

Comparative Analysis of HIV-Related Attitudes, Behaviors, and Beliefs between People Living with HIV and Health Care Workers in Thailand

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Background: Different forms of HIV-related stigma are now firmly established in all HIV-affected countries across the world, including Thailand. These stigmas adversely affect access to care and other types of support needed by people living with HIV [PLHIV]. Data specific to differences in HIV-related attitudes, behaviors, and beliefs between Thai PLHIV and health care workers [HCWs] are scarce.

Objective: To investigate and compare differences in HIV-related attitudes, behaviors, and beliefs between PLHIV and HCWs. This study aimed at comparing stigma-related attitudes among PLHIV and HCWs in Thailand.

Materials and Methods: This questionnaire-based study was conducted in June 2014 in HCWs employed at and PLHIV receiving care from Siriraj Hospital, Thailand's largest university-based national tertiary referral center.

Results: Ninety-one HCWs and 61 PLHIV were included. Counseling for safe sex practice and appropriate family planning were considered as stigma at higher proportion among PLHIV than did HCWs ($p = 0.006$ and 0.012 , respectively). Moreover, attending special clinic was also a stigma issue concerned by PLHIV ($p = 0.006$). Issues including sexually promiscuous, people avoiding interaction with PLHIV, gossiped by others, expelled from their places of residency, and stigmatized by mass media appeared to be a concern by only small proportion of PLHIV (less than 25% of PLHIV).

Conclusion: The present study emphasized the differences in attitude among HCWs and PLHIV regarding HIV-related stigma in Thailand health care setting. Safe sex advice, appropriate family planning counseling, and setting special clinic for PLHIV were considered HIV stigma-influenced behaviors in a higher proportion of PLHIV than HCWs.

Keywords: HIV, Stigma, Health care worker, PLHIV, Thailand, Social context

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According to data from UNAIDS, worldwide incidence of HIV/AIDS decreased between 2001 and 2012, but the prevalence of HIV/AIDS increased from 30 million to 35.3 million. In 2012, Thailand was estimated to have 460,000 people living with HIV [PLHIV] and 26,000 AIDS-related deaths⁽¹⁾.

Stigma is a mark of disgrace and a labeling process that involves devaluation of the stigmatized person or group⁽²⁾. Stigmatization gives stigmatizers (people whose attitudes, behaviors, and beliefs are influenced by a stigma or stigmas) a sense of personal

safety from and superiority over the person or group being stigmatized⁽³⁾. Although people may not know or interact with PLHIV, their views about PLHIV may be influenced by pervasive HIV-related stigma. Stigma can be divided into social stigma and shame. Social stigma is characterized by negative attitudes of other toward PLHIV whereas shame is associated with fears that PLHIV have regarding how they will be perceived once others learn that they are HIV-positive⁽⁴⁾.

HIV-related social stigma adversely affects PLHIV in many ways, including decreased or altered social activity and involvement⁽⁵⁾. Moreover, HIV-related social stigma may compromise participation in and compliance with prevention programs (e.g., mother-to-child transmission), and the effectiveness of antiretroviral therapy, which could worsen the disease⁽⁶⁾.

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In health care setting, PLHIV perceived HIV-related stigma, such as the feeling that health care workers [HCWs] were uncomfortable to treat PLHIV or treated them with inferior manner, which was reported to be associated with poor treatment adherence⁽⁷⁾. Attitudes, behaviors, and beliefs influenced by HIV-related stigma were found to have a negative impact on PLHIV because HCWs play an important role in the treatment and counseling process of PLHIV⁽⁸⁾. Moreover, HIV-related stigma behavior from HCWs was shown to increase the incidence of mental health among PLHIV such as stress, anxiety, and suicidal ideation⁽⁹⁾. A better understanding of stigma in health care setting is needed so that appropriate policies can be developed to reduce stigma and improve attitudes, behaviors, and beliefs regarding HIV infection in both HCWs and PLHIV⁽¹⁰⁾.

In Thai society, PLHIV are accused of being sexually promiscuous and immoral. PLHIV may conceal their HIV status, based on their perception of attitude and behavior-related actions that others demonstrate or otherwise reveal relative to their concerns about HIV⁽¹¹⁾. However, data relating to HIV-related stigma in health care settings in Thailand are scarce⁽¹²⁾.

