Determinants Model in Reducing HIV-Related Stigma in Health care Workers: A Systematic Review

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Abstract

BACKGROUND: The stigma accepted by people living with HIV/AIDS (PLWHA) is a major obstacle in HIV prevention, especially from health workers.

AIM: This study aims to determine the factors associated with HIV stigma among health workers.

METHODS: This systematic review was conducted using the 2015 PRISMA guidelines. All publications review was conducted using four bibliographic databases. In the final screening stage, the authors read the full text of the remainder of the article and held back studies that were consistent with inclusion criteria, focusing on HIV-related stigma determinants published in 2010–2020.

RESULTS: The stigma that comes from health workers to PLWHA can come from personal beliefs or a lack of personal confidence, which can be derived from self-confidence, self-confidence, knowledge, working time, institutional support or policies from the workplace, religious, and sociocultural values that create discriminatory behavior when dealing with PLWHA. The created stigma can reduce social interactions and the quality of life of PLWHA.

CONCLUSION: It is important to find determinants to formulate appropriate intervention plans in reducing HIV-related stigma, especially among health workers.

Introduction

HIV/AIDS prevalence globally is still rather high [1], [2]. The World Health Organization (WHO) data mention around 54% of HIV-positive cases were new cases [3], [4]. A myriad of efforts was done to reduce HIV/AIDS cases [5], however, stigmas are still an important aspect and often become the main hurdle in reducing HIV/AIDS cases [6], [7], [8], [9].

Stigmas on people living with HIV/AIDS (PLWHA) not only occur from common society members but also occur on health care workers [7]. This is in conjunction with the research result done by Nyblade et al., 2018, which stated that health care workers have a stigma and differentiates PLWHA. On health-care facilities, the manifestation of the stigma was widely documented [10], from direct rejection of treatment, below standard treatment, verbal and physical abuse, to a more soft form of rejection such as making them wait longer or surrenders the care to the more junior member of the health-care team [11]. It can be concluded that stigma is the main obstacle in treating those who are seeking preventive measure and to uphold their own quality of life [6]. Therefore, there needs to be a comprehensive and holistic care in the HIV/AIDS epidemic which can cause a bad impact not only on health sector but also socioeconomic development of a nation [12].

Methods

Search strategy

Search is conducted using online journal database which provides articles in PDF format such as PubMed, Scinapse, Elsevier, and Google Scholar. Articles taken were imported into Mendeley Library. Main keywords used during the search process are HIV* and Stigma* And Health care Workers* And Risk Factor* OR Determinant.

Inclusion/Exclusion criteria

Criteria that were integrated in the database are (1) focus on stigma determinant related to HIV,
(2) published in the past 10 years (2010–2020), and (3) articles full text published in English. Exclusion criteria are (1) Review/Editorial (2) Conference Process (3) Systematic Review/Literature Review (4) Protocol Study, and (5) Meta-Analysis.

**Data extraction**

The study selection process is in accordance with Data Extraction Based on PRISMA 2015 Guidelines in Figure 1.

**Stigma and discrimination on health care workers**

Stigma and discrimination are not only carried out by ordinary people who do not have sufficient knowledge about HIV/AIDS, but can also be carried out by health-care providers. According to research by Wilandika (2019), the stigma associated with HIV in health services can hinder PLWHA from seeking care if they have previously experienced unwanted treatment or the confidentiality of their HIV status is not respected. The emergence of stigma against PLWHA in health services is closely related to the attitudes and behaviors shown by health workers in providing health services, be they nurses, doctors, or other health workers [23].

Nyblade’s (2019) study shows that there is a decrease in professional attitudes among health-care providers who care for patients with HIV infection. The stigma that occurs in the health-care environment is a serious problem in the health-care system. If a patient is infected with HIV and feels stigmatized by health workers, it can affect the quality of care, the patient’s quality of life, and involvement in the care process [24].

The following summary on determinant related stigma on health care workers at Table 2.

