



# Characterization of HIV-Related Stigma in Myanmar

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## Abstract

Characterizing HIV-related stigma and its impacts are important for interventions toward their elimination. A cross-sectional study was conducted in 2016 to evaluate enacted and internalized stigma among adult people living with HIV (PLWH) across four cities in Myanmar using the India Stigma Index questionnaire. Multivariable regression analyses were performed to determine differences in measured enacted and internalized stigma outcomes. Among 1,006 participants, 89% reported any stigma indicator, 47% enacted stigma, and 87% internalized stigma. In regression analysis, city and duration of illness were associated with higher enacted stigma, and younger age was associated with higher internalized stigma. Those with HIV duration > 7.4 years had mean enacted stigma nearly 2 units higher than the overall mean. Internalized stigma increased with duration of illness and leveled off at 5 years. PLWH from smaller cities experienced lower stigma. In Myanmar, nearly 90% of PLWH experience stigma, results that reflect a unique transition point.

**Keywords** HIV · Myanmar · Enacted and internalized stigma

## Introduction

HIV-related stigma and discrimination permeate both the developed and developing regions, despite the tremendous success and evolution of antiretroviral therapy (ART) in prolonging the lives of people living with HIV (PLWH) [1–3]. For its recipients, HIV-related stigma can have significant negative consequences including depression, isolation, loss of marriage, childbearing options and occupational

opportunities, financial constraints, and poor quality of life and health care [4–8].

HIV-related stigma can arise from fear of transmission and misinformation, and be multifaceted depending on the geographical region, societal norms, and religious beliefs [9–12]. Enacted stigma refers to experiences of exclusion, discrimination, and prejudice from others because of one's HIV diagnosis [13, 14]. Internalized stigma represents cognitive or emotional absorption of negative messages

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or stereotypes associated with HIV and their application onto oneself [15]. The two types of stigma are interrelated; experiencing enacted stigma can lead to the development of internalized stigma, and both negatively impact quality of life among PLWH [16]. There is ample literature to support that ethnic and cultural differences impact the type and severity of stigma experienced by PLWH in resource-poor settings which result in reticence about disclosing at-risk behaviors, reluctance to seek health services, and treatment adherence difficulties [17–24], all of which can impact HIV transmission, morbidity and mortality, particularly in key populations. Moreover, socio-demographic factors found to be associated with higher levels of HIV-related stigma within resource poor settings include female gender [25–29], lower education level [30–32], and shorter duration of illness [33–35], suggesting directions for further research and characterization, particularly in unique geographical and cultural contexts.

Myanmar is a Southeast Asian country with a population of 53 million. Nearly 90% of the population in Myanmar identify as Buddhists, specifically Theravada Buddhism, the most conservative branch of Buddhism. Central religious beliefs include practicing mindfulness, strict morality, filial piety, and building good Karma—a belief that actions and intentions dictate future consequences. For over fifty years prior to 2010, the most recent political challenges aside, the country was under strict military rule with media censorship and economic and travel restrictions. The country has an estimated HIV prevalence of 0.8% [36]. Starting around 2010 and following an official change in government from military rule to democratic leadership in 2015, ART dispensing efforts began shifting from the private sector, managed by local and international non-governmental organizations (NGOs), to the public sector, managed by the central government [37]. While there is a rising number of individuals taking ART, social and resource barriers, including stigma, hinder progress in HIV management [38], which may be amplified in the high-risk groups. Meanwhile, HIV-related stigma has not been formally assessed or addressed in Myanmar. Given the country's unique conservative culture, disease concentration in key populations [39], and issues with loss to follow-up [40, 41], it is imperative to evaluate HIV-related stigma in the country to develop effective interventions in mitigating this social barrier towards achieving the targets highlighted in Myanmar's HIV/AIDS national strategic plan and the ambitious UNAIDS 95-95-95 goals [42, 43].

In our previous work among PLWH in Myanmar, we found that engagement in peer-to-peer HIV counseling was related to lower HIV-related stigma [44] and lower level of stigma was associated with increased ART adherence [45]. In this study, we particularly characterize HIV-related

enacted and internalized stigma among a large population of adult PLWH in Myanmar and assess demographic and clinical associations of perceived negative attributions and overt acts of discrimination related to the HIV diagnosis. Based on prior findings in other resource limited settings, we hypothesized that female gender, younger age, lower education level, shorter duration of illness, and residence in smaller cities are associated with higher stigma. Our study provides important and currently unavailable information on stigma in Myanmar, important for understanding it within the country's distinct cultural and regional context and for developing focused interventions toward its elimination for improved HIV outcomes.