If the authors can improve our understanding of HIV-related attitudes, behaviors, and beliefs among PLHIV and HCWs in both a healthcare and social setting, the authors can improve the quality of patient care and patient adherence to treatment. Accordingly, the aim of this study was to investigate and compare differences in HIV-related attitudes, behaviors, and beliefs between PLHIV and HCWs in Thailand.

The present study intended to explore differences in attitude among HCWs and PLHIV regarding HIV-related stigma in Thailand to better understand their perspective in both health care setting and social contexts which could be used to improve HCWs' attitude and enhance adherence to treatment.

Materials and Methods

This questionnaire-based study was conducted in July 2014 in HCWs employed at and PLHIV receiving care from Siriraj Hospital, Thailand's largest university-based national tertiary referral center. Written informed consent was obtained from all HCWs and PLHIV prior to their inclusion in this study. The protocol for this study was approved by the Siriraj Institutional Review Board [SIRB], Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand (approval No.309/2557(EC3)).

HCWs included physicians (residents, fellows, and medical students), nurses, nursing assistants, and other allied health personnel. Included PLHIV were HIV-infected patients aged older than 18 years old who were attending and received treatment from the HIV clinic at our center. PLHIV diagnosed with depression or other psychological disorders, or who were unable to read and understand the study questionnaire by themselves were excluded by a structured interview.

The study questionnaire consisted of 25 items that were subdivided into two parts. The first part, items 1 to 16 related to HIV stigma-related attitudes, behaviors, and beliefs toward PLHIV in a health care setting, was answered by HCWs and PLHIV. The second part, items 17 to 25 centered on social attitudes, behaviors, and beliefs toward PLHIV in a social context, was answered by only PLHIV.

Questionnaire items were developed from studies that were previously conducted in other countries, and they were modified to Thai cultural contexts by a group of physicians that included specialists in HIV⁽¹²⁻¹⁷⁾. All items were internally consistent, with reliability coefficients of 0.799 and 0.888 for stigma-influenced in health care setting and stigma-influenced in social context, respectively.

For each item in both two parts, participants were asked to rate to what extent they agree that a given situation represents an HIV stigma-related behaviors, attitudes, and beliefs. Item scoring was based on a 5-point Likert scale, as follows: 5 = strongly agree; 4 = agree; 3 = neutral; 2 = disagree; and 1 = strongly disagree. Individual questionnaire item scoring of 4 or 5 was reflecting that the respondent viewed the situation as being influenced by HIV-related stigma. Items scored as 1, 2, or 3 were reflecting that the respondent viewed the situation as not being influenced by HIV-related stigma.

Statistical analysis

Data were analyzed using SPSS Statistics version 18.0 (SPSS Inc., Chicago, IL, USA), and are reported as percentage. For questionnaire items 1 to 16, Pearson's Chi-square test was used to compare differences between groups. For questionnaire items 17 to 25, descriptive statistics were used to quantitatively describe the perspective of PLHIV regarding HIV-related stigma in a Thai social context. A *p*-value of less than 0.05 was regarded as being statistically significant.

Results

One hundred fifty two participants (91 HCWs

and 61 PLHIV) fulfilled the eligibility criteria. Demographic and clinical characteristics of HCWs and PLHIV are shown in Table 1. HCWs consisted of residents, fellows, and medical students (n = 43), nurses and nursing assistants (n = 30), and other allied health personnel (n = 18). Most HCWs were younger than 35 years of age (74.4%) and had at least one year of work experience (88.9%).

Approximately half (49.2%) of PLHIV were in the 35 to 49 years age range. More than half of PLHIV (62.7%) were not educated to the level of bachelor's degree and 50% of PLHIV lived in a household with three to four people. Forty percent of PLHIV were aware of their HIV-positive status for less than four years. One PLHIV had HIV infection from vertical transmission, and all PLHIV were on antiretroviral therapy.

