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The correlation of social support and family support with HIV-related stigma and depression in people living with HIV in Vietnam

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Abstract

Background HIV-related stigma and symptoms of depression (SOD) in people living with HIV (PLWH) remain public health challenges in many countries. This study determined the levels of support PLWH received from family and community and their impact on HIV-related stigma and SOD.

Methods A cross-sectional study was conducted with PLWH at four outpatient clinics in four districts in Ho Chi Minh City, Vietnam. Data were collected through face-to-face interviews. Social support and family support were measured using the Health Outcomes Research Social Support Survey and the Family Support Scale. HIV-related stigma was measured by the HIV Stigma Scale. SOD were identified using the Center for Research in Epidemiology—Depression scale.

Results Among 777 PLWH in the data analysis, the level of family support reported by PLWH was high with an overall family support score of 28.0 (SD = 5.6), ranging from 7 to 30. The mean overall social support score was 2.7 (SD = 0.9), ranging from 1 to 5. For HIV-related stigma, the overall score was 32.9 (SD = 6.6), ranging from 14 to 56. The overall depression score was 15.6 (SD = 12.7), ranging from 0 to 57. There were statistically significant negative correlations between all types of family support and social support and all types of HIV-related stigma and SOD.

Conclusions Although the prevalence of HIV-related stigma and SOD remains common, our study showed that social support and family support are beneficial to PLWH. Therefore, developing community support projects combined with counseling and encouraging support from the families of PLWH is essential to help them overcome challenges.

Keywords HIV-related stigma, Symptoms of depression, Social support, Family support

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Introduction

HIV/AIDS remains one of the most serious global health and development challenges [1]. According to the World Health Organization [2], in 2021, 38.4 million people are living with HIV. The medical advancement with the introduction of antiretroviral therapy (ART) has helped suppress the virus and thus, HIV has become a manageable chronic condition that prolongs life for people living with HIV (PLWH) [3]. However, living longer with HIV leads to other health and social problems in this population.

Among the challenges PLWH have, HIV-related stigma is still common, especially in developing countries, with diverse manifestations in different areas such as in the community, workplace, and even medical care facilities [4, 5]. While HIV-related stigma is culture and context dependent, approximately 63.8%—79.1% of PLWH reported to have been facing HIV-related stigma [6, 7]. Many studies have shown that stigma can lead to many negative problems, such as poor adherence to treatment, increased risk behaviors for HIV transmission, or mental health problems [5, 8, 9]. Therefore, identifying the factors contributing to HIV-related stigma will be very helpful in targeting interventions to reduce the negative effects on this vulnerable population.

Another common problem among PLWH is mental health disorders, of which depression is the most prevalent condition [10]. A meta-analysis of 118 studies on depression in PLWH has revealed that nearly half of PLWH globally have at least one sign of psychosis during the course of their illness, with depression accounting for the highest rate of about 31% [11]. Depression in PLWH also leads to many negative effects on patients' health, such as decreased CD4 cell count [12], decreased quality of life [12], increased likelihood of poor response to ART [13], increased viral load and doubled risk of death compared with those with HIV and no depression [14]. Interestingly, many studies have reported the intertwined nature between depression and stigma among PLWH, making it challenging for intervention programs to address these two conditions [15]. In the presence of both depression and stigma, PLWH are at high risk of suicide [16].

One of the common factors associated with both HIV-related stigma and symptoms of depression is the support PLWH receive. In general, social support programs and family support have a significant impact on the health of PLWH such as reducing the risk of depression [17, 18], reducing levels of social stigma [19], enhancing the ability to cope with challenges, improving health and quality of life [20, 21]. In a community-oriented and family-oriented culture such as Vietnam, these types of support are particularly important for PLWH to cope with stigma and mental health problems. However, many studies fail to find a link between these sources of support and whether the presence of multiple types of support such as emotional support, informational support, tangible support, social support and family support is significantly beneficial [15, 22, 23]. Moreover, the manifestation of these types of support is context dependent and thus the effect of these types of support on the health of PLWH can be different. Therefore, more studies in different contexts are needed to understand this issue.

