Epidemiological insights into HIV-related discrimination in Indonesia and Myanmar: Evidence from DHS Phase 7

Rimawati A. I. Sadarang*[1] , Emmi Bujawati[2]

[1, 2] Department of Public Health, Universitas Islam Negeri Alauddin Makassar, Gowa, Indonesia

ABSTRACT

Despite expanded HIV awareness efforts, comparable evidence on the determinants of discriminatory attitudes in Southeast Asia remains limited. This study explored the key factors contributing to stigma and discriminatory attitudes toward people living with HIV (PLWH) in Indonesia and Myanmar, utilizing data from the Demographic and Health Survey (DHS) Phase 7. A total of 57,409 individuals participated in the analysis—41,592 from Indonesia and 15,817 from Myanmar. Attitudes were assessed based on responses to statements about school participation and buying food from PLWH. The dataset was weighted to ensure national representation. Statistical analysis involved chi-square tests followed by multivariate logistic regression. In Indonesia, variables such as age, sex, residence, and HIV-related knowledge were significantly associated with discriminatory attitudes. Women and individuals in rural areas were more likely to express stigma. In both countries, higher knowledge about HIV was linked to lower discrimination. Gender emerged as the strongest predictor in Indonesia, while geographic location was more influential in Myanmar. These results underscore the importance of tailored strategies, including gender-responsive education, awareness initiatives focused on rural populations, and policy reforms aimed at reducing stigma and fostering greater acceptance of PLWH.

ABSTRAK

Meskipun upaya peningkatan kesadaran tentang HIV telah diperluas, bukti yang sebanding mengenai faktor-faktor yang mempengaruhi sikap diskriminatif di Asia Tenggara masih terbatas. Studi ini mengeksplorasi faktor-faktor utama yang berkontribusi terhadap stigma dan sikap diskriminatif terhadap orang yang hidup dengan HIV (ODHA) di Indonesia dan Myanmar, menggunakan data dari Survei Demografi dan Kesehatan (DHS) Fase 7. Sebanyak 57.409 individu berpartisipasi dalam analisis ini—41.592 dari Indonesia dan 15.817 dari Myanmar. Sikap dinilai berdasarkan respons terhadap pernyataan tentang partisipasi sekolah dan pembelian makanan dari ODHA. Data disesuaikan untuk memastikan representasi nasional. Analisis statistik melibatkan uji chi-square diikuti dengan regresi logistik multivariat. Di Indonesia, variabel seperti usia, jenis kelamin, tempat tinggal, dan pengetahuan tentang HIV secara signifikan terkait dengan sikap diskriminatif. Perempuan dan individu di daerah pedesaan lebih cenderung mengekspresikan stigma. Di kedua negara, pengetahuan yang lebih tinggi tentang HIV terkait dengan tingkat diskriminasi yang lebih rendah. Jenis kelamin muncul sebagai prediktor terkuat di Indonesia, sementara lokasi geografis lebih berpengaruh di Myanmar. Hasil ini menyoroti pentingnya strategi yang disesuaikan, termasuk pendidikan yang responsif terhadap gender, inisiatif kesadaran yang berfokus pada populasi pedesaan, dan reformasi kebijakan yang bertujuan untuk mengurangi stigma dan meningkatkan penerimaan terhadap ODHA.

GRAPHICAL ABSTRACT
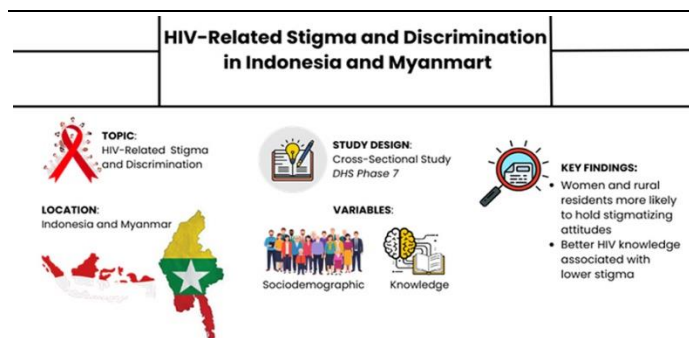
* Correspondence
🏛 Jl. Jipang Raya 6 no.38, Makassar, South Sulawesi, 90221, Indonesia
✉ rimawati.aulia@uin-alauddin.ac.id

INTRODUCTION

Despite a global decline in new HIV infection from 2.1 million (1,7-2,7 million) in 2010 to 1.3 million (1.0-1.7 million), HIV remains a major global public helath concern. This continue transmission, particularly among key populations and their partners, highlight persistent challenges in prevention and control efforts (World Health Organization, 2024a, 2024c). According to World Health Organization (WHO), an estimated 39.0 million people are living with HIV (PLWH) worldwide, with 25.6 million in the African region and 6.5 million in the Asia-Pacific region (World Health Organization, 2024b). These regional disparities suggest that efforts to prevent and treat HIV are not uniformly effecive across the globe.