## Methods

### Participants and Setting

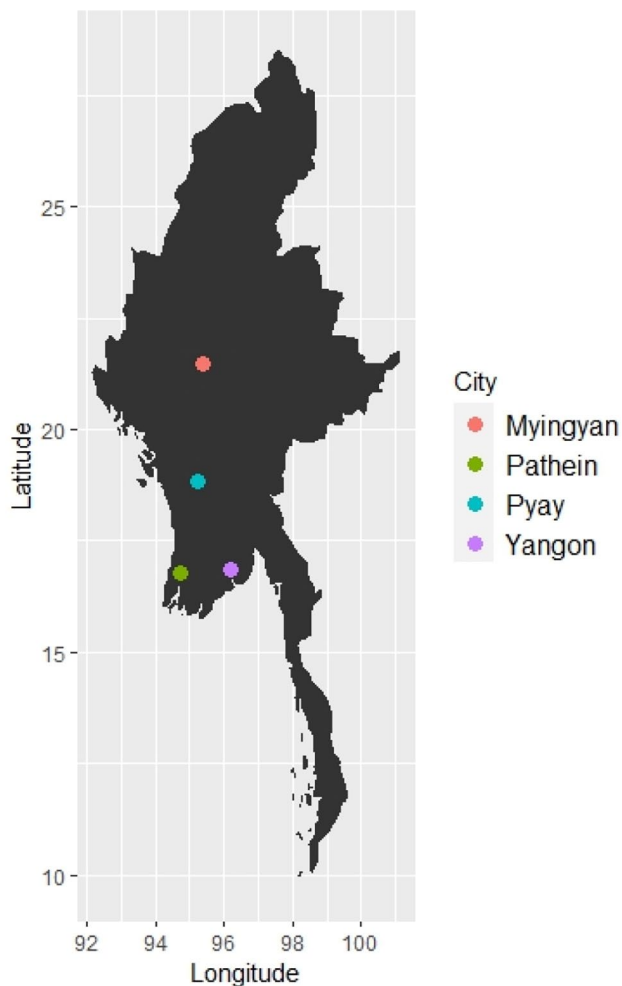
Adults living with HIV older than 18 years of age with known HIV diagnosis and taking ART were recruited from five ART distribution sites. These sites were affiliated with three governmental or non-governmental HIV-care organizations (Pyi Gyi Khin, Myanmar Positive Group, and National AIDS Programme) across four cities in Myanmar (Yangon, Pyay, Patheingyi, and Myingyan), which agreed to participate. These cities are dispersed in central and delta regions of Myanmar (Fig. 1). Yangon is the largest in and remains the commercial capital of the country, while Myingyan, Pyay, and Patheingyi are still urban but smaller in size and population and less economically developed. Study enrollment occurred from May to October of 2016 and all PLWH were approached for participation during their clinic visit.

### Procedures

As adult PLWH arrived to retrieve medications, seek counseling, or receive medical care at the distribution sites, trained local research staff approached them, explained the study protocol, met individually with eligible participants, obtained consent, and administered the questionnaire. Participants received 1000 kyats (approximately \$1 USD at the time of the study) in cash as compensation for their time. The study was approved by the Ethical Review Committee, Department of Medical Research in Myanmar and the Lifespan Institutional Review Board (Providence, RI).

### Data Collection and Measures

A one-time questionnaire was administered in Burmese to eligible individuals who provided consent. Socio-demographic and clinical characteristics included in the



**Fig. 1** Map of Myanmar with the cities included in the study: Yangon, Pyay, Pathein, and Myingyan

questionnaire covered age, gender, education level, duration of illness, city, CD4 count, and mode of HIV transmission. The primary outcomes were enacted and internalized stigma, measured using validated scales adopted from the India Stigma Index [46] and chosen for potential cultural overlap and applicability within Myanmar.

**Enacted Stigma Index** Enacted stigma refers to overt acts of discrimination experienced by the participant [14, 47]. The 10-item enacted stigma scale adopted from the India Stigma Index and applied to our questionnaire included either “yes” or “no” responses to a list of discriminatory acts participants may have experienced related to their HIV status. Example items include, “Has a medical provider or hospital worker mistreated you because of your HIV?” and “Have people looked at you differently because you have HIV?” Scores were obtained by summing the number of reported items, with a maximum score of 10. See Supplemental Table 12 for the full questionnaire.

**Internalized Stigma Scale (Index and Severity)** Internalized stigma reflects perceived negative attributions related to one’s HIV diagnosis. Unlike the enacted stigma index, the internalized stigma 9-item scale adopted from the India Stigma Index and applied to our questionnaire, also included responses that gauged the severity of the negative sentiments experienced by participants to each item asked. The scale included questions such as “How much do you feel that you should avoid holding a new infant because of your HIV?” and “How much do you feel that you should avoid feeding children because of your HIV?” For each question, responses ranged from 0 (*not at all*) to 3 (*a great deal*) reflecting the severity of each negative attribution endured. The scale includes items that more directly reflect both the negative feelings related to one’s HIV but also attitudes that may have resulted from misinformation. The internalized stigma index refers to a score of 1 for any response other than *not at all* to each question (maximum score 9), while the internalized stigma severity refers to the sum of all numeric responses (maximum score 27). To incorporate both scales, an overall score was obtained as the mean of all items [38], with a maximum score of 3. See Supplemental Table 13 for the full questionnaire.

