Mental health-related stigma in health care and mental health-care settings

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This Review considers the evidence for mental-health-related stigma in health-care and mental-health-care settings. Do mental-health-care and other health-care professionals stigmatise people using their services? If so, what are the effects on quality of mental and physical health care? How can stigma and discrimination in the context of health care be reduced? We show that the contact mental-health-care professionals have with people with mental illness is associated with positive attitudes about civil rights, but does not reduce stigma as does social contact such as with friends or family members with mental illness. Some evidence suggests educational interventions are effective in decreasing stigma especially for general health-care professionals with little or no formal mental health training. Intervention studies are needed to underpin policy; for instance, to decrease disparity in mortality associated with poor access to physical health care for people with mental illness compared with people without mental illness.

Introduction

The evidence that professionals working in all areas of health care including mental health stigmatise and discriminate against people with mental illness is increasingly compelling. Recent progress in two areas of research has re-emphasised the need to consider how stigma related to mental health manifests in health-care settings, and how to address it effectively. First, the specialty of stigma research increasingly encompasses exploration of what the people who are the targets of stigma perceive, anticipate, and directly experience from various sources of stigma, and how they feel and respond accordingly. Health care is one of the contexts in which this research is most actively developing. The frequencies of discrimination reported by respondents to surveys in these studies range from 16% to 44% in a mental health-care setting and 17% to 31% in a physical health-care setting. Second, epidemiological research shows a mortality gap in people with severe mental illness in high-income countries of around 20 years for men and 15 years for women compared with the general population, which puts mental illness at the top of the list of variables associated with physical health inequality. The conclusion that severe mental illness itself explains this mortality gap should be avoided; instead, the reasons for the mortality gap need to be investigated and addressed. We therefore extended the scope of this Review beyond mental health professionals and stigma to include all types of health professionals.

Stigma in a health-care context probably contributes to the disparity in life expectancy, compared with the general population, but before this can be tackled effectively, careful consideration of what stigma means in health care is needed. We used a theoretical framework and separated mental health services from other health services, because the effect of stigma might vary in these contexts. We then addressed the questions: do mental health professionals stigmatise people using their services; and do other health-care professionals stigmatise people with mental illness? If health professionals do stigmatise people with mental illness, what are the effects on quality of mental health care and physical health care? We then considered the evidence that stigma and discrimination in the health-care context can be decreased. To focus this Review on health professionals, we excluded the literature in which health-care students were the only study group. Neither did we address the question of the extent to which stigma is a barrier to health professionals seeking help for their own mental illness.

A framework for considering stigma in mental health care

In the context of service provision, it is useful to consider stigma as operating on three inter-related levels: structural, interpersonal, and intrapersonal. Structural stigma refers to discriminatory social structures, policy, and legislation, which contribute to health disparities for some populations, such as African Americans, and to low quality care for elderly people. In health care for people with mental illness, structural discrimination can be seen in the disparity between physical and mental health care provision that results in poor quality and scarce mental health services; in the poor coverage of mental health education in university curricula for health professionals; in over-reliance on institutional care; and in limited reasonable adjustments to ensure equal access to physical health care, such as longer appointment times or peer support. When the quality of health care varies across hospitals, people with mental illness might experience disproportionate access to low quality care. Structural discrimination is an important part of the backdrop to encounters between health professionals and people with mental illness. For example, resource allocation might affect the culture of a health-care organisation, such that the investment in treatment of stigmatised groups (by decision makers such as commissioners of health services) sends a message to them that they are worth treating.
Discrimination (eg, with respect to race) at the organisational level has been termed both institutional and systemic. The culture of an organisation has a role in shaping health professionals’ knowledge levels and attitudes and thus their interpersonal interactions with people with mental illness. Although such structural discrimination occurs worldwide, the ways in which it is manifest are variable in the context of health-care delivery to people with mental illness, across countries, health-care systems, health-care provider organisations, and professional groups.

In this Review interpersonal stigma consists of problems of knowledge (ignorance or misinformation); attitudes (prejudice); and behaviour (discrimination, targeted violence and hostility, and human rights abuses). Although health professionals generally have more knowledge of mental illness than does the general public, they might be affected by lack of knowledge related to stigma—eg, knowledge about specific disorders such as borderline personality disorder. Attitudes of the public and of groups of health professionals to mental illness have been measured with various instruments to assess: emotional reactions to people with mental illness; endorsement of stereotypes; opinions about civil rights and restrictions such as the right to vote and stand for office; or desire for social distance (the willingness to interact with a person in a survey in various social situations), although the last is also used to assess behavioural intent. Notably, in consideration of behaviour in interpersonal stigma, the form discrimination takes depends partly on the relation between the source, and the target, of stigma. Some behaviour that is deemed unfair treatment by mental health service users is common to other relationships (eg, an assumption that the person is not as competent as other adults or an assumption that the person is prone to violence), whereas other forms of unfair treatment are more specific to the role of health professionals. For example, participants in the Viewpoint study described being ignored or made to wait longer for treatment; having their mental illness diagnosis disclosed in front of other patients; not being listened to regarding the nature of the problem; and not having adjustments made to allow them to access care (eg, being removed from the register of a general practitioner after missing appointments).

At the intrapersonal level, the effect of stigma, whether direct, the observed treatment of others, or through awareness of public attitudes, has been termed both self-stigma and internalised stigma. This form of stigma encompasses negative beliefs about the self, which are largely based on shame, the acceptance of mental illness stereotypes, a sense of alienation from others, and consequent low mood. The effect of stigma is negatively correlated with measures of empowerment and can be conceived of as its opposite—ie, a state of disempowerment. Health professionals’ behaviour might exacerbate or ameliorate self-stigma, because of the effect of interpersonal interactions on self-stigma.

**What attitudes do mental health professionals have towards people using their services?**

**Professional experience**

Table 1 summarises the studies identified by our search that address this question. The first studies of mental health professionals’ attitudes came after recognition of the negative public response to deinstitutionalisation and community care. Calicchia compared psychiatrists, psychologists, and social workers with each other, and against mental health students and a sample of non-mental-health professionals consisting of teachers, lawyers, and engineers. He used five dimensions to assess attitudes toward patients: perceived worth; dangerousness; effectiveness; comprehensibility; and the desire for social distance assessed with the social distance scale. Although the responses of mental health professionals to attitude measures were less negative than those of the non-mental-health professionals, they were more negative than those of mental health students in terms of perceived ineffectiveness and undesirability. Calicchia suggested that the results could be partly explained by the negative effects of professionals’ training and by the effect of burnout.

Although Jorm and colleagues do not discuss the possible effect of burnout on health professionals’ attitudes, they also emphasise the negative effect of professional experience in their report on a survey comparing the attitudes of the Australian public and health professionals including general practitioners, psychiatrists, and psychologists. The authors point out that although health professionals’ increased pessimism with respect to long-term patient outcomes and the likelihood of patients encountering discrimination might be due to greater knowledge than the general public, it might also be biased because of increased contact with people whose illnesses are long-term or recurrent. Jorm and colleagues conclude that irrespective of the extent of bias held by health professionals, care is needed so as not to convey overly negative assumptions about potential outcomes to people with mental illnesses and their families.

