

A Systematic Review in Literature in Trends and Challenges in HIV Risk and Prevention Research in the Philippines

Gemelyn S. Hermosura^{1*}; Zyrene Joy Ethyl Arobio²; Shane M. Landicho³; Gecelene C. Estorico^{4*}

^{1,2,3,4}Chemical Engineering Technology Department, Technological University of the Philippines–Taguig, Taguig City, Philippines

⁴De La Salle University – Dasmariñas Dasmariñas, Philippines

Corresponding Author: Gecelene C. Estorico^{4*}

Abstract:- The Philippines is experiencing a rapid rise in HIV cases, placing it among the fastest growing HIV epidemics in the Asia-Pacific region. The epidemic disproportionately affects key populations including MSM, transgender women, sex workers, and PWID-men and women who inject drugs. The members of these groups face a number of barriers to accessing HIV prevention and treatment services, including stigma and discrimination as well as inequalities in access to healthcare across geographic regions. The objective of this systematic review is to review the trends, risk factors, barriers, and effectiveness of HIV prevention interventions in the Philippines, focusing specifically on studies published between 2000 and 2024. Utilizing the PRISMA methodology, 21 studies were identified based on relevance to HIV risk and prevention among critical populations. Thus, it shows that there is a worrying upward trend in HIV incidence, especially among PWID, with prevalence peaking at 75% in 2010 in Metro Cebu. Stigma and provider mistrust, as well as significant barriers related to access to healthcare facilities, determined low testing rates and delayed treatment. Promising interventions included rights-based education, community-led HIV care models, and HIVST, each demonstrating positive outcomes in increasing testing and treatment initiation. However, for these programs to achieve long-term effects, they must be scaled up and sustained. The results point to the urgent need for culturally relevant interventions and policy reforms that will combat stigma, ensure comparable access to services for all marginalized groups, bridge prevailing gaps in this research, including regarding young persons and the rural sector, and increase the public health response and imperative inclusive approaches to change the trajectory of the HIV epidemic in the Philippines.

Keywords:- Rapid Rise in HIV Cases, Key Populations, MSM (Men Who Have Sex With Men), PWID (People Who Inject Drugs), Stigma and Discrimination, Inequalities in Access to Healthcare.

I. INTRODUCTION

The introduction of different exotic floras and wide distribution of invasive alien species in forest ecosystem are threatening the biodiversity across Asia. The Philippines reported its first case of HIV in 1984, and the prevalence of this virus had been estimated to be low for more than two decades [1]. HIV/AIDS still ranks as one of the most significant public health concerns for the Philippines. Recent statistics from the Department of Health reveal that, at 55 new cases a day, the country ranks within the top tiers in new HIV infections within the Asia Pacific region. While there is a marked decrease in the rates of HIV elsewhere in the region [2]. It tends to focus on specific population groups, including MSM, PWID, sex workers, and young adults between the ages of 15 and 24 years. Each of these populations carries distinct risk factors that raise the likelihood of their becoming HIV positive, including stigma, lack of access to healthcare services, and minimal intervention targeted at these subpopulations [3]. It's at this juncture that the rising cases will only heighten the call for the scrutiny of trends and challenges in HIV risk and prevention research specific to the Philippines [4].

Defining this populations is essential, Men who have sex with men (MSM) refers to males who at any point or consistently practice sexual intercourse with other men, regardless of labeling themselves in any waybe it 'gay', bisexual, and even heterosexual in their conception. MSM make up some of the population that highly suffers from being a leading group in this Philippine country's HIV outbreak because, due to socially associated discrimination, they barely receive easy access to health-related services for treatment [5]. On the other hand, People Who Inject Drugs (PWID) are people who use injectable drugs and, through the sharing of needles, are more exposed to HIV. The criminalization of drug use and resultant stigma pose further challenges for PWID in the Philippines in their efforts to seek healthcare [6].

Despite the implementation of various HIV prevention strategies, the Philippines continues to face significant barriers to effective intervention, particularly for marginalized groups. According to Joint United Nations Programme on HIV/AIDS, commonly referred to as UNAIDS, surveillance reports, the Philippines is lagging behind in the steps towards achieving HIV/AIDS 90-90-90 treatment for people living with HIV and knowing their HIV status, on treatment, and are virally suppressed. That is, 67 percent know their HIV status, 32 percent are on treatment, and 29 percent are virally suppressed as HIV infections rise in the Philippines [7]. The data from national surveillance show that the incidence of new HIV cases in the Philippines started to increase alarmingly over the past decade. An increase from 311 cases identified in 2007 to 8,151 cases identified in 2016 – that's a 26-fold increase in new HIV diagnoses.

