Int J Biol Med Res. 2025; 16(3): 8195-8200

Contents lists available at BioMedSciDirect Publications

International Journal of Biological & Medical Research

Journal homepage: www.biomedscidirect.com

Review Article

Gender-Related Issues in Women infected with Human-Immunodeficiency Virus – A Narrative Review

***K.Mary Sushi[1] and K.Sivasangeetha[1]**

Department of Experimental Medicine, The Tamil Nadu Dr MGR Medical University, 69,AnnaSalai, Guindy, Chennai-600 032.

ARTICLEINFO

Keywords:
Human Immuno-deficiency Virus,
Acquired Immuno-deficiency Syndrome,
Women,
Social Stigma,
Quality of Life

ABSTRACT

Introduction: Human Immuno-deficiency Virus (HIV) disease has affected an estimated 40 million people worldwide, of whom 44% of newly affected (2023)were women (all ages). An estimated1.9 million adolescent girls and young women have been living with HIV in comparisonto 1.2 million adolescent boys and young men of the same age. The risk of HIV among womenhas been increasing over the years, yet healthcare access andtreatment coveragehave been compromised due to various gender-based factors. This review was thus conducted to understand the gender-related issues faced by women affected with HIV. Methods: A comprehensive literature review was conducted in research databases like PubMed, Medline, EMBASE, and Cochrane and the search was dated till 2010. The search used MeSH keywords and only published articles were considered for final review. Results:Our search provided 16 articles regardinggender-related issues faced by women affected with HIV including its impact on their quality of life. Multi-faceted issues were reported including social stigma, inadequate treatment access, sexual violence, reproductive health affection, and poverty. Also, HIV stigma has been higher among transgender women which prevented them from early detection and seeking adequate care leading to increased mortality rates and poor quality of life. Conclusion: Thus, the need for policies to specifically address the unique challenges faced by HIV-infected women has been raised to promote gender equality in healthcare access and treatment coverage.Also, initiatives focusing on education and socialempowerment through support groupscan ensure betterprognosis and quality of life.

© Copyright 2025 BioMedSciDirect Publications IJBMR -ISSN: 0976:6685.

Introduction

Human Immunodeficiency Virus (HIV) has been a global public health concern for decades and approximately 40 million people have been diagnosed with the disease in 2023, of whom 53% were women and girl children. However, there has been a significant 39% decline in HIV incidence since 2010 and a 60% decline since its peak incidence (1995). In 2023, an estimated 1.3 million individuals worldwide acquired HIV of whom 44% werewomen and girls.[1] Concerning awareness, 86% of patients with HIV knew their status and 5.4 million people were unaware yet needed access to HIV testing services.The global target for HIV status awareness is 95% by 2025, indicating the gap and unmet need for continuous health education and other measures to raise awareness worldwide.

Corresponding author:

Dr. K.Mary Sushi
Department of Experimental Medicine
The Tamil Nadu Dr MGR Medical University,
69,AnnaSalai, Guindy,
Chennai-600 032.
Email: susigels@yahoo.com

© Copyright 2025 BioMedSciDirect Publications IJBMR -ISSN: 0976:6685.

The treatment access for HIV patients to antiretroviral therapy (ART) globally has been reported to be at 77% coverage, yet the global target stands at 95% by 2025.

Globally, 84% of pregnant women with HIV had access to ART which helped prevent transmitting HIV to their babies during pregnancy and childbirth. Concerning mortality, due to increasing treatment coverage, the death due to HIV has reduced by 69% since its peak in 2004, and currently, 630,000 people have died (2023) which had reduced from 2.1 million people in 2004 and 1.3 million in 2010.[2]

Concerning regional impact, HIV prevalence (Figure 1)among various WHO regions was highest in Eastern and Southern Africa (25.8 million), and least in Western and Central Europe and North America (2.4 million). [3]Among Asia and the Pacific region, HIV epidemics have been growing in Afghanistan, Bangladesh, Fiji, the Lao People's Democratic Republic, Papua New Guinea, and the Philippines.

In India, the risk of HIV incidence according to gender-based age effect between 15 and 79 years was decreased by 91.1% among males and 70.1% among females between 1990 and 2019. India reported around 69,220 new HIV infections in 2019 indicating a 86% decline from the peak in 1997 and the treatment coverage is still 86%.[4] However, the decline has been higher among males than females.