## Analysis

The statistical analysis had two objectives. The first was to describe, using item-specific responses to the stigma questionnaires, the relative contribution of different factors leading to stigma. The second was to characterize differences in stigma measures across levels of age, sex, educational attainment, HIV disease duration, and city of residence. To meet the first objective, we summarized the distribution of each questionnaire item across the sample. To meet the second objective, we examined associations between stigma and each of these five variables individually by summarizing means and standard deviations of stigma scores across levels of each explanatory variable. We characterized variation in stigma score as a function of all five variables collectively using two multivariable regression models (one for each stigma measure). We adjusted for regional variation by including indicator variables for each city. To capture potential nonlinear effects of duration of illness on stigma, we used regression splines with a single knot point placed at the median value of disease duration. The effect of each explanatory variable is reported in terms of estimated regression coefficients and associated 95% confidence intervals. Data analyses were performed using R version 4.0.3.

**Table 1** Demographic characteristics of the study cohort (n=1006)

Sex Number, %	
Female	526 (52.3)
Missing	45 (4.5)
Mean Age (years $\pm$ SD, number)	38.6 $\pm$ 9.0, 993
Education level (number, %)	
< 10th grade	776 (77.1)
10th grade, GED	99 (9.8)
Some college/Degree Completed	114 (11.30)
Missing	17 (1.7)
Time since HIV diagnosis (years $\pm$ SD, number)	5.2 $\pm$ 4.5, 955
Median reported CD4 count in cells/mm <sup>3</sup> (count, %)	
<350	363 (36.1)
350–500	284 (28.2)
>500	300 (29.8)
Missing	59 (5.9)
City (number, %)	
Yangon	493 (49.0)
Pyay	99 (9.8)
Pathein	319 (31.7)
Myingyan	95 (9.4)
Mode of Transmission (number, %)	
Heterosexual intercourse	526 (52.3)
Homosexual intercourse	56 (5.6)
Intravenous Drug Use	94 (9.3)
Transfusion-related	108 (10.7)
Occupational exposure	37 (3.7)
Other	23 (2.3)
Refuse to answer	83 (8.3)
Missing	79 (7.9)
Participants taking Antiretroviral Therapy	1,006 (100.0)

Footnote: SD, standard deviation; GED, General Educational Development test

## Results

Among 1,006 total participants, 52% were female and mean age was 39 years. About three-fourths (77%) had grade school level education and 11% attended college. At enrollment, mean duration of HIV was 5 years; just over one-third (36%) reported a CD4 count < 350 cells/mm<sup>3</sup>; and 49% were enrolled from Yangon followed by Pathein (32%), Pyay (10%), and Myingyan (9%). The majority (52%) reported heterosexual intercourse as the mode of HIV transmission and all participants were taking ART (Table 1). Among those enrolled, 16 participants (2%) were excluded due to incomplete or invalid responses on the pertinent questions, or not meeting inclusion criteria.

Of all participants, 89% reported any type of stigma, 47% and 87% reported at least one enacted or internalized stigma, respectively; and 44% reported experiencing both forms of stigma. A full summary of item-specific responses is shown

in Fig. 1 (enacted stigma) and 2 (internalized stigma). The three most frequently reported enacted stigma items were being looked at differently by others due to HIV (30%), having a hospital worker make their HIV infection publicly known by marking HIV on the medical record (17%), and being mistreated by a medical provider or hospital worker because of their HIV (17%) (Fig. 2). For internalized stigma, most participants perceived they were paying for karma or sins because of their HIV (64%), brought shame to their families because of their HIV (61%), and felt they have HIV because of their wrong behaviors (58%) (Fig. 3). These were also the three most intensely experienced internalized stigma items as participants reported experiencing these “a great deal”. Supplemental Tables 1–10 include detailed frequencies of enacted (Supplemental Tables 1–5) and internalized (Supplemental Tables 6–10) stigma based on gender, age, education level, duration of illness, and city; and Supplemental Table 11 of internalized stigma severity.

