Stigma of Mental Health and Help-seeking: A Systematic Style Literature Review.

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Abstract

Background: Approximately 1 in 4 adults will experience a mental health problem at some point during their lives. Over the past decade government policies and funding has been aimed at improving access to mental health care; however barriers to accessing care still remain.

Objectives: This paper aims to review the literature on the impact of mental health stigma on help-seeking in the general population.

Method: A review of research published on the Medline (FirstSearch) database was conducted and studies were assessed for eligibility based on PICOS criteria.

Results: 9 quantitative studies and 13 qualitative studies were identified in the review. None used experimental methodologies. Only two reported statistically significant effects of perceived stigma on attitudes to help-seeking.

Conclusions: Due to the methodologies used in the studies, limited conclusions can be drawn. Further experimental research is needed to investigate the impact of perceived stigma on help-seeking attitudes.
Introduction

Rationale

The purpose of this paper is to review the literature regarding the impact of mental health stigma on help-seeking from mental health services. This will involve a complete review of the qualitative and quantitative data available on the Medline(FirstSearch) database.

Given the importance of improving early access to mental health support for people experiencing psychological distress, research into the barriers to accessing support is relatively minimal. Generally researchers have taken an exploratory approach to identifying barriers to accessing mental health support (e.g. Boyd et al., 2007; Barney, Griffiths, Christensen & Jorm, 2009; Taskanen et al., 2011; Kessler et al., 2001), which has largely focussed on examining retrospective accounts of individuals who have previously sought help from mental health services, using qualitative research methods such as focus groups or semi-structured interviews.

However, there have also been some more recent attempts at analysing the relationship using quantitative methods (e.g. Bathje & Prior, 2011; Masuda & Boone, 2011; Belloch, del Valle, Morillo, Carrió, & Cabedo, 2009; Deen, Bridges, McGahan, & Andrews, 2011), which have subsequently lead to reviews of the literature (e.g. Jackson et al., 2007; Gulliver, Griffiths, & Christensen, 2010). However, these reviews are often focussed on specific groups such as indigenous people (Isaacs, Pyett, Oakley-Brown, Gruis, & Waples-Crowe, 2010) or young adults (Gulliver, Griffiths, & Christensen, 2010), which perhaps limits the generalizability of the findings.
There have also been very few attempts to define the concept of stigma, with many authors relying on Goffman’s definition of stigma as an “attribute that is deeply discrediting” that reduces the bearer “from a whole and usual person to a tainted, discounted one” (Goffman 1963, p. 3). However, other researchers have suggested that stigma can only occur within a broader social context, with Crocker Major and Steele (1998, p. 505) suggesting stigmatization occurs in response to “a social identity that is devalued in a particular social context”. More recently however, an important contribution has been made by Corrigan (2000) who distinguishes between public stigma as the negative attitudes held by society towards a particular group, and self-stigma as the internalization of these beliefs by an individual. Corrigan’s definition has been particularly influential in this area as it has provided researchers with a clearer framework for understanding and measuring the impact of perceived public stigma on peoples own perceptions and attitudes towards seeking help.

Certainly, researching the impact of perceived societal stigma on help-seeking has important implications for the individual, the general public, clinicians and mental health service commissioners. In order to tackle the social stigma attached to mental health problems and improve access to effective treatment, it is necessary to understand the impact that perceived societal stigma has on people’s decisions to disclose mental health difficulties. Whilst individuals report that fear of negative social visibility and anticipated judgement from others factored in their decision to seek help from services (Boyd et al., 2007; Johnson, Mills, DeLeon, Hartzema, & Haddad, 2009), investigating this relationship experimentally would identify how this occurs. This would not only inform clinicians and service commissioners about how to reduce stigma-related barriers to treatment, but would also be useful to broader
anti-stigma campaigns which aim to reduce mental health-related stigma in society.

The relevance of this review to the author’s development through clinical psychology training is to develop a clearer understanding of the literature around mental health stigma and help-seeking to inform the design of her final year research thesis. The information gained from the review will also be used to inform clinical practice around service development within the author’s role in mental health services.

The review was completed using relevant aspects of the 27-item checklist published by the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) group (Moher, Liberati, Tetzlaff, & Altman, 2009: Appendix A), which provides a best practice guideline for completing systematic reviews and meta-analyses.

Objectives

This paper will aim to review the available literature regarding stigma and seeking help from services. The question the review will attempt to answer is: What is the relationship between perceived stigma of mental illness and help-seeking behaviour?

Methods

Eligibility Criteria

Articles that attempted to assess the impact of mental health-related stigma on seeking help from services were screened for eligibility for the review. Studies focusing on the perceptions of family members or professionals were
excluded from the review. Commentaries and other non-empirically based papers were also screened out, as well as articles which were published in a foreign language. Quantitative studies which did not explicitly state how stigma was assessed were excluded, as were studies which demonstrated an unacceptable level of bias in the assessment of stigma perception, i.e. asking only one closed or leading question about the perception of mental health-related stigma. The review was not limited to research carried out in a specific country or with a certain population.