Response data from both HCWs and PLHIV for items of the first part (HIV stigma-influenced behaviors/attitudes/beliefs in health care setting) of the questionnaire are presented in Table 2. Item 1, 2, 3, and 4 were all scored as being influenced by

HIV-related stigma by HCWs (57.1%, 60.4%, 51.6%, and 60.4%, respectively). A majority of PLHIV also ranked those same four items as being influenced by HIV-related stigma (78.7%, 80.0%, 73.8%, and 72.1%, respectively). Response rates for items 1 (HCWs counsel PLHIV about safe sex practices), 2 (HCWs counsel PLHIV about family planning), and 3 (HCWs provide special clinic at a specific time and place for PLHIV) were significantly different between groups ($p = 0.006, 0.012, \text{ and } 0.006$, respectively).

The stigma-level response rate for questionnaire item 5 (HCWs make a special mark on PLHIV specimens to alert others) was also significantly different between the HCW and PLHIV groups (42.9% and 23.0%, respectively; $p = 0.012$), which implies significantly higher level of concern among HCWs. Suggestive of concerns about HIV stigma-related discrimination from HCWs. 50.5%, 39.6%, 49.5%, and 48.4% of HCWs and 41.0%, 36.1%, 42.6%, and 42.6% of PLHIV registered concern about items 6 (HCWs wash their hands after touching PLHIV), 7 (HCWs wear mask and/or gloves when interacting

Table 1. Demographic and clinical characteristics of HCWs and of PLHIV

Variables	HCWs				PLHIV (n = 61)	p-value
	Resident, fellow, and medical student (n = 43)	Nurse and nursing assistant (n = 30)	Allied health personnel (n = 18)	Total (n = 91)		
Gender, n (%)						0.01*
Male	20 (46.5)	0 (0.0)	37 (62.7)	31 (31.8)	37 (62.7)	
Female	23 (53.5)	29 (100)	22 (35.3)	58 (64.8)	22 (37.3)	
Age, n (%)						0.00*
<35 years	43 (100)	8 (26.7)	16 (94.1)	67 (74.4)	16 (27.1)	
35 to 49 years	0 (0.0)	16 (53.3)	0 (0.0)	16 (17.8)	29 (49.2)	
>49 years	0 (0.0)	6 (20.0)	1 (5.9)	7 (7.8)	14 (23.7)	
Work duration, n (%)						
<1 year	6 (14.0)	1 (3.3)	3 (17.6)	10 (11.1)		
1 to 4 years	23 (53.5)	3 (10.0)	8 (47.2)	34 (37.8)		
5 to 9 years	14 (32.5)	2 (6.7)	3 (17.6)	19 (21.1)		
>9 years	0 (0.0)	24 (80.0)	3 (17.6)	27 (30.0)		
Education, n (%)						
Precollege					26 (43.3)	
Vocational college					11 (18.3)	
Undergraduate					17 (28.3)	
Graduate					6 (10.0)	
Family member, n (%)						
1 to 2 people					17 (30.4)	
3 to 4 people					28 (50.0)	
>4 people					11 (19.6)	
Disease duration, n (%)						
<4 years					24 (40.0)	
5 to 9 years					12 (20.0)	
10 to 14 years					16 (26.7)	
>14 years					8 (13.3)	

HCWs = health care workers; HIV = human immunodeficiency virus; PLHIV = people living with HIV

* p -value <0.05 indicates statistical significance (Pearson's Chi-square test)

Table 2. Questionnaire item 1 to 16 concerning stigma in health care setting comparing between HCWs and PLHIV, shown proportion reflects the percentage of respondents that gave that question a stigma-level score of 4 or 5

