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Reducing mental illness stigma in health care students and professionals: a review of the literature

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Abstract

Objective: The aim of this study was to examine the effectiveness of interventions designed to reduce mental illness stigma among healthcare students and professionals.

Method: A literature search was conducted using the Cochrane Library and PubMed.

Results: Randomised controlled trial level evidence demonstrated that interventions involving direct contact, indirect filmed contact or an educational email effectively reduced stigma in the short term. Role play was the only intervention with randomised controlled trial level evidence demonstrating no effect. There was not enough evidence to suggest that any intervention can maintain stigma reduction over time.

Conclusions: Stigma reduction in healthcare students and professionals needs to be sustained over time if it is to result in positive changes for people living with mental illness. Further research is needed to determine which interventions, if any, can achieve this. Only then will large-scale implementation of a stigma reduction intervention be feasible and beneficial to people living with mental illness.

Keywords: mental illness, stigma, prejudice, healthcare professionals, health care students

Stigma is a sign of disgrace that sets a person apart.[1] Mental illness stigma exists among the general public,[1–5] leading to prejudice and discrimination against people living with mental illness in many areas of life, such as employment, housing and social relationships.[3] Perhaps less widely recognised is the fact that stigma also exists among healthcare students and professionals; people directly involved in helping those living with mental illness.[6–8] This stigma discourages involvement in healthcare[4] and results in under-diagnosis and mistreatment of physical complaints,[1] leading to poor outcomes for people living with mental illness.

Many interventions have been developed to reduce mental illness stigma in an effort to combat the harm it causes. Interventions fall into three broad categories: contact; education; protest. Contact challenges stigma through direct interaction between participants and people living with mental illness or their carers; education aims to replace stigmatised beliefs with more accurate conceptions about mental illness; protest aims to directly suppress stigmatised beliefs and associated behaviours.[3]

At present, there is no synthesis of available evidence on interventions for reducing mental illness stigma specifically in healthcare students and professionals. This literature review aims to fill this gap.

Methods

Aims

This literature review aims to address the research question: how effective are interventions designed to reduce mental illness stigma in health care students and professionals?

Inclusion and exclusion criteria

Studies were included if they featured any intervention aimed at reducing the stigma of any mental illness in

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healthcare students or professionals. Interventions could include education, contact or protest elements, or a combination of these, but had to be an addition to normal curriculum or clinical work, i.e. studies where the intervention was a psychiatric rotation that formed a standard part of students' curriculum were excluded. The population of included studies could be students or professionals of any healthcare-related discipline, such as medicine, pharmacy, nursing or psychology. Studies also needed to include evidence of a stigma-related outcome: social distance; attitudes; empathy/emotional response; behaviour; knowledge. To be included, studies had to be databased and a full text version needed to be available in English.

Search strategy

Electronic searches of The Cochrane Library and PubMed were conducted on 1 March 2014. The following search terms were used: (stigma reduc* OR anti-stigma) AND (mental illness OR psych* illness) AND (worker* OR professional* OR student* OR doctor*). Reference lists of included studies were searched and relevant references were identified and included. Special 'stigma issues' of the *British Journal of Psychiatry* (volume 202, issue 55 (Supplement)) and the *American Journal of Public Health* (volume 103, issue 5) were also searched and relevant studies included.

Organisation and analysis of evidence

Studies were grouped according to type of intervention – contact, education or mixed education and contact (no studies used protest interventions), as displayed in Tables 1–3. The effectiveness of each type of intervention was assessed, taking into account the study design (randomised controlled trials (RCTs) were given the most weight), number of participants and results.

Results

Search results

From the search of The Cochrane Library and PubMed, 52 titles were identified, nine of which were deemed relevant, one was excluded due to lack of access to an English language version and the remaining eight were included. One relevant article was identified and included from journal 'stigma issues'. A further nine relevant articles were found from reference checking; one was excluded due to lack of access to an English language version and eight included. A further study was found incidentally during the search process. In total, 18 studies were included in this review.