Due to the small number of papers available on this topic a broad approach to reviewing the literature was taken, including studies that were non-experimental or qualitative in approach. Inclusion criteria for the review were defined according to the participants, interventions, comparisons, outcomes, and study design (PICOS):

- Participants: must be over the age of 18. It was thought that children younger than this age are likely to be reliant on others to seek help from services on their behalf and are less likely to be influenced by the variables explored in this review. Details about participants previous history of mental illness as well as previous or current access to mental health services should be provided although articles missing this information would be included if all other criteria was met.

- Interventions: Studies were not limited to a particular intervention.

- Comparison: Comparisons may be made across sample populations, e.g. participants from different cultures, but no comparison group was required for the study to be included in the review. If comparisons are made across groups then adequate statistics must be used in the
Outcomes: Perceived stigma must be specifically explored as a potential barrier to attitudes to seeking help from services or actual help-seeking behaviour.

Study Design: Experimental, correlational, qualitative, cross-sectional, or longitudinal studies were included in the review. Assessment of perceptions about stigma should be relatively thorough in quantitative studies. Qualitative analysis should be described in detail and attempts should be made to minimise bias strategies in quantitative and qualitative studies.

Information Sources

The Medline (FirstSearch) on-line database was searched between the period of 07th May 2013 and 9th July 2013.

Search Strategy

Search terms included both “stigma” and “mental”. Additional search terms (i.e. synonyms of stigma) were considered, but due to the large number of results (2534), broadening or extending the search terms was not deemed viable. All search results were closely screened and individually assessed for eligibility based on the inclusion criteria described above.

Study Selection

Studies were screened for relevance to the topic based on the study title and abstract. If a study appeared to be relevant to the review, the author accessed the article in full text format. Where access to articles was not
available, attempts were made to gain the article from other sources including direct from the author.

**Data Collection Process**

Data extraction was completed using relevant aspects of the Cochrane Effective Practice and Organisation of Care Group (EPOC: Appendix B). This involved recording details of the study setting, design, participants, and the outcome.

**Risk of Bias**

Experimental studies with a separate control group were assessed for risk of bias at the individual study level using the Cochrane Collaboration Tool for Assessing Risk of Bias (Higgins & Green, 2011; Appendix C). Studies that demonstrated an unacceptable risk of bias were removed (for numbers of studies removed, see below). Studies that were not experimental were also assessed at the individual level with regards to selection, performance, measurement and attrition biases. Risk of bias across studies was assessed according to presence of publication bias and selective reporting in studies.

**Results**

**Study Selection**

The flow diagram presented in Figure 1 depicts the process of study selection for the review, based on the PRISMA four-phase flow diagram (Moher, Liberati, Tetzlaff, & Altman, 2009). Studies were excluded according to the criteria outlined above.
Study Characteristics

Details of each of the 22 studies included in the review are presented in Table 1. The information presented in this table draws on the relevant PICOS inclusion criteria. Of the total 22 articles, 19 studies found evidence of perceived stigma of mental illness as a barrier to accessing mental health services, whilst two reported minimal evidence and another found no evidence of a relationship between perceived stigma and help-seeking.

TABLE 1 HERE

The studies utilised a range of research methodologies, with 9 studies taking a quantitative approach and 13 studies taking a qualitative approach. Of the qualitative studies included in the review, eight utilised a semi-structured interviewing approach and four used focus groups. The quantitative studies all employed survey correlational designs.

The majority of the studies included in the review involved participants of both genders, although seven studies were completed only with female participants and one with only male participants. In total, 10 studies involved participants with past or present mental health difficulties, and a further five involved participants with or without mental health difficulties. Six studies did not assess participant’s mental health and one study was limited to participants with no experience of mental health difficulties. Sample sizes ranged from 6 to 138 for the qualitative studies and from 15 to 55,302 for the quantitative studies. Nine studies had sample sizes over 100. With regards to settings, 10 studies were based in the USA, four in Australia, three in the UK, one in Canada, one in
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Spain, one in Pakistan, one across 21 different countries.

Of the nine quantitative studies, one used logistic regression, one used correlations, one used chi square analysis and six other studies did not include any statistical analysis, instead presenting the results in percentages. None of the studies used experimental research designs. With regards to the qualitative studies, one used Grounded Theory, two used the constant comparative method, one used Dimensional Analysis, and another used Interpretative Phenomenological Analysis. Two qualitative studies used a combination of grounded or thematic approach as well as data analysis software, and further two studies did not specify the approach used, instead providing a thorough description of the process of analysis.

Across all the studies included in the review, stigma was often poorly operationalised, and in many of the articles there was no attempt to clarify or define the type of stigma being assessed, e.g. self-stigma or social stigma. Within the quantitative studies, stigma was variably defined in terms of perceptions of community attitudes to mental illness, or perceptions of a combination of self stigma (i.e. personal identification with stigma) and social stigma (i.e. stigma in society), although these were often not delineated in the analyses. Three of the quantitative studies did not provide any clear information about the type of stigma being assessed. In comparison, eight of the qualitative studies attempted to distinguish self-stigma and social stigma, and six studies specifically identified perceptions of social or community stigma in the analyses.

Within the quantitative studies, less than half of the studies used validated measures to assess stigma, with the rest using questions designed by
the authors. Studies which correlated perceived stigma with help-seeking attitudes or behaviour mostly used a psychometric measure of attitudes to seeking help or instead simply asked participants about their current use of mental health services.