Questionnaire items No.	HCWs (n = 91) n (%)	PLHIV (n = 61) n (%)	p-value
1. HCWs counsel PLHIV about safe sex practices	52 (57.1)	48 (78.7)	0.006*
2. HCWs counsel PLHIV about family planning	55 (60.4)	48 (80.0)	0.012*
3. HCWs provide special clinic at a specific time and place for PLHIV	47 (51.6)	45 (73.8)	0.006*
4. HCWs use an alternative for PLHIV's clinic in order to avoid using the terms HIV and/or AIDS	55 (60.4)	44 (72.1)	0.138
5. HCWs make a special marker on PLHIV specimens to alert others	39 (42.9)	14 (23.0)	0.012*
6. HCWs wash their hands after touching PLHIV	46 (50.5)	25 (41.0)	0.247
7. HCWs wear mask and/or gloves when interacting with PLHIV	36 (39.6)	22 (36.1)	0.664
8. HCWs request written informed consent from general medical patients who do not intend to check their HIV status	45 (49.5)	26 (42.6)	0.408
9. HCWs ask PLHIV about other sexually transmitted diseases	44 (48.4)	26 (42.6)	0.487
10. HCWs speak with PLHIV in a hurried manner, and they attempt to conclude the conversation as quickly as possible	25 (27.5)	14 (23.0)	0.532
11. HCWs refuse to speak with PLHIV, saying that they are busy in with other work	24 (26.4)	9 (15.0)	0.098
12. HCWs maintain more distance from PLHIV than non-PLHIV patients	29 (32.2)	14 (23.0)	0.215
13. HCWs speak to PLHIV in a derogatory and condescending tone	26 (28.6)	12 (19.7)	0.214
14. HCWs blame PLHIV when they do not comply with treatment	19 (20.9)	16 (26.7)	0.410
15. HCWs are angry to anything around PLHIV	18 (19.8)	12 (19.7)	0.987
16. HCWs act as though all PLHIV illnesses are derived from the patient's HIV status	18 (19.8)	14 (23.0)	0.638

AIDS = acquired immune deficiency syndrome; HCWs = health care workers; HIV = human immunodeficiency virus; PLHIV = people living with HIV
* p-value <0.05 indicates statistical significance (Pearson's Chi-square test)

with PLHIV), 8 (HCWs request written informed consent from general medical patient who do not intend to check their HIV status), and 9 (HCWs ask PLHIV about other sexually transmitted diseases), respectively. Although the results for items 6 to 9 were not significantly different between groups, a substantial level of concern was reported regarding potential discrimination from HCWs. The percentage of HCWs and PLHIV that rated items 10 to 16 as a 4 or 5 (stigma level response) ranged from 15% to 32.2%. Proportions were relatively similar between groups for each item, and no statistically significant differences were observed between groups for any of these items.

Results concerning attitudes, behaviors, and beliefs in a Thai social context (items 17 to 25) are shown in Table 3. These nine items were divided into the following three groups: (A) negative attitudes against PLHIV (items 17: PLHIV are sexually promiscuous, 18: PLHIV have problems with drug addiction, and 19: PLHIV are immoral), (B) negative actions against PLHIV (items 20: people avoid interaction with PLHIV, 21: PLHIV are expelled from their place of residence, 22: people gossip about PLHIV in a disparaging tone/manner, and 23: mass media shows how PLHIV can be distinguished), and (C) negative prejudice against PLHIV (items 24: people

Table 3. Questionnaire items 17 to 25 concerning stigma in a social context among PLHIV, shown proportions reflect the percentage of respondents that gave that question a stigma-level score of 4 or 5

Questionnaire items No.	PLHIV (n = 61) n (%)
Group A: negative attitudes against PLHIV	
17. PLHIV are sexually promiscuous	11 (19.6)
18. PLHIV have problems with drug addiction	10 (18.2)
19. PLHIV are immoral	9 (16.7)
Group B: negative actions against PLHIV	
20. People avoid interaction with PLHIV (e.g., touching, sharing a meal, talking together, etc.)	7 (12.7)
21. PLHIV are expelled from their places of residency	8 (14.3)
22. People gossip about PLHIV in a disparage tones/manner	10 (17.5)
23. Mass media shows how PLHIV is distinguish	12 (22.2)
Group C: negative prejudices against PLHIV	
24. People have inadequate knowledge about understanding toward PLHIV	31 (54.4)
25. PLHIV have to keep their HIV status secret	37 (63.8)

PLHIV = people living with human immunodeficiency virus

have inadequate knowledge about and understanding toward PLHIV and 25: PLHIV have to keep their HIV status secret). Notably, 54.4% of PLHIV reported that

non-HIV-infected people have insufficient knowledge about and understanding toward PLHIV, and 63.8% of PLHIV reported that they have to keep their HIV status secret from others.