Study characteristics

Most of the 18 included studies used students as the target population, with the exceptions of Schmetzer et al. and Bayar et al., which used psychiatric residents/specialists, and Ucok et al., which used general practitioners.[13,17,20] Numbers of participants ranged from 1452[25] to 25.[22] The most common outcome measures were attitudes, social distance, knowledge and behaviour. Length of follow-up varied, with O'Reilly et al. having the longest follow-up period of 12 months.[14]

Seven studies used contact interventions, either direct (face-to-face) or filmed. Three of these were RCTs, the remaining four were pre-post/comparative studies as displayed in Table 1.

Five studies featured education-based interventions including lectures, role plays, mental health first aid training and email. Two were RCTs, one a non-RCT and two were pre-post studies, as shown in Table 2.

The remaining six studies used interventions featuring both education and contact elements. Two were non-RCTs and four were pre-post studies, as displayed in Table 3.

Analysis of evidence

All studies that featured direct contact interventions demonstrated stigma reduction as a result of the intervention. The strongest evidence for this comes from two RCTs: Pattern et al.; Clement et al.[9,10] Three studies examined the effect of indirect filmed contact, with conflicting results.[10–12] Kerby et al. found no statistically significant differences between indirect filmed contact and control.[11] In contrast, Clement et al. demonstrated that indirect filmed contact was as effective as direct contact at reducing stigma overall and more effective at improving knowledge.[10] Nguyen et al. found that both direct and indirect filmed contact improved social distance and stigma; however, the positive effect was stronger in the direct contact group.[12] Although a RCT, the small sample size of Kerby et al. may have contributed to the lack of statistically significant results. It is likely that indirect filmed contact is effective at reducing stigma, as found by the larger RCT Clement et al. and supported by Nguyen et al.[10,12]

In terms of follow-up, improvements in the attitudes and behaviour of direct and indirect contact groups in Clement et al. had significantly decreased at four months.[10] In contrast, O'Reilly et al. was the only study to show that stigma reduction was maintained long-term at 12 months after the intervention.[14] While this is promising, without a control group it is not possible to determine whether students had other experiences during the follow-up period that may have contributed to the result. At present, there is not enough evidence to suggest that any contact interventions can maintain benefits over time.

Of the five education intervention studies, four showed a reduction in stigma after the intervention. The exception was Roberts et al., which demonstrated RCT level

Table 1. Characteristics of contact intervention studies

Reference and country	*Study type*	*N (invited/ started/ completed)*	*Population*	*Intervention*	*Comparison*	*Length of follow-up*	*Outcome measures*
Pattern et al., Canada[9]	Randomised controlled trial	211/131/74	Pharmacy students	Direct contact with patient/ carer	No intervention	Immediate and 1 month	Social distance, disclosure, self-stigma, prejudice, social responsibility (OMS-HC)
Clement et al., UK[10]	Randomised controlled trial	430/360/193	Nursing students	Direct contact with patient/ carer OR indirect filmed contact	Traditional lecture about stigma	Immediate and 4 months	Knowledge (SCILO), attitude (MICA and ERMIS), behaviour (RIBS), acceptability and process
Kerby et al., UK[11]	Randomised controlled trial	82/46/41	Medical students	Indirect filmed contact with patient	Unrelated film	Immediate and 2 months	Social distance (SDS), perceived dangerousness (DS), attitude (ATSMIS), attitude to psychiatry (APS)
Nguyen et al., Australia[12]	Non-randomised comparative study	476/349/244	Pharmacy students	Direct contact with patient OR indirect filmed contact	N/A	Immediate	Social distance (SDS), behaviour (AQ), stigmatisation, service delivery
Schmetzer et al., USA[13]	Pre-post study	292 per year/ unspecified/ unspecified	Medical students and 1st year psychiatric residents	Direct contact with carers	N/A	Immediate	Attitude, knowledge
O'Reilly et al., Australia[14]	Pre-post study and focus groups	258/225/178	Pharmacy students	Direct contact with patient	N/A	6 weeks and 12 months	Service delivery, stigmatisation
Buhler and Karimi, USA[15]	Pre-post study	unspecified/ 48/48	Pharmacy students	Direct contact with peer-level patient	N/A	Immediate	Social distance (SDS), knowledge

