic judgments).
						
						Antagonistic judgments were a significant predictor of decreased empathy (controlling for sex).

					Antagonistic judgments	
					A suitable setting for BPD patients is a closed psychiatric ward	
					The mental health services for BPD patients are sufficient enough	
					The treatment of BPD patients in hospital should be based on behavioural psychotherapy and setting of limits	
					Psychotherapists should not be held responsible for a BPD patient dying by suicide	
					Psychotic manifestations among BPD patients are very common	
					While being in hospital, BPD patients demonstrate rapid mood changes and suicidal threats as a way to manipulate others	
					Treatment of BPD patients should be conducted by a psychiatrist	
					Treatment of BPD patients should be conducted by a social worker	
					BPD patients receive insufficient mental health services due to difficulties they create	

						Clinical depression among BPD patients may be followed by suicide BPD should be defined as a psychiatric disorder because it is an Axis I disturbance The mental health services that BPD patients receive are limited because of staff's lack of knowledge Psychotic manifestations among BPD patients are in fact malingering Profession Seniority (levels were not specified) Perceptions of suicidal tendencies Wishing to improve treatment skills Familiarity with therapies other than dialectical-behaviour therapy Sex	
Botega & Silveira (1996)	GPs (Brazil)	Cross-sectional survey	-		Depression (label)	Causal attributions Prognosis	Participants attributed depression to a range of causes with varying proportions. Recent misfortunes and biochemical abnormalities were the most likely causes, and poor stamina and deprivation in early life were the least likely causes (neutral responses were available).

						Roughly half of the participants disagreed that depression reflects a characteristic response in patients which is not amendable to change, and depression seen in general practice improves without treatment (neutral responses were available).
Botega et al. (1992)	GPs (UK)	Cross-sectional survey	Between-groups ANOVA	Depression (label)	Causal attributions Prognosis Amount of antidepressants prescribed Time since receiving medical degree Perceived frequency of depression in the clinic Sex	Participants agreed more with biological and environmental causes of depression, and disagreed more with poor stamina being the cause of depression. Participants agreed more with a positive prognosis. Participants that attributed depression more to organic causes prescribed antidepressants significantly more than participants that attributed the cause of depression more to recent misfortunes. Time since receiving medical degree and perceived frequency of depression was not found to have a significant impact on causal attributions. Sex was not found to have a significant impact on biological causal attributions.
Brener et al. (2013)	Unspecified mental health professionals (Australia)	Cross-sectional survey IAT	Correlation analysis Standardized multiple regression analysis	Mental illness in general (label) Bipolar affected, schizophrenia affected, and PTSD affected (labels)	General attitudes Implicit general attitudes/stereotypes (particular stereotypes were not specified) Helping behaviour Negative emotions (fear was the only example provided)	Participants had more general positive attitudes towards people with mental illness. Participants held more implicit negative attitudes/stereotypes about the mental disorders than positive attitudes/stereotypes. Participants were more certain than uncertain that they would help someone with a mental illness. Participants expressed little negative emotion towards mental illness.

| | | | | | | Implicit negative attitudes/stereotypes were a significant predictor of uncertainty in providing help to people with mental illness.

Implicit attitudes/stereotypes were not found to be a significant predictor of negative emotions.

Negative emotions were significantly positively associated with uncertainty in providing help to people with mental illness. |
|---|---|---|---|---|---|---|
| Bulbulia & Laher (2013) | Psychiatrists

(South Africa) | Semi-structured interviews | Thematic analysis | Mental illness in general (label) | Causal attributions

Islamic beliefs

General perceptions of mental illness | Participants emphasised biological factors in the aetiology of mental illness. Participants were less inclined to highlight the environmental, socio-cultural and religious aspects of mental illness.

It was suggested that Islamic beliefs influenced perceptions of mental illness. It was not clear as to how these beliefs influenced perceptions. |
| Burns et al. (2000) | GPs

Psychiatric nurses

Psychiatrists

Occupational therapists

A clinical psychologist

Social workers

(England) | Cross-sectional survey | - | Long-term psychotic disorders (label) | People with long-term psychotic disorders create a lot of work for a practice/are a major burden on a community health team

People with long-term psychotic disorders pose communication problems

People with long-term psychotic disorders are difficult to like

People with long-term psychotic disorders rarely cause difficulties for families or other carers

Prognosis whatever is done

Profession | Most participants did not stigmatise long-term psychotic disorders on most of the measures. There were only a couple of cases in which most participants stigmatised long-term psychotic disorders.

GPs were more likely to stigmatise long-term psychotic disorders than all the other professions combined. Differences between GPs and the other professions combined were not assessed with inferential statistics. The other professions were not compared with respect to stigmatisation. |

Burroughs et al. (2006)	GPs (England)	Semi-structured interviews	Thematic analysis	Depression (label)	Causal attributions Prognosis Age of the person with depression	Depression in late life was viewed by GPs as a normal response to loneliness and a reduction in function. Depression in late life was also seen as understandable and justified. Some GPs expressed the belief that psychotherapy is unlikely to work for people with depression in late life compared to younger adults with depression.
Bushnell et al. (2005)	GPs (New Zealand)	Cross-sectional survey	-	Mental illness in general (label)	I have no personal difficulties in dealing with mental health patients	Almost all participants agreed at least somewhat that they have no personal difficulties in dealing with mental health patients.

Caldwell & Jorm (2001)	Mental health nurses (Australia)	Experiment
		
		Vignettes were used
			Mann-Whitney U-test
			
			Kruskal-Wallis test
			
			Between-groups ANOVA
				Depression (description)
				
				Schizophrenia (description)
					Prognosis
					
					Perceived long-term positive and negative behavioural outcomes in the event that the target is getting help (some of which were stereotypes)
					
					Whether the target is receiving professional help or not
					
					Age
					   39 and younger
					   40-49
					   50 or older
					
					Sex
					
					Amount of contact with someone similar to the target in the vignette
					
					Work setting
					   Community
						Participants endorsed good and bad prognoses and long-term behavioural outcomes with varying proportions.
						
						Generally, participants were more likely to report worse prognoses and long-term outcomes for schizophrenia compared to depression. This was not examined with inferential statistics.
						
						Prognoses were more likely to be good if the target was receiving help. This was not assessed with inferential statistics.
						
						Nurses that were 40 to 49 perceived slightly more positive long-term outcomes for schizophrenia compared to nurses that were 39 or younger. Nurses that were 50 or older perceived more negative long-term outcomes for schizophrenia compared to the other age groups. However, it was not clear if age had a significant impact on perceived long-term outcomes for schizophrenia, and multiple comparisons were not applied to these

					Hospital
					
					Size of community
					
					Education environment
					  Hospital
					  University
					  Both hospital and university
					
					Level of training
					  Undergraduate degree
					
					  Postgraduate diploma/certificate
					
					Masters/PhD degree
						differences. All other age differences were not reported and not clearly assessed with inferential statistics.
						
						Sex was not found have a significant impact on perceived long-term outcomes.
						
						Amount of contact with a person similar to the target in the vignette, work setting, size of community, education environment, and level of training were not found to have a significant impact on perceived long-term outcomes.
						
						All significant findings in this study were not accompanied by inferential statistics.

Calicchia (1981a)	Psychologists
	
	Psychiatrists
	
	Social workers
	
	(USA)
		Cross-sectional survey	Correlation analysis
			
			Between-groups ANOVA
				Mental illness in general (label)	Semantic differentials were used to measure attitudes
					  Worthy-unworthy
					  Safe-dangerous
					  Effectiveness-ineffectiveness
					  Understandable-mysterious
					
					Social distance
					
					Using the semantic differential dimensions and social distance, attitudes towards people in general were measured
					
					Profession
						Participants expressed stigmatising attitudes towards people with mental illness.
						
						There was a significant positive correlation between attitudes towards the public and attitudes towards people with mental illness.
						
						After controlling for attitudes towards people in general, each profession expressed significantly more negative attitudes than the other professions for at least one measure of stigmatisation. No profession consistently expressed significantly more negative attitudes than the other professions across the measures of stigmatisation and some differences were not found to be statistically significant. Statistics were not reported in this study for multiple comparisons.

Calicchia (1981b)	Psychologists Psychiatrists Social workers	Cross-sectional survey	-	Mental illness in general (label)	Semantic differential dimensions (only the following examples were given for each dimension) Evaluative (e.g., good-bad, worthy-unworthy)	Generally, the mental health professionals expressed stigmatising attitudes towards mental illness. Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.

	Unspecified mental health students Teachers Lawyers Engineers (USA)				Activity (e.g., safe-dangerous, predictable-unpredictable) Potency (e.g., effective-ineffective, competent-incompetent) Comprehension (e.g., understandable-incomprehensible, logical-mysterious) Social distance	
Cape et al. (2008)	GPs (England)	Cross-sectional survey and unstructured interviews Videos of mock consultations with patients with mental health problems were used	Correlation analysis	Depression (label)	DAQ Treatment attitude (causal attributions including poor stamina/biochemical abnormality and antidepressants over psychotherapy) Professional unease (discomfort and dissatisfaction working with depression) Inevitable course of depression/pessimism about depression (depression is caused by deprivation in early life, is unchangeable, and is a normal part of getting old) Identification of depression (depression is distinguishable from regular unhappiness)	Descriptive statistics were not reported for the DAQ. There was a significant positive correlation between complexity of psychosocial explanations and positive attitudes toward depression.

| | | | | | Complexity of psychosocial explanations of mental health problems

    Mention a greater number of hypothesised elements for the patient's difficulties

    Link these elements to describe how their interaction resulted in problems for the patient

    Give alternative possible explanations | |
| Caplan et al. (2016) | Primary care physicians

A psychologist

A school psychologist

A medical psychologist

Social workers

Psychiatrists

An occupational therapist

A neuropsychologist and epidemiologist

Auxiliary nurses

Unspecified nurses

Directors of nursing, a subdirector, hospital administrators, a hospital director, and a regional health administrator

A paediatrician | Focus groups | Thematic analysis | Mental illness in general (label) | Perceived physical appearance

Perceived hygiene

Perceive strange expression

Perceived aggression | One primary care physician believed that people with mental illness have a poor physical appearance and lack good personal hygiene. Another primary care physician believed that people with mental illness have a strange expression in their eyes and seem aggressive.

Other relevant findings were excluded from this table as they were not reported for mental health professionals separately. |

	Unspecified physicians An unspecified physician and epidemiologist An orthopaedic surgeon A gastroenterologist Medical students (Dominican Republic)					
Caplan et al. (2018)	Primary care physicians A psychologist A school psychologist A medical psychologist Social workers Psychiatrists An occupational therapist A neuropsychologist and epidemiologist Auxiliary nurses Unspecified nurses Directors of nursing, a subdirector, hospital administrators, a hospital director, and a regional health administrator A paediatrician	Focus groups	Thematic analysis	Mental illness in general (label)	Fear Perceived aggression Causal attributions	One psychologist stated that they experience fear in the company of people with mental illness due to their perception of people with mental illness being aggressive. A social worker attributed mental illness to a lack of faith in god. Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.

	Unspecified physicians An unspecified physician and epidemiologist An orthopaedic surgeon A gastroenterologist Medical students (Dominican Republic)					
Carroll (1993)	Counsellors Social workers Psychiatric nurses General nurses Prison nurse officers (Scotland)	Cross-sectional survey	-	Mental illness in general (label) Drug abusers (label) Other unspecified patients (label)	A measure of attitudes towards drug abusers Drug use can be treated successfully A drug-using person who has had several relapses cannot be treated successfully Street pushers are the initial source of drugs for young people Angry confrontation is necessary in the treatment of drug users Drug users are usually unconventional in dress and appearance Any person who is receiving treatment in a residential setting should be discharged if discovered using illicit drugs Drug users can be rehabilitated	For the relevant items, most counsellors and social workers did not express stigmatisation (I don't know was an available option). Most counsellors and social workers disagreed that drug use leads to mental illness, and agreed that drug misuse is no different from any other physical illness (I don't know was an available option). Social workers expressed more overall negative attitudes than psychiatric nurses, followed by addiction counsellors. However, the impact of profession on attitudes was not examined with inferential statistics for the mental health professionals separately. Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.

					Only disturbed people experiment with drugs Drug users should be sterilised Once someone is using drugs, there is very little that can be done Drug use leads to mental illness Most drug users have above average intelligence Treatment of drug users should be through the prison system only For most purposes the drug user can best be treated by a social worker Parents should react with anger on discovering that their sons or daughters are using drugs People who are 'high' on drugs should not be allowed into a drug treatment agency Drug misuse is no different from any other physical illness People who use drugs are sexually promiscuous It is normal for a teenager to experiment with illicit drugs	

					Drug users should only be cared for in specialized units People who use drugs are irresponsible Most female drug users prostitute to support their habit Drugs corrupt the young Pregnant drug users should have an abortion All drug users are criminals who prey on society Drug users will 'grow out of it' HIV testing should be compulsory for all drug users Health and social services staff should be able to refuse to work with drug users All drug users are a threat to society as potential AIDS carriers Drug users are not as deserving of care as other patients Profession	
Carr-Walker et al. (2004)	Psychiatric nurses Prison officers (England)	Cross-sectional survey and semi-structured interviews	-	Personality disorder (label)	APDQ Enjoyment/loathing Security/vulnerability	For the APDQ, psychiatric nurses expressed less positive attitudes on the enjoyment factor and more positive attitudes on the other factors.

					Acceptance/rejection Purpose/futility Enthusiasm/exhaustion SAPDI	As part of the SAPDI, psychiatric nurses expressed that personality disorder is either caused by nurture or a mixture of nature and nurture/were unsure. As part of the SAPDI, only a small proportion of the psychiatric nurses expressed that people with personality disorder have a warped and different perspective on the world that reflects incompetence. All other factors in the SAPDI were either unable to be interpreted with the information provided or were irrelevant to the stigmatisation of personality disorder. Other relevant findings were excluded from this table as they were not reported for psychiatric nurses separately.
Ceuterick et al. (2020)	GPs (Belgium)	Experiment Videotaped interviews between a GP and a patient with major depression were used	MANOVA	Major depression (presentation)	Therapy adherence The patient tells you about all medications and treatments he or she is using? The patient tells you if he/she is not following the treatment plan? The patient follows the treatment plan you recommend The patient is likely to follow-up the referral advice The patient will take the prescribed medicines in a correct manner The patient is unlikely to follow up for clinic visits The patient will stop his/he medication as soon as he/	GPs expressed more positivity for therapy adherence and more overall positivity for therapy optimism. However, overall GPs responded neutrally towards a native target, and slightly more negatively towards foreign decent and asylum seeker targets for client trustworthiness. Migration background was not found to have a significant impact on therapy adherence. For therapy optimism, GPs were significantly more positive overall towards the native and foreign decent targets compared to the asylum seeker target, and no significant difference was found between the two former targets. For client trustworthiness, GPs were significantly more positive overall towards the native target compared to the foreign decent and asylum seeker targets, and no significant difference was found between the two latter targets.

					she feels better
					
					Therapy optimism
					  It is unlikely that the patient will improve
					
					  The patient will not understand GP's recommendations
					
					  Optimistic about patient chances of complete healing
					
					  The patient poses no difficult management problem
					
					Client trustworthiness
					  The patient makes unreasonable demands
					
					  The patient is exaggerating his pain
					
					  The patient does manipulate the office visit for secondary gain
					
					Migration background
					  Native
					  Foreign decent
					  Asylum seeker	

Chambers et al. (2010)	Mental health nurses General nurses and other unspecified non-mental health nurses					Nothing more was reported for this study as findings were not reported for mental health nurses separately.

Chang et al. (2013)	Psychiatric nurses	Cross-sectional survey	-	SUDs (label)	A measure of attitudes towards people with SUDs
					  Treatment necessity
					  (perceptions regarding
						Psychiatric nurses expressed more overall positive attitudes.

	Medical and surgical nurses, and other unspecified nurses (Taiwan)				necessary treatments provided for clients with SUDs) Treatment optimism (positive perceptions regarding treatment outcomes) Acceptance (acceptance of SUDs within a continuum of normal human behaviour) Stereotypes (the only examples provided were clients with SUDs are from low socio-economic groups, are unemployed, exhibit poor impulse control, and have emotional difficulties) Moralism (moralistic perspectives regarding SUDs)	Other relevant findings were excluded from this table as they were not reported for psychiatric nurses separately.
Charles & Bentley (2018)	Social work professionals Marriage and family therapists Counsellors Psychology professionals Unspecified nursing professionals that work in either mental health or inpatient facilities Unspecified medical professionals that work in either mental health or inpatient facilities					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

	Human services professionals Support staff Paraprofessionals Other unspecified mental health and health professionals					
Chekuri et al. (2018)	Psychologists Psychiatrists Mental health nurses Primary care physicians Primary care nurses					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Chen et al. (2013)	Psychiatrists (China)	Cross-sectional survey	-	Mental illness in general (label)	People with mental illness are treatable People with mental illness should receive social security and free medical care People with mental illness are more violent than the general population All people with mental illness should receive violence risk assessments It is difficult to manage forensic psychiatric patients Separate legislation should be created regarding the disposal of forensic psychiatric patients	For some measures most of the participants expressed stigmatisation, whereas for other measures most participants expressed a lack of stigmatisation.

					Forensic psychiatric patients can receive treatment in the community	
					A specific controlled community network needs to be established for the rehabilitation of forensic psychiatric patients	
					Offenders found not guilty by reason of insanity should be sent home under their guardians' surveillance	
					Offenders found not guilty by reason of insanity should be treated in the custody of a forensic psychiatric hospital	
					Offenders found not guilty by reason of insanity should forcibly send them to a general psychiatric hospital	
					Offenders found not guilty by reason of insanity should be allowed to choose whether or not they received treatment in a hospital or as an outpatient	
					Offenders found not guilty by reason of insanity should be treated in prison	
Chew-Graham et al. (2002)	GPs (England)	Semi-structured interviews	Thematic analysis	Depression (label)	Causal attributions Perceived reason for seeking treatment Perceived burden caused by people with depression	Participants reported that depression is caused by life stressors. Participants suggested that some people with depression are seeking assistance not just for the treatment of their illness but also for an underlying reason, such as in order to avoid having to work.

					Perceived difficulty	Participants reported that people with depression are a psychological and professional burden.
					Frustration	One participant stated that you have to be robust enough to manage people with depression and if you are not, they can be very difficult.
					People with depression are draining and tiresome	Participants found people with depression frustrating and draining.
					People with depression are unattractive and boring	One participant stated that people with depression are unattractive, difficult, boring and tiresome.
					Working with depression is a positive experience	Some participants found working with depression to be a positive experience and could see the potential for improvement. However, these participants also reported being frustrated by some people with depression that resist treatment and continue to be depressed.
					Prognosis	
					Depression is time consuming	Some participants viewed depression as intractable and time consuming.
Chiba et al. (2016)	Social workers Clinical psychologists Psychiatrists Occupational therapists Unspecified nurses that work in psychiatric hospitals and community service agencies Assistant nurses Pharmacists (Japan)	Cross-sectional survey	The analysis was not clear	Mental illness in general (label) Schizophrenia (label)	Japanese version of the RAQ Recovery is possible and needs faith Recovery is difficult and differs among people Positive attitudes scale Ability and recovery of people with mental illness Attitudes toward living alongside those people Supportive helping behaviours	Social workers, clinical psychologists, psychiatrists, and occupational therapists agreed more that people with mental illness can recover. Scores on the positive attitudes scale and SDSJ were not reported. Profession was not found to have a significant impact on overall RAQ scores. Inferential statistics were not reported for this. Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.

					Social distance towards schizophrenia was measured with the SDSJ Profession	
Chien et al. (2014)	Psychiatrists Psychiatric nurses Occupational therapists Social workers Psychologists (China)	Cross-sectional survey	It was not clear which statistical analyses were used	Mental illness in general (label)	People with mental illness are unpredictable People with mental illness are weird People with mental illness are emotional People with mental illness are bedraggled People with mental illness are dangerous People with mental illness are self-controlled People with mental illness are stubborn People with mental illness are healthy People with mental illness are reasonable People with mental illness are unreliable People with mental illness are stupid People with mental illness should be required to admit to a psychiatric hospital or unit	For many measures, most participants expressed stigmatisation. For the other measures, either roughly half or most of the participants expressed a lack of stigmatisation. Profession, years of experiences as a mental health professional, and occupational characteristics were not found to have a significant impact on overall stigmatisation.

					People with mental illness should have their license revoked People with mental illness should have an abortion in the case of pregnancy People with mental illness should have the right to vote Profession Years of experience as a mental health professional Occupational characteristics (it was not clear what this meant)	
Chikaodiri (2009)	Social workers Unspecified medical doctors Unspecified nurses Pharmacists Administrators Laboratory scientists Physiotherapists Medical records officers Hospital support staff (Nigeria)	Cross-sectional survey	-	Mental illness in general (label)	Would not wish to have their place of work next door to the psychiatric wards It is reasonable for the hospital staff to resist the location of psychiatric wards within the hospital	Most social workers did not express stigmatisation. Other relevant findings were excluded from this table as they were not reported for social workers separately.
Cleary et al. (2002)	Psychiatrists Psychologists					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

	Social workers Occupational therapists Unspecified nurses from mental health and community health facilities Other unspecified health professionals					
Clemente et al. (2017) (Brazil)	Psychiatrists	Semi-structured interviews	Contextual semantic interpretation	Mental illness in general (label) Bipolar disorder (label) SUDs (label) Schizophrenia (label)	Perceived insight Perceived weakness Perceived difficulty Perceived unpredictability Perceived uncontrollability Perceived dangerousness to the self and others Prognosis Perceived aggression People with mental illness are individuals who should be able to make their own decisions	Participants described people with bipolar disorder as lacking insight, weak, problematic, unpredictable, uncontrollable, and potentially dangerous to themselves and especially to their family and their own possessions. Participants perceived people with bipolar disorder as unlikely to recover. Compared to schizophrenia however, the participants believed that people with bipolar disorder can have a good life. Participants discussed aggressive behaviour when talking about mental disorders in general, and some comorbid conditions, such as SUDs. Participants also humanised people with mental illness, viewing them as individuals that should be able to make their own decisions regarding treatment.
Cohen & Struening (1962)	Psychiatrists Social workers					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

	Psychologists					
	Unspecified nurses that work in neuropsychiatric hospitals					
	Other unspecified physicians that work in neuropsychiatric hospitals					
	Psychiatry residents or trainees					
	Social work trainees					
	Psychology trainees					
	Nursing trainees					
	Dentists					
	Chaplains					
	Aides					
	Special services					
	Physiatrists					
	Kitchen workers					
	Clerks					

Cohen & Struening (1963)	Psychiatrists
	
	Psychologists
	
	Social workers
	
	Unspecified nurses that work in mental hospitals
		Cross-sectional survey	Between-groups ANOVA
			
			Cluster analysis
				Mental illness in general (label)	OMI scale
					  Authoritarianism
					  Benevolence
					  Mental hygiene ideology
					  Social restrictiveness
					  Interpersonal aetiology
					
					Profession
						Overall, psychiatrists, psychologists, social workers, and nurses expressed more positive attitudes towards mental illness. However, for benevolence, psychologists either expressed roughly neutral responses, or more negative responses.

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	Other unspecified physicians that work in mental hospitals Dentists Dieticians Lab technicians Physiatrists Clerks Special services personnel (USA)					For interpersonal aetiology, psychiatrists, psychologists and social workers expressed more agreement. Nurses on the other hand expressed roughly neutral responses. Profession was found to have a significant impact on all OMI scale factors. Although multiple comparisons were not applied to profession differences, clusters of professions were identified with respect to differences on the OMI scale. Nurses formed a cluster with physicians and dentists, and dieticians, lab technicians, physiatrists, clerks, and special services personnel. This cluster was characterised by low authoritarianism but fairly neutral scores on benevolence, mental hygiene ideology, social restrictiveness, and interpersonal aetiology. Psychologists and social workers formed a cluster. This cluster was characterised by low authoritarianism, low social restrictiveness, high mental hygiene ideology, high interpersonal aetiology, and neutral scores on benevolence. Psychiatrists did not clearly fit into a particular cluster. They were characterised by low authoritarianism, low social restrictiveness, high benevolence, high mental hygiene ideology, and high interpersonal aetiology. Other relevant findings were excluded from this table as they were not reported for other physicians separately.
Cohen & Struening (1964)	Psychiatrists Social workers					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

	Psychologists Unspecified nurses that work in mental hospitals Other unspecified physicians that work in mental hospitals and dentists Nursing assistants Physiatrists Special services personnel					

Colombo et al. (2003)	Psychiatrists
	
	Psychiatric nurses
	
	Social workers
	
	(England)
		Structured interviews with open-ended questions
		
		A vignette was used
			-	Mental illness in general (label)
				
				Schizophrenia (description)
					Mental illness is a myth
					
					Causal attributions
					
					Prognosis generally and if changes are made at a societal level
					
					Rights of the target (including blame)
					
					Rights of society (including coercion)
					
					Duties of society
					
					Profession
					
					Target attributes
					    Severity of learning
					    problems
					
					Levels of ego strength
						None of the participants stated that mental illness is a myth (disagreement was not an available option).
						
						Participants attributed schizophrenia to a range of causes with varying proportions. Social (e.g., marginal status) and biological causes were the most common explanations, and family-based causes were among the least common explanations.
						
						Over half of the participants expressed a good prognosis for schizophrenia generally and just under half expressed a good prognosis for schizophrenia if changes are made at a societal level. Further, only a small proportion of participants expressed that therapy may be long term for the person in the vignette (disagreement was not an available option).
						
						Half of the participants expressed that the person in the vignette had the right to the sick role, should be given sympathy, and should not be blamed. Most of the participants expressed that the person in the vignette had

| | | | | | the right to privacy, personal freedom, and the same civil rights as anyone else. However, only a small proportion of participants expressed that the person in the vignette had the right to receive help and support as a victim of a stressful society (disagreement was not an available option).

Only a small proportion of participants expressed that society had the right to restrain/sanction those who break social rules, such as the person in the vignette. However, most participants expressed that society had the right to restrain those who are at risk of harming themselves or others, such as the person in the vignette. In comparison, less than half of the participants expressed that society had limited rights over the person in the vignette and should be proactive in preventing stress for this person (disagreement was not an available option).

Just over half of the participants expressed that society had the duty to empathise with and provide proper medical facilities for the care of the person in the vignette. Also, under half of the participants expressed that society had a duty to build therapeutic partnerships with, listen to and respect the views of people like the person in the vignette (disagreement was not an available option).

A small proportion of participants expressed that the prognosis of the mental disorder present in the vignette depends on severity of learning problems and levels of ego strength (disagreement was not an available option).

Some professions were more likely to attribute schizophrenia to particular causes. Psychiatrists were the most likely to attribute cause to biological and cognitive-behavioural factors (e.g., poor coping skills), and the they |
|---|---|---|---|---|---|

						were the only participants to attribute cause to family interactions. Social workers were the most likely to attribute cause to early trauma, whereas none of the psychiatrists attributed cause to this factor. Nurses were the most likely to attribute cause to social factors. No profession was consistently more or less likely to express a particular attitude across the stigmatisation measures. Nurses were more likely than psychiatrists to express that prognosis for the mental disorder present in the vignette partly depended on the severity of learning problems. Further, social workers were the only participants to express that the prognosis of the mental disorder present in the vignette depends on levels of ego strength. Differences between professions were not assessed with inferential statistics.
Corrigan et al. (2014)	Psychologists Unspecified nurses from mental health and primary care clinics Unspecified physicians from primary care clinics and other unspecified physicians from mental health clinics					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Cremonini et al. (2018)	Unspecified nurses from psychiatric care facilities Social workers Healthcare assistants Educators	Cross-sectional survey	Between-groups ANOVA	Mental illness in general (label)	The authoritarianism, benevolence and social restrictiveness factors from the CAMI-I Profession	Mental health professionals expressed more positive attitudes towards mental illness. Profession was found to have a significant impact on attitudes. Social workers expressed more positive attitudes than nurses. However, these differences were not examined with multiple comparisons.

	(Italy)					Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.
Crowe & Averett (2015)	Psychologists Social workers Counsellors (USA)	Cross-sectional survey with open-ended questions	Thematic analysis	Mental illness in general (label)	General attitudes Empathy Tolerance Perceived strengths and abilities of people with mental illness Perceived competence Avoidance Prognosis Compassion Frustration People with mental illness can be insulting Education in mental health Professional experience Religion Media Family Personal familiarity with mental illness	Some participants suggested that their education in mental health made them more empathic and tolerant of people with mental illness, and more able to see the strengths and abilities of people with mental illness. However, some participants did not believe their education in mental health had any impact on their attitudes towards people with mental illness. Some participants suggested that professional experience with people with mental illness made them more negative towards people with mental illness. This was exemplified by viewing people with mental illness as incapable and wanting to avoid people with mental illness. However, one participant believed that people with mental illness can function if they receive help and treatment. Some participants suggested that professional experience with people with mental illness has made them more able to see the strengths and abilities of people with mental illness. Also, some participants suggested that professional experience with people with mental illness had made them more compassionate, empathic, and tolerant of people with mental illness. However, these participants also believed that people with mental illness can be frustrating and insulting. Participants also suggested that some other variables have an impact on their attitudes towards mental illness, but did not specify in what direction. These variables were religion, the media, family, and personal familiarity with mental illness.

Currin et al. (2009)	Primary care physicians (England)	Cross-sectional survey Vignettes were used	Paired samples t-test Correlation analysis	Anorexia nervosa (label and description) Bulimia nervosa (label and description)	A measure of attitudes towards eating disorders
					    This condition is psychological rather than medical
					
					    Patients with this condition are largely responsible for their own condition
					
					    Patients can do a lot to control these symptoms
					
					    This illness is likely to be chronic
					
					    This illness is a severe and enduring mental illness
					
					    Treatment is highly effective for patients with these symptoms
					
					    Symptoms of this illness are fairly common and will resolve over time, without specific treatment
					
					    This condition causes difficulties for a patient's family and friends
					
					    This illness has major consequences on a patient's quality of life
					
					    Compared to other patients I see in my practice, I generally enjoy working with these patients
					
					Diagnosis
						Participants agreed more with a psychological rather than medical aetiology of both mental disorders, and disagreed more that the targets are largely responsible for their condition.
						
						Participants agreed more that the targets could do a lot to control their symptoms. However, participants also agreed more that both mental disorders are enduring and likely to be chronic. Whether participants agreed or disagreed more with the other prognosis items was dependent on the eating disorder (e.g., participants agreed more that treatment is highly effective for bulimia nervosa, but disagreed more for anorexia nervosa).
						
						Participants agreed more that both mental disorders cause difficulties for their family and friends.
						
						An overview of the other items in the measure of attitudes towards eating disorders was not reported in this table as those items are not relevant to stigmatisation.
						
						In comparison to anorexia nervosa, participants agreed more with a psychological aetiology for bulimia nervosa, and disagreed less that the target with bulimia nervosa was responsible for their condition. For every other relevant item, anorexia nervosa was stigmatised more than bulimia nervosa. Compared to bulimia nervosa, participants agreed significantly more that anorexia nervosa is likely to be chronic, and cause difficulties for family and friends. This was the only difference between the eating disorders that was examined with inferential statistics. However, participants were asked to make a diagnosis for the vignettes (this was all that was stated), and it was found that the diagnoses were not found to be significantly related to overall attitude scores.

					Knowledge of eating disorders	
						Knowledge was not found to be significantly correlated with attitudes.

Dabby et al. (2015)	Psychiatrists
	
	Psychiatry residents
	
	(Canada)
		Cross-sectional survey
		
		IAT
		
		Short descriptions were used
			-	Mental illness in general (label)
				
				Schizophrenia (description)
				
				Hallucination, delusion, psychosis, paranoia (labels)
					Social distance towards schizophrenia
					
					OMS-HC (factors were not specified)
					
					Implicit attitudes towards schizophrenia (e.g., delusion)
					    Positive (i.e., joy, love, peace, wonderful, pleasure, glorious, laughter, happy)
					
					    Negative (i.e., agony, terrible, horrible, nasty, evil, awful, failure, hurt)
						Psychiatrists displayed little evidence of stigmatisation on all measures.
						
						Other relevant findings were excluded from this table as they were not reported for psychiatrists separately.