Risk of Bias

As there were no experimental studies included in the review, risk of bias was limited to an assessment of selection, measurement, and attrition bias. Five studies were removed at the eligibility stage as the methods used to assess perception of stigma were considered to be extremely limited. This was due to an over-reliance on participant’s endorsement of one leading question regarding their attitudes towards stigma as a barrier to help-seeking. In some cases participant responses were only coded as a yes or no answer, which was deemed to further limit the opportunity for participants to express their views. Many of the studies did not document any attrition but others included minimal attrition rates (i.e. >10%). Selection bias was considered to be high in 15 studies as sampling methods were limited to convenience or purposive sampling. The majority of the other studies recruited participants who were self-selected volunteers from the general public.
Risk of bias across studies was assessed according to presence of publication bias and selective reporting in studies. Whilst a number of studies were limited in terms of statistical analysis, for the purposes of providing a broad review on the topic they were included in the review. Only two of the studies in the final review were authored by one of the same researchers (i.e. Alvidrez, & Azocar, 1999; Alvidrez, Snowden, & Kaiser, 2008), which was considered to present an acceptable risk of publication bias.

**Results from the studies**

As reported above, 19 studies found evidence of perceived stigma of mental illness as a barrier to accessing mental health services, whilst two reported minimal evidence and another found no evidence of a relationship between perceived stigma and help-seeking. All of the 13 qualitative studies identified stigma as a barrier to seeking help, although one study also included some indication of opposing beliefs among participants (Cinnerella, & Loewnthal, 1999). Of the nine quantitative studies, one study found no evidence of stigma as a potential barrier to accessing mental health services (Komiti, Judd, & Jackson, 2006) and two studies found minimal evidence of a relationship (Alvidrez, & Azocar, 1999; Bruffaerts et al., 2011). None of the studies used an experimental research designs to explore the impact of stigma on help-seeking. The results of the three quantitative studies which used statistical procedures to investigate a relationship between perceived stigma and help-seeking (Ting, & Hwang, 2009; Belloch, del Valle, Morillo, Carrió, & Cabedo, 2009; Komiti, Judd, & Jackson, 2006) are presented in Table 2. Data that is missing from the table was due to incomplete reporting in the original
articles. Effect sizes of around .30 are considered to be in the medium range (Cohen, 1992).

Results from the quantitative studies therefore provide some preliminary evidence that an increased awareness of the stigma attached to mental health problems may predict more negative attitudes to seeking help (Ting, & Hwang, 2009), and longer delays in seeking mental health care (Belloch, del Valle, Morillo, Carrió, & Cabedo, 2009). However, there is also evidence to suggest that perceived stigma of mental illness is not a significant predictor of seeking help for psychological problems from a general practitioner (Komiti, Judd, & Jackson, 2006). In addition, it is evident that in some circumstances around 40-60% of participants report that stigma is a barrier to seeking help (Marquez, Weingarden, LeBlanc, & Wilhelm, 2011; Zafar et al., 2009; Goodman, 2009).

TABLE 2 HERE

However, other studies report a much lower consensus (Alvidrez, & Azocar, 1999), and one study reports that only 7% identified stigma as a barrier to help-seeking (Bruffaerts., et al, 2011).

Drawing on the findings from the qualitative studies, it appears that many participants regarded the stigma attached to mental illness as a reason to avoid or delay treatment, with some experiencing a feeling of personal shame (Harris, Collinson, & das Nair, 2011; Chew-Graham, Rogers, & Yassin, 2003; Hepworth & Paxton, 2007; Lazear, Pires, Isaacs, Chaulk, & Huang, 2008) and embarrassment (Ward, Clark, & Heidrich, 2009). Others were more concerned about a fear of social judgement (Alvidrez, Snowden, & Kaiser, 2008; Barney, Griffiths, Christensen & Jorm, 2009), for example believing that others will think...
they are crazy or incapable (Ahmed, Stewart, Teng, Wahoush, & Gagnon, 2008; Lazear, Pires, Isaacs, Chaulk, & Huang, 2008; Uebelacker et al., 2012).

A number of studies also reported a concern from participants that if they sought help then family members would experience stigmatisation by association (Barney, Griffiths, Christensen & Jorm, 2009), or that they might be ostracised by their community (Ward, Clark, & Heidrich, 2009; Alvidrez, Snowden, & Kaiser, 2008; Cinnirella, & Loewnthal, 1999; Uebelacker et al., 2012) or labelled as mad Cinnerella, & Loewnthal, 1999; Alvidrez, Snowden, & Kaiser, 2008). Other studies also described participants’ difficulty seeking help due to a fear of loss of status, relationships and opportunities (Mishra, Lucksted, Gioia, Barnet, & Baquet, 2009; Chew-Graham, Rogers, & Yassin, 2003), although this was not a barrier that was widely reported.