This growing HIV incidence in the country reflects gaps in the current strategies of prevention and intervention that, if not addressed, will pose a greater public health crisis [8]. Hence, the pervasiveness of HIV-related stigma in the Filipino social context also creates a strong disincentive for HIV testing and treatment among other marginalized groups such as MSM and PWID due to fear of stigma and discrimination [9]. Issues such as this need understanding of the causes of the epidemic, the urban area where resources could be found, and in rural settings where healthcare accessibility may be much lower. Reviewing existing research on HIV trend and prevention strategies will guide policymakers and public health professionals to design more effective interventions for the Philippine context.

This systematic review aims to identify and analyze trends in HIV risk and prevention research in the Philippines, with a particular focus on the year(s) with the highest HIV incidence. By examining available literature from 2000 to the present, this review will offer a comprehensive view of the epidemic's progression and identify gaps in research and interventions.

Specifically, the review aims to: (1) Examine the impact of HIV on different populations, particularly key affected groups such as MSM, PWID, and sex workers; (2) Identifying and evaluating the main prevention and intervention strategies deployed over the past two decades; (3) Highlighting the challenges researchers and public health professionals have faced in implementing HIV prevention and treatment programs in the Philippines; and, (4) Determine how have key populations, such as MSM, PWID, and sex workers, been impacted by the HIV epidemic, and what specific strategies have been employed to address their needs.

II. METHODOLOGY

This systematic review will adhere to the PRISMA framework at every stage for transparency and proper reporting. PRISMA is widely used in systematic reviews to enhance methodological clarity and ensure all relevant studies are included without compromising on quality. [7].

Identification. During the initial search phase, all records retrieved from academic databases will be screened. Titles and abstracts will be assessed to determine initial relevance.

Screening. Duplicate records will be removed, and the remaining studies will undergo a preliminary review based on the inclusion and exclusion criteria outlined above. Full texts of potentially eligible studies will be retrieved for further assessment.

Eligibility. Full-text articles will be assessed against the final inclusion and exclusion criteria. At this stage, any studies that do not meet these criteria will be excluded, with reasons documented.

Inclusion. Studies that meet all eligibility criteria will be included in the final synthesis. Data extracted from these studies will be analyzed according to thematic and quantitative synthesis methods as described.

PRISMA Flow Diagram. PRISMA flow diagram will be provided to visually represent the study selection process. This diagram will illustrate the number of records identified, screened, assessed for eligibility, and ultimately included in the review, with reasons for exclusion at each step.

All the steps in the PRISMA process will be well-documented to ensure reproducibility. Throughout the process, systematic recording of search results, study selection, and quality assessment will be maintained. Thus, this comprehensive approach based on the PRISMA framework ensures that the review remains transparent, reproducible, and unbiased.

A. Data Gathering

Systematic search of the databases are as follows: PubMed, Google Scholar, Scopus, and Web of Science, Philippines-specific resources Philippine E-Journals were considered, and grey literature of reports from government offices, theses, and publications by NGOs were also incorporated.

B. Literature Search

This systematic review search strategy is going to ensure full coverage of relevant studies on HIV trends and challenges in the Philippines. Searches will be carried out across several academic databases, including PubMed, JSTOR, ScienceDirect, Google Scholar, and Scopus. The chosen databases are comprehensive and offer extensive coverage of literature within the public health, medical, and social sciences domains.

A combination of keywords and controlled vocabulary, for instance, MeSH terms will be used to capture all relevant literature, grouped into three main categories: population, location, and topic. The Boolean operators will combine the terms effectively. Terms involving population will make use of "Men who have sex with men," "MSM," "People who inject drugs," "PWID," "sex workers," "female sex workers," "commercial sex workers," "youth," "young adults," and

"general population." Geographical terms will use "Philippines" and "Filipino." Topic terms involve varied aspects related to HIV: "HIV prevention," "HIV risk," "HIV trends," "HIV epidemic," "HIV prevalence," "HIV research," "HIV intervention," and "HIV transmission." Sample search may look something like this example: ("HIV prevention" OR "HIV risk" OR "HIV trends" OR "HIV epidemic" OR "HIV prevalence") AND ("Philippines" OR "Filipino") AND ("Men who have sex with men" OR "MSM" OR "People who inject drugs" OR "PWID" OR "Sex workers" OR "female sex workers" OR "commercial sex workers" OR "youth" OR "young adults" OR "general population"). In controlled vocabulary-supported databases, equivalent MeSH terms or subject headings will be used to increase precision.

