Abstract

People with mental health problems sometimes have the choice whether or not to disclose these to others. The decision to disclose or conceal is likely to depend on various factors. In this systematic review, we examined the findings of studies looking at factors affecting adults' decisions to disclose or conceal a mental health problem outside of the workplace. Key databases (PsycINFO, Scopus and Web of Science) revealed 19 relevant articles published between January 2005 and August 2015. Common factors affecting disclosure or concealment included anticipated stigma, characteristics of the target, relationship with the target, mental health of the discloser, rules and beliefs about mental health problems, and fears about control and identity. Demographic factors were not strongly associated with disclosure decisions. We also found that measures used to understand mental health disclosure may fail to capture the complexity of the process. Implications for future research and policy are discussed, including the need for palpable public support for people with mental health problems, the need for healthcare professionals to establish better relationships with service users, and the value of respecting non-disclosure.

Keywords: stigma; mental illness disclosure, concealment; secrecy; systematic review

Introduction

Individuals with a mental health problem sometimes have the choice of whether or not to disclose this information to others. Disclosure enables access to support, and research has demonstrated that the process of disclosing distress may in itself effect an improvement in mood and physical health (Frattaroli, 2006). Despite this, research indicates that people with mental health problems often disclose selectively, and that around 10% have not disclosed their mental health problem to even one family member (Bos, Kanner, Muris, Janssen & Mayer, 2009). The factors involved in this decision-making process are unclear.

The Disadvantages and Benefits of Disclosure

Notwithstanding campaigns to change public perceptions of mental health problems, society continues to view some people with mental health problems as unpredictable, dangerous, and responsible for their difficulties (Angermeyer & Dietrich, 2006; Crisp, Gelder, Rix, Meltzer & Rowlands, 2000). These stigmatized views frequently lead to discrimination within the family, workplace and school; loss of friends; and shame and loss of self-esteem (Ilic et al., 2012; Shrivastava et al., 2011; Suto et al., 2012). Consequently, many people experiencing mental health problems prefer not to disclose these to others. As Vogel, Wade and Haake (2006) point out, this creates an 'unsettling paradox' whereby even though research has shown psychological treatments to be effective for a range of mental health problems, fewer than 40% of affected people seek help. In addition to stigma and discrimination, disclosure of a mental health problem may lead to coercive treatments and medication (Corrigan & Matthews, 2003), and poorer performance in academic environments (Quinn, Kahng, & Crocker, 2004).

Receiving support is not the sole benefit of disclosure. Hiding a concealable stigma can lead to thought intrusions, vigilance and suspiciousness; depression, anxiety and decreased self-esteem; social avoidance and isolation, guilt, anxiety and maladaptive behavior in close

relationships; reduced self-efficacy, and identity ambivalence (Pachankis, 2007). It has been argued that selective disclosure of a concealable stigma can alleviate the aforementioned difficulties, in part because it allows for positive feedback from others. This feedback may have a positive effect on an individual's identity and self-esteem, by creating greater congruence between their private and public selves (Pachankis, 2007). Additionally, emotional self-disclosure can help to build trust, foster relationships, and promote cognitive processing of emotions (Ignatius & Kokkonen, 2007). The process of disclosure may in itself reduce distress, depression, anger, anxiety, and stigma stress, and improve physical health (Frattaroli, 2006; Frisina, Borod, & Lepore, 2004; Pennebaker & O'Heeron, 1984; Rüsch, Brohan, Gabbidon, Thornicroft, & Clement, 2014; Smyth, 1998). Disclosure also encourages the wider community to become more accepting of mental health issues (Corrigan & Matthews, 2003).

Factors Affecting Disclosure

Academics working in the field of information disclosure have sought to explain how people make decisions about disclosing or concealing personal information (Greene et al., 2012). Factors found to affect disclosure of personal information include the quality of the relationship with the target, the anticipated response of the target, the long-term impact on the relationship, the discloser's confidence that they can accurately anticipate the target's response to their disclosure, aspects of the information itself (such as the stigma perceived to be associated with the information), and the discloser's skills in negotiating disclosure (Greene et al., 2012). Individuals may disclose to seek support, out of a duty to inform or wish to educate others, or out of the desire to have a close, trusting relationship with increased intimacy (Greene, Derlega & Mathews, 2006). People may conceal out of fear of rejection or loss of privacy, a belief that the target will not respond helpfully, a desire to protect the target, fear of losing the relationship, or a belief that the information is irrelevant

(Greene et al., 2006). The target's availability is a significant factor, as is the discloser's belief that she can communicate the information effectively (Afifi & Steuber, 2009; Caughlin, Afifi, Carpenter-Theune, & Miller, 2005). Further factors contributing to verbal disclosure include features of the target (such as trustworthiness and attractiveness), situational factors, and cultural factors (in non-Western cultures people may disclose less frequently but with greater depth than in Western cultures) (Ignatius & Kokkonen, 2007).

Given the complexity and gravity of the disclosure-concealment decision-making process, it seems important to better understand the pressures acting on individuals when they make this decision. This area of research requires particular clarity, since most of the pre-existing literature relates to disclosure of personal or distressing information, secrets, such as sexual orientation, and concealable physical conditions, such as HIV, but not to mental health problems (Petrak, Doyle, Smith, Skinner, & Hedge, 2001; Schope, 2002). While reviews exist that focus on workplace disclosure (Brohan et al., 2012; Jones, 2011), to the authors' knowledge none have examined reasons for disclosure or concealment in other contexts. Aforementioned issues relating to disclosure and concealment, including their impact on physical health, the ability to foster relationships, emotional wellbeing, identity ambivalence and the impact on public stigma, are not restricted to the workplace. Therefore, understanding disclosure within the context of academic, health provider, community and family contexts appears to be crucial.

Measuring Factors Associated with Disclosure

The majority of studies included in reviews of mental health disclosure in the workplace have used qualitative methodologies, predominantly in the form of interviews (Brohan et al., 2012; Jones, 2011). Those studies employing quantitative methodologies have for the most part used surveys that focus on the frequency of disclosure as opposed to more nuanced outcomes, such as selectivity of disclosure (Jones, 2011). According to these reviews, there

appears to be little consistency in the way that disclosure is defined and measured. Indeed, one review has called for greater care in the measurement of the 'complex construct of disclosure' (Jones, 2011, p. 228). The absence of reviews of mental health disclosure outside of the workplace means that the state of measurement in these studies is uncertain. However, since it is a study's measures that set the parameters for the type of information that will be gathered from participants, it seems crucial that we take steps towards understanding better whether these measures appropriately reflect the complexity of the disclosure process.

Aims and Objectives

The current review seeks to summarise and critique contemporary research into the factors affecting an individual's decision to disclose to or conceal from others a mental health problem outside of the workplace. To what extent do individuals with mental health problems consider issues of stigma when making disclosure decisions, and to what extent does stigma act as a barrier to disclosure? How much attention is paid to the context of the disclosure situation and to characteristics of the target? What factors ultimately prove the weightiest in persuading individuals to disclose or conceal? It is beyond the scope of this review to closely scrutinize the tools used to measure disclosure in the studies identified. However, we will endeavour to highlight and comment on aspects of these tools, where it is felt that these bear particular relevance to the aims of the review. In so doing, we hope to begin a discussion about the appropriateness of current measures of disclosure.