Interestingly, little evidence shows negative effects of contact on attitudes of professional contact accumulate with time. Two studies showed that older or more experienced health professionals have greater therapeutic optimism and show less negative stereotyping than younger or less experienced professionals. Another study showed that nurses with 10–14 years’ experience had the lowest desire for social distance compared with those of less, and more, experience. The reasons for this finding are not well understood. Selective dropout from mental health professions by
people who hold more pessimistic beliefs and negative stereotypes might be one reason. Another possibility is that with time professionals become more capable of preventing burnout, gain more observations of personal recovery in patients, or accumulate an increased level of personal and family experience of mental illness. An increase in personal experience of mental illness was also related to more positive attitudes and intended behaviour among the general public. Professionals might also become accomplished at overriding stereotypes when these are activated, in favour of their personal beliefs. Rogers and Kashima\textsuperscript{37} studied this

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<tr>
<td>Rogers and Kashima (1998)\textsuperscript{34}</td>
<td>Identify differences between personal standards of general nurses, psychiatric nurses, and lay people with respect to how they should respond, and beliefs about how they would respond to patients with schizophrenia</td>
<td>Self-selected convenience sampling (91)</td>
<td>General nurses, psychiatric nurses, and lay people</td>
<td>Australia</td>
<td>Purpose written questionnaire; no vignettes</td>
<td>People reported that their actual responses would be more negative than their personal standards suggested they should be; lay people were more negative with respect to their affective responses</td>
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<tr>
<td>Magliano et al (2004)\textsuperscript{35}</td>
<td>Compare attitudes held by psychiatrists, psychologists, and social workers towards patients with schizophrenia</td>
<td>Nurses (190), psychiatrists (110), and relatives (709); convenience sample; 24 (5%) professionals of 489 and 41 (5.5%) families out of 750 did not participate</td>
<td>Nurses and psychiatrists who had been working in the service for at least 1 year in mental health centres</td>
<td>Italy</td>
<td>Pattern of care schedule; questionnaire on the opinions about mental illness; questionnaire on the opinions about mental illness family version; questionnaire on the opinions about mental illness professional version; includes vignettes*</td>
<td>Nurses (63%), relatives (71%), and psychiatrists (43%) thought patients should not get married; nurses (21%), relatives (49%), and psychiatrists (7%) felt patients should not have children</td>
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<td>Nordt et al (2006)\textsuperscript{36}</td>
<td>Compare attitudes of mental health professionals and the general population towards mental illness</td>
<td>Random sample of the general public (1737); self-selected convenience sample of mental health professionals (2073)</td>
<td>Psychiatrists, nurses, vocational workers, social workers, physiotherapists, and psychologists working with psychiatric inpatients and outpatients</td>
<td>Switzerland</td>
<td>Questionnaire already being used in the public attitude survey in Switzerland; includes vignettes*</td>
<td>Psychiatrists had more negative stereotypes; mental health professionals accepted restrictions towards patients with mental illness three times less often than the general public; social distance towards patients with major depression and someone without mental illness lower than towards patients with schizophrenia</td>
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<td>Lauber et al (2004)\textsuperscript{37}</td>
<td>Compare attitudes held by psychiatrists, psychologists, and social workers towards patients with mental illness</td>
<td>Purposive sample psychiatrists (90), response rate 90%; general population (786)</td>
<td>Psychiatrists and the general population</td>
<td>Switzerland</td>
<td>Purpose written questionnaire; includes vignettes</td>
<td>Psychiatrists had significantly more positive attitudes than lay people; the level of social distance increased for both groups the more the situation described implied social closeness</td>
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<tr>
<td>Calcichia (1981)\textsuperscript{38}</td>
<td>Compare the attitudes held by mental health professionals, non-mental health professionals, and students toward patients with previous mental illness (ie, previous use of psychiatric services)</td>
<td>Random sample (87); response rate 58%</td>
<td>Psychiatrists, psychologists, and social workers</td>
<td>USA</td>
<td>Purpose written questionnaire; no vignettes</td>
<td>Participants held negative attitude towards people with previous mental illness; psychologists showed most benign attitudes</td>
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<tr>
<td>Calcichia (1981)\textsuperscript{39}</td>
<td>Compare attitudes held by mental health professionals, non-mental health professionals, and students toward patients with previous mental illness</td>
<td>Random sample (180); response rate 59%</td>
<td>Mental health professionals, mental health students, and non-mental health professionals (teachers, lawyers)</td>
<td>USA</td>
<td>Purpose written questionnaire; no vignettes</td>
<td>Patients with previous mental illness perceived as dangerous, ineffective, mysterious, and undesirable; mental health groups showed less negative attitudes</td>
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<td>Jorm et al (1999)</td>
<td>Self-selected convenience sample (2454); general practitioners (872), psychiatrists (1128), clinical psychologists (454); results compared with general public (2031), response rate 85%</td>
<td>General practitioners, psychiatrists, and clinical psychologists</td>
<td>Australia</td>
<td>Vignettes</td>
<td>Public and professionals rated outcomes as poorer and discrimination more likely for patients with schizophrenia; professionals had more negative attitudes than the public, but clinical psychologists had similar attitudes to the public about depression</td>
<td>Social desirability; questionnaire less suited to professionals; did not cover all relevant health professionals, notably mental health nurses</td>
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<tr>
<td>Lauber et al (2006)</td>
<td>Convenience sample (1073); response rate 35%</td>
<td>Psychiatrists, nurses, vocational workers, social workers, physiotherapists, and psychologists working with psychiatric inpatients and outpatients</td>
<td>Switzerland</td>
<td>Questionnaire from previous opinion survey of a representative sample of the general population in Switzerland; includes vignettes</td>
<td>Mental health professionals felt most negative depictions as typifying of patients, and positive depictions, except highly skilled, as less typifying of patients; patients were stereotyped as dangerous by both groups; psychiatrists stereotyped patients more than did psychologists and nurses</td>
<td>Low response rate; tendency of participants to respond according to social desirability; holding of stereotypes should not be mistaken for interpersonal behaviour</td>
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<td>Linden and Kavanagh (2012)</td>
<td>Self-selected convenience sample; nurses (221), response rate 68%; students (66), response rate 63%</td>
<td>Mental health nurses and students</td>
<td>Republic of Ireland</td>
<td>CAMI; includes vignettes</td>
<td>Nurses in the community held more positive attitudes than students; nurses in an inpatient setting had the most socially restrictive attitudes</td>
<td>Social desirability, all respondents may have been biased toward positive attitudes</td>
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<tr>
<td>Loch et al (2013)</td>
<td>Self-selected convenience sample of psychiatrists (1414); random stratified sampling of general population (1015)</td>
<td>Psychiatrists and the general population</td>
<td>Brazil</td>
<td>General population assessed with vignettes; psychiatrists assessed with purpose written questionnaire including previous attitude surveys</td>
<td>In the general population: male sex was linked to negative stereotyping and higher age was linked to social distance; in psychiatrists lower age was associated with negative stereotyping of patients; psychiatrists negatively stereotyped patients with schizophrenia</td>
<td>Psychiatrist sample not assured to be representative; different interview methods; response bias in face to face interviews</td>
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<tr>
<td>Morris et al (2012)</td>
<td>Convenience sample (858); response rate 69.3%</td>
<td>Registered nurses, psychiatric hospital wards, acute psychiatric units in general hospitals, and community-based facilities</td>
<td>Finland, Lithuania, England, Ireland, Italy, and Portugal</td>
<td>Original community attitudes towards the mentally ill scale and two modified versions of the scale; no vignettes</td>
<td>Further research recommended to develop valid and reliable tools to assess attitudes; modified version of the CAMI scale (Wolf and colleagues) fits the data</td>
<td>Better representation of nurses in community and general hospital based psychiatric units would have improved the findings to better represent the diversity of mental health-care settings</td>
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<tr>
<td>Vihla et al (2008)</td>
<td>Systematic sample; psychiatric attendants (100), general attendants (100) (cases of patients with mental illness as control)</td>
<td>Psychiatric ward attendants and general ward attendants in Central Institute of Psychiatry</td>
<td>India</td>
<td>Community attitudes towards mental illness; no vignettes</td>
<td>Psychiatric ward attendants had more positive attitudes than general attendants; older age; higher education, longer duration of contact with mentally ill patients predicted more favourable attitudes</td>
<td>None as stated by the authors of the study; response rate not provided</td>
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<td>Gibb et al (2020)</td>
<td>Self-selected convenience sample; hospital staff (195); response rate 64.4%</td>
<td>Medical or psychiatric staff working at two hospitals in Christchurch</td>
<td>New Zealand</td>
<td>Purpose written questionnaire including Maslach Burnout Inventory; no vignettes</td>
<td>Staff did not feel confident working with patients who self-harm; negative attitudes were associated with high levels of professional burnout</td>
<td>Low response rate; results might not generalise to other hospitals in other countries</td>
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<td>Bell et al (2006)</td>
<td>Self-selected convenience sample; pharmacy students (216); pharmacy graduates (232)</td>
<td>Pharmacy students and pharmacy graduates</td>
<td>Australia</td>
<td>Purpose written questionnaire including SDS; no vignettes</td>
<td>No significant difference between groups in stigmatisation of patients groups</td>
<td>Assessments do not necessarily reflect participants’ competence to provide pharmaceutical services</td>
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(Table 1 continues on next page)
process in general health and psychiatric nurses with respect to their responses to people with schizophrenia. Because stereotypes are established at an early age, this occurs before a person can critically appraise them and before the start of any professional training. Rogers and Kashima\(^4\) showed that although general nurses, psychiatric nurses, and lay people all had personal beliefs about how to (felt they should) respond to someone with schizophrenia, the imagined actual (felt they would respond) response of psychiatric nurses was in greater accordance with their beliefs than that of the other study groups. When the controlled inhibition of automatic responses is learned, relative to professional training, is unknown. Another problem arising from this study is whether the cynicism, which is a component of burnout, encompasses the erosion of controlled inhibition, changes in personal beliefs, and the development of new negative attitudes.

