

Knowledge and attitudes towards people living with HIV/AIDS among healthcare workers in a low middle income country

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ABSTRACT

Introduction: Although Sri Lanka has a low Human Immunodeficiency Virus (HIV) prevalence, there has been an increase in HIV/ Acquired Immunodeficiency Syndrome (AIDS) cases over the last few decades. HIV-related stigma and discrimination within the healthcare system can have serious effects as it can discourage people living with HIV/AIDS (PLWHA) from seeking essential health care, creating a latent epidemic within the country.

This study aimed to assess the level of knowledge about HIV/AIDS and the level of stigma and discrimination towards PLWHA among healthcare workers at a District General Hospital.

Methods: A descriptive cross-sectional study was conducted using self-administered questionnaires among a sample of 115 healthcare workers, consisting of doctors, nurses and healthcare assistants from medical and surgical wards.

Results: Only 43.5% of participants had good knowledge, with doctors being the majority. Stigma was highest among healthcare assistants and nurses. Most of the (94.8%) participants admitted to practising at least one act of discrimination, among which healthcare assistants were the majority. Poor knowledge about the disease was a positive driver for both stigma and discrimination.

Conclusions: As healthcare workers are expected to have a better understanding of HIV and lesser stigma and discriminatory attitudes compared to the general public, there is a need for a programme that would provide education about the disease to all healthcare workers to eliminate the stigma so that PLWHA will benefit both medically and socially.

Keywords: *HIV, AIDS, doctor, discrimination, healthcare workers, nurse, stigma.*

Introduction

The incidence of HIV/AIDS in Sri Lanka continues to rise since the identification of the first local patient in 1987 (1). Although stigma and discrimination related to HIV/AIDS are apparent in many settings, such behaviour in healthcare bears serious consequences as people living with

HIV/AIDS (PLWHA) find this as the immediate point of support (2). Despite HIV/AIDS currently being a disease with an excellent prognosis if diagnosed and managed early (3-5), negative attitudes and behaviours towards PLWHA are major obstacles for effective care (2, 6). This has the potential to create a latent epidemic of the disease(2).

With a national goal of achieving zero HIV/AIDS case transmission by the end of 2025 (1), it is paramount to address this issue with sheer urgency.

Methods

This is a descriptive cross-sectional study. Prior to the commencement of the study, ethical clearance was obtained from the Ethics Review Committee of General Sir John Kotelawala Defence University. The study was conducted at the general medical and general surgical wards of a District General Hospital in the Western province. The professions included were doctors (intern medical officers and preliminary/grade medical officers), nurses and healthcare assistants. Medical consultants were excluded. All healthcare workers from the general medical and general surgical wards present during the 24-hour shift on a certain day were selected as participants. After obtaining written informed consent, a sample of 115 individuals were selected for the study.

A pre-tested anonymous self-administered questionnaire was used as the study instrument. It contained both open and closed ended questions. Responses for knowledge questions were recorded through a Yes/ No/ Don't know scale for 18 statements with a cut-off value of 50% used to categorise into good and poor. Knowledge was tested both on the illness in general as well as certain ward practices. A few examples for statements about the illness that were assessed included: 'a person who looks healthy can transmit the virus', 'coughing and sneezing spreads HIV' and 'you can get infected with HIV through a mosquito bite.' A few examples for statements regarding ward practices included 'isolation of HIV patients leads to reduced transmission' and 'normal sterilization procedures are sufficient to sterilise instruments that were used to treat an HIV patient.' Stigma experienced by patients living with HIV/AIDS was recorded through 8 statements on a 5-point Likert scale [highly disagree (1) to highly agree (5)] and a total stigma score was calculated by adding points on the scale. Stigma score ranged from 8 to 40 and was categorised into low and high with scores from 8 to 24 and 25 to 40, respectively. The 8 statements which were assessed were 'HIV/AIDS is a punishment for promiscuous

behaviour', 'HIV/AIDS patients should not be allowed to marry', 'HIV patients waste medical resources by getting treatment', 'HIV patients should be treated in a separate hospital', 'HIV patients should not be allowed to work with other people', 'HIV patients should be provided treatment only if they abstain from participating in immoral activities', 'only those who were infected with HIV through medical needles or blood transfusions should be eligible to receive treatment' and 'it is women prostitutes that spread HIV in the community.' Discrimination was assessed regarding 6 actions (avoiding an HIV patient while doing ward work, wearing masks when talking only with an HIV patient, discarding sharps used on HIV patients into a different sharps bin, additional sterilization measures used to sterilize instruments used on them, informing other ward staff about his HIV status without consent and informing other patients in the ward about HIV status without his consent) and was grouped by how many of those they practised. The questionnaire was developed by referring to existing medical literature (7-9) as well as tailor-made questions. Questionnaires were prepared in English, Sinhalese and Tamil.