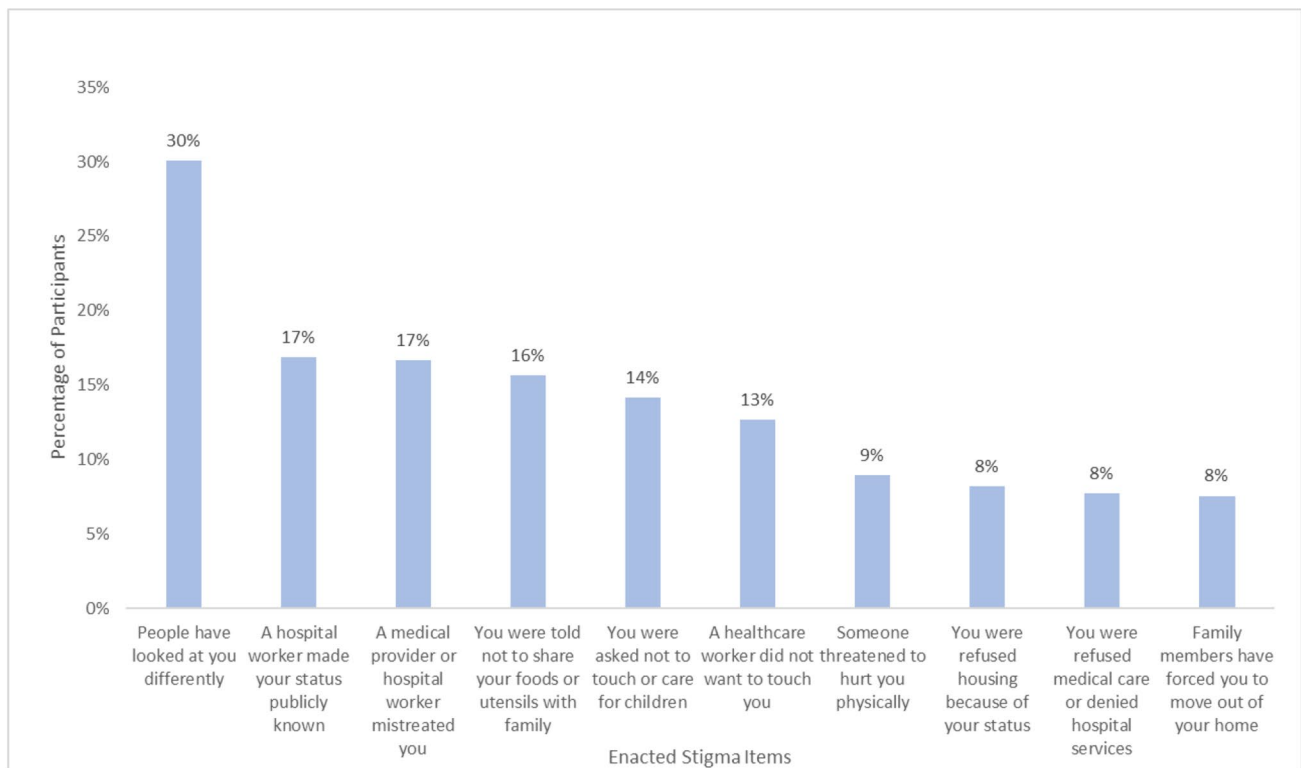
Table 2 provides a summary of the questionnaire items stratified by gender, age, education, duration of illness and city of residence. The effects of these variables on both enacted and internalized stigma are estimated using a multiple regression model, reported in subsequent tables.

Tables 3 and 4 show the fitted regression models to characterize differences in enacted (Table 3) and internalized (Table 4) stigma variables. For enacted stigma (Table 3), regression results yielded different levels by city, with lower levels for participants from Myingyan and Pathein and higher levels for those from Pyay, compared to Yangon. For internalized stigma (Table 3), regression results demonstrated higher levels in younger participants (adjusted mean difference  $-0.06$  per 10-year age difference, 95% CI  $-0.11$  to  $-0.01$ ) and in those living in Yangon compared to all other cities. The fitted models showed no association between educational attainment and either type of stigma.

Regression results also revealed a strong association between duration of HIV and both enacted and internalized stigma. Figure 3 illustrates these relationships further through spline models. Those living with HIV longer than 7.4 years (log duration 2.0 years) had higher enacted stigma (Fig. 4; top panel), almost 2 units above the overall mean. Internalized stigma (Fig. 4; bottom panel) scores were higher with longer duration of illness up to 5 years (log duration 1.6 years) then leveled off.

## Discussion

This is the first study to characterize HIV-related stigma in Myanmar, a country with limited HIV research and complex historical and ongoing political and societal changes influencing healthcare. Our results highlight the high prevalence



**Fig. 2** HIV related enacted stigma. The graph presents frequencies (Y axis) of responses to the 10 enacted stigma questionnaire items (X axis), ordered from most to least frequent