By contrast, a survey\(^2\) of psychiatrists (n=90) and the general population (n=786) in Switzerland postulated that mental health professionals should have more positive attitudes to people with mental illness than the general public, based on their high level of contact. In this hypothesis professional contact is assumed to have the same positive effect on attitudes to mental illness as does familiarity with mental illness through personal or family experience in the general public.\(^6,7\) Although this hypothesis was true for attitudes toward community mental health care, the authors showed the desire for social distance did not differ between professionals and the general public, similar to Calicchia’s\(^3\) results. Subsequently a larger survey\(^4\) of mental health professionals (n=1073) and the general public (n=1737) in Switzerland confirmed this result, showing that psychiatrists held more negative stereotypes of people with mental illness than either the general population or other mental health professionals.

### Limitations to the evidence
Caution is needed in the interpretation of comparisons between health professionals and the general public. Professionals have complained that questions and responses in measures designed for the public are too imprecise for them to respond easily;\(^\ast\) the validity of their use for professionals has been questioned;\(^50\) and the extent of social desirability bias (the tendency of respondents to answer questions in a manner that will be viewed favourably by others; over-reporting positive attitudes and under-reporting undesirable attitudes) might be different in these two groups. Some researchers have suggested that mental health professionals’ attitudes are affected less by social desirability bias than are those of the general public because they are more fixed,\(^4\) making their attitudes seem relatively more negative. Also, some surveys have used different data collection methods for different groups such as face to face interviews with mental health professionals versus telephone interviews with members of the public;\(^4\) this variation might increase the observed effect of social desirability bias in professionals. The comparative attitudes of mental health professionals and the general public toward people with mental illness differ dependent on how these attitudes are measured. Although measures of social distance show few differences between these two groups, health professionals consistently show less socially restrictive attitudes (except regarding coercion into treatment) and are more supportive of the civil rights of people with mental illness.\(^51,57,52\)

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<td>Ishige and Hayashi (2005)(^5)</td>
<td>Self-selected convenience sample (786), 57.2% usable questionnaires</td>
<td>Psychiatric and public health nurses, non-psychiatric care workers</td>
<td>Japan</td>
<td>Scale developed by applying the SDS; social distancing measured using modified social rejection scale; no vignettes</td>
<td>Public health nurses had the most accepting attitudes; psychiatric nurses and local welfare commissioners ranked second and third in terms of effective acceptance</td>
<td>Results might be confounded by demographic, socioeconomic, and psychological properties of the participants</td>
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<td>Schmetzer and Lofuze (2008)(^1)</td>
<td>Self-selected convenience sample (672)</td>
<td>Medical students and residents</td>
<td>USA</td>
<td>Purpose written questionnaire; no vignettes</td>
<td>NAMI presentation was more efficacious in junior freshman year rotation and first year resident experience than in freshman year</td>
<td>Lack of long-term follow-up; focus on students and residents in one centre; social desirability bias</td>
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| All studies were cross sectional unless otherwise indicated. CAMI=Community attitudes to mental illness scale and social interaction scale. SDS=social distancing scale. \(^\ast\) A vignette presents a hypothetical description of a person, to which research participants respond thereby revealing their attitudes. \(†\) Follow up study. |

**Table 1. Do mental health professionals hold stigmatising attitudes towards patients using their services?**

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www.thelancet.com/psychiatry Vol 1 November 2014
Professional versus social contact

Consideration of why contact with people with mental illness in health-care contexts might not have the same effect on attitudes, as measured by the desire for social distance, as does personal or family experience is important. Professional burnout has been around as an explanation for discrimination in mental health care since 1981, and components of burnout (high emotional exhaustion and low personal accomplishment) were shown to be significantly associated in general and psychiatric hospital professionals with negative attitudes toward patients who self-harm. The type of contact that health professionals have with people with mental illness was shown not to decrease prejudice. Disproportionate levels of contact with people with mental illness when they are most unwell and with people whose illness is severe and chronic might not challenge stereotypes, and the clinical encounter does not tend to provide equal status to professionals and service users. Recognition of these negative attitudes has led to calls for training of both mental health professionals and other community-based health professionals, such as contact with people with mental illness who are functioning successfully in the community (eg, as peer educators) and their family members. Finally, whether a biomedical view of mental health illness might negatively affect at least some aspects of stigma is unclear; there is evidence from the general public that it does, but this question might be harder to address in professional groups. Table 2 summarises the studies we identified that address this question.

Do attitudes of general health professionals differ from those of mental health professionals?