**Discussion**

**Summary of Evidence**

The majority of the studies identified in this review found some preliminary evidence that an increased awareness of the stigma attached to mental health problems may present a barrier to seeking help (see Table 1). However, this finding should be interpreted with caution as the majority of the studies utilised qualitative research designs, therefore the results should not be over-generalised. In addition, only three studies utilised statistical analysis, with only two reporting a significant effect (Table 2). Many of the studies had methodological limitations and none used experimental research designs. Due to this, limited conclusions can be drawn about the strength or type of relationship between perceived mental health stigma and attitudes to seeking help from services.
Limitations

There are a number of limitations to the studies included in this review. Primarily, none of the studies took an experimental approach to examining the impact of perceived stigma on help-seeking, the implication being that limited conclusions can be drawn from this review.

With regards to risk of bias, a number of studies presented a considerable risk of selection bias as sampling methods were limited to convenience or purposive sampling in 15 of the 22 studies. Within the qualitative studies, few attempts were made to limit researcher bias (e.g. co-analysis with another researcher and using deductive rather than inductive approaches), and some failed to identify a guiding theoretical approach or structured methodology. In a small number of studies the researcher’s conclusions seemed distanced from the samples of raw data extracted from the transcripts.

With regards to the quantitative studies, stigma was often poorly operationalised and methods of measuring the construct varied dramatically. Analysis of the results was often extremely inadequate and the findings were not always fully documented. Sample means, standard deviations and effect sizes were often not reported. Very few studies included statistical analysis, instead presenting descriptive statistics for the data, such as the percentage of participants who identified stigma as a barrier to help-seeking. This made it more difficult to draw any reliable conclusions across studies with regards to the relationship between perceived stigma and help-seeking attitudes.

The majority of the studies neglected to take previous or current experience of mental health issues or access to treatment into account, and
only one study was limited to people who had no experience of mental health problems. An acknowledgement of the difference between attitudes to help-seeking and actual help-seeking behaviour was also lacking in some studies, which at times diminished the ecological validity of the findings. Utilising a longitudinal approach would be one way of exploring the impact of perceived stigma on future help-seeking behaviour within a real-life context.

Investigating the impact of perceived stigma on help-seeking attitudes under controlled conditions using an experimental design would also bring further clarity to this important topic. Comparing attitudes to help-seeking across experimental groups and utilising validated measures of perceived stigma and attitudes to help-seeking could provide more reliable information with regards to this relationship. Exploring the possibility of moderator variables in the relationship between perceived stigma and help-seeking would also provide a more detailed insight into the mechanisms underlying the relationship. Previous history of mental health difficulties, use of mental health services, cultural identity, age, gender and socioeconomic status would all be important factors to consider in this regard.

**Conclusions**

This paper systematically reviewed all published literature available on the Medline (FirstSearch) database on the topic of perceived stigma as a barrier to accessing mental health services. The review found some preliminary evidence that an increased awareness of the stigma attached to mental health problems may present a barrier to seeking help (see Table 1). However, this finding should be interpreted with caution as many of the studies were biased in their approach and the results were often poorly analysed. The implication of this is
that very little is known about the impact of stigma on the decision to seek help from mental health services. Developing a clearer understanding of this relationship is therefore an important area for further research.
Figure 1: Flow diagram detailing study selection process.
### Table 1.