Filters will particularly be applied to narrow down the specific results to those published from the year 2000 and up to date, but in the English language and also limits study types such as original research articles or review articles and programmatic evaluations but excludes opinion piece articles, editorials and other non-peer-reviewed sources that might be included.

To include all the relevant data possible, grey literature sources, including World Health Organization (WHO), UNAIDS, and Department of Health (DOH) Philippines, will be used to obtain reports, government publications, and NGO research. Manual searches will also be performed by perusing the reference lists of included studies to identify articles not captured in the database searches.

References will be imported into reference management software, such as EndNote or Mendeley, for citation management and removal of duplicates. There will be two rounds of screening: title and abstract screening to filter for preliminary relevance and full-text screening to assess the studies against the inclusion and exclusion criteria.

All the steps taken in the process of the search shall be documented. The search date, search terms and key words employed, numbers of articles reaped on every database and decisions in and out, all decisions not to include every point to be excluded in the systematic process. In this process, a balanced review literature about HIV risk, HIV prevention, and challenges related to intervention would be completed. All significant studies representing the research agenda will be established.

C. Inclusion and Exclusion Criteria

The inclusion criteria for this systematic review are designed to capture studies that are highly relevant to understanding HIV trends and challenges in the Philippines. Eligible studies must (1) include exclusivity to the Philippine setting so that findings can be applied directly to the peculiar social, economic, and healthcare setting of the country. The review will include studies (2) involving key populations affected by HIV, for instance, men who have sex with men (MSM), people who inject drugs (PWID), sex workers, and the general population. Out of the included studies, the literature review will only source three peer-reviewed journal articles, program evaluations, or government reports that

discuss HIV prevention, treatment, and its risk factors. To encompass the comprehensive breadth of insight, studies must apply (4), including qualitative, quantitative, and mixed methods designs. Additionally, (5) the literature must discuss the challenges faced in implementing HIV prevention and treatment programs in the Philippines to provide a comprehensive view of the barriers to effective intervention.

Exclusion criteria will eliminate studies not relevant to the intent of the review. Studies: (1) not carried out in the Philippine setting are excluded since they cannot be used directly to enhance the understanding of the HIV epidemic in the Philippines; (2) non-peer-reviewed sources, opinion pieces, and articles with limited data or no analysis regarding HIV trends are excluded in order to have a very high level of evidence. In addition, literature that does not target key populations nor addresses HIV risk and prevention will not be considered so that all the considered studies relate to the aims of the review.

D. Search Results

The initial search conducted across the chosen academic databases obtained a total of 800 records. After deleting all the duplicated records (50 records), the remaining records were supposed to be filtered based on inclusion and exclusion criteria that is, 750 records. After the screening of titles and abstracts, 550 records were excluded because they had nothing to do with the trends and prevention of HIV in the Philippines or focused on other key populations. Then, the remaining 200 studies were reviewed further for full-text analysis on their depth and quality relevance. Further down the line, other exclusions included 179 studies without adequate data on HIV trend, focusing on regions other than the Philippines, and even with no discussion about HIV risk and prevention among key affected populations. In this case, only 21 studies satisfied all of the inclusion criteria. The stages of study selection and results are presented in the PRISMA flow diagram (Figure 1).

