The effectiveness of workplace interventions to reduce HIV-related stigma amongst healthcare professionals

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Abstract

Aim: To undertake a systematic review and critically appraise research to investigate the effectiveness of workplace interventions to reduce HIV-related stigma amongst healthcare providers.

Methods: An electronic search was conducted to find relevant research studies using pre-determined inclusion criteria and a structured search strategy. Nine studies were identified and critically appraised, and the data were extracted and synthesised into five measured outcomes.

Results: The studies examined a range of measurable outcomes to investigate the impact interventions had on five manifestations of stigma, including general attitudes and stigma towards people living with HIV (PLWH), willingness to care for PLWH, enacted stigma, compounded stigma and fear-based stigma. Eight of the nine studies showed a reduction in HIV-related stigma amongst healthcare workers.

Conclusion: The evidence from this review shows a great deal more research needs to be undertaken, all using the same, validated measurement tool of stigma, and research needs to be done to investigate the biomedical and health effects stigma-reducing interventions have on PLWH.

Background

Stigma has been associated with many healthcare conditions, such as mental illness, leprosy and venereal diseases; however, HIV is viewed more negatively than other stigmatised diseases [1]. UNAIDS defines HIV-related stigma as 'negative beliefs, feelings and attitudes towards people living with HIV, groups associated with people living with HIV (e.g. the families of people living with HIV) and other key populations at higher risk of HIV infection, such as people who inject drugs, sex workers, men who have sex with men and transgender people' [2].

Stigma can be experienced by an individual in three forms: perceived stigma, internalised stigma and enacted stigma [3]. Perceived stigma refers to feelings of shame and fear that an individual may have at the thought of others treating them in a prejudicial manner. Internalised stigma, or self-stigma, refers to the individual believing they are to blame for their condition and the negative treatment they receive from others. Enacted stigma or discrimination is prejudicial and discriminatory actions and attitudes experienced by the individual in interactions with other individuals. Expressions of enacted stigma are reported to be social isolation, rumour and gossip, ejection from home, verbal abuse and rejection from community [4].

The first cases of AIDS occurred in 1981 in the USA. Due to the lack of knowledge, the disease became misunderstood and feared due to its high mortality rates, and it was thought at the time to be only transmitted by homosexual intercourse [5]. Over the last 40 years, knowledge of HIV has grown exponentially; however, stigma that began in the origins of this virus still remains. HIV is still associated with already stigmatised groups such as homosexuals, migrants and prostitutes, and behaviours such as intravenous drug use [6]. Many research studies have found HIV is still misunderstood by many healthcare workers (HCWs). This lack of knowledge surrounding HIV can manifest in stigma.

One study of HCWs surveyed in Nigeria found that 89.4% exhibited shame or blame beliefs against PLWH, and 97.7% reported observing other healthcare workers discriminate against PLWH [7]. In 2008, Andrewin and Chien [8] surveyed 230 HCWs to investigate stigmatising attitudes towards PLWH in Belize. Twenty-nine percent of HCWs reported that they gave differential treatment to patients based on their HIV status.

Although these studies were in countries much different to the UK, it shows that stigma does exist amongst HCWs for a multitude of reasons, including fear of contracting HIV and lack of knowledge of the virus.

Although many research studies surrounding the stigma of HIV have been conducted outside the UK, the 'People Living with HIV Stigma Index' [9] was conducted to investigate whether PLWH suffered from stigma and discrimination in the UK. Issues were raised due to counselling, mental health, confidentiality and

consent, with 17% of participants reporting to have been denied health services due to their HIV status.

HIV-related stigma in healthcare settings negatively affects HIV-preventative measures, quality of care given to PLWH, and HIV care-seeking behaviour [10,11]. Fear of stigma also leads some PLWH to avoid HIV testing, which can lead to the unintentional transmission of the disease and delays in the start of treatment [12]. Depressive symptoms and increased psychiatric care have also been linked to HIV-related stigma [13], which shows that both adult and mental health services are being affected by the negative results of stigma.

Methodology

The databases chosen for the final search were: CINAHL and MEDLINE (OVID). Appropriate keywords were selected and entered into the free text search browser of the databases and combined with other keywords using the Boolean operators 'AND', 'OR' and 'NOT'.

The studies found in the electronic databases were examined according to the inclusion and exclusion criteria shown in Table 1.

Due to the nature of the research question, research of a solely qualitative nature would not be an appropriate answer as the review is examining the relationship amongst variables – the relationship between intervention and HIV stigma – and so quantitative research or a mixture of the two is most suitable in answering the question. The lived experience of PLWH is vitally important to understanding the impact of stigma; however, to answer this specific question the data needed to be restricted in this manner.