The review seeks to address the following question:

What is known about factors that affect the decision to conceal or disclose a mental health problem outside of the workplace?

Method

Search Strategy

A systematic literature search was conducted using PsycINFO, Scopus and Web of Science. Articles published in English between January 2005 and August 2015 were included

in the search. The search was restricted to articles published in the previous ten years in order to ensure that findings were most relevant to the state of current research. Search terms focused on two areas: disclosure and mental health problems (see table 1). These terms were combined using the Boolean terms 'OR' and 'AND' to search for titles that included both disclosure-related terms and mental health problem-related terms. The inclusion and exclusion criteria outlined below were applied to the 376 articles identified in the initial search. Article titles were read to determine which met inclusion criteria. Where there remained ambiguity abstracts and where necessary, entire papers, were read.

[Insert Table 1 here]

Inclusion and Exclusion Criteria

Articles were included if they: (i) related to the disclosure or concealment of a mental health problem and the variables affecting this decision; (ii) were empirically based, using either qualitative or quantitative methodologies; (iii) were written in English. Articles about the impact or consequences of disclosure were included only if they also included analysis of factors affecting disclosure. Articles were excluded if they: (i) focused on disclosure of physical health conditions; (ii) related to disclosure of traumatic events; (iii) related to disclosure by children or adolescents; (iv) related to distress disclosure, where distress was not defined as a mental health problem (see ‘clarification of terms’ below); (v) focused on help-seeking rather than disclosure (see ‘clarification of terms’ below); (vi) used a general population sample or did not distinguish between participants who did and did not have a personal history of a mental health problem. We excluded review articles, conference presentations and unpublished dissertations.

Clarification of terms. This review included studies of individuals with a formal diagnosis of a mental health problem as well as individuals who had been identified as having a mental health problem by the process of a clinical interview as part of the research process.

Articles focusing on the disclosure of emotional or mental distress, where this was not described or understood as a mental health problem, diagnosis or illness, were excluded. We distinguished between emotional distress and mental health problems because distress is ubiquitous to human experience and does not carry an equivalent level of stigma, shame or implications for relationships. This review also made a distinction between disclosure and help-seeking. Help-seeking may be one of the reasons why individuals choose to disclose, however disclosure is not always intended as a means to seek help. Moreover, the factors associated with help-seeking may not be the same as those associated with disclosure. For example, it has been suggested that reasons for disclosure of mental health status include gaining a sense of empowerment and finding others who have shared similar experiences (Corrigan, Kosyluk & Rüsch, 2013). In the literature search a small number of articles used the two terms interchangeably. In these instances, articles were read in full and included if it was clear that the researchers and participants understood the focus of the study to be disclosure rather than help-seeking.

Quality Assessment

Articles were compared to the criteria specified in the critical appraisal tool developed by Hawker and colleagues (Hawker, Payne, Kerr, Hardey, & Powell, 2002) and used consequently in papers that synthesise quantitative and qualitative research (for example, Flemming, 2010; Markoulakis & Kirsh, 2013). The tool is used to rate studies on a scale of 1 (very poor) to 4 (good) on nine aspects of methodology. A summed total score of 9 (very poor) to 36 (very good) is obtained. The tool is particularly useful because it provides clear guidelines for scoring of methodologies (see appendix A). Previous research has found inter-rater reliability to be ‘high’ for the tool, although specific reliability scores have not been published (Flemming, 2010; Hawker et al., 2002, p. 1292).

Results

The database searches combining at least one term from the 'disclosure' domain and one term from the 'mental health problem' domain identified 376 articles. Of these, 16 met the inclusion criteria. Searching the reference lists of included articles identified three further articles. A flowchart of article selection is presented in figure 1. Table 2 presents the articles identified in the search. There were 19 publications in total, 11 of which were quantitative and eight qualitative in methodology.

[Insert Figure 1 here]

[Insert Table 2 here]

Quality Assessment

The quality appraisal ratings for the studies included in this review are presented in appendix B. A second researcher co-rated nine articles, for which there was high inter-rater reliability (intra-class correlation = .78, $p < .01$). Consequently, the remainder of the articles were only rated by the first author. Overall the studies were of a fair to good quality. No study scored below 24 out of 36 possible points, and none were excluded on the basis of methodology. Despite this, all studies but one fell short on item six: ethics and bias. The strength of the literature reviewed lay in the clarity and thoroughness of the presentation of results. Most studies presented data in a logical and coherent fashion, accompanied by tables and graphs that complemented this.

Factors Associated with Disclosure and Concealment in Quantitative Studies

Stigma. Perceived stigma was negatively correlated with disclosure in one study (Bos et al., 2009) and positively correlated with secrecy in four studies (Chronister et al., 2013; Kleim et al., 2008; O'Mahen et al., 2011; Yow & Mehta, 2010). Anticipated discrimination was negatively correlated with comfort about disclosing in one study (Rüsch et al., 2014). One study found that perceived stigma acted as a barrier to disclosure only in individuals not motivated by 'ecosystem' goals (Garcia & Crocker, 2008)[1]. Findings showed that internalised

stigma was positively correlated with secrecy (Chronister et al., 2013). Researchers also identified a negative correlation between stigma stress (which occurs when people believe that stigma-related harm exceeds their coping resources) and comfort about disclosing **(**Rüsch et al., 2014).

Mental health status and psychological wellbeing. Three studies found an association between disclosure and mental health status. One study found that psychiatric inpatient treatment in the most recent year negatively predicted comfort about disclosing (Rüsch et al., 2014). Another study found that openness about a mental health problem was positively predicted by better self-reported current mental health (Pandya et al., 2011). The third study found that concealment was significantly higher in people who were currently or had been recently symptomatic than in people who had not experienced symptoms in the past 12 months (Bushnell et al., 2005). Findings indicated that secrecy is positively associated with symptom distress (Chronister et al., 2013), and negatively associated with self-efficacy (Kleim et al., 2008). Results from Corrigan et al. (2010) demonstrated that people agreeing more strongly with statements about benefits of disclosure had significantly higher ratings of quality of life and empowerment. As this study did not report statistics on people who have not disclosed mental health problems, it was not possible to determine whether concealment is related to lower ratings of quality of life and empowerment. Finally, Bos et al., (2009) found that self-esteem was positively associated with disclosure.

Relationships. Three studies looked at the impact of interpersonal dynamics on disclosure. One study found that disclosure was positively associated with perceived social support (Bos et al., 2009) and another found that openness was negatively correlated with the number of types of relationships of participants (Pandya et al., 2014). Chronister et al. (2013) found secrecy to be negatively associated with emotional and tangible support.