In the Asia region, Indonesia and Myanmar are among the countries with the highest estimated number of PLWH, as reported by the WHO Global Health Observatory in 2021 (WHO, 2022). Epidemiological data from Indonesia indicated an estimated 540,000 PLWH, with 24,000 new infection annually. Although new infection have declined from 50,000 to 28,000 in 2022, this trend has not been accompanied by a consistent declinde in HIV-related mortality (AIDS Data Hub, 2024). The mortality rate increased from 2010 to 2018, began to decline in 2019, but stagnated through the end of 2022 (WHO, 2023b).

In contrast, Myanmar shows a relatively better trend. The estimated number of PLWH in Myanmar is approximately 280,000 with 11,000 new infections annually. The country has seen a 35% declined in new infections between 2010 and 2022, and the HIV mortality rate has shown a consistent downward trend over the same period. A key factor contributing to this difference may be the coverage of antiretroviral therapy (ART), which reached 74% in Myanmar compared to only 33% in Indonesia (WHO, 2023a, 2023b).

ART is effective when initiated early, yet not all PLWH are aware of their status. The Joint United Nations Programme on HIV/AIDS (UNAIDS) reported in 2022 that globally, 86% of PLWH knew their status, 76% had receives ART, and 71% of those on ART achieved viral suppression. These figures remain below the global targets sert under the Sustainable Development Goals (SDGs), particularly SDG 3, which aim to end the AIDS epidemic by 2030 through achieving the 95-95-95 targets: 95% of PLWH knowing their status, 95% receiving ART, and 95% achieving viral suppression (UNAIDS, 2023b).

One of the major barriers to achieving global HIV target is the persistent stigma and discrimination faced by PLWH. Discrimination may arise not only from the general community but also from healthcare providers and even family members, negatively affecting access to testing, treatment adherence, and health outcome (Sadarang, 2022). Data from UNAIDS Global AIDS Monitoring in 2023 showed that in 10 out of 12 reporting countries, more than 10% of PLWH experienced stigma or discrimination within health settings. Evidence from South Africa further indicates that HIV related stigma significantly contributes ART failure and poor treatment outcomes (UNAIDS, 2023a).

Eliminating HIV-related discrimination by 2030 is a core global commitment under the SDG 3. Some countries in Southeast Asia, such as Thailand, have integrated anti-discrimination strategies into their national HIV responses. However, discriminatiory experiences persist. In 2022, 8.7% of PLWH in Thailand still reported discrimination within healthcase setting (UNAIDS, 2023b). These findings highlight the urgent need to better understand the determinants of HIV related discrimination, given its profound implicaitions for access to care, quality of life and survival among PLWH.

Previous studies in developing countries have documented substantial levels of HIV-related discrimination and identified multiple sociodemographic and contextual determinants. Population-based analyses using DHS data in Ethiopia found that education level, wealth index, marital status, media exposure, HIV testing history, and community-level factors were significant predictors of discriminatory attitudes toward PLWH (Arefaynie et al., 2021). A multi-country study across 15 sub-Saharan African countries reported a pooled prevalence of discriminatory attitudes of 47%, with consistent associations with low socioeconomic status, limited HIV knowledge, and reduced media exposure (Teshale & Tesema, 2022). In Indonesia, Sadarang (2022) demonstrated that inadequate HIV knowledge, lack of HIV testing, and traditional beliefs were key contributors to discriminatory attitudes, indicating that stigma remains a major challenge despite ongoing HIV programs.

Despite this growing body of evidence, comparative studies examining HIV-related discrimination across countries in Southeast Asia remain limited. Most existing studies are country-specific or focus primarily on African settings, thereby