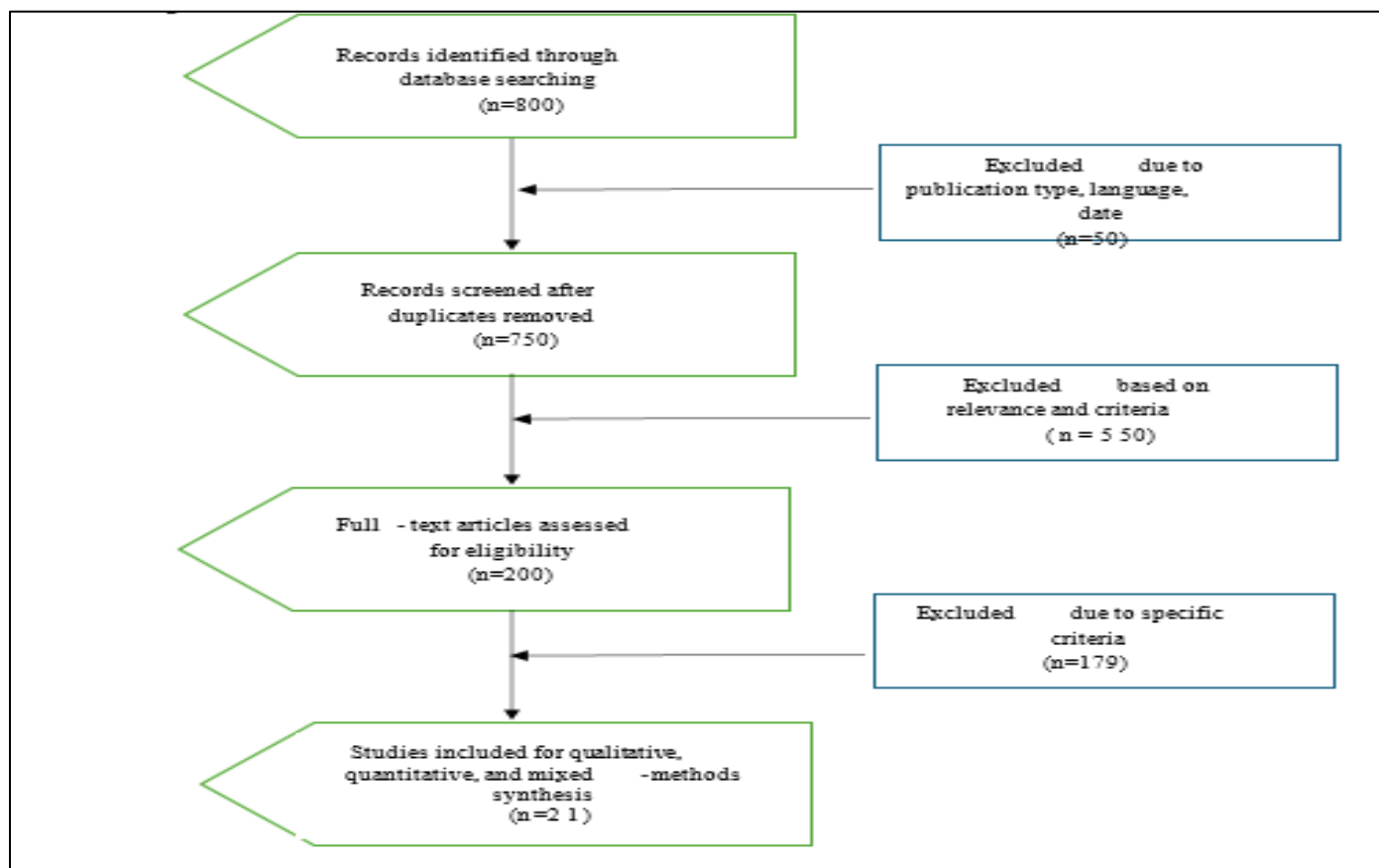


Fig 1: Schematic Diagram Representing the Stages of Study Selection and Results Presented in the PRISMA Flow Diagram

E. Data Extraction

For the systematic review, data extraction will involve gathering and organizing relevant data from each selected study such that there will be sufficient and consistent analysis of trends and challenges in HIV problems in the Philippines. The study will use a standardized form for data extraction to carry out systematic collection of the information with accuracy and comprehensiveness across studies. First, there will be information on the basic publication: author(s), title, year of publication, name of journal, and location of study, whether it is urban, rural, or nationwide. Such data will put the study in context and help categorize studies according to their publishing time and place. The study population details will then be documented, which include the specific groups affected in particular. This encompasses MSM, PWID, sex workers, youth, and the general population. Understanding the demographic and targeted risk groups is essential to assess the epidemic's impact on different communities.

F. Statistical Analysis

The statistical synthesis of this systematic review will involve quantitative findings on the trends, risk factors, and the effectiveness of the prevention strategies of the Philippines. This will be through descriptive statistics, whereby the process of summarizing key variables, such as HIV incidence and prevalence rates across the different years and key populations, is a summary of the process used in the synthesis.