Once studies had been identified, the researcher judged the paper's quality through critical appraisal. A framework was chosen that was suited for all types of quantitative research, including pre- and post-test design, which is not included in any CASP (Critical Appraisal Skills Programme) checklist. The Caldwell Framework of Critiquing Research [14] fits this description and was chosen for use. In addition to the framework, a modified version of the Downs and Black checklist [15] was used to assess the quality of the papers. By combining the two critical appraisal tools, a thorough analysis of each paper will take place. Finally, the individual findings from each study were synthesised to provide an overall answer to the research question.

Results

In total, 1187 studies were identified in the search of CINAHL and MEDLINE (OVID) which was reduced to nine studies on examination according to the inclusion/exclusion criteria. The studies that have been included in this review have been formatted into a table (Table 2).

Measured outcomes

Throughout the process of data extraction, five key outcomes that interventions impacted upon have emerged: general attitudes towards PLWH, willingness to care for PLWH, enacted stigma, compounded stigma and fear-based stigma.

Impact on general stigmatising attitudes towards PLWH

Five of the nine studies investigated the effect the intervention had on the general stigmatising attitudes of HCWs toward PLWH [18,20,22–24]. This generalised measure was mainly used as these studies investigated other measures such as HIV knowledge, UP (universal precautions) knowledge and PLWH confidentiality. Four studies showed a statistically significant decrease in the general attitudes towards PWLH. Uys *et al.* found there to be no change in stigma amongst HCWs who participated in the intervention [22]. The four other studies show significantly positive results post intervention. All interventions that yielded positive results included interactive activities such as group discussions, roleplays, teaching and discussions with PLWH, and ranged from 4 hours to 5 days.

Impact on willingness to care for PLWH

Three studies investigated whether the interventions increased HCWs' willingness to care [18,20,23]. All of

Table 1: Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
Papers containing only quantitative research, or a mix of qualitative and quantitative research.	Papers that produce qualitative research, or papers that do not produce any data
Papers conducted globally	
Papers published within the last 10 years	Papers published longer than 10 years ago
Papers exploring interventions that have been used on workers in a healthcare setting	Papers exploring interventions that have been used on people with HIV
One of the primary outcomes of the study is to measure the reduction of stigma within healthcare workers	
Only studies published in English	Any study not published in English language

Table 2: Studies included in the review

Title	Year	Study design	Result	Downs & Black score
Impacts of a peer-group intervention on HIV-related knowledge, attitudes, and personal behaviors for urban hospital workers in Malawi [16]	2009	Quasi-experimental with no control group	Stigma decreased	12
Improving hospital-based quality of care in Vietnam by reducing HIV-related stigma and discrimination, a Horizons final report [17]	2008	Quasi-experimental with control group	Stigma decreased	15
Reducing HIV-related stigma in health care settings: a randomized controlled trial in China [18]	2013	Randomised, controlled trial	Stigma decreased	19
The impact of an education intervention to change nurses' HIV-related knowledge and attitudes in Lithuania: a randomized controlled trial [19]	2011	Randomised, controlled trial	Stigma decreased with interactive workshops, not solely written materials	17
Peer group intervention for HIV prevention among health workers in Chile [20]	2012	Quasi-experimental with control group	Stigma decreased	17
Nurses' health education program in India increases HIV knowledge and reduces fear [21]	2007	Quasi-experimental with no control group	Stigma decreased, with the exception of comfort of cleaning urine and stool of PLWH	11
Evaluation of a health setting-based stigma intervention in five African countries [22]	2009	Quasi-experimental with no control group	No stigma difference in nurses Perceived stigma felt by PLWH decreased	15
Effectiveness of an HIV/AIDS educational programme for Chinese nurses [23]	2006	Quasi-experimental with no control group	Stigma decreased	12
A brief HIV stigma reduction intervention for service providers in China [24]	2008	Quasi-experimental with control group	Stigma decreased	16

the studies showed a positive effect on HCWs' willingness to treat and care for PLWH.

Impact on enacted stigma

Three studies [16,17,21] investigated the effect interventions had on enacted stigma. All showed there to be a reduction in discriminatory behaviours or increase in respectful interactions with PLWH. However, Khuat *et al*. [17] only showed a decrease in discriminatory behaviours in the intervention that contained time spent teaching about social stigma, which was facilitated by PLWH. The other intervention in the study included only HIV education and showed no significant change in behaviours. In addition, Pisal *et al*. [21] found that after the intervention there were no changes in nurses' attitudes to cleaning stool or urine of PLWH.