Table 1
Distributions of respondent characteristics in Indonesia and Myanmar

Variable	Indonesia		Myanmar	
	N=41,592	%	N=15,817	%
Age group				
Adolescent	11,738	26.86	4,553	28.27
Adult	29,854	73.14	11,264	71.73
Gender				
Man	6,759	16.2	4,286	26.97
Female	34,833	83.8	11,531	73.03
Place of residence				
Urban	24,719	59.43	4,909	31.13
Rural	16,873	40.57	10,908	68.87
Marital status				
Never in union	10,142	21.95	5,226	33.6
Married	29,649	74.18	9,721	60.95
Living with partner[1]	259	0.31	-	-
Separated/ Divorced	1,542	3.56	870	5.45
Currently working				
No	16,372	39.95	4,546	27.05
Yes	25,220	60.05	11,271	72.95
Educational level				
No education	152	0.35	1,417	8.82
Primary	6,935	20.01	6,025	39.67
Secondary	25,114	60.75	6,743	41.11
Higher	9,391	18.89	1,632	10.4
Wealth Index				
Poorest	6,303	11.63	2,531	15.71
Poorer	7,525	17.79	2,952	18.25
Middle	8,322	20.79	3,346	20.98
Richer	9,290	23.66	3,508	21.69
Richest	10,152	26.13	3,480	23.37
HIV-related knowledge				
Moderate	14,806	33.64	7,279	45.83
Good	26,786	66.36	8,538	54.17
Discriminatory attitude				
No	11,369	29.08	5,896	35.74
Yes	30,223	70.92	9,921	64.26

Note: [1] Living with partner category is only available in the Indonesia dataset; N = Total; % : Percentage

restricting cross-national and regional insights. Indonesia and Myanmar provide a compelling comparative context: both are lower-middle-income countries in Southeast Asia with concentrated HIV epidemics, yet they differ substantially in ART coverage, HIV-related mortality trends, and national HIV response strategies.

To address this gap, the present study conducts a cross-country comparison of HIV-related discriminatory attitudes in Indonesia and Myanmar using standardized, nationally representative DHS indicators. This study is among the first to directly compare these two Southeast Asian countries, identifying both shared and context-specific determinants of discrimination. The findings offer novel regional evidence to inform more context-sensitive HIV stigma reduction policies and support progress toward SDG targets.

METHODS

This study is a secondary data analysis using the seventh phase of Demographic and Health Survey (DHS) conducted in Indonesia and Myanmar, employing a cross-sectional design. The DHS is a nationally representative household survey conducted every five years in various developing countries. The survey was implemented by ICF International with funding from the United States Agency for International Development (USAID), and supported by UNICEF, UNFPA, WHO, and UNAIDS. Ethical approval for the original data collection was obtained from the Institutional Review Board (IRB) of ICF International and relevant national authorities. This study used anonymized, publicly available DHS datasets, and the authors obtained official approval to access and use the data through the DHS Program. As no identifiable personal information was included, no additional ethical clearence was requiered required for

Table 2
Bivariate analysis of discrimination toward PLWH in Indonesia and Myanmar

Variable	Indonesia				Myanmar			
	Discriminatory attitude		P value	OR (95%CI)	Discriminatory attitude		P value	OR (95%CI)
	Yes	No			Yes	No		
Age category								
Adolescent	9,043	2,695	<0.001*	1	3,012	1,541		1
Adult	21,180	8,674		0.71 (0.67-0.75)	6,909	4,355	<0.001*	0.79 (0.73-0.87)
Gender								
Man	4,494	2,265	<0.001*	1	2,667	1,619		1
Female	25,729	9,104		1.46 (1.35-1.58)	7,254	4,277	0.687	1.02 (0.92-1.12)
Place of residence								
Urban	17,356	7,363	<0.001*	1	2,384	2,525		1
Rural	12,867	4,006		1.34 (1.25-1.43)	7,537	3,371	<0.001*	2.39 (2.10-2.72)
Marital status								
Never in union	7,476	2,666		1	3,138	2,088		1
Married	21,408	8,241	<0.001*	0.89 (0.83-0.94)	6,260	3,461	<0.001*	1.22 (1.11-1.34)
Living with partner1	211	48	0.572	1.12 (0.75-1.67)	N/A	N/A	N/A	N/A
Separated/ Divorced	1,128	414	0.534	0.95 (0.83-1.10)	523	347	0.932	1.01 (0.85-1.19)
Currently working								
No	12,378	3,994	<0.001*	1	2,941	1,605		1
Yes	17,845	7,375		0.78 (0.74-0.82)	6,980	4,291	0.208	0.94 (0.85-1.03)
Educational level								
No education	126	26		1	1,116	301		1
Primary	5,496	1,439	0.718	0.92 (0.58-1.45)	4,362	1,663	0.003*	0.74 (0.61-0.90)
Secondary	18,515	6,599	0.085	0.67 (0.42-1.06)	3,907	2,836	<0.001*	0.4 (0.33-0.49)
Higher	6,086	3,305	<0.001*	0.43 (0.27-0.68)	536	1,096	<0.001*	0.14 (0.11-0.17)
Wealth Index								
Poorest	5,175	1,128		1	1,949	582		1
Poorer	5,750	1,775	<0.001*	0.76 (0.69-0.85)	2,110	842	0.002*	0.81 (0.71-0.92)
Middle	6,070	2,252	<0.001*	0.65 (0.59-0.73)	2,216	1,130	<0.001*	0.63 (0.55-0.73)
Richer	6,469	2,821	<0.001*	0.56 (0.50-0.62)	2,032	1,476	<0.001*	0.46 (0.39-0.53)
Richest	6,759	3,393	<0.001*	0.48 (0.43-0.53)	1,614	1,866	<0.001*	0.27 (0.22-0.31)
HIV-related knowledge								
Moderate	12,129	2,677	<0,001*	1	5,402	1,877		1
Good	18,094	8,692		0.49 (0.46-0.52)	4,519	4,019	<0.001*	0.41 (0.37-0.45)