**Overview of Studies Included in Review.**

<table>
<thead>
<tr>
<th>Study</th>
<th>n</th>
<th>Participants</th>
<th>Study design</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alvidrez, Snowden, &amp; Kaiser (2008)</td>
<td>34</td>
<td>Black mental health service users, San Francisco.</td>
<td>Qualitative semi-structured interview.</td>
<td>Stigma as a reason to avoid/delay treatment was identified as a theme.</td>
</tr>
<tr>
<td>Barney, Griffiths, Christensen &amp; Jorm (2009)</td>
<td>6</td>
<td>Recruited from depression support group and newspaper. Australia.</td>
<td>Qualitative semi-structured interview.</td>
<td>Perceived stigma about help-seeking for depression was identified as a theme.</td>
</tr>
<tr>
<td>Study</td>
<td>Sample Description</td>
<td>Methodology</td>
<td>Findings</td>
<td></td>
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<td>------------------------------</td>
<td>------------------------------------------------------------------------------------</td>
<td>---------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Boyd et al., (2007)</td>
<td>First year psychology undergraduates with previous service use.</td>
<td>Qualitative semi-structured interview.</td>
<td>Identified theme of ‘barriers to seeking psychological help’.</td>
<td></td>
</tr>
<tr>
<td>Bruffaerts et al., (2011)</td>
<td>World Mental Health Survey with self-reported lifetime mental disorder.</td>
<td>Quantitative interview.</td>
<td>7% reported stigma as a barrier for not seeking treatment.</td>
<td></td>
</tr>
<tr>
<td>Cinnerella, &amp; Loewnthal (1999)</td>
<td>Volunteers from 5 religious groups. No details of mental health provided.</td>
<td>Qualitative Semi-structured interview.</td>
<td>One participant said better to see GP than seek advice from friends due to taboo associated with mental illness.</td>
<td></td>
</tr>
<tr>
<td>Goodman (2009)</td>
<td>Women recruited from obstetrics clinic. 30.6% scored in probable to significant depression range.</td>
<td>Quantitative. Self administered questionnaire.</td>
<td>42.5% endorsed stigma related barriers for why they may avoid treatment.</td>
<td></td>
</tr>
<tr>
<td>Gorman, Blow, Ames, &amp; Reed (2011)</td>
<td>National guard members, 40% met criteria for a mental health problem</td>
<td>Quantitative survey.</td>
<td>29% with mental health problems said others may have less confidence in them if they sought help, 31% believed</td>
<td></td>
</tr>
<tr>
<td>Authors</td>
<td>Sample Size</td>
<td>Study Details</td>
<td>Methodology</td>
<td>Findings/Results</td>
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<tr>
<td>-------------------------------</td>
<td>-------------</td>
<td>--------------------------------------------------------------------------------</td>
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<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Harris, Collinson, &amp; das Nair</td>
<td>8</td>
<td>Early intervention in psychosis service users.</td>
<td>Qualitative. semi-structured interviews</td>
<td>Participants said shame impacted on ability to talk about their experiences.</td>
</tr>
<tr>
<td>Hepworth &amp; Paxton (2007)</td>
<td>63</td>
<td>Respondents from a local advertisement. All met criteria for an eating disorder.</td>
<td>Qualitative. semi-structured interviews</td>
<td>Fear of stigma was identified as most prominent barrier to help-seeking.</td>
</tr>
<tr>
<td>Komiti, Judd, &amp; Jackson (2006)</td>
<td>300</td>
<td>Randomly selected adults. 32.8% met criteria for mental health condition or substance misuse disorder.</td>
<td>Quantitative interview.</td>
<td>Perceived stigma did not significantly predict help-seeking behaviour.</td>
</tr>
<tr>
<td>Lazear, Pires, Isaacs, Chaulk, &amp; Huang (2008)</td>
<td>138</td>
<td>Mothers on low-income. No details of mental health provided.</td>
<td>Qualitative focus groups</td>
<td>Stigma and fear of being labelled was identified as a barrier to seeking help.</td>
</tr>
<tr>
<td>Lee et al., (2009)</td>
<td>17</td>
<td>Young adults. No details of mental health provided.</td>
<td>Qualitative focus groups</td>
<td>Identified theme of 'deterrents of mental health help-seeking behaviour'.</td>
</tr>
<tr>
<td>Marquez, Weingarden, LeBlanc, &amp; Wilhelm</td>
<td>401</td>
<td>Adults with symptoms consistent with a Body dysmorphia diagnosis.</td>
<td>Quantitative web-based survey.</td>
<td>55.6% endorsed shame as barrier to treatment, 46.6% worried what others</td>
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<td>---------------------------------------------------------------------------------</td>
<td>------------------------</td>
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<tr>
<td></td>
<td>Uebelacker et al., (2012)</td>
<td>Latino adults, 73% reported history of depression.</td>
<td>Qualitative. Focus groups</td>
<td>Stigma as a barrier to treatment was identified as a sub-theme.</td>
</tr>
<tr>
<td></td>
<td>Ward, Clark, &amp; Heidrich (2009)</td>
<td>African American women. Responders to local advertisements.</td>
<td>Qualitative interview.</td>
<td>Embarrassment about mental illness and fear of discrimination were barriers.</td>
</tr>
<tr>
<td></td>
<td>Zafar et al., (2009)</td>
<td>Pakistani adults. No experience of mental health difficulties.</td>
<td>Quantitative interview.</td>
<td>48.7% endorsed view that stigma is linked to use of psychotherapy services.</td>
</tr>
</tbody>
</table>
Table 2.

*Results of Correlational Studies included in the Review*

<table>
<thead>
<tr>
<th>Study</th>
<th>n</th>
<th>β</th>
<th>$\chi^2$</th>
<th>Cohen’s $d$</th>
<th>95% CI</th>
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<tbody>
<tr>
<td>Belloch, del Valle, Morillo, Carrió, &amp; Cabedo (2009)</td>
<td>26</td>
<td>2.04*</td>
<td>.29</td>
<td>-0.11</td>
<td>-0.59</td>
</tr>
<tr>
<td>Komiti, Judd, &amp; Jackson, (2006)</td>
<td>300</td>
<td>-.04</td>
<td></td>
<td>0.90</td>
<td>1.01</td>
</tr>
<tr>
<td>Ting, &amp; Hwang (2009)</td>
<td>107</td>
<td>.62*</td>
<td></td>
<td>.82</td>
<td></td>
</tr>
</tbody>
</table>

*Note. CI = Confidence intervals, LL = Lower limit, UL = Upper limit.  
* $p < .05$
### Appendices

**Appendix A: PRISMA Guidelines for Systematic Reviews and Meta-Analyses**

<table>
<thead>
<tr>
<th>Section/topic</th>
<th>#</th>
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<td>Title</td>
<td>1</td>
<td>Identify the report as a systematic review, meta-analysis, or both.</td>
</tr>
<tr>
<td><strong>ABSTRACT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structured summary</td>
<td>2</td>
<td>Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.</td>
</tr>
<tr>
<td><strong>INTRODUCTION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rationale</td>
<td>3</td>
<td>Describe the rationale for the review in the context of what is already known.</td>
</tr>
<tr>
<td>Objectives</td>
<td>4</td>
<td>Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).</td>
</tr>
<tr>
<td><strong>METHODS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protocol and registration</td>
<td>5</td>
<td>Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.</td>
</tr>
<tr>
<td>Eligibility criteria</td>
<td>6</td>
<td>Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.</td>
</tr>
<tr>
<td>Information sources</td>
<td>7</td>
<td>Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.</td>
</tr>
<tr>
<td>Search</td>
<td>8</td>
<td>Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.</td>
</tr>
<tr>
<td>Study selection</td>
<td>9</td>
<td>State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).</td>
</tr>
<tr>
<td>Data collection process</td>
<td>10</td>
<td>Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.</td>
</tr>
</tbody>
</table>
Data items | 11 | List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.