OMS-HC: Opening Minds Survey for Healthcare Providers; SCILO: Social Contact and Intended Learning Outcomes; MICA: Mental Illness: Clinicians Attitude Scale; ERMIS: Emotional Reactions to Mental Illness Scale; RIBS: Reported and Intended Behaviour Scale; SDS: Social Distance Scale; AQ: Attribution Questionnaire; DS: Dangerousness Scale; ATSMIS: Attitudes Toward Serious Mental Illness Scale; APS: Attitude to Psychiatry Scale.

evidence that a single role-play session had no statistically significant effect on stigma.[16] Bayar et al., the only other RCT with an education intervention, showed that a single email containing information about stigma was effective in reducing stigmatising attitudes.[17] O'Reilly et al. demonstrated that mental health first aid training improved mental health literacy and social distance.[18] Mino et al. and Ucok et al. showed that lecture-style

Table 2. Characteristics of education intervention studies

Reference and country	Study type	N (invited/ started/ completed)	Population	Intervention	Comparison	Length of follow-up	Outcome measures
Roberts et al., UK [16]	Randomised controlled trial	332/332/332	Medical students	Education session and role play	No intervention	1 week	Social distance (SDS), attitude, perceived stigma
Bayar et al., Turkey[17]	Randomised controlled trial	918/205/205	Psychiatric residents and specialists	Email containing information about stigma	No intervention	Immediate	Social distance
O'Reilly et al., Australia[18]	Non-randomised controlled trial	272/258/223	Pharmacy students	Mental health first aid training	No intervention	6 weeks	Social distance (SDS), mental health literacy, service delivery
Mino et al., Japan[19]	Pre-post study	189/153/151	Medical students	1 hour education programme	No intervention	Immediate	Social distance, attitudes
Ucok et al., Turkey[20]	Pre-post study	Unspecified/ 106/54	General practitioners	Anti-stigma education session and distribution of related documents	N/A	3 months	Knowledge, attitudes

SDS: Social Distance Scale.

interventions improved attitudes.[19,20] Ucok et al. showed that these improvements were sustained at 3 months.[20] However, as in O'Reilly et al., these results are difficult to interpret without a control group. As for contact interventions, there is not enough evidence to suggest that any education intervention can sustain stigma reduction over time.

Six studies combined education and contact elements to create mixed interventions of various types, all of which demonstrated positive effects. The combination of a lecture and direct contact was found to reduce stigma in two non-RCTs and two pre-post studies.[21,22,25,26] The addition of role-play to the lecture and direct contact in one experimental group of Kassam et al. did not result in further improvement.[21] This concurs with Roberts et al., which found role play to be ineffective at reducing stigma.[16] Mann and Himelein found that a narrative teaching method combined with filmed contact significantly reduced stigma, but had no effect on knowledge.[23] While Webster found no quantitative difference between a creative reflective clinical experience compared with a traditional clinical experience, the qualitative data from this study suggest the intervention was helpful for reducing stigma, improving attitudes and promoting empathy.[24] The two studies with follow-up components, Altindag et al. and Friedrich et al. both found that benefits from the interventions were lost over time.[22,25] With no RCTs of mixed interventions, the evidence for this group is not as strong as that for contact or education alone. However, given the RCT level evidence demonstrating the efficacy of direct or indirect contact,[10] it is likely that mixed interventions that include similar contact are effective at reducing stigma, but this effect is not sustained over a prolonged period.