The occurrence of stigma against PLWHA by health workers is influenced by several things according to the research that was reviewed as follows:

**Knowledge of HIV/AIDS**

Knowledge of HIV/AIDS greatly influences how individuals behave towards people with HIV/AIDS [25]. Stigma and discrimination against PLWHA arise in relation to ignorance or misunderstanding of the mechanisms of HIV transmission, overestimation of the risk of contracting HIV through casual contact, and disproportionately negative attitudes toward social groups affected by the HIV/AIDS epidemic [26], [27]. In line with research conducted by Vorasane (2017) which states that across health professionals, lower levels of HIV/AIDS knowledge are associated with higher levels of stigmatizing attitudes toward PLWHA [7].

**Perceptions about PLWHA**

Perceptions of people living with HIV or people with AIDS will greatly influence how that person will behave and behave toward PLWHA [14], [19]. Subedi (2019) states that stigma and discrimination against PLHIV are related to the perception of shame and

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Figure 1: Flowchart literature

**Data synthesis**

Author filters all publication by reading the title and abstract. In the final filtering phase, author reads the complete text of the remaining articles and withholds the study which is in line with inclusion criteria. The summary of the selected articles is recorded which consists of: author, year of publication, country of publication, title, subject/sample, study objective, study design, outcome/results, and determinants of stigma (Table 1).

**Literature search**

The literature was accessed by identifying articles based on inclusion and exclusion criteria. This review article was compiled thematically using PRISMA 2015 because is the right method for filtering articles to be compiled in a systematic system consisting of various studies that have relevant methods, concepts, and results.
Table 1: Research synthesis on determinant model in reducing HIV-related stigma on health care workers