Discussion

HIV-related stigma in health care setting is one of the key factors that lead to poor HIV treatment compliance⁽⁷⁾. Different perceptions between HCWs and PLHIV on attitudes or behaviors might create PLHIV stigmatize feeling, which results in ineffective counseling and poor health promotion program. Only few previous studies explored HIV-related stigma issues in Thai HCWs. A systematic review by Churcher⁽¹²⁾ published 15 articles between 2007 and 2012 that focused on HIV-related stigma in Thailand. Most of those articles focused on attitudes of PLHIV and the community. One of those 15 studies investigated attitudes about HIV-related stigma among 20 HCWs that were nursing students. Participants in that study revealed that they viewed PLHIV who were sex workers or drug abusers to be immoral⁽¹⁸⁾. This is the first study to investigate and compare differences in HIV-related attitudes, behaviors, and beliefs between PLHIV and HCWs in Thailand.

In this study, a significant higher percentage of PLHIV than HCWs considered family planning and safe sex counseling to be a HIV-stigma influenced behavior. This perception may be because Thailand's culture is influenced by Buddhist principles and philosophies. Thai people reported believing that PLHIV could have contracted HIV from inappropriate relationships, such as extramarital affairs, having many sex partners, or having sex with prostitutes⁽¹⁴⁾. In the present study, approximately 40% of HCWs did not consider family planning and safe sex counseling to be influenced by HIV-related stigma. People that engage in extramarital relationships may contract and spread HIV to their sex partners and perhaps even to their children⁽¹⁴⁾. Aware of overemphasizing sexual practice issues in counseling might reduce PLHIV stigmatized feeling and improve PLHIV counseling quality.

PLHIV can recognize discriminatory behavior and hesitation or unwillingness of HCWs to help them⁽¹⁹⁾. Family planning counseling about the potential risks of vertical transmission may increase feelings and concerns among PLHIV that they are being stigmatized⁽²⁰⁾. Therefore, PLHIV may develop anxiety and stress about pregnancy or planning for a future pregnancy.

Alternatively, it has been reported that HIV-

related discriminatory behavior by HCWs may not be influenced by their job, but rather by a generalized societal adverse attitude toward PLHIV⁽²¹⁾. The authors hypothesized that HIV stigma-related views and behaviors held and demonstrated by HCWs may be due to a lack of experience dealing with PLHIV, a lack of sufficient understanding of the disease, or feelings of a need to overprotect HCWs from contracting the disease from PLHIV. Unfavorable counseling results revealed in the present study may have also been caused or exacerbated by an insensitive or inappropriate approach by HCWs or by forms of unintentional non-verbal communication to which PLHIV may be particularly sensitive. It should also be noted that despite receiving counseling from professional HCWs, PLHIV may have a generally pessimistic view and may, therefore, misunderstand the purpose or intent of the counseling. Regardless of how well family planning counseling is received, accepted, and assimilated by the PLHIV, it is essential that family planning be provided according to Thailand National Guidelines on HIV/AIDS Diagnosis and Treatment and other recognized guidelines, because this will help to reduce the risk of spreading HIV to the partners and children of PLHIV⁽²²⁾.

The authors found that a significantly higher percentage of PLHIV than HCWs (73.8% vs. 51.6%) considered issues relating to the HIV special clinic to be influenced by HIV-related stigma. Previous study found that PLHIV desired to attend a special clinic where they would be understood and not feel isolated⁽²³⁾. Although the HIV special clinic at our center gives all indications of providing a suitably accommodating environment for PLHIV, it is possible that the stigma felt by PLHIV in this study was caused by their feeling that HCWs at that clinic somehow viewed them differently because they are HIV-positive. Social groups and online social networks for PLHIV can help to mask or obscure their HIV-positive identity, which may help to reduce or otherwise compensate for feelings of isolation and stigmatization⁽²⁴⁾.

As a possible alternative and similar to how a psychiatric clinic might be euphemistically named a behavioral health clinic, the HIV special clinic might be renamed using terminology or phraseology that omits the use of the acronyms HIV and/or AIDs. This type of change may benefit PLHIV, HCWs, and others who work or interact in that specific work/service environment. However, based on our findings, it is possible that changing the name of the HIV special clinic would also be viewed at HIV stigma-influenced behavior. Although the use of special markings or codes

on investigative specimens obtained from PLHIV is common in health care settings, a significantly lower proportion of PLHIV than HCWs regarded special marking specimens as HIV-related stigmatization in this study. However, according to universally recognized specimen handling precautions, all human blood and certain body fluids should be treated as if known to carry blood-borne pathogens, including HIV⁽²⁵⁾. Given that this specimen marker does effectively differentiate HIV from non-HIV-infected specimens, it is not surprising that HCWs would report attitudes influenced by HIV-related stigma. The lower proportion of PLHIV may be explained by the fact that PLHIV had no preexisting awareness of this special marking system.