In Vietnam, although the number of new cases has decreased in recent years, the total number of PLWH is still high. Stigma and discrimination against PLWH in the country remain common [12, 24]. Given the unique characteristics of cultural and social values in Vietnam, coupled with misconceptions about HIV and social judgments regarding HIV-related health risk behaviors, a pervasive stigma against HIV persists across various settings, including families, communities, workplaces, and healthcare facilities [24, 25]. The complex nature of HIV stigma and its context dependence make stigma reduction efforts challenging and unsustainable [24, 26]. Additionally, many studies have shown that the prevalence of symptoms of depression is relatively high, accounting for about 31%—50.1% of PLWH in the country [12, 18, 27]. Many intervention and support projects have been undertaken to support this population but reports on the impact of various sources of support on HIV-related stigma and depression are still lacking.

While our previous study explored the association between HIV-related stigma, symptoms of depression, and suicidal ideation [16], the present study takes a different approach by examining the impact of social and family support on stigma and depression among PLHIV in the same cohort. By shifting the focus from risk factors for suicidal ideation to potential buffers against stigma and depression, this study aims to provide actionable insights for mental health and HIV care programs in Vietnam. Therefore, this study determined the levels of support PLWH received from family and community and the impact of this multilateral support on HIV-related depression and stigma.

Materials and methods

Settings and participants

A cross-sectional study was conducted in PLWH receiving care and treatment at outpatient clinics (OPC) in Ho Chi Minh City. Ho Chi Minh City is an economic and financial center of Vietnam and has about 30 outpatient clinics in 24 districts. During the period January to April 2021, a total of 4 OPC in 4 districts was selected, including Districts 3, 6, 8 and 11.

The calculation of sample size was mainly based on the main objective of a larger project about mental health and suicidal ideation in PLWH and has been reported elsewhere [16]. In brief, based on the formula to calculate sample size for estimating a proportion, 755 was needed for the project (Supplementary 1). At each clinic, 200 outpatients were recruited. However, 23 outpatients did not complete the interview or refused to answer the questionnaire. Thus, a total of 777 patients (97.1%) were included in the analysis.

Study procedure

At each OPC, outpatients were recruited on a voluntary basis using a systematic sampling technique, in which every fifth patient going to OPC for monthly visits was invited to participate in this study. Eligibility criteria for recruitment included: 18 years old or older, having a confirmed HIV-positive test result and having been on ART at the study clinics, and agreeing to participate in the study. Participants were excluded if they had any major health problems preventing them from participating in a face-to-face interview. Participants underwent a face-to-face interview with an interviewer from the University of Medicine and Pharmacy at Ho Chi Minh City using a structured questionnaire already defined and deployed on the REDCap. HIV-related information was extracted from clinical records. All data collection activities occurred at the study clinics during the study period, from January to April 2021.

This study was reviewed and approved by the Biomedical Research Ethics Committee of the University of Medicine and Pharmacy at Ho Chi Minh City (UMP HCMC) (No. 97/ĐHYD-HĐĐĐ). All the study procedures were performed in accordance with guidelines and regulations of UMP HCMC and the ethical standards of Declaration of Helsinki and its later amendments. Informed consent to participate in the study was obtained from all subjects.

Measurement

Social support was assessed by the Medical Outcomes Study Social Support Survey (MOS-SSS) [28]. This scale consists of 19 items to examine four important aspects of social support: tangible support, emotional-informational support, social network support, and emotional support. Each item is rated by the 5-point Likert scale ranging from 1 (not always) to 5 (all the time). The overall score is the average of all 19 items, ranging from 1 to 5. A higher score indicates that respondents receive a higher level of social support. The MOS-SSS has a Cronbach's alpha of 0.97 [28]. In our sample, the Cronbach's alpha of the MOS-SSS was 0.97. The level of family support is measured by the 10-item Family Support Scale (FSS) [17], based on the 4-point Likert rating scale from 0 (never) to 3 (always). The total score ranges from 0 to 30, and higher scores reflect higher family support. In this study, the Cronbach's alpha of the FSS was 0.82.

HIV-related stigma was measured by the HIV Stigma Scale (HSS) [29]. The scale consists of 14 items to assess the perceived stigma and internalized stigma. Each item is rated by the 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). The overall scores for the scale and the two subscales are the sum of the scores for all items. A higher score indicates a higher level of stigma. The HSS has a Cronbach's alpha of 0.96 [29]. In our study, the Cronbach's alpha of the HSS was 0.93.