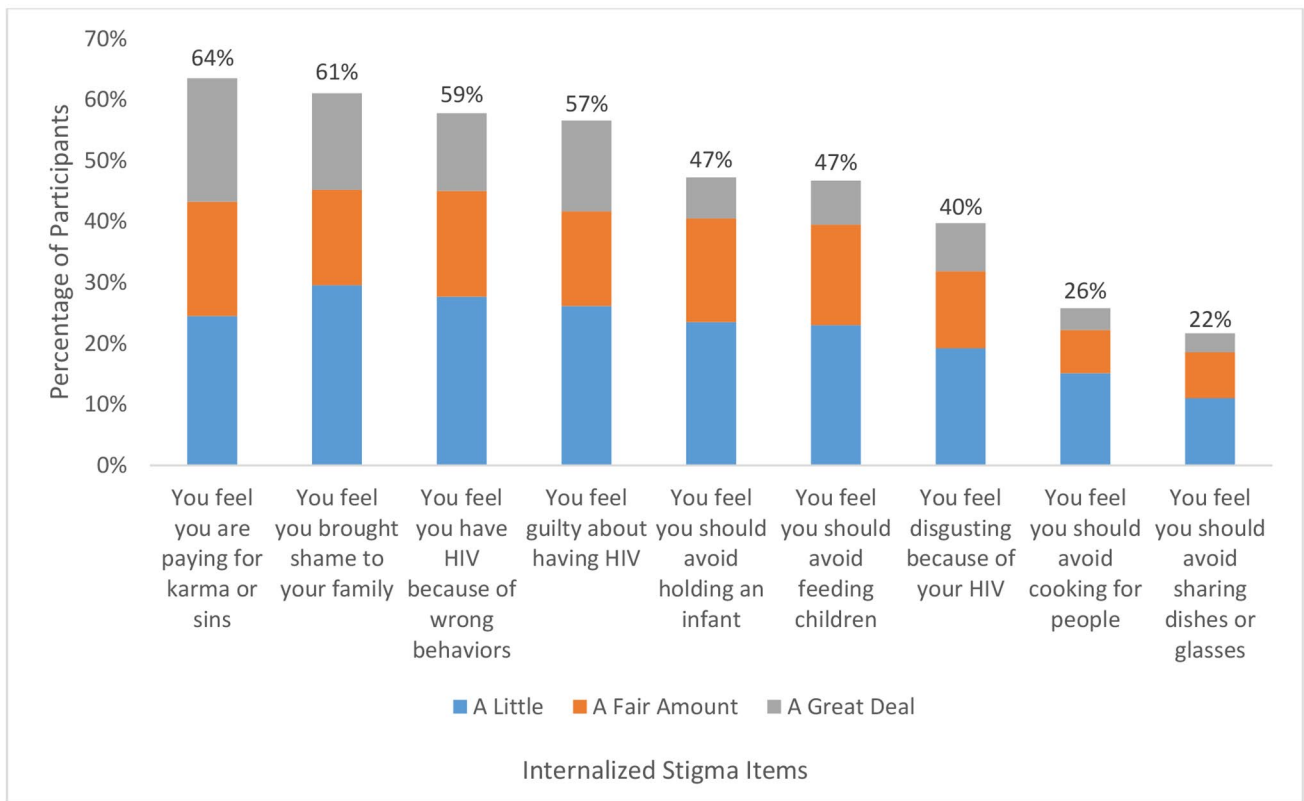
of HIV-related stigma in Myanmar, particularly internalized stigma, that both longer duration of HIV and city of residence are associated with higher enacted stigma, and that younger age is associated with higher internalized stigma. These findings shed important light on the extent of HIV-related stigma in the unique Myanmar setting. Considering our prior data from Myanmar and literature reports from other settings on the impact of HIV-related stigma on health outcomes, these results suggest the urgent need for longitudinal assessments and interventions to address stigma within counseling and prevention programs in Myanmar, particularly in key populations.

Participants in this study reported being mistreated in healthcare settings, and within their community and own households (enacted stigma). Such experiences can lead to isolation and lack of support with negative outcomes on accessing care and overall well-being among PLWH in Southeast Asia and elsewhere [48–51]. Participants also reported sensations of shame and guilt related to one's HIV serostatus (internalized stigma), which may result in greater depressive symptoms, less healthcare utilization, and worse physical health among PLWH [52, 53]. While our findings offer new information on enacted and internalized stigma important for development of interventions toward their elimination, longitudinal studies are needed to evaluate the

associated mental and physical health outcomes specific to PLWH in Myanmar and incorporate cultural nuances [54].

In this study, 89% of participants endorsed any stigma indicator, 47% and 87% reported experiencing enacted or internalized stigma respectively, and 44% experienced both types of stigma. Among the few reports from other Southeast Asian countries with similar geography and cultural norms, enacted stigma was found in over 80% among a large PLWH cohort in Vietnam [55], and a similarly high level of internalized stigma was found in a smaller sample of PLWH in Bangladesh [56]. The Vietnam study focused on enacted stigma in different settings including community, family, or healthcare system, and contrary to our results, found lower stigma with increased time on ART. The Bangladesh study evaluated internalized stigma only and found no association between duration of illness and HIV, and higher stigma among males and those aged 30–39 years. These differential results further suggest and justify the need to characterize stigma in different settings.

Based on our results, the most prevalent types of enacted and internalized stigma were similar across different gender, age groups, education level, and duration of illness. Most participants reported being viewed differently by others and expressed feeling they were paying for prior karma or sins for being diagnosed with HIV. Karma is a prominent



**Fig. 3** HIV related internalized stigma. The graph presents frequencies (Y axis) and relative severities (bar colors according to the legend), of responses to the nine internalized stigma questionnaire items (X axis), ordered from most to least frequent

