

ORIGINAL ARTICLE

HIV-related Stigma and Discrimination Toward People Living With HIV Among Healthcare Workers and Associated Factors

Thanh Tran Ai Nguyen¹, Vu Hoang Anh Nguyen², Yen Thi Hoai Phan³, Thanh Vu-Tri^{4,5}

¹ Internal Medicine Department, Thu Duc City Hospital, 71300 Ho Chi Minh City, Vietnam

² Psychosomatic Medicine Department, Thu Duc City Hospital, 71300 Ho Chi Minh City, Vietnam

³ Faculty of Public health, University of Medicine and Pharmacy, 72700 Ho Chi Minh City, Vietnam

⁴ Faculty of Medicine, University of Medicine and Pharmacy at Ho Chi Minh City, 72700 Ho Chi Minh City, Vietnam

⁵ Board of Directors, Thu Duc City Hospital, 71300 Ho Chi Minh City, Vietnam

ABSTRACT

Introduction: Stigma and discrimination remain significant barriers for individuals with high-risk behaviors and those living with HIV/AIDS. This study aims to delineate the current landscape of stigma and discrimination against individuals living with HIV/AIDS among healthcare workers at Thu Duc City Hospital, Vietnam. **Materials and methods:** Cross-sectional study was conducted with 120 healthcare workers at Thu Duc City Hospital, using a self-completed questionnaire based on validated components from the Ho Chi Minh City Department of Health and USAID guidelines to assess attitudes and behaviors towards people living with HIV/AIDS. **Results:** Findings revealed significant rates of fear of infection during routine procedures, such as touching clothes, changing bandages and taking blood are 68.7%, 81.7%, and 86.7% respectively. Discriminatory behaviors, such as double gloving and restricting procedures, were reported at rates of 35.0% and 10.8%. Attitudinal trends depicted 50.8% opposition towards women being infected with HIV allowed to have children. Men exhibited lower rates of discriminatory acts than women (OR = .11, 95% CI = [.03, .44], $p = .002$), and married individuals demonstrated higher discriminatory acts compared to their single counterparts (OR = 7.65, 95% CI = [2.36, 24.82], $p = .001$). **Conclusion:** Despite efforts to reduce stigma, discrimination against individuals living with HIV/AIDS remains prevalent among healthcare workers at Thu Duc City Hospital, highlighting the need for comprehensive interventions to foster a more inclusive and compassionate healthcare environment.

Malaysian Journal of Medicine and Health Sciences (2025) 21(1): 252-260. doi:10.47836/mjmhs.21.1.31

Keywords: HIV stigma, Health care worker stigma, Discrimination, People living with HIV/AIDS, Thu Duc City Hospital

Corresponding Author:

Vu Hoang Anh Nguyen, MSc

Email: hoanganhv.vu@gmail.com

Tel : +84 903060192

INTRODUCTION

Stigma and discrimination surrounding HIV/AIDS create formidable barriers, impeding the ability of people living with HIV/AIDS (PLWH) to access crucial prevention, care, and treatment services (1). Research underscores the pervasive impact of HIV-related stigma within clinical settings, where individuals should ideally find solace and support. Instead, PLWH often encounter prejudice and discrimination, which not only compromise their physical health but also inflict substantial psychological distress (2, 3).

UNAIDS defines HIV-related stigma and discrimination as a process that devalues individuals living with or affected by the virus, perpetuating a cycle of

marginalization and social exclusion (4, 5). Within the confines of hospital environments, this stigma manifests through a myriad of actions from involuntary testing and breaches of confidentiality to the insidious effects of labeling, gossip, and verbal abuse on PLWH (3, 6, 7). In extreme cases, they may even face outright refusal of treatment, denying them their fundamental right to healthcare (3, 7). Numerous studies conducted worldwide have documented the prevalence of stigma and discrimination directed at PLWA by healthcare workers, underscoring the urgent need for systemic change. Particularly disconcerting is the realization that stigma, especially when perpetuated by those entrusted with providing care, contributes to significant delays in accessing vital healthcare services (8, 9).

Addressing HIV/AIDS-related stigma within healthcare settings represents a critical imperative for healthcare administrators, requiring a concerted effort to enact meaningful change. UNAIDS (10) has recognized the urgency of this issue and proposed regulatory

measures designed to mitigate stigma within healthcare environments. Central to UNAIDS' recommendations is the periodic assessment of healthcare personnel's knowledge and attitudes towards vulnerable populations, including PLWH. By systematically evaluating these factors, healthcare administrators can gain invaluable insights into the prevailing attitudes and perceptions within their institutions, laying the groundwork for targeted educational initiatives (10). Engaging healthcare personnel in active learning experiences, administrators can foster empathy, dispel misconceptions, and promote a culture of inclusivity and compassion within healthcare settings (11).