Daibes et al. (2017)	Unspecified nurses from addiction rehabilitation facilities (Jordan)	Semi-structured interviews	Thematic analysis	Drug and alcohol addiction (labels) Other unspecified conditions (label)	Perceived and endorsed causal attributions/blame Addicts and alcoholics are very bad people Addicts and alcoholics are monsters Addicts and alcoholics are barbarians Addicts and alcoholics are criminals Addicts and alcoholics are careless Addicts and alcoholics are irresponsible Addicts and alcoholics are undisciplined	Participants described addicts and alcoholics as very bad people, monsters, barbarians, criminals, careless, irresponsible, undisciplined, out of control, sexually deviant, to blame for their condition, liars, pretenders, and cheaters. One participant stated they were fearful of patients with addiction because they are sexually deviant. It was suggested that due to the lack of trust participants had in patients with substance addiction, participants would neglect the subjective experience of patients with addiction and focus more on objective means to verify complaints. Participants would avoid patients with addiction. Participants stated that the only reason they would talk to patients with addiction was out of curiosity for how the patient became addicted. It was suggested

					Addicts and alcoholics are out of control Addicts and alcoholics are sexually deviant Addicts and alcoholics are liars Addicts and alcoholics are pretenders Addicts and alcoholics are cheaters Fear Lack of trust Neglectful of the subjective experience of patients Avoidance Sympathy Prognosis Intention to provide the same level of care as other conditions Substance addiction is shameful and wrong Comfort coming into contact with patients with substance addiction Curiosity for how the patient became addicted Socio-economic status of the patient	that participants would avoid patients because they are seen as criminals and out of control. Participants were more inclined to stigmatise patients with addiction if they came from a high socio-economic background. Participants were more likely to blame patients with addiction if they came from high socio-economic backgrounds, and sympathise with patients that came from low-socio-economic backgrounds. Participants believed that people with substance addiction are unlikely to recover, and one participant stated for that reason they should not receive the same level of care as other conditions. Participants stated that substance addiction is shameful and wrong. Compared to males, participants blamed females more for their substance addiction and attributed it more to sexual deviation. This was also perceived in other nurses. Participants were less stigmatising of younger patients. It was suggested that stigmatisation was exacerbated if a patient was abandoned by their family. Participants reported that mass media and socialisation contribute to their stigmatisation of substance addiction. It was suggested that participants were uncomfortable coming into contact with patients that had a substance addiction because the participants were worried they would become addicted.

					Sex of the patient	Participants stigmatised patients that were addicted to prescribed drugs less than patients that were addicted to alcohol and illegal drugs.
					Age of the patient	
					Whether the patient has been abandoned by their family	
					Mass media	
					Socialisation	
					Type of drug being used by patients	
Dale & Middleton (1990)	GPs (England)	Cross-sectional survey Vignettes were used	Exploratory factor analysis Correlation analysis	Multiple unspecified mental disorders (descriptions) Physical illness in general (descriptions)	Enthusiasm towards the target in the vignette	The amount of stigmatisation present in this study was not reported.
					Sympathy towards the target in the vignette	For mental illness, enthusiasm, sympathy, lack of irritation, and deeming a consultation appropriate for the person in the vignette formed a factor. There was a significant positive correlation between this factor and more professional experience with mental illness.
					Irritation towards the target in the vignette	
					Anxiety towards the target in the vignette	
					How appropriate a consultation would be with the target in the vignette	For both mental and physical illness, enthusiasm, sympathy, and lack of irritation formed a factor. This factor was significantly positively associated with more professional experience with mental illness, older age, and working in a non-training practice. For both mental and physical illness, irritation and deeming it appropriate to have a consultation with the person in the vignette formed another factor. However, this factor was significantly positively associated with more professional experience with mental illness, older age, and fewer postgraduate qualifications.
					How urgent a consultation would be with the target in the vignette	
					Professional experience with mental illness	
					Age	
					Whether participants worked in a non-training practice or not	For both mental and physical illness, anxiety towards the target in the vignette and

					Number of postgraduate qualifications Sex	deeming it urgent to have a consultation with the person in the vignette formed a factor. This factor was significantly positively associated with being female.

Dalky et al. (2020)	Unspecified physicians from primary healthcare centres
	
	(Jordan)
		Cross-sectional survey	Correlation analysis	Mental illness in general (label)	RIBS
					    Are you currently living with, or have you ever lived with, someone with a mental health problem?
					
					    Are you currently working with, or have you ever worked with, someone with a mental health problem?
					
					    Do you currently have, or have you ever had, a neighbour with a mental health problem?
					
					    Do you currently have, or have you ever had, a close friend with a mental health problem?
					
					    In the future, I would be willing to live with someone with a mental health problem
					
					    In the future, I would be willing to work with someone with a mental health problem
					
					    In the future, I would be willing to live nearby to someone with a mental health problem
						Participants expressed more negativity on the RIBS.
						
						Age was not found to be significantly correlated with scores on the RIBS.

					In the future, I would be willing to continue a relationship with a friend who developed a mental health problem Age	

Day et al. (2018)
 	
(Australia)
	Mental health nurses
	
	(Australia)
		Longitudinal survey and semi-structured interviews	Thematic analysis
			
			Correlation analysis
			
			Independent samples t-test
			
			Mann-Whitney *U*-test
				Personality disorder (label)
				
				BPD (label)
					Prognosis
					
					Perceived difficulty
					
					General dislike
					
					Perceived manipulativeness, attention seeking, and superficiality
					
					Frustration
					
					Empathy
					
					APDQ (only items relevant to stigmatisation were included in this table)
					    Protective
					    Fondness
					    Interested
					    Unable to gain control
					    Frightened
					    Helpless
					    Intolerant
					    Angry
					    Frustrated
					    Drained
					
					ADSHQ
					    Confidence in assessment
					    and referral
					
					    Ability to deal effectively
					    with clients (subjective)
						Participants from both cohorts expressed the view that BPD is chronic and people with BPD are difficult. However, participants from the 2000 cohort also expressed general dislike towards BPD, and the view that people with BPD are manipulative, attention seeking and superficial. Participants from the 2015 cohort expressed the view that people with BPD are frustrating, but also expressed empathy towards people with BPD.
						
						Participants expressed that they feel protective and fond of personality disorder between occasionally and very often. Participants also expressed that they feel the last six APDQ factors between occasionally and very often. An overview of the interested and unable to gain control factors of the APDQ was not included in this table as those factors are not relevant to stigmatisation.
						
						Participants expressed more willingness and optimism in working with BPD.
						
						The subjective ability of participants to deal with self-harming clients was significantly positively correlated with more positive overall attitudes on the APDQ. Whether any of the other ADSHQ factors were found to be significantly correlated with APDQ scores was not reported.
						
						Age and years of professional experience were not found to be significantly correlated with overall APDQ scores.

					Empathic approach
					
					Ability to cope with legal and hospital regulations that guide practice
					
					ASQ (only items relevant to stigmatisation were included in this table)
					    Willingness in working with BPD
					
					    Optimism in working with BPD
					
					Age
					
					Years of professional experience
					
					Cohort
					    Year 2000
					    Year 2015
					
					Level of training
					    Undergraduate
					    Postgraduate
					
					Exposure to BPD specific training
						Compared to participants from the 2000 cohort, participants from the 2015 cohort were significantly more protective, fond and tolerant of personality disorder. Cohort was not found to have a significant impact on any of the other relevant APDQ items.
						
						Level of training was not found to have a significant impact on overall APDQ scores.
						
						Exposure to BPD specific training was not found to have a significant impact on overall APDQ scores. This was only assessed for the 2015 cohort.

Deans & Meocevic (2014)	Psychiatric nurses
	
	(Australia)
		Cross-sectional survey	-	BPD (label)	A measure of attitudes towards people with BPD (only items that are relevant to stigmatisation were included in this table)
					    People with BPD are manipulative
					
					    People with BPD emotionally blackmail people they work with
						Half or most participants expressed stigmatisation for some items, and less than half expressed stigmatisation for other items (a neutral option was available).

					People with BPD are nuisances	
					People with BPD are time wasters	
					People with BPD make me angry	
					People with BPD are charming	
Deans & Soar (2005)	Unspecified nurses from a psychiatric facility A social worker A psychiatrist A psychologist GPs (only discussed by the other professionals) (Australia)	Unstructured interviews	Interpretative phenomenological analysis	Mental illness and a coexisting SUD (label) Schizophrenia (label) Other unspecified clients (label)	Frustration Prognosis Ease of treatment (this was not too clear) Perceived empathy experienced by GPs Judgmental attitudes in general Sympathy Causal attributions Perceived difficulty People with comorbid mental illness and SUD are not motivated in their treatment Powerlessness and helplessness Perceived risk of violence and contracting hepatitis when visiting people with comorbid mental illness and SUD at home	Participants expressed frustration towards comorbid mental illness and SUD. It was suggested that this was due to the chronic nature of this condition. Participants stated that it was easier to treat a person with schizophrenia compared to comorbid mental illness and SUD. This was again attributed to the chronic nature of comorbid mental illness and SUD. Younger compared to older GPs were perceived as more empathic of comorbid mental illness and SUD. Participants also suggested that GPs from small/one-doctor towns tend to express judgemental attitudes towards people with comorbid mental illness and SUD. Some participants expressed sympathy towards comorbid mental illness and SUD. One participant suggested that comorbid mental illness and SUD occurs when a person with mental illness uses substances to cope. Comorbid mental illness and SUD was perceived as the most challenging and difficult of all clients. Another participant also perceived comorbid mental illness and SUD to be difficult.

						Participants felt powerless and helpless because they believed that people with comorbid mental illness and SUD are not motivated in their treatment. One participant also felt powerless due to the chronic nature of comorbid mental illness and SUD.
						Participants perceived a risk of violence when visiting a person with comorbid mental illness and SUD. One participant also perceived a risk of contracting hepatitis when visiting a person with comorbid mental illness and SUD.
Deehan et al. (1997)	GPs (England)	Cross-sectional survey	t-test for two dependent proportions	Drug misusers (label) Alcohol misusers (label) Other unspecified patients (label)	Perceived difficulty	Most participants perceived both disorders to take up more time than other patients and to present major management problems (uncertain was an available option). Drug misusers were significantly more likely to be perceived as taking up more time than other patients and presenting major management problems.
Delaruelle et al. (2021)	GPs Candidate GPs					Nothing more was reported for this study as findings were not reported for GPs separately.
Dell et al. (2021)	Social workers Psychologists Counsellors Unspecific nurses from community mental health centres Other unspecified service providers from community mental health centres					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

Del Olmo-Romero et al. (2019)	Psychiatrists Psychologists Unspecified nurses from mental health institutions Social workers Occupational therapists Rehabilitation technicians Social educators Other unspecified mental health professionals Assistant nurses Administrative and general service staff Other unspecified non-clinical professionals (Spain, Italy, Portugal)	Cross-sectional survey Vignettes were used	Between-groups ANOVA Multiple regression analysis	Mental illness in general (label) Schizophrenia (description and a possible label)	AQ-27 (items were not specified) 　Perceived personal 　responsibility 　Pity 　Anger 　Perceived dangerousness 　Fear 　Helping 　Coercion 　Segregation 　Avoidance CAMI questionnaire 　Authoritarianism 　　One of the main causes 　　of mental illness is a lack 　　of self-discipline and 　　will power 　　The best way to handle 　　the mentally ill is to keep 　　them behind locked 　　doors 　　There is something about 　　the mentally ill that 　　makes it easy to tell them 　　from normal people 　　As soon as a person 　　shows signs of mental	Across the stigmatisation factors, psychiatrists, psychologists, nurses, and other unspecified mental health professionals mostly expressed positive attitudes. However, these groups also expressed more negative attitudes for coercion and avoidance. The only exception to this was, psychologists responded roughly neutrally to the avoidance factor. Profession was found to have a significant impact on all of the stigmatisation factors. Across the different factors, there were no consistent differences between psychiatrists, psychologists, nurses, and other unspecified mental health professionals. All of these groups stigmatised more than the others at least once and stigmatised less than the others at least once. Differences between these groups were not examined with multiple comparisons. Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.

					disturbance, he should be hospitalized Mental patients need the same kind of control and discipline as a young child Mental illness is an illness like any other The mentally ill should not be treated as outcasts of society Less emphasis should be placed on protecting the public from the mentally ill Mental hospitals are an outdated means of treating the mentally ill Virtually anyone can become mentally ill Benevolence The mentally ill have for too long been the subject of ridicule More tax money should be spent on the care and treatment of the mentally ill We need to adopt a far more tolerant attitude toward the mentally ill in our society	

					Our mental hospitals seem more like prisons than like places where the mentally ill can be cared for
					
					We have a responsibility to provide the best possible care for the mentally ill
					
					The mentally ill don't deserve our sympathy
					
					The mentally ill are a burden on society
					
					Increased spending on mental health services is a waste of tax dollars
					
					There are sufficient existing services for the mentally ill
					
					It is best to avoid anyone who has mental problems
					
					Social restrictiveness
					    The mentally ill should not be given any responsibility
					
					    The mentally ill should be isolated from the rest of the community
					
					    A woman would be foolish to marry a man who has suffered from mental illness, even	

					though he seems fully recovered I would not want to live next door to someone who has been mentally ill Anyone with a history of mental problems should be excluded from taking public office The mentally ill should not be denied their individual rights Mental patients should be encouraged to assume the responsibilities of normal life No one has the right to exclude the mentally ill from their neighbourhood The mentally ill are far less of a danger than most people suppose Most women who were once patients in a mental hospital can be trusted as babysitters Community mental hygiene ideology Profession	

Des Courtis et al. (2008)	Psychiatrists Psychologists Social workers Unspecified nurses from mental health facilities and a general hospital Vocational workers Physiotherapists Other unspecified health professionals					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Deska et al. (2020)	Faculty in clinical and counselling PhD programs actively seeing clients or supervising clinical cases Graduate student clinicians Undergraduate students					Nothing more was reported for this study as findings were not reported for faculty members separately.

Dowrick et al. (2000)	GPs
	
	(England)
		Cross-sectional survey	Correlation analysis	Depression (label)	DAQ (only factors relevant to stigmatisation were included in this table)
					    Treatment attitude
					
					    Inevitable course of depression/pessimism about depression
					
					Diagnostic competence
					    Identification (ability to detect depression)
					
					    Accuracy (ability to make assessments that are
						Participants agreed slightly less with treatment attitudes, suggesting slightly more disagreement with attributing depression to poor stamina/a biochemical abnormality. Participants also disagreed more with inevitable course of depression/pessimism about depression.
						
						There was a significant negative correlation between treatment attitude and diagnostic accuracy. A significant correlation was not found between treatment attitude and the other two diagnostic competences. However, inevitable course of depression/pessimism about depression was significantly negatively

					congruent with patient symptom levels) Bias (tendency to either make diagnoses or avoid making diagnoses) Prescription of antidepressant medication	correlated with diagnostic accuracy and identification, but was not found to be significantly correlated with bias. Treatment attitude was significantly positively associated with prescribing SSRIs, but was not found to be significantly correlated with prescribing tricyclic antidepressants. Inevitable course of depression/pessimism about depression was not found to be significantly correlated with the prescription of antidepressants.
Drake et al. (2018)	SUD treatment providers and trainees from the following fields Social work Counselling Psychology Nursing Sociology Other unspecified fields					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Eack & Newhill (2008)	Social workers (USA)	Cross-sectional survey	Correlation analysis	Mental illness in general (label)	A measure of attitudes towards mental illness Mental illness is not a preferred population to treat Not optimistic about treatment People with mental illness fail to follow through on treatment	The level of stigmatisation present in this study was not reported. The view that mental illness is not a preferred population to treat was significantly positively correlated with special countertransference problems and the preceding items for the measure of attitudes towards mental illness. This item was not found to be significantly correlated with mental illness is intellectually challenging to understand. Not being optimistic about treatment was significantly positively correlated with believing people with mental

				Mental illness is intellectually challenging to understand Clinicians prefer to avoid contact with mental illness Special countertransference problems (this was not clear) People with mental illness are difficult to relate to There are no satisfying rewards working with mental illness Clinicians do not receive adequate training Burnout is common when working with mental illness Frustrations with the following Medication noncompliance Legal leverage to force treatment Bizarre behaviour Manipulative behaviour A person not accepting their illness Difficulty obtaining resources Managed care regulations Uncooperative caregivers	illness fail to follow through on treatment and the preceding items for the measure of attitudes towards mental illness. Believing people with mental illness fail to follow through on treatment was significantly positively correlated with mental illness is intellectually challenging to understand and the preceding items for the measure of attitudes towards mental illness. The view that mental illness is not a preferred population to treat was significantly positively correlated with the first six frustrations. This item was also significantly positively correlated with frustration at a lack of client improvement. This item was not found to be significantly correlated with any of the other frustrations. Not being optimistic about treatment was significantly positively correlated with frustrations at legal leverage to force treatment, bizarre behaviour, a person not accepting their illness, lack of client improvement, and threatening/violent client behaviour. This item was not found to be significantly correlated with any of the other frustrations. Believing that people with mental illness fail to follow through on treatment was significantly positively correlated with most of the frustrations. However, this item was not found to be significantly correlated with frustration towards managed care regulations and threatening/violent client behaviour.

					Lack of client improvement	
					Threatening/violent client behaviour	
					Difficulty with colleagues	
					Waiting lists for services	
Ebrahimi et al. (2017)	Psychiatric nurses Unspecified non-psychiatric nurses (Iran)	Cross-sectional survey	The analysis was unclear	Mental illness in general (label)	CAMI questionnaire Authoritarianism Benevolence Social restrictiveness Community mental health ideology Willingness to continue working in a psychiatric ward Amount of professional experience in a psychiatry ward	Psychiatric nurses expressed more positive attitudes for authoritarianism and social restrictiveness, but more negative attitudes for benevolence and community mental health ideology. Willingness to continue working in a psychiatric ward and amount of professional experience in a psychiatry ward were not found to have a significant impact on stigmatisation. Inferential statistics for this were not reported. Other relevant findings were excluded from this table as they were not reported for psychiatric nurses separately.

Ebrahimi et al. (2012)	Unspecified nurses from psychiatric wards
	
	(Iran)
		Cross-sectional survey	Correlation analysis
			
			Mann-Whitney *U*-test
			
			Kruskal-Wallis test
				Mental illness in general (label)	A measure of stigmatisation towards mental illness (items were not specified)
					    Cognitive component
					    Emotional component
					    Behavioural component
					
					Age
					
					Sex
					
					Marital status
					    Married
					    Single
					
					Working shift schedule
					    Morning fixed
						Most participants expressed a medium level of stigmatisation for the cognitive component, and a low level of stigmatisation for the emotional component. Roughly half of the participants expressed a high level of stigmatisation for the behavioural component, and just under half expressed a medium level of stigmatisation.
						
						Age was not found to be significantly correlated with stigmatisation.
						
						Sex, marital status, working shift schedule, employment type, and working in the ward according to personal interest were not found to have a significant impact on stigmatisation.

| | | | | | Nights fixed
Changing

Employment type
  Plan
  Contract
  Formal

Working in the ward according to personal interest

Satisfaction with working in the ward

Level of training

University of graduation
  Governmental
  Azad

Interest in continuation of work in the ward

Personal familiarity and lived experience with mental illness | Satisfaction with working in the ward was not found to be significantly correlated with stigmatisation.

Participants with a bachelor's or master's degree stereotyped mental illness significantly less than participants with a diploma. No other significant differences were reported with respect to level of training, and no other comparisons were made.

The university participants graduated from and interest in continuation of work in the ward had a significant impact on emotions. However, no other details were reported.

Participants with personal familiarity and lived experience with mental illness expressed significantly less negative emotions and discrimination. No other significant differences were reported with respect to personal familiarity and lived experience with mental illness. |
| Economou et al. (2020) | Psychologists

Social workers

Psychiatrists

Psychiatric nurses

(Greece) | Cross-sectional survey | Independent samples t-test

Correlation analysis

Between-groups ANOVA

Multiple regression analysis | Mental illness in general (label) | ASMI scale
  If a person has experienced severe mental illness, he/she will suffer from it for the rest of his/her life

People with severe mental illness have to take medication for as long as they live

People with severe mental illness can recover nowadays

People with severe mental illness are failures | For the ASMI and GSD scales the majority of participants expressed positivity for most of the items relevant to stigmatisation. However, roughly half of the participants expressed positivity for the first three items in the ASMI scale. Also, for the GSD scale most participants expressed negativity towards the prospect of marrying someone with mental illness, roughly half felt upset or disturbed about rooming with a person with mental illness, and roughly half expressed positivity at living in a neighbourhood with a psychiatric institution.

Age, family status, years with tenure, and duration of work experience were not found to be significantly correlated with or to have a |

					No matter how hard they try, people with severe mental illness will never be like other people	significant impact on overall scores on either of the stigmatisation measures.
					Severe mental illness makes the person who suffer from it look ill from a distance	Compared to nurses, being a psychologist or social worker was a significant predictor of more overall positive responses on both stigmatisation measures. Being a psychiatrist was also a significant predictor of more overall positive responses on the ASMI scale compared to nurses. However, the overall scores for these two professions were not found to be significantly different for the GSD scale. Stigmatisation scores were not compared between psychologists, social workers and psychiatrists.
					Once ill, people with severe mental illness stop being like other people	
					It is easy for other people to recognize that someone has severe mental illness	
					People with severe mental illness cannot acquire new skills	For the ASMI scale, lived experience with mental illness and having an acquaintance with mental illness were not found to have a significant impact on overall scores. Also, having a close friend or relative with mental illness were not found to be significant predictors of overall scores on the ASMI scale. However, having a colleague with a mental illness was a significant predictor of more overall positive responses on the ASMI scale. For the GSD scale, none of the forms of experience with mental illness, except for having a close friend with mental illness, were found to have a significant impact on overall scores. Having a close friend with mental illness was found to be a significant predictor of more overall positive responses on the GSD scale
					People with severe mental illness are dangerous	
					Severe mental illness is responsible for all the misfortunes of a person	
					All psychiatric medication cause addiction	
					A person with severe mental illness is able to work	
					A person with severe mental illness can receive training for an occupation	Income, education, and gender were not found to be significantly correlated with or to have a significant impact on overall scores on the ASMI scale. Also, these variables were not found to be significant predictors of overall scores on the GSD scale.
					People with severe mental illness do not differ from other people	

					People with severe mental illness can cope with life difficulties Taking psychiatric medication does not render a person with severe mental illness different from other people People with severe mental illness should not give up People with severe mental illness should seek help from a mental health professional It is better for a person with severe mental illness to hang out only with people who also have a mental disorder It is better for people with severe mental illness to conceal their illness, so as to avoid life difficulties Friends should not avoid a person with severe mental illness when he/she falls ill It is better for a person with severe mental illness to avoid other people People with severe mental illness should not hide their problem from family and friends People with severe mental illness usually feel a burden to their families	Controlling for the significant predictors in the previous analyses (with the respective measures), perspective taking was found to be significant predictor of more overall positive responses on both measures of stigmatisation. Also, fantasy was found to be a significant predictor of overall scores on the GSD scale, but was not found to be a significant predictor of overall scores on the ASMI scale. Still controlling for the significant predictors in the previous analyses, the other two factors of the IRI were not found to be significant predictors of overall scores for either measure of stigmatisation.

					People with severe mental illness usually feel inferior to other people People treat differently a person with severe mental illness when he/she falls ill People blame a person with severe mental illness for every misfortune occurs to his/her family People with severe mental illness usually feel responsible for their illness It is difficult for other people to understand how a person with severe mental illness feels GSD scale Decide to live in house building, where someone with mental illness also resides Feel afraid to have a conversation with someone with mental illness Be upset or disturbed about working on the same job with someone with mental illness Feel upset or disturbed about rooming with someone with mental illness	

					Feel ashamed if people knew someone in your family has mental illness	
					Feel annoyed or disturbed about sitting next to someone with mental illness in the bus	
					Maintain a friendship with someone with mental illness	
					Marry someone with mental illness	
					Lend anything of yours to someone with mental illness	
					Accept a person with mental illness as your hairdresser	
					Rent your house to someone with mental illness	
					Hire someone with mental illness	
					Decide to live in neighbourhood, where an institution for the treatment of people with mental illness is operating	
					Start a friendship with a person with mental illness	
					Age	

					Family status
					    Single
					    Married/cohabiting
					    Divorced/widowed	

					Years with tenure	
					Duration of work experience	
					Profession (focal and control variable)	
					Personal experience with mental illness Lived experience	
					Relative	
					Close friend (focal and control variable)	
					Acquaintance	
					Colleague (focal and control variable)	
					Income	
					Education (levels for this were not made clear)	
					Gender	
					The IRI was used to measure trait empathy Perspective taking (one's tendency to spontaneously adopt the psychological perspective of another person)	
					Fantasy (one's ability to place oneself into the shoes of fictional characters in literature and movies)	
					Empathic concern (other-oriented feelings of	

					sympathy and concern over misfortunes) Personal distress (self-oriented feelings of anxiety and unease during intense interpersonal encounters)	

Egan et al. (2014)	Clinical psychologists
	
	(Australia)
		Cross-sectional survey	Hierarchical regression analysis	Personality disorder (label)	APDQ
					    Enjoyment
					    Security
					    Acceptance
					    Purpose
					    Enthusiasm
					
					Professional familiarity with personality disorder (i.e., what percentage of clients do you have that are diagnosed with a personality disorder)
					
					Sex
					
					Age
					
					Recency of specialist training on personality disorder
						Participants expressed more overall positive attitudes.
						
						More professional familiarity with personality disorder was a significant predictor of positive attitudes. The other variables were not found to be significant predictors of attitudes towards personality disorder.

Egbe et al. (2014)	A psychiatric nurse Auxiliary social workers A range of other nurses Lay counsellors					Nothing more was reported for this study as findings were not reported for psychiatric nurses separately.

Eker (1985)	Psychologists
	
	Psychiatrists
	
	Social workers
	
	(Turkey, USA)
		Cross-sectional survey	Between-groups ANOVA	Mental illness in general (label)	Attitudes were measured with the following semantic differentials
					    Weak/strong
					
					    Bad/good
						Participants endorsed involuntary more than voluntary, and psychology more than biology and sociology.
						
						For most of the other semantic differentials participants expressed more negative attitudes. The only exceptions to this were,

					Irresponsible/responsible	Turkish participants endorsed wise more than foolish, and responded neutrally to slow/fast, and USA participants endorsed intelligent slightly more than retarded.
					Foolish/wise	
					Voluntary/involuntary (it was not clear what this meant)	The only significant difference between Turkish participants and USA participants regarded the foolish/wise semantic differential. No other significant differences were found.
					High education/low education	
					Strange/familiar	
					Predictable/unpredictable	
					Clean/dirty	
					Dangerous/safe	
					Slow/fast	
					Cold/warm	
					Psychology/biology (it was not clear what this meant)	
					Sociology/psychology (it was not clear what this meant)	
					Retarded/intelligent	
					Sick/healthy	
					Relaxed/tense	
					Country	
Elwy et al. (2013)	Unspecified physicians from a primary care practice					Nothing more was reported for this study as findings were not reported for primary care physicians separately.

	Resident physicians from a primary care practice					
Farmer & Greenwood (2009)	GPs (England)	Cross-sectional survey and structured interviews	-	Problem drinkers (label)	Pessimism is the most realistic attitude to take towards drinkers In general, I like drinkers Causal attributions Problem drinkers can be identified based on their appearance/they are unkempt Frustration Perceived difficulty	Just over half the participants disagreed that pessimism is the most realistic attitude to take towards drinkers. However, only a small proportion of participants agreed to liking drinkers (neutral responses were available). Almost half of the participants agreed that alcohol misuse is a symptom of an underlying personality disorder, and under half agreed that alcohol misuse is self-inflicted (neutral responses were available). A small proportion of participants believed that problem drinkers can be identified based on their appearance/they are unkempt. Under half of the participants believed that problem drinkers are frustrating and difficult to treat.
Finamore et al. (2020)	Unspecified mental health professionals (England)	Longitudinal survey An intervention was used	Paired samples t-test	Personality disorder (label)	A measure of negative emotional reactions (this includes feelings of being manipulated and feeling overwhelmed, but specific items were not specified)	Before an intervention that addresses misconceptions about personality disorder, the participants expressed slightly more overall stigmatisation. After the intervention participants expressed slightly less overall stigmatisation, and time point was found to have a significant impact on overall stigmatisation.
Fitzgerald & McNicholas (2014)	Psychologists Psychiatrists Paediatricians Unspecified primary care professionals					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

Flanagan et al. (2016)	Unspecified mental health professionals Unspecified primary care professionals Unspecified obstetric and gynaecological professionals A pharmacist Other unspecified health professionals					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Flanagan et al. (2009)	Unspecified mental health professionals (USA)	Structured and semi-structured interviews	Interpretive phenomenological analysis	Mental illness in general (label)	Causal attributions People with mental illness have a lot of potential General attitudes General emotional reactions Positive attributes in general Perceived ability of people with mental illness to cope People with mental illness are strong and courageous Empathy Happiness at the success of people with mental illness Sadness Perceived self-destructiveness Perceived incompetence	One participant alluded to mental illness being caused by extraordinary life experiences coupled with difficulty in coping with such experiences. This participant also believed that people with mental illness have a lot of potential. Some participants reported general positive perceptions and emotional reactions towards mental illness. Others however, reported general negative perceptions and emotional reactions towards mental illness, and some reported a mixture of both positive and negative reactions. One participant highlighted the strengths of people with mental illness in general, and their ability to cope with their lives. Relatedly, one participant described people with mental illness as strong and courageous. Another participant felt privileged to be able to work with people with mental illness. A fourth participant described feeling empathy towards people with mental illness and happiness at their success. However, this participant also described feeling sad at the self-destructive behaviours of people with mental illness.

					People with mental illness are weak and have only him/herself to blame	One participant described people with mental illness as incompetent.
					People with mental illness are brain damaged	Participants disagreed more that people with mental illness are weak, only have themselves to blame, and are brain damaged.
					People with mental illness are drowsy	For the remaining measures, participants expressed more stigmatisation for some measures, less stigmatisation for some measures, and roughly neutral responses for other measures.
					People with mental illness are emotional	
					People with mental illness are able to recover	
					People with mental illness have thinking problems	
					People with mental illness have attention problems	
					People with mental illness are different	
					People with mental illness are insightful	
					People with mental illness are confused	
					People with mental illness are unstable	
					People with mental illness ramble on	
					People with mental illness are unpredictable	
					People with mental illness are excessively loud or soft	

					People with mental illness are emotionally insightful	
					People with mental illness are no different	
					People with mental illness have a dishevelled appearance	
					People with mental illness are shameful	
					People with mental illness are obsessed	
					People with mental illness are aggressive	
					People with mental illness are normal	
					People with mental illness are scary	
					People with mental illness are difficult to talk to	
					People with mental illness are strange looking	
					People with mental illness are apathetic	
					People with mental illness are dirty	
					People with mental illness are likely to be violent	
					People with mental illness are incoherent	

					People with mental illness are smelly	
					People with mental illness have intelligence problems	
					People with mental illness have consciousness problems	
					People with mental illness stutter	
					People with mental illness are mentally retarded	
Foster & Onyeukwu (2003)	Forensic psychiatric nurses (England)	Cross-sectional survey	Bivariate regression analysis	Substance abuse (label)	SAAS (items were not specified by the authors and only factors relevant to stigmatisation were included in this table) Treatment optimism (an optimistic perception of treatment and the possibility of a successful outcome) Non-moralism (absence/avoidance of moralistic perspective when considering substance use and substance users) Non-stereotyping (non-reliance on popular societal stereotypes of substance use and substance users) Sex Nursing grade Staff nurses Other grades (i.e., ward managers, charge nurses,	Overall, participants expressed more stigmatisation. Being male was a significant predictor of more stigmatisation on the non-moralism factor. No other significant findings were reported for sex. Being a staff nurse was a significant predictor of less stigmatisation on the non-stereotyping factor. No other significant findings were reported for nursing grade. Being non-Black was a significant predictor of more stigmatisation on the treatment optimism factor. No other significant findings were reported for ethnicity. No other variables were found to be significant predictors of stigmatisation.

					senior staff nurses, enrolled nurses)
					
					Ethnicity
					  Black
					  Non-Black
					
					Age
					  40 and below
					  41 and above
					
					Level of training
					  Non-graduate
					  Undergraduate/postgraduate
					
					Years of experience
					  Less than four years
					  Four years and more	

Foster et al. (2008)	Unspecified nurses from a psychiatric hospital
	
	Medical orderlies
	
	(Fiji)
		Cross-sectional survey	-	Mental illness in general (label)
				
				Alcohol abuser (label)
					ATAMHS 33 (only items that were relevant to stigmatisation and summarised for nurses separately were included in this table)
					  Alcohol abusers have no self control
					
					  Mentally ill patients have no control over their emotions
					
					  Mental illness is the result of adverse social circumstances
					
					  Many normal people would become mentally ill if they had to live in a very stressful situation
					
					  Mental illnesses are genetic in origin
					
					  Those with a psychiatric history should never be
						Most nurses agreed that people who abuse alcohol have no self control. However, most nurses disagreed that mentally ill patients have no control over their emotions. Most nurses agreed that mental illness is the result of negative social circumstances, and many normal people would become mentally ill if they had to live in a very stressful situation. Despite this, most nurses also agreed the mental illnesses are caused by genetic factors.
						
						Most nurses disagreed that those with a psychiatric history should never be given a job with responsibility, and most nurses agreed that psychiatric illness deserves as much attention as physical illness. Most nurses also agreed that psychiatric drugs are used to control disruptive behaviour.
						
						Other relevant findings were excluded from this table as they were not reported for nurses separately.

					given a job with responsibility	
					Psychiatric illness deserves as much attention as physical illness	
					Psychiatric drugs are used to control disruptive behaviour	
Franz et al. (2021)	Primary care/family physicians Internal medicine physicians Emergency medicine physicians					Nothing more was reported for this study as findings were not reported for primary care/family physicians separately.