Demographic variables. Two studies identified that secrecy was higher in younger

participants (Bushnell et al., 2005; Kleim et al., 2008). Otherwise, few studies found significant correlations between disclosure and demographic variables, including gender, level of education, employment and ethnicity. An exception was O'Mahen et al. (2011), who found that perceived stigma was positively associated with secrecy in white, but not black, women. The findings of Corrigan et al. (2010) suggested that there may be demographic differences in patterns of concealment and disclosure. Their research identified that, of people who have disclosed a mental health problem to family and friends, African-Americans reported significantly stronger agreement with reasons for doing so than did European Americans ($F = 12.36$, $p < .005$). Although Yow and Mehta (2010) described differences in levels of secrecy between people with schizophrenia in Singapore and the USA, their article does not comment on the statistical significance of these findings.

Beliefs about mental health problems and treatment. One study found that disclosure of depression to family and/or friends was positively correlated with endorsement of three items: 'people with depression deserve a lot of support from their friends and family', 'depression is a medical condition, just like any other illness', and 'anybody can suffer from depression' ($p<.001$) (Weich et al., 2007). This study showed that people who saw depression as stigmatising, disabling and who had negative beliefs about anti-depressants, were significantly less likely to disclose depression to family and friends. A study comparing people with a history of treatment for depression with people presenting with depressive symptoms, found that the former group was most concerned by medical records privacy (17.9%), being put on medication (15.6%) and being considered a 'psychiatric patient' (13.7%). The latter group was most concerned about being put on medication (27.8%), medical records privacy (25.5%), losing emotional control during disclosure (20.9%) and being considered a 'psychiatric patient' (20.3%) (Bell et al. (2011).

Type of mental health problem. Only one study investigated the disclosure patterns of

individuals with a range of mental health problems, including psychotic disorder, anxiety disorder, depressive disorder, bipolar disorder and personality disorder (Bos et al., 2009). The authors claim that they found a significant difference in disclosure according to mental health problem. However, it is not clear from the article where these differences lie. The literature demonstrated that of people who have disclosed their mental health problems to others, those who did not have psychosis, and those who were not taking antipsychotic medication, showed significantly stronger agreement with reasons for concealing their mental health problems in the past, compared with people who have psychosis and who are taking antipsychotic medication ($p<.05$ and $p<.005$ respectively) (Corrigan et al., 2010).

Characteristics of targets of disclosure. Two studies looked in more detail at levels of disclosure according to target. Bos et al. (2009) found that disclosure was highest to a partner (96.8% of participants), mother (88.8%) and father (84.2%). Over one third (36.3%) of participants had not disclosed to any colleagues and 11.6% had not disclosed to any friends. In the study by Pandya et al. (2011), participants reported being most open with doctors, followed by spouse/significant other, parents, and then friends. Participants were least open with neighbours. While 98% of individuals have been at least somewhat open about their diagnosis with a health care professional, 40% had been with co-workers and 33% with their children. The same study found that males were most open with parents and extended family whereas females were most open with friends and significant others. However, the article did not provide data on the statistical significance of these sex differences.

Additional factors. The only study to measure attitudes towards disclosure at more than one time-point found that disclosure behavior at time one was positively associated with disclosure behavior at time two (Garcia & Crocker, 2008). This study found that people motivated by ecosystem goals were significantly more likely to disclose their mental health problem to others than people motivated solely by egosystem goals[2]. Table 3 displays the

relationships found in quantitative studies between variables relevant to disclosure and concealment.

[Insert Table 3 here]

Factors Associated with Disclosure and Concealment in Qualitative Studies

The eight qualitative studies reviewed identified multiple factors contributing to individuals' decision-making processes. These have been summarised as the following themes:

The practical value of disclosure. Findings showed that people took into account the practical value of disclosure when making disclosure decisions. In two studies disclosure of mental health status was seen as a necessary step towards gaining additional support and special consideration in education (Martin, 2010; Venville et al., 2014). Thus, some individuals considered disclosure to be unnecessary if it did not promise to add anything of value to their lives or if mental health status was deemed not to be the business of others (Martin, 2010). For some people, the practical value of disclosure was unclear. Two studies highlighted ambivalence about how much medical professionals could do to help in response to disclosure (Bushnell et al., 2005; Chew-Graham et al., 2009). One study highlighted individuals' concerns about being prescribed medication if they were to disclose (Chew-Graham et al., 2009). Another study underscored participants' fears about being institutionalised should they disclose to a doctor (Dew et al., 2007). Some individuals described a belief that there was no alternative and that they were forced to disclose as a way to either explain their poor academic performance and attendance or to avoid situations deteriorating further (Martin, 2010; Venville et al., 2014). The practical value of disclosure was also highlighted by Chinese immigrants in the USA, who saw disclosure as a way of gaining help with monitoring symptoms, and concealment as appropriate where there seemed to be little likelihood that disclosure would lead to help (Chen et al., 2013). Practical obstacles to disclosure in healthcare settings included difficulty getting an appointment, time

constraints during appointments, language barriers, difficulty expressing oneself, and concerns about how confidentiality was managed by the service (Bushnell et al., 2005; Chew-Graham et al., 2009; Withers et al., 2015).

Rules and beliefs about mental health problems. Findings showed that individuals subscribed to sets of beliefs regarding disclosure. This was particularly so in the work of Chen et al. (2013), which highlighted how individuals felt a sense of obligation to inform family members of their mental health status, and viewed disclosure as a necessary part of building a relationship with others. In contrast, Bushnell et al. (2005) discovered that some individuals believed that mental health problems should not be talked about at all.

Relationship with target. Willingness to disclose was affected by the relationship that people had with the potential target of this disclosure. People felt that the absence of a trusting relationship with their healthcare professional acted as a barrier to disclosure (Withers et al., 2015). Where people felt that doctors were not empathic or sympathetic, disclosure was more difficult, and disclosure to a general practitioner (GP) was facilitated by a positive relationship between individual and GP (Chew-Graham et al., 2009). Students described the attitude and approach of staff as being central to their decision to disclose or conceal (Martin, 2010). Chen et al. (2013) found that disclosure to friends and family was facilitated by affection and trust, and that disclosure to those outside of the social network was more likely if the target was considered to be understanding, trustworthy and kind.

Fear and control. Fear was a significant barrier to disclosure. People with mental health problems were afraid that disclosure would involve a process of confronting oneself and coming to terms with aspects of one's own personality that felt threatening (Dew et al., 2007). Participants feared the 'unknown' and the loss of control that might accompany disclosure (ibid.). Research in an educational setting underlined how students believed that disclosure would compromise the control they had over their identities. Students talked about how

control over disclosure represented a victory over the illness and acted as an important source of wellbeing and self-efficacy (Venville, 2010). Issues of identity and control were also highlighted by Venville et al. (2014), who found that individuals had to disclose because of particular roles they held within the community, and by Chen et al. (2013), whose work demonstrated how gossip and one's mental health-related behaviors may betray one's health status to others, whether one wishes to disclose or not.