Many of the surveys mentioned compared mental health professionals’ attitudes with those of general hospital professionals, general practitioners, or medical students. Compared with psychiatrists (but not psychologists), general practitioners in Australia were more optimistic about treatment outcome, but both groups of doctors had greater optimism with increasing age. The decreased stigmatisation of patients by mental health professionals with increasing experience was shown in surveys that compared medical students’ attitudes with those of hospital doctors, in London, Lahore, and Colombo, and in nurses in Sweden. In these studies, people people with alcohol or drug addiction were stigmatised compared with people with schizophrenia, depression, panic disorder, and dementia. The same was shown in another survey comparing primary care professionals’ attitudes toward substance misuse with those of mental health professionals. Sri Lankan doctors’ attitudes toward people with schizophrenia were less stigmatising than the attitudes of doctors in the UK. Psychiatric nurses’ attitudes are more positive than are those of general nurses, and a study in Japan showed the same for psychiatrists versus physicians.

Health professionals’ attitudes towards patients with physical versus mental illness

Fewer studies have examined the effect of patients’ mental illness on health professionals’ attitudes compared with a physical illness, even though this comparison closely addresses whether discrimination is more likely to occur in the general health-care setting. Minas and colleagues showed that in Malaysian hospital professionals, stigmatising attitudes towards people with mental illness were common. Respondents to a mental illness vignette scored significantly lower on ratings for care and support and higher on ratings for avoidance and negative stereotype expectations compared with respondents to a diabetes vignette. Unlike other health professionals, for whom ratings of care and support were inversely correlated with avoidance of patients, nurses’ ratings showed a positive correlation between care and support, and avoidance. The authors suggest nurses have conflicted emotions, such that they feel people with schizophrenia should get extra support for physical health needs but that they also have a desire to avoid them. Another vignette survey of medical residents in France showed that not only did the diagnosis of a psychiatric condition increase a desire for social distance, but also unease at the examination of the person in the emergency setting.

What are the effects of stigma on the quality of mental health care?

Surveys of mental health professionals’ attitudes, and assessments of training interventions are done under the assumption of a relation between attitudes and behaviour and do not measure behavioural outcomes. Few studies in our search strategy measured behavioural outcomes. In 1965, Ellsworth did surveys of psychiatric inpatients, and the nurses and aides working with them after screening the patients for their ability to recognise the professionals. He found that restrictive attitudes, measured using the Opinions about Mental Illness Survey and the Staff Opinion Survey, were associated with patients’ reports of controlling and restrictive behaviour by professionals. Questionnaire statements contributing to the measurement of restrictive attitudes included but were not limited to contact between patients of the opposite sex; contact between patients and children; implementation of procedures for going on leave; and patients keeping their personal possessions while in hospital. Protective benevolence (defined by the authors as professionals who endorse kindness to patients) in health professionals was associated with patients’ reporting aloofness, distance, and dishonesty in their behaviour (eg, promising something to a patient when they are disturbed and then not keeping this promise). Professionals who scored high for protective benevolence thought that it was better to avoid patients when they were upset in case of making the situation worse; and that being honest with patients could hurt their feelings. This protective benevolence was experienced by some patients as being treated like a child, and with a lack
of respect or honesty. Rejection of both protective benevolence and restrictive control by professionals contributed to a factor termed “non-traditional” by Ellsworth. Professionals scoring high for non-traditional were perceived by patients as: “sensitive and understanding”; “dependable and reliable”; “open and honest”; and “gives advice freely”.

This study shows how negative attitudes can result in different discriminatory behaviours, although often present in the same professionals. Avoidance and rejection of patients can occur when health professionals find patients difficult to treat. In mental health services, most attention has been paid to people with borderline personality disorder in this respect. The term malignant alienation was coined in 1979 to describe the process whereby therapeutic relationships broke down leading to rejection of the patient by professionals including discharge from care, thus increasing the risk of suicide. This rejection of the patient can be understood in psychodynamic terms as acting out of a countertransference (ie, the therapist’s emotional reaction to the patient). Differential treatment of people with borderline personality disorder by selective discharge, and through negative interactions, also constitutes discrimination, and is experienced as such by people given this diagnosis, who describe feeling excluded from mental health care on the basis that professionals are unable to or do not wish to help. Psychiatric nurses describe feeling fear of the consequences of self-harm; frustration at what they feel is manipulative behaviour on the part of patients; lack of support from other colleagues; anger; and insufficient knowledge on their own part.

A qualitative study of patients with schizophrenia identified encounters with mental health professionals, which they felt to be discriminatory. They expressed feeling rejected by health professionals focusing on diagnostic tests, which they experienced as little interest in their person and focus on their symptoms. Furthermore, they felt there was only one standard psychiatric treatment for everyone that revolved around drugs and about which they were given insufficient information. Coercive measures and professionals’ therapeutic pessimism were also experienced by patients as discriminatory. Additionally, undesired effects of psychotropic drugs, such as extrapyramidal symptoms and weight gain, were described by service users as having a negative effect on their social relationships by making their disorder visible to others, and thus they felt, involuntarily “outing” their mental health status.

The medical literature on recovery from mental illness is another source of information about behaviours by mental health professionals that service users find discriminatory and that create barriers to personal recovery. One of these is overprotectiveness, which is described as generally hampering positive risk-taking to allow personal development, and specifically results in under-referral to vocational services and to research. In a survey of clinical studies officers, who assist with clinical research in the UK National Health Service, many described clinicians as paternalistic, and suggested they undermine the autonomy of service users by preventing their participation in research by screening them out of lists of eligible service users, or by not informing them about the research. Other barriers to recovery from mental illness identified include an emphasis on risk reduction and low expectations by professionals, reflective of the social restrictiveness and therapeutic pessimism captured by attitude surveys. According to our theoretical framework, the behaviour of health professionals that suggests a socially restrictive attitude might reflect organisational culture and structural stigma. For example, when mental health policy emphasises risk reduction or mental health care is provided in institutions.

**Does stigma affect the quality of physical health care?**

**Quality of care**

Studies show that people with mental illness and substance misuse disorders receive lower quality treatment for various physical illnesses including cardiovascular disease, diabetes, HIV, hepatitis, and cancer than do people without mental illness. Less is known about the role stigma has in the decreased quality of care. Corrigan and colleagues showed a correlation between attitudes and treatment intentions in mental health and primary care professionals working for the US Veterans Health Administration. Path analyses showed participants who endorsed stigmatising characteristics of a patient with schizophrenia described in a vignette were more likely to believe he would not adhere to treatment; as a result, they were less likely to refer the patient to a specialist or to refill their prescription.

Evidence from the USA shows family physicians are less likely to believe that patients with previous episodes of depression have serious medical disorders causing physical symptoms, which leads to increased reluctance to initiate investigations of underlying disease based on symptoms. This reluctance might reflect the misattribution of physical symptoms to pre-existing mental illness, known as diagnostic overshadowing. A study using qualitative interviews of emergency department nurses and doctors showed that this reluctance is a fairly well recognised problem that can lead to adverse consequences from delay in treatment to death. Some of the professionals interviewed also reported that they avoid people who have symptoms of mental illness owing to their fear of violence, which might also adversely affect the quality of care for these patients.

The fear of patients with substance misuse disorders has also adversely affected the quality of care for these patients.