Note: [1] *Living with partner category is only available in the Indonesia dataset; * p<0.05; N/A = not available*

this secondary data analysis.

Access to the dataset was obtained through the USAID DHS Program website following registration and approval (USAID, 2018). This study used data from the Phase 7 DHS in Indonesia in 2017 and in Myanmar in 2015-2016. Sampling weights were applied to account for the complex survey design and ensure national representativeness. The final sample included 57,409 respondents: 41,592 from Indonesia and 15,817 from Myanmar.

Independent variables included sociodemographic characteristics, namely age group (adolescents age 15-24 years and adults aged > 25 years), gender (man and female), marital status (never in union, married, living with partner, and separated/divorced), educational level (no education, primary, secondary, and higher), employment status (currently working or not working), wealth index (poorest, poorer, middle, richer, and richest), and place of residence (urban and rural). HIV related knowledge

Table 3
Multivariate analysis of discrimination toward PLWH variables in Indonesia and Myanmar

Variable	Indonesia			Myanmar		
	aOR	p-value	95%CI	aOR	p-value	95%CI
Age group	0.81	<0.001*	0.76-0.87	0.81	<0.001*	0.74-0.88
Gender	1.38	<0.001*	1.26-1.50	N/A	N/A	N/A
Place of residence	1.1	0.008*	1.02-1.18	2.2	<0.001*	1.93-2.50
Currently working	0.93	0.020*	0.87-0.99	N/A	N/A	N/A
HIV-related knowledge	0.52	<0.001*	0.49-0.56	0.45	<0.001*	0.41-0.49
Wealth index						
Poor	0.8	<0.001*	0.72-0.89	N/A	N/A	N/A
Middle	0.72	<0.001*	0.65-0.81	N/A	N/A	N/A
Richer	0.64	<0.001*	0.58-0.72	N/A	N/A	N/A
Richest	0.59	<0.001*	0.53-0.66	N/A	N/A	N/A

Note: *p<0.05; N/A = not available

was assessed based on respondents' knowledge of HIV causes, transmission, and prevention. The primary outcome was discriminatory attitude toward PLWH, measurred using country specific DHS survey questions.

In Indonesia, discrimination was defined based on responses to two questions: (1) "Should children with HIV/AIDS be allowed to attend school with non-infected children?" and (2) "Would you buy fresh vegetables from a vendor known to have HIV/AIDS?". Respondents who answered "no" to both were classified as holding discriminatory attitudes. In Myanmar, only the second question was available, respondents who answered "no" were considered to exibit discrimination toward PLWH.

Data analysis was conducted in three stages. First, univariate analysis was used to describe variable distributions. Second, bivariate analysis using the chi-square test identified association between independent variables and the outcome. Variables with p value < 0.25 were include in the third stage, a multivariate logistic regression analysis, to determine significant predictors of discriminatory attitudes toward PLWH.

RESULTS

The analysis revealed that respondents in both Indonesia and Myanmar were predominatly adult, female, and employed. In terms of place of residence, most Indonesian respondents lived in urban areas, while the majority of respondents in Myanmar resided in rural areas. A difference in marital status categorization was noted. In Myanmar, marital status was limited to three catagories: never in union, married, and separated/divorced. In contrast, Indonesia included an additional category: living

together, representing a cohabitation arrangement between a man and a woman outside of legal marriage, which accounted for 0.31% of Indonesia respondents.

With regard to educational attainment, both countries were dominated by respondents with a middle level of education. The wealth index showed that the majority of respondents in both countries were classified as "very rich". Despite demonstrating adequate knowledge regarding HIV prevention and transmission, a substantioal proportion of respoendents still displayed potential discriminatory attituted towards PLWH (see Table 1).