Fraser & Gallop (1993)	Unspecified nurses from psychiatric units
	
	(Canada)
		Behavioural observation
		
		Actual patient interactions were used
			Between-groups ANOVA	Schizophrenia (label and presentation)
				
				BPD (label and presentation)
				
				Affective disorder (label and presentation)
				
				Other unspecified mental disorders (label and presentation)
					Self-reported emotional responses
					    Helpless
					    Frustrated
					    Angry
					    Caring
					    Confused
					
					Confirming/disconfirming behavioural responses (these were not made very clear)
					    Confirming
					    Disparagement
					    Inadequate
					    Ambiguous
					    Impervious
					    Indifferent
					    Tangential
						Descriptive statistics were not reported for level of stigmatisation.
						
						Participants expressed significantly more overall positive emotions towards schizophrenia and affective disorder compared to BPD. Further, participants expressed significantly more overall negative emotions towards BPD compared to schizophrenia and affective disorder. Other unspecified mental disorders were not compared to the other mental disorders, and no other significant differences were reported between the mental disorders for emotional responses.
						
						Participants displayed significantly more disconfirming responses towards BPD than affective disorder and other unspecified mental disorders. No significant difference was found between BPD and schizophrenia. No other significant differences were reported between the mental disorders for disconfirming behavioural responses.

Fuss et al. (2018)	Psychologists	Experiment	Between-groups ANOVA	Psychosis (description)	Causal attributions	Psychosis was attributed to biological and psychological causes equally, whereas the other mental disorders were attributed to psychological causes more.
	Psychiatrists	Vignettes were used		Exhibitionism (description)	Blame	
	Other unspecified mental health professionals			Frotteurism (description)	Social distance	Participants desired social distance from and blamed all the mental disorders more. Participants perceived psychosis and sexual masochism as less dangerous, and sexual sadism and paedophilia as more dangerous. Female cases of exhibitionism were perceived as less dangerous, and male cases elicited roughly neutral responses. Female cases of frotteurism were perceived as less dangerous, and male cases were perceived as more dangerous.
	(Germany, Austria, Switzerland)			Sexual sadism (description)	Perceived dangerousness	
				Paedophilia (description)	Target sex	
				Sexual masochism (description)		Psychosis was attributed to biological causes significantly more than all other mental disorders, and paedophilia was attributed psychological causes significantly less than the other paraphilic disorders. No significant differences were found between the other paraphilic disorders for causal attributions.
						For each measure of stigmatisation, a hierarchical pattern emerged, in which participants stigmatised the different mental disorders to varying degrees. This pattern was different for each measure of stigmatisation. Also, different patterns emerged depending on target sex. For a male target, paedophilia was consistently stigmatised more than exhibitionism, sexual masochism and psychosis across the measures of stigmatisation. Similarly, sexual sadism was stigmatised consistently more than frotteurism, sexual masochism and psychosis. Also, exhibitionism and frotteurism were stigmatised consistently more than sexual

						masochism and psychosis. For a male target, the only consistent difference found was paedophilia and sexual sadism were consistently stigmatised more than all the other disorders. No other consistent differences between mental disorders were found across the measures of stigmatisation. None of these differences between mental disorders were examined with inferential statistics. However, the mental disorders were compared with inferential statistics using an aggregate of blame, social distance and perceived dangerousness scores. In this analysis, psychosis was stigmatised significantly less than all other mental disorders, followed by sexual masochism, followed by exhibitionism, followed by frotteurism. Sexual sadism and paedophilia were not found to be significantly different. Compared to a female target, a male target elicited significantly more social distance and perceived dangerousness for most of the mental disorders. The only exception to this was target sex was not found to have a significant impact on social distance and perceived dangerousness for sexual masochism. A male target with frotteurism was blamed significantly more than a female target with frotteurism. Target sex was not found to have a significant impact on blame for any of the other mental disorders.
Gallop et al. (1989)	Unspecified nurses from psychiatric settings (Canada)	Experiment Vignettes were used	Binomial test for paired comparisons Chi-square test of independence	BPD (description and label) Schizophrenia (description and label)	QMEE (only behavioural categories relevant to stigmatisation were included in this table) 　Belittles or contradicts 　patient 　Expresses care or concern Age (levels were not specified)	A small proportion of the participants expressed care or concern towards the targets. However, a smaller proportion belittled or contradicted the targets. BPD was significantly more likely to elicit belittling or contradiction than schizophrenia. No significant difference was found between the mental disorders regarding the proportion of participants expressing care or concern.

					Years of professional experience (levels were not specified)
					
					Education
					    Hospital nursing school
					    Community colleges
					    Universities
						There was a significant relationship between age and belittling or contradicting. The youngest age group belittled or contradicted less than the other age groups. Age was not found to have a significant relationship with belittling or contradicting.
						
						Years of professional experience and education were not found to have a significant relationship with either of the QMEE behavioural categories.

Gateshill et al. (2011)	Psychiatrists Mental health nurses Social workers GPs Junior and middle-grade hospital doctors Primary and secondary care nurses					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

Gilchrist et al. (2011)	Psychiatrists
	
	Psychologists
	
	Social workers
	
	Psychiatric nurses
	
	General nurses working in general psychiatry and from specialist addiction services
	
	GPs/first contact physicians
		Cross-sectional survey and structured interviews	Between-groups ANOVA	Problems related to alcohol (label)
				
				Problems related to drugs (label)
				
				Depression (label)
					MCRS
					
					Profession
					
					Treatment service entry point
					    Primary care
					    General psychiatry
					    Specialist addiction
						Psychiatrists, psychologists, and social workers expressed more positive regard to all the mental disorders.
						
						For psychiatrists, psychologists, and social workers, problems related to drugs elicited the least positive regard, followed by problems related to alcohol, followed by depression. This however was not assessed with inferential statistics for mental health professionals separately.
						
						Profession was found to have a significant impact on regard for all of the mental disorders. For the most part, psychologists expressed more positive regard than social

	Unspecified physicians from primary care centres Unspecified physicians working in general psychiatry Unspecified physicians working in specialist addiction services Unspecified nurses from primary care centres Unspecified physicians from internal medicine emergency departments (Bulgaria, Greece, Italy, Poland, Scotland, Slovakia, Slovenia, Spain)					workers, and social workers expressed more positive regard than psychiatrists. The only exception to this was psychiatrists expressed slightly more positive regard towards depression than psychologists, and psychologists expressed more positive regard than social workers. It was found that psychologists expressed significantly more positive regard for problems related to both alcohol and drugs compared to psychiatrists. All other profession differences were either not clearly examined with multiple comparisons, or were not examined with multiple comparisons separately for mental health professionals. For psychiatrists, psychologists, and social workers treatment entry point was found to have a significant impact on regard for problems related to alcohol and drugs (depression was not included in this analysis). In both cases, psychiatrists, psychologists, and social workers from specialist addiction expressed the most positive regard, followed by general psychiatry, followed by primary care. These differences were not clearly examined with inferential statistics. Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.
Gonzales (2021)	Clinical psychologists Psychology students Medical students					Nothing more was reported for this study as findings were not clinical psychologists separately.
Gonzales et al. (2021)	Clinical psychologists Trainee psychologists Medical students	Cross-sectional survey Vignettes were used	-	Schizophrenia (label and description) Mental illness in general (label)	AQ-27 (most items were not specified) Familiarity with mental illness	Clinical psychologists expressed more overall positivity on the AQ-27 towards the target with schizophrenia. They also expressed more overall positivity towards mental illness

					Perceived personal responsibility
					
					Pity
					
					Anger
					
					Fear
					    How scared of Harry would you feel?
					
					Helping
					    How likely is it that you would help Harry?
					
					Coercion-segregation
					    If I were in charge of Harry's treatment, I would require him to take his medication
					
					RIBS
					
					A 14-item version of the MIMS-P was used to measure microaggressions (most items were not specified)
					    If I saw a person who I thought had a mental illness in public, I would be careful in case they snap
					
					    If someone I'm close to told me that they had a mental illness diagnosis, I would expect them to have trouble understanding some things
						on the RIBS, and slightly more overall positivity on the MIMS-P.
						
						Other relevant findings were excluded from this table as they were not reported for clinical psychologists separately.

	General population (USA)					
Gove et al. (2016)	GPs (England)	Semi-structured telephone interviews	Thematic analysis	Dementia (label)	Dementia is pitiful Dementia is characterised by being curled up in a deformed position, crying, screaming, and	One GP described the advanced stages of dementia as pitiful, and characterised by being curled up in a deformed position, crying, screaming, and being unable to have

					being unable to have any kind of meaningful interaction Sadness Stage of dementia People with dementia are incontinent People with dementia have become non-persons and have lost the essence if their being Frustration and irritation Empathy Sympathy Concern Protectiveness Dementia is unjust People with dementia are unable to give back to society	any kind of meaningful interaction. This GP reported feeling sad thinking about this. GPs stereotyped people with dementia as being incontinent. Again however, this was seen as occurring only in the advanced stages of dementia. One GP referred to people with advanced dementia as becoming a non-person, and another stated that people with dementia have lost the essence of their being. Some GPs found people with dementia to be frustrating and irritating. However, they mostly felt empathy, sympathy, concern, protectiveness, sadness, and a sense that dementia is unjust. GPs expressed that people with dementia are unable to give back to society.
Graham et al. (2010)	Psychologists Social workers Occupational therapists Counsellors Speech pathologists Managers Unspecified nurses					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

	Personal carers/aged care workers				
	Welfare workers				
	Youth workers/youth health workers				
	Those who work in a school environment				
	Housing support workers				
	Psychiatric disability rehabilitation and support service workers				
	Community workers				
	Women's health/support workers				
	Case managers				
	Disability workers				
	Aboriginal health workers				
	Physiotherapists				
	Childcare/child welfare workers				
	Carer support workers				
	Administrators				
	Dieticians				
	Volunteers				
	Family support workers				

	Health promotion workers Employment consultants Police officers Pastoral workers Outreach workers Other unspecified professionals					
Grausgruber et al. (2007).	Psychiatric nurses Social workers Occupational therapists Psychologists Physiotherapists					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

Guise et al. (2010)	Psychiatric nurses
	
	General nurses working in a mental healthcare organisation
	
	Other unspecified non-psychiatric nurses working in a mental healthcare organisation
	
	(England)
		Cross-sectional survey	MANOVA	Mental illness in general (label)	CAMI questionnaire
					   Authoritarianism
					
					   Benevolence
					
					   Social restrictiveness
					
					   Community mental health ideology
					
					Mode of data collection
					   Web-based
					   Paper-based
						Participants displayed less stigmatisation across all the factors.
						
						Mode of data collection was not found to have a significant impact on any of the CAMI factors.

Gupta et al. (1992)	GPs (India)	Cross-sectional survey	-	Mental illness in general (label)	Casual attributions Prognosis in general and if left alone	Most participants believed that mental disorders are inherited genetically, can occur in a normal person under stress, and can be caused by an abnormal family or society.

					Social distance Do people around mental illness tend to become odd or strange themselves?	Most participants also believed that mental illness is an illness. Roughly half of the participants believed that mental illness can be caused by poor living conditions, and no participants believed that mental disorders are due to God's punishment for some sin or wrongdoing. Most participants did not believe that mental illness is untreatable. However, most participants did not believe that mental illness can improve if a patient is left alone and nothing is done. About half of the participants expressed social distance towards mental illness. Most participants did not believe that people around mental illness tend to become odd or strange themselves.

Gutierrez & Ruiz (1978)	Psychiatric nurses
	
	(Spain)
		Cross-sectional survey	-	Mental illness in general (label)	Causal attributions
					
					Semantic differentials
					   Wise-foolish
					   Intelligent-ignorant
					   Sincere-insincere
					   Warm-cold
					   Clean-dirty
					   Good-bad
					   Beautiful-ugly
					   Valuable-worthless
					   Safe-dangerous
					   Familiar-strange
					   Healthy-sick
					   Active-passive
					   Fast-slow
					   Strong-weak
					   Understandable-mysterious
					   Relaxed-tense
					   Predictable-unpredictable
					
					Prognosis
						Most participants attributed mental illness to disturbed personality development. A small proportion of participants attributed mental illness to chemical brain disorders and heredity, and an even smaller proportion attributed mental illness to civilisation. No participants attributed mental illness to financial difficulties and drug and alcohol abuse, and a small proportion of participants did not respond.
						
						For some of the semantic differentials, participants expressed more stigmatisation, whereas for other semantic differentials participants expressed more positive attitudes. Positive attitudes were more common than negative attitudes.
						
						About half of the participants believed that mental illness requires long ambulatory treatment. Less than half of the participants believed that mental illness can be cured in a

					Mental patients have a strange expression in their eyes Practically all mental patients are capable of attacking others without reason Young women must always be particularly careful of mental patients Mental patients should not be allowed to look after small children There is something about mental patients which make them easily distinguishable from normal people Mental patients should not be allowed to get married I should hesitate to employ a mental patient	short time by a psychiatrist. Roughly the same amount of participants believed that mental illness is usually recurrent and needs frequent long-term hospitalisation. No participants believed that mental illness is incurable and needs permanent hospitalisation, and can be cured usually without a psychiatrist. A small proportion of participants did not respond. For the remaining measures, either half or most of the participants expressed agreement with some of the measures, and either less than half or a small proportion expressed agreement for other measures.
Haddad et al. (2015)	Mental health nurses GPs Counsellors Psychological therapists A psychiatrist Practice nurses					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

Hamdan-Mansour & Wardam (2009)	Mental health nurses
	
	(Jordan)
		Cross-sectional survey	Mann-Whitney U-test
			
			Chi-square test of independence
				Mental illness in general (label)
				
				Alcohol abuser (label)
					ATAMHS 33
					    Care or control
					    Semantic differentials
					    Therapeutic perspective
						Most participants agreed that alcohol abusers have no self control, and depression occurs in people with a weak personality. Most participants also agreed that mentally ill

		Correlation analysis	Chronic schizophrenia (label)
			
			Depression (label)
				Hard to help
				   Positive attitudes
				
				Age
				
				Sex
				
				Special training in psychiatric nursing
				
				Place of work
				   Private
				   Governmental
				
				Marital status
				   Married
				   Single
				
				Level of training
				   Masters
				   Bachelor
				   Associate
				
				Satisfaction with nursing care at the current organisation
					patients have no control over their emotions, and disagreed that many normal people would become mentally ill if they had to live in a very stressful situation, and people are born vulnerable to mental illness. However, most participants agreed that mental illness is the result of adverse social circumstances, and mental illnesses are genetic in origin.
					
					Most participants disagreed that psychiatric illness deserves as much attention as physical illness, and agreed that patients with chronic schizophrenia are incapable of looking after themselves and it is hard to help patients who are emotionally disturbed. Most participants also agreed that psychiatric drugs are used to control disruptive behaviour, and people with mental illness are dangerous, immature, cold-hearted, harmful, pessimistic, and have poor hygiene. In contrast, only half of the participants believed that people with mental illness are rude and childlike.
					
					The remaining items in the ATAMHS 33 were either not included in this table due to their irrelevance to stigmatisation, or were not summarised by the authors.
					
					Age was found to have a significant impact on ATAMHS 33 scores. In particular, age was found to have a significant impact on the adult-child and caring-cold-hearted semantic differentials. This is all that was reported for the effect of age.
					
					Females expressed more overall positive attitudes on the ATAMHS 33 compared to males. This overall difference was not examined with inferential statistics. However, there was a significant relationship between sex and the item patients with chronic schizophrenia are incapable of looking after themselves, and the polite-rude semantic

					differential. This was all that was reported for the former item. Regarding the latter, females were more likely to perceive people with mental illness as polite compared to males. No significant relationship was found between sex and the item those with a psychiatric history should never be given a job with responsibility. Nothing else was reported for the relationship between sex and the relevant items.
					Having special training in psychiatric nursing was not found to be significantly related to the item mental illnesses are genetic in origin. This variable was significantly related to the items members of society are at risk from the mentally ill, and acute wards are little more than prisons. However, nothing else was reported for these relationships, and the relationship between special training in psychiatric nursing and the relevant items in general.
					Place of work had a significant relationship with the items acute wards are little more than prisons, mental illnesses are genetic in origin, and the caring-cold-hearted semantic differential. Nothing else was reported for these relationships, and the relationship between place of work and the relevant items in general.
					Marital status had a significant relationship with the item patients with mental illnesses are more likely to harm someone else than themselves. However, nothing else was reported for these relationships, and the relationship between marital status and the relevant items in general.
					Level of training had a significant relationship with the items violence mostly results from mental illness, and psychiatric

						illness deserves as much attention as physical illness. Nothing else was reported for these relationships, and the relationship between level of training and the relevant items in general. There was a significant negative correlation between satisfaction and the item patients with mental illnesses are more likely to harm someone else than themselves. There was also a significant positive correlation between satisfaction and perceiving people with mental illness as rude and childlike. Nothing else was reported for the relationship between satisfaction and the relevant items.
Harris et al. (2016)	Psychiatrists Psychologists Social workers Unspecified nurses Other unspecified health professionals					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Hartmann (1989)	Family physicians (USA)	Quasi-experiment An intervention was used	Independent samples t-test	Somatoform disorder (label)	Anger Anxiety Resentment Perception that people with somatoform disorder take up too much time	The intervention used was a series of Balint groups using cognitive therapeutic approaches that focused on somatoform disorder. Before the intervention, participants expressed a moderate level of anger and less anxiety, but more resentment and more of a perception that people with somatoform disorder take up too much time. In comparison, participants in the control group at baseline expressed less anger, anxiety, and resentment, and neutral responses to people with somatoform disorder taking up too much time.

						Participants perceived that people with somatoform disorder take up too much time significantly less at postintervention, compared to preintervention. This was the only significant difference found between pre and postintervention. No significant differences were found between baseline and follow up scores for the control group.

Hayes et al. (2004)
 	
(USA)
	Counsellors	Experiment
		
		Interventions were used
			Mixed ANOVA
			
			Correlation analysis
				Drug addicts and alcoholics (label)	CASA (this is a modified version of the CAMI questionnaire that changes mental illness to drug addicts and alcoholics)
					    Authoritarianism (one unspecified item was removed from this factor)
					
					    Benevolence
					
					    Social restrictiveness
					
					    Community mental health ideology
					
					Another measure of attitudes towards drug addicts and alcoholics (only the following examples were provided)
					    My client is not going to change no matter what I do
					
					    If my clients really wanted to get sober, they would
					
					Burnout
						Participants were randomly assigned to either training in acceptance and commitment therapy, multicultural training, or training on the role of methamphetamines and related chemicals in addiction.
						
						Prior to the interventions, participants expressed more overall positive attitudes on both attitude measures.
						
						There was a significant time point by intervention interaction effect for overall scores on the CASA.
						For participants receiving acceptance and commitment therapy training, overall stigmatisation on the CASA decreased significantly from pre-intervention to follow-up. However, no significant difference was found between pre-intervention and post-intervention. For multicultural training, overall stigmatisation on the CASA decreased significantly from pre-intervention to post-intervention, but no significant difference was found between pre-intervention and follow up. For methamphetamine training, time point was not found to have a significant impact on overall CASA scores.
						
						A significant time point by intervention interaction effect was not found for overall scores on the other measure of attitudes. For participants receiving acceptance and commitment therapy training, overall stigmatisation decreased significantly from

						pre-intervention to post-intervention, and pre-intervention to follow-up. For multicultural training, overall stigmatisation decreased significantly from pre-intervention to post-intervention, but no significant difference was found between pre-intervention and follow up. For methamphetamine training, time point was not found to have a significant impact on overall CASA scores. For participants receiving acceptance and commitment therapy training, there was a significant positive correlation between stigmatisation on the other measure of attitudes, and burnout. A significant relationship was not found between these two variables for participants in the multicultural training group. The relationship between these two variables was not examined for the methamphetamine training group.

Hayes & Wall (1998)	Clinical psychologists
	
	Other unspecified mental health professionals
	
	(USA)
		Experiment
		
		Vignettes were used
			Factorial ANOVA
			
			Multiple regression analysis
				PTSD (description)
				
				Bulimia (description)
					Perceived responsibility of cause
					
					Perceived responsibility of problem solution
					
					Level of responsibility attributed by the target
					    None
					    Low
					    High
					
					Theoretical orientation
					    Psychodynamic
					    Humanistic
					    Leaning
					    Other
						Participants attributed less responsibility to the targets for the cause of their problem. PTSD was attributed less responsibility for a solution, and bulimia was attributed more responsibility for a solution. However, when the target with bulimia attributed a high level of responsibility to them self for solving the problem, participants responded roughly neutrally for problem solution.
						
						Participants attributed significantly more responsibility of cause and problem solution to the bulimia target than to the PTSD target.
						
						Level of responsibility attributed by the target was not found to have a significant impact on perceived responsibility of cause or problem solution.
						
						Psychodynamic orientation was a significant predictor of less perceived responsibility of cause. However, the reference group was not

						made clear. None of the other theoretical orientations were found to be significant predictors of perceived responsibility of cause. Again, the reference group was not stated. Theoretical orientation was not found to be a significant predictor of perceived responsibility of problem solution.
Heinz et al. (2019) (Germany)	Counsellors	Cross-sectional survey	Correlation analysis Fisher-Freeman-Halton test	Depression (label)	The personal stigma subscale of the DSS People with depression could snap out of it if they wanted Depression is a sign of personal weakness Depression is not a real medical illness People with depression are dangerous It is best to avoid people with depression so you don't become depressed yourself People with depression are unpredictable If I had depression I would not tell anyone I would not employ someone if they knew they had a been depressed I would not vote for a politician if I knew they had been depressed Number of years working at current organisation	Overall, participants expressed a lack of stigmatisation. Number of years working at the current organisation was significantly correlated with less overall stigmatisation. Older age was significantly correlated with less overall stigmatisation. High self-rated knowledge about depression and suicide was significantly correlated with less overall stigmatisation. Participants with a higher overall stigmatisation score were significantly more likely to pose concrete questions only if the caller mentions suicidality himself, compared to participants with lower overall stigmatisation scores. However, participants with a higher overall stigmatisation score were significantly less likely to pose concrete questions if they get suspicious, compared to compared to participants with lower overall stigmatisation scores. Also, participants with a higher overall stigmatisation score were slightly more likely to pose concrete questions if proof becomes more and more evident, compared to participants with lower overall stigmatisation scores. Whether this difference was statistically significant was not reported.

					Age	Reported management of callers at risk of suicide was not found to have a significant impact on overall stigmatisation.
					Self-rated knowledge about depression and suicide	

					When do you pose concrete questions about suicidality?
					  If I get suspicious
					
					  Only if the caller mentions suicidality himself
					
					  If proof becomes more and more evident throughout the conversation
					
					Reported management of callers at risk of suicide
					  Didn't go into detail
					
					  Asked for reasons
					
					  Informed about specific contacts
					
					  Advice of seeking help immediately
					
					  Called ambulance/police
					
					  Others
					
					  I don't know	

Hengartner et al. (2012)	Psychiatrists Psychologists Social workers Other unspecified physicians/therapists					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

	working in psychiatric institutions Other unspecified physicians/therapists Aides					
Heresco-Levy et al. (1999)	Psychiatrists Psychologists Social workers Occupational therapists Psychiatric nurses Nurse assistants					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

Holleman et al. (2000)	Primary care physicians
	
	(USA)
		Cross-sectional survey	Independent samples t-test
			
			Structural equation modelling
				Substance abuse (label)	A measure of negative attributions (only one example item was provided)
					   You can't win when treating substance-abuse patients
					
					Sex
					
					A measure of trait authoritarianism (only one example item was provided)
					   Those who contribute the most to society should get better health care
					
					Depressed mood
					
					A measure of clinical uncertainty tolerance (only one example item was provided)
					   I do not enjoy treating patients whose illness is
						Participants expressed overall negative attributions regarding substance abuse.
						
						Sex was not found to have a significant impact on overall negative attributions.
						
						Higher authoritarianism, depressed mood, and intolerance of clinical uncertainty were found to be significant predictors of more overall negative attributions.
						
						Higher reliance on the technological aspects of medicine was a significant predictor of less overall negative attributions.

					unlikely to respond to treatment Excessive reliance on technological aspects of medicine (e.g., for me, the laboratory profile is the most important part of the medical record)	
Holmqvist (2000)	Unspecified nurses working in psychiatric units Social workers Psychologists Psychiatric aides					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Holmqvist & Armelius (2004)	Unspecified nurses working in psychiatric units Social workers Psychologists Psychiatric aides					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Hori et al. (2011)	Psychiatrists Other unspecified physicians Unspecified nurses Pharmacologists A community health worker General population	Cross-sectional survey	-	Schizophrenia (label)	Patients with schizophrenia can work Would oppose if one of his/her relatives would like to marry someone who has schizophrenia Schizophrenia patients can be recognized by his/her appearance Schizophrenia patients are dangerous	Most psychiatrists responded positively to the measures. The only exception to this was most psychiatrists agreed that they would oppose if one of his/her relatives would like to marry someone who has schizophrenia. Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.

	(Japan)				Would not like to have a neighbor with schizophrenia Schizophrenia patients are untrustworthy Schizophrenia patients could harm children Schizophrenia patients should be kept in hospitals I don't worry about examining a person who is diagnosed with schizophrenia Schizophrenia can be treated Patients with schizophrenia cannot comprehend their illness Patients with schizophrenia cannot comprehend nor apply suggested treatment Schizophrenia has the chance of recovery	
Howard & Holmshaw (2010)	Psychiatrists Unspecified nurses from mental health services Occupational therapists/assistants Ward managers/team leaders Health care assistants/support, time and recovery workers					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

	Environment coordinators Welfare rights workers Senior house officers Other unspecified staff					

Hsiao et al. (2015)	Mental health nurses
	
	(Taiwan)
		Cross-sectional survey
		
		Short descriptions were used (the substance abuse description was not clear)
			Repeated-measures ANOVA
			
			Correlation analysis
			
			Hierarchical regression analysis
			
			Independent samples t-test
				Substance abuse (description and possible label)
				
				Schizophrenia (description and label)
				
				Major depression (description and label)
					AMIQ
					   Do you think that this would damage John's career?
					
					   I would be comfortable if John was my colleague at work?
					
					   I would be comfortable about inviting John to a dinner party
					
					   How likely do you think it would be for John's wife to leave him?
					
					   How likely do you think it would be for John to get in trouble with the law?
					
					Sex
					
					Age
					
					Years of mental health nursing experience
					
					Seniority
					   Head nurses/supervisors
					   Staff nurse
					
					Work setting
						Participants expressed more negative attitudes overall on the AMIQ towards the mental disorders.
						
						Substance abuse elicited the most overall negative attitudes on the AMIQ, followed by schizophrenia, followed by major depression. Type of mental disorder was found to have a significant impact on AMIQ overall scores. However, differences between the mental disorders were not examined with multiple comparisons.
						
						Sex was not found to have a significant impact overall AMIQ scores for any of the mental disorders.
						
						Age was significantly positively associated with overall positive attitudes towards all the mental disorders on the AMIQ.
						
						Having more years of experience in mental health nursing was a significant predictor of more overall positive attitudes on the AMIQ for all mental disorders.
						
						Seniority was not found to be a significant predictor of overall attitudes on the AMIQ for any of the mental disorders.
						
						Compared to working in psychiatric rehabilitation units, working in the other two settings were not found to be significant

					Acute psychiatric inpatient units Psychiatric rehabilitation units Outpatient clinics/community psychiatric rehabilitation centres Attitudes towards empathy in patient care	predictors of overall attitudes on the AMIQ for any of the mental disorders. In this analysis, these two settings were not compared. However, in a bivariate analysis, participants from acute psychiatric inpatient units expressed significantly more overall negative attitudes on the AMIQ towards substance abuse and schizophrenia, compared to participants from outpatient clinics/community psychiatric rehabilitation centres. A significant difference between these two groups was not found for major depression. Having a more positive attitude towards empathy in patient care was a significant predictor of more overall positive attitudes towards all of the mental disorders on the AMIQ.
Hugo (2001)	Mental health nurses Psychiatrists Social workers Clinical psychologists Occupational therapists Trainee psychiatrists Unspecified medical officers from psychiatric facilities Activity supervisors (Australia)	Cross-sectional survey Vignettes were used	Independent samples t-test	Schizophrenia (description) Depression (description)	Prognosis with and without professional help Full recovery with no further problems Full recovery, but problems would probably recur Partial recovery Partial recovery, but problems would probably recur No improvement Get worse Perceived long-term outcomes Negative outcomes Be violent Drink too much Take illegal drugs	For both mental disorders, and with professional help, full recovery, but with problems likely recurring was the most common prognosis by nurses. For depression, the next most likely prognosis was full recovery with no further problems. However, for schizophrenia partial recovery, but problems likely recurring was the next most common prognosis. The remaining prognoses with professional help were selected by either no nurses or a small proportion of nurses for both mental disorders. Prognoses were much more likely to be poor if the targets were not receiving professional help. This was not examined with inferential statistics. For depression, nurses mostly expressed a lack of stigmatisation. The only exception to this was two positive outcomes were perceived as less likely. For schizophrenia, nurses expressed more stigmatisation. However, one negative outcome was perceived as less likely, one positive outcome

					Have poor friendships
					Positive outcomes
					    Understand other's feelings
					
					    Have a good marriage
					
					    Be a caring parent
					
					    Be a productive worker
					
					    Be creative or artistic
						was perceived as more likely, and two negative outcomes were believed to be just as likely compared to the general population.
						
						Nurses were overall significantly more optimistic about the prognosis of depression compared to schizophrenia. However, without professional help participants were more likely to predict that depression would partially recover, but with problems likely recurring, and not improve. This was not assessed with inferential statistics.
						
						Nurses rated positive outcomes as more likely for depression than schizophrenia, and negative outcomes as less likely for depression than schizophrenia. The only exception to this was, schizophrenia was perceived as more likely than depression to be creative or artistic. These differences were not clearly examined with inferential statistics.
						
						Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.

Ighodaro et al. (2015)
 	
(Nigeria)
	Primary care physicians	Cross-sectional survey	-	Mental illness in general (label)
				
				Schizophrenia (label)
				
				Major depression (label)
				
				Bipolar disorder (label)
				
				Anxiety disorder (label)
					A measure of attitudes towards mental illness
					    Socializing
					        Not upset or disturbed about working on the same job
					
					        Willing to work with somebody with a mental illness
					
					        People with mental illness can work in regular jobs
						Most participants expressed positive attitudes on the measure of attitudes towards mental illness.
						
						Participants believed that all the mental disorders would improve with treatment. The following mental disorders are listed from least likely to improve with treatment to most likely to improve.
						    Schizophrenia
						    Bipolar disorder
						    Major depression
						    Anxiety disorder
						These differences were not examined with inferential statistics.

					People with mental illness are not a public nuisance	
					Do not object to having mentally ill people in my neighborhood	
					Not unwilling to share a room	
					Not afraid to have a conversation	
					Would invite somebody with mental illness into my home	
					Not afraid of people with mental problems living in residential neighborhoods	
					I am not afraid of people with mental illness	
					Are not dangerous because of violent behavior	
					Should have the same rights to a job as anyone else	
					Do not end to mentally retarded	
					Do not mind living next door to someone who has been mentally ill	
					Not ashamed if someone in your family had been	

					diagnosed with a mental illness
					
					Non-superstitious about witchcraft
					    Disagree that witchcraft can cause mental illness
					
					    Disagree that possession by evil spirits can cause mental illness
					
					    Disagree that a curse can cause mental illness
					
					    Disagree that God's punishment can cause mental illness
					
					Neighborly feelings
					    Would have casual conversations with neighbors with mental illness
					
					    Would have a former psychiatric patient as a friend
					
					    Would occasionally greet a former patient that came to live next door to you
					
					Stress and abuse etiology
					    Stress can cause mental illness
					
					    Physical abuse can cause mental illness
					
					    Poverty can cause mental illness	

					Perceived effectiveness of treatment for the particular mental disorders	
Imran & Haider (2007)	Family physicians Unspecified house officers Medical students					Nothing more was reported for this study as findings were not reported for family physicians separately.

Ishige & Hayashi (2005)	Psychiatric nurses
	
	Public health nurses
	
	Health care assistants
	
	Medical case workers
	
	Social welfare workers
	
	Local welfare commissioners
	
	Professional probation officers
	
	Other unspecified non-psychiatric care workers
	
	Unspecified non-care workers
	
	(Japan)
		Cross-sectional survey	-	Schizophrenia (label)	Semantic differentials
					  Safe vs harmful
					  Bad vs good
					  Annoying vs pleasing
					  Dark vs bright
					  Miserable vs merry
					  Wonderful vs fearful
					  Fierce vs gentle
					  Warm vs cool
					  Repellant vs attractive
					
					Social distance
						Psychiatric nurses stigmatised schizophrenia less overall for the semantic differentials, and expressed slightly more social distance towards schizophrenia.
						
						Other relevant findings were excluded from this table as they were not reported for psychiatric nurses separately.

James & Cowman (2007)	Psychiatric nurses (Ireland)	Cross-sectional survey	-	BPD (label) Other unspecified clients (label)	Prognosis Perceived difficulty	Half of the participants expressed that a number of people with BPD achieve some stability in their 40s (I don't know was an available option).

				Other unspecified psychiatric disorders (label)		Most of the participants agreed that clients with BPD are very or moderately difficult to look after. Most of the participants agreed that clients with BPD are more difficult to look after than other clients and more difficult to care for than those with other psychiatric disorders.