Risk of bias in individual studies | 12 | Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.

Summary measures | 13 | State the principal summary measures (e.g., risk ratio, difference in means).

Synthesis of results | 14 | Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I²) for each meta-analysis.

<table>
<thead>
<tr>
<th>Section/topic</th>
<th>#</th>
<th>Checklist item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk of bias across studies</td>
<td>15</td>
<td>Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).</td>
</tr>
<tr>
<td>Additional analyses</td>
<td>16</td>
<td>Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.</td>
</tr>
</tbody>
</table>

RESULTS

| Study selection | 17 | Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram. |
| Study characteristics | 18 | For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations. |
| Risk of bias within studies | 19 | Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12). |
| Results of individual studies | 20 | For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot. |
| Synthesis of results | 21 | Present results of each meta-analysis done, including confidence intervals and measures of consistency. |
| Risk of bias across studies | 22 | Present results of any assessment of risk of bias across studies (see Item 15). |
| Additional analysis | 23 | Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]). |

DISCUSSION

| Summary of evidence | 24 | Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy |
Limitations 25 Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).

Conclusions 26 Provide a general interpretation of the results in the context of other evidence, and implications for future research.

**FUNDING**

Funding 27 Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.


*For more information, visit: [www.prisma-statement.org](http://www.prisma-statement.org)*.
Appendix B: Cochrane Data Abstraction Form

Data Abstraction Form

This form can be used to record the results of data extraction and is intended for use in conjunction with the EPOC Data Collection Checklist.

Data collection

<table>
<thead>
<tr>
<th>Name of reviewer:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date:</td>
</tr>
<tr>
<td>Study reference:</td>
</tr>
</tbody>
</table>

EPOC scope:
The effect(s) of a behavioural/educational, financial, organisational or regulatory intervention(s) is evaluated

1. **Inclusion criteria**
   1.1 **Study design**
   1.1.1 **RCT designs**
   1.1.2 **CCT designs**
   1.1.3 **CBA designs**
      a) Contemporaneous data collection
      b) Appropriate choice of control site/activity

Studies should contain a minimum of two intervention and two control groups

1.1.4 **ITS designs**
   a) Clearly defined point in time when the intervention occurred
   b) At least 3 data points before and 3 after the intervention

1.2 **Methodological inclusion criteria**
   a) The objective measurement of performance/provider behaviour or health/patient outcomes
   b) Relevant and interpretable data presented or obtainable

*N.B. A study must meet the minimum criteria for EPOC scope, design, and methodology for inclusion in EPOC reviews. If it does not, COLLECT NO FURTHER DATA.*

2. **Interventions**

2.1 **Type of intervention**
   (state all interventions for each comparison/study group)

   Group 1:
   Group 2:
   Group 3:
   Group 4:

2.2 **Control(s)**
3. **Type of Targeted Behaviour** (state more than one where appropriate)

4. **Participants**
   4.1 **Characteristics of participating providers**
      4.1.1 **Professions**
      4.1.2 **Level of training**
      4.1.3 **Clinical specialty**
      4.1.4 **Age**
      4.1.5 **Time since graduation (or years in practice**
   4.2 **Characteristics of Participating patients**
      4.2.1 **Clinical problem**
      4.2.2 **Other patient characteristics**
         a) Age
         b) Gender
         c) Ethnicity
         d) Other (specify)
      4.2.3 **Number of patients included in the study**
         a) Episodes of care
         b) Patients
         c) Provider
         d) Practices
         e) Hospitals
         f) Communities or regions

5. **Setting**
   5.1 **Reimbursement system**
   5.2 **Location of Care**
   5.3 **Academic status**
   5.4 **Country**
   5.5 **Proportion of eligible providers (or allocation units)**

6. **Methods**
   6.1 **Unit of allocation**
   6.2 **Unit of analysis**
   6.3 **Power calculation**
   6.4 **Quality criteria**
      6.4.1 **Quality criteria for randomised controlled trials (RCTs) and controlled clinical trials (CCTs)**
         (Go to 6.4.2 and 6.4.3 for the quality criteria for CBA and ITS, respectively)
         a) Concealment of allocation
         b) Follow-up of professionals
         c) Follow-up of patients or episodes of care
         d) Blinded assessment of primary outcome(s)
         e) Baseline measurement
         f) Reliable primary outcome measure(s)
         g) Protection against contamination
      6.4.2 **Quality criteria for controlled before and after (CBA) designs**
         a) Baseline measurement
         b) Characteristics for **studies using second site as control**
c) Blinded assessment of primary outcome(s)* (protection against detection bias)

d) Protection against contamination (studies using second site as control)

e) Reliable primary outcome measure(s)

f) Follow-up of professionals (protection against exclusion bias)

g) Follow-up of patients

6.4.3 **Quality criteria for interrupted time series (ITS) designs**

Protection against secular changes:

a) The intervention is independent of other changes

b) Data were analysed appropriately

c) Reason for the number of points pre- and post-intervention given

d) Shape of the intervention effect was specified

Protection against detection bias:

a) Intervention unlikely to affect data collection

b) Blinded assessment of primary outcome(s)

c) Completeness of data set

d) Reliable primary outcome measure(s)