**Self-harm and borderline personality disorder**

Much of the evidence for decreased stigmatisation by health professionals comes from assessment of their
<table>
<thead>
<tr>
<th>Aim</th>
<th>Design</th>
<th>Sampling strategy (N)</th>
<th>Type of professional and setting</th>
<th>Country</th>
<th>Assessment</th>
<th>Results</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mukherjee et al (2002)⁶⁴</td>
<td>Study the attitudes and opinions of doctors and medical students with regard to psychiatric illness</td>
<td>Cross-sectional</td>
<td>Self-selected convenience sample; medical students (520)</td>
<td>Medical students and doctors in a teaching hospital in London, UK</td>
<td>Scale used by Crisp et al (2000); no vignettes</td>
<td>More than 50% felt patients with schizophrenia, and drug and alcohol addiction were dangerous, unpredictable; most felt patients were not to blame for condition</td>
<td>Questions highlighted some points—eg, whether patients were in the acute phase which could have led to confusion and ambiguity</td>
</tr>
<tr>
<td>Naeem et al (2006)⁶³</td>
<td>Assess the attitudes of medical students and doctors</td>
<td>Cross-sectional</td>
<td>Self-selected convenience sample (294); response rate 59%</td>
<td>Medical students and doctors</td>
<td>Purpose written questionnaire including items from a survey developed by Crisp et al (2000); no vignettes</td>
<td>Negative attitudes toward schizophrenia, alcohol and drug problems, considered patients dangerous, unpredictable; doctors less negative towards mental illness</td>
<td>Unable to include doctors with more than 10 years’ experience owing to low numbers</td>
</tr>
<tr>
<td>Fernando et al (2009)⁶⁵</td>
<td>Examine negative attitudes towards mental illness by Sri Lankan doctors and medical students and compare with equivalent UK and other international data</td>
<td>Cross-sectional</td>
<td>Self-selected convenience sample; medical students (574); response rate 54%; doctors (72), response rate 36%</td>
<td>Medical students in the University of Colombo, doctors working in surgical and medical specialties in the National Hospital of Sri Lanka</td>
<td>Based on scales in Crisp et al (2000) and Mukherjee et al, (2002), no vignettes</td>
<td>More stigmatisation of patients with depression, alcohol, and drug addiction compared with UK; patients with schizophrenia less stigmatised, students had more negative attitudes</td>
<td>Majority of the participants had limited medical experience so might not be generalisable; social desirability</td>
</tr>
<tr>
<td>Bjorkman et al (2008)⁶⁶</td>
<td>Investigate attitudes towards mental illness and people with mental illness in nursing staff working in psychiatric or somatic care</td>
<td>Cross-sectional</td>
<td>Self-selected convenience sample (120); response rate 80%</td>
<td>Nurses and assistant nurses</td>
<td>Modified, translated form of the Level of Familiarity Questionnaire; no vignettes</td>
<td>Negative attitudes, towards patients with schizophrenia, more negative attitudes in nurses in somatic care, younger nurses, and nurses with less professional experience</td>
<td>In some cases the significant differences are only small differences between subgroups</td>
</tr>
<tr>
<td>Gilchrist et al (2011)⁶⁷</td>
<td>Compare regard for working with different patient groups between different professional groups in different health care settings</td>
<td>Multicentre cross-sectional comparative</td>
<td>Random samples in five countries (866); convenience samples in three countries; and samples of professionals in eight countries</td>
<td>Physicians, general and psychiatric nurses, psychiatrists, psychologists, and social workers, general psychiatrists, and addiction services</td>
<td>MCIRS; no vignettes</td>
<td>Regard for working with alcohol and drug users was consistently lower than for working with other patient groups (such as with diabetes or depression) across all countries</td>
<td>Convenience sample decreased generalisability; selection bias; small sample of psychiatrists, psychologists, and social workers decreased statistical power, MCIRS might not be applicable to all professions</td>
</tr>
<tr>
<td>Hori et al (2011)⁶⁸</td>
<td>Investigate whether the attitudes toward schizophrenia differ between the general public and health-care professionals</td>
<td>Cross-sectional</td>
<td>Self-selected convenience sample (445; 450 approached, five excluded); included general population, psychiatric staff, physicians, and psychiatrists</td>
<td>Psychiatric staff, psychiatrists, and physicians</td>
<td>Purpose written questionnaire with use of some items from questionnaire previously published; no vignette</td>
<td>Psychiatrists scored lower for stigma and were least negative towards schizophrenia; general population and physicians were equally stigmatising</td>
<td>Some respondents may have supplied false information; few psychiatrists enrolled, risk of type II error; gender distribution unbalanced</td>
</tr>
<tr>
<td>Minas et al (2011)⁶⁹</td>
<td>Examine whether attitudes of hospital staff towards patients with mental illness are associated with different attitudes than towards a patient with diabetes</td>
<td>Cross-sectional</td>
<td>Convenience sample, diabetes vignette (295) and mental illness vignette (356); response rate 67.8%</td>
<td>General hospital health professionals (doctors, nurses, paramedics) in a large university general hospital</td>
<td>Questionnaire using vignettes and includes items adapted from the Opinions about Mental Illness Scale</td>
<td>Mental illness vignette showed low ratings for care and support, high ratings for avoidance and negative stereotype expectations</td>
<td>Convenience sample difficult to generalise results; social desirability bias</td>
</tr>
<tr>
<td>Neauxport et al (2012)⁷⁰</td>
<td>Investigate the effect of a psychiatric label on the attitudes of medical residents towards an individual</td>
<td>Cross-sectional</td>
<td>All of target population, random allocation (322); response rate 47.4%</td>
<td>Medical residents of all specialties in a university hospital</td>
<td>Two vignettes were created and a modified version of the Social Distance Scale</td>
<td>Residents allocated to the psychiatric-diagnostic label group were less at ease with becoming the individual’s next door neighbour and working in the same place</td>
<td>Presentation in the emergency department might have altered residents’ responses because this occurrence might indicate a more serious psychiatric disorder (Table 2 continues on next page)</td>
</tr>
</tbody>
</table>
training to improve mental health and general medical professionals’ attitudes to people who self-harm, and with borderline personality disorder, whom they find particularly difficult to treat (table 3). Commons Trelor and Lewis99 point out that this is partly because the medical model used does not provide the knowledge and skills that professionals need to treat people with these difficulties. An assessment100 of training to improve attitudes to people who self-harm and to people with borderline personality disorder showed psychologists had more positive attitudes than doctors and nurses, but their attitudes showed no association with having had specific training, whereas the attitudes of doctors and nurses were more positive if they had received training. This association was shown in Belgium98 and is consistent with several assessments of training.94–96 One study101 included a 6 month follow-up showing little if any decrease in the improvement of attitudes in mental health professionals. Training might be differentially effective in professional groups; another study showed that improvements in attitudes were only seen in female health professionals and in those with less than 15 years’ experience.94 The authors suggest that women’s greater empathy, and entrenched attitudes in those with more than 15 years’ experience, might explain these differences.

Substance misuse
A systematic review102 of stigmatisation by health professionals of people with substance misuse disorders showed evidence for a positive effect of supportive organisational factors such as supervision and training policies on professionals’ attitudes to working with these patients. We identified a few intervention studies103–106 aimed at the improvement of health professionals’ knowledge, attitudes, and behaviour towards people with substance misuse disorders. One randomised study103 of acceptance and commitment therapy (used to teach experiential acceptance, cognitive defusion, mindfulness, and values clarification to decrease the effect of negative thoughts and feelings; for instance, their believability, behaviour in response to them) in comparison with multicultural training for substance misuse counsellors showed that acceptance and commitment therapy was more effective at 3 months’ follow-up, decreasing both stigmatisation of patients and burnout. Another study107 of advanced training in drug misuse for general practitioners, showed improved knowledge, attitudes, and prescribing confidence, and greater involvement in the treatment of drug misusers than in those on the waiting list for training. The authors of this study point out this group was self-selected, wanted training, and already had positive attitudes towards drug misusers. A 1987 survey108 provides grounds for optimism that stereotypes can change over time. Although professionals’ attitudes in the 1980s showed substantial desirability bias, another study109 psychiatrists in Turkey showed the most positive views of personality and the most negative views of treatability.