James et al. (2012)
 	
(Nigeria)
	GPs	Cross-sectional survey	-	Depression (label)	DAQ (only items relevant to stigmatisation were included in this table)
					  Becoming depressed is a way that people with poor stamina deal with life's difficulties
					
					  Becoming depressed is a natural part of old age
					
					  It is possible to distinguish two main groups of depression: one psychological in origin and the other caused by biochemical abnormalities
					
					  The majority of depression seen in general practice originates from patients' recent misfortunes
					
					  Depressed patients are more likely to have experienced deprivation early in their lives compared to other people
					
					  An underlying biochemical abnormality forms the basis of severe cases of depression
						For the majority of the causal attribution items, most participants expressed agreement. However, roughly half the participants expressed agreement for the item becoming depressed is a way that people with poor stamina deal with life's difficulties, and most participants disagreed that becoming depressed is a natural part of old age.
						
						Most participants agreed that working with depressed patients can be difficult.
						
						Less than half of the participants agreed that most depressive disorders seen in general practice improve without medication and most participants disagreed that depression reflects a characteristic response that is not amenable to change.

					Working with depressed patients can be difficult Most depressive disorders seen in general practice improve without medication Depression reflects a characteristic response that is not amenable to change	

Jones et al. (2009)	Psychiatrists
	
	Primary care physicians
	
	(USA)
		Structured interviews
		
		Vignettes were used
			Chi-square test of independence
			
			Mann-Whitney U-test
			
			One of the analyses was not clear
				Mental illness in general (label)
				
				Schizophrenia (descriptions and label)
					Mental illness interferes with history taking and physical examination
					
					Other stereotypes
					   Dangerous
					   Unpredictable
					   Unhealthy
					   Not intelligent
					   Unreliable
					   Difficult
					   Uncontrollable
					   Unkempt
					   Tiresome
					   Abnormal
					   Non-adherent to medications
					
					A measure of attitudes
					   Level of discomfort dealing with the target
					
					   Prematurely ending a visit with the target
					
					   Perceived negative impact of the target on examination
					
					Type of schizophrenia symptoms
					   Positive
					   Negative
						Most participants believed that mental illness interferes with history taking sometimes, and a small proportion believed that this always occurs. Also, a small proportion of primary care physicians believed that this never occurs. Most psychiatrists believed that mental illness interferes with physical examination sometimes, a small proportion believed that this never occurs, and a small proportion believed this this always occurs. For primary care physicians, roughly half believed that mental illness interferes with physical examination sometimes, roughly half believed that this never occurs, and a small proportion believed that this always occurs.
						
						Participants stereotyped schizophrenia more overall.
						
						Overall participants expressed more negative attitudes towards schizophrenia on the measure of attitudes.
						
						A significant relationship was not found between profession and the view that mental illness interferes with history taking. However, there was a significant relationship between profession and the perception that mental illness interferes with physical examination. Primary care physicians were more likely to believe that this never occurs and less likely to believe that it occurs

					Profession	sometimes. Profession was not found to have a significant impact on overall stereotyping of schizophrenia, and attitudes towards schizophrenia on the measure of attitudes. For psychiatrists, there was no difference between positive and negative symptoms for the measure of attitudes. Primary care physicians expressed more negative attitudes towards positive symptoms compared to negative symptoms. However, this difference was not found to be statistically significant.
Jones et al. (2013) (England)	Psychiatrists	Cross-sectional survey	Mann-Whitney *U*-test	Anorexia nervosa (label) Bulimia nervosa (label)	Causal attributions The mental disorders represent abnormal behaviour in the context of a weak, manipulative or inadequate personality The mental disorders are essentially untreatable It is appropriate that the MHA enables compulsory re-feeding of patients with anorexia nervosa The MHA should not be used to enforce admission to hospital for patients with anorexia nervosa The MHA should not be used when patients clearly believe that the advantages of anorexia nervosa outweigh the disadvantages The MHA should be used more frequently to protect the health and safety of patients with anorexia nervosa	Roughly half of the participants believed that the mental disorders are culturally determined by women's role in society, and less than half believed that the mental disorders are a neurophysiological disorder of unknown origin. Very few participants believed that the mental disorders represent abnormal behaviour in the context of a weak, manipulative or inadequate personality, and very few believed that the mental disorders are essentially untreatable. Most participants believed that it is appropriate that the MHA enables compulsory re-feeding of patients with anorexia nervosa, and very few believed that the MHA should not be used to enforce admission to hospital for patients with anorexia nervosa. Very few participants also believed that the MHA should not be used when patients clearly believe that the advantages of anorexia nervosa outweigh the disadvantages, and less than half believed that the MHA should be used more frequently to protect the health and safety of patients with anorexia nervosa.

					Grade
					    Consultants
					    Non-consultants
					
					Seniority
					    Psychiatrists of higher
					    seniority
					
					    Junior psychiatrists
						Bulimia nervosa was slightly more likely to be seen as culturally determined by women's role in society, and anorexia nervosa was more likely to be seen as a neurophysiological disorder of unknown origin. Further, anorexia nervosa was slightly more likely to be perceived as abnormal behaviour in the context of a weak, manipulative or inadequate personality, and essentially untreatable. Differences between anorexia nervosa and bulimia nervosa were not examined with inferential statistics.
						
						Non-consultants were significantly more likely to perceive anorexia nervosa as essential untreatable, compared to consultants. This was the only significant difference reported for grade.
						
						Junior psychiatrists were significantly more likely to view bulimia nervosa as abnormal behaviour in the context of a weak, manipulative or inadequate personality, compared to psychiatrists of higher seniority. Also, senor psychiatrists were significantly more likely to believe that the MHA should not be used to enforce admission to hospital for patients with anorexia nervosa. No other significant differences were reported for seniority.

Jorm et al. (1999)	Clinical psychologists
	
	Psychiatrists
	
	GPs
	
	General population
	
	(Australia)
		Cross-sectional survey
		
		Vignettes were used
			Between-groups ANOVA	Major depression (description)
				
				Schizophrenia (description)
					Long term outcomes following treatment compared to other people in the community
					    Negative
					        Be violent
					        Drink too much
					        Take illegal drugs
					        Have poor friendships
					    Positive
					        Understand other's
					        feelings
						For major depression, psychologists believed that negative outcomes were less likely, and positive outcomes were either more likely or slightly more likely. GPs and psychiatrists believed that some negative outcomes were more likely and slightly more likely, and some were less likely and slightly less likely. GPs only believed that one positive outcome was more likely, and one positive outcome was just as likely. Psychiatrists believed some positive outcomes were more likely and slightly more likely, and some positive

					Have a good marriage
					
					Be a caring parent
					
					Be a productive worker
					
					Be creative or artistic
					
					Profession
					
					Age (levels were not specified)
					
					Sex
					
					Payment method
					  Private practice
					  Salaried
					  Mixed
					
					Frequency of contact with the mental disorders described (it was not clear if this was professional or personal contact)
						outcomes were less likely and slightly less likely. For schizophrenia there was more consistency across the items and professions. All of the relevant participants believed negative outcomes were either more likely or slightly more likely. Positive outcomes were believed to be less likely by the relevant participants. The only two exceptions to this were GPs and psychologists believed that being creative or artistic was slightly more likely.
						
						For the relevant participants, schizophrenia was stigmatised more than major depression for all items. The only exception to this was GPs and psychologists believed that a person with schizophrenia was more likely than a person with major depression to be creative or artistic. Differences between the mental disorders were not examined with inferential statistics.
						
						Across the different items and disorders, each profession expressed more stigmatisation than the other professions at least once, and less stigmatisation at least once. However, psychologists often expressed less stigmatisation than the other two professions. Differences between the professions were either not examined with inferential statistics separately to the general population, or were not clearly examined with inferential statistics.
						
						For GPs, age was not found to have a significant impact on negative outcomes for schizophrenia. Younger psychiatrists believed more that negative outcomes were more likely for both disorders, and there were no age differences for psychologists. It was not clear if these differences were statistically significant or not. Nothing else was reported for the impact of age on stigmatisation.

						Female GPs believed more that negative outcomes were more likely for schizophrenia, and there were no sex differences for psychologists. Whether these results were examined with inferential statistics was not clear, and nothing else was reported for the impact of sex on stigmatisation.
						Salaried psychiatrists believed more that negative outcomes were more likely for depression, compared to private practice psychiatrists, and psychologists in mixed practice believed more that positive outcomes were more likely for depression compared to salaried psychologists. Whether these differences were statistically significant was not reported, and nothing else was reported for the impact of payment method on stigmatisation.

Frequency of contact with the mental disorders described was not associated with stigmatisation for any profession or mental disorder. Whether this was explored with inferential statistics was not clear.

Other relevant findings were excluded from this table as they were not reported for mental health professionals separately. |
| Kahle & White (1991) | Psychologists

Counsellors

(USA) | Cross-sectional survey | Chi-square test of independence | Alcoholism (label) | Causal attributions

It is somewhat difficult to feel truly empathic towards an alcoholic

I would feel uncomfortable being around alcoholics a lot

If over the course of providing therapy for your client he/she continues to drink, | Most participants disagreed that alcoholics tend to be weak-willed individuals. However, only roughly half of the psychologists disagreed that alcoholism is a symptom of an underlying personality disorder, and only roughly half of the counsellors disagreed that an alcoholic is as blameless for his/her disease as a diabetic. In comparison, most of the counsellors disagreed that alcoholism is a symptom of an underlying personality disorder, and most of the psychologists |

					after providing referral sources you would suspend/terminate the counselling relationship Alcoholics can be cured Profession	disagreed that an alcoholic is as blameless for his/her disease as a diabetic. Most participants disagreed that it is somewhat difficult to feel truly empathic towards an alcoholic. However, only roughly half disagreed that they would feel uncomfortable being around alcoholics a lot, and they would suspend/terminate the counselling relationship if over the course of providing therapy the client continues to drink. Further, roughly half of the counsellors agreed that alcoholics can be cured, compared to most psychologists agreeing that alcoholics can be cured. Profession was found to have a significant relationship with two causal attributions. Counsellors were more likely to agree that an alcoholic is as blameless for his/her disease as a diabetic, and psychologists were more likely to agree that alcoholism is a symptom of an underlying personality disorder. Profession was found to have a significant relationship with the measure it is somewhat difficult to feel truly empathic towards an alcoholic and alcoholics can be cured. Psychologists were more likely to agree with both of these statements, compared to counsellors. Profession was not found to have a significant relationship with any other measure of stigmatisation.

Kahn (1976)
 	
(USA)
	Psychiatric nurses	Cross-sectional survey	-	Mental illness in general (label)	OMI scale
					    Authoritarianism
					    Benevolence
					    Mental hygiene ideology
					    Social restrictiveness
					    Interpersonal aetiology
						Participants expressed more negative attitudes on the authoritarianism, benevolence, and social restrictiveness factors, and more positive attitudes on the mental hygiene ideology factor.
						
						Participants expressed less agreement with interpersonal aetiology.

Kaitz et al. (2021)	Psychiatrists Psychologists Social workers Unspecified nurses Other unspecified providers within a Veteran's Affairs healthcare system					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

Kapungwe et al. (2011)	Clinical officers in psychiatry
	
	Psychiatric nurses
	
	General clinical officers
	
	Primary care nurses
	
	Environmental health technologists
	
	(Zambia)
		Cross-sectional survey	-	Mental illness in general (label)	Stereotypes
					    People with mental illness are dangerous
					
					    If people become mentally ill once, they easily become ill again
					
					    People with mental illness have unpredictable behaviour
					
					Level of comfort when working with mental illness
					
					Restrictiveness
					    Violent mental patients should be handcuffed
					
					    Detention in a solitary place should be considered for people with mental illness
					
					    Sedation of mental patients would guarantee safety for other people in all cases
					
					Profession
						Most general clinical officers did not agree with the three stereotypes (neutral responses were available).
						
						For the clinical officers in psychiatry and general clinical officers, most of the participants were uncomfortable working with mental illness, and clinical officers in psychiatry were more likely to be uncomfortable. For the psychiatric nurses, most enrolled nurses felt uncomfortable working with mental illness, whereas all of the registered nurses were comfortable. These differences between the professions were not examined with inferential statistics.
						
						Clinical officers in psychiatry were more likely to be restrictive overall compared to the other mental health professionals. This was not assessed with inferential statistics.
						
						Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.

					Level of psychiatric nurse training
					    Registered
					    Enrolled	

Kassam et al. (2012)	Social workers Psychiatric nurses Counsellors Psychologists Occupational therapists Recreational therapists Unspecified nurses Unspecified physicians Pharmacists Social work students Psychiatric nursing students Psychology graduate students Occupational therapy students Nursing students Medical students Other unspecified health professionals					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

Kerr et al. (1995)	Psychiatrists GPs (Wales)	Cross-sectional survey	Independent samples t-test	Depression (label)	DAQ
					  Treatment attitude
					    Most depressive disorders seen in general practice improve without medication
					
					    An underlying biochemical abnormality is at the basis of severe cases of depression
					
					    Becoming depressed is a way that people with poor stamina deal with life difficulties
					
					    Psychotherapy tends to be unsuccessful with depressed patients
					
					    Antidepressants usually produce a satisfactory result in the treatment of depressed patients in general practice
					
					    If psychotherapy were freely available, it would be more beneficial than antidepressants for most depressed patients
					
					  Professional ease
					    I feel comfortable in dealing with depressed patients' needs
					
					    Working with depressed patients is heavy going
						Participants agreed more that an underlying biochemical abnormality is at the basis of severe cases of depression, and disagreed more that becoming depressed is a way that people with poor stamina deal with life difficulties. Also, participants disagreed more with the depression malleability factor. The remaining DAQ items were either not summarised separately or were not included in this table due to being irrelevant to stigmatisation.
						
						Compared to GPs, psychiatrists agreed significantly more with the item an underlying biochemical abnormality is at the basis of severe cases of depression, and disagreed significantly more with the item becoming depressed is a way that people with poor stamina deal with life difficulties. No significant difference was found between GPs and psychiatrists for the depression malleability factor. However, GPs agreed significantly more than psychiatrists that depression reflects a characteristic response in patients that is not amenable to change, and becoming depressed is a natural part of being old. Professions were not compared for the remaining relevant DAQ items.

					It is rewarding to spend time looking after depressed patients
					
					Psychotherapy for depressed patients should be left to a specialist
					
					Depression malleability
					    Depression reflects a characteristic response in patients that is not amenable to change
					
					    Becoming depressed is a natural part of being old
					
					    Depressed patients are more likely to have experienced deprivation in early life than other people
					
					    If depressed patients need antidepressants, they are better off with a psychiatrist than a GP
					
					Depression identification
					    The majority of depression seen in general practice originates from patients' recent misfortunes
					
					    It is difficult to differentiate whether patients are presenting with unhappiness or with clinical depressive disorder that needs treatment	

					There is little to be offered to those depressed patients who do not respond to what GPs do The practice nurse could be a useful person to support depressed patients During the past five years, I have seen an increase in the number of patients presenting with depressive symptoms It is possible to distinguish two main groups of depression: one psychological in origin and the other caused by biochemical mechanisms Profession	
Keuroghlian et al. (2016)	Counsellors Social workers Psychiatrists Psychologists Primary care physicians Unspecified nurses Internists Physician assistants Psychiatry residents					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

| Kingdon et al. (2004) | Psychiatrists Trainee psychiatrists (UK) | Cross-sectional survey | - | Mental illness in general (label) Schizophrenia (label) | Causal attributions A woman (or man) would be foolish to marry someone who has suffered from mental illness Most women formerly in a mental hospital can be trusted as babysitters Perceived unpredictability Perceived difficulty to talk to People with schizophrenia feel the same way we all do at times Grade   Consultant   Other grades | Roughly half of the consultant psychiatrists believed schizophrenia is caused by biological factors, and a balance of biological and social factors. In comparison, most psychiatrists from other grades believed that schizophrenia is caused by biological factors, and under half believed schizophrenia is caused by a balance of biological and social factors. Most of the psychiatrists did not agree that a woman (or man) would be foolish to marry someone who has suffered from mental illness. Consultant psychiatrists agreed with this more than psychiatrists from other grades (neutral responses were available). Most consultant psychiatrists believed that most women formerly in a mental hospital can be trusted as babysitters, and roughly half of the psychiatrists from other grades agreed with this statement (neutral responses were available). Under half of the psychiatrists perceived schizophrenia as unpredictable, difficult to talk to, and feeling the way we do at times. There was no difference between the grades for perceived unpredictability, and consultant psychiatrists were more likely to agree with the other two items compared the psychiatrists from other grades. Differences between the grades were not examined with inferential statistics. Other relevant findings were excluded from this table as they were not reported for psychiatrists separately. |

Kirkby & James (1979)	GPs Psychiatrists Other unspecified non-psychiatric medical practitioners Other unspecified medical practitioners					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

Kloss & Lisman (2003)	Counsellors
	
	Unspecified nurses working in mental health or alcohol rehabilitation facilities
	
	Other unspecified mental health clinicians
	
	(USA)
		Cross-sectional survey
		
		Vignettes were used
			Correlation analysis
			
			Independent samples t-test
			
			Between-groups ANOVA
				Alcoholism (description and label)
				
				Schizophrenia (description and label)
				
				Comorbid alcoholism and schizophrenia (description and label)
					Perceived blame
					    The target is responsible for his problems
					
					    The target could have avoided the problems that he has
					
					    The target could have controlled the cause of his problems
					
					Perceived control
					    The target is personally responsible for creating a solution
					
					    The target can overcome his problems by himself
					
					    The target can control the solution to his problems
					
					Endorsement of the alcoholism disease model (items were not specified)
					
					Agency type
					    Mental health
					    Alcohol rehabilitation
						Overall perceived blame and control was low. Participants also endorsed the alcoholism disease model to a moderate to high degree.
						
						Endorsement of the alcoholism disease model was not found to be significantly correlated with overall perceived blame.
						
						Participants from the mental health facility blamed comorbid alcoholism and schizophrenia significantly more than participants from the alcohol rehabilitation facility. The impact of agency type on perceived blame was not examined for the other mental disorders.
						
						Agency type was not found to have a significant impact on perceived control.
						
						Recovering alcoholics attributed significantly less blame to alcoholism compared to participants not recovering from alcoholism. This was not clearly examined for the other mental disorders, and this variable was not found to have a significant impact on endorsement of the alcoholism disease model.
						
						Certified addiction counsellors attributed significantly less blame to alcoholism compared to the other participants. This was not clearly examined for the other mental disorders, and this variable was not found to

					Whether the participants are recovering alcoholics	have a significant impact on endorsement of the alcoholism disease model.
					Whether the participant is a certified addiction counsellor	Participants that refer patients to Alcoholics Anonymous attributed significantly less blame to alcoholism compared participants that do not make this referral. This was not clearly examined for the other mental disorders, and this variable was not found to have a significant impact on endorsement of the alcoholism disease model.
					Whether participants refer patients to Alcoholics Anonymous	
Knaak et al. (2015)	Social workers Counsellors Occupational therapists Psychologists Psychiatrists Directors Managers Unspecified nurses Other unspecified health professionals Unspecified students					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

Kopera et al. (2015)	Psychiatrists
	
	Psychotherapists
	
	(Poland)
		Cross-sectional survey
		
		GNAT
			Correlation analysis	Mental illness in general (label)
				
				Schizophrenia, depressive, and neurotic (labels; only these examples were given for the GNAT)
					Emotions
					  Positive
					    Compassion
					    Interest
					    Sadness
					    Acceptance
					  Negative
					    Anger
					    Dislike
					    Anxiety
						Participants reported more overall positive emotions and less overall negative emotions towards mental illness.
						
						Participants expressed low authoritarianism and low social restrictiveness towards mental illness. Scores for the other OMI factors were not reported by the authors.

					Aversion
					Distrust
					Indifference
					
					OMI scale
					  Authoritarianism
					  Benevolence
					  Mental hygiene ideology
					  Social restrictiveness
					  Interpersonal aetiology
					
					Implicit attitudes (only the following example was provided)
					  General attitudes
					
					Age
						Participants expressed negative implicit attitudes towards mental illness (exemplified by at least the terms schizophrenia, depressive, and neurotic).
						
						Age was not found to be significantly correlated with any of the stigmatisation measures overall.

Koutrelakos et al. (1978)	Psychologists Social workers Business administration officers					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Krawitz (2004)	Psychologists Social workers Occupational therapists Unspecified nurses from mental health and substance abuse services Unspecified doctors from mental health and substance abuse services (Australia)	Longitudinal survey An intervention was used	Repeated-measures ANOVA One analysis was not made clear	BPD (label)	Willingness to work with BPD Optimism in working with BPD Age Profession Work setting (levels were not made clear)	Before an educational workshop on BPD, participants were more willing to work with BPD and more optimistic in working with BPD. Postintervention participants were significantly more willing and optimistic. Six months after the intervention participants were less willing and optimistic than at postintervention, but were still significantly more willing and optimistic compared to before the intervention. The differences between postintervention and six months after the intervention were not found to be statistically significant. Age, profession, and work setting were not found to be related to differences across the

						time points. Inferential statistics were not reported for this.

Kua et al. (2000)	GPs
	
	Psychiatrists
	
	Other unspecified doctors
	
	(Singapore)
		Experiment (GPs were randomly assigned to vignettes)
		
		Cross-sectional survey (Psychiatrists were assigned to all the vignettes)
		
		Vignettes were used
			-	Major depression (description)
				
				Schizophrenia (description)
				
				Mania (description)
					Long term outcomes compared to other people in the community
					  Negative
					    Be violent
					    Drink too much
					    Take illegal drugs
					    Have poor friendships
					  Positive
					    Understand other's feelings
					
					    Have a good marriage
					
					    Be a caring parent
					
					    Be a productive worker
					
					    Be creative or artistic
					
					Prognosis with and without professional help
					
					Profession
						For depression, mental health professionals rated all the negative outcomes as less likely and all the positive outcomes as more likely. The pattern of responses for mania and schizophrenia were not as straight forward. For mania, all negative outcomes were rated as less likely, and some of the positive outcomes were rated as more likely. However, GPs rated three of the positive outcomes as roughly as likely, and psychiatrists rated one of the positive outcomes as less likely and one as roughly as likely. For schizophrenia, GPs rated all of the negative outcomes as less likely, and the psychiatrists rated three of the negative outcomes as less likely, and one as more likely. Also, psychiatrists rated all positive outcomes as less likely, and GPs rated one of the positive outcomes as more likely, and one as less likely. For the remaining positive outcomes, GPs rated them as roughly as likely.
						
						For all of the mental disorders, most mental health professionals gave poor prognoses without professional help. In contrast, most mental health professionals gave good prognoses with professional help (don't know was an available option). This difference between receiving professional help and not receiving professional help was not examined with inferential statistics.
						
						For GPs, there was no consistent difference between the mental disorders across the negative outcomes. For positive outcomes, GPs mostly stigmatised schizophrenia the most, followed by mania, followed by depression. The only exception to this was for one of the positive outcomes, mania was

						stigmatised the most, followed by schizophrenia, followed by depression. For psychiatrists, schizophrenia was stigmatised more than mania and depression for one negative outcome. In this case mania and depression were stigmatised to the same degree. For all remaining items (including prognosis items), mental health professionals stigmatised more or were more likely to stigmatise schizophrenia, followed by mania, followed by depression. Differences between the mental disorders were not examined with inferential statistics. Across the mental disorders, for some items GPs expressed more or were more likely to express stigmatisation, whereas for other items, psychiatrists expressed more or were more likely to express stigmatisation. Differences between GPs and psychiatrists were not examined with inferential statistics separately to the other unspecified doctors.
Kukulu & Ergun (2007)	Unspecified nurses working in psychiatric wards (Turkey)	Cross-sectional survey	-	Schizophrenia (label)	Causal attributions Social distance People diagnosed with schizophrenia are aggressive People diagnosed with schizophrenia are not able to make correct decisions about their own lives People with schizophrenia never completely recover Schizophrenia is a treatable illness	Most participants agreed that schizophrenia is an illness, and disagreed that schizophrenia is a state and contagious. Further, most participants agreed that schizophrenia is an illness present from birth, and roughly half agreed that schizophrenia is caused by social problems. However, roughly half of the participants also agreed that schizophrenia is a state of emotional weakness (I don't know was an available option). Overall, either roughly half or most of the participants expressed social distance towards schizophrenia. The only exception to this was most participants disagreed that people diagnosed with schizophrenia should not be allowed to move freely within society (I don't know was an available option).

						Most participants agreed that people diagnosed with schizophrenia are aggressive and are not able to make correct decisions about their own lives (I don't know was an available option). Most participants agreed that people with schizophrenia never completely recover, but most participants also agreed that schizophrenia is a treatable illness (I don't know was an available option).
Kusalaruk et al. (2015) (Thailand)	Psychiatrists	Cross-sectional survey	Chi-square test of independence Fisher's exact test	OCD (label) Other unspecified mental disorders (label)	Positive feelings Admiration Pity Understanding Empathy Negative feelings Tiredness Annoyance Perceived difficulty People with OCD are not compliant to treatment I don't want to treat people with OCD compared to other mental disorders People with OCD require more time compared to other mental disorders People with OCD require more patience compared to other mental disorders People with OCD talk to much compared to other mental disorders	Most participants expressed positive attitudes towards OCD across the measures and items. The only exceptions to this were most participants disagreed with admiring people with OCD, most participants agreed that people with OCD are difficult, and roughly half of the participants agreed that people with OCD exhibit poor compliance with behaviour therapy. Years of professional experience was significantly associated with annoyance and the perception that people with OCD have a poor compliance with medication. Participants with six to ten years of experience reported these responses the most often. Nothing else was reported for the relationship between years of professional experience and stigmatisation. Workplace was significantly associated with annoyance. Participants in the general/provincial hospitals felt this the most often, followed by participants in the mental hospitals, followed by participants in the medical university hospitals. Nothing else was reported for the relationship between workplace and stigmatisation.

				People with OCD are more difficult to build a therapeutic relationship with compared to other mental disorders Years of professional experience 1-5 6-10 11-20 >20 Workplace Mental hospital Medical university hospital General/provincial hospital Private hospital/clinic/others Estimated number of outpatients treated over a three hour period 1-10 11-20 21-30 >30 Estimated number of OCD patients treated 1-10 11-20 21-30 >30 Estimated time spent on visits with OCD patients 1-15 minutes 15-30 minutes 30-45 minutes >45 minutes Estimated time spent in follow-up sessions with OCD patients 1-15 minutes 15-30 minutes	Estimated number of outpatients treated over a three hour period was significantly associated with admiration. Participants with less than ten patients were most likely to report admiration. Estimated number of outpatients treated over a three hour period was also significantly associated with the perception that people with OCD have a poor compliance with behaviour therapy, and people with OCD require more time compared to other mental disorders. Participants with more than 30 patients were the most likely to agree with these responses. Nothing else was reported for the relationship between estimated number of outpatients treated over a three hour period and stigmatisation. Estimated number of OCD patients treated was significantly associated with the perception that people with OCD have a poor compliance with behaviour therapy. Participants that had treated 11 to 20 patients were the least likely to agree with this perception. Nothing else was reported for the relationship between estimated number of OCD patients treated and stigmatisation. Estimated time spent on visits with OCD patients was significantly associated with pity. Participants that spent less than 15 minutes with OCD patients were the least likely to feel pity, and participants that spent more than 45 minutes with OCD patients were the most likely to feel pity. Estimated time spent on visits with OCD patients was also significantly associated with the perception that people with OCD have a poor compliance with behaviour therapy. All the participants that spent less than 15 minutes with OCD patients agreed with this perception, and roughly a third of the participants that spent more than 45 minutes

					30-45 minutes
					>45 minutes
					
					Experience and proficiency with exposure and response prevention therapy
					   None
					   Known but never practice
					   Practice but not proficient
					   Proficient
					
					Overall confidence in treating OCD
					
					Confidence in treating OCD with behaviour therapy
					
					Confidence in treating OCD with medication
					
					Preferred treatment mode for OCD
					   Drugs only
					
					   Drugs and behaviour therapy
					
					   Drugs and other psychotherapy
					
					   Drugs, behaviour therapy, and other psychotherapy
					
					Sex
					
					Age
					   <35
					   35-45
					   >45
						with OCD patients agreed with this perception. Nothing else was reported for the relationship between estimated time spent on visits with OCD patients and stigmatisation.
						
						Estimated time spent in follow-up sessions with OCD patients was significantly associated with the view that people with OCD are more difficult to build a therapeutic relationship with compared to other mental disorders. Participants that spent more than 30 minutes in follow-up sessions with OCD patients were the most likely to agree with this view. Nothing else was reported for the relationship between estimated time spent in follow-up sessions with OCD patients and stigmatisation.
						
						Experience and proficiency with exposure and response prevention therapy was significantly associated with admiration and pity. Most proficient participants felt admiration towards people with OCD, and all proficient participants felt pity towards people with OCD. In comparison, none of the participants with no experience felt admiration, and half of these participants felt pity. Experience and proficiency with exposure and response prevention therapy was significantly associated with tiredness. A small proportion of proficient participants felt tired, and most of the participants without experience felt tired. Experience and proficiency with exposure and response prevention therapy was significantly associated with the perception that people with OCD have a poor compliance with medication. Proficient participants were most likely to agree with this perception, and none of the participants without experience agreed with this perception. Experience and proficiency with exposure and response prevention therapy was also significantly

| | | | | | associated with the view that people with OCD require more time than other mental disorders. Participants either without any experience or without practice experience were the most likely to agree with this, whereas none of the proficient participants agreed with this view. Nothing else was reported for the relationship between experience and proficiency with exposure and response prevention therapy and stigmatisation.

Overall confidence in treating OCD was significantly associated with tiredness and annoyance. Confident participants were less likely to feel tired and annoyed compared to participants that lacked confidence. Overall confidence in treating OCD was significantly associated perceived difficulty. Most confident participants agreed with this perception, however all of the participants that lacked confidence agreed with this perception. Overall confidence in treating OCD was significantly associated with not wanting to treat people with OCD compared to other mental disorders. Confident participants were less likely to agree with this compared to participants without confidence. Overall confidence in treating OCD was also significantly associated with the view that people with OCD are more difficult to build a therapeutic relationship with compared to other mental disorders. Again, confident participants were less likely to endorse this view compared to participants without confidence. Nothing else was reported for the relationship between overall confidence in treating OCD and stigmatisation.

Confidence in treating OCD with behavioural therapy was significantly associated with the view that people with OCD exhibit poor compliance with other psychotherapy, and |

						people with OCD require more patience than other mental disorders. These variables were reportedly related to confidence in treating OCD with behaviour therapy in a similar way to how variables were related to overall confidence in treating OCD. Nothing else was reported for the relationship between confidence in treating OCD with behaviour therapy and stigmatisation. Confidence in treating OCD with medication was significantly associated with pity and tiredness. Nothing else was reported for the relationship between confidence in treating OCD with medication and stigmatisation. Preferred treatment mode for OCD, sex, and age were not found to be significantly associated with stigmatisation.
Kuyken et al. (1992) (England)	Clinical psychologists	Semi-structured interviews	-	Depression (label)	Causal attributions	Participants attributed depression to a range of causes with varying proportions. Life-events or traumatic experiences were among the most likely causes, and loneliness or poor social support were among the least likely causes. The following aetiological approaches are listed from the most explanatory power to the least, according to the participants. Diathesis-stress approach Cognitive approach Psychodynamic approach Biological approach Differences between aetiological approaches were not assessed with inferential statistics.
Lam et al. (2013) (China)	Family physicians	Cross-sectional survey with open-ended questions and experiment Vignettes were used	Thematic analysis Multiple ordinal logistic regression analysis	Mental illness in general (label) Depression (description)	Perceived difficulty Perceived helplessness/prognosis Sympathy	Participants described mental illness via a number of adjectives with varying proportions. Challenging, time consuming, demanding, difficult, and helpless were among the most likely adjectives. Sympathy, curable, unfortunate, patience, troublesome,

				Schizophrenia (description) Other unspecified patients (label)	People with mental illness are unfortunate Patience People with mental illness are vulnerable Perceived unpredictability I would like to have the target on my practice list for their mental issues I would not like to have the target on my practice list for their physical issues I will spend more time on the target than other patients The target arouses sympathy The target is likely to annoy me I am worried that I am unable to predict how the target would behave or respond I am afraid to ask the target personal questions I will avoid confronting the target directly I will have greater distance with the target than other patients I expect the target to be more demanding than other patients	bizarre, vulnerable, and unpredictable were among the least likely adjectives. Also, chronic was stated slightly less frequently than curable. For some of the target specific measures, most participants expressed positive attitudes towards the mental disorders, and for a few other measures most participants expressed negative attitudes. Also, for some measures, either roughly half, less than half, or just under half of the participants expressed positive attitudes (neutral responses were available). For eight of the target specific measures schizophrenia was significantly more likely to be stigmatised than depression. Depression was significantly more likely to be stigmatised than schizophrenia for only one of the measures. Mental disorder was not found to be a significant predictor of the remaining measures. For two of the target specific measures, participants with more professional experience were significantly less likely to stigmatise the mental disorders compared to participants with less professional experience. For one measure participants with more professional experience were significantly more likely to stigmatise the mental disorders. Years of professional experience was not found to be a significant predictor of the remaining measures. For two of the target specific measures, females were significantly more likely to stigmatise the mental disorders compared to males. Sex was not found to be a significant predictor of the remaining measures.