Despite the considerable efforts made by governments, including the implementation of documents, policies, and decisive actions aimed at combating stigma against PLWH, the insidious presence of stigma and discrimination persists across a spectrum of settings. From the intimate confines of families to the broader spheres of communities, workplaces, schools, and even within the ostensibly neutral territory of medical facilities, PLWH continue to encounter barriers and biases that hinder their full participation and acceptance within society. In Vietnam, a nation grappling with the complexities of the HIV/AIDS epidemic, the Ministry of Health has taken proactive measures to address the pervasive issue of stigma and discrimination. In December 2017, the Ministry issued a directive that underscored the importance of fostering a supportive and inclusive environment within medical facilities. This directive encompassed a range of initiatives, including the development and implementation of training programs designed to educate healthcare professionals on best practices for providing compassionate and non-discriminatory care to PLWH. Additionally, the directive outlined specific medical protocols for the examination and treatment of HIV/AIDS patients, ensuring that their healthcare needs are met with dignity and respect. Moreover, codes of conduct were established to explicitly address and condemn instances of anti-stigma and discrimination within medical settings, reinforcing the message that such behaviors are incompatible with the ethical standards expected of healthcare providers. However, despite these proactive measures, the persistence of stigma and discrimination within Vietnamese society underscores the need for continued vigilance and concerted action.

Vietnam, nestled in Southeast Asia, is a country marked by its vibrant culture, rich history, and burgeoning economic growth. With a population surpassing 90 million in 2019, Vietnam stands as one of the most populous nations in the region (12). Within its dynamic landscape, the Thu Duc area in Ho Chi Minh City emerges as a beacon of economic prosperity and urban development. This vibrant locale pulsates with activity, attracting individuals from across the nation in search of economic opportunities and a better quality of life.

Despite its economic prowess, Thu Duc grapples with significant health issues, including a notable prevalence of HIV/AIDS cases. Within the realm of healthcare, strides have been made to enhance care and treatment for PLWH in Thu Duc. Healthcare facilities in the region have undergone advancements, adopting innovative approaches and specialized treatment protocols to address the unique needs of PLWH.

However, despite these efforts, the specter of stigma and discrimination continues to loom large. Stigma and discrimination cast a shadow over the lives of PLWH in Thu Duc, creating barriers to accessing essential healthcare services and support. Undertaken over the course of two years, from 2020 to 2021, this study embarked on a crucial exploration at Thu Duc City Hospital, the principal healthcare bastion in the region. Against the backdrop of elevated rates of HIV infection nationwide (13), this study sought to unravel the intricate web of perceptions and actions among medical staff towards PLWH. Central to the study's methodology was the active engagement of medical personnel as participants, offering an intimate glimpse into their perspectives and conduct regarding PLWH. By observing the daily interactions and routines of healthcare professionals, we aimed to shed light on the underlying discriminatory behavior within the medical domain.

MATERIALS AND METHODS

Participants

A descriptive cross-sectional study was conducted from January 2020 to December 2021 on 120 professional healthcare workers involved in the care and treatment of PLWH at Thu Duc City Hospital. In this study, specific criteria were established for selecting healthcare workers who must have formally signed contracts for a minimum period of three months. They work in departments where there is direct or indirect contact with PLWH (e.g., contact with patient secretions or patient belongings). Exclusion criteria apply to healthcare workers on sick leave, maternity leave or those who do not consent to participate.

Measurements

The questionnaire utilized in this study encompassed various aspects related to healthcare workers' attitudes and behaviors concerning PLWH. It drew upon validated components sourced from previous research and official documents. Specifically, the questionnaire included sections on fear of HIV infection and overprotective behavior, which were referenced from a survey conducted by the Ho Chi Minh City Department of Health in 2016. Additionally, components addressing negative attitudes toward people living with HIV were informed by research conducted by USAID (14). The questionnaire comprised the following components: (1) Fear of infection; (2) Use of unnecessary preventive

measures; (3) Discriminatory acts of healthcare workers; and (4) Health workers' attitudes and opinions about people living with HIV/AIDS. These components were selected based on their relevance to the study objectives and their alignment with established measures of HIV-related stigma and discrimination. The questionnaire's validity and reliability were affirmed through previous surveys conducted in Vietnam (10).

Ethical considerations

Approval for the research was obtained from the Ethics Council of the Hanoi University of Public Health under Decision No. 457/2019/YTCC-HD3, dated October 2, 2019, ensuring adherence to ethical standards in biomedical research.

Procedures

To determine the sample size, a formula based on estimating a ratio was utilized. With a confidence level of 95% (represented by $z = 1.96$) and a tolerance level of .05, coupled with pre-survey findings indicating a discrimination rate of 8% ($p = .08$), the calculated sample size was determined to be 114. However, to enhance the robustness of the study and account for potential dropouts or incomplete responses, a total of 120 healthcare workers were surveyed. This larger sample size provided a more comprehensive representation of the population of interest and improved the statistical power of the analysis.