<table>
<thead>
<tr>
<th>Study aim</th>
<th>Study design</th>
<th>Total sample size and sampling strategy</th>
<th>Type(s) of professional, setting and country</th>
<th>Country</th>
<th>Measure</th>
<th>Results</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bander et al 1987108</td>
<td>To examine differences in attitude, knowledge, and treatment of alcoholism among physicians in three different specialties</td>
<td>Cross-sectional</td>
<td>Self-selected convenience sample (202); response rate 52%</td>
<td>Full and part time physicians working in the medicine, surgery, and psychiatry departments in a tertiary care teaching hospital</td>
<td>USA</td>
<td>Questionnaire with vignettes</td>
<td>Overall negative perceptions of alcoholics’ personality; psychiatrists held the most positive views toward treatability, and the most negative views toward personality; whereas surgeons held the most positive views of personality and the most negative views of treatability</td>
</tr>
</tbody>
</table>

MRCS=Medical Condition Regard Scale.

Table 2: Studies assessing whether health professionals hold stigmatising attitudes towards people with mental health disorders

Interventions to decrease stigma in mental illness
Apart from studies about people with specific diagnoses, we identified two on mental illness. Both used internet-based interventions. In one study110 psychiatrists in Turkey were randomly assigned to receive an instructional email about stigma; controls received a questionnaire on social distance. The intervention group had significantly lower scores for social distance than the control group. No baseline assessment was done, however, and the response rate was 41 (22%) of 205, and there was a risk of social desirability bias. Another randomised study111 provided internet-based education on mental illness to professionals working in long-term care facilities in the USA. After adjustment for pretest scores, significant positive differences were found for all outcomes including measures of knowledge, attitudes (stereotype endorsement), empathy, self-efficacy, and intentions.
<table>
<thead>
<tr>
<th>Aim</th>
<th>Design</th>
<th>Sampling strategy (N)</th>
<th>Type of professional and setting</th>
<th>Country</th>
<th>Measure</th>
<th>Intervention</th>
<th>Follow-up</th>
<th>Results</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assess attitudes of mental health and emergency medicine clinicians towards patients with BPD</td>
<td>Cross-sectional survey</td>
<td>Self-selected convenience sample (416)</td>
<td>Mental health and emergency medicine clinicians</td>
<td>USA</td>
<td>Opinion</td>
<td>Educational, self-assessment</td>
<td>None</td>
<td>None</td>
<td>Self-selected convenience sample; might be unable to generalise results</td>
</tr>
<tr>
<td>Commons et al (2008)</td>
<td>Self-selected convenience sample (416)</td>
<td>Opinion</td>
<td>Educational, self-assessment</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Muehlenkamp et al (2013)</td>
<td>None</td>
<td>None</td>
<td>Mental health clinicians had significantly more positive attitudes toward borderline personality disorder compared with emergency medicine clinicians; allied health professionals had significantly more positive attitudes toward borderline personality disorder than nursing or medical staff</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Information on type of training received was not assessed, unclear what type of training is most useful in promoting positive attitudes</td>
</tr>
<tr>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Significantly more positive empathy, less negative attitudes; mental health providers had more positive attitudes than medical professionals</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Miller and Davenport (1996)</td>
<td>Randomised controlled trial</td>
<td>Randomised sample (416)</td>
<td>After intervention</td>
<td>After intervention</td>
<td>Participants reported greater empathy towards patients with borderline personality disorder, greater knowledge of, and attitudes toward patients with borderline personality disorder, and their desire to work with them; significantly less likely to express dislike for patients with borderline personality disorder</td>
<td>Significant change in knowledge of, and attitudes toward, patients with borderline personality disorder</td>
<td>After intervention; 6 months</td>
<td>After intervention</td>
<td>„Educational package” on dealing with borderline personality disorder; 2 days</td>
</tr>
<tr>
<td>Shanks et al (2011)</td>
<td>Cross-sectional survey</td>
<td>Self-selected convenience sample (241)</td>
<td>Mental health care professionals</td>
<td>USA and New Zealand</td>
<td>Opinion</td>
<td>Educational; self-instructional programme on nurses’ attitudes toward patients with borderline personality disorder</td>
<td>None</td>
<td>None</td>
<td>Limited number of participants; no matched control group</td>
</tr>
<tr>
<td>Common et al (2008)</td>
<td>Cross-sectional survey</td>
<td>Self-selected convenience sample (416); delivered to 910; 241 excluded; 251 lost to follow-up</td>
<td>After intervention</td>
<td>After intervention</td>
<td>After workshop: significant improvement in all six items of questionnaire; 6 month follow up: score remained the same or showed non-significant decrease</td>
<td>After workshop; significant change in knowledge of, and attitudes toward patients with borderline personality disorder</td>
<td>None</td>
<td>After workshop</td>
<td>Significant improvement in clinician attitude ratings towards working with deliberate self-harm behaviours in patients with borderline personality disorder</td>
</tr>
<tr>
<td>Kowit et al (2004)</td>
<td>Cross-sectional survey</td>
<td>Self-selected convenience sample (416)</td>
<td>After intervention</td>
<td>After intervention</td>
<td>After intervention; 6 months</td>
<td>After intervention</td>
<td>None</td>
<td>After intervention</td>
<td>After workshop; significant change in knowledge of, and attitudes toward patients with borderline personality disorder</td>
</tr>
<tr>
<td>Samuels et al (2002)</td>
<td>Cross-sectional survey</td>
<td>Self-selected convenience sample (47)</td>
<td>Psychiatric nurses</td>
<td>Sweden</td>
<td>Opinion</td>
<td>Educational, self-assessment</td>
<td>None</td>
<td>None</td>
<td>Noses had indexed understanding in decision making and willingness to care; suicide-risk of patients with borderline personality disorder</td>
</tr>
<tr>
<td>Aim</td>
<td>Design</td>
<td>Sampling strategy (N)</td>
<td>Type of professional and setting</td>
<td>Country</td>
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<tr>
<td>To measure changes in knowledge, attitudes, and practice of family doctors enrolled for training in the management of drug misusers</td>
<td>Randomised controlled trial</td>
<td>Original population—137 (112)</td>
<td>General practitioners working in primary care practices</td>
<td>England</td>
<td>Drug and Drug Problems Perceptions Questionnaire, Drug Problems Occupationally Perceived Questionnaire, and other questionnaires</td>
<td>Educational; certificate course; 5 training days for 6 months</td>
<td>After intervention</td>
<td>Improvements in attitudes and behaviour greatest in intervention group, only “role security” and “situational constraint” significant</td>
<td>None stated by the authors</td>
</tr>
<tr>
<td>Assess “Caring Skills: Working with Mental Illness”</td>
<td>Randomised controlled trial</td>
<td>91% completed all three surveys (172)</td>
<td>Carers in nursing homes</td>
<td>USA</td>
<td>Video situational testing, purpose written questionnaire, attribution questionnaire; no vignettes</td>
<td>Educational; internet based training programme; each course 10–30 min</td>
<td>2, 4, and 8 weeks after intervention</td>
<td>Significant group differences in self-efficacy, knowledge, attitudes, intentions, empathy; training effects were maintained throughout follow-up</td>
<td>Relied on self-report; self-identified as having limited mental illness training and lacking confidence—might not be representative</td>
</tr>
<tr>
<td>Provide a systematic review of existing research that has empirically assessed interventions designed to decrease stigma related to substance use disorders</td>
<td>Systematic review</td>
<td>Papers identified from 7 databases, reference lists, consulting experts; 13 papers, sample size from 28–445 (median 103)</td>
<td>Medical students, drug and alcohol counsellors, and psychiatrists</td>
<td>USA, UK, Canada, and Australia</td>
<td>Study quality appraisal checklist, Hedge’s g; effect size, standardised stigma-related measures were used in 11 (85%) studies</td>
<td>10 educational-based, two involved contact education, and one involved plastic surgery for intravenous drug users</td>
<td>Three studies (23%) assessed stigma beyond the immediate post-intervention period</td>
<td>All but one study indicated that their intervention produced a positive effect</td>
<td>Adverse events not measured or reported, no masking of assessors or participants; power calculation not done; few studies; heterogeneity across studies</td>
</tr>
<tr>
<td>Assess how training in mental health care can change primary care paramedical health workers’ attitudes toward mental health</td>
<td>Follow-up study</td>
<td>Method of recruitment and response rate unclear (150)</td>
<td>Paramedical health workers</td>
<td>India</td>
<td>35 item questionnaire developed for a previous study</td>
<td>Educational intervention with role plays; 1 week residential course</td>
<td>After intervention</td>
<td>Significant change in the attitudes to items; low frequency of desirable responses in the pre-course questionnaire</td>
<td>Small sample size; social desirability, especially after the course</td>
</tr>
<tr>
<td>Can a simulation game called, “A Day in the Life of an Inpatient” influence in a positive way the attitudes of the staff</td>
<td>Follow-up study</td>
<td>Method of recruitment and response rate unclear (800)</td>
<td>Admission clerks, psychologists, ward attendants, and nurses</td>
<td>USA</td>
<td>A semi-structured session includes a 45 min debriefing and brainstorm about “What does this mean for us as staff?” then a questionnaire 3 months later (no details on this)</td>
<td>Simulation game called “A Day in the Life of an Inpatient”, 1 day</td>
<td>After intervention and at 3 months</td>
<td>3 months after playing the game, staff were more observant of patients and more likely to try to communicate and interact with patients; staff with less patient contact reported greater appreciation for the difficult role of the direct-care staff</td>
<td>Social desirability; different measure used directly after intervention and at 3 months so difficult to make a direct comparison</td>
</tr>
<tr>
<td>Investigate whether an educational intervention improved practising nurses’ recognition of, and responses to, patients with substance-misuse</td>
<td>Follow-up study</td>
<td>Self-selected convenience sample (32)</td>
<td>General health nurses</td>
<td>USA</td>
<td>Substance Abuse Knowledge Survey, Substance Abuse Experience Survey, and SAAS; no vignettes</td>
<td>Educational; 2 full-day workshops, 1 week apart, every year for 3 years</td>
<td>After intervention completion of five workshops, 3 years apart</td>
<td>Clinical confidence ratings of the nurses increased significantly in relation to both alcohol-related and drug-related clinical skills; attitude changes were reflected in the responses to only one subscale of the SAAS treatment optimism</td>
<td>Nurses enrolled had to volunteer to take part; only quantitative data</td>
</tr>
</tbody>
</table>