Bivariate analysis (see Table 2) indicated different statistically significant factors associated with discriminatory attitudes in Indonesia and Myanmar. In Indonesia, six of eight variables significantly associated: age (OR=0.71; 95%CI=0.67-0.75), gender (OR=1.46; 95%CI=1.35-1.58), residence (OR=1.34; 95%CI=1.25-1.43), employment status (OR=0.78; 95%CI=0.74-0.82), wealth index, and knowledge level (OR=0.49; 95%CI=0.46-0.52). In Myanmar, five variables were significant: age (OR=0.79; 95%CI=0.73-0.87), place of residence (OR=2.39; 95%CI=2.10-2.72), education level, wealth index and knowledge level (OR=0.41; 95%CI=0.37-0.45). A linear trend was observed in both education and the wealth variables, whereby higher levels were associated with lower odds of exhibiting discriminatory attitudes .

Multivariate analysis (see Table 3) showed that, in Indonesia, gender was the strongest predictor of discriminatory attitudes (aOR=1.38; 95%CI=1.26-1.50) after adjusting for other factors. In Myanmar, place of residence was the most influential factor (aOR=2.20; 95%CI=1.93-2.50). Overall, differences

were found in the distribution of significant factors between countries. In Indonesia, six variables remained significantly associated with discriminatory attitudes : age, gender, residence, employment status, knowledge, and wealth, while in Myanmar, only three factors: age, residence, and knowledge, showed a significant association after adjustment.

DISCUSSION

HIV/AIDS remains a disease that is heavily stigmatized and discriminated against in many countries (Karver et al., 2022). Discrimination behavior toward people living with HIV/AIDS (PLWHA) is often influenced by demographic, social, economic, and knowledge factors (Melkam & Fente, 2024). The findings of this study revealed significant differences in the factors associated with discriminatory attitudes in Indonesia and Myanmar. In Indonesia, six factors were significantly associated with discriminatory attitudes: age, gender, place of residence, employment status, wealth index, and knowledge level. In contrast, in Myanmar, five significant factors were age, residence, education level, wealth index, and knowledge level.

Comprehensively, spesific respondent conditions such as being employed, having a higher level of of education (Myanmar) and being economically well-off, and possessing good knowledge about HIV/AIDS tend to interact in a reinforcing manner. Employment contributes to better economic position, which often correlates with greater access to education andh health-related information (Nutakor et al., 2023; Nguyen et al., 2024). Adequate access to health information is crucial in shaping positive health behaviors (Asamoah et al., 2017). Those who are employed and frequently interact in diverse social environments are typically more open-minded and less prone to stigmatizing others, including PLWHA (Melkam & Fente, 2024). This condition is futher supported by geographic factors. People living in rural areas are more likely to demonstrate discriminatory attitudes , likely due to limited access to health services and information, resulting in poor knowledge of HIV/AIDS (Yang et al., 2021).

Another important findings is that younger individuals are more likely to exibit dicriminatory attitudes than older individuals. Psychological and social developmental factors play a role in shaping these attitudes (van Doeselaar et al., 2020; Pfeifer & Berkman, 2018). Young people often have limited

social experience and are still forming their self-identities, making them more susceptible to social conformity and adopting stereotypical views to reinforce their sense of belonging (Bayram Özdemir et al., 2021; Lee & Kim, 2024). Dichotomous thinking, which is common in youth, also contributes to catagorizing others into simplistic "us versus them" labels that foster discrimination (van Doeselaar et al., 2020). These findings align with Kohlberg's moral development theory and Tajfel's social identity theory, which suggest social and moral reasoning develops with age and experience (Brown, 2020; Ibda, 2023).

Regarding gender, Indonesian women were found to be more engage in discriminatory attitudes than men. This may be attributed to prevailing social and cultural norms that assign spesific roles and responsibilities to men and women (Hastuti, 2005). In Indonesian, the social construction of women as primary caregivers responsible for household and family health, especially that of children, is deeply embedded (Abdurrahman & Tusianti, 2021). This role instilled from childhood and reinforced through daily routines, positions women as more attentive to health risks, which can sometimes manifest as excessive concern of fear, particularly when they lack accurate information about disease transmission (Sihite & Siregar, 2022; Mussida & Patimo, 2021). On the other hand, gender was not significant factor in Myanmar, suggesting that gneder norms and expectations may play a stronger role in shaping discriminatory attitudes in Indonesia than in Myanmar. This discrepancy warrants furter qualitative exploration.