Data related to healthcare workers' attitudes and behaviors toward people with HIV/AIDS were collected using self-completed questionnaires. The investigation was conducted with the assistance of the Social Work Department in the hospital. The questionnaires were completed by 120 healthcare workers who agreed to participate in the study. The questionnaire included components such as healthcare workers fear of HIV infection and overprotective behavior, referenced by a survey conducted in Ho Chi Minh City in 2016 by the Department of Health.

Data Analysis

The analysis involved both descriptive and inferential statistical methods. Descriptive statistics, such as frequencies and percentages, were computed to summarize the demographic characteristics of the participants, including age, gender, marital status, academic level, specialization, type of labor, position, and participation in training classes to reduce stigma.

Inferential statistics, including t-test tests, ANOVA and regression analysis, were employed to examine associations the relationships between various factors with stigmatizing behaviors and attitudes among healthcare workers. T-test tests and ANOVA were

used to explore the relationships between categorical variables, such as gender, marital status, and stigmatizing behaviors. Regression analysis was conducted to identify predictors of stigmatizing behaviors and attitudes, considering factors such as gender and marital status. Additionally, subgroup analyses were performed to investigate differences in attitudes and behaviors across different demographic groups, such as age, gender, academic level, and type of labor. All statistical analyses were conducted using appropriate software, and significance levels were set at $p < .05$ to determine statistical significance. The results of the analyses provided valuable insights into the prevalence and predictors of stigmatizing behaviors and attitudes among healthcare workers, thereby informing strategies for reducing HIV-related stigma and discrimination in healthcare settings.

RESULTS

Table I illustrates the demographic and job characteristics of 120 participants. Age distribution reveals that a majority of participants, 73 individuals (60.8%), fall under the category of under 30 years old, indicating a relatively youthful workforce. Gender representation within the sample shows a slight preponderance of female participants, constituting 72 individuals (60.0%), compared to 48 male participants (40.0%). Marital status delineates that the majority of participants are single, with 63 individuals (52.5%) reporting unmarried status and 1 participant (0.8%) reports being divorced. Academic attainment among participants varies, with 60 individuals (50.0%) holding intermediate/college-level education, 56 individuals (46.7%) possessing undergraduate degrees, and a smaller cohort of 4 participants (3.3%) attaining graduate-level education, demonstrating a diverse educational background within the workforce. Specialization within the healthcare domain showcases a varied distribution, with 14 participants (11.7%) identifying as doctors, 49 participants (40.8%) as nurses, 27 participants (22.5%) as technicians, and 26 participants (25.0%). Employment status delineates that 45 participants (37.5%) are engaged in contract labor arrangements, while a larger proportion, 75 participants (62.5%), are on payroll labor. Positional hierarchy within the hospital setting reveals that the majority of participants hold officer positions, accounting for 116 individuals (96.7%), whereas only 4 participants (3.3%) occupy managerial roles, indicating a hierarchical structure with a smaller managerial cadre. Participation in training programs aimed at reducing stigma is relatively low, with only 7 participants (5.8%) reporting involvement in such initiatives, while the majority, 113 participants (94.2%), have not participated in such training, underscoring potential gaps in stigma reduction efforts within the healthcare setting.

Table I: Demographic and job characteristics of health care worker at Thu Duc City Hospital (n=120)

Characteristics		n	%
Age range	Under 30 years old	73	60.8
	Over 30 years old	47	39.2
Gender	Male	48	40.0
	Female	72	60.0
Marital status	Single	63	52.5
	Married	56	46.7
Academic level	Divorce	1	.8
	Intermediate/College	60	50.0
	Undergraduate	56	46.7
Specialize	Graduate	4	3.3
	Doctor	14	11.7
	Nursing	49	40.8
Type of labor	Technicians	27	22.5
	Others	26	25.0
	Contract labor	45	37.5
Position	Payroll labor	75	62.5
	Manager	4	3.3
Participate in training classes to reduce stigma	Officer	116	96.7
	Yes	7	5.8
	No	113	94.2

Table II presents the level of fear of infection among healthcare workers when engaging in care activities for PLWH at Thu Duc City Hospital. The table categorizes responses into "Yes" and "No" for each activity. The results indicate a considerable level of fear among healthcare workers regarding potential infection when performing various care activities. Specifically, when it comes to touching clothes, bedding, or belongings of PLWH, 82 participants (68.7%) expressed fear of infection, while 38 participants (31.3%) did not report such concerns. Similarly, a significant majority of healthcare workers, 98 participants (81.7%), reported fear of infection when dressing wounds for PLWH compared to 22 participants (18.3%) who did not harbor such apprehensions. Moreover, a substantial proportion of healthcare workers experienced fear of infection when taking blood from PLWH, while only 13.3% did not share this concern.

Table II: Level of Fear of Infection During Care Activities for People Living with HIV/AIDS (n=120)

Care Activities	Yes		No	
	n	%	n	%
Touching clothes, bedding or belongings of people living with HIV/AIDS	82	68.7	38	31.3
Dressing wounds for people living with HIV/AIDS	98	81.7	22	18.3
Taking blood from people living with HIV/AIDS	104	86.7	16	1.7

Table III presents the utilization of unnecessary preventive measures by healthcare workers at Thu Duc City Hospital when caring for PLWH. The table delineates responses categorized as "Yes" and "No" for each manifestation, along with corresponding percentages and p-values.