(Table 3 continues on next page)
<table>
<thead>
<tr>
<th>Aim</th>
<th>Design</th>
<th>Sampling strategy (N)</th>
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<tr>
<td>Graham et al (2010)</td>
<td>Assess whether changes occurred in the trainees’ confidence, mental health literacy, attitudes towards effective treatments, mental health knowledge and skills, and community mental health ideology after Mental Health Aptitudes in Practice training</td>
<td>Follow-up study</td>
<td>Self-selected convenience sample (876); response rate 77.8%</td>
<td>Health and social care workers; police, and youth workers with in and outside school settings</td>
<td>Australia</td>
<td>Purpose written questionnaire; no vignettes</td>
<td>Educational; the Mental Health Aptitudes into Practice training package; 6 months duration</td>
<td>After intervention, at 6 months, and at 12 months</td>
<td>After training, participants had more confidence and less desire for social distance; participants’ knowledge and skills in relation to the treatment of mental health disorders increased; these changes were seen immediately after training; the limited existing evidence suggests these changes are sustained up to 6 and 12 months</td>
</tr>
<tr>
<td>Happell and Taylor (2001)</td>
<td>Investigate whether access to liaison services from a specialist drug and alcohol unit leads to a change in attitudes, confidence, and perceived knowledge related to the care of patients with drug and alcohol problems</td>
<td>Cross-sectional study</td>
<td>Self-selected convenience sample (106); response rate 53%</td>
<td>General hospital nurses working in a large, private medical-surgical hospital in Melbourne</td>
<td>Australia</td>
<td>Purpose written questionnaire; no vignettes</td>
<td>Access to liaison drug and alcohol service</td>
<td>After intervention</td>
<td>The groups who used the drug and alcohol liaison service differed very little from those who did not use the drug and alcohol liaison service with the exception of the perceived knowledge category, which indicated a significant difference</td>
</tr>
<tr>
<td>Patterson et al (2007)</td>
<td>Test the effectiveness of an educational intervention aimed at changing attitudes to self-harm</td>
<td>Controlled follow-up study</td>
<td>Self-selected convenience sample; intervention group (69); control group (22)</td>
<td>Nurses</td>
<td>UK</td>
<td>Self-Harm Antipathy scale</td>
<td>Educational; course titled Understanding and Managing Self Harm and Suicide; 32 days</td>
<td>After intervention and at 18 months</td>
<td>Physicians showed significantly increased knowledge score and willingness to implement new treatment strategies, and more positive attitudes toward, and confidence in, treating depression</td>
</tr>
<tr>
<td>Shirazi et al (2009)</td>
<td>Assess the effect of an educational intervention on depression in family doctors in Iran</td>
<td>Randomised controlled trial and questionnaire</td>
<td>Randomisation; intervention group (96); control group (96)</td>
<td>Family doctors</td>
<td>Iran</td>
<td>Two purpose written questionnaires; included vignettes</td>
<td>Educational; 8 h course</td>
<td>After intervention</td>
<td>Knowledge and attitudes improved in the intervention group compared with the control group</td>
</tr>
<tr>
<td>Wang et al (2012)</td>
<td>Assess whether non-psychiatric physicians would benefit from a national depression training programme</td>
<td>Follow-up study</td>
<td>Self-selected convenience sample (95); response rate 72%</td>
<td>Physicians</td>
<td>China</td>
<td>Depression Attitude Questionnaire and Adapted Intention to Change Depression Management Practices; no vignettes</td>
<td>Educational; 2 day course</td>
<td>After intervention</td>
<td>Physicians showed significantly increased knowledge score and willingness to implement new treatment strategies, and more positive attitudes toward, and confidence in, treating depression</td>
</tr>
</tbody>
</table>

Table 3: Studies assessing whether stigma and discrimination can be decreased in a health-care context

SAAS=Substance Abuse Attitude Scale.
Although training for health professionals might address stereotypes or attitudes toward patients with mental illness\textsuperscript{99,105,106} we identified only one study of an antistigma intervention for health professionals that was for paramedical health workers at primary health-care centres in India;\textsuperscript{107} attitudes showed improvement immediately after the course. Modgill and colleagues\textsuperscript{108} developed the Opening Minds Stigma Scale for health-care providers to assess the effect of 37 contact-based education projects, done as part of Canada’s Opening Minds antistigma programme; this study is ongoing.