Stigma and discrimination. The most frequently mentioned reason for concealment was concern about the response of others. Many participants described stigma as a barrier to disclosure (Bushnell et al., 2005; Venville et al., 2014). People felt ashamed, embarrassed, concerned about ‘losing face’, and worried about being seen as 'stupid', 'weird' or crazy, and being judged negatively (Chen et al., 2013; Chew-Graham et al., 2009; Dew et al., 2007; Martin, 2010; Venville et al., 2014; Withers et al., 2015). People anticipated negative consequences for them of this stigma, including gossip, awkward questions, costs to personal reputation, receiving special treatment, and others’ beliefs that they were unreliable, untrustworthy and irresponsible (Chen et al., 2013; Venville, 2010; Venville et al., 2014; Withers et al., 2015). People identified examples of discrimination they imagined might materialise following disclosure, including social alienation and loss of friends, breakdown of marriage, and the removal of children (Chen et al., 2013, Dew et al., 2007; Martin, 2010; Venville et al., 2014). In two studies negative experiences of previous disclosure was identified as a barrier to future disclosure (Martin, 2010; Venville et al., 2014).

Measurement of Concealment and Disclosure

Measurement in quantitative studies. Measurement of disclosure in quantitative studies ranged from a single ‘yes/no’ response option to questions about disclosure across a range of relationships, including family, friends, partners and colleagues. Five studies used variations on a secrecy coping scale developed from Link’s (1987) Perceived Devaluation and

Discrimination scale (PDD). Versions of this secrecy coping scale ranged from five items to nine items. Items included statements about the extent to which individuals favoured keeping mental health problems concealed from others. An example of an item on the secrecy scale is 'If you have ever been treated for a serious mental illness, the best thing to do is keep it a secret' (Link, Struening, Neese-Todd, Asmussen, & Phelan, 2002). The secrecy coping scales did not distinguish between targets of disclosure and therefore did not make allowances for selective disclosure. Two of the three studies that used self-developed measures to understand disclosure did not present descriptive statistics for these measures. The third study using a self-developed measure did not present the measure's items. Appendix C summarises the measures relating to disclosure and concealment used in the quantitative studies reviewed.

Measurement in qualitative studies. All qualitative studies except one used semi-structured interviews to gather data. The exception was Martin (2010), who used an online survey. Articles varied in the level of detail provided about interview questions. Two articles did not make it clear that the questions asked during interviews related specifically to disclosure (Chew-Graham et al., 2009; Venville, 2010). However, in both articles the interview responses indicated that disclosure featured significantly in the questions asked.

Discussion

This review has summarised and critiqued articles published over the past ten years that look at factors affecting an individual's decision to disclose or conceal a mental health problem outside of the workplace. The review identified shortcomings of the existing literature, some of which echo those identified in previous reviews of disclosure in the workplace. Foremost amongst these is the simplistic manner in which disclosure and concealment are measured, which has been highlighted also in a previous review of disclosure in the workplace (Jones, 2011). Moreover, this review found that some authors who had developed their own measures did not include items or descriptive statistics in their

articles, and authors did not always include data relating to the statistical significance of their findings. There also is an evident dearth of longitudinal studies of disclosure, a limitation noted in Brohan et al.'s (2012) review of disclosure in the workplace. The absence of longitudinal studies acts as an obstacle to further understanding causal factors in the decision-making process. Additionally, we identified a lack of attention paid to ethics and bias in all but one study, which is regrettable given that disclosure of mental health problems is so closely associated with shame, embarrassment and concerns about privacy. Recurrent themes identified in our review, as well as implications and areas for future research, are discussed in the sections below.

Features of Discloser and Target

Taken as a whole, findings indicate that whether or not an individual decides to disclose a mental health problem depends on features of both the potential target of disclosure and the discloser herself. These findings are consistent with the literature on disclosure of secrets and personal information (Afifi & Steuber, 2009; Greene et al., 2006; Ignatius & Kokkonen, 2009). People are most open with their doctors. However, this seems to depend on the empathy and approach of the doctor, and some people are unsure whether disclosure to a doctor is appropriate at all (Bushnell et al., 2005; Chew-Graham et al., 2009; Withers et al., 2015). This aspect of disclosure, which has not been the focus of previous reviews of disclosure in the workplace (Brohan et al., 2012; Jones, 2011), seems important, since health professionals often act as the gateway to psychological support. It is apparent that doctors must do more to educate patients about the appropriateness of disclosing to them, and to create an environment in which disclosure is empathically handled. People worry that disclosure will lead to a prescription for psychiatric medication (Bell et al., 2011; Chew-Graham et al., 2009; Weich et al., 2007). Healthcare professionals should emphasize that disclosure of a mental health problem need not necessarily lead to treatment or

institutionalisation but can facilitate a discussion that allows the patient an active role in deciding the next step(s). It is also the responsibility of healthcare professionals and health services to explore with people their fears about issues of medical record privacy and confidentiality. While in some instances these fears may be reasonable, it seems crucial that services educate service users so that they are able to make informed decisions about disclosure.

Most studies found no demographic differences between people who disclose and people who conceal mental health problems. These findings conflict with literature that suggests patterns of personal disclosure differ according to cultural background (Ignatius & Kokkonen, 2007) and that attitudes towards mental health problems vary across culture (Rüsch et al., 2012). The findings also contrast with the findings of studies of disclosure in the workplace, which have noted that white workers may disclose more than workers of other ethnicities (Jones, 2011). In our review some studies touched upon how disclosure patterns may differ according to ethnicity (Chen et al., 2013; Corrigan et al., 2010; O'Mahen et al., 2011; Yow & Mehta, 2010). However, we believe that the studies reviewed here do not adequately explore the role played by cultural factors in peoples' decision-making. Future research that compares communities according to both levels of and reasons for disclosure would help to shed light on the roles that culture and ethnicity play in this process.

The finding that older people demonstrate greater willingness to disclose mirrors the findings of a previous review of workplace disclosure (Jones, 2011). Evidence that younger people are less open than older people may reflect concerns about the implications of disclosure for one's future. It is possible that older individuals have more established relationships and careers, which they consider more robust to the consequences of disclosure. For younger people, who are already navigating uncertainties in their lives – including identity and independence from parents (e.g., see Erikson’s (1980) stages of development) –

making a disclosure may feel like an uncomfortable additional complication. Research into the way that young people with mental health problems think about disclosure may help academic institutions and health services best support this demographic.

It appears that support from others is positively related to disclosure (Bos et al., 2009; Chronister et al., 2013), although the direction of causality is unclear. People may begin to reach out for support by testing the water through making smaller disclosures to a select few people they believe may be sympathetic (Chen et al., 2013). One avenue of public policy and health service development could be to invest in campaigns that ask members of the public to actively demonstrate their support for people with mental health problems. This might shift the onus away from people with mental health problems and signal to them the extent of support available. Our review therefore indicates that studies using measures of disclosure that do not discriminate between the targets of disclosure or that do not explore the nature of the discloser's relationship with these targets, fail to capture the complexity of the process. We encourage future researchers to differentiate between targets of disclosure, and to measure attitudes towards these targets.