Table III: Use of unnecessary preventive measures by health care workers (n=120)

Manifestation	Yes		No		p
	n (%)		n (%)		
Regularly use 2 gloves on the same hand for 3 months when in direct contact with PLWH (n=42)					
Gender	Male	11 (22.9)	37 (77.1)	.023*	
	Female	31 (43.1)	41 (56.9)		
Marital status	Single	14 (22.2)	49 (77.8)	.005*	
	Married	28 (50.0)	28 (50.0)		
	Divorce	0	1		
Type of labor	Contract labor	22 (48.0)	23 (51.1)	.013*	
	Payroll labor	20 (26.7)	55 (73.3)		
	Total	42 (35.0)	78 (65.0)		
Limit performing procedures such as taking blood or bandaging patients (n=13)					
Gender	Male	1 (2.1)	47 (97.9)	.012*	
	Female	12 (16.7)	60 (83.3)		
Marital status	Single	2 (3.2)	61 (96.8)	.015*	
	Married	11 (19.6)	45 (80.4)		
	Divorce	0	1		
Type of labor	Contract labor	2 (4.4)	43 (95.6)	.08	
	Payroll labor	11 (14.7)	64 (85.3)		
	Total	13 (10.8)	107 (89.2)		

Notes: *p < .05

For the manifestation of regularly using two gloves on the same hand for three months when in direct contact with PLWH, the data reveal significant disparities based on gender, marital status, and type of labor. Among male healthcare workers, 11 individuals (22.9%) reported the affirmative use of two gloves, while 31 individuals (43.1%) of female healthcare workers indicated the same practice. This gender-based discrepancy was statistically significant (p=.023). Furthermore, marital status also influenced this practice, with 28 married healthcare workers (50.0%) reporting the use of two gloves, compared to 14 single healthcare workers (22.2%). Similarly, the type of labor exhibited a significant association with this practice, as 22 individuals (48.0%) on contract labor reported the use of two gloves, compared to 20 individuals (26.7%) on payroll labor. Overall, 42 healthcare workers (35.0%) admitted to regularly using two gloves, while 78 healthcare workers (65.0%) did not engage in this practice.

Regarding the limitation of performing procedures such as taking blood or bandaging patients, gender and marital status emerged as influential factors. Only 1 male healthcare worker (2.1%) reported limiting procedures, whereas 12 female healthcare workers (16.7%) indicated such limitations, revealing a statistically significant gender-based difference (p=.012). Similarly, marital status significantly influenced this manifestation, with 11 married healthcare workers (19.6%) limiting procedures, compared to 2 single healthcare workers (3.2%). Overall, 13 healthcare workers (10.8%) acknowledged limiting procedures, while 107 healthcare workers (89.2%) did

not restrict their practice in this manner.

Table IV illustrates the percentage of healthcare workers at Thu Duc City Hospital who have observed discrimination within health facility environments concerning PLWH. The table presents responses categorized as "Observed" and "Not Observed" for each manifestation, along with corresponding percentages.

Table IV: Healthcare Workers' Observations of Discrimination in Health Facility Environments (n=120)

Discrimination in health facility environments	Observed		Not Observed	
	n	%	n	%
Health care workers are not ready to care for PLWH	3	2.5	117	97.5
Health care workers provide poorer quality care to PLWH	3	2.5	117	97.5
Health care workers defame people living with PLWH	0	.0	120	100.0
Other Health care workers defame me for taking care of PLWH	2	1.7	118	98.3
Health care workers are avoided by colleagues because of their work taking care of PLWH	3	2.5	117	97.5

The data reveal low instances of observed discrimination among healthcare workers regarding care for PLWH. Specifically, only 3 healthcare workers (2.5%) reported observing instances where health care workers were not ready to care for PLWH, while the vast majority, 117 healthcare workers (97.5%), did not witness such behavior. Similarly, only 3 healthcare workers (2.5%) reported observing instances where health care workers provided poorer quality care to PLWH. Notably, no instances of defamation of PLWH were reported by surveyed participants. Regarding observations of defamation directed towards healthcare workers for taking care of PLWH, 2 healthcare workers (1.7%) reported such instances and only 3 healthcare workers (2.5%) reported observations of colleagues avoiding them due to their work in caring for PLWH.

Table V presents health care workers' attitude on PLWH at Thu Duc City Hospital, depicting responses categorized as "Agree" and "Disagree" for each statement, along with corresponding percentages.