**Conclusions**

In view of our framework, clearly very few studies address more than one level of stigma, and almost all focus on interpersonal stigma. We suggest that future work should address all three levels of stigma and the relations between them. We postulate that organisational culture and structural stigma might moderate the effectiveness and durability of any effects of interventions directed solely at health professionals to decrease stigmatisation of patients, and suggest the need for long-term or recurrent interventions and interventions targeted at structural and organisational levels. For example, reasonable adjustments for people with mental illness by organisations to promote equal access to physical health care are likely to necessitate organisational change and funding. Although organisational level interventions might be studied with cluster randomised trials, quasi-experimental designs are needed to evaluate national level interventions,\textsuperscript{110} changes to legislation,\textsuperscript{111} or changes in national policy, such as redistribution of funding from physical to mental health care, or changes to the training mandated by professional regulatory bodies.

For interpersonal stigma, our findings suggest that mental health professionals, early career professionals, men, and professionals with burnout are particularly in need of interventions to decrease their stigmatisation of patients. The use of contact interventions in Canada\textsuperscript{110} is based on meta-analyses of interventions in other groups,\textsuperscript{111} and the authors suggest that professional contact, although associated with improved attitudes in terms of civil rights, does not decrease stigmatisation generally. The evidence for contact interventions is limited to effects on professionals’ knowledge and attitudes rather than behaviour, and follow-up periods tend to be short.\textsuperscript{116} The same limitations apply to many studies of education and training for professionals to decrease stigma towards people who self-harm or have borderline personality disorder or substance misuse disorders. Nevertheless, the results of educational interventions should not be ignored because they suggest that education might be an effective strategy to target health professionals who have had little training in mental health. Apart from the direct effect of improved knowledge on health professionals’ attitudes an indirect effect might occur through increased confidence and skills to treat people with mental illness. A more positive interaction with the patient could result so that they are no longer perceived as difficult to treat. A combination of both education and contact with patients is not difficult and should be considered as an intervention. Finally, the study\textsuperscript{115,116} on acceptance and commitment therapy suggests that interventions to prevent and decrease professional burnout should be explored for their potential to decrease the enactment of stigma in health care.

Whether service users can affect changes in professionals’ attitudes, or structural discrimination, is unknown. Current anecdotal evidence for such processes suggests further study in this area is needed.\textsuperscript{99,105}

Irrespective of the type of intervention and research design, it will be important to use measures of the quality of mental and physical health care such as discrimination rated by service users to evaluate studies on interventions to reduce stigma in health care. Such measures could also be used for routine audit of mental and physical health care for people with mental illness.

The paucity of intervention studies besides training to improve health professionals’ attitudes toward people with specific diagnoses might reflect the limitations of our search strategy. Studies on professionals’ attitudes to service users that might be relevant but that do not address stigma were excluded. Our search strategy excluded some surveys from non-western countries.

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**Search strategy and selection criteria**

We searched Medline, PsychINFO, CINAHL, AMED, and the Social Science Citation Index databases to identify full-text, peer-reviewed, data-based studies and reviews (editorials and opinion pieces were excluded). Articles in any language were included from Jan 1, 1980 to April 9, 2014. Articles were included that we judged to represent health-care professionals’ (counsellors were excluded) attitudes or opinions towards, or stigmatisation of, individuals with mental health disorders (dementia, developmental disorders, and learning disabilities were excluded). Any study design was included, but required a comparison of health professionals and mental health professionals and the general public or health-care students, or a comparison of the attitudes of health professionals towards individuals with mental health disorders and those without.

We searched terms covering all relevant types of health professional such as doctor\textsuperscript*, or clinician\textsuperscript*, or psychiatrist\textsuperscript*, or health\textsuperscript*, provider\textsuperscript*, or nur\textsuperscript* to within 5 words of a stigma term, such as stigma\textsuperscript*, or stereotyp\textsuperscript*, or discrimination or prejudi\textsuperscript*, or social distanc\textsuperscript*, or disrespect\textsuperscript*, or under treatment, or diagnostic overshadow\textsuperscript*, or attitud\textsuperscript*, and mental health terms such as mental disorder\textsuperscript*, or mental health, or mental\textsuperscript* ill\textsuperscript*, or psychiatrist\textsuperscript*, or psychological disorder, or terms relating to specific disorders. We checked reference lists of included papers and of reviews on mental-health stigma by our group and by others.
which means that we are not able to address whether professionals’ stigma differs in high-income and low-income regions or in other parts of the world. The medical literature shows attention is being paid to the problem of stigma in health care, but the implementation of training or other interventions might be difficult in view of professionals’ time constraints and different priorities. Disparities in mortality and health in people with mental illness and their negative experiences of physical and mental health care described in this Review underscore the need for leaders within all health professions and health-care organisations to prioritise intervention at all levels, using the available evidence.

Contributors

CH had input into the research questions, advised on the search strategy and selection criteria and on inclusion of papers for which there was uncertainty, wrote the first draft of the manuscript, and revised the Review after contributions from coauthors. JN had input to the research questions and to the search strategy and selection criteria, implemented the original search strategy and did the search after revisions, drafted table 3, and edited the manuscript. HP had input to the research questions and into the search strategy and selection criteria; implemented the original search strategy and did the search after revisions, drafted table 3, and edited the manuscript. SC contributed to the formulation of the research questions and inclusion criteria, and development of the search strategy, and critically revised the first and final drafts of the Review and tables. AC reviewed articles identified through the search for inclusion or exclusion, and reviewed the manuscript. OG-G reviewed articles identified through the search strategy for inclusion, or exclusion, and reviewed the manuscript. BS wrote a paragraph on stigma experiences of service users in mental health care, contributed to the literature search, provided references, and commented on several drafts of the Review. BD reviewed, provided comments, and input to the Review. GT wrote the first draft of the summary, reviewed, and provided comments on the Review.

Declaration of interests

We declare no competing interests.

References

17 Lawrence D, Hancock, KJ, Kiselis S. The gap in life expectancy from preventable physical illness in psychiatric patients in Western Australia: retrospective analysis of population based registers. BMJ 2013; 346:f22539.
27 Cai X, Li Y. Are AMI patients with comorbid mental illness more likely to be admitted to hospitals with lower quality of AMI care? PLoS One 2013; 8:e60258.
52 Bell JS, Johns R, Chen T. Pharmacy students’ and graduates’ attitudes towards people with schizophrenia and severe depression. Am J Pharm Ed 2006; 70: 1–6.
78 Schulze B, Janeiro, M Kiss, MH. Das kommt ganz drauf an... Strategien zur stigmabewältigung von menschen mit schizophrenie und borderline-persönlichkeitstorung. [It all depends... Strategies for managing stigma among people with schizophrenia and borderline personality disorder]. Psychiatr Psychol Psychother 2010; 58: 275–85.