Medical practices like washing hands after touching patients and wearing a mask were similarly recognized as stigma-influenced behavior by both HCWs and PLHIV in this study. This can likely be explained by either unawareness of universal hygiene and prevention practices or hypersensitivity by PLHIV to these commonly accepted hygiene practice. Enhanced and/or ongoing promotion of hand hygiene and mask wearing in a health care setting may help to establish a better and more enduring understanding of these essential disease transmission prevention methods. Proving consenting for HIV testing and requesting for history of sexually transmitted diseases was beneficial for patients, even if both HCWs and PLHIV considered this to be HIV stigma-influenced behavior⁽²⁶⁾. These practices should, therefore, be continue by HCWs.

Intentional and unintentional non-verbal and verbal communication by HCWs while interacting with PLHIV were recognized by a low proportion of respondents in both study groups as being influenced by HIV stigma. This finding suggests that long-term care and a paradigm shift towards HIV being viewed as a chronic disease may have created a better doctor-patient relationship that translates to improve mutual understanding between PLHIV and HCWs.

Negative social attitudes toward PLHIV, such as sexual promiscuity, drug addiction, and immorality may be decreasing given that less than 20% of PLHIV in the present study rated them as being HIV stigma-related. Growing acceptance and positive changing attitudes toward PLHIV were found in the present study, similar to Hasan's study, which found that PLHIV were greeted in public places and were accepted to adherently sit with other people on public transport⁽³⁰⁾. PLHIV may have more positive

perception regarding these negative social attitude issues. Local community-based intervention could reduce discrimination and proposed that knowledge sharing may help people to better understand the causes of disease to avoid misjudging PLHIV⁽²⁷⁾.

In the present study, the authors found that less than a quarter of PLHIV perceived that there were negative actions against PLHIV in Thailand, such as avoid of touching and being expelled from residency. A possible explanation for the low percentage of PLHIV concerned about these issues is a perceived improvement in understanding among non-HIV-infected individuals regarding HIV transmission. Several public campaigns were shown to decrease stigma associated with actions for which there is no associate risk of contracting HIV⁽²⁸⁾. Moreover, the way public media portrayed PLHIV tended to be more positive by showing more dimensions of PLHIV, which may lead to better holistic understanding of HIV and PLHIV⁽²⁹⁾. Many families in Thailand have HIV-infected members. As such, more people are more likely to be comfortable in living with PLHIV and to empathize with other PLHIV⁽²⁷⁾.

In this study, a high proportion of PLHIV considered knowledge about and understanding toward PLHIV to be inadequate, and that PLHIV had to keep their HIV-positive status confidential. According to the previous finding in 2012, some old misbelieves such as HIV contract from getting closer to PLHIV are persistent. This indicates that negative prejudice against PLHIV continues to endure in Thai society. Two reported examples of false belief among non-HIV-infected people are that PLHIV should remain isolated and that PLHIV will die within a few months after HIV infection⁽²⁷⁾. PLHIV may still attempt to conceal their HIV status due to feelings of insecurity and fear of influencing HIV stigma-related behavior and discrimination from others^(11,27). Therefore, continuing health promotion and campaigns designed to improve HIV knowledge and understanding may help to improve overall knowledge about this disease and to dispel commonly held myths about HIV infection and transmission.