Table V: Healthcare Workers' Attitudes Toward People Living with HIV/AIDS (n=120)

Opinions on PLWH	Agree		Disagree	
	n	%	n	%
Most PLWH do not care that they can transmit HIV to others	26	21.7	94	78.3
PLWH should be ashamed of their HIV status	16	13.3	104	86.7
PLWH because they have engaged in irresponsible/unethical behavior	18	15.0	102	85.0
Women infected with HIV/AIDS should be sterilized, whether they agree or not	11	9.2	109	90.8
Women living with HIV/AIDS are still allowed to have children if they wish	59	49.2	61	50.8

The data reveal varying attitudes among healthcare workers towards PLWH. Regarding the perception that most PLWH do not care about transmitting the virus to others, 21.7% healthcare workers agreed with this statement, while the majority (78.3%) disagreed. Similarly, when asked whether PLWH should be ashamed of their HIV status, 13.3% agreed the rest disagreed, indicating a prevailing attitude of empathy and non-judgment towards PLWH among the majority of respondents. Regarding the belief that PLWH due to engaging in irresponsible or unethical behavior, 15.0% agreed with this statement, while 85.0% disagreed, suggesting a recognition of the multifaceted nature of HIV transmission and a rejection of stigma based on behavior. In terms of attitudes towards women living with HIV/AIDS, 9.2% healthcare workers agreed that women infected with HIV/AIDS should be sterilized, irrespective of their consent, whereas 90.8% disagreed with this notion, affirming the importance of respecting individuals' reproductive rights. Lastly, when asked whether women living with HIV/AIDS should be allowed to have children if they wish, 59 healthcare workers (49.2%) agreed, while 61 healthcare workers (50.8%) disagreed, revealing a relatively balanced perspective on this matter among respondents.

Based on the responses reflecting the attitudes of healthcare workers toward PLWH, we assigned 1 point for each answer that indicated a positive attitude. The higher mean score, the more positive attitudes toward PLWH. Table VI presents differences in opinions about PLWH among different groups of healthcare workers. The table displays the mean (M) and standard deviation (SD) for each group, along with the p-values indicating the significance of the differences observed.

Table VI: Differences in Healthcare Workers' Attitude toward people living with HIV across Demographic Groups

Demographic Groups		M	SD	p
Age range	Under 30 years old	4.23	.79	.0001***
	Over 30 years old	3.42	1.34	
Gender	Male	4.19	.76	.028*
	Female	3.74	1.27	
Marital status	Single	3.90	1.11	.991
	Married	3.93	1.12	
	Divorce	4	na	
Academic level	Intermediate/College	3.72	1.24	.036*
	Undergraduate	4.06	.94	
	Graduate	5.00	na	
	No	3.94	1.08	
Specialize	Doctor	4.07	0.83	.879
	Nursing	3.69	1.35	
	Technicians	4.14	0.80	
Type of labor	Others	4.04	0.96	.254
	Contract labor	4.07	0.89	
	Payroll labor	3.83	1.22	
Position	Manager	4	2	.879
	Officer	3.91	1.08	

CONTINUE

Table VI: Differences in Healthcare Workers' Attitude toward people living with HIV across Demographic Groups. (CONT.)

Demographic Groups		M	SD	p
Participate in training classes to reduce stigma	Yes	3.57	1.62	.399
	No	3.94	1.08	

Notes: *p < .05; **p < .001; ***p < .0001

Regarding age range, healthcare workers under 30 years old demonstrated a significantly higher mean opinion score of 4.23 (SD = .79) compared to those over 30 years old, who had a mean score of 3.42 (SD = 1.34) (p = .0001). This suggests that younger healthcare workers hold more favorable opinions towards PLWH compared to their older counterparts. In terms of gender, male healthcare workers exhibited a higher mean opinion score of 4.19 (SD = .76) compared to female healthcare workers, who had a mean score of 3.74 (SD = 1.27) (p = .028). This indicates that male healthcare workers tend to hold more positive opinions towards PLWH than their female counterparts. Analyzing opinions based on academic level, healthcare workers with an intermediate/college education demonstrated a mean opinion score of 3.72 (SD = 1.24), while those with an undergraduate education had a slightly higher mean score of 4.06 (SD = .94) (p = .036). However, the mean opinion score for healthcare workers with a graduate education is not available. This suggests that healthcare workers with higher academic qualifications tend to have more positive opinions towards PLWH compared to those with lower academic qualifications. In addition, no association was found between positive attitude and Marital status; Specialize; Type of labor; Position; Participate in training classes of health workers (p > .05). Table VII presents the results of multivariate regression analysis examining factors related to stigmatizing behavior and views among healthcare workers at Thu Duc City Hospital. The table displays the adjusted Odds Ratios (aOR) with 95% confidence intervals (CI) and corresponding p-values.