The pathophysiology of HIV/AIDS which targets the immune system and causes visible symptoms such as opportunistic infections (e.g.,Kaposi's sarcoma) and wasting syndrome, makes PLWHA especially vulnerable to stigma (Theresia, 2024; Fauk et al., 2021; Padilla et al., 2022). Moreover, HIV is often associated with high-risk behaviors such as injecting drug use and non-heteronormative sexual practices (e.g., among LGBTQ+ individuals), furher intensifying societal prejudice. Misconceptions about casual transmission also contribute to fear-based discrimination. Many people still incorrectly believe that HIV can be spread through everyday interactions, which exacerbates social avoidance and stigma. This is compounded by low level of understanding about HIV transmission. Goffman's theory of health stigma explains howindividuals with chronic illnesses like HIV are frequently labeled as "dangerous" or "abnormal," despite the fact that effective treatment can

significantly reduce tranmission risk and enable individuals to lead normal social lives (Yuvaraj et al., 2020; Goffman, 2009; CDC, 2024).

Multivariate analysis revealed that gender was the most influential factor associated with discriminatory attitudes in Indonesia, while place of residence emerged as the strongest predictor in Myanmar. These results underscore the importance of context-spesific intervention. In Indonesia, educational and social intervention programs should incorporate a gender-sensitive approach, promoting emphaty and respect for diversity from an early age. In Myanmar, efforts should focus on reducing information disparities between rural and urban area. Awareness campaigns that foster tolerence and reduce prejudice should target regions with higher levels of discrimination. The cross-country differences observed in this study it emphasize the importance of understanding sociocultural contexts in designing effective anti-discrimination interventions. In Indonesia, strategies should address gender roles and patriarchal norms, whereas in Myanmar, closing the information gap between rural and urban population is a more urgent priority.

This study utilized secondary data from DHS, which entails several limitations. First, the dataset lacks in depth contextual and qualitative insight into individual's perspectives on discriminatory attitudes toward PLWH, which could have enriched the interpretation of the findings. Second, the availability variables was limited to those inclueed in the DHS, requiring the research questions to and analytical scope to ber confined to accessible data. Third, the measurement of discriminatory attitudes differed between the two countries. In Indonesia, discriminatory attitudes were assessed using two DHS indicators, whereas in Myanmar only one comparable question was available. Although the analysis focused on overlapping indicators to enhance cross-country comparability, this discrepancy may have introduced measurement bias and should be considered when interpreting. Lastly, as the data were collected in 2017, they may not fully reflect current social, economic, or policy conditions in 2024. Nevertheless, the finding provide valuable insight into the determinants of HIV-related discrimination attitueds in Southeast Asia and offer a foundation for developing more contextually informed and evidence based public health policies.

CONCLUSIONS

This study found that gender was the most influential factor associated with discriminatory attitudes toward PLWHA in Indonesia, while place of residence was the strongest determinant in Myanmar. These findings have important public health implications, as HIV related discrimination can hinder access to testing, treatment uptake, and long-term adherence to ARV. The stronger association with place of residence in Myanmar suggests persistent urban-rural disparities, where limited access to health information, services, and stigma reduction programs in rural areas may exacerbate discriminatory attitudes. Overall, these results underscore the need for context specific public health interventions that address both gender-related norm and urban-rural inequities to effectively reduce HIV related discrimination.

Based on these findings, the following operational recommendations are proposed: (1) integrate gender sensitivity, tolerance, and diversity education into school curricula to foster empathy and reduce stereotype-based prejudice from early age, (2) develop HIV-friendly health services by training health workers, especially in maternal and reproductive health settings- to provide non-discriminatory care, with special attention to women living with HIV, (3) launch nationwide public awareness campaigns using mass media and digital platforms, involving influential figures from both urban and rural areas, to spread accurate information about HIV transmission and reduce stigma, and (4) support inclusive employment initiatives by offering skill training and promoting partnerships with businesses to create work opportunities for PLWHA, enabling economic and independence and reducing vulnerability to discrimination. These recommendations underscore the importance of addressing both structural and socio-cultural dimension of HIV-related discrimination through targeted, context-specific policies in each country.

AUTHORS' CONTRIBUTIONS
Rimawati A. I. Sadarang contributed to the study design and conceptualization, collected and analyzed the data, and drafted and revised the manuscript. Emmi Bujawati contributed to the study design and conceptualization, conducted/performed fieldwork activities, and critically reviewed and revised the manuscript. Both authors read and approved the final version of the manuscript.

AUTHORS' INFORMATION
Rimawati Aulia Insani Sadarang, M.P.H., is an Assistant Professor in the Department of Public Health, Faculty of Medicine and Health Science, Universitas Islam Negeri Alauddin Makassar, Gowa, Indonesia. Emmi Bujawati, M.Kes, is an Associate Professor in the Department of Public Health, Faculty of Medicine and Health Science, Universitas Islam Negeri Alauddin Makassar, Gowa, Indonesia.

COMPETING INTERESTS
The authors confirm that all of the text, figures, and tables in the submitted manuscript work are original work created by the authors and that there are no competing professional, financial, or personal interests from other parties.