| No. | Author/year/place | Subject/sample | Study objective | Study outcome/result |
|-----|-------------------|----------------|----------------|----------------------|
| 1   | Tran et al., 2019. | 1016 patients | Grades the stigmatization and discrimination that is experienced by people living with HIV (PLWHA) in multitudes of settings such as social, family, community, and health-care facility in Vietnam | Stigma level from society or community reported by PLWHA is linked with socioeconomic status whereas stigma in health-care facility is reported based on knowledge and attitude of the health care workers |
| 2   | Xie et al., 2018. | 63 medical staff with 2 weeks interval; and structural validation with 349 medical staff from 52 hospitals | To grade stigmata regarding individual infected with HIV between health-care providers and members of society | Stigma was insignificantly different (p > 0.05) in terms of gender, career (physician and nurses), level of education, and whether or not the person in question has treated AIDS. There were connections between culture, level of education, career, gender, and knowledge regarding HIV/AIDS in China |
| 3   | Nairet et al., 2019. | 71 participants, including 35 individuals infected with HIV and member of society and 26 health-care providers | To grade attitudes regarding individual infected with HIV between health-care providers and members of society | Several factors which contribute to stigma on health care workers: Perception regarding HIV; the disclosure of HIV status without consent; and inadequate knowledge and fear between the health-care providers in regard to the infection of HIV and also the policy in health facilities |
| 4   | Yang et al., 2018. | 558 health care workers from 12 of the 17 hospitals in Vietnam | To grade HIV-related stigma between health-care providers in Laos and examine the related factors in HIV/AIDS stigma between physician and nurses | Lower HIV/AIDS-related knowledge in relations with higher stigma level with individuals infected with HIV/AIDS. Stigmatized treatment, fear of AIDS, and prejudice were observed to be lower in health care workers with more experience in treating patients with HIV/AIDS |
| 5   | Befekadu et al., 2017. | 16 participants are PLWHA that is treated in two selected hospitals in Amhara region in Ethiopia | To explore factors that are caused by stigma and discrimination to people infected with HIV in two hospitals in rural Ethiopia | Participants viewpoints are grouped into fear of contact, slow service, below standard treatment, rejection of treatment, rudeness of the health-care providers, secrecy offence, and bad follow-up for patient infected with HIV |
| 6   | Prinslo et al., 2017. | 110 Health Care Workers | To determine the size of the stigma and discrimination in relation with HIV/AIDS (SAD) and factors that are affecting health-care settings | Stigma to patient from health care workers participating in the training (OR = 13.46, p = 0.005). In the 2nd hospital, only infection risks are felt to have a significant effect on stigma |
| 7   | Jabour et al., 2018. | 1747 members of congregation faith-based African-American organization | To examine the connections between social factors in a religion-based settings (including religiousness and proximity with individuals infected with HIV/AIDS) and HIV stigma | Female (p = 0.011), higher education (p < 0.001), knowing someone with HIV/AIDS (p = 0.01) and knowing someone who is gay (p < 0.001), lack of religiousness is linked with a lower level of stigma and lower chances of stigma (p < 0.05) |
| 9   | Vonasane, 2017. | 558 health care workers from 12 of the 17 hospitals in Vietnam | The purpose of this study was to assess HIV stigmatizing attitudes within Laotian health-care service providers and examine some of the factors associated with HIV/AIDS-related stigma among doctors and nurses | Across the different health professionals included in this study, lower levels of HIV/AIDS knowledge were associated with higher levels of stigmatizing attitudes toward people living with HIV/AIDS. Stigmatizing attitudes, including discrimination at work, fear of AIDS, and prejudice, were lower in health care workers with more experience in treating HIV/AIDS patients |
| 10  | Opollo and Gray, 2015. | 76 HIV-infected health care workers in Kisumu, Kenya | Study explored stigma as perceived, experienced, and managed in HIV-infected health care workers in Kisumu, Kenya | Two negative themes (blame, lack of knowledge) and five positive themes (living positively, optimism, empathy, support, and changes overtime). Three themes emerged on reducing stigma (normalizing, empowerment, leading by example). |
| 11  | Nina Sommerland, 2019. | 882 HCWs from eight hospitals was surveyed in the Free State, South Africa | This study explored factors associated with HIV stigma toward colleagues | There was a significant negative relationship between stigmatizing attitudes against other co-workers and knowing a colleague living with HIV, having a colleague who worked to reduce stigma in the workplace, and having basic HIV knowledge. Our results have implications for understanding and combating interventions to reduce HIV stigma among HCWs |
| 12  | Fauk, 2021. | Using in-depth interviews with 92 PLWHA (52 women, 40 men) and 20 health-care providers | This paper describes perspectives and personal experiences of the 20 health-care providers, relating to HIV stigma and discrimination toward PLWHA in both study settings | Some health-care providers reported that they had personally stigmatized and discriminated against PLWHA. A lack of knowledge about HIV, fear of contracting HIV, personal values, religious thoughts, and sociocultural values and norms were reported as drivers or facilitators behind this HIV-related stigma and discrimination |
| 13  | Reyes-Estrada et al., 2018. | This study induced 40 in-depth interviews with nurses who provided services to PWHA | This study aimed to explore the role of religion in the stigmatization of PLWHA by nurses in Puerto Rico | Three main factors emerged in the analysis as contributors to HIV/AIDS stigmatization: (1) Nurses’ personal religious experiences, (2) religion as a rationale for HIV-related stigma, and (3) religious practices during health care delivery. The results show that religious beliefs play a role in how nurses understand HIV/AIDS and provided service |
| 14  | Xie et al., 2019. | 349 medical Staff from 52 hospitals | The study aimed to validate the health-care provider HIV/AIDS stigma scale among medical staff in China | The discrimination factor showed identical means between Canadian medical students and Chinese medical staff, while the prejudice and stereotype factors had higher mean scores in the Chinese sample. The three-factor structure of health-care provider HIV/AIDS stigma scale was confirmed in Chinese medical staff with a simpler solution. This could provide a basis for trans-cultural application and comparison |

Blame associated with AIDS [19], [28]. The results of Masoudnia’s (2015) study show that there is a significant negative correlation between citizen awareness about HIV/AIDS, HIV-related attitudes, negative perceptions of people with HIV/AIDS symptoms, and discriminatory attitudes toward PLWHA (p < 0.01) [29].

Level of education

Chambers (2015) states that the type of health worker according to their educational background affects the stigma and discrimination scores against PLWHA [25]. Another study also stated that educational attainment (F statistic: 13.8; 4 df; p < 0.001) was associated with stigma scores after controlling for all confounding variables. The results of statistical analysis showed that there was no significant relationship between education and stigma among PLWHA [17]. In the learning process, all nurses and midwives are equipped with knowledge and skills according to professional competencies/standards, especially in providing services to PLWHA. However, the reality is that after they graduate and get a diploma, they are not automatically able to enter the ministry [18], [20].