Impact on compounded stigma

Compounded stigma is experienced by certain marginalised groups who experience stigma due to their HIV status and their group identity [17]. Examples would be injecting drug users (IDUs) and prostitutes. Khuat *et al*. [17] measured attitudes towards drug users, prostitutes and promiscuous men. Mockiene *et al*. [19] measured attitudes towards homosexuals. They showed that the intervention group with an interactive workshop showed significant reduction in negative homophobic attitudes; however, the intervention group which received only written materials and the control group showed a small increase in homophobic attitudes. Additionally, Khuat *et al*. [17] found that both intervention groups showed a decrease in agreement with negative statements about IDUs, sex workers and men with multiple partners.

Impact on fear-based stigma

Two studies investigated the impact on fear-based stigma and measured HCWs' fear when performing tasks with patient contact, such as giving injections [17,21]. All intervention groups showed a significant reduction in fear of contracting the infection, regardless of whether or not the intervention group had specific training on social stigma, suggesting that the fear of infection is related to knowledge of the disease and transmission routes of HIV.

Discussion

Characteristics of effective interventions

Inclusion of HIV education

Eight of the nine studies described interventions reducing the amount of stigma HCWs exhibit and feel towards PLWH. Only one study [22] found that there was no change in HCWs' level of stigma. This study used a range of interventions within five different countries; however, all interventions used in the study had the sole focus to educate HCWs about the stigma associated with HIV. This was the only study that did not provide HCWs with general information about HIV. This suggests a link between increased knowledge of HIV and decreased stigma towards PLWH.

This link is highlighted by Pisal *et al*. [21] who conducted focus group discussions to highlight themes and causes of stigma amongst HCWs, and a primary theme raised was the fear of contracting the disease. It is interesting to note that the nurses who believed they were at high risk of contracting the disease were those who had the least direct interaction with PLWH. Nurses who had substantial HIV training and knowledge believed their fear of contracting HIV was less due to being well educated about the risks and procedures of reducing the risk of contracting the virus.

Multiple studies have investigated the connection between poor knowledge of HIV and discriminatory behaviours of HCWs towards PLWH in numerous countries [25–28]. All of these studies reported HCWs to have a high level of fear of contagion, which was often due to the lack of knowledge about HIV transmission and UP. Whilst these studies are over 12 years old, a study in 2013 in Namibia found that 90% of nurses caring for PLWH were fearful of contracting the virus [29]. This review, and research conducted by other authors, have shown that increasing HIV education and knowledge is vital to reducing stigma amongst HCWs.

Inclusion of stigma education

The majority of studies included specific workshops or training sessions on stigma, the manifestations of stigma, and the effects stigma can have on PLWH as well as ethical considerations [16–19,21–23]. These sessions were usually incorporated with education about HIV – with the exception of Uys *et al*. [22].

Khuat *et al*. [17] tested the results of the impact of including a stigma training session by using two types of intervention. In Arm 1, HCWs received HIV and UP information, whereas in Arm 2 they received a specific workshop about stigma as well as the information in Arm 1. The findings showed a larger reduction in stigma in Arm 2 than in Arm 1. Williams *et al*. [23] used an intervention that did not include teaching about stigma, and a positive change in attitudes was found amongst HCWs. This would seem to suggest that the distribution of HIV and UP information is enough to reduce HCW stigma against PLWH. However, it is not known whether a greater change in HCWs' attitudes would result if the issues of stigma were taught to them.

The rationale for interventions to include education about stigma is backed up by stigma-reduction frameworks used to reduce stigma amongst the general population. The International Centre of Research on Women (ICRW) [30] used a framework specific to stigma, including impact, outcomes and manifestations of stigma in five settings in India. Overall, it was found that this framework led to a reduction in stigma towards PLWH. Interventions incorporating teaching on stigma are not only used to reduce stigma towards PLWH. Happell *et al*. [31] investigated whether including testimony by a mental health service user would reduce stigma towards people living with mental health issues, which included discussion of stigma and discrimination, compared to an intervention based solely on knowledge. The teaching programme, including lived experience, showed statistically significant positive changes in decrease of negative stereotypes.

By combining education on HIV as a virus, and the stigma attached to a diagnosis of HIV, an optimum intervention is formed to allow for the greatest amount of positive attitude change towards PLWH.