The responses from each questionnaire were analysed using the *Statistical Package for Social Sciences (SPSS)* software version 26. Descriptive statistics were used to describe the data through frequency tables and cross-tabulations with measures of central tendency included where relevant. Hypotheses were then developed, and inferential statistics were used to accept or reject them using a statistical significance of less than 0.05 probability at a 95% confidence interval.

Results

Out of the 115 participants in this study, there were 31 (27.0%) doctors, 45 (39.1%) nurses and 39 (33.9%) healthcare assistants, consisting of 40 (34.7%) males and 75 (65.3%) females. Out of the doctors, 18 were intern medical officers and the rest were either preliminary or grade medical officers. Most participants (n=62, 53.9%) were below 35 years of age. There was a response rate of 95.8% in this study.

Majority of them (71.3%, n=82) had work experience of over 2 years. Most of the participants (67.8%, n=78) has had an encounter with an HIV/AIDS patient only once during their career, while 22.6% (n=26) of all participants had 2 or more encounters and 9.6% (n=11) had no encounter with a HIV patient. Forty-four (38.3%) participants have been tested for HIV at least once after an occupational exposure.

Assessment of knowledge pertaining to the disease and practical aspects at the ward setting showed that 43.5% (n=50) of participants had good knowledge. Twenty-seven (23.5%) believed in isolating HIV patients in the ward and 39.1% (n=45) believed that standard sterilisation was inadequate to remove the virus, which inevitably leads to stigma and discrimination due to unnecessary precaution.

Regarding stigma experienced by people living with HIV/AIDS, 55.7% (n=64) of participants had a high overall stigma score, which assessed both the attitudes towards PLWHA and towards healthcare practices. The stigma statement 'HIV/AIDS is a punishment for promiscuous behaviour' was the statement which was mostly agreed on (n=81, 70.4%) while 'HIV patients waste medical resources by getting treatment' was the statement mostly disagreed on (n=19, 16.5%).

Majority of the participants practiced 1 to 3 acts of discrimination (Table 1). The act most practiced by participants (78.3%, n=90) was additional sterilisation measures taken to sterilize instruments used on HIV patients.

Doctors had better knowledge compared to nurses and healthcare assistants (Table 2). There was a significant ($\chi^2=49.8$, df=2, $p<0.001$) association between knowledge and the profession. Out of the total participants, 77.4% (n=81) have received an education about HIV after joining their careers. However, 29.2% (n=24) of this proportion claimed that it wasn't adequate. It was seen that there was a significant ($\chi^2=14.42$, df=1, $p<0.001$) association with better knowledge scores among those who were educated.

Majority of healthcare assistants and nurses showed high stigma whereas more than half of doctors showed low stigma (Table 3). This was a

significant ($\chi^2=8.1$, df=2, $p<0.001$) association. Analysis of the levels of stigma with the degree of knowledge of HIV/AIDS reflected a significant ($\chi^2=8.8$, df=1, $p<0.001$) association; those who were more knowledgeable had lesser stigma scores.

Table 1: Number of acts of discrimination practiced by participants

Number of acts practiced	Number of participants
None	15 (13.0%)
1 to 3	55 (47.8%)
4 to 6	45 (39.2%)

Nurses and healthcare assistants showed more discrimination towards HIV patients compared to doctors (Table 4). There was a significant ($\chi^2=21.5$, df=4, $p<0.001$) association between discrimination and profession. When discrimination was assessed with knowledge, they appeared to be significantly associated ($\chi^2=12.1$, df=2, $p<0.001$). In contrast to this, there was no significant ($\chi^2=3.9$, df=2, $p=0.144$) association between stigma and discrimination.

The two most common reasons for potentially discriminating a HIV patient were 'There aren't enough post-exposure prophylaxis facilities in the hospital' (79.1%, n=91) and 'People see me as a potential threat of HIV transmission because I handle with blood and other body fluids of patients' (88.7%, n=102).

Participants were asked if they had ever witnessed a HIV patient being discriminated during the last 5 years while being in service. Fifty-eight (50.4%) participants claimed that they had seen a HIV patient receiving lesser care than other patients, 49 (42.6%) claimed that they have seen a HIV patient being verbally abused for his/her HIV status and 9 (7.8%) claimed that they have seen a HIV patient being unnecessarily referred to another healthcare provider because he/she has HIV.