REFERENCES

Abdurrahman, A., & Tusianti, E. (2021). Apakah Pemberdayaan Perempuan dalam Ekonomi dan Politik Telah Meningkatkan IPM Perempuan Indonesia? *Jurnal Ekonomi Dan Pembangunan Indonesia*, *21*(2), 5. https://doi.org/10.21002/jepi.2021.13

AIDS Data Hub. (2024). *Indonesia | HIV/AIDS Data Hub for the Asia-Pacific Region*. HIV AIDS Asia Pacific Research Statistical Data Information Resources AIDS Data . https://www.aidsdatahub.org/country-profiles/indonesia

Arefaynie, M., Damtie, Y., Kefale, B., & Yalew, M. (2021). Predictors of discrimination towards people living with hiv/aids among people aged 15–49 years in ethiopia: A multilevel analysis. *HIV/AIDS - Research and Palliative Care*, *13*, 283–292. https://doi.org/10.2147/HIV.S299812

Asamoah, C. K., Asamoah, B. O., & Agardh, A. (2017). A generation at risk: A cross-sectional study on HIV/AIDS knowledge, exposure to mass media, and stigmatizing behaviors among young women aged 15–24 years in Ghana. *Global Health Action*, *10*(1). https://doi.org/10.1080/16549716.2017.1331538

Bayram Özdemir, S., Özdemir, M., & Boersma, K. (2021). How Does Adolescents' Openness to Diversity Change Over Time? The Role of Majority-Minority Friendship, Friends' Views, and Classroom Social Context. *Journal of Youth and Adolescence*, *50*(1), 75–88. https://doi.org/10.1007/S10964-020-01329-4

Brown, Rupert. (2020). *Henri Tajfel : explorer of identity and difference*. Routledge. https://www.routledge.com/Henri-Tajfel-Explorer-of-Identity-and-Difference/Brown/p/book/9781138589810

CDC. (2024). *HIV Treatment as Prevention*. https://www.cdc.gov/hiv/risk/art/index.html

Fauk, N. K., Hawke, K., Mwanri, L., & Ward, P. R. (2021). Stigma and discrimination towards people living with hiv in the context of families, communities, and healthcare settings: A qualitative study in indonesia. *International Journal of Environmental Research and Public Health*, *18*(10). https://doi.org/10.3390/ijerph18105424

Goffman, E. (2009). *Stigma: Notes on the management of spoiled identity*. Simon and schuster.

Hastuti, E. L. (2005). Hambatan Sosial Budaya Dalam Pengarusutamaan Gender di Indonesia (Socio-Cultural Constraints on Gender Mainstreaming in Indonesia). *SOCA: Jurnal Sosial Ekonomi Pertanian*, *5*(2), 1–14. https://ojs.unud.ac.id/index.php/soca/article/view/4084

Ibda, F. (2023). Perkembangan Moral Dalam Pandangan Lawrence Kohlberg. *Intelektualita*, *12*(1), 42–78. https://doi.org/10.22373/JI.V12I1.19256

Karver, T. S., Atkins, K., Fonner, V. A., Rodriguez-Diaz, C. E., Sweat, M. D., Taggart, T., Yeh, P. T., Kennedy, C. E., & Kerrigan, D. (2022). HIV-Related Intersectional Stigma and Discrimination Measurement: State of the Science. *American Journal of Public Health*, *112*, S420–S432. https://doi.org/10.2105/AJPH.2021.306639

Lee, S., & Kim, B. (2024). Exploring How Stereotype Modification Mediates the Relationship between Social Dominance and Multicultural Acceptance. *Behavioral Sciences 2024, Vol. 14, Page 745*, *14*(9), 745. https://doi.org/10.3390/BS14090745

Melkam, M., & Fente, B. M. (2024). Multilevel analysis of discrimination of people living with HIV/AIDS and associated factors in Ghana: demographic health survey of 2022 Ghana data. *Frontiers in Public Health*, *12*. https://doi.org/10.3389/fpubh.2024.1379487

Mussida, C., & Patimo, R. (2021). Women's Family Care Responsibilities, Employment and Health: A Tale of Two Countries. *Journal of Family and Economic Issues*, *42*(3), 489–507. https://doi.org/10.1007/S10834-020-09742-4/TABLES/3

Nguyen, T. T., Huong, D. T., Nguyen, L. T., Nguyen, B. D., Giang, L. M., & Lin, C. (2024). Disclosure of HIV Status in Healthcare Settings: Practices and Considerations among Women Living with HIV/AIDS in Vietnam. *Journal of the International Association of Providers of AIDS Care*, *23*. https://doi.org/10.1177/23259582241277655