Length of work

The length of time a health worker works or does a certain type of work are stated in the length of time he/she performs the task. The development of behavior and attitudes of health workers in decision-making...
Institutional support

Institutional factors or health service institutions such as hospitals, primary health-care services, and clinics influence the existence of stigma and discrimination against people with HIV/AIDS (PLWHA), including matters related to policy-making, standard operational procedure, provision of facilities, facilities, materials, and personal protective equipment in the treatment of HIV/AIDS patients [31]. Research on the influence of institutional or institutional factors is still rarely conducted when in fact it is very important to legally intervene in the existence of stigma and discrimination against PLWHA by health workers [14], [24].

Religious

Religion plays an important role in stigmatizing behavior among health workers. Religious thought in Islam and Catholicism that prohibits the use of illegal drugs, sexual relations outside of marriage and considers it as a sin also facilitates stigma and discrimination against HIV by health-care providers. The use of such thinking as a parameter to assess the behavior of PLWHA causes the reluctance of health-care providers to serve, interact, and feel disgusted with HIV patients [21]. This supports the findings of a previous study which reported that the inclusion of personal religious beliefs in the provision of health to PLWHA led to clashes between personal religious values and professional expectations [20].

Sociocultural values

Community stigma against PLWHA is an assessment that is based on values and norms that are rooted in society. Cultural understanding of disease, fear of disclosure is rooted in cultural responses to epidemic disease. Sociocultural values and norms that do not accept same-sex relationship and perceive it as deviant and contaminated behavior also affect participants’ acceptance of HIV-positive patients, treatment, and perceptions of PLWHA or facilitate HIV stigma and discrimination against PLWHA in health-care centers. The sociocultural values possessed by health workers are the driving force for discriminatory and stigmatizing attitudes and behavior toward PLWHA. Values of fidelity in marriage and not accepting cheating behavior in PLWHA who are married because it is considered painful for their partner are some examples of personal values held by some participants in research [20] that supports their discriminatory behavior toward PLWHA. The personal values held by these health workers also seem to lead to a personal assessment that PLWHA deserves infection as a consequence of their own behavior. The assessment appears to strengthen participants’ discriminatory treatment of HIV patients [22].

Conclusion

Stigma is still an important issue in the prevention and control of HIV/AIDS. Determinant

Table 2: Summary on determinant related stigma on health care workers

| Author/year/country | Design study | Determinant stigma |
|---------------------|--------------|--------------------|
| Tran et al., 2019. Vietnam [8] | Bivariate and multivariate logistic regression. | Socioeconomic status, knowledge, and attitude |
| Xie et al., 2018. China [13] | Multivariate and logistic regression analysis | Culture, education level, gender, and knowledge regarding HIV/AIDS |
| Nair et al., 2019. Bihar, India [14] | Multivariate logistic regression analysis | Perception in regards to HIV; disclosure of HIV status without consent; policy or institutional support |
| Yans et al., 2018. United States. [15] | Multivariate double regression linear analyses | Knowledge, prejudice, fear, and working time |
| Befekadu et al., 2017. South Africa [16] | Multivariate logistic regression | Fear and working time |
| Prinsloo et al., 2017. South Africa [17] | Quasi-experimental design on two groups. | Training |
| Jabour et al., 2018. British Columbia [18] | Logistical regression. | Gender, education, and religiosity |
| Vora et al., 2017. Laos. [19] | The study is a cross-sectional survey. | Fear infection HIV/institutional support or standard operating procedures (SOP) |
| Opolo and Gray, 2015. Kenya [20] | Bivariate and multiple linear regression analyses | Knowledge and attitude, fear, and working time |
| Sommerland, 2019 South Africa [21] | Mixed methods study | Blame, lack of knowledge, normalizing, and empowerment |
| Faul, 2021. Yogyakarta, Indonesia [22] | Multigroup structural equation modeling | Knowledge and attitude |
| Reyes et al., 2018. South Carolina [23] | A qualitative framework analysis | Knowledge and attitude, societal values, and religion |
| Xie et al., 2019. China [24] | Exploratory study using qualitative techniques | Religious |
| Tran et al., 2019. Vietnam [8] | Logistics regression | Cultural |
factors that influence HIV-related stigma among health workers are knowledge of HIV/AIDS, perceptions of PLWHA, education level, length of work, training, institutional support, religious, and sociocultural values.

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