Between 2010 and 2022, the number of new HIV infections increased by 32% among gay men and by 85% among non-client sex partners of people from key populationsin all countries in the region.[5] However, the number of AIDS-related deaths has reduced by 51% since 2010, as the antiretroviral coverage for people living with HIV reached over 80% in Cambodia, Nepal, New Zealand, and Thailand. Less than half of the estimated people living with HIV were on treatment in Afghanistan (9%), Bangladesh (49%), Fiji (28%), Indonesia (31%), the Islamic Republic of Iran (43%), Mongolia (39%), Pakistan (15%) and the Philippines (43%).[6]

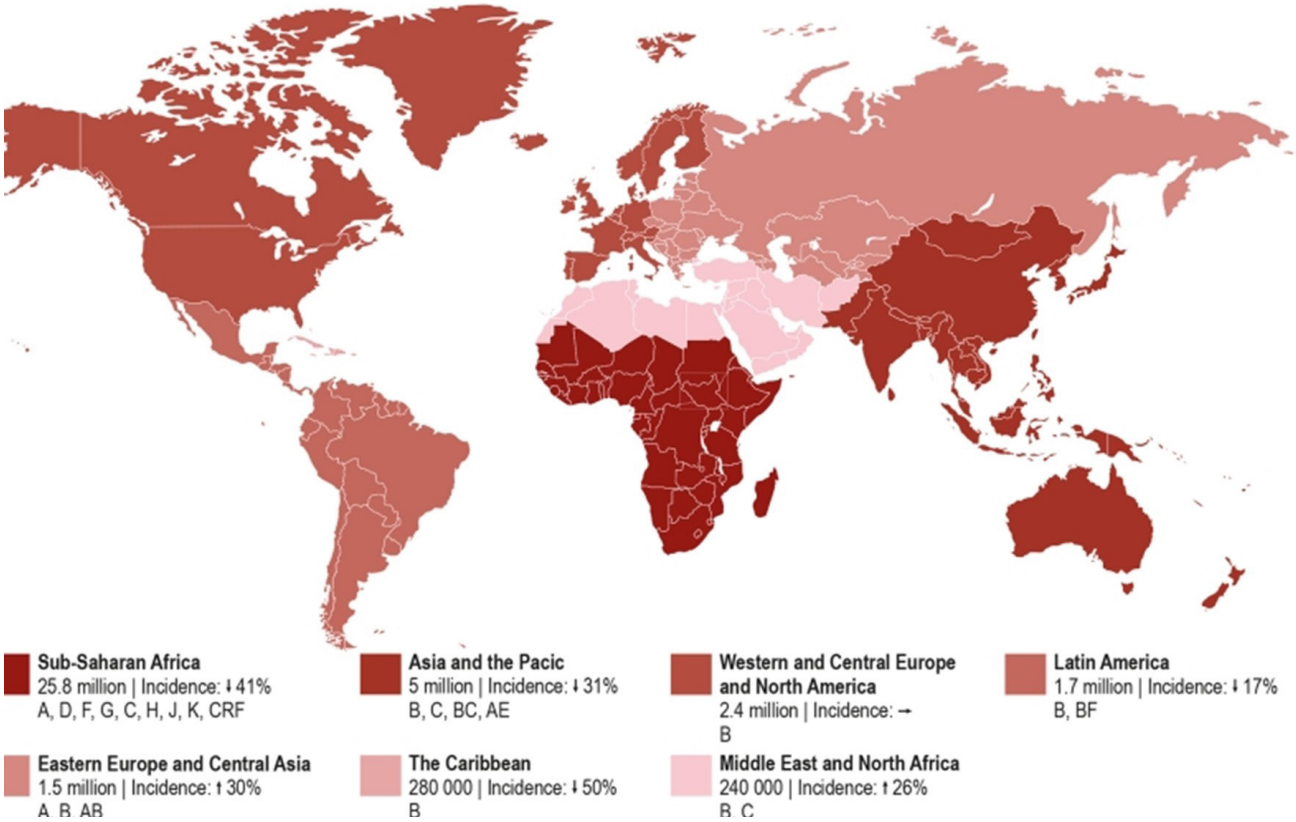


Figure 1: HIV Prevalence Distribution around the world (Source: WHO, UNAIDS)

Various factors have contributed to this increasing-decreasing trend in incidence, prevalence, treatment coverage, and mortality and most of them have reported better effects among men than women in all countries including India. This review was thus undertaken to assess and understand the gender-based factors and issues prevailing among HIV-infected patients.

Materials and Methods

A comprehensive literature review was conducted in research databases like PubMed, Medline, EMBASE, Cochrane, and Google Scholar, and the search was dated till 2010. The search was performed using MeSH keywords and only published articles were considered for final review. Studies on gender-related factors and issues affecting patients with HIV were studied in detail.