Symptoms of depression were identified by using the Center for Research in Epidemiology—Depression (CES-D) scale [30]. The 20-item scale rates symptoms of depression over the past 7 days by using the 4-point Likert rating scale ranging from 0 to 3. The total score ranges from 0 to 60, a higher CES-D score indicates higher levels of depression. The Cronbach's alpha of the CES-D is 0.87 [30]. In our study, Cronbach's alpha of the CES-D was 0.95.

Data analysis

Classical descriptive statistics were used, including count and percentage, mean and standard deviation. Correlation coefficients were used to determine the correlation between family support, social support, and HIV-related stigma and depression in PLWH. To identify the magnitude of the correlations, univariate and multiple linear regressions were used with adjustment for other relevant variables. Variables with p-values less than 0.05 were considered statistically significant. All data analyses were performed using Stata version 17.0.

Results

Among 777 PLWH included in the data analysis, the majority were males (81.1%) and the mean age was 34.3 (SD = 8.8) years. Nearly two-thirds (64.1%) reported having HIV infection through sexual transmission, and most of PLWH (75.8%) disclosed HIV positivity to others. The mean duration of living with HIV was 6.0 (SD = 4.9) years, and the mean duration of ART was 5.3 (SD = 4.2) years. Details about participant demographics and health profiles are described in our previous publication [16].

The level of family support reported by PLWH was high, with a mean score of the FSS of 28.0 (SD = 5.6), ranging from 7 to 30. The level of social support was lower with a mean score of the MOS-SSS of 2.7 (SD = 0.9), ranging from 1 to 5. Among the four aspects of social support measured, emotional and informational support had the lowest score (M = 2.5, SD = 0.9) and affectionate support had the highest score (M = 2.8,

SD = 0.9). The overall HIV-related stigma score was 32.9 (SD = 6.6), ranging from 14.0 to 56.0. The score for internalized stigma and perceived stigma was 18.9 (SD = 3.8) and 13.9 (SD = 3.1), respectively. Based on the CES-D, the overall depression score was 15.6 (SD = 12.7), ranging from 0 to 57. The score for somatic complaints was the highest (M = 4.3, SD = 4.4) and the score for interpersonal problems was the lowest (M = 1.0, SD = 1.5) (Table 1).

The correlations between family support, social support, and HIV-related stigma and depression are shown in Table 2. There were statistically significant negative correlations between all types of family support and social support with all types of HIV-related stigma and depression. Among these, the strongest correlations were found between affectionate social support and overall depression ($r = -0.56$), between positive social interaction and overall depression ($r = -0.55$). The level of correlation between different types of support and stigma was relatively lower with correlation coefficients ranging from −0.37 to −0.22.

Table 1 Family support, social support, HIV-related stigma and symptoms of depression among people living with HIV/AIDS in HCMC, Vietnam

Measures (scale)	Mean	Standard deviation	Minimum	Maximum
Family support (FSS)	28.0	5.6	7.0	30.0
Social support (MOS-SSS)	2.7	0.9	1.0	5.0
Emotional/informational support	2.5	0.9	1.0	5.0
Tangible support	2.7	0.8	1.0	5.0
Affectionate support	2.8	0.9	1.0	5.0
Positive social interaction	2.7	0.9	1.0	5.0
HIV-related stigma (HSS)	32.9	6.6	14.0	56.0
Perceived stigma	13.9	3.1	6.0	24.0
Internalized stigma	18.9	3.8	8.0	32.0
Symptoms of depression (CES-D)	15.6	12.7	0	57.0
Depressed affect	3.5	3.9	0	15.0
(Low) Positive affect	3.5	2.1	0	9.0
Somatic complaint	4.3	4.4	0	18.0
Interpersonal problems	1.0	1.5	0	6.0

FSS Family Support Scale, *MOS-SSS* Medical Outcomes Study Social Support Survey, *HSS* HIV Stigma Scale, *CES-D* Center for Research in Epidemiology – Depression scale

Table 2 Correlation between family support, social support and HIV-related stigma, depression