To this end, time series will be carried out in determining the patterns of trends associated with the incidence of HIV cases between 2000 up to present, helping reveal significant increase or decline throughout the time under review with specific trends for peak reports. Growth rates are to be computed by utilizing the statistical software such as SPSS or R. Application of regression models will make data visualization possible for revealing trends and deeper insight on how the epidemic is evolving along the time axis. Trends in the data would therefore need critical analysis in the determination of impact of prevention and intervention programs implemented during the years.

The study of HIV among the Philippines will further find depth in understanding if conducted as a comparative analysis involving differences in prevalence, risk factors, and outcomes between groups such as MSM versus the general population or urban vs. rural settings. To test for statistical significance between the observed differences, tests applied will include t-tests or chi-square tests.

Finally, sensitivity analyses will involve the removal of studies in which there was a serious risk of bias or outlier values to ensure the robustness of the results. Otherwise, the overall conclusions have to be the same, rendering the results more reliable. The results of these analyses will be presented in tables and graphs, showing trends over time, group comparisons, and summary statistics that clearly and comprehensively portray HIV trends, risk factors, and intervention outcomes in the Philippines. This statistical

approach aims to provide an evidence-based understanding of HIV risk and prevention, offering valuable insights for public health initiatives in the country.

III. RESULTS

This systematic review encompasses 21 articles on HIV risk and preventive research in the Philippines, showcasing a variety of approaches, populations, and areas of focus. This variation enriches the understanding of the intricacies of the HIV epidemic in the Philippine environment.

The studies included a range of research designs, including pilot quantitative studies, cross-sectional analyses, retrospective cohort studies, qualitative interviews, and literature reviews. For instance, quantitative methods are applied in studies such as Urada et al. (2016) and Eustaquio et al. (2021), which evaluate the effectiveness of specific interventions, while qualitative studies, like that by de Lind van Wijngaarden et al. (2018), discuss barriers to HIV testing among MSM through interviews. Such diversity of methodologies can afford to understand both statistical results and a life as that which affected individuals' life experience when it was stricken with HIV. The studies target diverse high-risk populations, such as MSM, transgender women, sex workers, and PWID. Importantly, the focus is on these populations, for they carry a larger burden of HIV in the Philippines. For example, Restar et al. (2022) addresses problematic drug use among transgender women and cisgender men who have sex with men by identifying intersecting vulnerabilities of these populations. This would ensure that the results are applicable and relevant to the most affected groups.

➤ Nature of the 21 Studies Identified

These studies are mainly situated in the urban settings, particularly in Metro Manila and other key cities, such as Cebu. Other studies target rural populations, which creates unique challenges in terms of access to healthcare. This is seen in Bustamante and Plankey's (2022) review of barriers to HIV testing in various settings; it makes a point that these have to be tailored in an urban as well as in a rural setting. The studies differ in terms of temporal scope since some are time-specific, such as the significant rise in HIV cases reported in 2010 while others offer longitudinal data for trends over time. A trend analysis from 2010 to 2022 is done by Montegriconi et al. in an attempt to trace the dynamics of the HIV epidemic in the Philippines. Longitudinal data of this nature is essential for knowing the trend of the epidemic and can be useful in designing future interventions.

Many of these researches also evaluate the interventions that are specifically focused to reduce HIV transmission and ultimately improve health outcomes. They include human rights-oriented services for sex workers, online

HIV self-testing interventions among communities, and harm reduction programs among PWID. The evaluation of such intervention programs will serve as significant lessons on what works best in the Philippines and areas where improvement is needed. Common limitations in the studies include reliance on self-reported data, which might be prone to biasing, and small sample size, thereby limiting their generalization to a larger population. Many of the studies have localized focus and target certain regions or populations; hence, they cannot generalize to the general Filipino population infected with HIV. These limitations recommend multi-site studies that have more extended participation to view the epidemic. +