Inclusion criteria

Studies which met the following criteria were included for final review –

- Published in peer-reviewed journals
- Available in electronic databases
- Studies were in00cluded if they described either one or all the following variables –
  - Gender-based factors among HIV patients
  - Multifaceted factors causing gender-related issues among women with HIV
  - Gender-based violence faced by women with HIV – Testing and Care
  - Women and Transgender living with HIV – Quality of life and challenges
- Articles available in the English language

Exclusion criteria

Conference abstracts, books, and grey literature were excluded

Screening and data extraction

The search titles were uploaded in Zotero software and scrutinized for duplicates. Firstly, the titles were read and screened as per their relevance to the topic. Secondly, the abstracts of the relevant titles were read by the reviewers and screened. Thirdly, the full texts of the screened abstracts were read. The reviewers independently completed the screening processes at both abstract and full-text levels as per the inclusion criteria. The data extractions from the screened studies were done in the Excel spreadsheet. Details regarding publication, methodology, and results were extracted and recoded.

Results

Our search results revealed 198 studies (Figure 2) relevant to our research objective and on filtering out duplicates and other exclusions, 63 articles (studies and reviews) resulted. After timeline limitations to articles published since 2010, the abstract of 34 studies were read and reviewed through full-text screening which resulted in 16 studies that focused on gender-related issues faced by women affected with HIV including its impact on their quality of life.

All articles were published in English. They were then reviewed in detail for the factors that caused gender-related issues among women with HIV and its impact on their quality of life (Table 1).