6.4.4 **Consumer involvement**

7. **Prospective identification by investigators of barriers to change**

8. **Intervention**

8.1 **Characteristics of the intervention**

a) Evidence base of recommendation

b) Purpose of recommendations

8.2 **Nature of desired change**

8.3 **Format (Medium for each intervention)**

8.4 **Source**

8.5 **Intervention based upon implementation of clinical practice guidelines**

8.6 **Clinical practice guidelines developed through formal consensus process**

8.7 **Recipient**

8.8 **Deliverer**

8.9 **Timing**

a) Proximity to clinical decision-making

b) Frequency/number of intervention events

c) Duration of intervention

8.10 **Setting of intervention**

8.11 **Source of funding**

8.12 **Ethical approval**

9. **Outcomes**

9.1 **Description of the main outcome measure(s).**

a) Health professional outcomes/process measures

b) Patient outcomes

c) Economic variables
• Costs of the intervention
• Changes in direct health care costs as a result of the intervention
• Changes in non-health care costs as a result of the intervention
• Costs associated with the intervention are linked with provider or patient outcomes in an economic evaluation

9.2 **Length of time during which outcomes were measured after initiation of the intervention.**

9.3 **Length of post-intervention follow-up period**

9.4 **Identify a possible ceiling effect:**
   a) Identified by investigator
   b) Identified by reviewer

10. **Results** (use extra page if necessary)
   10.1.1 **For RCTs and CCTs**
   10.1.2 **For CBAs**
   10.1.3 **For ITSs**
### Appendix C: Cochrane Collaboration Risk of Bias Tool

<p>| Domain                          | Support for judgement                                                                                                                                                                                                 | Review authors’ judgement                                                                                                                                                                                                 |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <strong>Selection bias.</strong>             |                                                                                                                                                                                                                       | Selection bias (biased allocation to interventions) due to inadequate generation of a randomised sequence.                                                                                                                                                                               |
| <strong>Random sequence generation.</strong> | Describe the method used to generate the allocation sequence in sufficient detail to allow an assessment of whether it should produce comparable groups.                                                             |Selection bias (biased allocation to interventions) due to inadequate generation of a randomised sequence.                                                                                                                                                                               |
| <strong>Allocation concealment.</strong>     | Describe the method used to conceal the allocation sequence in sufficient detail to determine whether intervention allocations could have been foreseen in advance of, or during, enrolment.                                                 |Selection bias (biased allocation to interventions) due to inadequate concealment of allocations prior to assignment.                                                                                                                                                                   |
| <strong>Performance bias.</strong>           |                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                    |
| <strong>Blinding of participants and personnel.</strong> Assessments should be made for each main outcome (or class of outcomes).                                                                                               | Describe all measures used, if any, to blind study participants and personnel from knowledge of which intervention a participant received. Provide any information relating to whether the intended blinding was effective. | Performance bias due to knowledge of the allocated interventions by participants and personnel during the study.                                                                                                                                                                |
| <strong>Detection bias.</strong>             |                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                    |
| <strong>Blinding of outcome assessment.</strong> Assessments should be made for each main outcome (or class of outcomes).                                                                                                   | Describe all measures used, if any, to blind outcome assessors from knowledge of which intervention a participant received. Provide any information relating to whether the intended blinding was effective. | Detection bias due to knowledge of the allocated interventions by outcome assessors.                                                                                                                                                                                                 |
| <strong>Attrition bias.</strong>             |                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                    |
| <strong>Incomplete outcome data.</strong>    | Assessments should be made for each main outcome (or class of outcomes).                                                                                                                                          | Describe the completeness of outcome data for each main outcome, including attrition and exclusions from the analysis. State whether attrition and exclusions were reported, the numbers in each intervention group (compared with total randomized participants), reasons for attrition/exclusions where reported, and any re-inclusions in analyses performed by the review authors. | Attription bias due to amount, nature or handling of incomplete outcome data.                                                                                                                                                                                                    |
| <strong>Reporting bias.</strong>             |                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                    |</p>
<table>
<thead>
<tr>
<th><strong>Selective reporting.</strong></th>
<th>State how the possibility of selective outcome reporting was examined by the review authors, and what was found.</th>
<th>Reporting bias due to selective outcome reporting.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Other bias.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Other sources of bias.</strong></td>
<td>State any important concerns about bias not addressed in the other domains in the tool. If particular questions/entries were pre-specified in the review’s protocol, responses should be provided for each question/entry.</td>
<td>Bias due to problems not covered elsewhere in the table.</td>
</tr>
</tbody>
</table>
Appendix D: Guidance for Authors from the Personality and Social Psychology Review

SUBMISSION GUIDELINES

Content: Personality and Social Psychology Review (PSPR) publishes original theoretical papers and conceptual review articles in personality and social psychology. As an official publication of SPSP, the Society for Personality and Social Psychology, PSPR (a) supports the society's objectives of the scientific advancement of personality and social psychology and the advancement of human welfare, (b) provides an outlet for important conceptual and empirical developments and emerging trends in the fields of personality and social psychology worldwide, and (c) presents a versatile outlet for substantive work that does not readily fit the existing publication molds. Our readership includes social, personality, and organizational psychologists and sociologists.