Stigma and Symptom Severity

We found that stigma and anticipated stigma act as barriers to disclosure. A previous review has highlighted similar issues (not being hired, being treated unfairly, losing credibility and rejection by work colleagues) in relation to disclosure in the workplace (Brohan et al., 2012). It is apparent that our findings go further in demonstrating a fear of wider social rejection, not simply rejection restricted to a specific setting. Where societal attitudes continue to discriminate against people with mental health problems, we must better educate members of the public about the nature of mental health problems. This review also found that people are more likely to disclose when they are motivated by ecosystem goals (Garcia & Crocker, 2008). Educating the public about the positive impact of disclosure on the

wider community (see Corrigan & Matthews, 2003) may have the effect of increasing ecosystem motivations. This, in turn, may create a snowball effect, with increasing numbers of people disclosing, and the prevalence of stigma decreasing.

Respect for Non-Disclosure

In view of the fact that disclosure of a mental health problem does not always bring benefits (Quinn et al., 2004; Suto et al., 2012), particularly where the discloser and/or the target hold stigmatising attitudes, we would do well to respect the choice not to disclose. Where concealment represents a measure of control over one's mental health problems, then attempting to cajole people into talking about their problems could be detrimental. In our review concealment was considered by some as a way of both avoiding discrimination and of retaining control over one's identity. The concept of identity and control have been touched upon but not explored in reviews of workplace-related disclosure (Brohan et al., 2012; Jones, 2011). This may be a particularly important factor associated with concealment in relationships and contexts outside of the workplace, for example with friends, family and at social gatherings. Having the ability to conceal a mental health problem can make an important contribution to a sense of self-empowerment. While we should strive to create environments in which people feel safe to disclose mental health problems, we must refrain from assuming that disclosure is always the most helpful path forward. We must also acknowledge that concealment is not always a viable course of action. The ways that some people behave can act as clues to others that they are suffering with a mental health problem. Disclosure may be a social obligation or may be required to explain poor academic performance. Researchers and policymakers should not assume that people have complete control and freedom over disclosure. It is misleading to label mental health problems as 'concealable' stigmas.

Limitations

We are aware that our selection criteria prevented inclusion of research on disclosure of emotional distress. Thus, people who were experiencing emotional distress but were not aware that this constituted a mental health problem, or who had never received a diagnosis or label of mental health problem, were unlikely to have featured in the articles reviewed here. It could be argued that we therefore overlooked a valuable demographic. The review also excluded studies about help-seeking. As disclosure is a necessary component of help-seeking (Pederson & Vogel, 2007), we would expect there to be consideration of disclosure in some studies on help-seeking. One justification for the strict selection criteria is that it enabled us to make a clear distinction between the disclosure of emotional experiences common to all humans, and the disclosure of mental health conditions, which continue to attract negative judgement and discrimination. We would further argue that the distinction between disclosure and help-seeking is an important one, because disclosure is not always intended as a step towards help-seeking. Nonetheless, it is possible that our selection criteria prevented inclusion of articles that would have contributed to our overall understanding of this topic.

While we have attempted to underscore the nuanced nature of mental health disclosure, we are aware that our paper does not do justice to all of the details included in the studies reviewed. For example, we have combined together results from qualitative research into general themes, thereby risking the loss of the complexity inherent in the original data. For practical reasons and in the interest of clarity we have also chosen not to present and examine all analyses included in the quantitative studies in our review. It is inevitable that our own biases have affected this process, and it is likely that exceptions exist to the conclusions that we have drawn. While we acknowledge these limitations, we would argue that the common trends and methodological shortcomings we have highlighted mark a valuable starting point from which to conduct further critical analyses of the disclosure literature.

Conclusion

Whether one chooses to disclose or conceal a mental health problem depends on numerous factors, including characteristics of the discloser and the target, the nature of relationship between discloser and target, the mental health problem in question, and the discloser's anticipation of stigmatized reactions. Individuals tend to disclose selectively, when they anticipate a practical benefit to them doing so. While for some people concealment is associated with control over one's identity, for others concealment is not a viable option, with disclosure being either an obligation or beyond one's control. This review extended previous findings that were restricted to disclosure in the workplace, and shed light on the additional factors that may be associated with disclosure in other contexts. The studies in this review also highlighted that there is a lack of sophistication in the way that disclosure, concealment and secrecy are measured by researchers. Future research should distinguish carefully between types of mental health problem, targets of disclosure, and content of disclosure, and should attempt to measure disclosure longitudinally. Recommendations for public and health policy include educating GPs and patients about the appropriateness and consequences of disclosure of a mental health problem, and public campaigns in which people are encouraged to outwardly demonstrate acceptance of people with mental health problems. We also urge family members, educational establishments and healthcare services to respect that for some individuals choosing to conceal a mental health problem may be the most helpful way for them to manage their difficulties.

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Notes

[1] 'Ecosystem' motivation describes a 'motivational framework in which peoples' actions are motivated by prioritising both the needs and wellbeing of others, as well as the self.' (Garcia & Crocker, 2008, p. 454).

[2] When people are motivated by egosystem goals, they prioritise their own needs and desires (for example maintaining a desired self-image) over the needs and desires of others (Garcia & Crocker, 2008, p.454**).**

Table 1

Literature Review Search Terms

Disclosure	Mental health problem
Disclos*	"Mental health problem"
Conceal*	"Mental illness"
Self-disclos*	"Mental disorder*"
Self-conceal*	"Psych* illness"
Non-disclos*	"Psych* disorder*"
Secrecy	"Psych* diagnosis"
	"Psych* problem*"
	Distress
	Schizophrenia
	Depression
	Anxiety