Discussion

Stigma reduction

The evidence suggests that interventions featuring direct contact, indirect filmed contact or educational email effectively reduce stigma in healthcare students and professionals; however, this effect is lost over time. Role play is the only intervention shown to be ineffective.[16] While other interventions may also be effective, as suggested by the non-RCTs and pre-post studies in this review, there is not yet RCT level evidence to support this.

Unless stigma reduction can be sustained over time, the cost of implementing an intervention will outweigh the benefits. All RCTs with substantial follow-up periods showed that any benefit from the intervention diminished over time.[10,11] O'Reilly et al. and Ucok et al. demonstrated sustained stigma reduction over time;[14,20] however, further research is needed to confirm this finding.

Table 3. Characteristics of mixed (education and contact) intervention studies

Reference and country	*Study type*	*N (invited/ started/ completed)*	*Population*	*Intervention*	*Comparison*	*Length of follow-up*	*Outcome measures*
Kassam et al., UK[21]	Non-randomised controlled trial	Unspecified/ 110/110	Medical students	Lecture + direct contact with patient/carer OR Lecture + direct contact with patient/ carer + role play	No intervention	1 week	Knowledge, attitudes, (MICA), behaviour
Altindag et al., Turkey[22]	Non-randomised controlled trial	32/25/25	Medical students	Lecture + direct contact with patient + film ('A Beautiful Mind')	Unrelated lecture and film	Immediate and 1 month	Attitudes, social distance
Mann and Himelein, USA[23]	Pre-post study	Unspecified/ 101/101	Psychology students	Narrative education and filmed contact with patients	Traditional diagnosis focused education	Immediate	Social distance, attitudes, knowledge
Webster, USA[24]	Quasi-experimental pre-post study	Unspecified/ 73/73	Nursing students	Creative reflective education and clinical experience (direct contact)	Traditional clinical experience (direct contact)	Immediate	Empathy (IRI)
Friedrich et al., UK[25]	Pre-post study	Unspecified/ 1452/1452	Medical students	Lecture + contact with patient/carer + role play	No intervention	Immediate and 6 months	Knowledge (MAKS), attitudes (CAMI), behaviour (RIBS), empathy (JS)
Coodin and Chisholm, Canada[26]	Pre-post study	Unspecified/ 34/34	Medical students	Educational seminar including direct contact with patient	No intervention	Immediate	attitudes

IRI: Interpersonal Reactivity Index; MICA: Mental Illness: Clinicians Attitude Scale; MAKS: Mental Health Knowledge Schedule; CAMI: Community Attitudes toward the Mentally Ill; RIBS: Reported and Intended Behaviour Scale; JS: Jefferson Scale.

Limitations

The limitations of this literature review include the exclusion of some potentially relevant studies due to lack of access to an English language version. This review did not include a statistical analysis of study results and all outcome measures were considered equally, when some may be better indicators of stigma than others. Perhaps one of the most significant limitations is the fact that the majority of studies in this review used students as the target population, with only three studies using healthcare professionals[13, 17, 20]. It is possible that these two target populations respond differently to stigma reduction interventions; thus, the results of this review may not be generalizable to all healthcare professionals.

Implications for future research and practice

Without evidence of long-term benefits from stigma reduction interventions, it is difficult to justify the costs of implementing any intervention on a larger scale.

More research, particularly RCTs, is needed to determine which, if any, interventions can sustain stigma reduction over time. This research could also investigate the need for, and effectiveness of, 'booster' interventions during follow-up periods.

Further studies using healthcare professionals as the target population are also needed to explore the effectiveness of stigma reduction interventions in this group. Studies comparing responses of students with those of healthcare professionals could clarify whether results of existing student-based studies could reasonably be applied to healthcare professionals. Future research could also investigate whether stigma reduction translates into real-world benefits for people living with mental illness.

With further research, there is potential for a successful intervention to be implemented on a larger scale to reduce the damaging effects of stigma in healthcare students and professionals, leading to increased healthcare involvement and more appropriate treatment of physical complaints for people living with mental illness.

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