PSPR is intended as a forum for conceptual pieces that initiate new lines of research and theory or provide a coherent framework for existing theory and programs of research. The journal emphasizes theory-based reviews of empirical contributions to a substantive area of research and offers integrative theoretical formulations concerning work in a given area of personality and/or social psychology. The journal does not publish methodological papers or critiques unless they make a direct and substantial contribution to theory. Occasionally PSPR publishes other pieces of particular interest to members of the Society, such as special topical issues, selected symposia, and invited addresses. All papers are reviewed with respect to their scholarly merit.

Manuscript Preparation:

Compliance with these policies is verified upon submission of manuscripts. Failure to comply with the policies will prevent submission and review of manuscripts. SPSP recommends that authors read "Improving the Dependability of Research in Personality and Social Psychology" http://www.spsp.org/resource/resmgr/docs/practicespsprinpress.pdf and APA's Ethical Principles of Psychologists and Code of Conduct Standard 8 http://www.apa.org/ethics/code/index.aspx?item=11 before submitting manuscripts to PSPR. Use a word processor to prepare manuscript. Files in Word or rich text format are preferred. All components of the manuscript should be double-spaced and should conform to the formatting and style conventions of the Publication Manual of the American Psychological Association (6th edition).

Title Page. On page 1, include (a) the article title no longer than 50 words, (b) the names, affiliations, and contact information for all authors, and (c) a running head containing no more than 45 characters and spaces.

Abstract. On page 2, type an abstract no more than 150 words long. Longer abstracts will be rejected by the manuscript submission website.

Tables. Refer to APA Publication Manual for table format; double spaced. Provide each table with an explanatory title that is intelligible without reference to the text. Provide an appropriate heading for each column in the table. Clearly indicate any units of measurement in the table. If the table is reprinted or adapted from another source, include a credit line in the table caption. Consecutively number all tables.

Figures and Figure Captions. If a figure is reprinted or adapted from another source, include a credit line in the caption. Each figure should be prepared and saved in a separate, clearly identified file, which will be uploaded to the manuscript submission website at the same time as the main body of the manuscript. Figures should be prepared in high-resolution format such with a minimal resolution of 300 dots per inch for grayscale images.
Methodology reporting (for empirical papers): In addition to the text, authors are required to submit in a separate file any relevant stimulus materials or coding materials, including the verbatim wording (translated if necessary) of all independent and dependent measures. If the article is published, this appendix will be made available on-line.

Results reporting (for empirical papers): Data-based submissions must report effect sizes and 95% confidence intervals for primary findings in each study, and address issues of sample size and consequent issues of power in each study or, in the case of multiple-study articles, in the context of evaluating the overall case for the reliability of the primary findings. Meta-analyses should follow the Meta-Analysis Reporting Standards (MARS) recommended by the APA (http://www.apa.org/pubs/authors/jars.pdf).

Masked review: To receive masked review, remove all identifying information from the manuscript and check appropriate box upon submission.

Ethical Practices verification: Corresponding authors of submitted papers must verify that:
- the same or substantially similar manuscript has not been simultaneously submitted for consideration by another journal
- the same or substantially similar manuscript has not already been published in whole or part
For empirical papers:
- data collection complied with current APA Ethical Principles of Psychologists and Code of Conduct
- the raw data and related coding information underlying all findings of empirically-based publications will be shared consistent with SPSP’s (2013) Data Sharing Policy
https://spsp.site-ym.com/?DataSharingPolicy

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Manuscript Submission. Submit manuscripts to the Editor by going to the journal’s website at: http://mc.manuscriptcentral.com/pspr

Author Center. Once logged in, select “Author Center” and follow the link for manuscript submission. The website will guide you through the necessary steps to upload your submission. You will be required to provide at least 3 keywords for your submission. You will have the opportunity to upload a cover letter with your submission, and you will be asked to confirm that the manuscript is an original work that is not concurrently under editorial consideration at another journal and that conforms to the ethical guidelines of the American Psychological Association. Submitting authors may suggest preferred and non-preferred reviewers, although the editors retain final discretion in the selection of reviewers. If you have questions, use the “Get Help Now” link.

Manuscript Review and Acceptance. Submitted manuscripts are screened by the editors to determine their general suitability and match to the journal’s mission. Manuscripts that fall within the journal’s purview are then peer reviewed.

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References


Chew-Graham, C., Rogers, A., & Yassin, N. (2003). 'I wouldn't want it on my CV or on their records': Medical students' experiences of help seeking for mental health problems. *Medical Education, 37*, 873-880. doi: 10.1046/j.1365-2923.2003.01627.x