Multilateral support	Stigma			Depression				
	Perceived stigma	Internal stigma	Overall stigma	Depressed affect	(Low) Positive affect	Somatic complaint	Inter-personal problems	Overall depression
Family support	-.36 (< 0.001)	-.36 (< 0.001)	-.37 (< 0.001)	-.42 (< 0.001)	-.30 (< 0.001)	-.42 (< 0.001)	-.37 (< 0.001)	-.46 (< 0.001)
Social support								
Emotional/informational support	-.19 (< 0.001)	-.23 (< 0.001)	-.23 (< 0.001)	-.36 (< 0.001)	-.29 (< 0.001)	-.34 (< 0.001)	-.28 (< 0.001)	-.39 (< 0.001)
Tangible support	-.20 (< 0.001)	-.22 (< 0.001)	-.22 (< 0.001)	-.35 (< 0.001)	-.27 (< 0.001)	-.32 (< 0.001)	-.29 (< 0.001)	-.38 (< 0.001)
Affectionate support	-.32 (< 0.001)	-.33 (< 0.001)	-.34 (< 0.001)	-.50 (< 0.001)	-.37 (< 0.001)	-.50 (< 0.001)	-.41 (< 0.001)	-.56 (< 0.001)
Positive social interaction	-.31 (< 0.001)	-.34 (< 0.001)	-.34 (< 0.001)	-.50 (< 0.001)	-.38 (< 0.001)	-.50 (< 0.001)	-.41 (< 0.001)	-.55 (< 0.001)
Overall social support	-.27 (< 0.001)	-.30 (< 0.001)	-.30 (< 0.001)	-.45 (< 0.001)	-.35 (< 0.001)	-.43 (< 0.001)	-.37 (< 0.001)	-.49 (< 0.001)

Table 3 presents results from linear regression to quantify the correlation between family and social support with stigma and depression with adjustment for other covariates. Based on standardized coefficients, social support had a positive association with symptoms of depression. However, family support had a relatively equal magnitude of association on both stigma and symptoms of depression.

Discussion

While our previous study focused on suicidal ideation as the primary outcome and examined the impact of stigma and depression [16], the present study explores whether other factors, such as social and family support, influence stigma and depression among PLWH. Understanding the protective role of support systems is crucial, as stigma and depression continue to pose significant challenges for this population. In our current study, HIV-related stigma and depression remained highly prevalent among PLWH, with mean scores of 32.9 (SD = 6.6) and 15.6 (SD = 12.7), respectively. Our results are quite similar to a previous study using similar scales in PLWH in China [7]. However, another study in China reported a much higher level of HIV-related stigma with a mean score of 105.92 (SD = 12.35) on a possible score of 40—160 [31]. For symptoms of depression, a study using the same rating scale conducted in Vietnam to investigate the prevalence and factors related to depression in PLWH also reported results similar to ours. In their study population, at least 30% of PLWH had depressive symptoms [18]. However, a study among PLWH in Nepal using a different depression rating scale found a lower prevalence of depression (25.5%) [17]. Regardless of the scales used and study populations in various settings, previous studies and ours indicate that HIV-related stigma and symptoms of depression require further investigation and attention from HIV programs and stakeholders.

Due to the prevalence of these two health problems in PLWH, many programs and projects to support PLWH to overcome challenges have been formed and developed [32–34]. The level of social support and family support recorded in our study was in the moderate range with mean scores of 2.7 (SD = 0.9) and 28.0 (SD = 5.6), respectively. Regarding the level of social support, our results are similar to a study using the same MOS-SSS scale in HCMC on methadone outpatients, many of whom were HIV positive [35]. Similarly, a study in China conducted on PLWH reported a high level of social support in PLWH using the Social Support scale [36]. Regarding the level of support from family, most participants in our study reported receiving at least one type of family support, similar to findings from Nepal [17] and Vietnam [18], though lower levels were observed in Ethiopia [37].

We also found a negative correlation between social and family support and both stigma and depression, reinforcing findings from previous studies in Nepal [17], Vietnam [18, 26, 38], and North America [31]. Multilateral support has also been proved to bring many beneficials to PLWH including improving quality of life [21], increasing adherence to treatment [39], improving and maintaining good health [20, 40, 41]. Interestingly, our study also reveals that while the impact of family support was roughly the same on HIV-related stigma and depression, social support has more impact on depression than HIV-related stigma. This phenomenon can happen in community-oriented cultures like Vietnam where both HIV-related stigma and depression are significantly affected by the society.