Table VII: Multivariate regression of factors related to stigmatizing behavior and views in health care workers

Factors	aOR (95% CI)	p-value
Act of discrimination		
Age	.91 (.30 – 2.78)	.871
Gender	.11 (.03 – .44)	.002
Marital status	7.65 (2.36 – 24.82)	.001
Academic level	1.33 (.47 – 3.78)	.587
Position	.58 (.29 – 1.15)	.119
Type of labor	.54 (.03 – 1.61)	.090
Participate in training classes to reduce stigma	1.33 (.14 – 12.78)	.803
View of discrimination		
Age	.28 (.06 – 1.39)	.119
Gender	.30 (.05 – 1.79)	.189
Marital status	1.51 (.36 – 6.30)	.567
Academic level	3.9 (.96 – 15.67)	.060
Position	1.19 (.46 – 3.12)	.719
Type of labor	.44 (.06 – 3.50)	.437
Participate in training classes to reduce stigma	.26 (.03 – 1.96)	.189

Regarding stigmatizing behavior, gender emerged as a significant predictor, with female healthcare workers exhibiting a lower likelihood of engaging in discriminatory acts compared to their male counterparts (aOR = .11, 95% CI = [.03, .44], p = .002). This suggests that male healthcare workers are approximately 9 times more likely to exhibit stigmatizing behavior compared to female healthcare workers after adjusting for other factors. Marital status also significantly influenced stigmatizing behavior, with married healthcare workers demonstrating a substantially higher likelihood of engaging in discriminatory acts compared to single healthcare workers (aOR = 7.65, 95% CI = [2.36, 24.82], p = .001).

DISCUSSION

The findings of the study at Thu Duc City Hospital shed light on the complex interplay of factors influencing attitudes, behaviors, and perceptions of healthcare workers towards PLWH. The prevalence of stigma and discrimination within healthcare settings remains a significant barrier to accessing quality care and treatment for those affected by the virus. The observed disparities in opinions and behaviors across demographic variables such as age, gender, and marital status underscore the need for tailored interventions to address these challenges. These findings underscore the importance of comprehensive training programs and policy initiatives aimed at fostering empathy, increasing awareness, and promoting inclusive care practices within healthcare settings. Furthermore, the study underscores the ongoing need for continuous efforts to combat stigma and discrimination to ensure equitable access to healthcare services for PLWH.

The concern among healthcare workers regarding the risk of HIV transmission during patient care tasks remains significant. Our findings revealed that a considerable percentage of healthcare workers expressed fear of infection when handling tasks such as touching clothes, changing bandages, and taking blood from HIV-infected individuals, with rates of 68.7%, 81.7%, and 86.7%, respectively. These percentages were significantly higher than those reported in a previous UNAIDS study conducted in Ho Chi Minh City. In the UNAIDS study, healthcare workers who did not undergo stigma reduction training demonstrated worry rates of 57.6% when handling items of people with HIV, which decreased to 27.2% among those who received training. Similarly, worry rates when dressing wounds for HIV patients decreased from 79.8% to 58.7% post-training, and rates of concern when taking blood from HIV patients decreased from 80.2% to 60.9% after training. These findings underscore healthcare workers' awareness of the risk of HIV infection and their heightened anxiety when exposed to potential sources of infection. While stigma reduction training has shown to decrease anxiety rates to some extent, it remains clear that anxiety

levels persist at concerning levels. This emphasizes the continued need for comprehensive training programs and supportive workplace environments to address and alleviate healthcare workers' fears and ensure the delivery of quality, stigma-free care to individuals living with HIV/AIDS (10).

In our study, the proportion of healthcare workers avoiding contact and refusing to perform procedures for HIV patients was found to be 10.8%, a rate lower than what has been reported in studies conducted in Africa and the Asia Pacific region, which ranged from 14.8% to 35.9%. For instance, Zarei, Joulaei (15) conducted research in Iran and found that 35.9% of healthcare staff disagreed with providing services to PLWH via injection. Furthermore, 39.6% and 46.2% of health workers expressed unwillingness to provide services to prostitutes and homosexuals. Similarly, Dong, Yang (16) conducted research in Guangzhou, China, reporting that 14.8% of staff refused to provide general treatment to infected individuals, while 21.3% refused to treat high-risk infected individuals. Additionally, our study revealed that 50% of healthcare workers objected to providing services to infected pregnant women. While this percentage was higher than rates reported in the UNAIDS study, it was still lower than figures observed in studies conducted by Ekstrand, Ramakrishna (17) in India, where rates ranged from 55% to 80%.

Interestingly, our findings also indicate that participating in training classes did not significantly impact discriminatory behavior. The gap between training and the actual reduction of stigma may result from training that does not fully address deeply ingrained biases, lacks practical application, and is not reinforced within the existing workplace culture. To address this gap, Nyblade, Srinivasan (18) proposed a comprehensive intervention program consisting of three sessions. The first two sessions focus on theoretical aspects, covering perceptions of stigma, attitudes, fear of HIV transmission, and the implementation of standard precautions. The third session, conducted in small groups, emphasizes practical skill-building through role-playing activities and personal testimonies from PLWH. Throughout these sessions, a member of the research team oversees the administration, explains procedures, and remains available to address any queries or concerns (18). This approach highlights the importance of targeted and interactive training initiatives aimed at equipping healthcare workers with the necessary knowledge and skills to effectively manage their interactions with PLWH. By fostering a culture of acceptance, compassion, and support, healthcare service provider can serve as a beacon of hope in the nation's quest to create a society where all individuals, regardless of their HIV status, are treated with dignity and respect (19-21).