Methods of educating HCWs

The nine studies combined a range of educational tools to enforce the intervention, including roleplay, lectures, group discussion, games, film and testimonies from PLWH. Only one study tested the effectiveness of educational tools [19]. It consisted of two intervention groups: EG1, which had a two-day interactive workshop as well as written materials; and EG2, which only had written materials. It was found that a change in stigma was only found in the group that took part in the interactive workshop.

These findings reflect many teaching techniques in nursing. Multiple learning strategies must be used to assist teaching HCWs with varying learning styles. Frankel [32] investigated which learning styles best suit nurses and found that visual or kinaesthetic learning was their main preference, rather than lectures or written materials. An intervention with a range of teaching techniques is going to appeal to more learners and so the effect of the intervention is going to be greater.

Challenges of implementing a stigma-reducing intervention

Despite the majority of the studies being successful in decreasing the stigma of HCWs, there are a number of challenges authors will face when designing and implementing an intervention.

The way in which the included studies investigate stigma is to look at a single aspect of stigma on an individual level. The papers do not investigate the community-wide level of stigma and attitudes, and the majority do not investigate the manifestations of stigma or enacted stigma. The studies provide important insights into how to reduce individual stigma amongst HCWs; however, issues are raised when looking at the long-term effects of the interventions and the narrowness of their reach.

In addition, observations of the effects of the intervention need to be recorded, as it is vital to explore the effects the intervention has on clinical practice. Self-reported questionnaires cannot be solely relied on as HCWs may be performing actions that they do not believe to be discriminatory – but are. Also, a change in actions must be investigated,

Table 3: List of recommendations

Recommendation	Explanation
Included content	Education on both HIV and stigma surrounding HIV
Type of teaching	To be interactive as well as providing written materials
Measurement tool	A range of measurement tools should be incorporated. The risk of social desirability (people inaccurately answering questions to present themselves in the best possible light) is high when using questionnaires, so the inclusion of other tools (interviews, observations) will decrease this bias.
Interviews	Interviews should be conducted prior to the intervention with HCWs to identify sources of fear and stigma and then adapt the intervention to tackle the sources of stigma
Measured outcome	A study is needed that investigates the effect the intervention has on HCWs alongside its effect on PLWH; this is an area that needs more research as the main reason a reduction in stigma amongst HCWs is needed is to reduce the perceived stigma felt by PLWH

because without any change the experienced stigma by PLWH will still exist and health-seeking behaviours will not improve.

There are limited data assessing the influence of stigma-reduction interventions on increased health-seeking behaviours such as HIV testing or counselling. A long-term study needs to take place to look at the overall effect a less-stigmatising health setting has on the health-seeking behaviours of PLWH or those who voluntarily test for HIV.

Of the nine studies included, all used different measurement tools to investigate the levels of stigma amongst HCWs. A universal scale is needed to successfully compare interventions to decide upon the best intervention to reduce stigma. The use of a standardised tool is vital for the future of implementing stigma reduction interventions.

Recommendations

Table 3 contains recommendations of components that any future study implementing an intervention to reduce HCW stigma against PLWH should contain.

Limitations of review

The use of research from a variety of countries and inclusion of varied healthcare professionals can be seen as a limitation. Little information was given surrounding the areas in which the healthcare workers worked with the only relevant information being from one study recognising that the sample group rarely interacted with PLWH as they were referred to a different hospital [20]. Due to there being no information regarding the HCWs' original training or education about HIV, and the regularity of their interaction with PLWH, very little information can be summarised about their baseline knowledge.

The studies included in this review are from various countries; however, this paper has not fully explored the impact this may have on the findings. More research needs to be completed to examine the stigma surrounding PLWH in each individual country and tailor an intervention that best suits that country. In addition, the differences in health systems and nursing education programmes amongst countries, and how this affects the level of stigma PLWH face in healthcare settings, needs to be examined in further research.

Conclusion

Multiple challenges were found when conducting this review that have repercussions on future nursing practice and research on this topic. Current researchers are focusing on the short-term effects of stigma-reducing interventions, but not enough research is being conducted looking at the long-term effect that HIV education programmes for HCWs are having on the stigma against PLWH. Background research has found that stigma towards PLWH within healthcare settings has a devastating effect on their lives, including the quality of life, HIV-preventative measures and health-seeking behaviours [10,11]. However, no research exists on how an intervention, which has reduced HCWs' stigma against PLWH, has affected the number of people getting HIV tested or the number of PLWH seeking counselling or antiretroviral therapy.

Future research must focus on the long-term effects interventions have on PLWH to become more relevant, valid and useful to current nursing clinical practice, and to support future researchers in implementing successful interventions that have a dramatic and worthwhile effect on PLWH.

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