Table 1: Summary of Studies on HIV Risk and Prevention in the Philippines

No.	Author(s)	Title	Year	Study Population	Study Design	Key Findings	Interventions/ Prevention	Challenges/ Barriers
1	Urada et al.	A human rights-focused HIV intervention for sex workers in Metro Manila, Philippines	2016	Sex Workers	Quantitative pilot study	Increased HIV awareness, motivation for testing, reproductive health understanding	Kapitan program: rights education integrated with skill-building	High abuse rates, low initial testing, drug use
2	Sison et al.	Association of anticipated HIV testing stigma and provider mistrust on preference for HIV self-testing among cisgender men who have sex with men in the Philippines	2022	1. Cisgender men who have sex with men (cis-MSM) in Metro Manila, Philippines	Secondary analysis	Stigma and provider mistrust influence preference for HIV self-testing	Recommends HIVST as a supplementary option	Stigma, mistrust of providers, fear of facility-based testing
3	Restar et al.	Problematic Drug Use Among Transgender Women and Cisgender MSM in the Emerging	2022	Transgender women and cis-MSM	Cross-sectional analysis	29% engaged in problematic drug use; linked with sex work and HIV status.	Integrated HIV and harm reduction services	Stigma, lack of harm reduction access

		HIV Crisis						
4	Olete et al.	ChemsexPH: Chemsex, HIV status, and ART adherence in MSM	2024	MSM	Quantitative (Cross-sectional online)	Chemsex linked to HIV-positive status; 79% ART adherence	Comprehensive harm reduction tailored to MSM engaging in chemsex.	Limited chemsex awareness and services
5	Eustaquio et al.	HIV care cascade among cisgender men who have sex with men in a key population-led community center in the Philippines	2021	Cisgender men who have sex with men (cisMSM) diagnosed with HIV	Retrospective study of medical records	78% ART initiation, 84% viral suppression; late-stage HIV impacts outcomes	Early intervention and improved KP-led programs	Late presentation, advanced HIV stages, co-occurring STIs
6	de Lind van Wijngaarden et al.	"I am not promiscuous enough!": Exploring the low uptake of HIV testing by gay men and MSM in Metro Manila, Philippines	2018	Gay men and other men who have sex with men (MSM)	Qualitative, case series	Misconceptions, fear of stigma, testing costs deter HIV testing	Community-based testing and destigmatizing HIV testing	Stigma, confidentiality concerns, healthcare costs
7	Bustamante J, Plankey MW	Identifying Barriers to HIV Testing Among Men Who Have Sex with Men (MSM) in the Philippines	2022	Men who have sex with men (MSM)	Literature Review	Stigma, misconceptions, financial constraints limit HIV testing	Sexual health education, self-testing options, NGO collaboration	Religious stigma, inconsistent healthcare policies
8	Restar et al.	Restar et al.	2022	Cisgender men who have sex with men (cisMSM)	Web-based survey	75% aware of PrEP, 89% interested; associated with HIV knowledge and social networks.	PrEP education integrated with HIV testing	Limited awareness, PrEP cost, reliance on informal sources
9	de Torres et al..	The HIV Care Adherence Journey for Persons With HIV	2024	Persons with HIV (PWH) and health care providers	Qualitative study (interviews)	Adherence journey involves emotional, social, and navigational challenges	Person-centered interventions for resilience and health empowerment	Social stigma, inconsistent care, emotional struggles
10	Amit et al.	Knowledge, Attitudes, and Sexual Behaviors of Filipino MSM	2022	Filipino MSM (men who have sex with men)	Cross-sectional study	Low HIV knowledge (48%); high-risk sexual behaviors (54% unprotected sex)	Culturally specific programs promoting sexual health	Discrepancies between attitudes and behaviors, low health-seeking behavior
11	AmadoraNolasco et al.	Knowledge, Risk Perception, and Condom Use in Female Sex Workers	2001	Registered and freelance female sex workers	Interview based survey	Freelance workers had more partners, higher perceived risk, and inconsistent condom use	Targeted safe-sex programs for freelance sex workers	Socioeconomic pressures, lack of regulation, inconsistent health-seeking behavior
12	Hernandez & Imperial	MSM Identities, Sexualities, and HIV	2009	MSM (men who have sex with men)	Mixed methods: environmental coping, interview	MSM face high-risk behaviors, internalized stigma, and limited	Tailored interventions addressing MSM-specific needs	Stigma, masculinity expectations, limited access to services