					I doubt the ability of the target to be involved in treatment decisions
					
					I believe the target will comply with treatment and advice
					
					The target is likely to have improvement if treated
					
					Years of professional experience
					
					Sex
					
					Setting
					   Hospital
					   Community
					
					Sector
					   Public
					   Private
					
					Practice
					   Solo
					   Group
					
					Have a relative/friend with a mental illness
						For three of the target specific measures, participants from a community setting were significantly more likely to stigmatise the mental disorders compared to participants from a hospital setting. Setting was not found to be a significant predictor of the remaining measures.
						
						For two of the target specific measures, participants from the private sector were significantly more likely to stigmatise the mental disorders compared to participants from the public sector. Sector was not found to be a significant predictor of the remaining measures.
						
						For one of the target specific measure, participants that practice in a group format were significantly less likely to stigmatise the mental disorders compared to participants that practice in a solo format. Practice was not found to be a significant predictor of the remaining measures.
						
						For four of the target specific measures, participants without a relative/friend with a mental illness were significantly more likely to stigmatise the mental disorders, compared to participants with a relative/friend that has a mental illness. For one measure, participants with a relative/friend that has a mental illness were significantly more likely to stigmatise mental illness. Having a relative/friend with a mental illness was not found to be a significant predictor of the remaining measures.

Lammie et al. (2010)	Unspecified nurses from forensic mental health settings Nursing assistants					Nothing more was reported for this study as findings were not reported for nurses separately.

| Lampe et al. (2013) | GPs

Psychiatrists

(Australia) | Cross-sectional survey | Independent samples t-test

Correlation analysis | Depression (label) | DAQ (only factors relevant to stigmatisation were included in this table)
  Treatment attitudes

  Inevitable course of depression/pessimism about depression

Profession

NEO-FFI
  Neuroticism
  Extraversion
  Openness
  Agreeableness
  Conscientiousness | Participants agreed slightly more with treatment attitudes, suggesting more agreement with attributing depression to poor stamina/a biochemical abnormality. However, GPs disagreed more with inevitable course of depression/pessimism about depression, and psychiatrists responded roughly neutrally to this factor.

Profession was not found to have a significant impact on treatment attitudes. Psychiatrists agreed significantly more with inevitable course of depression/pessimism about depression compared to GPs.

For GPs, extraversion was significantly negatively correlated with both DAQ factors, and neuroticism was significantly positively correlated with inevitable course of depression/pessimism about depression. No other significant correlations were found between the NEO-FFI and the DAQ for GPs. For psychiatrists, no significant correlations were found between the NEO-FFI and the DAQ. |
| Lauber et al. (2004) | Psychiatrists

(Switzerland) | Structured telephone interviews

A vignette was used | - | Mental illness in general (label)

Schizophrenia (description and label) | Social distance

Mental health facilities should be kept out of residential neighbourhoods

Local residents have good reason to resist the location of mental health services in their neighbourhood

Local residents should accept the location of mental health facilities in their neighbourhood to serve the needs of the local community | Participants expressed more social distance towards schizophrenia for some items, and less social distance for other items. Participants expressed social distance on most of the items.

Overall, participants expressed a lack of stigmatisation for the remaining measures. |

					Locating mental health facilities in a residential area downgrades the neighbourhood	
					Locating mental health services in a residential neighbourhood does endanger local residents	
					It is frightening to think of people with mental problems living in residential neighbourhoods	
Lauber et al. (2006)	Psychologists Psychiatrists Social workers Unspecified nurses from psychiatric wards Physiotherapists Vocational workers					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Lawrie et al. (1998)	GPs (Scotland)	Experiment Vignettes were used	Mann-Whitney *U*-test Correlation analysis	Schizophrenia (description and label) Depression (description and label) Unspecified patients (label)	You would be happy to have the target on your list The target is likely to take up a lot of time The target is more likely to be violent than most patients The target is unlikely to comply with advice or treatment given You would be concerned about the welfare of the target's child The target is likely to drink to excess	For most of the measures, participants expressed more positive attitudes to both mental disorders. The only two exceptions to this were participants responded neutrally to the measure you would be concerned about the welfare of the target's child, and agreed more with the measure this person is likely to take up a lot of time. For most of the measures there was either no difference between schizophrenia and depression, or differences between schizophrenia and depression were not found to be statistically significant. The only significant difference between schizophrenia and depression was participants were

					The target is likely to take illegal drugs The target arouses your sympathy Age	significantly less happy to have a patient with schizophrenia on their list. Age was not found to be significantly correlated with any of the measures.
Lawrie et al. (1996)	GPs (Scotland)	Cross-sectional survey A vignette was used	-	Schizophrenia (description and label) Unspecified patients (label)	You would be happy to have the target on your list The target is likely to take up a lot of time The target is more likely to be violent than most patients The target is unlikely to comply with advice or the treatment given The target is likely to drink to excess The target is likely to take illegal drugs The target arouses your sympathy You would be concerned why the target is wanting to join your practice	Overall, participants expressed either neutral or more positive responses. The only exception to this was participants agreed more that the target is likely to take up a lot of time.

Lebowitz & Ahn (2014)	Psychiatrists
	
	Psychologists
	
	Social workers
	
	Counsellors
		Experiment
		
		Vignettes were used
			Correlation analysis
			
			Mixed factorial ANOVA
			
			Paired samples t-test
				Schizophrenia (description)
				
				Social phobia (description)
				
				Depression (description)
					Empathy
					    Sympathetic
					    Soft-hearted
					    Warm
					    Compassionate
					    Tender
					    Moved
					
					Personal distress
						Across the different conditions and professions, participants expressed more empathy at times and less empathy at times. Mostly, participants either expressed slightly less empathy or slightly more empathy towards the mental disorders. Participants expressed less personal distress towards the mental disorders. For all mental disorders, participants believed that the likelihood of

| | Other unspecified mental health professionals

(USA) | | | OCD (description) | Alarmed
Troubled
Distressed
Upset
Disturbed
Worried

Prognosis without treatment

Explanations provided for the mental disorders
   Biological/both explanations but the biological explanation is prominent

   Psychosocial/both explanations but the psychosocial explanation is prominent

Profession
   Medical doctors

   Non-medical doctors (e.g., counsellors) | improvement without treatment was less than 50%. Also, participants believed that the mental disorders would persist for somewhere between one month to five years. None of the participants believed that the mental disorders were indefinite.

Across the different conditions, professions, and measures of stigmatisation, participants expressed positive and negative attitudes towards the mental disorders to varying degrees. However, no consistent mental disorder differences emerged, and every mental disorder was stigmatised more than every other mental disorder at least once. Differences between the mental disorders were not examined with inferential statistics.

The correlation between overall empathy and overall personal distress was investigated in the first and second studies. Across the different conditions there was a positive correlation between these two variables. However, in most cases the correlations were not found to be statistically significant.

Biological/prominent biological explanations elicited significantly less overall empathy than psychosocial/prominent psychosocial explanations for all mental disorders. Explanation was not found to have a significant impact on overall personal distress. The only exception to this was biological explanations elicited significantly more overall personal distress for schizophrenia. For the first and second studies, biological explanations elicited significantly worse prognoses for one of the prognosis items, compared to psychosocial explanations (for all of the mental disorders). However, explanation was not found to have a significant impact on the other prognosis item for the first and second studies (for all of |

						the mental disorders), and explanation was not found to have a significant impact on prognosis for the third study (this study was with social phobia and depression only). Medical doctors expressed significantly less empathy and significantly more personal distress than non-medical doctors. However, it was not reported whether the effect of profession on personal distress was significant for the second study. In this study, medical doctors expressed more personal distress than non-medical doctors in all cases but one. Non-medical doctors expressed slightly more personal distress towards depression in the biological condition compared to medical doctors. For the first and second studies, profession was not found to moderate the relationship between explanation and overall empathy. Also, for the first study profession was not found to moderate the relationship between explanation and overall personal distress. Whether this was also the case for the second study was not reported. However, in the third study, prominent biological explanations elicited significantly less overall empathy for non-medical doctors, and explanation was not found to have a significant impact on overall empathy for medical doctors. Similarly, in the second study biological explanations elicited a significantly worse prognosis for one item among non-medical doctors, and explanation was not found to have a significant impact on this prognosis item for medical doctors. Although profession was found to moderate the relationship between explanation and one of the prognosis items in the third study, the nature of this moderation was not reported. Whether this moderation effect emerged for the first study in general, or the other

						prognosis items in the second and third studies was not reported.

Lebowitz & Ahn (2016)	Psychiatrists
	
	Psychologists
	
	Social workers
	
	Other unspecified mental health professionals
	
	(USA)
		Experiment
		
		Vignettes were used
		
		An intervention was used
			Paired samples t-test
			
			Mixed ANOVA
				Depression (description)	Empathy
					   Sympathetic
					   Soft-hearted
					   Warm
					   Compassionate
					   Tender
					   Moved
					
					Personal distress
					   Alarmed
					   Troubled
					   Distressed
					   Upset
					   Disturbed
					   Worried
					
					Social distance
					
					Profession
						The intervention included a personification component and an agency reorientation component. The former component involved providing the participants with a photo purportedly depicting the targets and non-diagnostic personal information about the target. The latter component involved providing participants with the information that the target was currently in the process of making a decision about which clinician they should see. The control group was provided with an apparently real fMRI image of the targets brain.
						
						Participants expressed slightly more overall empathy, less overall personal distress, and more social distance.
						
						Intervention was not found to have a significant impact on overall empathy and overall personal distress. Participants in the intervention group expressed significantly less social distance than participants in the control group. Although the intervention was not found to have an impact on overall empathy, overall empathy was significantly negatively correlated with social distance for participants in the intervention group.
						
						Profession was not found to moderate the effect of intervention on overall empathy, overall personal distress, and social distance.

Lester et al. (2005)	GPs Practice nurses (England)	Focus groups	Discourse analysis	Mental illness in general (label) Psychosis (label) Recurrent depression (label)	Perceived difficulty to communicate with People with mental illness regularly do not attend appointments and present when the GP is not available	GPs suggested that it can be difficult to communicate effectively with people with mental illness. One GP perceived people with mental illness as regularly not attending appointments and presenting when the GP is not available.

					Appointment non-attendance by people with mental illness reflects irrational behaviour and a chaotic lifestyle Prognosis	Appointment non-attendance by patients with mental illness was described by most GPs as reflecting irrational behaviour and a chaotic lifestyle. Most if not all GPs saw psychosis and recurrent depression as chronic lifelong conditions. Other relevant findings were excluded from this table as they were not reported for GPs separately.
Levitt et al. (1963)	Unspecified nurses from a drug addiction facility A social worker A vocational rehabilitation counsellor Aides A purchasing agent A barber Manual arts therapists A cook A security aide Financial management employees Clerical workers					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Lewis & Appleby (1988) (England, Wales, Scotland)	Psychiatrists	Experiment Vignettes were used	Factorial ANOVA Correlation analysis	Personality disorder (description and label) Depression (description and label)	The target is manipulative If the target had an overdose it would be to seek attention	For depression, participants expressed more positive attitudes for most of the stigmatisation measures. The only exception to this was participants agreed more that the target with depression is likely to become

					Anxiety state (label)	Would not like to have the target in one's clinic	dependent on me. For personality disorder, participants expressed positive, negative, and roughly neutral responses across the measures of stigmatisation. Scores for each measure were not reported for the remaining mental disorders.
					Adjustment reaction (label)	The target poses difficult management problems	
					Neurasthenia (label)	The target is unlikely to complete treatment	Personality disorder elicited significantly more stigmatisation than depression for most of the measures. However, personality disorder was not found to be significantly different to depression for the measure the target is likely to become dependent on me.
					Drug dependence (label)	The target is unlikely to comply with advice/treatment	
						The target is likely to become dependent on me	
						Prognosis	Diagnosis had a significant impact on some of the measures of stigmatisation, but was not found to have a significant impact on other measures of stigmatisation. Although, differences between the diagnoses were not specified or examined with multiple comparisons.
						Annoyance	
						Sympathy	
						Diagnosis	There was a significant vignette (personality disorder or depression) by diagnosis interaction effect for the target is manipulative. All that was noted was participants that diagnosed the target in the personality disorder vignette with depression endorsed this stereotype more than the participants who received the depression vignette. It was also noted that for the most part no other interaction between vignette and diagnosis were found for the measures of stigmatisation. It was concluded by the authors that personality disorder was stigmatised more than depression independent of participant diagnosis.
						Years of professional experience	
						The target is not mentally ill	
						The cause of the target's debt is under their control	
						Suicidal urges are under the target's control	
						The target's case does not merit National Health Service time	Believing that if the target had an overdose it would be to seek attention was significantly positively correlated with believing that the target is manipulative, not expressing sympathy, and annoyance. Believing the
						The target should be discharged from out-patient follow up	

						target is manipulative was significantly positively correlated with not expressing sympathy, but was not found to be significantly correlated with annoyance. Not expressing sympathy was significantly positively correlated with annoyance. Participants with more experience expressed more negative attitudes for several measures of stigmatisation. This was not assessed with inferential statistics, and only annoyance was provided as an example. Believing that the target is not mentally ill, that the cause of the target's debt and suicidal urges are under their control, and that the target's case does not merit National Health Service time was significantly positively correlated with believing that if the target had an overdose it would be to seek attention, believing that the target is manipulative, not expressing sympathy, and annoyance. Believing that the target should be discharged from out-patient follow up was significantly positively correlated with believing that if the target had an overdose it would be to seek attention, believing that the target is manipulative, and not expressing sympathy. This variable was not found to be significantly correlated with annoyance.
Linden & Kavanagh (2012) (Ireland)	Mental health nurses	Cross-sectional survey	MANOVA	Mental illness in general (label)	CAMI questionnaire Authoritarianism Benevolence Social restrictiveness Community mental health ideology Social distance	Participants displayed more positive attitudes on all measures. Compared to participants from a community setting, participants from an inpatient setting expressed significantly more negative attitudes for social restrictiveness and social distance, and significantly less positive attitudes for community mental health ideology. Work setting was not found to have

| | | | | | Work setting
    Inpatient
    Community

Years of professional experience
    1-4 years
    5-9 years
    10-14 years
    15-19 years
    20-24 years
    25-29 years
    30-34 years
    35-39 years | a significant impact on authoritarianism and benevolence.

Years of experience was found to have a significant impact on social distance. Participants with 10-14 years of experience expressed significantly more positive attitudes than participants with 5-9 years of experience. No other significant differences were found for social distance. Years of experience was not found to have a significant impact on any of the CAMI factors. |
| Loch et al. (2013)

(Brazil) | Psychiatrists | Structured interviews | Generalized linear model | Schizophrenia (label) | Positive stereotypes
    Creative
    Healthy
    Self-controlled
    Gifted
    Reasonable

Negative stereotypes
    Dangerous
    Unpredictable
    Stupid
    Bedraggled
    Abnormal
    Unreliable
    Weird

Social distance

Age

Personal experience with psychological treatment
    Never sought help
    Sought help, no medication
    Sought help, medication | Participants attributed overall positive stereotypes to schizophrenia less and attributed overall negative stereotypes to schizophrenia more. However, participants also expressed little social distance towards schizophrenia.

Older age was a significant predictor of less overall negative stereotypes.

Having never sought help was a significant predictor of less overall negative stereotypes, compared to having sought help, medicated. Having sought help, no medication, was not found to be a significant predictor of overall negative stereotypes, compared to having sought help, medication. Having never sought help and having sought help, no medication, were not compared. |

Loch et al. (2011)	Psychiatrists	Structured interviews	Correlation analysis	Schizophrenia (label)	Positive stereotypes (items were not specified)	Participants endorsed more overall negative stereotypes and less overall positive stereotypes. However, participants expressed less social distance.
	(Brazil)		Chi-square test of independence		Negative stereotypes (items were not specified)	
			Stepwise multiple logistic regression analysis		Social distance	Overall negative stereotypes were significantly negatively correlated with overall positive stereotypes. Also, overall positive stereotypes were significantly negatively correlated with social distance, and overall negative stereotypes were significantly positively correlated with social distance.
					Perceived negative attitudes in the general population (items were not specified)	
					Acceptance of psychotropic medication side-effects (items were not specified)	
					Attitude towards psychotropic medication (items were not specified)	Perceiving negative attitudes towards schizophrenia in the general population was significantly negatively correlated with overall positive stereotypes, and significantly positively correlated with overall negative stereotypes and social distance.

					Age
					   <30
					   31-40
					   41-50
					   >50
						Acceptance of psychotropic medication side-effects was significantly negatively correlated with overall positive stereotypes, and significantly positively correlated with overall negative stereotypes. This variable was not found to be significantly correlated with social distance.

					Sex	
					Working in a university hospital	
					Having children	Having a negative attitude towards psychotropic medication was significantly positively correlated with overall positive stereotypes, and significantly negatively correlated with overall negative stereotypes. This variable was not found to be significantly correlated with social distance.

					Level of training
					   No doctoral degree
					
					   Doctoral/post-doctoral degree	

					Professional experience Started working before 1980	Overall negative stereotypes were not found to be significantly related to age or any of the remaining variables.
					Started working between 1981 and 1990	Compared to participants that were less than 30 years old, participants that were 41 to 50

					Started working between 1991 and 2000 Started working in 2001 and later Personal familiarity with mental illness No ill family member or no contact with ill member Rarely sees ill member Sees ill member several times per month Sees ill member several times per week Sees ill member daily Receiving psychopharmacological treatment Working in a public hospital Working in a private hospital Working in a public outpatient institution Working in a private office Working for a mental health insurance	years old and participants that were 50 or older, were significantly more likely to endorse overall positive stereotypes. Being 31 to 40 years old was not found to be a significant predictor of overall positive stereotypes compared to being less than 30 years old. No other comparisons were made regarding age and overall positive stereotypes. Also, whether sex and working in a university hospital were found to be significant predictors of overall positive stereotypes was not reported. Compared to males, female participants were significantly less likely to express social distance. Further, compared to participants that were not working in a university hospital, participants that were working in a university hospital were significantly less likely to express social distance. Whether age was found to be significant predictor of social distance was not reported. Whether the remaining variables were found to be significantly related to overall positive stereotypes and social distance was not reported.
Loch et al. (2013) (Brazil)	Psychiatrists	Structured interviews	Latent profile analysis Multinomial logistic regression analysis	Schizophrenia (label)	Positive stereotypes compared to the general population Healthy Self-controlled	Amongst the participants three profiles were identified. Participants in the first profile (profile 1) were the most likely to believe that the positive stereotypes overall occur more

					Reasonable
					Talents
					  Creative
					  Intelligent
					  Gifted
					
					Negative stereotypes compared to the general population
					  Dangerous
					  Unpredictable
					  Stupid
					  Unreliable
					  Strange
					    Bedraggled
					    Abnormal
					    Weird
					
					Restrictiveness
					  Involuntary admission
					
					  Restriction of voting rights
					
					  Revocation of driver's licenses
					
					Social distance
					
					Age
					  18-30
					  31-40
					  41-50
					  51-60
					  61 and above
					
					Frequency of contact with a family member with a psychiatric disorder
					  No such family member
					  Rare contact
					  Frequent contact
					
					Sex
						often in people with schizophrenia, and the negative stereotypes overall occur less often in people with schizophrenia. Participants in this profile were also the most likely to disagree with two of the restrictiveness items, and had intermediate scores for social distance. Participants in the second profile (profile 2) were the most likely to view people with schizophrenia as being equal to the general population in terms of the stereotypes overall, and agree to involuntary admission. Participants in this profile also expressed the least amount of social distance. Participants in the final profile (profile 3) were the most likely to believe that the positive stereotypes occur less often in people with schizophrenia, and the negative stereotypes occur more. Participants in this profile were also the most likely to agree with two of the restrictiveness items, and express social distance.
						
						In comparison to profile 1, participants in profile 2 were significantly more likely to be 18-30 years old, 31-40 years old, and 41-50 years old with 61 and above years old as the reference group. It was not found that participants in profile 2 were significantly more likely to be 51-60 years old again with 61 and above years as the reference group. Whether profile 2 was used to predict the other variables was not clear.
						
						In comparison to profile 1, participants in profile 3 were significantly more likely to be 31-40 years old with 61 as the reference group. Profile 3 was not found to be a significant predictor of the other age groups. Participants in profile 3 were also significantly less likely to have rare contact with a family member with a psychiatric disorder, using frequent contact as a reference group. Profile 3 was not found to be a

					Marital status
					  Single
					  Married
					  Previously married
					
					Have offspring
					
					Level of training
					  No doctoral degree
					
					  Doctoral or post-doctoral
					  degree
					
					Sought professional help for a
					psychiatric disorder/have been
					prescribed psychotropic drugs
					
					Place of work
					  Public hospital
					  Private hospital
					  Public outpatient institution
					  University hospital
					  Private office
					  Mental health insurance
						significant predictor of not having a family member with a psychiatric disorder. Further, profile 3 was not found to be a significant predictor of any of the other variables.
						
						Variables were not predicted with either profile 2 or 3 as the respective reference group.

Loh et al. (2018)	GPs Residents and physicians in internal medicine Residents and physicians in obstetrics and gynaecology Residents and physicians in cardiology Residents and physicians in endocrinology Residents and physicians in pulmonology					Nothing more was reported for this study as findings were not reported for GPs separately.

	Medical interns					
Lovi & Barr (2009)	Unspecified nurses from alcohol and other drugs units (Australia)	Unstructured interviews	Descriptive phenomenological analysis	Drug and alcohol dependence (label)	Perceived general attitudes Advocacy of clients in general Ensuring clients are given more than once chance if they relapse Providing support and understanding People with alcohol or drug dependence are old nasty olgars People with alcohol or drug dependence are homeless People with alcohol or drug dependence will attack and steal from you to maintain their dependence	Participants perceived hostile attitudes in other nurses that work in the alcohol and other drugs units. In general, it was important to the participants to be advocates for the clients. Part of this involved ensuring that the clients were given more than one chance if they relapsed, and providing them with support and understanding during this time. This is in comparison to discharging them. One participant stated that people with alcohol or drug dependence are just people with another condition, and not old nasty olgars. This participant also stated that people that are dependent on alcohol or drugs are not necessarily homeless, and not necessarily going to attack and steal from you to maintain their dependence.
Lucas et al. (2005)	GPs (England)	Semi-structured interviews	Thematic analysis	Mental illness in general (label) Depression (label)	Causal attributions	Participants attributed mental illness to medical, social, environmental, and psychological factors. Depression in particular was attributed to uncertainty, loss of identity, greed, or boredom.

Magliano et al. (2019)	GPs
	
	Medical specialists
	    Medical
	    Surgical
	    Diagnostic/laboratory
						Nothing more was reported for this study as findings were not reported for GPs separately.

Magliano et al. (2004)	Psychiatrists Unspecified nurses from mental health services Relatives of clients	Cross-sectional survey A vignette was used	Kruskal-Wallis test	Schizophrenia (description)	Causal attributions Perceived competence Prognosis	Psychiatrists and nurses attributed schizophrenia to a range of causes with varying proportions. Heredity, stress, family conflict, and the misuse of alcohol and drugs were among the most likely causes. Magic, spirit possession, and spells, bad friendships,

	(Italy)				Perceived unpredictability It's easy to notice that these patients have had this disorder Segregation Opinions on civil rights 　Patients with this disorder should not get married 　Patients with this disorder should not have children 　The law should allow a woman to divorce from his husband as soon as possible if he suffers from this disorder 　Patients with this disorder should not vote Profession	physical illness, and incorrect therapy were among the least likely causes. Most of the psychiatrists and nurses believed that it is partially true that the target is competent. Most of the psychiatrists believed that it is not true that there is little to be done for the target, and roughly half of the nurse believed this is not true. Most psychiatrists believed that it is partially true that the target is unpredictable and easy to notice that they have a disorder. Roughly half of the nurses believed this to be partially true. Most of the psychiatrists and nurses believed it was not true the target should be sent to an asylum. For the opinions on civil rights, roughly half of the psychiatrists and nurses responded partially true for one item, and not true for another item, and most of the psychiatrists and nurses responded not true for a third item. For the item patients with this disorder should not get married, most of the psychiatrists responded not true, and roughly half of the nurses responded partially true. Profession was found to have a significant impact on prognosis, it's easy to notice that these patients have had this disorder, and perceived unpredictability. In all of these cases, nurses were either more likely to respond completely true and partially true, or more likely to respond completely true, compared to psychiatrists. Profession was not found to have a significant impact on perceived competence and segregation. This was all that was reported for the impact of

						profession on each measure of stigmatisation individually. Profession was found to have a significant impact on the first three civil rights items. For all of these items, nurses were either more likely to respond completely true and partially true, or more likely to respond completely true, compared to psychiatrists. Profession was not found to have a significant impact on the item patients with this disorder should not vote. This was all that was reported for the impact of profession on each civil rights item individually. Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.
Magliano et al. (2004)	Psychiatrists Psychologists Social workers Occupational therapists Unspecified nurses working in a mental health centre Sociologists Auxiliary and administrative personnel General population					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Maier et al. (2015)	Mental health professionals from the following fields specialising in psychotraumatology	Experiment Vignettes were used	Between-groups ANOVA	Depression (description) PTSD (description)	Likability Perceived dependency Perceived autonomy	Across the measures, mental health professionals mostly expressed less stigmatisation towards both mental disorders. However, both mental disorders were perceived as less autonomous, and depression

	Medicine Psychology Social work Other unspecified mental health professionals specialising in psychotraumatology Psychiatry residents (Switzerland)				Perceived personal responsibility Expected quality of therapeutic relationship Prognosis with and without professional help	was blamed more. Also, although the mental health professionals gave a good prognosis in the context of professional help, a bad prognosis was given when the targets were not receiving professional help. This was not examined with inferential statistics. Compared to depression, mental health professionals perceived PTSD as significantly more likable and autonomous, and significantly less dependent and blameworthy. However, PTSD was given a significantly worse prognosis than depression in the context of not receiving professional help. No significant differences were found between PTSD and depression for expected quality of therapeutic relationship and prognosis with professional help. Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.
Malcolm et al. (1977)	Family physicians Family physician residents					Nothing more was reported for this study as findings were not reported for family physicians separately.

Manis et al. (1963)	Staff members from the following fields
	    Psychology
	    Psychiatry
	    Social work
	
	(USA)
		Cross-sectional survey	-	Mental illness in general (label)	A measure of beliefs about mental illness (most items were not specified)
					    Will power is the basis of personal adjustment
					
					    Pleasant preoccupation is the basis of mental health
					
					    The maintenance of mental health is through a dependence on strong persons in the environment
						Participants disagreed more with every belief. The only exception to this was participants agreed slightly more with the maintenance of mental health is through a dependence on strong persons in the environment.

					Mental troubles are caused by physical exhaustion, and financial and social problems

Persons become more susceptible to emotional disorders as they grow older

Mental disorder is brought on by organic factors

Moralism (e.g., if a person becomes mentally ill it is because he did not live right)

The mentally ill look and act differently

There is little that can be done to cure a mental disorder | |
| Mannarini et al. (2020) | Psychiatric nurses

Psychiatrists

Psychologists

Social workers

Educators

Psychology students

Psychiatric patients and their relatives | | | | | Nothing more was reported for this study as findings were not reported for mental health professionals separately. |
| Manning et al. (2020) | Psychologists

Social workers

Occupational therapists | | | | | Nothing more was reported for this study as findings were not reported for mental health professionals separately. |

	Unspecified doctors from mental health services Unspecified nurses from mental health services Support workers Other unspecified providers from mental health services					

Markham & Tower (2003)
 	
(England)
	Mental health nurses	Experiment	Withing-groups ANOVA
			
			Correlation analysis
				BPD (label)
				
				Schizophrenia (label)
				
				Depression (label)
					Attributions of challenging behaviours (e.g., acting in a violent manner, setting off a fire alarm when there was no fire, failing to attend a planned therapeutic activity or refusing to carry out a request from staff)
					    Internality
					    Stability
					    Globality
					    Control of cause
					    Control of event
					
					Sympathy
					
					Prognosis
					
					Personal experience with the target disorders
					    Positive
					    Negative
						Attributions were unable to be fully interpreted with the information provided.
						
						Challenging behaviour was perceived as the most internal for schizophrenia, followed by BPD, followed closely by depression. BPD was not found to be significantly different to either schizophrenia or depression. Whether there was a statistically significant difference between schizophrenia and depression was not reported.
						
						Challenging behaviour was perceived as significantly more stable for BPD compared to schizophrenia and depression. Challenging behaviour was perceived as slightly more stable for schizophrenia compared to depression. Whether this difference was statistically significant was not reported.
						
						Mental disorder was not found to have a significant impact on globality.
						
						Control of cause and event were attributed to BPD significantly more compared to schizophrenia and depression. Also, control of cause and event were attributed to depression more than schizophrenia. Whether these differences were statistically significant was not reported.

						Participants expressed significantly less sympathy and a significantly worse prognosis for BPD than schizophrenia and depression. Schizophrenia elicited more sympathy and a worse prognosis than depression. Whether these differences were statistically significant was not reported. For all mental disorders, control of the cause and event were significantly negatively correlated with sympathy. For BPD, personal experience was not found to be significantly associated with attributions of challenging behaviour. The relationship between these variables was not assessed for the other mental disorders. For all the mental disorders, a negative personal experience was significantly positively correlated with a poor prognosis.
Martensson et al. (2014)	Mental health nurses Assistant nurses Nurses Hospital orderlies					Nothing more was reported for this study as findings were not reported for mental health nurses separately.
Masland et al. (2018)	Psychiatrists Social workers Psychologists Counsellors Unspecified nurses Other unspecified health professionals					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

McGillion et al. (2000)	GPs (England)	Cross-sectional survey	-	Drug misuse (label) Other unspecified patients (label)	Working with drug misusers is more stressful than any other patient Most drug misusers are unreliable and disruptive Most patients presenting with a drug problem are not serious about needing help Most drug users are unresponsive to help with their drug problem	Most participants believed that working with drug misusers is more stressful than any other patient. For the reaming measures, roughly half of the participants expressed agreement.
McGovern et al. (1986)	Clinical psychologists Psychology interns					Nothing more was reported for this study as findings were not reported for clinical psychologists separately.
McKeown et al. (2003)	GPs (Scotland)	Semi-structured telephone interviews	Thematic analysis	Drug misusers (label)	Causal attributions Endorsed and perceived willingness to provide general medical care/treatment Behaviour, motivation, and commitment of the patient Negative viewpoints in general Drug misusers are difficult and intentionally misleading Perceived dangerousness	Drug misuse was attributed to coping with societal issues (e.g., poverty, unemployment) rather than medical factors. Most of the participants were comfortable providing drug misusers with general medical care. One participant stated that they treat drug misusers like anyone else. However, participants acknowledged that not all GPs treat drug misusers in this way. It was suggested that the behaviour, motivation, and commitment of the patient is related to willingness to provide treatment. More specifically, it was suggested that verbal and physical aggression is related to less willingness to provide treatment. Nothing more was reported about motivation and commitment. The majority of participants had some negative viewpoints regarding drug misusers. One participant perceived drug misusers as difficult and intentionally misleading. Also,

						several participants were concerned about drug misusers becoming violent.

McIntyre & Schwartz (1998)	Psychotherapists (USA)	Cross-sectional survey
		
		Audiotaped interviews presenting cases of BPD or major depression were used
			Factorial ANOVA
			
			Correlation analysis
				BPD (presentation)
				
				Major depression (presentation)
					IMI (items were not specified)
					    Dominant (perceptions of exhibitionism, attention seeking, and hunger for approval from others)
					
					    Hostile (tendencies to criticize, ridicule, or punish another individual; perceptions of doubt concerning the attitudes and intentions of others; and emotional detachment to minimize emotional investment)
					
					    Submissive (perceptions such as a willingness to accept blame, a tendency to belittle oneself, passiveness, the appearance of helplessness, and a preference of yielding responsibility)
					
					    Friendly (feelings of agreeableness, cooperativeness, consideration, sympathy, fondness, and warmth)
					
					SAS (items were not specified and only factors relevant to stigmatisation were included in this table)
					    Difficulty (a belief that the target is a significant stressor and feelings of anxiety)
					
					Sex
						Overall, participants endorsed the IMI factors between not at all and somewhat for both mental disorders.
						
						The level of difficulty perceived by the participants was unable to be fully interpreted with the information provided.
						
						BPD elicited significantly more dominant perceptions and hostile reactions than major depression, and major depression elicited significantly more submissive perceptions and friendly reactions than BPD. No significant difference was found between BPD and major depression for difficulty.
						
						Sex was not found to have a significant impact on stigmatisation, and the interaction between sex and mental disorder was not found to be significant for any of the factors.
						
						Years of professional experience was significantly negatively correlated with dominant perceptions and difficulty for depression. No other significant correlations between years of professional experience and stigmatisation were found.