Nutakor, J. A., Zhou, L., Larnyo, E., Addai-Dansoh, S., Cui, Y., Kissi, J., Danso, N. A. A., & Gavu, A. K. (2023). A multiplicative effect of Education and Wealth associated with HIV-related knowledge and attitudes among Ghanaian women. *BMC Public Health*, *23*(1). https://doi.org/10.1186/S12889-023-16311-5

Padilla, M., Patel, D., Beer, L., Tie, Y., Nair, P., Salabarría-Peña, Y., Henny, K. D., Thomas, D., & Dasgupta, S. (2022). HIV Stigma and Health Care Discrimination Experienced by Hispanic or Latino Persons with HIV — United States, 2018–2020. *MMWR. Morbidity and Mortality Weekly Report*, *71*(41), 1293–1300. https://doi.org/10.15585/MMWR.MM7141A1

Pfeifer, J. H., & Berkman, E. T. (2018). The Development of Self and Identity in Adolescence: Neural Evidence and Implications for a Value-Based Choice Perspective on Motivated Behavior. *Child Development Perspectives*, *12*(3), 158. https://doi.org/10.1111/CDEP.12279

Sadarang, R. A. I. (2022). Prevalence and Factors Affecting Discrimination Towards People Living With HIV/AIDS in Indonesia. *Journal of Preventive Medicine and Public Health*, *55*(2), 205–212. https://doi.org/10.3961/JPMPH.21.502

Sihite, H., & Siregar, N. (2022). *Kesehatan Perempuan dan Perencanaan Keluarga* . Penerbit NEM. https://books.google.co.id/books/about/Kesehatan_Perempuan_dan_Perencanaan_Kelu.html?id=kPp7EAAAQBAJ&redir_esc=y

Teshale, A. B., & Tesema, G. A. (2022). Discriminatory attitude towards people living with HIV/AIDS and its associated factors among adult population in 15 sub-Saharan African nations. *PLOS ONE*, *17*(2), e0261978. https://doi.org/10.1371/JOURNAL.PONE.0261978

Theresia, Y. A. I. S. A. L. E. S. C. D. P. N. A. A. S. (2024, June). *Keperawatan HIV-AIDS*.

UNAIDS. (2023a). *The Path that Ends AIDS - UNAIDS Global AIDS Update 2023*. https://thepath.unaids.org/wp-

content/themes/unaids2023/assets/files/2023_report.pdf

UNAIDS. (2023b). *UNAIDS Data 2023*. https://www.unaids.org/sites/default/files/media_asset/data-book-2023_en.pdf

USAID. (2018). *The DHS Program - Indonesia: Standard DHS, 2017 Dataset*. The DHS Program - Demographic and Health Survey. https://www.dhsprogram.com/data/dataset/Indonesia_Standard-DHS_2017.cfm?flag=0

van Doeselaar, L., McLean, K. C., Meeus, W., Denissen, J. J. A., & Klimstra, T. A. (2020). Adolescents' Identity Formation: Linking the Narrative and the Dual-Cycle Approach. *Journal of Youth and Adolescence*, *49*(4), 818–835. https://doi.org/10.1007/S10964-019-01096-X

WHO. (2022, November 25). *HIV/AIDS*. OECD. https://doi.org/10.1787/C7467F62-EN

WHO. (2023a). *HIV Country Profiles*. https://cfs.hivci.org/index.html

WHO. (2023b). *Indonesia HIV Country Profiles*. https://cfs.hivci.org/index.html

World Health Organization. (2024a). *HIV – Number of new HIV infections*. https://www.who.int/data/gho/data/indicators/indicator-details/GHO/number-of-new-hiv-infections

World Health Organization. (2024b). *HIV Statistics, Globally and by WHO Region*. https://apps.who.int/iris/handle/10665/360348

World Health Organization. (2024c). *HIV/AIDS in the South-East Asia*. https://www.who.int/southeastasia/health-topics/hiv-aids

Yang, F., Li, Z., Subramianian, S. V., & Lu, C. (2021). Assessment of Knowledge of HIV/AIDS and Association with Socioeconomic Disparities among Young Women in Low- And Middle-Income Countries, 2003 to 2018. *JAMA Network Open*, *4*(1). https://doi.org/10.1001/jamanetworkopen.2020.35000

Yuvaraj, A., Mahendra, V. S., Chakrapani, V., Yunihastuti, E., Santella, A. J., Ranauta, A., & Doughty, J. (2020). HIV and stigma in the healthcare setting. *Oral Diseases*, *26 Suppl 1*(S1), 103–111. https://doi.org/10.1111/ODI.13585