**Table 2** Bivariate comparisons of enacted and internalized stigma scores

	Enacted Stigma (total score (SD), max 10)			Internalized Stigma (mean score (SD), max 3)		
	Mean (SD)	Test statistic <sup>§</sup> , df	P-value	Mean (SD)	Test statistic, df	P-value
Total	1.4 (2.2)			0.80 (0.64)		
Gender, N = 961		t(958) = -2.3	0.02		t(926) = 1.1	0.28
Males	1.2 (2.0)			0.82 (0.64)		
Females	1.5 (2.3)			0.78 (0.64)		
Age, N = 993		t(599) = -0.22	0.82		t(627) = -0.36	0.72
Mean age < 38.6 years	1.4 (2.2)			0.81 (0.66)		
Mean age > 38.6 years	1.4 (2.1)			0.79 (0.62)		
Education, N = 989		F(2, 986) = 0.72	0.49		F(2, 986) = 0.20	0.82
< 10th grade*	1.4 (2.2)			0.80 (0.65)		
Passed 10th grade	1.6 (2.3)			0.83 (0.63)		
Some college/graduated	1.2 (1.9)			0.82 (0.62)		
Duration of illness, N = 955		F(2, 952) = 6.1	0.002		F(2, 952) = 0.33	0.72
< 1 year	0.9 (1.6)			0.78 (0.70)		
1–5 years	1.2 (2.1)			0.80 (0.67)		
> 5 years	1.6 (2.2)			0.83 (0.60)		
City, N = 1006		F(3, 1002) = 4.8	0.002		F(3, 1002) = 27.3	< 0.001
Yangon	1.5 (2.3)			1.0 (0.6)		
Myingyan	1.0 (1.9)			0.7 (0.5)		
Pathein	1.1 (1.9)			0.7 (0.6)		
Pyay	1.9 (2.4)			0.5 (0.6)		

Footnote: \*10th grade was the highest level of secondary education in Myanmar. <sup>§</sup>T-test is denoted in this column by t(df); F-test is represented by F(df1, df2). SD, standard deviation; df, degrees of freedom; GED, General Educational Development test

**Table 3** Regression model coefficients for enacted stigma outcome (n = 887)

Covariates	Coefficients	
	Estimate	95% CI
City	Ref	-1.29 to
Yangon	-0.79	-0.29
Myingyan	-0.32	-0.64
Pathein	0.55	to
Pyay		-0.01
Gender		0.06 to
Male	Ref	-0.06
Female	0.22	to 0.50
Education		
Less than 10th grade	Ref	-0.28
Passed 10th grade	0.18	to 0.65
Some college/college graduate	-0.34	-0.78
		to 0.10
Age (per 10 years)	-0.09	-0.25
		to 0.07
Duration of HIV (log years)	See Fig. 3 for fitted curve	

Footnote: CI, confidence interval

**Table 4** Regression model coefficients for internalized stigma outcome (n = 888)

Covariates	Coefficients	
	Estimate	95% CI
City	Ref	-0.41 to
Yangon	-0.27	-0.12
Myingyan	-0.34	-0.44 to
Pathein	-0.49	-0.25
Pyay		-0.63 to
Gender		-0.34
Male	Ref	-0.14
Female	-0.05	to 0.03
Education		
Less than 10th grade	Ref	-0.15
Passed 10th grade	-0.01	to 0.12
Some college/college graduate	-0.08	-0.21
		to 0.05
Age (per 10 years)	-0.06	-0.11 to
		-0.01
Duration of HIV (log years)	See Fig. 3 for fitted curve	