Table 2: Distribution of the knowledge of participants according to profession

Profession	Knowledge		Total
	Good	Poor	
Healthcare assistants	7 (17.9%)	32 (82.1%)	39 (100.0%)
Nurses	17 (37.8%)	28 (62.2%)	45 (100.0%)
Doctors	26 (83.9%)	5 (16.1%)	31 (100.0%)

Table 3: Distribution of the stigma of participants according to profession

Profession	Stigma score		Total
	Low	High	
Healthcare assistants	12 (30.8%)	27 (69.2%)	39 (100.0%)
Nurses	19 (42.2%)	26 (57.8%)	45 (100.0%)
Doctors	20 (64.5%)	11 (35.5%)	31 (100.0%)

Table 4: Distribution of the discrimination of participants according to profession

Profession	Number of acts			Total (n)
	None	1 to 3	4 to 6	
Healthcare assistants	2 (5.1%)	26 (66.7%)	11 (28.2%)	39 (100.0%)
Nurses	3 (6.7%)	17 (37.8%)	25 (55.6%)	45 (100.0%)
Doctors	10 (32.3%)	12 (38.7%)	9 (29.0%)	31 (100.0%)

Discussion

The study showed poor overall knowledge among healthcare workers like in other studies conducted elsewhere (10-13). The association of knowledge and profession was a foreseen result as we expected doctors to have the highest knowledge given their years of undergraduate learning together with postgraduate learning among some. These findings were mirrored in prior studies (5, 14-16). This could be explained by the fact that, unlike other variables, knowledge is definite and hence universally they all have the same correct answer. Better knowledge with prior education on HIV/AIDS was seen in previous studies as well (17). However, even out of those who received an education, almost half of them thought it was not adequate for their practice.

Kabbash and others (18) showed that healthcare workers had high overall stigma and discrimination levels like in the current study. Although our study found that doctors had the least stigma, a study conducted by Karawita and others (19) in public sector hospitals in Colombo showed that both doctors and nurses had the most stigma while healthcare assistants had the least stigma. This finding could have been due to the increased awareness of the disease among doctors and nurses through digital education and online platforms when compared to the past, leading to a change in previous trends. Several other studies (20-25) done in Asia and LMICs showed similar findings. A recent study done in North America revealed high levels of stigmatizing attitudes toward PLWHA across all categories of healthcare

workers, with support staff being the majority. This reflects that stigma is a persistent obstacle irrespective of geographical area or culture (26).

The positive behaviour towards HIV patients among doctors could have been because they receive more knowledge on HIV than nurses and other staff. Medical officers' complete comprehensive theory and practical examinations within their undergraduate and postgraduate careers. Nurses in Sri Lanka would often practice in public sector hospitals following the completion of their basic nursing training school curriculum with only a minority pursuing other allied health science diplomas (only 12.3% in our study). Thus, the aspects of care for a HIV patient may not be fully covered during this general training period currently. Likewise, majority (93.6%) of healthcare assistants in our study completed their education only up to the primary grade, thus reflecting the importance of knowledge in reducing discriminatory acts towards PLWHA. Higher discrimination levels with lesser knowledge were mirrored in the findings of prior studies as well (27-29). However, Ekstrand and others showed that higher professional qualifications were not associated with lesser discrimination. This study was able to find an absence of a significant association between stigma and discrimination; an aspect that is not reportedly studied in the literature. By revealing this finding, we can deduce that one may not necessarily act openly in a way that discriminates a person with HIV/AIDS yet may have a negative attitude towards such person. Hence, it would not have a negative implication for PLWHA being treated at a hospital or clinic setting as it does not hinder them from receiving standard treatment.

Although previous studies have identified the fear of lack of post-exposure prophylaxis (30) and secondary stigma (31, 32) as drivers for discrimination, our study did not find such association. There is evidence that discrimination has been present for at least half a decade as participants reported events of discrimination they have witnessed. This further reflects the gravity of this problem.

Limitations

The low sample size of 120 due to the COVID-19 pandemic was a limitation of this study. Also, the study was conducted only in a single setting. A comparison between hospitals could have provided better results but was practically demanding due to the COVID-19 pandemic at the time of the study. Self-administration of the questionnaires could have led to a bias as participants would have responded in a way that is socially acceptable than being truthful.

Conclusions and Recommendations

In conclusion, our findings revealed that, the more knowledge they had about HIV/AIDS, lesser the stigma they showed towards PLWHA, both regarding the PLWHA in general and towards healthcare practices and lesser the discrimination towards PLWHA. Poor knowledge and attitudes can be addressed if there is more awareness for all categories of healthcare workers through in-service workshops. These workshops should provide both education about HIV/AIDS as well as a chance to build skills as the fulfilment of both these aspects are shown to be much more beneficial (33-34). By doing so, adequate and non-biased care to PLWHA can be provided, thus helping us to achieve the targets set by the National STD/AIDS Control Programme to end AIDS by the year 2025 in Sri Lanka.

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