The regression analysis conducted in our study elucidated that specific demographic characteristic of healthcare

workers, notably female gender and being married, were significant predictors of stigma and discrimination. This finding resonates with observations from prior research conducted in settings such as Indonesia and India, where women exhibited a heightened propensity towards stigmatizing and discriminatory behaviors compared to their male counterparts (17, 22). However, while gender-based disparities in discriminatory attitudes have been extensively documented, the association between marital status and discriminatory behavior remains relatively understudied. This divergence in findings could potentially be attributed to the intricate interplay of cultural norms, traditional gender roles, and religious beliefs prevalent in diverse societal contexts. Cultural factors may exert profound influences on individuals' perceptions and behaviors, shaping their attitudes towards marginalized groups such as PLWH. The cultural landscape in Vietnam, deeply influenced by Confucian values, places significant emphasis on social harmony, family honor, and moral conduct, which can shape healthcare workers' perceptions and behaviors toward people living with HIV/AIDS (PLWH). For instance, PLWH are often viewed through the lens of moral failing, leading to stigmatization and exclusion (23). Additionally, gender norms further complicate this issue, as women with HIV may face compounded stigma due to societal expectations around purity and motherhood. Moreover, societal expectations surrounding marriage and family dynamics may further influence healthcare workers' attitudes and behaviors towards stigmatized populations. Therefore, acknowledging and comprehensively understanding these cultural nuances is paramount for devising effective interventions tailored to address and mitigate stigma and discrimination within healthcare settings.

The study's findings carry significant implications for healthcare policy and practice in Vietnam. Firstly, they underscore the urgent need for targeted interventions to address stigma and discrimination within medical facilities, particularly among healthcare workers. Initiatives aimed at raising awareness, promoting empathy, and fostering a supportive environment for PLWH are essential. Furthermore, the identification of gender and marital status as factors associated with discriminatory behavior highlights the importance of tailored training programs and interventions tailored to address these specific demographics. Implementing comprehensive training programs that incorporate role-playing, counseling, and support from supervisors may be instrumental in mitigating discriminatory attitudes and behaviors among healthcare workers.

Despite its contributions, this study is not without limitations. Firstly, the use of self-completed questionnaires may introduce response bias, as participants may provide socially desirable responses. Additionally, the cross-sectional design of the study limits the ability to establish causality between

variables. Furthermore, the study's focus on a single healthcare facility may limit the generalizability of the findings to other settings. Future research should employ longitudinal designs and include a broader sample of healthcare facilities to enhance the generalizability of the findings.

Future research endeavors should aim to delve deeper into the intricate interactions between demographic factors, cultural contexts, and discriminatory attitudes to inform the development of more nuanced and culturally sensitive approaches towards stigma reduction.

CONCLUSION

This study sheds light on the pervasive issue of stigma and discrimination against individuals living with HIV/AIDS within medical settings in Vietnam. Despite efforts to transition HIV/AIDS care to hospitals and implement training programs, stigma and discriminatory attitudes persist among healthcare workers. Addressing these challenges requires multifaceted approaches that target attitudinal change, policy reform, and institutional support. By fostering a culture of inclusivity and compassion, healthcare facilities can better serve individuals living with HIV/AIDS and contribute to the broader goal of ending the HIV/AIDS epidemic.

ACKNOWLEDGEMENT

We are deeply grateful to all participants who contributed to the data collection process.