*Truncated terms to allow for multiple endings of words

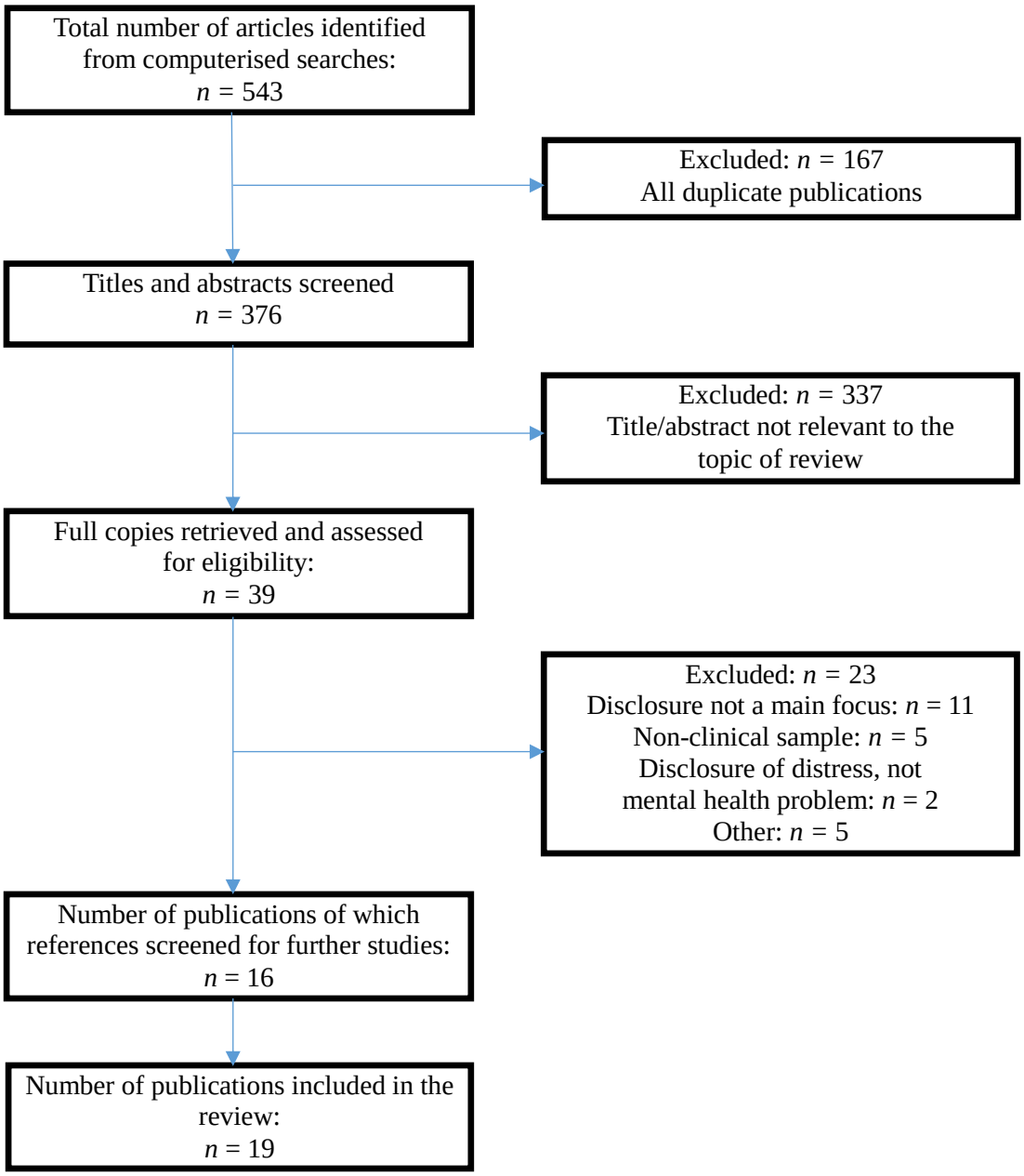

Figure 1. Flowchart showing process of study selection.

Table 2

Summary of Articles Included in Review

Author(s) and date	Country	Sample, recruitment and method	Target of disclosure	Key findings	Overall quality appraisal score (0-36)
Quantitative studies					
Bell et al. (2011)	USA	• N = 1054 (475 with history of depression) • Random sampling followed by stratified sampling • Cross-sectional	Primary care physician	*Most frequently chosen reasons for not disclosing:* • Concern about medical records being seen by others and about being put on medication *Significant predictors of non-disclosure:* • Being female (+ve) • Being Hispanic (+ve) • Beliefs that depression is stigmatized (+ve) • Depression symptoms (+ve) • Higher income (-ve)	30
Bos et al. (2009)	Netherlands	• N = 500 • Random sampling from a mental health institute • Cross-sectional	Family Friends Acquaintances Colleagues	• Highest percentage of disclosure to partner (96.8%), followed by mother (88.8%) and father (84.2%) • Disclosure negatively correlated with perceived stigma • Disclosure positively correlated with perceived social support	28

Table 2 (continued)

Authors	Country	Sample & Method	Target of disc.	Key findings	Overall appraisal (/36)
Chronister, Cho & Liao (2013)	USA	• N = 101 • Flyers posted targeting people attending psychosocial rehab programme • Cross-sectional	General	*Correlations with secrecy:* • Quality of life (-ve) • Societal stigma (+ve) • Internalised stigma (+ve) • Emotional support (-ve) • Tangible support (-ve)	33
Corrigan et al. (2010)	USA	• N = 85 • Flyers targeting people in community rehab programmes • Cross-sectional	General	• No differences in secrecy according to demographics or other variables • Stronger agreement with past reasons for not disclosing were not significantly correlated with secrecy	25
Garcia & Crocker (2008)	USA	• N = 45 • Advertisements in campus newspaper • Longitudinal	Family Friends Co-workers Strangers	• Highest level of disclosure when individuals had both ego and eco-system goals • Lowest level of disclosure when individuals had high ego and low eco-system goals	29
Kleim et al. (2008)	UK	• N = 127 • Service users from local psychiatrists and hospital outpatient service • Cross-sectional	General	*Correlates of secrecy:* • Perceived stigma (+ve) • Age (-ve) • Self-efficacy (-ve) *Regression analysis showed:* • Perceived stigma positively predicts secrecy • Age and gender are not significant predictors of secrecy	29

Table 2 (continued)

Authors	Country	Sample & Method	Target of disc.	Key findings	Overall appraisal (/36)
O'Mahen, Henshaw, Jones & Flynn (2011)	USA	• N = 532 (women only) • 56% with current or past depression • Opportunity sampling • Cross-sectional	General	• For white women, secrecy and depression stigma are positively correlated. • For black women, non-significant correlation of secrecy and depression stigma.	33
Pandya, Bresee, Duckworth, Gay & Fitzpatrick (2011)	USA	• N = 258 • Opportunity sampling via National Alliance on Mental Illness • Cross-sectional	Friends Family Colleagues Police Place of worship Doctor Partner	• People most open with doctor, followed by spouse/significant other, parents, and then friends. • Least open with neighbours • Females most open with friends and significant other • Males most open with parents *Predictors of openness:* • Self-reported current mental health status (+ve) • Number of types of relationships (-ve)	28
Rüsch et al. (2014)	UK	• N = 202 • Recruitment via clinicians working in mental health teams • Cross-sectional	Friend Family member	*Predictors of comfort disclosing:* • Anticipated discrimination (-ve) • Stigma stress (-ve) • Psychiatric inpatient treatment in past year (-ve)	29
Weich, Morgan, King & Nazareth (2007)	UK	• N = 866 • Opportunity sampling – people approached in GP waiting room • Cross-sectional	Family/friends	• A person is more likely to disclose to family and friends if she considers depression to be a medical condition that responds to support, and less likely if she considers it a permanent, disabling and stigmatizing condition	33

Table 2 (continued)

Authors	Country	Sample & Method	Target of disc.	Key findings	Overall appraisal (/36)
Yow & Mehta (2010)	Singapore	• N = 84 • Opportunity sampling from attendees of the Institute of Mental Health • Cross-sectional	General	• Secrecy positively correlated with perceived stigma • Higher level of secrecy than in comparative US sample	29
<u>Qualitative studies</u>					
Bushnell et al. (2005)	New Zealand	• N = 775 (481 had mental health problem) • Volunteer sampling followed by stratified sampling • Cross-sectional • Thematic analysis	Doctor	*Reasons for not disclosing:* • GP not the appropriate person to speak to • Mental health problems should not be discussed at all • One's own GP is not the right person to speak with (on account of relationship and GP's attitude) • Concerns about stigma • System factors, including time, cost & confidentiality	32

Table 2 (continued)