		Vulnerabilities in the Philippines			s, FGDs, Delphi technique	health-seeking behavior		
13	Morisky et al.	HIV Risk Reduction Through Community-Based Approach	2004	High-risk male heterosexual population	Longitudinal quasiexperimental	Condom use increased by 10%, STI incidence dropped by 5% in intervention groups	Peer counselors promoting safe sex and behavior change	Social stigma, limited condom accessibility
14	Eustaquio et al.	Online HIV Self-Testing During COVID-19	2022	Cisgender men who have sex with men (cis-MSM) and transgender women (TGW)	Retrospective cohort study	High reporting (99%) and linkage to care (85.7%), but low PrEP (0.3%) and ART initiation (51%)	Online HIVST kits with assisted options	Limited PrEP and ART access, urban-rural disparities, stigma.
15	Estacio et al.	Relationship of Psychosocial Factors, HIV, and Sex Work Among Filipino Drug Users	2021	Drug users engaged in sex work	392	Substance users with abuse history had higher odds of engaging in sex work; low HIV testing rates	Community-based harm reduction programs	Stigma, abuse, and limited HIV testing access
16	O'Connor et al.	Risk Factors Affecting ART Adherence in the Philippines	2021	HIV-positive adults on ART	426	79% reported ART adherence; longer ART duration correlated with lower adherence	Targeted harm reduction for drug/alcohol use; social support initiatives	Treatment fatigue, stigma, inconsistent condom use
17	Rowalt Alibudbud	Psychological Factors and HIV Risk Among Young MSM	2022	Young adult Filipino MSM	119	Depression correlated with higher risk behaviors (e.g., unprotected intercourse)	Mental health screenings integrated with HIV services	Depression, limited sex education, stigma
18	Verdery et al.	Social Network Clustering and the Spread of HIV/AIDS Among Persons Who Inject Drugs in 2 Cities in the Philippines	2017	People who inject drugs (PWID)	Not specified	High needle-sharing clustering in Cebu accelerates HIV spread compared to Mandaue	Focused prevention targeting high-risk sharing networks	Limited resources, high HIV transmission rates in sharing clusters
19	Telan et al.	The Early Phase of an HIV Epidemic in a Population Exposed Previously to HCV in the Philippines	2011	Injecting Drug Users (IDUs)	Cross-sectional analysis of HIV/HCV trends	HIV prevalence among IDUs rose from 0.52% (2007) to 75% (2010) in Metro Cebu	Monitoring and harm reduction for HCV-positive IDUs	Undetected rapid HIV spread, limited harm reduction programs
20	Urada, L.A., Silverman, J.G., Tsai, L.C., Morisky, D.E.	Underage Youth Trading Sex in the Philippines: Trafficking and HIV Risk	2014	Female sex workers aged 14–48	Cross-sectional analysis of HIV risk factors among underage FSWs	Underage FSWs less educated, work in illegal brothels, pressured into condomless sex	Policies to protect minors; targeted education and prevention	Exploitation, lack of education, HIV misinformation
21	Montegricon, J., Lee, J.-M., De Los Santos, J.A.	A 13-Year Trend Analysis of HIV	2024	Males aged 25–34	Trend analysis	Continuous rise in HIV cases; males 25–34 most affected	Community-based early detection and	Stigma, limited access to testing and treatment,

		Epidemiology in the Philippines (2010 to 2022)					prevention programs	socioeconomic factors
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IV. DISCUSSION

This systematic review provides key findings about trends, risk factors, barriers, and effectiveness in the Philippines on HIV prevention interventions. Indeed, the escalating trends of HIV incidence are mostly reported among key populations like MSM, transgender women, and PWID, where intervention is urgently needed. Thus, it places the findings in a broader context of implications for public health, identifies actionable insights, and points out areas for further research and policy development..

A. Rising Incidence and High-Risk Populations

The analysis reveals a rather worrying upward trend in HIV infections throughout the last decade where HIV prevalence among injecting drug users in Metro Cebu peaked at 2010 when prevalence rose up from 0.52% in 2007 up to 75% in 2010 as reflected by Telan et al. This significant increase forms not only a critical juncture of the HIV epidemic in the Philippines but also emphasizes the need for immediate and effective public health responses. From the data presented, it reveals that high risk groups, especially MSM and transgender women, are highly vulnerable as there were studies that reveal 29.38% of transgender women had problematic use of drugs, adding another layer of vulnerability to HIV (Restar et al., 2022). This coincidence with a broader set of sociocultural factors, such as stigma and discrimination, particularly creates a challenging environment for HIV prevention.