REFERENCES

1. Adebajo SB, Bamgbala AO, Oyediran MA. Attitudes of health care providers to persons living with HIV/AIDS in Lagos State, Nigeria. *African Journal of Reproductive Health*. 2003;7(1):103-12. doi: 10.2307/3583350.
2. Surlis S, Hyde A. HIV-positive patients' experiences of stigma during hospitalization. *Journal of the Association of Nurses in AIDS Care*. 2001;12(6):68-77. doi: 10.1016/S1055-3290(06)60185-4.
3. Nyblade L, Stangl A, Weiss E, Ashburn K. Combating HIV stigma in health care settings: what works? *Journal of the International AIDS Society*. 2009;12:1-7. doi: 10.1186/1758-2652-12-15.
4. Lentine D, Hersey J, Iannacchione V, Laird G, McClamroch K, Thalji L. HIV-Related Knowledge and Stigma--United States, 2000. *JAMA: Journal of the American Medical Association*. 2000;284(24):3118. doi: 10.1001/jama.284.24.3118.
5. Saki M, Kermanshahi SMK, Mohammadi E, Mohraz M. Perception of patients with HIV/AIDS from stigma and discrimination. *Iranian Red Crescent Medical Journal*. 2015;17(6). doi: 10.5812/ircmj.23638v2.
6. Banteyerga H, Kidanu A, Abebe F, Alemayehu M, Fiseha B, Asazenew A, et al. Perceived stigmatization and discrimination by health care providers toward persons with HIV/AIDS. Miz-Hasab Research Center, Addis Ababa, IntraHealth International, USAID. 2005. doi: 10.13140/2.1.3556.7687.
7. Varas-Díaz N, Neilands TB. Development and validation of a culturally appropriate HIV/AIDS stigma scale for Puerto Rican health professionals in training. *AIDS Care*. 2009;21(10):1259-70. doi: 10.1080/09540120902804297.
8. Dieleman M, Biemba G, Mphuka S, Sichinga-Sichali K, Sissolak D, van der Kwaak A, et al. 'We are also dying like any other people, we are also people': perceptions of the impact of HIV/AIDS on health workers in two districts in Zambia. *Health Policy & Planning*. 2007;22(3):139-48. doi: 10.1093/heapol/czm006.
9. Uebel KE, Nash J, Avalos A. Caring for the caregivers: models of HIV/AIDS care and treatment provision for health care workers in Southern Africa. *The Journal of Infectious Diseases*. 2007;196(Supplement_3):S500-S4. doi: 10.1086/521113.
10. UNAIDS JUNPoHA. Evidence for eliminating HIV related stigma and discrimination. Geneva: UNAIDS. 2020.
11. Feyissa GT, Lockwood C, Woldie M, Munn Z. Reducing HIV-related stigma and discrimination in healthcare settings: A systematic review of quantitative evidence. *PLoS One*. 2019;14(1):e0211298. doi: 10.1371/journal.pone.0211298.
12. Vi VTT, Long KQ, Hong LHTC, Anh HTN, Ngoc NV, Tam VV, et al. HIV prevalence and factors related to HIV infection among transgender women in Vietnam: a respondent driven sampling approach. *AIDS & Behavior*. 2020;24:3132-41. doi: 10.1007/s10461-020-02867-5.
13. Lee P, Docrat A. Prevalence and shared risk factors of HIV in three key populations in Vietnam: A systematic review and meta-analysis. *Epidemiology and Infection*. 2023;151:e138. doi: 10.1017/S0950268823001243.
14. Nyblade L. Measuring HIV stigma and discrimination among health facility staff. 2013.
15. Zarei N, Joulaei H, Darabi E, Fararouei M. Stigmatized attitude of healthcare providers: a barrier for delivering health services to HIV positive patients. *International Journal of Community Based Nursing & Midwifery*. 2015;3(4):292.
16. Dong X, Yang J, Peng L, Pang M, Zhang J, Zhang Z, et al. HIV-related stigma and discrimination amongst healthcare providers in Guangzhou, China. *BMC Public Health*. 2018;18:1-10. doi: 10.1186/s12889-018-5654-8.
17. Ekstrand ML, Ramakrishna J, Bharat S, Heylen E. Prevalence and drivers of HIV stigma among health providers in urban India: implications

- for interventions. *Journal of the International AIDS Society*. 2013;16:18717. doi: 10.7448/IAS.16.3.18717.
18. Nyblade L, Srinivasan K, Mazur A, Raj T, Patil DS, Devadass D, et al. HIV stigma reduction for health facility staff: development of a blended-learning intervention. *Frontiers in Public Health*. 2018;6:362233. doi: 10.3389/fpubh.2018.00165.
 19. Li L, Lin C, Liang L-J, Chen J, Feng N, Nguyen AT. HIV-and Drug Use-Related Stigma and Service Provision Among Community Health Workers in Vietnam. *AIDS Education & Prevention*. 2020;32(2):169-79. doi: 10.1521/aeap.2020.32.2.169.
 20. Thi MDA, Brickley DB, Vinh DTN, Colby DJ, Sohn AH, Trung NQ, et al. A qualitative study of stigma and discrimination against people living with HIV in Ho Chi Minh City, Vietnam. *AIDS & Behavior*. 2008;12:63-70. doi: 10.1007/s10461-008-9374-4.
 21. Tran BX, Than PQT, Tran TT, Nguyen CT, Latkin CA. Changing sources of stigma against patients with HIV/AIDS in the rapid expansion of antiretroviral treatment services in Vietnam. *BioMed Research International*. 2019;2019. doi: 10.1155/2019/4208638.
 22. Stringer KL, Turan B, McCormick L, Durojaiye M, Nyblade L, Kempf M-C, et al. HIV-related stigma among healthcare providers in the deep south. *AIDS & Behavior*. 2016;20:115-25. doi: 10.1007/s10461-015-1256-y.
 23. Badanta B, González-Cano-Caballero M, Suárez-Reina P, Lucchetti G, de Diego-Cordero R. How Does Confucianism Influence Health Behaviors, Health Outcomes and Medical Decisions? A Scoping Review. *Journal of religion and health*. 2022;61(4):2679-725. doi: 10.1007/s10943-022-01506-8.