Authors	Country	Sample & Method	Target of disc.	Key findings	Overall appraisal (/36)
Chen, Lai & Yang (2013)	USA	• N = 53 • Opportunity sampling on the basis of psychiatric inpatient admissions • Cross-sectional • Content analysis	General	*Reasons for disclosing:* • Disclosure within a circle of confidence • Obligation to inform family (except for those who are living far away) • Disclosure based on affection and trust (‘ganqing’) • Willingness to disclose outside of social network if recipient has similar problems or is understanding/trustworthy/kind • Moral obligation to show kindness in social interactions (‘renqing’) • Involuntary disclosure (gossip, others trying to help, clues in behavior) *Reasons for concealing:* • Concerns about shame/losing face • Anticipated negative consequences of disclosure, including alienation, effect on marriage, rejection, loss of friends, others will misunderstand • Avoiding gossip and awkwardness • Not wanting to burden others • Anticipating that there would be a low likelihood of help	33
Chew-Graham, Sharp, Chamberlain, Folkes & Turner (2009)	UK	• N = 28 (women only). • Purposeful sampling • Cross-sectional • Thematic analysis	GPs and health visitors	Disclosure facilitated by good relationship with GP *Reasons for concealing:* • Difficulty getting an appointment • Fear of being prescribed medication • Relationship with and attitude of GP (being treated as if wasting GP’s time; GP unsympathetic) • Belief that GPs cannot do much to help	26

Table 2 (continued)

Authors	Country	Sample & Method	Target of disc.	Key findings	Overall appraisal (/36)
Dew et al. (2007)	New Zealand	• N = 33 • Opportunity sampling, purposeful sampling • Cross-sectional • Thematic analysis	GP	*Barriers to disclosing:* • Fear of confronting oneself and dealing with a difficult sense of self; loss of control; fear of the unknown; fear of judgement; fear of failure as a mother and losing children; fear of being institutionalised	26
Martin (2010)	Australia	• N = 54 • Opportunity sampling - online survey sent to university students suffering with mental health problems • Cross-sectional • Method of analysis not clear	University staff	*Reasons for not disclosing:* • Fear of judgement/stigmatization • Risk of being seen as telling lies and/or wanting privileges • Embarrassment • No need to • Previous negative experience • Belief that mental health status is no-one else's business *Reasons for disclosing:* • To receive special consideration • To explain difficulty completing work	24
Venville (2010)	Australia	• N = 5 • Non-probability purposive sampling • Poster displays and information sessions in classes • Cross-sectional • Thematic analysis	Educational staff	*Reasons for concealing:* • Desire to be able to do things oneself and to have control over one's identity. • Non-disclosure as a strategy that can aid learning • 'Controlled disclosure' can be helpful but participants did not trust that they will be treated the same as others if they were to disclose	29

Table 2 (continued)

Authors	Country	Sample & Method	Target of disc.	Key findings	Overall appraisal (/36)
Venville, Street & Fossey (2014)	Australia	• N = 20 • Opportunity sampling via posters, emails and presentations • Longitudinal • Thematic analysis	Educational staff	*Reasons for disclosing:* • Advised to disclose by a professional • Necessary due to one's role as a mental health advocate • Fear of failing/need to explain absences/performance • To gain support • Desire to break historical pattern of repeated failures and educational costs *Reasons for concealment:* • Fear of stigma and discrimination • Risks to identity, integrity and personal reputation • Unhelpful experiences following previous disclosures • Fear of being perceived as stupid/weird, untrustworthy, unreliable and irresponsible • Absence of mental health problems indicates self-reliance and dependability	29
Withers, Moran, Nicassio, Weisman, & Karpouzas (2015)	USA	• N = 46 • 65% of sample had personal experience of depression • Opportunity sampling from rheumatology clinic • Cross-sectional • Grounded theory	Doctor	*Barriers to disclosing:* • Stigma • Fear of gossip and being judged 'crazy' • Belief that mental health is not related to physical health, which is the primary reason for seeing doctor • Absence of trusting relationship with health care professional • Practical barriers – time constraints and language difficulties	31

Table 3

Variables Related to Disclosure and Concealment of a Mental Health Problem

Outcome variable	Associated variable	Study	Strength of correlation
Stigma			
Perceived societal stigma	Disclosure	Bos et al. (2009)	-.40***
	Disclosure	Garcia & Crocker (2008)[A]	β = -.27*
	Secrecy	Kleim et al. (2008)	.50**
	Secrecy	O'Mahen et al. (2011)[B]	.36**
	Secrecy	Yow & Mehta (2010)	.24*
	Secrecy	Chronister et al. (2013)	.61**
Anticipated discrimination	Comfort disclosing	Rüsch et al. (2014)	β = -.27**
Stigma stress	Comfort disclosing	Rüsch et al. (2014)	β = -.26**
Internalised stigma	Secrecy	Chronister et al. (2013)	.39**
Mental health status and psychological wellbeing			
Recent inpatient status	Disclosure	Rüsch et al. (2014)	β = -.17* (inpatient status = less likely to disclose)
Mental health status (current mental health)	Openness	Pandya et al. (2011)	β = .72*** (more open when current mental health rated as 'very good')
Currently/recently symptomatic	Concealment	Bushnell et al. (2005)[C]	"Significant positive" (α level not specified)
Self-efficacy	Secrecy	Kleim et al. (2008)	-.27*
Self-esteem	Disclosure	Bos et al. (2009)	.22***
Symptom distress	Secrecy	Chronister et al. (2013)	.36**
Quality of life	Positive attitudes towards disclosing[D]	Corrigan et al. (2010)	.32*
Empowerment	Positive attitudes towards disclosing[D]	Corrigan et al. (2010)	.29*
Interpersonal factors			
Perceived social support	Disclosure	Bos et al. (2009)	.24***
No. of types of relationships	Openness	Pandya et al. (2011)	β = -.17***
Emotional support	Secrecy	Chronister et al. (2013)	-.38**
Tangible support	Secrecy	Chronister et al. (2013)	-.48**
Demographic factors			
Age	Secrecy	Bushnell et al. (2005)[C]	t=12.37** (younger people were twice as likely to report non-disclosure)
		Kleim et al. (2008)	-.20*

Beliefs about mental health problems and treatment			
Positive beliefs about depression	Disclosure	Weich et al. (2007)	.29***
Additional factors			
Disclosure time 1	Disclosure time 2	Garcia & Crocker (2008)	.87**
Ecosystem goals	Disclosure	Garcia & Crocker (2008)	β = .37***
Egosystem goals	Disclosure	Garcia & Crocker (2008)	β = -.21**

*Significant at $p < .05$. ** Significant at $p < .01$. *** Significant at $p < .001$. [A] Only when ecosystem goals were low. [B] Significant results restricted to white women only. [C] Qualitative study which included quantitative element to analysis. [D] Only for people who have already disclosed.

Appendix A

Quality appraisal checklist (Hawker et al., 2002)

1. Abstract and title: Did they provide a clear description of the study?
   - Good (4) Structured abstract with full information and clear title.
   - Fair (3) Abstract with most of the information.
   - Poor (2) Inadequate abstract.
   - Very poor (1) No abstract.