					Years of professional experience	
Meza et al. (2001)	Counsellors Social workers Psychiatrists Other unspecified physicians from drug and alcohol treatment facilities (Canada)	Cross-sectional survey	Between-groups ANOVA	Problem drinkers (label)	In alcohol-dependent individuals, drinking is explainable on the grounds of self-medication of distressing psychiatric or psychological symptoms A significant number of problem drinkers can give up alcohol without any professional treatment or self-help groups Profession	For the measure in alcohol-dependent individuals, drinking is explainable on the grounds of self-medication of distressing psychiatric or psychological symptoms, counsellors and social workers agreed more. However, psychiatrists and other physicians disagreed more. Profession was found to have significant impact on this measure. Social workers agreed with this measure significantly more than all other professions. Counsellors agreed significantly more than other physicians, but were not found to be significantly different to psychiatrists. Psychiatrists were not found to be significantly different to other physicians. Participants agreed more that a significant number of problem drinkers can give up alcohol without any professional treatment or self-help groups. Profession was not found to have a significant impact on this measure.
Miller & Davenport (1996)	Unspecified nurses from psychiatric units (USA)	Quasi-experiment An intervention was used	Between-groups ANOVA Correlation analysis	BPD (label)	A measure of attitudes towards BPD (items were not specified) Whether the participants had completed an educational program on BPD Knowledge about BPD Source of previous knowledge about BPD (the sources were not specified) Current position (levels were not specified) Years in current position	At pre-test, both the educational program group and the control group had more negative attitudes. At post-test, the control group had more negative attitudes and the educational program group had a mix of positive and negative attitudes. Controlling for pre-test scores, the educational program group had significantly more positive attitudes than the control group at post-test. At both pre-test and post-test, there was a significant positive correlation between knowledge about BPD and positive attitudes.

					Years in psychiatric nursing Age Formal education level (it was not clear if this meant general education or education in nursing) Most recent learning about BPD Most recent contact with a patient with BPD	Source of previous knowledge about BPD, current position, years in current position, years in psychiatric nursing, age, formal education level, most recent learning about BPD, and most recent contact with a patient with BPD were not found to be significantly correlated with attitudes.
Mittal et al. (2014)	Mental health nurses Psychiatrists Psychologists Primary care physicians Primary care nurses					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Mittal et al. (2016)	Mental health nurses Psychiatrists Psychologists Primary care physicians Primary care nurses					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Mittal et al. (2019)	Primary care physicians Primary care nurses					Nothing more was reported for this study as findings were not reported for primary care physicians separately.
Modgill et al. (2014)	Social workers Psychologists	Cross-sectional and longitudinal survey	Between-groups ANOVA Paired samples t-test	Mental illness in general (label)	OMS-HC (only factors relevant to endorsed provider-based stigmatisation were included in this table)	Social workers, psychologists, psychiatrists, and family physicians expressed less negative attitudes and less of a preference for social distance.

	Psychiatrists	Interventions were used			Negative attitudes	For negative attitudes, family physicians expressed the most stigmatisation, followed by social workers, closely followed by psychologists, closely followed by psychiatrists. Psychiatrists expressed significantly less negative attitudes than family physicians. The other profession differences were not fully examined with inferential statistics. For social distance, psychologists expressed the most stigmatisation, closely followed by psychiatrists, closely followed by family physicians, closely followed by social workers. Psychiatrists expressed significantly less social distance than family physicians, and no significant difference was found between psychologists and social workers. The other profession differences were either not fully examined with inferential statistics, or were not examined with inferential statistics separately for mental health professionals.
	Family physicians				Preference for greater social distance	
	Anaesthetists					
	Surgeons				Profession	
	Emergency physicians					
	Other unspecified physicians					
	Unspecified nurses					
	Medical students					
	Nurse students					
	Occupational therapy students					
	Pharmacy students					
	Unspecified non-medical staff					Social workers participated in an anti-stigma workshop that was about BPD and dialectical behaviour therapy. Negative attitudes and social distance were not found to differ significantly between before and after the intervention.
	Other unspecified professionals or students					
	(Canada)					Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.
Mohamed-Kaloo & Laher (2014)	GPs (South Africa)	Semi-structured telephone interviews	Thematic analysis	Mental illness in general (label)	Causal attributions	Participants believe that mental illness is caused by organic factors, and stress (including financial difficulties and family conflict) and lifestyle factors. The latter two factors were believed to impact anxiety, depression, and stress disorders in particular.
				Anxiety (label)		
				Depression (label)		
				Stress disorders (label)		

Molina-Mula et al. (2018)	Mental health nurses Emergency nurses					Nothing more was reported for this study as findings were not reported for mental health nurses separately.
Moodley-Kunnie (1988)	Psychiatric nurses Unspecified non-psychiatric nurses Psychiatric nursing students Non-psychiatric nursing students					Nothing more was reported for this study as findings were not reported for psychiatric nurses separately.
Morant (2006)	Psychiatrists Clinical psychologists Psychiatric nurses Social workers Occupational therapists A psychotherapist An art therapist Case mangers Movement therapists A community programme worker A community centre receptionist (England, France)	Semi-structured interviews	Thematic analysis	Mental illness in general (label) Neurosis (label)	Causal attributions	One French psychiatrist reported that treating neurosis involved changing the personality of an individual. Another French psychiatrist alluded to psychoanalytic processes as an explanation for mental illness. Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.

| Morrison & Becker (1975) | Professionals in the following fields that provide psychiatric services
    Psychology
    Psychiatry
    Social work
    Nursing

(USA) | Longitudinal survey and structured interviews with open-ended questions

An intervention was used | Repeated measures t-test | Mental illness in general (label) | A measure of agreement with the medical model called the CAQ (only the following items were specified)
    Mental hospitals should be abolished

    Mental patients are not able to fool a psychiatrist

Only the following interview questions were specified (these questions were derived from the CAQ)
    What would you say are common causes of mental health problems?

    How do you feel about mental hospitals? | Overall, participants endorsed more of a psychosocial model than a medical model.

Compared to pre-test scores, participants endorsed the psychosocial model significantly more after a seminar on theoretical and operational approaches to mental illness. No significant differences were found between the three post-test time points.

Participants with scores that changed substantially from pre to post-test were interviewed. Social, familial, and environmental factors were stressed, and participants believed that hospitals contribute to the depersonalization and dehumanization of people with mental illness. |
| Morrison & Hanson (1978) | Psychologists

Social workers

Psychiatrists

Psychiatric nurses

(USA) | Cross-sectional survey | Two proportion z-test | Mental illness in general (label) | A subset of items from the CAQ
    I believe that mental illness is an illness like any other

    People have been duped or fooled into believing that there is such a thing as mental illness

    Psychiatrists and psychologists almost always can tell a mentally ill person from a normal person

    Mostly women, rather than men, end up being diagnosed as schizophrenic and psychotic

    There is really no such thing as mental illness, just people with problems | Compared to the medical model, roughly half of the psychologists endorsed a psychosocial orientation overall, whereas most of the other professions endorsed a medical orientation overall (not sure was an available option).

Most of the participants did not agree that mental hospitals should be abolished. Psychologists were the most likely to agree with this statement, followed by psychiatrists, followed by nurses. No social workers agreed that mental hospitals should be abolished. These differences were not examined with inferential statistics (not sure was an available option).

Psychologists were significantly more likely to be oriented towards the psychosocial view overall, compared to the other professions. For the remaining three professions, social workers were the most likely to be oriented towards the psychosocial view overall, followed by nurses, followed by psychiatrists. |

					Mental hospitals should be abolished Profession	Differences between these professions were not examined with inferential statistics.
Morrison & Nevid (1976)	Psychiatrists Psychiatric nurses Psychologists Social workers (USA)	Cross-sectional survey	Independent samples t-test	Mental illness in general (label)	CAQ (items were not specified) Profession	Compared to the medical model, participants agreed more with a psychosocial orientation overall. Psychologists agreed with a psychosocial orientation significantly more than the other professions, and social workers agreed with a psychosocial orientation significantly more than nurses and psychiatrists. Nurses agreed slightly more with a psychosocial orientation than psychiatrists, but this was not examined with inferential statistics.
Morrison et al. (1977)	Social workers Counsellors Other unspecified mental health professionals Public health nurses from a county health department and alcohol rehabilitation program Lawyers Outreach workers Other unspecified health professionals (USA)	Cross-sectional survey	-	Mental illness in general (label)	A revised version of the CAQ called the CAQ-B (items were not specified)	In comparison to a medical orientation, the unspecified mental health professionals agreed more with a psychosocial orientation. Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.
Morrison et al. (1979)	Social workers (USA)	Cross-sectional survey	-	Mental illness in general (label)	CAQ-B (only the following items were specified)	Participants were mostly unsure about whether they endorsed a medical or psychosocial orientation.

					There is no such thing as mental illness, just people with problems There are some people who clearly suffer from schizophrenia	
Morrison et al. (1976) (USA)	Psychiatric nurses	Cross-sectional survey	-	Mental illness in general (label)	CAQ (only the following items were specified) People have been duped or fooled into believing that there is such a thing as mental illness Mental hospitals should be abolished	Participants agreed slightly more with a psychosocial orientation overall, compared to a medical orientation.
Morgan (2016)	Mental health nurses Palliative care/hospice nurses Several other non-mental health nurses (USA)	Semi-structured interviews	Thematic analysis	Mental illness in general (label)	People with mental illness refuse to take medication	One mental health nurse expressed that patients with mental illness will always refuse medication. Other relevant findings were excluded from this table as they were not reported for mental health nurses separately.
Mosaku & Wallymahmed (2017)	Unspecified doctors working in primary care centres Unspecified nurses Health assistants Community health officers Community extension workers					Nothing more was reported for this study as findings were not reported for doctors separately.

Moss & Davidson (1982)	Social workers Adherence counsellors Teachers Psychology students					Nothing more was reported for this study as findings were not reported for social workers separately.
Motteli et al. (2019)	Psychologists Social workers Unspecified physicians from a psychiatric facility Unspecified nurses from a psychiatric facility Occupational therapists Other unspecified therapists					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Muga & Jenkins (2008)	Psychiatric nurses General nurses Unspecified doctors Unspecified clinical officers					Nothing more was reported for this study as findings were not reported for psychiatric nurses separately.
Mulango et al. (2018)	GPs Social workers Pharmacy attendants Primary care nurses					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

	Nurse assistants					
Munro & Baker (2007)	Mental health nurses Healthcare assistants					Nothing more was reported for this study as findings were not reported for mental health nurses separately.
Murray et al. (2006)	GPs Counsellors (two of which were trained as clinical psychologists) Practice nurses (England)	Unstructured interviews	Thematic analysis	Depression (label)	Causal attributions	GPs and counsellors believed that depression should not be regarded as a normal reaction to getting old. Also, GPs alluded to social (e.g., loneliness) and socioeconomic factors as causes of depression. Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.
Muyambi et al. (2021)	Social workers General nurses Peer support workers					Nothing more was reported for this study as findings were not reported for social workers separately.
Najavits (2002)	Social work professionals Counsellors Psychology professionals Psychiatrists A GP Nursing professionals from mental health and substance abuse setting, and forensic practices and homeless shelters Probation officers Business administrators					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

	Other unspecified professionals					
Ndetei et al. (2011)	Occupational therapists Unspecified doctors from primary care and other health care facilities Medical interns Unspecified clinical officers Nurses Pharmacists Dentists Rehabilitation workers Physiotherapists Laboratory medicine workers Medical students Pharmacy students Dentistry students Administrator students Other unspecified students					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Newhill & Korr (2004)	Social workers (USA)	Cross-sectional survey with closed and open-ended questions	Content analysis Independent samples t-test	Mental illness in general (label)	Avoidance Dislike working with mental illness	A small proportion of participants reported that they no longer work with mental illness because they don't like working with mental illness, they feel uncomfortable working with mental illness, it is frustrating working with

					Discomfort working with mental illness	mental illness, and they are unlikely to make an impact. Another small proportion of participants stated that they no longer work with mental illness due to fear of violence.
					Frustration	
					Prognosis	Most participants preferred not to treat mental illness.
					Perceived dangerousness	
					Prefer not to treat mental illness	Participants from private practice expressed significantly more that they prefer not to treat mental illness, compared to participants from community mental health.

					Primary employment
					    Community mental health
					    Private practice	

Newton-Howes et al. (2008)	Mental health professionals from the following fields
	    Medicine
	    Nursing
	    Social work
	
	Other unspecified mental health professionals
	
	(England)
		Cross-sectional survey
		
		Information was provided on patients (it was not clear what form this was presented in)
			Mann-Whitney U-test	Personality disorder (a label was used and it was not clear how the remaining information was presented)
				
				Schizophrenia (it was not clear how this was presented)
				
				Depression (it was not clear how this was presented)
				
				Anxiety (it was not clear how this was presented)
				
				Alcohol dependence (it was not clear how this was presented)
				
				Drug dependence (it was not clear how this was presented)
				
				Any psychiatric diagnosis (it was not clear what this meant
					Perceived difficulty
					
					Perceived instability
					
					Perceived aggressiveness
					
					Perceived engagement
					
					Perceived compliance
					
					Personality disorder presentation
					    Label
					    No label
						Stigmatisation scores were unable to be fully interpreted with the information provided.
						
						Compared to the other mental disorders, personality disorder was perceived as significantly more difficult and aggressive, and significantly less compliant. Mental disorder was not found to have a significant impact on the other measures of stigmatisation. Mental disorders other than personality disorder were not compared.
						
						Compared to personality disorder without a label, the presence of a personality disorder label elicited significantly more perceptions of difficulty, instability, and aggression. Personality disorder presentation was not found to have a significant impact on the other measures of stigmatisation.

				and how it was presented)		
Ngako et al. (2012)	Psychiatric nurses (South Africa)	Focus groups	Thematic analysis	Mental illness in general (label)	Perceptions of safety Fear Helplessness Frustration Anger Ambivalence Guilt Demotivation Perceived unpredictability Perception that you get nothing in return for working with mental illness Desire to develop general positive attitudes Quality of nursing care	Participants expressed that working with mental illness involves entering an unsafe world. Participants expressed fear, helplessness, frustration, anger, ambivalence, guilt, and a feeling of demotivation towards people with mental illness. One participant perceived people with mental illness as unpredictable, and stated that this is where the fear comes from. Another participant expressed that despite the hard work put in, you get nothing in return. Participants expressed a desire for developing positive attitudes in general towards people with mental illness. Participants also suggested that this would increase the quality of nursing care for people with mental illness.
Nordt et al. (2006)	Psychiatrists Unspecified nurses from psychiatric facilities Psychologists Social workers Vocational workers Physiotherapists	Structured telephone interviews and experiment Vignettes were used	Between-groups ANOVA	Mental illness in general (label) Major depression (description) Schizophrenia (description)	Stereotypes 　Dangerous 　Unpredictable 　Stupid 　Bedraggled 　Abnormal 　Unreliable 　Weird 　Reasonable 　Self-controlled 　Healthy Restrictions	Psychiatrists, nurses, and psychologists expressed more overall stigmatisation for stereotyping. Although most of these participants agreed with involuntary admission, most of these participants did not agree with the other restrictions for people with mental illness. The only exception to this was roughly half of the nurses agreed with driver's licence revocation. For social distance, the responses of the psychiatrists, nurses, and psychologists were different for the two mental disorders. For major depression, these participants expressed less social distance. For schizophrenia

	Other unspecified professionals from psychiatric facilities General population (Switzerland)				What do you think: should a woman who had suffered severely from a mental illness have an abortion in the case of a pregnancy? Do you approve of the right to vote and to run for office for somebody who had suffered severely from a mental illness? What do you think: should somebody who is severely mentally ill have her/his driver's license revoked? What do you think: should somebody be admitted to a psychiatric hospital even against his/her will and if needed retained, or should a person under no circumstances be compulsorily admitted to a psychiatric hospital? Social distance towards depression and schizophrenia Profession Sex	psychologists and nurses expressed roughly neutral responses, and psychiatrists expressed more social distance. Psychiatrists, nurses, and psychologists expressed significantly more social distance towards schizophrenia than major depression. For stereotypes, psychiatrists expressed the most overall stigmatisation towards mental illness compared to nurses, followed by psychologists. Psychiatrists expressed significantly more overall stigmatisation for stereotyping mental illness than nurses and psychologists. The difference between nurses and psychologists was not examined with inferential statistics. For driver's licence revocation, nurses were the most likely to agree, followed by psychiatrists, followed by psychologists. These differences were not examined with inferential statistics, and profession was not found to have a significant impact on the remaining restrictions items. For schizophrenia, psychiatrists expressed the most social distance, followed by psychologists, closely followed by nurses. However, for major depression, nurses expressed the most social distance, followed by psychiatrists, followed by psychologists. Differences between these professions for social distance were not examined with inferential statistics. Sex was not found to have a significant impact on overall stereotyping for the psychiatrists, nurses, and psychologists. Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.

| Norton et al. (2011) | Family physicians (France) | Cross-sectional survey | Multiple standardised regression analysis | Depression (label) | DAQ (only relevant items and factors were included in this table)

Origins of depression and its amenability to change

The majority of depression seen in general practice originates from patients' recent misfortunes

It is possible to distinguish two main groups of depression: one psychological in origin and the other caused by biochemical mechanisms

Becoming depressed is a way that people with poor stamina deal with life's difficulties

Depressed patients are more likely to have experienced deprivation early in life than other people

Depression reflects a characteristic response that is not amenable to change

Becoming depressed is a natural part being old

An underlying biochemical abnormality forms the basis of severe cases of depression | Participants disagreed more with the majority of the DAQ items. The only exceptions to this were participants agreed more that the majority of depression seen in general practice originates from patients' recent misfortunes, and an underlying biochemical abnormality forms the basis of severe cases of depression.

Controlling for age and sex, none of the non-stigmatisation variables were found to be significant predictors of origins of depression and its amenability to change overall. Also, the interaction between having a desire for future training in mental health and having received training in mental health was not found to be a significant predictor of origins of depression and its amenability to change overall. |

| | | | | | Most depressive disorders seen in general practice improve without medication

Working with depressed patients can be difficult

Desire for future training in mental health

Received training in mental health

Type of training received in mental health
　Two-day continuing medical education seminar

　Evening continuing medical education seminar

　Hospital psychiatry

　Balint group

　Personal training

Age (control variable)

Sex (control variable) | |
| Nunnally (1957) | Psychologists

Psychiatrists

General population

(USA) | Cross-sectional survey | - | Mental illness in general (label) | Causal attributions

People with mental illness look and act different to normal people

Prognosis

People with mental illness speak in words that can be understood

Profession | Mental health professionals disagreed more that mental illness reflects a lack of will power, mental health is maintained by having pleasant thoughts, older people are more susceptible to mental illness, and mental illness is caused by poor diet and diseases of the nervous system. Mental health professionals responded roughly neutrally to good mental health being maintained through a dependence on strong persons, and mental illness being caused by a lack of affection in childhood. The causal attribution regarding |

						external factors compared to personality factors was unable to be interpreted with the information provided. Mental health professionals disagreed more that people with mental illness look and act different to normal people, and that they are unlikely to recover. Mental health professionals also agreed more that people with mental illness speak in words that can be understood. It was reported that psychologists and psychiatrists responded similarly. This was not examined with inferential statistics. Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.
Nutt et al. (2016)	Psychologists Psychiatrists Social workers GPs Unspecified nurses from addiction/mental health services and general practice Occupational therapists Health or social care assistants A nursing student An office manager	Cross-sectional survey	-	Depression (label) Alcohol misuse (label) Drug misuse (label) Comorbid substance misuse and depression (label)	MCRS I prefer not to work with patients like this Patients like this irritate me I enjoy giving extra time to patients like this Patients like this are particularly difficult for me to work with Working with patients like this is satisfying I feel especially compassionate toward patients like this I wouldn't mind getting up on call nights to care for patients like this	Psychologists, psychiatrists, social workers, and GPs expressed more overall positive regard towards all of the mental disorders. The only exception to this was GPs expressed slightly less overall positive regard towards drug misuse. For psychologists, psychiatrists, social workers, and GPs, a hierarchical pattern emerged in which participants stigmatised the different mental disorders to varying degrees. This pattern was different for each of these professions. The only consistent finding across these professions was depression elicited more positive regard overall than comorbid substance misuse and depression. Differences between the mental disorders were not examined with inferential statistics. For psychologists, psychiatrists, social workers, and GPs, the only consistent finding across the mental disorders was GPs consistently expressed less overall positive

	An unspecified senior practitioner (Scotland)				I can usually find something that helps patients like this feel better There is little I can do to help patients like this Insurance plans should cover patients like this to the same degree that they cover patients with other conditions Treating patients like this is a waste of medical dollars Profession	regard than psychiatrists and social workers. Differences between these professions were not examined with inferential statistics separately to the irrelevant subsets of the sample. Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.
Ogden et al. (1999)	GPs (England)	Cross-sectional survey	It was not clear what statistical analysis was used	Depression (label)	Causal attributions Lived experience with depression	Participants agreed the most with psychological causes of depression (e.g., unhappy childhood), followed by medical causes (e.g., hormones), followed by external causes (e.g., time of the year). Lived experience with depression was not found to have a significant impact on causal attributions.
Ola et al. (2014)	Primary care physicians (Nigeria)	Cross-sectional survey	-	Depression (label)	DAQ (only items relevant to stigmatisation were included in this table) Becoming depressed is a way that people with poor stamina deal with life's difficulties The majority of depression seen in general practice originates from patients' recent misfortunes	Most of the participants agreed that becoming depressed is a way that people with poor stamina deal with life's difficulties, and the majority of depression seen in general practice originates from patients' recent misfortunes. In comparison, most participants disagreed that becoming depressed is a natural part of old age, and it is possible to distinguish two main groups of depression: one psychological in origin and the other caused by biochemical abnormalities. Also, roughly half of the participants disagreed that depressed patients are more likely to have experienced deprivation in early life than

					Becoming depressed is a natural part of old age It is possible to distinguish two main groups of depression: one psychological in origin and the other caused by biochemical abnormalities Depressed patients are more likely to have experienced deprivation in early life than other people An underlying biochemical abnormality forms the basis of severe cases of depression Most depressive disorders seen in general practice improve without medication Depression reflects a characteristic response that is not amenable to change	other people, and an underlying biochemical abnormality forms the basis of severe cases of depression. Most of the participants agreed that most depressive disorders seen in general practice improve without medication. However, most participants also agreed that depression reflects a characteristic response that is not amenable to change.
Ori et al. (2020)	Psychiatrists Trainee psychiatrists					Nothing more was reported for this study as findings were not reported for psychiatrists separately.

Ozer et al. (2017)	Psychiatrists
	
	Psychiatric nurses
	
	Other unspecified mental health workers
	
	Paramedics
	
	(Turkey)
		Cross-sectional survey	-	Mental illness in general (label)	BMI scale (items were not specified)
					   Perceived dangerousness
					
					   Perceived incurability and disturbance in interpersonal relationships
					
					   Shame
						Psychiatrists expressed less stigmatisation overall on the BMI scale (individual factor scores could not be interpreted with the information provided).
						
						The self-reported use of stigmatising language score for psychiatrists was unable to be interpreted with the information provided.
						
						Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.

					Self-reported use of stigmatising language (items were not specified clearly)	
Pace et al. (2011)	Family physicians Obstetricians Gynaecologists Internists Paediatricians					Nothing more was reported for this study as findings were not reported for family physicians separately.
Payne et al. (2011)	Primary care physicians Primary care nurses					Nothing more was reported for this study as findings were not reported for primary care physicians separately.
Pepper et al. (2007)	Primary care physicians Primary care nurses Physician assistants					Nothing more was reported for this study as findings were not reported for primary care physicians separately.

Peris et al. (2008)	Clinical psychologists
	
	Social workers
	
	Counsellors
	
	Psychiatrists
	
	Other unspecified mental health professionals
	
	Clinical psychology students
	
	(USA)
		Cross-sectional survey
		
		IAT
			Between-groups ANOVA
			
			One of the analyses was not clear
				Mental illness in general (label)	Implicit general attitudes (only example categories were specified)
					   Good (e.g., wonderful, joyful)
					
					   Bad (e.g., terrible, awful)
					
					Explicit general attitudes
					
					Explicit stereotypes
					   Blameworthy/innocent
					
					   Helpless/competent
					
					Profession
						Mental health professionals expressed slightly more positive implicit general attitudes towards mental illness.
						
						Clinical psychologists expressed more positive implicit general attitudes towards mental illness than the other unspecified mental health professionals, followed by social workers and counsellors. Although profession was found to have a significant impact on implicit general attitudes, differences between the professions were not examined with multiple comparisons.
						
						Profession was not found to have a significant impact on overall explicit stigmatisation.

						Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.
Pfeffer & Erdal (2015)	Unspecified doctors from a mental health unit Unspecified clinical officers from a mental health unit Unspecified nurses from a mental health unit Village health team members A range of mental health trainees General population					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

Pinikahanaet et al. (2002)	Unspecified nurses from a substance use and mental illness treatment facility
	
	Psychologists
	
	Social workers
	
	Psychiatrists
	
	Occupational therapists
	
	Other unspecified mental health professionals
	
	(Australia)
		Cross-sectional survey	-	Mental illness in general (label)
				
				Drug and alcohol dependence (labels)
					A measure of attitudes towards drugs and alcohol based on the SAAS (only items relevant to stigmatisation were included in this table)
					    Cannabis use leads to mental illness
					
					    Recreational drug use leads to drug misuse
					
					    Alcohol dependence is associated with a weak will
					
					    All heroin use leads to dependence
					
					    Weekend users will progress to drug misuse
						For the causal attribution items, most participants disagreed.
						
						For the remaining items, most participants expressed a lack of stigmatisation.

| | | | | | Heroin is so addictive that no one can really recover once he/she becomes dependent

Drug dependence is a treatable illness

Alcohol dependence is a treatable illness

An alcohol or drug dependent person who has relapsed several times probably cannot be treated

Most alcohol and other drug dependent persons are unpleasant to work with as patients

Angry confrontation is necessary in the treatment of alcohol and other drug dependent people

Chronic alcohol dependent people who refuse treatment should be legally committed to long term treatment | |
| Potamianos et al. (1985) | GPs

Psychiatrists

Psychiatric nurses

Other unspecified physicians

Other unspecified nurses

Patients with alcohol related problems | Cross-sectional survey | - | Problem drinker (label) | A measure of attitudes towards problem drinkers
    Sociable-solitary

    Confident-not confident

    Law abiding-law breaking

    Realist-escapist

    Happy-unhappy

    Attractive-unattractive | GPs stigmatised problem drinkers more overall.

Other relevant findings were excluded from this table as they were not reported for mental health professionals separately. |

	(England)				Healthy-ill Conscientious at work-not conscientious at work Happy childhood-unhappy childhood Responsible-irresponsible Unlikely to become dependent on other drugs-likely to become dependent on other drugs Responsible for own condition-not responsible for own condition	

Pranckeviciene et al. (2018)	Psychologists
	
	Social workers
	
	Psychology students
	
	Social work students
	
	(Lithuania)
		Cross-sectional survey	ANCOVA	Mental illness in general (label)	Social distance
					
					Profession
					
					Years of professional experience
					
					Level of training
					   Master's degree
					   No master's degree
					
					Social desirability
					   Conscious
					   Unconscious
					
					Personal familiarity with mental illness
					   Visited a psychiatrist or psychologist due to personal problems
						For mental health professionals with six to ten years of experience and more than ten years of experience, psychologists expressed more social distance, and social workers expressed less social distance. However, for mental health professionals with up to five years of experience, psychologists expressed less social distance and social workers expressed more social distance. Differences between the professions were not examined with inferential statistics for the mental health professionals separately.
						
						Controlling for social desirability and personal familiarity with mental illness, psychologists with less than five years of experience expressed significantly less social distance than psychologists with more than ten years of experience, and this was reversed for social workers. For social workers, social distance was highest for participants with up to five years of experience, and was roughly the same for participants with six to ten years

| | | | | | Have a family member/friend with mental illness | of experience, and more than ten years of experience. For psychologists, social distance was lowest for participants with up to five years of experience, was higher for participants with six to ten years of experience, and was highest for participants with more than ten years of experience. These differences were not examined with inferential statistics, and the interaction between profession and years of professional experience was not examined with inferential statistics for mental health professionals separately.

Controlling for social desirability and personal familiarity with mental illness, level of training was not found to have a significant impact on social distance for social workers. The impact of level of training on social distance was not examined for the psychologists.

Unconscious social desirability had a significant impact on social distance for psychologists. The nature of this effect, and whether conscious social desirability was found to have an impact on social distance for psychologists was not reported. Conscious social desirability had a significant impact on social distance for social workers. The nature of this effect, and whether unconscious social desirability was found to have an impact on social distance for social workers was not reported.

Personal familiarity with mental illness was not found to have a significant impact on social distance for the mental health professionals. |
|---|---|---|---|---|---|---|
| Qureshi et al. (2004) (Saudi Arabia) | GPs | Longitudinal survey | McNemar test | Mental illness in general (label) | Causal attributions (it was not clear what these were) | For most of the measures, there was either a lack of clarity as to what was being measured, |

		An intervention was used		Depression (label) Schizophrenia (label) Panic attacks (label)	Social distance Some people with mental illness are very difficult to communicate with and are less assertive Views about mental hospitals (it was not clear what this measure was about) Closure of mental hospitals Chronicity and prognosis of mental disorder Admission to mental hospital (it was not clear what this measure was about) Productivity and people with mental illness Creativity and people with mental illness Fear of mental disorder Clarity of mental disorder (it was not clear what this measure was about) Reproduction and people with mental illness	or not enough information was provided for a complete summary of the findings. Prior to a course on psychiatry, roughly half of the participants expressed positive attitudes for one of the social distance items towards mental illness, and most participants disagreed that some people with mental illness are very difficult to communicate with and are less assertive (don't know was an available option). None of the other social distance items or measures were able to be summarised in this manner. After the course on psychiatry, participants were significantly more likely to express positive attitudes for the previously mentioned social distance item, and significantly more likely to disagree that some people with mental illness are very difficult to communicate with and are less assertive. For most of the remaining items, time point was not found to have a significant impact on the measures. The only exceptions to this were the causal attribution items for depression, schizophrenia, and panic attacks. For these items, time point had a significant impact. However, the change that occurred between pre and post-intervention was not made clear.
Ralley et al. (2009)	Mental health nurses Nursing assistants					Nothing more was reported for this study as findings were not reported for mental health nurses separately.
Rao et al. (2009)	Unspecified nurses working in mental health and medical facilities					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

	Unspecified doctors working in mental health and medical facilities Healthcare assistants Other unspecified health professionals					
Reavley et al. (2014)	GPs Clinical psychologists Psychiatrists (Australia)	Experiment Vignettes were used	Between-groups ANOVA	Depression (description) Depression with suicidal thoughts (description) Early schizophrenia (description) Chronic schizophrenia (description) Social phobia (description) PTSD (description)	A measure of stigmatising attitudes 　Weak not sick 　　The target could snap out of the problem 　　The problem the target is experiencing is a sign of personal weakness 　　The problem the target is experiencing is not a real medical illness 　　It is best to avoid people with the target's problem 　Dangerous/unpredictable 　　People with the target's problem are dangerous 　　People with the target's problem are unpredictable 　　It is best to avoid people with the target's problem (this item was also included with the previous factor)	Participants expressed less stigmatisation for weak not sick, dangerous/unpredictable, and social distance for all mental disorders. The only exception to this was participants expressed more social distance towards chronic schizophrenia. The following are listed from the mental disorders considered the most weak not sick to the least. 　Social phobia 　Depression 　PTSD 　Both types of schizophrenia The following are listed from the mental disorders considered the most dangerous/unpredictable to the least (this was the same for social distance, except depression was stigmatised more than PTSD). 　Both types of schizophrenia 　PTSD and depression 　Social phobia Although it was reported that there were statistically significant differences between the mental disorders, pairs that were significantly different were not noted by the authors. Compared to depression, depression with suicidal thoughts was stigmatised slightly more for dangerous/unpredictable, more for social distance, and less for weak not sick. Also, compared to early schizophrenia,

| | | | | | If I had that target's problem, I wouldn't tell anyone

I would not employ someone with the target's problem

I would not vote for a politician with the target's problem

Social distance

Sex

Age
   <39
   40-49
   50-59
   60+

Profession | chronic schizophrenia was stigmatised slightly less for weak not sick, and more for dangerous/unpredictable and social distance. Again, whether these differences were statistically significant was not reported.

Compared to females, males expressed significantly more stigmatisation for both factors and social distance.

Age was not found to have an impact on weak not sick. For dangerous/unpredictable and social distance age had a significant impact. For these two variables, as age increased, stigmatisation increased. However, differences between the age groups were not examined with multiple companions.

For the two attitude factors, GPs expressed significantly more stigmatisation than psychiatrists and psychologists. For social distance, no significant difference was found between GPs and psychiatrists, and GPs expressed significantly more stigmatisation than psychologists. For dangerous/unpredictable and social distance, psychiatrists expressed significantly more stigmatisation than psychologists. For weak not sick, psychologists expressed significantly more stigmatisation than psychiatrists.

Some statistically significant interaction effects were found between sex, age, and profession. However, this was all that was reported. |
| Reid et al. (2001)

(England) | GPs | Cross-sectional survey with closed and open-ended questions

A vignette was used | Mantel-Haenszel test | MUS (description and label) | Patients with MUS are difficult to manage

Most MUS are related to not wanting to go back to work, and | Most participants agreed that MUS are difficult to manage.