This study has some mentionable limitations. First, given that only 152 participants were included, the size of our two study groups was relatively small (91 HCWs and 61 PLHIV). Therefore, it is possible that our study lacked sufficient power to identify all existing significant differences between groups. Second, the exclusion of PLHIV who had active comorbid psychiatric disorders is needed for the benefit

of patients, so the subjects in the present study possibly do not represent the actual PLHIV population. Third, more working experiences with PLHIV of HCWs might individually reduce HIV-related stigma attitudes or behaviors toward the patients. The questionnaire answers were able to be affected by HCWs and PLHIV individual perception on actual stigma situation. Fourth, the HCWs and PLHIV included in this study were recruited from one center, all of the HCWs and PLHIV were influenced by the same institutional ethos, the same guidelines, and it can be assumed, the same group-inspired attitudes. Therefore, the results of this study should be interpreted and applied with caution given that results from other centers in other urban or non-urban cities or regions could differ substantially from the results we are reporting. Multicenter study in urban and rural centers and in different regions is needed to develop a more defined understanding of differences in attitude about HIV-influenced stigma between HCWs and PLHIV. All of that acknowledged, this study demonstrates important differences between these two important groups and that more needs to be done to improve HIV-related attitudes and patient care.

Conclusion

The present findings emphasized the differences in attitude among HCWs and PLHIV regarding HIV-related stigma in Thailand health care setting. Safe sex advice and appropriate family planning counseling, which help to reduce HIV spreading risk, were considered HIV stigma-influenced activities in a higher proportion of PLHIV than HCWs. Setting special clinic for PLHIV at a specific time and place was also reported as HIV-related stigma concerned by high proportion of PLHIV.

Negative social attitudes toward PLHIV, including sexual promiscuity, drug addiction, and immorality, as well as negative actions, such as avoid of touching and being expelled from residency, tend to affect a relatively small proportion of PLHIV, which can be implied that HIV discrimination in Thai society is decreasing.

What is already known on this topic?

An understanding of stigma in health care settings is essential for the development and implementation of policies to reduce disease-related stigma, and for improving attitudes about HIV infection in both HCWs and PLHIV. Very little is known about differences in HIV-related attitudes, behaviors, and beliefs between PLHIV and HCWs in Thailand.

What this study adds?

Safe sex and appropriate family planning counseling were considered HIV stigma-influenced activities in a higher proportion of PLHIV than HCWs. There is a need to provide focused training designed to improve disease, treatment, and lifestyle counseling provided by HCWs.

PLHIV reported that the location and times of the HIV special clinic were influenced by HIV-related concerns held by others. Interestingly, issues like promiscuous sexual behavior, avoidance of interaction with PLHIV, HIV-influenced gossip by others, residency expulsion, and HIV stigmas perpetuated by the media were reported to be stigma-level problems by only a relatively small proportion of PLHIV.

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Potential conflicts of interest

The authors declare no conflict of interest.

References

1. UNAIDS, Thai National AIDS Committee. 2012 Thailand AIDS response progress report 2013. Nonthaburi: National AIDS Management Center Ministry of Public Health; 2013.
2. Goffman E. Stigma: notes on the management of spoiled identity. New York: Simon and Schuster; 1963.
3. Link BG, Phelan JC. Conceptualizing stigma. *Annu Rev Sociol* 2000;27:363-85.
4. Scambler G. Stigma and disease: changing paradigms. *Lancet* 1998;352:1054-5.
5. Rahmati-Najarkolaei F, Niknami S, Aminshokravi F, Bazargan M, Ahmadi F, Hadjizadeh E, et al. Experiences of stigma in healthcare settings among adults living with HIV in the Islamic Republic of Iran. *J Int AIDS Soc* 2010;13:27.
6. Rintamaki LS, Davis TC, Skripkauskas S, Bennett CL, Wolf MS. Social stigma concerns and HIV medication adherence. *AIDS Patient Care STDS* 2006;20:359-68.
7. Kinsler JJ, Wong MD, Sayles JN, Davis C, Cunningham WE. The effect of perceived stigma from a health care provider on access to care among a low-income HIV-positive population. *AIDS Patient Care STDS* 2007;21:584-92.
8. Hossain MB, Kippax S. Stigmatized attitudes toward people living with HIV in Bangladesh:

- health care workers' perspectives. *Asia Pac J Public Health* 2011;23:171-82.
9. Carrico AW. Elevated suicide rate among HIV-positive persons despite benefits of antiretroviral therapy: implications for a stress and coping model of suicide. *Am J Psychiatry* 2010;167:117-9.
 10. UNAIDS. Reducing HIV stigma and discrimination: a critical part of national AIDS programmes. Geneva. Joint United Nations Programme on HIV/AIDS; 2007.
 11. Thampanichawat W. Living with secrecy among Thai mothers with HIV infection. *Thai J Nurs Council* 2000;15:52-65.
 12. Churcher S. Stigma related to HIV and AIDS as a barrier to accessing health care in Thailand: a review of recent literature. *WHO South East Asia J Public Health* 2013;2:12-22.
 13. Ford N. The social context of the emergence of HIV in Thailand. *Warasan Prachakon Lae Sangkhom* 1990;2:223-37.
 14. Malikhao P. Religious approaches to HIV/AIDS prevention in Thailand. Paper prepared for presentation at the International Association for Mass Communication Research, The American University in Cairo, Egypt; July 23-29, 2006.
 15. Rintamaki LS, Scott AM, Kosenko KA, Jensen RE. Male patient perceptions of HIV stigma in health care contexts. *AIDS Patient Care STDS* 2007;21:956-69.
 16. Surkan PJ, Mukherjee JS, Williams DR, Eustache E, Louis E, Jean-Paul T, et al. Perceived discrimination and stigma toward children affected by HIV/AIDS and their HIV-positive caregivers in central Haiti. *AIDS Care* 2010;22:803-15.
 17. Thai Network of People Living with HIV/AIDS (TNP+). Report: Index of stigma and discrimination against people living with HIV/AIDS in Thailand. Bangkok: TNP+; 2009.
 18. Chan KY, Reidpath DD. Stigmatization of patients with AIDS: understanding the interrelationships between Thai nurses' attitudes toward HIV/AIDS, drug use, and commercial sex. *AIDS Patient Care STDS* 2007;21:763-75.
 19. Green G, Platt S. Fear and loathing in health care settings reported by people with HIV. *Sociol Health Illn* 1997;19:70-92.
 20. Loutfy MR, Margolese S, Money DM, Gysler M, Hamilton S, Yudin MH. Canadian HIV pregnancy planning guidelines. *J Obstet Gynaecol Can* 2012;34:575-90.
 21. Li L, Wu Z, Wu S, Zhao Y, Jia M, Yan Z. HIV-related stigma in health care settings: a survey of service providers in China. *AIDS Patient Care STDS* 2007;21:753-62.
 22. Panupak P, Leechawengwong M, Siraprasasiri T, Juntratit W, Techasathit W, Teeraratkul A, et al. National guidelines on HIV/AIDS diagnosis and treatment. Bangkok: Center of Service System Development of Antiretrovirus for HIV/AIDS of Thailand; 2010.
 23. Sayles JN, Ryan GW, Silver JS, Sarkisian CA, Cunningham WE. Experiences of social stigma and implications for healthcare among a diverse population of HIV positive adults. *J Urban Health* 2007;84:814-28.
 24. Macq J, Solis A, Martinez G, Martiny P. Tackling tuberculosis patients' internalized social stigma through patient centred care: an intervention study in rural Nicaragua. *BMC Public Health* 2008;8:154.
 25. Centers for Disease Control (CDC). Guidelines for prevention of transmission of human immunodeficiency virus and hepatitis B virus to health-care and public-safety workers. *MMWR Suppl* 1989;38:1-37.
 26. Patel P, Bush T, Mayer K, Milam J, Richardson J, Hammer J, et al. Routine brief risk-reduction counseling with biannual STD testing reduces STD incidence among HIV-infected men who have sex with men in care. *Sex Transm Dis* 2012;39:470-4.
 27. Busza JR. Promoting the positive: responses to stigma and discrimination in Southeast Asia. *AIDS Care* 2001;13:441-56.
 28. Ainsworth M, Beyrer C, Soucat A. AIDS and public policy: the lessons and challenges of "success" in Thailand. *Health Policy* 2003;64:13-37.
 29. Liamputtong P, Haritavorn N, Kiatying-Angsulee N. HIV and AIDS, stigma and AIDS support groups: perspectives from women living with HIV and AIDS in central Thailand. *Soc Sci Med* 2009;69:862-8.
 30. Hasan MK. AIDS-Related Stigma in Thailand. *Millennial Asia* 2012;3:187-206.