Table 3 Linear regression analysis of association between multilateral support and stigma, depression in people living with HIV/AIDS in Vietnam

	Crude estimate		Adjusted estimate[a]	
	Stigma	**Depression**	**Stigma**	**Depression**
Family support				
Unstandardized coefficient	-.35	-.67	-.31	-.60
95% CI	-.44, -.27	-.82, -.52	-.40, -.22	-.75, -.45
P value	< 0.001	< 0.001	< 0.001	< 0.001
Standardized coefficient	-.30	-.29	-.27	-.26
Social support				
Unstandardized coefficient	−1.18	−5.21	-.89	−4.60
95% CI	−1.74, −0.62	−6.20, −4.23	−1.48, -.30	−5.59, −3.62
P value	< 0.001	< 0.001	< 0.001	< 0.001
Standardized coefficient	-.15	-.35	-.11	-.31

[a] Adjusted for sex, age, sexual orientation, religion affiliation, education, marital status, living with whom, employment, income, number of years living with HIV and number of years on ART, HIV infection source, disclosure HIV positivity to others, family member having HIV+, HIV stage, ever discontinued ART, ART adherence

While HIV-related stigma is culturally and socially dependent, social support may not mean a change in the cultural and social perspectives of people toward PLWH. However, it is clear that this type of support has many positive effects on patients' health, including reducing symptoms of depression.

Our study, alongside others, emphasizes the need to enhance both social and family support strategies to alleviate stigma, depression, and other health-related issues among PLWH. Given the contextual nature of these challenges, intervention programs require a deep understanding of contextual factors. In a developing country such as Vietnam, initiatives should target disadvantaged PLWH by offering vocational training and job opportunities, thus lessening their burden on families, and fostering a sense of pride [12, 24, 26]. Implementing anti-discrimination regulations in communities, health facilities, and workplaces, coupled with awareness-raising efforts and community-based activities, can facilitate PLWH's integration into society and ensure unhindered access to HIV-related care services [12, 24]. Additionally, strengthening peer support programs can empower PLWH and counteract stigma. While mass media campaigns are crucial for dispelling misconceptions, they must be tailored to different educational and literacy levels for maximum effectiveness. These campaigns should be enduring and include frequent follow-ups to sustain their impact. Furthermore, community-based interventions, such as support groups and counseling, should address psychosocial well-being and mental health issues among PLWH. By offering comprehensive support, fostering social acceptance, and empowering PLWH, we can enhance health outcomes and reduce HIV-related stigma.

Our study had several limitations. First, its cross-sectional design does not establish causality between support PLWH received and HIV-related stigma and symptoms of depression. Second, variations in the type and timing of support received were not assessed, limiting recommendations for specific interventions. Third, our study was conducted on PLWH in HCMC, so the generalizability of this study is still limited. Therefore, it is necessary to have more studies addressing these limitations and to confirm our findings in different settings.

Conclusions

Although the prevalence of HIV-related stigma and symptoms of depression remains common, our study showed that social support and family support are beneficial to PLWH. Therefore, developing community support projects integrated with encouraging support from the families of PLWH is essential to help them overcome challenges.

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s12889-025-22326-x.

Supplementary Material 1.

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Authors' contributions
TTT, NBTN, VBT, BTN designed the study. MBTLN, THTT, VBT, PTTP collected the data. TTT, HHTB, BTN, THTT, MBTLN analyzed and validated the data. TTT, HHTB, BTN, PTTP, MBTLN interpreted the data. TTT, NBTN, VBT, BTN, MBTLN, THTT, PTTP, HHTB drafted the manuscript and approved the final manuscript.

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Data availability
The data presented in this study are available on request from the corresponding author. The data are not publicly available due to restrictions.

Declarations

Ethics approval and consent to participate
This study was reviewed and approved by the Biomedical Research Ethics Committee of the University of Medicine and Pharmacy at Ho Chi Minh City (UMP HCMC) (No. 97/ĐHYD-HĐĐĐ). All the study procedures were performed in accordance with guidelines and regulations of UMP HCMC and the ethical standards of Declaration of Helsinki and its later amendments. Informed consent to participate in the study was obtained from all subjects.

Consent for publication
Not applicable

Competing interests
The authors declare no competing interests.

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