One participant added the comment, most MUS are related to not wanting to go back to |

					medical sick benefits usually help to keep symptoms away	work, and medical sick benefits usually help to keep symptoms away.
					Received postgraduate psychiatric training	Having received postgraduate psychiatric training and having access to practice based psychological support was not found to have a significant impact on perceptions of difficulty.
					Practice based psychological support (i.e., psychologist, psychiatric nurse, counsellor)	
Richmond & Foster (2009)	Social workers Occupational therapists Psychologists A psychiatrist Unspecified nurses from mental health and non-mental health facilities Other unspecified doctors from mental health and non-mental health facilities Support workers					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Rivera-Segarra et al. (2019)	GPs Internal medicine physicians Unspecified nurses (Puerto Rico)	Semi-structured interviews	Thematic analysis	Mental illness in general (label)	People with mental illness do not love their family members Perceived dangerousness People with mental illness drink a lot People with mental illness are not educated Causal attributions	One GP believed that people with mental illness do not love their family members and will try to kill them. They stated that people with mental illness drink a lot and are not educated. Also, not being educated was believed to be part of what causes mental illness. However, this GP believed that people with mental illness should be able to reach their psychiatrists. Another GP believed that mental illness is not curable.

					People with mental illness should be able to reach their psychiatrists Prognosis	

Robinson (1973)	Psychiatric nurses
	
	Student nurses
	
	(New Zealand)
		Cross-sectional survey	Independent samples t-test	Mental illness in general (label)	OMI scale
					    Authoritarianism
					    Benevolence
					    Mental hygiene ideology
					    Social restrictiveness
					    Interpersonal aetiology
					
					Sex
					
					Seniority
					    Ward sister/charge
					    Staff nurse
						For authoritarianism, psychiatric nurses expressed more negative attitudes. However, for benevolence and mental hygiene ideology psychiatric nurses expressed more positive attitudes. The only exception to this was female staff nurses expressed less positive attitudes for benevolence. For social restrictiveness, ward sisters expressed more negative attitudes, female staff nurses expressed less negative attitudes, and male staff nurses expressed roughly neutral attitudes.
						
						For interpersonal aetiology, ward sisters and charges expressed more agreement, whereas female staff nurses expressed less agreement, and male staff nurses expressed roughly neutral responses.
						
						Male psychiatric nurses expressed either more or slightly more agreement with every OMI factor compared to female psychiatric nurses. Sex was not examined with inferential statistics for psychiatric nurses separately.
						
						For male psychiatric nurses, seniority was not found to have a significant impact on any of the OMI factors.
						
						For female psychiatric nurses, ward sisters expressed significantly more agreement with authoritarianism, benevolence, and interpersonal aetiology, compared to staff nurses. Seniority was not found to have a significant impact on mental hygiene ideology and social restrictiveness for female psychiatric nurses.

						Other relevant findings were excluded from this table as they were not reported for psychiatric nurses separately.
Roche et al. (1991)	GPs (Australia)	Focus groups	The analytical procedure used was not clear	Substance abusers (label) Opioid dependence (label) Alcohol abuse (label)	Perceived difficulty Substance abusers are nasty Perceived dangerousness Substance abusers are a waste of time and resources Substance abusers are time consuming Substance abusers are not financially rewarding enough to counsel Prognosis Whether substance abusers are motivated to change Substance abusers need to be listened to and encouraged Substance abusers need to be given support Causal attributions People dependent on opioids present to surgery at inconvenient times People dependent on opioids look scruffy People dependent on opioids look unhealthy	Participants endorsed the stereotypes that substance abusers are difficult, nasty, dangerous, and a waste of time and resources. Also, participants expressed that substance abusers are time consuming, and one participant expressed that it is not financially rewarding to counsel them. One participant expressed that substance abusers cannot be helped. However, another participant stated that GPs have a role in substance abuse to the extent that substance abusers are motivated to change. One participant stated that you need to listen to and encourage substance abusers, and another stated that GPs should provide support to substance abusers. One participant expressed that there is nothing that can be done when substance abuse is due to poverty. Participants stated that people dependent on opioids tend to present to surgery at inconvenient times, look scruffy and unhealthy, and have long-winded stories. Most participants wanted nothing to do with people dependent on opioids, would often send them away, and vehemently disliked them in general. However, some participants were prepared to provide treatment. Also, some participants felt uncomfortable sending people dependent on opioids away. Despite this, the participants also justified this based on the appearance and general behaviour of people dependent on opioids. People

					People dependent on opioids have long-winded stories	dependent on opioids were seen by one participant as never really wanting help.
					Avoidance	Many participants believed that alcohol abuse is a lifestyle problem, and this is why you can't help people that abuse alcohol. Participants were also reluctant to counsel people that abuse alcohol because of this hopelessness.
					Vehement dislike	
					Discomfort with avoidance	
					People dependent on opioids never really want help	
Ronzani et al. (2009)	Social workers Psychologists Administrative technicians Community health workers Nursing assistants Unspecified nurses Unspecified physicians Dental care professionals Unspecified students Other unspecified professionals					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Rosendal et al. (2005)	GPs (Denmark)	Experiment An intervention was used	Mann-Whitney U-test Independent samples t-test	Somatoform disorder (label)	People with somatoform disorder take up too much time Anxiety Anger	No significant differences were found between the control group and the intervention group prior to being assigned to these groups. Participants believed that people with somatoform disorder take up too much time, but experience anxiety and anger in the presence of people with somatoform

					Somatising patients are more likely to have experienced deprivation in early life than other people	disorder less. Participants also agreed more with all of the measures about causal attributions. The only exception to this was participants disagreed more that an underlying biochemical abnormality is at the basis of severe cases of somatisation. For the remaining measures, participants expressed more disagreement.
					The majority of somatising conditions in general practice originates from patients' conditions of life	
					It is possible to distinguish two main groups of somatisation: stress induced and more genuine somatisation disorders	One year following the intervention (an educational programme on treating somatoform disorder) participants in the intervention group expressed significantly less anxiety and significantly more comfort in dealing with somatising patients, compared to before the intervention. Control group participants became more anxious and less comfortable. For the remaining measures of stigmatisation, no significant difference was found between pre and post-intervention scores.
					Somatising is a way that people with poor stamina deal with life difficulties	
					An underlying biochemical abnormality is at the basis of severe cases of somatisation	
					Most somatising conditions in general practice improve without treatment	
					Somatisation reflects a characteristic response in patients which is not amenable to change	
					I feel comfortable in dealing with somatising patients	
Roskin et al. (1988)	Psychiatrists Psychologists Social workers Psychiatric nurses	Cross-sectional survey	Between-groups ANOVA	Mental illness in general (label)	Causal attributions Profession	Participants (excluding psychiatrists and psychiatric residents) agreed more with a biological aetiology of mental illness, but agreed even more with a psychodynamic aetiology of mental illness. The only exception to this was psychologists responded neutrally to a biological aetiology of mental illness. An overview of scores for moral

	Psychiatric residents
	
	(USA)
						weakness as a cause for mental illness was not reported.
						
						Profession had a significant impact on biological aetiology. All professions were significantly different from each other. The following are the professions listed from least endorsement of biological aetiology to most endorsement.
						    Psychologists
						    Social workers
						    Nurses
						Profession had a significant impact on psychodynamic aetiology. Differences between psychologist, social workers, and nurses were not found to be statistically significant. Profession was not found to have a significant impact on moral weakness as a cause of mental illness.
						
						Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.

Ross et al. (1999)	GPs
	
	(Scotland)
		Cross-sectional survey
		
		Vignettes were used
			Bivariate logistic regression analysis	Depression (label)	DAQ
					Inevitable course of depression
					    Depression reflects a characteristic response in patients that is not amenable to change
					
					    Becoming depressed is a natural part of being old
					
					    There is little to be offered to those depressed patients who do not respond to what GPs do
						Most of the participants disagreed that depression reflects a characteristic response in patients that is not amenable to change. However, less than half of the participants agreed that most depressive disorders seen in general practice improve without medication. Most participants disagreed that becoming depressed is a natural part of being old, and becoming depressed is a way that people with poor stamina deal with life difficulties. In contrast, most participants agreed that an underlying biochemical abnormality is at the basis of severe cases of depression. Less than half of the participants agreed that depressed patients are more likely to have experienced deprivation in early life than other people, and roughly half of the participants disagreed that the majority of depression seen in general practice originates from patients' recent

					Psychotherapy tends to be unsuccessful with depressed patients	misfortunes, and it is possible to distinguish two main groups of depression: one psychological in origin and the other caused by biochemical mechanisms (neutral responses were available).
					If depressed patients need antidepressants, they are better off with a psychiatrist than a GP	An overview of the findings for the other DAQ items was not included in this table as they were not relevant to stigmatisation.
					Professional confidence I feel comfortable in dealing with depressed patients' needs	Participants that scored high on overall social model of depression were significantly less likely to prescribe psychiatric drugs for a vignette that portrayed a crying patient with suicidal thoughts. Overall social model of depression was not found to be a significant predictor of psychiatric drug prescribing behaviour for a vignette portraying a patient that feels tired all the time.
					Working with depressed patients is heavy going	
					It is rewarding to spend time looking after depressed patients	
					Antidepressants usually produce a satisfactory result in the treatment of depressed patients in general practice	
					If psychotherapy were freely available, it would be more beneficial than antidepressants for most depressed patients	
					Social model of depression The majority of depression seen in general practice originates from patients' recent misfortunes	
					Most depressive disorders seen in general	

					practice improve without medication	
					Depressed patients are more likely to have experienced deprivation in early life than other people	
					The practice nurse could be a useful person to support depressed patients	
					During the past five years, I have seen an increase in the number of patients presenting with depressive symptoms	
					An underlying biochemical abnormality is at the basis of severe cases of depression	
					It is difficult to differentiate whether patients are presenting with unhappiness or with clinical depressive disorder that needs treatment	
					It is possible to distinguish two main groups of depression: one psychological in origin and the other caused by biochemical mechanisms	
					Becoming depressed is a way that people with poor stamina deal with life difficulties	

					Psychotherapy for depressed patients should be left to a specialist Psychiatric drug prescribing behaviour	
Roussy et al. (2015)	Counsellors Unspecified allied health staff Unspecified oral health staff Health promotion staff Receptionists					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

Russell et al. (2021)	Physicians, nurse practitioners, residents, and physician assistants with one of the following specialities
	    Addition medicine
	
	    Family medicine
	
	    Psychiatry
	
	    Emergency medicine
	
	    Geriatrics
	
	    Internal medicine
	
	    Paediatrics
	
	    Obstetrics and gynecology
	
	    Palliative care
						Nothing more was reported for this study as findings were not reported for mental health professionals separately.

	Surgery Other unspecified Administrative staff Unspecified students Other unspecified participants					
Sabin et al. (2015)	Psychiatric nurses Clinician therapists Psychiatrists Psychologists Case managers Program managers/supervisors Case aides Employment specialists Peer support counsellors Residential support counsellors Co-occurring disorder specialists Other unspecified health professionals					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Sagduyu et al. (2008) (Turkey)	GPs	Structured interviews Vignettes were used	Multiple regression analysis	Depression (description and label) Addiction (label)	Causal attributions Prognosis	Most participants agreed that depression is a disease. Slightly more participants agreed with this when depression was presented with a description compared to a label. Roughly

					Social distance
					
					Perceived aggression
					
					Segregation
					
					How depression was presented
					   Description
					   Label
					
					Having a relative with a psychiatric disorder
					
					Age
					
					Marital status
					   Married
					   Widow/widower
					   Separated/divorced
					   Never married
						half of the participants agreed that depression is a state of mental weakness. However, most participants disagreed with this when depression was presented with a description. Most participants agreed that depression occurs because of social problems. Slightly more participants agreed with this when depression was presented with a label, compared to a description. Also, most participants agreed that changes in the environment contribute greatly to depression recovery. Most participants disagreed that depression is congenital and contagious (no opinion was an available option). Causal attribution differences between the description of depression and the label were not examined with inferential statistics.
						
						Most participants disagreed that drugs used in the treatment of depression create addiction (no opinion was an available option).
						
						For the remaining measures of stigmatisation, most participants expressed a lack of stigmatisation towards depression.
						
						Having a relative with a psychiatric disorder, older age, and being married (the reference group was not specified) were significant predictors of less social distance towards depression. It was also suggested that beliefs about whether depression is a disease, and other aetiological beliefs were included as predictors of social distance towards depression. However, it was not clear whether these variables were found to be significant predictors of social distance, and the levels for the other aetiological beliefs were not specified.

Sakellari et al. (2020)	Unspecified nurses from a psychiatric hospital	Cross-sectional survey	-	Schizophrenia (description and a possible label)	AQ-27 (items were not specified)	Scores on both measures were unable to be interpreted with the information provided.

| | Midwives

Health visitors

(Greece) | | | | Familiarity with mental illness

Perceived personal responsibility

Pity

Anger

Fear

Helping

Coercion-segregation

Attitudes towards breastfeeding among women with schizophrenia (items were not specified) | Other relevant findings were excluded from this table as they were not reported for mental health professionals separately. |
| Salime et al. (2019) | Psychiatrists

Psychologists

Mental health nurses

Other unspecified physicians

Other unspecified nurses

Nurse assistants

Medico-psychological assistants

(France) | Unstructured interviews | Categorical analysis

Similarity analysis | Mental illness in general (label) | People with mental illness are in cognitive, physical, and relational decline

Causal attributions

Perceived dangerousness

Perceived likelihood of violence

Fear

Perceived difficulty

Prognosis

People with mental illness are unable to make judgments

People with mental illness are passive | A proportion of mental health professionals perceived elderly people with mental illness as being in cognitive, physical, and relational decline (this was likely due to many of the participants viewing mental illness in elderly people as dementia).

Another proportion of mental health professionals perceived mental illness as a disease. One subcomponent of this was personality structure. However, this was all that was reported. Also, other subcomponents of the disease theme were not made clear.

Psychologists and mental health nurses associated mental illness with danger, violence, and fear. These two groups also viewed mental illness in the elderly as difficult to care for and untreatable. Also, psychologists perceived people with mental illness as unable to make judgments and passive. Both psychologists and psychiatrists |

					People with mental illness are ugly	viewed mental illness as ugly, and all three groups of mental health professionals associated mental illness with dependence and burnout. Psychologists associated mental illness with the most amount of negative attributes, and psychiatrists associated mental illness with the least amount of negative attributes.
					People with mental illness are dependent	
					People with mental illness cause burnout	
					Profession	Other themes were identified that may have been relevant to stigmatisation. However, whether these themes were relevant to stigmatisation was not clear. Thus, these themes were not included in this table.
						Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.
Salt et al. (2005)	GPs (England)	Cross-sectional survey	-	ADHD (label)	Causal attributions People with ADHD under achieve in an educational setting People with ADHD are antisocial Prognosis	Participants attributed ADHD to a range of causes with varying proportions. Genetic inheritance, chemical imbalance, and quality of parenting were among the most likely causes, and social class, peer group influences, and ethnicity were among the least likely causes. Most participants believed that people with ADHD under achieve in an educational setting and are antisocial. Most participants disagreed that ADHD only exists in children.
Sandhu et al. (2019)	Psychiatrists Psychiatric residents Medical students Business, engineering, health science, science,					Nothing more was reported for this study as findings were not reported for psychiatrists separately.

	and social science students					
Scheerder et al. (2011)	Psychologists Psychiatrists Mental health nurses Counsellors Social workers A range of other nurses Nurse assistants A range of other doctors Police officers Priests Pastoral workers Youth advice service workers Teachers Pharmacists Volunteers					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Schwartz (2003)	Social workers (Israel)	Cross-sectional survey	-	Mental illness in general (label)	CLAS-MI (items were not specified by the authors and only factors relevant to stigmatisation were included in this table) Empowerment (relates to the rights of persons with mental illness to make their	Participants expressed more positive attitudes on the empowerment and exclusion factors, and neutral responses on the sheltering factor.

					opinions felt in decisions and policies affecting their lives) Exclusion (the desire to segregate persons with mental illness from community life) Sheltering (the extent to which the respondent believes that persons with mental illness need to have others supervise them in their daily lives or protect them from the dangers of community life)	
Servais & Saunders (2007) (USA)	Clinical psychologists	Cross-sectional survey	Repeated-measures ANOVA Multiple regression analysis	Borderline features (label) Schizophrenia (label) Moderate depression (label)	Effective-ineffective Understandable-incomprehensible Safe-dangerous Worthy-unworthy Desirable to be with-undesirable to be with Similar-dissimilar	Overall, stigmatisation was dependent on the type of mental disorder and measure of stigmatisation. In some cases, participants expressed more stigmatisation, and in other cases participants expressed less stigmatisation. However, moderate depression elicited less negative attitudes for all measures of stigmatisation. For ineffectiveness and incomprehensible, the following mental disorders are listed from most stigmatisation to least. 　　Schizophrenia 　　Borderline features 　　Moderate depression All of these mental disorders were significantly different from each other. For dangerous, unworthy, and undesirable to be with, the following mental disorders are listed from most stigmatisation to least. 　　Borderline features 　　Schizophrenia 　　Moderate depression All of these mental disorders were significantly different from each other, except

						moderate depression and schizophrenia were not found to be significantly different for unworthy.
						When only examining schizophrenia, perceptions of ineffectiveness and dangerousness were significant predictors of participants perceiving a person with schizophrenia as dissimilar to them. Unworthy and incomprehensible were not found to be significant predictors of perceived dissimilarity with schizophrenia. Whether these predictors of similarity regarded all of the mental disorders or just schizophrenia was not made clear.
						When only examining borderline features, perceptions of ineffectiveness and dangerousness were significant predictors of participants not seeing a person with borderline features as desirable to be with. Unworthy and incomprehensible were not found to be significant predictors of a person with borderline features being seen as undesirable. Whether these predictors of desirability regarded all of the mental disorders or just borderline features was not made clear.

Sevigny et al. (1999)	Unspecified doctors working in a psychiatric hospital
	
	Unspecified nurses working in a psychiatric hospital
	
	(China)
		Cross-sectional survey	The analyses were not clear	Mental illness in general (label)	Chinese version of the CAMI (only items relevant to stigmatisation were included in this table)
					    Benevolence, kindness, and sympathy
					        Locating mental health institutions in a residential area downgrades the neighbourhood
					
					        The state should provide more funding on the care
						CAMI factor scores were unable to be fully interpreted with the information provided. Overviews were reported for only 11 CAMI items individually. One of these items was mental illness is an illness like any other. For this item, most doctors agreed, whereas less than half of the nurses agreed. For the other items, most doctors expressed positive attitudes. The only exception to this was for one of the items only half of the doctors expressed positive attitudes. For the nurses, most nurses expressed negative attitudes for most of the items. However, for two items, roughly half of the nurses expressed positive

					and treatment of the mentally ill	attitudes, and for one item most nurses expressed positive attitudes.
					As far as possible community based mental health services should be provided	Doctors were significantly more likely to agree that mental illness is an illness like any other, compared to nurses. For the remaining items that were summarised individually, doctors were significantly less likely to stigmatise mental illness compared to nurses. For the items that were not summarised individually, profession was not found to have a significant impact (i.e., most of the items).
					Increased spending on mental health services is a waste	
					No one has the right to exclude the mentally ill from their neighbourhood	
					The mentally ill should not be treated as if they are outcasts of society	
					We have a responsibility to provide the best medical treatment for the mentally ill	
					Exclusion based on characteristics attributed to the mentally ill	
					It is very easy to tell the mentally ill from normal people	
					Anyone with a history of mental problems should be excluded from taking public office	
					Mental health facilities should be kept out of residential neighbourhoods	

					The mentally ill should not be given any social responsibilities
					
					Social exclusion based on the respondent's own personal reactions
					    Having mental patients living within residential neighbourhoods might be the best therapy but the risks to residents are too great
					
					    Mental patients need the same kind of control and discipline as a young child
					
					    I would not want to have a neighbour who has been mentally ill
					
					    It is frightening whenever to think of people with mental problems living nearby
					
					    It is best not to have any contact with a person who has mental problems
					
					As soon as a person shows signs of mental disturbance, he should be hospitalized
					
					The mentally ill should not be isolated from the rest of the community
					
					The most effective therapy for many mental patients is	

					to let them go back to a normal community	
					Mental illness is an illness like any other	
					The mentally ill are a burden on society	
					The mentally ill are far less of a danger than most people imagine	
					The situation that the mentally ill have for too long been the subject of ridicule should be put to an end	
					A woman would be very unwise to marry a man who has suffered from mental illness, even though he seems to have regained normality	
					There should not be any over-emphasis that the mentally ill endanger the public	
					Society should adopt a far more tolerant attitude toward the mentally ill	
					Residents should accept the location of mental health institutions in their neighbourhood to serve the needs of the residents	
					Mental patients should be encouraged to assume the responsibilities of normal life	

					Residents have good reason to resist the location of mental health institutions in residential areas	
					The best way to handle the mentally ill is to keep them behind locked doors	
					Our mental hospitals seem more like prisons than like places where the mentally ill can be treated	
					Locating mental health facilities in the community does not endanger local residents	
					Mental hospitals are an outdated means of treating the mentally ill	
					The mentally ill don't deserve our sympathy	
					One of the main causes of mental illness is a lack of self-discipline and will power	
					Residents have nothing to fear from people coming into their neighbourhood to obtain mental health services	
					Virtually anyone can become mentally ill	
					Most women who were once patients in a mental hospital	

					can be trusted to take care of babies Profession	
Shanks et al. (2011)	Social workers Counsellors Psychologists Psychiatrists Unspecified nurses Physician assistants Probation officers					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Shao et al. (1997)	Psychiatrists Family physicians Obstetricians and gynaecologists Internists Psychiatric residents Family physician residents Resident obstetricians and gynaecologists Resident internists					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Shinan-Altman et al. (2014)	Social workers Unspecified nurses (Israel)	Cross-sectional survey	-	Alzheimer's disease (label)	Causal attributions Prognosis Perceived personal control	Social workers agreed the most with attributing cause to risk factors such as heredity and smoking, followed by personality, stress, and worry, followed by an

					Negative emotions (only the following examples were provided) 　Depression 　Fear 　Anger People with Alzheimer's disease are apathetic People with Alzheimer's disease are grumpy People with Alzheimer's disease are restless	accident or chance, followed by germs and viruses. Social workers perceived Alzheimer's disease as more chronic, and reflecting slightly more personal control. Social workers expressed less overall negative emotions. Most social workers believed that people with Alzheimer's disease are apathetic, grumpy, and restless. Other relevant findings were excluded from this table as they were not reported for social workers separately.
Shinan-Altman et al. (2016)	Social workers Unspecified nurses					Nothing more was reported for this study as findings were not reported for social workers separately.
Siegfried et al. (1999)	Psychiatrists Psychologists Social workers Occupational therapists Unspecified nurses Other unspecified health professionals					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Smith & Cashwell (2010)	Social workers Psychologists Counsellors Business professionals	Cross-sectional survey	MANOVA	Mental illness in general (label)	CAMI 　Authoritarianism 　Benevolence 　Social Restrictiveness	Mental health professionals expressed less stigmatisation across all CAMI factors. Mental health professionals that were receiving clinical supervision had significantly more positive attitudes for benevolence compared to mental health professionals that were not receiving clinical

	Social work students Psychology students Counselling students Business administration students (USA)				Community Mental Health Ideology Currently receiving clinical supervision	supervision. Currently receiving supervision was not found to have a significant impact on the other CAMI factors for the mental health professionals. Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.
Smith & Cashwell (2011)	Social workers Psychologists Counsellors Business professionals Social work students Psychology students Counselling students Business students (USA)	Cross-sectional survey	Factorial ANOVA	Mental illness in general (label)	Social distance Profession	Mental health professionals expressed less social distance. Psychologists and counsellors expressed the exact same amount of social distance. Psychologists and counsellors expressed significantly less social distance than social workers. Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.

Smith et al. (2017)	Mental health nurses
	
	Psychiatrists
	
	Psychologists
	
	Primary care physicians
	
	Primary care nurses
	
	(USA)
		Experiment
		
		Vignettes was used
			Multiple regression analysis	Schizophrenia (description and label)
				
				A range of physical conditions (description and labels)
					Social distance
					
					Semantic differentials
					    Valuable-worthless
					    Clean-dirty
					    Sincere-insincere
					    Safe-dangerous
					    Warm-cold
					    Wise-foolish
					    Strong-weak
					    Predictable-unpredictable
					    Tense-relaxed
					
					AQ-9
						Mental health nurses, psychiatrists, psychologists, and physicians expressed less overall negative attitudes on all measures of stigmatisation towards both vignettes (stigmatisation scores were not provided for schizophrenia separately).
						
						Accounting for the control variables, the interaction between profession and vignette type was a significant predictor of social distance. For the schizophrenia vignette, physicians and psychiatrists expressed significantly more social distance than psychologists and mental health nurses. Other profession comparisons were not reported for

					I would think that it was the patient's own fault that he is in the present condition
					
					I would think that the patient is dangerous
					
					I would think that the patient should be forced into treatment with his doctor even if he does not want treatment
					
					I would be angry with the patient
					
					I would be scared of the patient
					
					I would try to stay away from the patient
					
					Profession
					
					Age (control variable)
					  <30
					  31-40
					  41-50
					  51-60
					  >60
					
					Sex (control variable)
					
					Race (control variable)
					  White
					  Non-White
					
					Years of professional experience (control variable)
						schizophrenia alone. However, taking the two vignettes together, physicians expressed more social distance than psychiatrists, and no significant difference was found between psychologists and mental health nurses (accounting for the control variables). The difference between physicians and psychiatrists was not examined with inferential statistics.
						
						Accounting for the control variables, the interaction between profession and vignette type was a significant predictor of overall semantic differential scores. Physicians expressed significantly more negative attitudes than psychologists and mental health nurses. Again, other profession comparisons were not reported for schizophrenia alone. Taking the two vignettes together, physicians expressed more negative attitudes than psychiatrists, who in turn expressed more negative attitudes than mental health nurses, and psychiatrists and mental health nurses were not found to be significantly different to psychologists (accounting for the control variables). The differences between physicians and psychiatrists, and psychiatrists and mental health nurses, were not examined with inferential statistics.
						
						Accounting for the control variables, the interaction between profession and vignette type was not found to be a significant predictor of overall AQ-9 scores. Thus, professions were not compared for schizophrenia separately. Taking the two vignettes together, physicians expressed the most negative attitudes, followed by psychiatrists, followed by mental health nurses, followed by psychologists. These differences were not examined with inferential statistics.

						Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.
Spagnolo et al. (2018)	Primary care physicians (Tunisia)	Cross-sectional survey	-	Mental illness in general (label)	I would use the terms "crazy," "nutter," "mad," etc. to describe to colleagues people with a mental illness who I have seen in my work People with severe mental illness can never recover enough to have a good quality of life I feel comfortable talking to a person with mental illness as I do talking to a person with physical illness People with mental illness are dangerous more often than not The public does not need to be protected from people with mental illness	For the first two measures, most participants expressed positive attitudes. However, for the remaining measures most participants expressed negative attitudes.
Stang et al. (2006)	Family physicians Internists Resident physicians					Nothing more was reported for this study as findings were not reported for family physicians separately.

Stefanovics et al. (2016)	Social workers
	
	Psychiatrists
	
	Nurses from a psychiatric hospital
	
	Primary care physicians
	
	Other unspecified nurses
		Cross-sectional survey	-	Mental illness in general (label)	A measure of attitudes towards mental illness (items were not specified)
					  Socialising (positive attitudes towards socialising with people with mental illness)
					
					  Normalising (a belief that socially people with mental
						For a subset of the psychiatrists and all of the nurses from a psychiatric hospital (i.e., the sample from China), most participants expressed overall positive attitudes for the first two factors, and most participants agreed with the non-supernatural factor overall, and biopsychosocial causation overall.

					illness should adopt normalised roles)	Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.
	Medical students (USA, Brazil, Ghana, Nigeria, China)				Non-supernatural factor (not endorsing witchcraft or curses as causes of mental Illness) Biopsychosocial model (a belief in the biopsychosocial causation of mental illness)	
Stefanovics et al. (2016)	Psychologists Social workers Psychiatrists Nurses from a psychiatric hospital Primary care physicians Other unspecified nurses Medical students (USA, Brazil, Ghana, Nigeria, China)	Cross-sectional survey	Correlation analysis	Mental illness in general (label)	The same measure used in the above study (items were not specified)	Factor scores were not reported. For a subset of the psychiatrists and all of the nurses from a psychiatric hospital (i.e., the sample from China) there was a significant positive correlation between overall biopsychosocial model and overall socialising, and between overall biopsychosocial model and overall normalising. Significant correlations were not found between overall non-supernatural factor, and overall socialising and normalising. Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.

Steinberg & Wetterneck (2017)	Professionals and students from the following fields
	    Clinical psychology
	
	    Behaviour analysis
	
	    Organisational psychology
	
	    Counselling psychology
						Nothing more was reported for this study as findings were not reported for mental health professionals separately.

	School psychology General psychology Marriage and family therapy Social work Other					
Stephens et al. (2021)	Psychiatrists Psychologists Social workers Counsellors or psychotherapists Occupational therapists Behavioural therapists Unspecified physicians Other unspecified clinicians Unspecified healthcare students					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Stromwall et al. (2011)	Unspecified behavioural health clinicians Peer employees (USA)	Cross-sectional survey	-	Mental illness in general (label)	Perceived stigmatisation in general	The level of stigmatisation perceived by the behavioural health clinicians was unable to be interpreted with the information provided. Other relevant findings were excluded from this table as they were not reported for the behavioural health clinicians separately.
Stuber et al. (2014)	Psychiatric nurses					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

	Unspecified therapists and psychologists Psychiatrists Program managers and directors Case managers Other unspecified health professionals (USA)					
Stull et al. (2013)	Social work professionals Psychology professionals Psychiatry professionals Unspecified nursing professionals Education professionals Other unspecified professionals					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Sullivan et al. (2015)	Mental health physicians Primary care physicians Mental health nurses Primary care nurses					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Sun et al. (2014)	Psychiatrists Psychiatric nurses (China)	Cross-sectional survey	ANCOVA	Mental illness in general (label)	A measure of attitudes that combined the FABI and the CAMI Community based treatment, social integration, and a	For most of the factors, participants expressed either more or slightly more positive attitudes. The only exception to this was nurses expressed mixed attitudes for fear-free and positive view of specific interactions with people with mental illness.

					biopsychosocial model of causation	After accounting for the control variables, profession was not found to have a significant impact on stigmatisation.
					Personal preferences for direct personal relationships with people with mental illness	
					Fear-free and positive view of specific interactions with people with mental illness In interacting with someone with mental illness, you were not upset or disturbed about working on the same job	
					Physical abuse cannot cause mental illness	
					People with mental illness are not a public nuisance	
					People with mental illness are not dangerous because of violent behavior	
					In interacting with someone with mental illness, I would not be unwilling to share a room	
					You would not avoid conversations with neighbors who had suffered from mental illness	

					Disbelief in superstitious explanations of mental illness
					
					Profession
					
					Age (control variable)
					
					Sex (control variable)
					
					Marital status (control variable)
					    Single
					    Married
					
					Years of education in total (control variable)
					
					Birthplace (control variable)
					    Urban
					    Semi-urban
					    Rural
					
					Residence (control variable)
					    Urban
					    Semi-urban
					    Rural	

Tay et al. (2004)	Unspecified nurses working in a psychiatric hospital
	
	Midwives working in a psychiatric hospital
	
	Assistant nurses
	
	(Singapore)
		Cross-sectional survey	Independent samples t-test
			
			Between-groups ANOVA
				Mental illness in general (label)	AMI questionnaire
					    One can always tell a mentally ill person by his physical appearance
					
					    In order to work with the mentally ill, there is no need for professional knowledge
					
					    The mentally ill, with a number of exceptions, cannot tell the difference between good and bad
					
					    Mental illness is genetic
						Unspecified nurses working in a psychiatric hospital expressed more positive attitudes overall.
						
						For the unspecified nurses working in a psychiatric hospital, nursing officers expressed more overall positive attitudes than senior staff nurses/staff nurses. This difference was not examined with inferential statistics separately for the unspecified nurses working in a psychiatric hospital.
						
						For the unspecified nurses working in a psychiatric hospital type of ward was not found to have a significant impact on overall attitudes.

					The mentally ill should be prevented from having children Mental illness cannot be cured One should avoid all contact with the mentally ill Psychiatric hospitals should not be located in residential areas Those who work in hospitals for the mentally ill do so because they have no other choice The mentally ill should not get married Life has no value for the mentally ill It is not necessary to consider the opinion of a person who has been released from a mental hospital The mentally ill should live only among themselves There are people who were never in a mental hospital and are more disturbed than those who are in a mental hospital Once crazy, always crazy	For the unspecified nurses working in a psychiatric hospital, years of professional experience was not found to have a significant impact on overall attitudes for nursing officers. However, years of professional experience was found to have a significant impact on overall attitudes for senior staff nurses/staff nurses. As years of experience increased overall attitudes became more positive, before they became more negative again for nurses with 31 and more years of experience. These differences were not examined with multiple comparisons. Other relevant findings were excluded from this table as they were not reported for the mental health professionals separately.