Footnote: CI, confidence interval

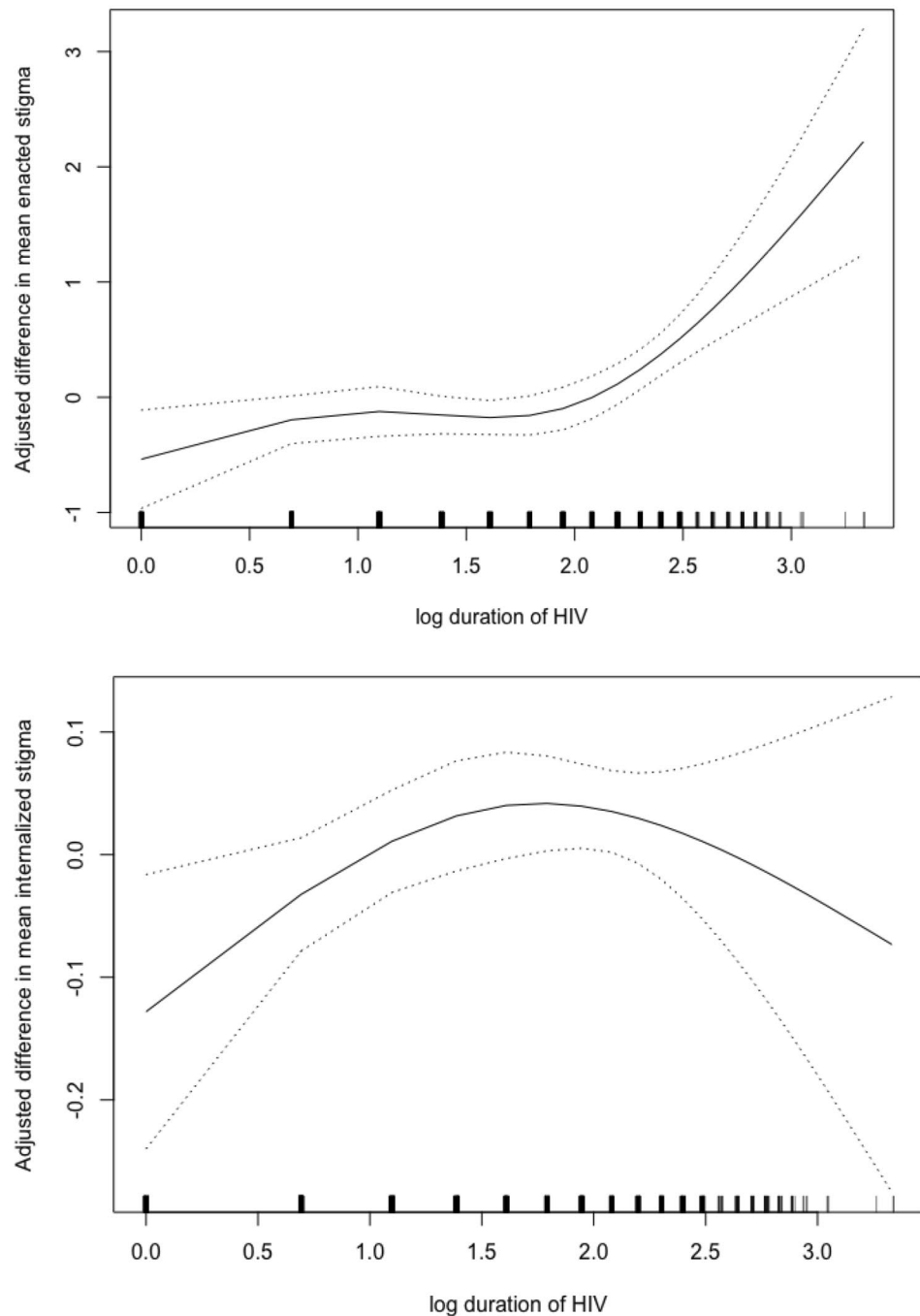
theme in Eastern religions, particularly Hinduism and Buddhism, and refers to experiencing consequences of prior bad deeds accumulated through the past states of existence. This response is unsurprising since nearly 90% of the population in Myanmar identify as Buddhist, and relating HIV to prior karma or sins is also a common sentiment among PLWH in India, Philippines, and Thailand [57–59]. These findings suggest the opportunity and potential benefit of incorporating faith-based leaders and institutions within Myanmar and other Buddhist communities into interventions for helping PLWH cope with acts of discrimination

and lessen internalization of shame [60]. Additionally, this may also warrant a more focused investigation into stigma characterization in Myanmar by incorporating cultural norms, societal changes, and religious sentiments into assessment scales. The country is unfortunately at high risk for increased marginalization in healthcare and possible regression in progress made with HIV management, which may further worsen stigma, due to isolation from political challenges and the COVID-19 pandemic.

Among the variables examined, longer duration since HIV diagnosis (more pronounced beyond 7.4 years based on the spline model used) was associated with higher enacted stigma. These findings contrast some prior studies, which showed that adjustment to HIV and enacted stigma improve with age and longer HIV diagnosis duration [33, 34]. Interestingly, significant political and HIV care changes took place in Myanmar between 2010 and 2016, when our data were collected. There was an official shift from military rule to a democratic government in the country, ART distribution began transitioning to the public sector managed by governmental organizations, and a nationwide effort commenced to increase ART initiation. These changes, accompanied by a redistribution in available resources, and perhaps a shift from focus on prevention and counseling towards medication treatment, likely resulted in a change in providers and care systems. Consequently, these major changes may have impacted the care and treatment of PLWH in Myanmar, particularly among those who have lived with HIV longer and were more accustomed to the former system, in which national and international NGOs largely contributed to HIV care and ART distribution. These changes in care systems and potentially new HIV counselors and providers may have provoked unease and stress among both caretakers and PLWH, and thereby worsen enacted stigma. These unique findings highlight the importance of evaluating HIV-related stigma within distinct societal and geographical settings, perhaps particularly at times of changing guidelines and care systems [61], to best identify the most prevailing stigma items and their potential reasons, sources, and associations, to optimize resources and interventions targeting stigma.

Intriguingly, the second most frequently reported enacted stigma experience was having one's HIV status involuntarily disclosed to the public due to a healthcare worker marking HIV on the medical record. Again, this may have occurred more commonly due to a change in the HIV care system from the private to public sector, largely managed by the central government in the country, during a significant political and societal transition. This also suggests the need to include healthcare workers and systems in programs targeting HIV-related stigma, since discrimination within

**Fig. 4** Effect of duration of HIV on stigma. The graphs present the effect of HIV duration on enacted (top panel) and internalized (bottom panel) stigma. The horizontal axes represent duration of HIV in log years; 1.0=2.8 years; 2.0=7.4 years; 3.0=20.0 years. The vertical axes represent adjusted difference in mean stigma, compared to the overall mean. The dotted lines represent pointwise 95% confidence bands. In the top plot, those whose duration is more than 7.4 years (2.0 on the horizontal axis) have mean enacted stigma that increases to almost 2 units higher than the overall mean. In the bottom plot, those with duration of 5 years (1.6 on the horizontal axis) reported the highest mean of internalized stigma



healthcare systems can significantly challenge adherence to care and provider-patient trust [62].