2. Introduction and aims: Was there a good background and clear statement of the aims of the research?
   - Good Full but concise background to discussion/study containing up-to date literature review and highlighting gaps in knowledge. Clear statement of aim AND objectives including research questions.
   - Fair Some background and literature review. Research questions outlined.
   - Poor Some background but no aim/objectives/questions, OR aims/objectives but inadequate background.
   - Very poor No mention of aims/objectives. No background or literature review.

3. Method and data: Is the method appropriate and clearly explained?
   - Good Method is appropriate and described clearly (e.g., questionnaires included). Clear details of the data collection and recording.
   - Fair Method appropriate, description could be better. Data described.
   - Poor Questionable whether method is appropriate. Method described inadequately. Little description of data.
   - Very poor No mention of method, AND/OR method inappropriate, AND/OR no details of data.

4. Sampling: Was the sampling strategy appropriate to address the aims?
   - Good Details (age/gender/race/context) of who was studied and how they were recruited. Why this group was targeted. The sample size was justified for the study. Response rates shown and explained.
   - Fair Sample size justified. Most information given, but some missing.
   - Poor Sampling mentioned but few descriptive details.
   - Very poor No details of sample.

5. Data analysis: Was the description of the data analysis sufficiently rigorous?
   - Good Clear description of how analysis was done. Qualitative studies: Description of how themes derived/respondent validation or triangulation. Quantitative studies: Reasons for tests selected hypothesis driven/numbers add up/statistical significance discussed.
   - Fair Descriptive discussion of analysis.
   - Poor Minimal details about analysis.
   - Very poor No discussion of analysis.

6. Ethics and bias: Have ethical issues been addressed, and what has necessary ethical approval gained? Has the relationship between researchers and participants been adequately considered?
   - Good Ethics: Where necessary issues of confidentiality, sensitivity, and consent were addressed. Bias: Researcher was reflexive and/or aware of own bias.
   - Fair Lip service was paid to above (i.e., these issues were acknowledged).
   - Poor Brief mention of issues.
   - Very poor No mention of issues.

7. Results: Is there a clear statement of the findings?

	Good	Findings explicit, easy to understand, and in logical progression. Tables, if present, are explained in text. Results relate directly to aims. Sufficient data are presented to support findings.
	Fair	Findings mentioned but more explanation could be given. Data presented relate directly to results.
	Poor	Findings presented haphazardly, not explained, and do not progress logically from results.
	Very poor	Findings not mentioned or do not relate to aims.
8.	Transferability or generalizability: Are the findings of this study transferable (generalizable) to a wider population?	
	Good	Context and setting of the study is described sufficiently to allow comparison with other contexts and settings, plus high score in Question 4 (sampling).
	Fair	Some context and setting described, but more needed to replicate or compare the study with others, PLUS fair score or higher in Question 4.
	Poor	Minimal description of context/setting.
	Very poor	No description of context/setting.
9.	Implications and usefulness: How important are these findings to policy and practice?	
	Good	Contributes something new and/or different in terms of understanding/insight or perspective. Suggests ideas for further research. Suggests implications for policy and/or practice.
	Fair	Two of the above (state what is missing in comments).
	Poor	Only one of the above.
	Very poor	None of the above

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Appendix B

Quality appraisal of studies included in review

Author(s) & date	Methodological items (0-4)									Overall score (0-36)
	Abstract & title (Q1)	Intro & aims (Q2)	Method & data (Q3)	Sampling (Q4)	Data analysis (Q5)	Ethics & bias (Q6)	Findings & results (Q7)	Transferability/ generalizability (Q8)	Implications & usefulness (Q9)	
Bell et al. (2011)	4	4	2	3	4	2	4	4	3	30
Bos et al. (2009)	2	3	3	3	4	3	3	3	4	28
Bushnell et al. (2005)	4	4	3	4	4	2	4	4	3	32
Chen et al. (2013)	4	4	4	3	4	3	4	3	4	33
Chew-Graham et al. (2009)	4	4	2	2	4	1	4	2	3	26
Chronister et al. (2013)	3	4	4	4	4	2	4	4	4	33
Corrigan et al. (2010)	3	3	2	2	3	2	3	3	4	25
Dew et al. (2007)	3	4	3	2	3	1	4	2	4	26
Garcia & Crocker (2008)	3	4	3	4	4	1	4	4	2	29
Kleim et al. (2008)	4	4	3	2	4	2	4	2	4	29
Martin (2010)	2	4	4	2	2	1	4	2	3	24
O'Mahen et al. (2011)	4	4	3	4	3	3	4	4	4	33
Pandya et al. (2011)	4	3	2	3	3	3	3	3	4	28
Rüsch et al. (2014)	4	4	2	3	4	3	4	3	2	29
Venville (2010)	3	4	3	2	4	4	4	2	3	29
Venville et al. (2014)	4	3	4	3	3	2	3	3	4	29
Weich et al. (2007)	4	4	4	4	4	1	4	4	4	33
Withers et al. (2015)	4	4	3	4	3	2	4	4	3	31
Yow & Mehta (2010)	2	3	3	4	4	2	3	4	4	29

Appendix C

Measures of Concealment and Disclosure Used in Quantitative Studies

Study	Measures used
Bell et al. (2011)	*Barriers to care-seeking/disclosure:* Self-developed – 11 statements. No descriptive statistics
Bos et al. (2009)	*Level of current disclosure:* Self-developed. 12 items. Alpha = .90. No items included
Chronister et al. (2013)	*Secrecy:* 9-item scale. Link, Cullen, Struening, Shrout and Dohrenwend (1989)
Corrigan et al. (2010)	*Disclosure:* Single 'yes/no' question: 'Are you out about your mental illness? In other words, have you decided to tell most of your family, friends, and acquaintances that you have a mental illness? Have you decided not to hide it?' *Coming out with mental illness:* COMIS – self-developed. 21 items *Secrecy:* Secrecy subscale of the stigma coping orientation scales (Link et al., 2002)
Garcia & Crocker (2008)	*Disclosure:* Self-developed. 4 questions. No descriptive statistics *Eco & ego-system motivations:* Modified scale. No information on how many items
Kleim et al. (2008)	*Secrecy:* Secrecy subscale of PDD (5 items) (Link, 1987)
O'Mahen et al. (2011)	*Secrecy:* Secrecy subscale of PDD (5 items) (Link, 1987) 2 items removed
Pandya et al. (2011)	*Disclosure:* Individual questions about to whom participants had been 'at least somewhat open'. Eleven types of relationship listed 4 point scale – 'not at all open' to 'completely open', for each type of relationship
Rüsch et al. (2014)	*Disclosure:* Single question: 'In general, how comfortable would you feel talking to a friend or family member about your mental health, for example, telling them you have a mental health diagnosis and how it affects you?'
Weich et al. (2007)	*Disclosure:* Single item for family and friends: 'Since [month when index episode began], have you told any of your family or friends that you [are feeling sad, empty or depressed, have lost interest in most things/lacked energy]?'
Yow & Mehta (2010)	*Secrecy:* Secrecy subscale of Link coping orientations (Link et al., 2002). 9 items