					It is not necessarily true that a person who was once in a hospital for the mentally ill will continually have to return there	
					Usually, there is no way of telling when seeing a person walking in the street if he was ever in a hospital for the mentally ill	
					Very few, if any, mentally ill people are capable of true friendships	
					Mentally ill people should be prevented from walking freely in public places	
					One should hide his/her mental illness from his/her family	
					Mentally ill people who do not get well have no one to blame but themselves	
					Mentally ill people who are not hospitalised should be prevented from walking freely in public places at night	
					The mentally ill should not be allowed to make decisions, even those concerning routine events	
					Every mentally ill person should be in an institution where he/she will be under supervision and control	

					Seniority
					    Nursing officer
					    Senior staff nurse/staff nurse
					
					Type of ward
					    Short-stay
					    Long-stay
					
					Years of professional experience
					    1 to 10 years
					    11 to 20 years
					    21 to 30 years
					    31 years and above	

Thomas-MacLean & Stoppard (2004) (Canada)	Primary care physicians	Semi-structured interviews	Foucauldian discourse analysis	Depression (label)	Causal attributions It is important to establish rapport with patients with depression	Most of the participants attributed depression to a biochemical imbalance and biological factors in general. Participants also seemed to downplay social factors in the aetiology of depression. Despite this, participants also expressed that people with depression need to accept at least some responsibility for their illness. In fact, one participant explained depression by referencing human laziness. Although social factors were downplayed, some participants also attributed depression to life stressors, lifestyle factors, and social inequalities. Participants believed it was important to establish rapport with patients with depression.
Thornicroft et al. (1987) (England and China)	Psychiatric nurses	Cross-sectional survey	Independent samples t-test	Schizophrenia (label)	Causal attributions Perceived incomprehensible of speech, criminal behaviour, and unusual mood changes Prognosis	Descriptive statistics were not reported for causal attributions and stigmatisation. Participants from China agreed significantly more than participants from England that the cause of schizophrenia is related to biochemical, infective, and genetic factors, and agreed significantly less that the cause of schizophrenia is related to past life events.

					People with schizophrenia should neither marry nor have children Country	Participants from China agreed significantly more than participants from England that people with schizophrenia can be characterised by incomprehensible speech, criminal behaviour, and unusual mood changes. Further, participants from China agreed significantly more than participants from England that people with schizophrenia will not go on to acquire full employment, can expect their condition to become steadily worse, and should neither marry nor have children. No other significant differences were identified for any other variables (it was not clear what these variables were). Inferential statistics were not reported in this study.
Tracey (1988)	Psychotherapists Psychology students Counselling students					Nothing more was reported for this study as findings were not reported for psychotherapists separately.

Treloar (2009)	Mental health nurses
	
	Practitioners from the following fields
	    Psychology
	    Social work
	    Occupational therapy
	
	Psychiatrists
	
	Other unspecified nurses
	
	Other unspecified medical practitioners
						Nothing more was reported for this study as findings were not reported for mental health professionals separately.

Tulachan et al. (2018)	Psychiatrists (Nepal)	Cross-sectional survey	Chi-square test of independence	Cluster B personality disorders (label) / Personality disorder (label)	What would be your honest feeling toward people with cluster B personality disorders? Feel angry / Feel manipulated / Feel affectionate / Feel excited / Feel helpless / Perceived difficulty / Avoidance / Sex / Years of professional experience (Less than 10 years / 10 to 20 years / More than 20 years) / Primary employment setting (Academic / Private practice)	Participants felt helpless and manipulated more than other feelings. Fewer Participants felt affectionate, and even fewer felt angry and excited. Most participants perceived personality disorder as very difficult. Most participants would not avoid caring for personality disorder if they had the choice. Sex was found to be significantly related to overall feelings towards cluster B personality disorders. Most males expressed overall positive feelings, whereas most females expressed overall negative feelings. Sex was not found to be significantly related to the other measures of stigmatisation. Years of professional experience and primary employment setting were not found to be significantly related to any of the measures of stigmatisation.
Tungchama et al. (2019)	Social workers / Clinical psychologists / Unspecified medical doctors / Unspecified nurses / Pharmacists / Administrators / Record officers					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

	Accountants Auditors					
Ucok et al. (2006) (Turkey)	GPs	Longitudinal survey An intervention was used	Chi-square test of independence McNemar test	Schizophrenia (label)	What is the course of schizophrenia? Patients with schizophrenia can work Would oppose if one of his/her relatives would like to marry someone who has schizophrenia Schizophrenia patients could be recognized by his/her appearance Schizophrenia patients are dangerous Would not like to have a neighbour with schizophrenia Schizophrenia patients are untrustworthy Schizophrenia patients could harm children Schizophrenia patients should be kept in hospitals I don't worry about examining a person who is diagnosed with schizophrenia Schizophrenia could be treated Patients with schizophrenia could not comprehend nor apply suggested treatment	Percentages for the question about the course of schizophrenia were not reported clearly. Prior to interactive training sessions on schizophrenia, and for the majority of the remaining measures, most participants expressed positive attitudes towards schizophrenia. However, most participants would oppose if one of his/her relatives would like to marry someone who has schizophrenia, and would not like to have a neighbour with schizophrenia. Also, roughly half of the participants agreed that schizophrenia patients are untrustworthy. Prior to training, there was a significant relationship between sex and two measures of stigmatisation. These measures regarded the course of schizophrenia and whether patients with schizophrenia could comprehend and apply suggested treatment. It was found that females were more likely to express positive attitudes than males for these measures. Nothing else was reported for the relationship between sex and stigmatisation. Prior to training, there was a significant relationship between personal familiarity with schizophrenia and the measure schizophrenia patients should be kept in hospitals. Participants with an acquaintance that had been diagnosed with schizophrenia were more likely to disagree with this measure. Nothing else was reported for the relationship between personal familiarity with schizophrenia and stigmatisation. Significant relationships were not found between time point and stigmatisation for

					Schizophrenia has the chance of recovery Sex Personal familiarity with schizophrenia	eight of the measures, excluding what is the course of schizophrenia? For the remaining measures, significant relationships were identified between time point and stigmatisation. In all of these cases, participants were more likely to express positive attitudes three months after the training sessions.
Ucok et al. (2004)	Psychiatrists (Turkey)	Cross-sectional survey with open-ended questions	Chi-square test of independence	Schizophrenia (label)	Prognosis Family history of psychiatric disorder	On average participants believed that the likelihood of rehabilitation for schizophrenia was roughly fifty-fifty. Family history of psychiatric disorder was not found to be significantly related to prognosis.
Upshur & Weinreb (2008)	Family physicians Family nurse practitioners Family practice and internal medicine residents					Nothing more was reported for this study as findings were not reported for family physicians separately.

Van Boekel et al. (2015)	GPs
	
	Nurses from mental health and addiction services
	
	Social workers
	
	Psychiatrists
	
	Psychotherapists
	
	Prevention and aftercare specialists from mental health and addiction services
		Cross-sectional survey	Multiple regression analysis	Substance addiction (label)	Attribution beliefs
					    Someone with a substance addiction is responsible for this
					
					    Someone with a substance addiction is in control of this addiction
					
					    Someone with a substance addiction can be treated successfully
					
					    Substance addiction is a disease
					
					    Substance addiction is the consequence of weakness
						GPs agreed more that someone with a substance addiction is responsible for their addiction. However, GPs agreed less that someone with a substance addiction is in control of this addiction, and substance addiction is the consequence of weakness. GPs also agreed more that someone with a substance addiction can be treated successfully, and substance addiction is a disease. Despite these positive attitudes, GPs expressed negative attitudes for most of the remaining stigmatisation measures and items. The only exceptions to this were GPs responded neutrally to the intelligent and able to maintain a regular job stereotypes, and responded positively to the tend to be criminals stereotype.

| | Other unspecified specialists from mental health and addiction services

General population

Clients in treatment for SUD

(Netherlands) | | | | Perceived rehabilitation chances
  Expectation of chance to find a place to live

  Expectation of chance to maintain a normal job

  Expectation of chance to have a relationship

Other stereotypical beliefs
  Intelligent

  Trustworthy

  Aggressive

  Able to maintain a regular job

  Tend to cause disturbances

  Self-neglecting

  Tend to be criminals

Social distance

Age

Sex

Social desirability | For GPs, all of the other stereotypical beliefs and most of the attribution beliefs were not found to be significant predictors of social distance. However, perceiving people with substance addiction as responsible for their addiction was a significant predictor of increased social distance. This was the only attribution belief found to be a significant predictor of social distance.

For GPs, age, sex, and social desirability were not found to be significant predictors of social distance.

Other relevant findings were excluded from this table as they were not reported for mental health professionals separately. |
| Van Boekel et al. (2014) | GPs

Nurses from mental health and addiction services

Social workers | Cross-sectional survey | - | Substance addiction (label) | MCRS (only items relevant to stigmatisation were included in this table)
  Insurance plans should cover patients like this to the same degree that they cover patients with other conditions | Most GPs expressed positive attitudes for the majority of the MCRS items. The only exceptions to this were roughly half of the GPs disagreed that they feel especially compassionate towards patients like this, and most GPs disagreed that they wouldn't mind getting up on call nights to care for patients like this. |

	Psychiatrists
	
	Psychotherapists
	
	Staff, prevention, aftercare, and management specialists from mental health and addiction services
	
	Other unspecified specialists from mental health and addiction services
	
	(Netherlands)
					There is little I can do to help patients like this
					
					I feel especially compassionate towards patients like this
					
					Patients like this irritate me
					
					I wouldn't mind getting up on call nights to care for patients like this
					
					Treating patients like this is a waste of medical dollars
					
					Patients like this are particularly difficult for me to work with
					
					I prefer not to work with patients like this
					
					Attribution beliefs
					  Someone with a substance addiction is responsible for this
					
					  Someone with a substance addiction is in control of this addiction
					
					  Someone with a substance addiction can be treated successfully
					
					  Substance addiction is a disease
					
					  Substance addiction is the consequence of weakness
						GPs agreed more that someone with a substance addiction is responsible for their addiction. However, GPs agreed less that someone with a substance addiction is in control of this addiction, and substance addiction is the consequence of weakness. GPs also agreed more that someone with a substance addiction can be treated successfully, and substance addiction is a disease.
						
						GPs reported feeling fear and anger less, and pity more.
						
						Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.

					Emotions
					  Anger
					  Fear
					  Pity	

Van Dorn et al. (2005)	Psychiatry clinicians Psychology clinicians Social work clinicians Case managers					Nothing more was reported for this study as findings were not reported for mental health professionals separately.
Vendsborg et al. (2013)	Psychologists Occupational therapists Social workers Unspecified doctors from psychiatric units Unspecified nurses from psychiatric units Nurse aides Administrative staff (Denmark)	Cross-sectional survey	-	Mental illness in general (label) Schizophrenia (label)	Causal attributions Prognosis People with schizophrenia are dangerous more often than not The public does not need to be protected from people with schizophrenia If a consultant psychiatrist instructed me to treat people with a mental illness in a disrespectful manner, I would not follow their instructions I feel as comfortable talking to a person with schizophrenia as I do talking to a person with a physical illness I would use the terms crazy, nutter, mad, etc to describe people with schizophrenia who I have seen in my work	Most of the doctors attributed schizophrenia to serious traumas, and just under half attributed schizophrenia to relations in the family. All of the doctors believed schizophrenia is a disease of the brain, and caused by a genetic disposition and a combination of the mentioned factors. Most of the doctors disagreed that people with schizophrenia can never reach a good quality of life. However, most of the doctors also believed that schizophrenia is a chronic illness. Most doctors did not agree that people with schizophrenia are dangerous more often than not, and most doctors agreed that the public does not need to be protected from people with schizophrenia. Only a small subset of doctors agreed that if a consultant psychiatrist instructed me to treat people with a mental illness in a disrespectful manner, I would not follow their instructions. For the remaining two measures of stigmatisation, most doctors did not express stigmatisation.

						Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.

Walsh et al. (2005)	Social workers
	
	(USA)
		Experiment	Between-groups ANOVA	Schizophrenia (label)
				
				Major depression (label)
				
				Eating disorder (label)
				
				Dissociative disorder (label)
					Causal attributions
					
					Years of professional experience
					   10 or less
					   11 to 20
					   21 to 29
					   30 or more
					
					Age (levels were not specified)
					
					Sex
					
					Racial-ethnic background (levels were not specified)
					
					Professional setting
					   Not-for-profit
					   Independent private practice
					   Public organisations
					   Other
					
					Professional function (levels were not specified)
						Participants attributed schizophrenia to biological causes more, followed by major depression (one biological aetiology item also included environmental factors beyond parental control). In comparison, participants attributed dissociative disorder to parenting and family dynamics more, followed by eating disorder.
						
						Schizophrenia was attributed to biological factors significantly more than eating disorder and dissociative disorder, and major depression was attributed to biological factors significantly more than dissociative disorder. The difference between schizophrenia and major depression was not found to be statistically significant, and the difference between major depression and eating disorder was not found to be statistically significant. Whether there was a significant difference between eating disorder and dissociative disorder was not reported.
						
						All other variables were not found to have a significant impact on causal attributions.

Wang et al. (2017)	Primary care physicians Primary care nurses Village doctors Other unspecified primary care workers					Nothing more was reported for this study as findings were not reported for primary care physicians separately.

| Waugh et al. (2017) | Unspecified nurses from mental health and non-mental health services

An occupational therapist

A therapy assistant practitioner

A physiotherapist

A health care assistant

A speech and language therapist | | | | | Nothing more was reported for this study as findings were not reported for mental health professionals separately. |
|---|---|---|---|---|---|---|
| Welch et al. (2015) | Family physicians

Internists | | | | | Nothing more was reported for this study as findings were not reported for family physicians separately. |
| Weller & Grunes (1988) | Unspecified nurses from a psychiatric hospital

Other unspecified nurses

(Israel) | Cross-sectional survey | - | Mental illness in general (label) | AMI questionnaire
One can always tell a mentally ill person by his physical appearance

In order to work with the mentally ill, there is no need for professional knowledge

The mentally ill, with a number of exceptions, cannot tell the difference between good and bad

Mental illness is genetic

The mentally ill should be prevented from having children

Mental illness cannot be cured | Overall, psychiatric nurses expressed more negative attitudes towards mental illness.

Other relevant findings were excluded from this table as they were not reported for psychiatric nurses separately. |

					One should avoid all contact with the mentally ill	
					Psychiatric hospitals should not be located in residential areas	
					Those who work in hospitals for the mentally ill do so because they have no other choice	
					The mentally ill should not get married	
					Life has no value for the mentally ill	
					It is not necessary to consider the opinion of a person who has been released from a mental hospital	
					The mentally ill should live only among themselves	
					There are people who were never in a mental hospital and are more disturbed than those who are in a mental hospital	
					Once crazy, always crazy	
					It is not necessarily true that a person who was once in a hospital for the mentally ill will continually have to return there	
					Usually, there is no way of telling when seeing a person	

					walking in the street if he was ever in a hospital for the mentally ill	
					Very few, if any, mentally ill people are capable of true friendships	
					Mentally ill people should be prevented from walking freely in public places	
					One should hide his/her mental illness from his/her family	
					Mentally ill people who do not get well have no one to blame but themselves	
					Mentally ill people who are not hospitalised should be prevented from walking freely in public places at night	
					The mentally ill should not be allowed to make decisions, even those concerning routine events	
					Every mentally ill person should be in an institution where he/she will be under supervision and control	

Werner & Araten-Bergman (2017)
 	
(Israel)
	Social workers	Experiment
		
		Vignettes were used
			Within-subjects ANOVA
			
			Correlation analysis
				Mental illness in general and schizophrenia (description and label)
				
				Intellectual disability (description)
					AQ-27 (items were not specified)
					   Perceived personal responsibility
					
					   Perceived dangerousness
						Participants mostly expressed less stigmatisation across the AQ-27 factors. However, intellectual disability and comorbid intellectual disability and schizophrenia (this vignette also included the label mental illness) elicited more avoidance, and schizophrenia (this vignette also included the

				Mental illness in general and comorbid intellectual disability and schizophrenia (description and label)	Anger Fear Pity Segregation Avoidance Coercion Helping	label mental illness) elicited roughly neutral responses. Also, all of the mental disorders elicited more coercion. For each AQ-27 factor, a hierarchical pattern emerged, in which participants stigmatised the different mental disorders to varying degrees. No mental disorder was consistently stigmatised more than any other disorder across the AQ-27 factors. Disorder was not found to have a significant impact on anger, pity, avoidance, and helping. Disorder was found to have a significant impact on the remaining AQ-27 factors. For all of these factors, schizophrenia was stigmatised significantly more than intellectual disability, and in one case was stigmatised significantly more than comorbid intellectual disability and schizophrenia. In all other cases, schizophrenia, and comorbid intellectual disability and schizophrenia were not found to be significantly different. For the AQ-27 factors in which disorder had an impact, comorbid intellectual disability and schizophrenia was stigmatised significantly more than intellectual disability for most of the factors. Comorbid intellectual disability and schizophrenia, and intellectual disability were not found to be significantly different in only one case. Perceived personal responsibility was not found to be significantly correlated with any of the behavioural intentions. Perceived dangerousness was significantly positively correlated with segregation, avoidance, and coercion, and significantly negatively correlated with helping. The only exception to this was perceived dangerousness was not found to be significantly correlated with helping for schizophrenia.

						Anger and fear were significantly positively correlated with segregation, avoidance, and coercion, and significantly negatively correlated with helping. Pity was significantly positively correlated with coercion and helping, and significantly negatively correlated with avoidance. The only exception to this was pity was not found to be significantly correlated with avoidance for comorbid intellectual disability and schizophrenia. Pity was not found to be significantly correlated with segregation.
Williams (2009)	Unspecified doctors from mental health services Unspecified nurses from mental health services Psychologists Female occupational therapists Social workers Physiotherapists Other unspecified professionals from mental health services (England)	Cross-sectional survey	-	Mental illness in general (label) Substance misuse problems (label)	Causal attributions Prognosis	The measures were unable to be interpreted with the information provided. However, some of the nurses commented that substance misuse rarely leads to mental illness. Other relevant findings were excluded from this table as they were not reported for mental health professionals separately.
Winkler et al. (2016)	GPs Psychiatrists Neurologists Paediatricians					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

	Gynaecologists Obstetricians Other unspecified medical doctors					
Wlodarczyk et al. (2018) (Australia)	GPs	Focus groups	Template analysis	BPD (label)	Perceived difficulty Feeling overwhelmed Exhaustion Avoidance People with BPD frequently cancel appointments Frustration Discomfort Intention to provide quality care The personhood of the patient with BPD must be maintained	Participants described people with BPD as difficult in general, and it was suggested that this elicited feelings of being overwhelmed and exhausted. Further, one participant stated that the perception of people with BPD being difficult made them not want to work with BPD. Avoidance of BPD was also explained by the participants as arising from the perception that people with BPD frequently cancel appointments. It was also suggested that this perception elicited frustration. GPs described their experience with BPD as uncomfortable in general. Despite the previously noted findings, GPs were still motivated to provide quality care to people with BPD, and one participant stated that the personhood of the patient with BPD must be maintained.
Woollaston & Hixenbaugh (2008) (England)	Psychiatric nurses	Semi-structured interviews	Thematic analysis	BPD (label)	People with BPD are powerful People with BPD are dangerous People with BPD are unrelenting People with BPD are disruptive People with BPD are an unstoppable force of destruction	People with BPD were described as powerful, dangerous, unrelenting, disruptive, and an unstoppable force of destruction. People with BPD were also described as being time and energy consuming, demanding, draining, and like a whirlwind that sucks you in. People with BPD were described as aggressive to themselves and others, and as causing personal distress.

					People with BPD are time and energy consuming	BPD was described as an unhelpable condition, and participants stated that this made them feel discouraged and frustrated. One participant stated that the chronic nature of BPD made them not like working with BPD. However, some participants expressed optimism in the ability of people with BPD to change.
					People with BPD are demanding and draining	
					People with BPD are like a whirlwind that sucks you in	
					People with BPD are aggressive to themselves and others	A participant suggested that professional exposure to BPD made them less optimistic in their ability to change.
					People with BPD cause me personal distress	
					Prognosis	One participant perceived avoidance of BPD in other psychiatric nurses. Participants also perceived sympathy in other psychiatric nurses, and a general dislike of people with BPD in another group of psychiatric nurses.
					Discouragement	
					Frustration	
					General dislike in working with BPD	Participants expressed the belief that people with BPD are manipulative and dishonest, and this perception made them feel used and devalued. This perception also motivated the participants to be vigilant around people with BPD.
					Professional exposure to BPD	
					Perceived avoidance	
					Perceived sympathy	
					Perceived general dislike	
					People with BPD are manipulative and dishonest	
					Feeling of being used and devalued	
					Vigilance	
Worthington & Atkinson (1993) (USA)	Psychologists	Cross-sectional survey Vignettes were used	Chi-square test of independence	Adjustment disorder (description)	Causal attributions	Participants attributed the disorders to a range of causes with varying proportions. For adjustment disorder, the most common causes

				Identity disorder (description)	Perceived responsibility of cause	were specific trauma and unresolved feelings. Adjustment disorder was not attributed to genetics, social isolation, sick society, or physical illness by any of the participants. For identity disorder, the most likely causes were lack of self-understanding and unresolved feelings. Identity disorder was not attributed to genetics, specific trauma, social isolation, or sick society by any of the participants. Differences between the disorders for causal attributions were not examined with inferential statistics.
					Perceived responsibility of problem solution	
						Most participants attributed a low level of cause to the person with adjustment disorder, and roughly half of the participants attributed a high level of cause to the person with identity disorder. All participants attributed a high level responsibility to both disorders for the solution to their problems.
						There was a significant relationship between disorder and perceived responsibility of cause. The person with identity disorder was more likely to be considered responsible for their disorder, compared to adjustment disorder.
Wright & Klein (1966)	Social workers Unspecified nurses Physical medicine and rehabilitation service therapists Unspecified physicians Physical medicine and rehabilitation service assistants Nursing assistants	Cross-sectional survey	-	Mental illness in general (label)	What percentage of the people going to a mental hospital will stay for life? What percentage of hospitalised mental patients need to be locked up because they are dangerous? What percentage of hospitalised mental patients need to be encouraged to leave the hospital because they lack confidence?	Overall, social workers stigmatised mental illness. Other relevant findings were excluded from this table as they were not reported for social workers separately.

	Unspecified registrars Housekeeping personnel Dieticians Engineers Laundry personnel Other unspecified hospital personnel (USA)				What percentage of hospitalised mental patients can be allowed to walk around the grounds without being watched? What percentage of hospitalised mental patients have too much energy and are too active most of the time? What percentage of hospitalised mental patients can be allowed to go to town by themselves on weekends? What percentage of those locked up need to wear straight jackets or be in a padded room? What percentage of hospitalised mental patients would sit around all day? What percentage of hospitalised mental patients would hurt themselves if they got out? What percentage of hospitalised mental patients would hurt someone else if they got out? What percentage of the patients discharged from the nearest mental hospital should settle in your town if they want to? What percentage of the people discharged from a mental hospital are able to hold a fulltime job? What percentage of the people discharged from a mental	

					hospital should be allowed to drive a car? What percentage of the people discharged from mental hospitals should return to their home towns if they want to? What percentage of the people discharged from a mental hospital are able to do the type of work they did before they entered the hospital? What percentage of the general population of the country will need to go to a mental hospital? What percentage of hospitalised mental patients could be given the freedom to come and go like patients in a regular hospital? What percentage of the patients in mental hospitals are there voluntarily?	
Yuan et al. (2017)	Unspecified doctors from a psychiatric facility Unspecified nurses from a psychiatric facility Psychologists Social workers Occupational therapists Case workers Pharmacists					Nothing more was reported for this study as findings were not reported for mental health professionals separately.

	Physiotherapists					

Appendix D

Consolidated Criteria for Reporting Qualitative Research Checklist

Topic	Item No.	Guide Questions/Description	Response
Domain 1: Research team and reflexivity			
Personal characteristics			
Interviewer/facilitator	1	Which author/s conducted the interview or focus group?	Interviews were conducted by the first author
Credentials	2	What were the researcher's credentials? E.g. PhD, MD	The interviewer had a bachelor's degree (honors) in psychology. The other researchers each have a PhD
Occupation	3	What was their occupation at the time of the study?	The interviewer was either a university tutor or received a stipend from the university. The other two researchers were faculty members at Griffith University
Gender	4	Was the researcher male or female?	The interviewer was male, one of the other researchers was male and the other two were female
Experience and training	5	What experience or training did the researcher have?	The interviewer previously administered interviews that used open and closed-ended questions for an organization that provided community-based services, and gained more experience conducting interviews by pilot testing the current study
Relationship with participants			
Relationship established	6	Was a relationship established prior to study commencement?	Other than email correspondence to organize a time to administer the interview, the

Topic	Item No.	Guide Questions/Description	Response
			interviewer and participants had no relationship prior to the interviews, with the exception that one of the participants was a previous lecturer of the interviewer
Participant knowledge of the interviewer	7	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	All participants knew that the interviewer was operating at Griffith University, and some participants would have been aware that the interviewer was doing the research as part of a PhD dissertation study
Interviewer characteristics	8	What characteristics were reported about the inter viewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	Sex and interview experience
Domain 2: Study design			
Theoretical framework			
Methodological orientation and Theory	9	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	Grounded theory
Participant selection			
Sampling	10	How were participants selected? e.g. purposive, convenience, consecutive, snowball	Purposive sampling
Method of approach	11	How were participants approached? e.g. face-to-face, telephone, mail, email	Online
Sample size	12	How many participants were in the study?	22
Non-participation	13	How many people refused to participate or dropped out? Reasons?	One participant dropped out
Setting			
Setting of data collection	14	Where was the data collected? e.g. home, clinic, workplace	Participants were either at their place of residence or in an office at their workplace. The interviewer was at Griffith University in his office or in a meeting room, but two interviews were

Topic	Item No.	Guide Questions/Description	Response
			performed in his apartment
Presence of nonparticipants	15	Was anyone else present besides the participants and researchers?	The majority of participants were alone for the duration of the interview, however for one interview the participant's son was present intermittently. When the interviewer conducted interviews from his office, there were times in which officemates were nearby. Yet, officemates and participants could not see each other, and the officemates were silent during the interviews and were unable to hear participant responses
Description of sample	16	What are the important characteristics of the sample? e.g. demographic data, date	Participants reported their profession, what organization they were registered with, and their age, gender, and ethnicity. See method
Data collection			
Interview guide	17	Were questions, prompts, guides provided by the authors? Was it pilot tested?	The full interview schedule is in supporting information. Yes, the study was pilot tested. See method
Repeat interviews	18	Were repeat inter views carried out? If yes, how many?	No
Audio/visual recording	19	Did the research use audio or visual recording to collect the data?	Interviews were audio recorded
Field notes	20	Were field notes made during and/or after the interview or focus group?	No
Duration	21	What was the duration of the inter views or focus group?	The mean was 32.96 minutes
Data saturation	22	Was data saturation discussed?	The first and second authors discussed saturation, and this informed a decision to stop interviewing.

Topic	Item No.	Guide Questions/Description	Response
			See method
Transcripts returned	23	Were transcripts returned to participants for comment and/or corrections?	No
Domain 3: analysis and findings			
Data analysis			
Number of data coders	24	How many data coders coded the data?	1, see method
Description of the coding tree	25	Did authors provide a description of the coding tree?	Yes
Derivation of themes	26	Were themes identified in advance or derived from the data?	Categories emerged from the data but were guided by relevant theory
Software	27	What software, if applicable, was used to manage the data?	Not applicable
Participant checking	28	Did participants provide feedback on the findings?	No
Reporting			
Quotations presented	29	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number	Quotations were used in the body of the article, and more were provided in Table 1. Quotations were labelled with participant numbers where necessary
Data and findings consistent	30	Was there consistency between the data presented and the findings?	Yes, see method and results
Clarity of major themes	31	Were major themes clearly presented in the findings?	Yes, see results
Clarity of minor themes	32	Is there a description of diverse cases or discussion of minor themes?	Yes, see results

Appendix E

Interview Consent Form

Mental health professionals' experiences with people with mental illness
CONSENT FORM
(GU Ref No: 2020/584)

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By signing below, I confirm that I have read and understood the information package and in particular:

- I understand that my involvement in this research will be an audio and video-recorded interview

- I have had any questions answered to my satisfaction;

- I understand the risks involved;

- I understand that there will be no direct benefit to me from my participation in this research;

- I understand that my participation in this research is voluntary;

- I understand that if I have any additional questions I can contact the research team;

- I understand that I am free to withdraw at any time, without explanation or penalty;

- I understand that my name and other personal information that could identify me will be removed or de-identified in publications or presentations resulting from this research;

- I understand that I can contact the Manager, Research Ethics, at Griffith University Human Research Ethics Committee on 3735 4375 (or research-ethics@griffith.edu.au) if I have any concerns about the ethical conduct of the project; and

I agree to participate in the project.

Name		
Signature		
Date		

Appendix F

Full Interview Schedule

Introduction: As outlined in the project information sheets, we are seeking to better understand how mental health professionals respond to people with mental illness. To do this we would like to ask you about your experience with mental illness.

1. What's the first thing that comes to mind?
   … anything else?

2. What's it like for you when you are around people with mental illness?
   … anything else?

3. Looking back over what we have been talking about, would you have responded any differently with particular mental illnesses?
   … anything else?

The following questions can be used as probes should these topics not come up during the interview

1. What thoughts do you have …?
   … anything else?

2. What feelings do you experience …?
   … anything else?

3. How do you act …?
   … anything else?

Appendix G

Vignettes

Bipolar Disorder

Morgan has Bipolar Disorder. As such, Morgan has been persistently exhibiting an abnormally elevated mood, irritability, and increased activity levels.

Borderline Personality Disorder

Jackie has been diagnosed with Borderline Personality Disorder. As part of this, Jackie is impulsive, has intense emotional reactions, and experiences instability of relationships and self-image.

Narcissistic Personality Disorder

Shannon has Narcissistic Personality Disorder. Characteristic of this disorder, Shannon has a grandiose sense of self-importance, needs admiration, and lacks empathy for others.

Major Depressive Disorder

Cameron has Major Depressive Disorder. This means that for the majority of the day Cameron is in a depressed mood, has little desire to engage in most activities, and finds little pleasure in previous interests.

Generalized Anxiety Disorder

Taylor has been diagnosed with Generalized Anxiety Disorder. Characteristic of this disorder, Taylor experiences frequent anxiety and worry about a range of different events most days of the week.

Schizophrenia

Sam has been diagnosed with Schizophrenia. As part of this, Sam has hallucinations in the form of hearing voices, and believes that others seek to harm them without any evidence.

Alcohol Use Disorder

Jessie has been diagnosed with Alcohol Use Disorder. This means that Jessie has not been able to reduce their alcohol consumption, despite it having a negative impact on their work and relationships.

Anorexia Nervosa

Alex has Anorexia Nervosa. As such, Alex has an intense fear of gaining weight, and has interfered with weight gain to the extent that their weight is abnormally low.

Antisocial Personality Disorder

Reese has been diagnosed with Antisocial Personality Disorder. For Reese, this entails a repeated pattern of law breaking, and unreliability regarding work and financial obligations.

Pedophilic Disorder

Jordan has been diagnosed with Pedophilic Disorder. For Jordan, this involves recurrent sexually arousing fantasies about prepubescent children and urges to act on these fantasies.

Appendix H

Familiarity with Mental Illness Scale

What is your level of familiarity with severe mental illness (Please specify all that apply)?

1. My job involves providing services/treatment for people with mental illness

2. I have observed, in passing, a person I believe may have had a severe mental illness

3. I have observed people with a severe mental illness on a frequent basis

4. I have worked with a person who had a severe mental illness at my place of employment

5. A friend of the family has a severe mental illness

6. I have a relative who has a severe mental illness

7. I live with a person who has a severe mental illness

8. I have or have had a severe mental illness

Appendix I

ANOVA Results Comparing Clusters for Each Stereotype

Cluster		Blame			Dangerousness			Difficulty			Recovery beliefs		
		$F(1, 477)$	p	η_p^2	$F(1, 477)$	p	η_p^2	$F(1, 477)$	p	η_p^2	$F(1, 477)$	p	η_p^2
Cluster 1	Cluster 2	2.50	.11	.005	1126.22	< .001	.70	929.02	< .001	.66	706.84	< .001	.60
	Cluster 3	313.94	< .001	.40	3574.29	< .001	.88	426.72	< .001	.47	607.00	< .001	.56
	Cluster 4	571.13	< .001	.54	843.99	< .001	.64	571.13	< .001	.55	0.40	.53	.001
Cluster 2	Cluster 3	414.33	< .001	.47	1488.96	< .001	.76	31.81	< .001	.06	74.66	< .001	.14
	Cluster 4	601.63	< .001	.56	20.36	< .001	.04	49.32	< .001	.09	359.86	< .001	.43
Cluster 3	Cluster 4	5.12	.02	.01	825.48	< .001	.63	107.45	< .001	.18	461.57	< .001	.49

Note. Cluster 1 = major depressive disorder, generalized anxiety disorder, and anorexia nervosa. Cluster 2 = borderline personality disorder, narcissistic personality disorder, antisocial personality disorder, schizophrenia, and bipolar disorder. Cluster 3 = paedophilic disorder. Cluster 4 = alcohol use disorder.