Unlike enacted stigma, where the observed association with increasing time since HIV diagnosis beyond 7.4 years was continuous, the observed rise of internalized stigma reached a maximum at 5 years and then decreased. This may again result from the unique timing of our study in relation to the political and HIV care transitions in the country that began around 2010. These observed differences may signal a lower intensity of apprehension and negative perceptions

related to HIV for participants diagnosed before these care transitions. This suggests that amid the anxiety related to these changes and despite the external acts of stigma that are not controlled by participants, PLWH may have felt hopeful about the long-term outcomes, which is important for the success of the country's efforts towards improving HIV care. Additionally, adjustment to and coping with negative sentiments related to one's HIV diagnosis may abate with time, especially among those engaged in care and on ART [63–66].



Stigma was generally worse for participants from Yangon. This city is the largest in and remains the commercial capital of the country, while Myingyan, Pyay, and Patheingyi are smaller in size and population and less economically developed. As such, the quality and quantity of resources and services per capita are likely lower in more densely populated cities such as Yangon resulting in higher internalized stigma. This introduces the concept of potential differences in experienced HIV-related stigma even within one ethnic and cultural setting and highlights the need for equitable resources across different cities and regions, which remains an issue in both developed and developing regions [67–69].

Although age of participants did not significantly correlate with enacted stigma, younger participants reported higher internalized stigma. Internalized stigma may evoke feelings of shame, guilt, and isolation and younger PLWH are generally more vulnerable to it [70, 71]. Older individuals, due to experience, familiarity, and perhaps knowledge of and access to more resources and support, may have better coping mechanisms to repel negative perceptions associated with one's HIV diagnosis [6, 72]. The relationship between age and stigma is likely multifactorial, and additional potentially-contributing factors to further examine this association include financial security, family/partner disclosure, and access to resources, among others [73].

Contrary to prior literature from Africa and India [33, 47], we found no significant (after adjustments) association between either enacted or internalized stigma with gender or education level. This lack of association could reflect the uniqueness of PLWH in Myanmar, but also may be due to several limitations of this study. First, some important sociodemographic information such as occupation, socioeconomic status, social support and disclosure to partner/family, were unavailable and can impact both types of stigma [24, 74–76]. Second, the cross-sectional nature of this study, particularly being conducted during a politically and socially delicate time-period in Myanmar, may lead to inability to generalize data to other settings, and longitudinal evaluation is needed to substantiate our findings. Third, our cross-sectional questionnaire asks whether enacted stigma ever happened since their diagnosis and does not capture the timing of the stigmatizing event, and a more detailed questionnaire or a longitudinal assessment is needed to further substantiate our findings. Fourth, utilization of self-reports and questionnaires may have led to recall and response bias despite our attempts to limit this by designating trained research staff who were not involved in the care of the participants. Fifth, while we enrolled participants across four cities throughout the country, our study population may not be representative of PLWH in those cities or the country. Lastly, the enacted and internalized stigma scales have not been validated in Myanmar; furthermore, the internalized

stigma scale used includes items that reflect misunderstanding and misinformation as well as internalized stigma.

## Conclusion

Previous and ongoing political challenges in Myanmar severely impact its healthcare and are concerning for negative consequences on HIV health outcomes. Within this unique setting, current findings extend our prior research, highlight HIV-related stigma and its importance, and shed light towards informing HIV care in this country and developing potential interventions to address it. The observed high prevalence of stigma, particularly internalized stigma, among PLWH in Myanmar, and its patterns and characteristics, underscore its longitudinal dynamics and the potential impact of national political and societal changes on it. While concerning, findings also signal hope, important for long-term success and positive outcomes of these changes. Results presented here suggest the need to include faith-based leaders in HIV care and better engage those with longer duration of HIV and who may struggle adjusting to the changing HIV care system. More research is warranted to explore whether and how further efforts for more equitable distribution of resources across different regions in Myanmar can lead towards eliminating HIV-related stigma and improving HIV care.

## List of Abbreviations

AIDS	Acquired Immunodeficiency Syndrome
ART	Antiretroviral Therapy
HIV	Human Immunodeficiency Virus
NGO	Non-governmental organization
PLWH	Persons/people living with HIV

**Supplementary Information** The online version contains supplementary material available at <https://doi.org/10.1007/s10461-023-03998-1>.

**Author's Contributions** SA conceived and designed the study. Material preparation and data collection were performed by SA, AK, MT, and KA. Data analysis was performed by NH, JH, AD, and SA. The first draft of the manuscript was written by SA and RK, all authors commented on early versions of the manuscript and all authors read and approved the final manuscript.

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**Data Availability** Data related to the research will be provided upon request.

## Declarations

**Conflict of Interest** The authors declare that they have no conflict of interest.

**Ethics Approval** The study received approval from the Institutional Review Board of Rhode Island Hospital, USA and the Ethical Review Committee in Myanmar.

**Consent to Participate** We obtained written consent from each participant in the study.

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