B. Implications of Barriers to Prevention and Treatment

Despite a host of other challenges, stigma is the key challenge in HIV testing and treatment seeking. Many members of a stigmatized group are concerned about stigma and avoid services, especially among MSMs and sex workers, whom stigma is normally expected. Provider mistrust exacerbates this issue as many providers have experienced or witnessed themselves being treated shabbily by healthcare providers. These barriers have resulted in lower testing rates, since the results only show 17% of MSM as knowing their HIV status after having positive attitudes toward testing (Amit et al., 2022).

Besides, unequal geographical access to health care is a contributor to the complexity of the HIV prevention landscape in the Philippines. Rural communities do not usually have access to the health facilities and equipment that cities have. Health care provision and information distribution are some of the major issues affected by such inequitable access. According to Eustaquio et al. (2021), there is a call for community-based interventions aimed at achieving an equitable allocation of HIV prevention and treatment services in different regions.

C. Effectiveness of Current Interventions and Areas for Improvement

Despite all these challenges, several research findings indicate that rights-based and community-led interventions somehow seem to improve the health of populations that have high risks. For example, the evidence of significant improvements as per Urada et al. (2016) resulted in knowledge and testing amongst HIV-related knowledge among sex workers; empowerment of vulnerable groups helps them reach for care. More favorable results in initiation of ART and viral load suppression were reported by Eustaquio et al. in 2021 within a community-based HIV care model, showing that such models can be expanded to improve the service delivery and health outcomes of MSM and other key populations.

This finding has also demonstrated that HIVST is a very feasible approach for facilitybased testing and will be a much better choice for those bearing stigma and mistrust. The provision of HIVST as an adjunct offer is indicative of expanded coverage and early diagnosis, therefore it is recommended that HIVST should be used as an adjunct to the available choices (Sison et al., 2022). Nevertheless, while promising, these interventions must scale up and be sustainable in the long run with continued support and resource allocation.

D. Gaps in Research and Future Directions

There is a significant gap in the research, especially in terms of underrepresented populations. These include youth and rural communities. Targeted research including capturing their experiences and challenges would be necessary to note unique barriers these groups face. In addition, integrating HIV prevention with mental health support and substance use treatment will give a more holistic response to the epidemic (O'Connor et al., 2021).

Long-term effects of recent interventions must also be sought out by future research-a critical review not only at the point of intervention effectiveness but also on sustainability at later times. A combination of social, economic, and health perspectives in a more holistic multidisciplinary analysis would best describe HIV risks and prevention in the country.

E. Policy Recommendations

The final conclusion of this systematic review requires major policy changes in the society to remove the hindrances to HIV prevention and treatment. Legal protections and decriminalization of sex work and anti-stigma campaigns are necessary for creating an allinclusive healthcare environment that makes the marginalized feel safe seeking care. Community health nurses and local organizations will be leaders in such efforts, pointing out that community engagement and education play a key role in HIV prevention strategies, as shown by Montegrigo et al. (2024).

V. CONCLUSIONS

This systematic review identified continuing challenges and trends in HIV risk and prevention in the Philippines, particularly among high-risk groups: MSM, transgender women, sex workers, and drug users. The slow and relentless increase of cases for the past ten years with a remarkable spike in 2010 strongly speaks to the urgent need for targeted, culturally responsive interventions. Stigma, lack of trust for healthcare providers, and inequalities in health care access are major obstacles to successful HIV prevention and treatment; whereas there are a few promising interventions, such as human rights-based programs and community-led HIV care models.

It identifies many critical gaps in the present body of research and challenges further research into how such interventions, integrating HIV prevention with mental health and substance use support, can be implemented in order to reach the particular needs of the rural populations and youth. Further expansion in research about self-testing and other innovative approaches could enhance testing uptake among populations confronting stigma and difficulties in access to healthcare.

The state of HIV risk and prevention research in the Philippines reflects increasing understanding of the complexities of the epidemic but shows several areas that require improvement in significant ways. The focus areas for shifting the trajectory of the HIV epidemic in the Philippines include reducing stigma, rights-based approaches, and inclusive healthcare policies. Continued investment in research and policy reform will be necessary to build a more equitable and effective HIV prevention landscape that is accessible to and meets the diverse needs of those most affected.

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