Figure 2: Flowchart of literature search and data extraction

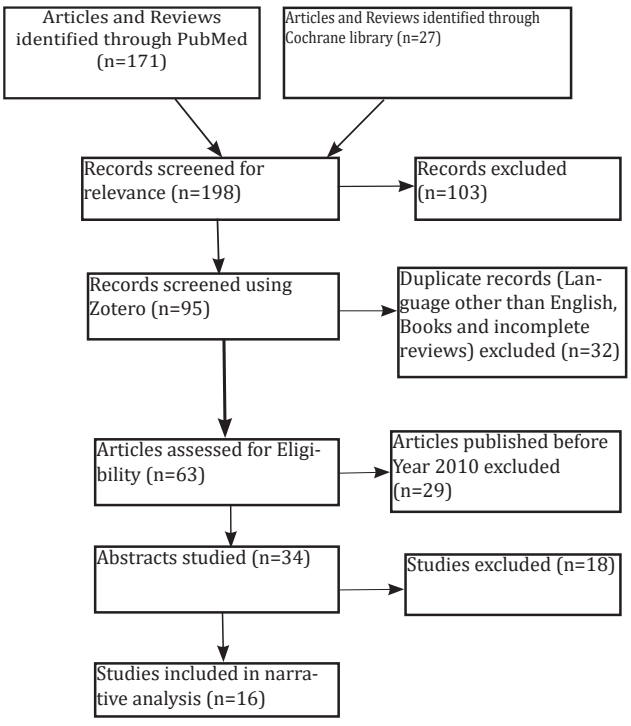


Table 1: Studies included for review and their findings

S.No	Title of the paper	Authors	Published date and journal	Results
1	Biological factors that place women at risk for HIV: evidence from a large-scale clinical trial in Durban	Abbai et al	BMC Women Health, 2016	Women that had presented with genital epithelial disruptions and abnormal vaginal discharge were shown to be at the highest risk for HIV acquisition (Hazard Ratio (HR): 4.30, 95 % CI: 2.25, 8.22, p <0001, HR: 2.37, 95 % CI: 1.69, 3.33, p <0.001) respectively. In addition, the damage to the mucosal epithelial lining increases a woman's risk of HIV seroconversion.
2	Socioecological factors influencing women's HIV risk in the United States: qualitative findings from the women's HIV SeroIncidence study (HPTN 064)	Frew et al	BMC Public Health, 2016	Social, Structural, and Individual risk factors have disrupted the early detection, healthcare access, and treatment response among women (80%) and tailored programs to address specific issues are essential for personal protection.
3	Socioeconomic, Psychosocial, and Clinical Factors Associated with Employment in Women with HIV (WLWH) in the United States: A Correlational Study	Wise et al	Journal of the Association of Nurses in AIDS Care, 2022	Among WLWH, household income, QOL, education, and time providing childcare remained associated with employment in adjusted multivariable analyses (R2 = .272, p < .001).
4	Resilience Among Women with HIV: Impact of Silencing the Self and Socioeconomic Factors	Dale et al	Sex Roles, The Journal of Research, 2014	Women with lower scores on the STSS (lower self-silencing) reported significantly higher resilience compared to women with higher STSS scores.
5	A Socio-Ecological Examination of Treatment Access, Uptake, and Adherence Issues Encountered By HIV-Positive Women in Rural North-Central Nigeria	Cornelius et al	Journal of evidence-informed social work, 2018	For HIV-positive women, stigma from family members, providers, and the local community affected their ability to obtain care and remain ART-adherent.
6	Barriers and Facilitators to Retention in Care and Treatment Adherence Among Racially/Ethnically Diverse Women with HIV in South Florida: A Qualitative Study	Ramírez-Ortiz et al	Women Health, 2023	Women, particularly those from racial/ethnic minority groups, experience disparities in HIV care and treatment, and in achieving viral suppression. This study identified barriers and facilitators influencing retention in HIV care and treatment.
7	In Women's Eyes: Key Barriers to Women's Access to HIV Treatment and a Rights-Based Approach to their Sustained Well-Being	Orza et al	Health and Human Rights, 2017	The results are based predominantly on women's own experiences and are coherent across all three phases.
8	Examining Barriers to Medication Adherence and Retention in Care among Women Living with HIV in the Face of Homelessness and Unstable Housing	Fernandezet al	International Journal of Environmental Research and Public Health, 2022	Significant barriers to HIV adherence and retention included storing and misplacing medication, inconsistent access to medication and health care disruptions, privacy- and stigma-related issues, and competing physical and mental health issues.
9	HIV risks and recent HIV testing among transgender women in Cambodia: Findings from a national survey	Sok et al	PloS One, 2020	49.2% of the participants reported having an HIV test in the past six months. The odds of having an HIV test in the past six months were significantly higher among participants who had been reached by community-based HIV services (AOR 5.01, 95% CI 3.29-7.65) and received HIV education (AOR 1.65, 95% CI 1.06-2.58) in the past six months relative to their respective reference group.
10	Factors Affecting Antiretroviral Therapy Adherence among HIV-Positive Pregnant Women in Greece: An Exploratory Study	Pontiki et al	Healthcare Journal, 2022	Patient characteristics determine compliance with ART in HIV-positive pregnant women in Greece, while the availability and quality of health system services may modulate this relationship.

11	Exploring the barriers, facilitators, and opportunities to enhance uptake of sexual and reproductive health, HIV and GBV services among adolescent girls and young women in Zambia: a qualitative study	Ngoma-Hazemba et al	BMC Public Health, 2024	Researchers noted some barriers at individual, community, and health system levels. Refusal or delay to seek the services, fear of side effects associated with contraceptives, and long distance to the health facility affected the uptake of services. Social stigma and cultural beliefs also influenced the understanding and use of the available services in the community.
12	Barriers and facilitators to HIV prevention and care for Venezuelan migrant/refugee women and girls in Colombia	Correa-Salazar et al	Journal of Migration and Health, 2023	Multi-level barriers to access to HIV prevention and care related to discrimination, gender-based violence, rigid gender norms, lack of information, and system fragmentation were reported.
13	Adherence to antiretroviral treatment and quality of life among transgender women living with HIV/AIDS in São Paulo, Brazil	Sabino et al	AIDS Care	85% of participantswere considered adherent using self-report (95%CI 77-91), whereas 72% (95%CI 62-80) were deemed adherent when self-reporting and undetectable. Quality of life ranged from good-excellent in 5 of 8 domains. Younger age, lower education, higher time since HIV diagnosis, comorbidities, illicit drug use, and depression were associated.
14	Health-related quality of life among women aging with and without HIV in Peru	Cabrera et al	PloS ONE, 2022	HIV-infected women scored lower in both physical and mental component scores. Important determinants for each component included CD4+ cell count as an assessment of HIV severity for the mental component, and ethnicity, reflecting sociocultural factors, for the physical component.
15	Quality of Life among Women Living with HIV in Rural India	Nyamathi et al	The Journal of the Association of Nurses in AIDS Care: JANAC, 2017	Depression symptoms were reported by 25.5%, internalized stigma was high, and most reported little to no social support. Multivariable analysis revealed positive associations between QOL and CD4+ T cells (b = .0011, p = .021) and social support (b = .260, p < .0001) and a negative relationship between QOL and internalized stigma (b = −.232, p < .0001)
16	Oral Health-Related Quality of Life and Unmet Dental Needs among Women Living with HIV	Parish et al	Journal of the American Dental Association, 2020	"Fair/poor" oral health condition was reported by 37.8% (N= 576) of WLWH. Multivariable linear regression showed that unmet dental needs, compared to not having unmet needs, had the strongest positive association with poor OHRQOL (difference in OHIP mean=2.675; p <0.001). Older age, fair/poor dental condition, smoking, symptoms of anxiety and loneliness, and poor overall health-related QOL were also associated with worse OHRQOL.

Discussion

Various studies have reported that HIV-positive women were particularly vulnerable due to various biological, socioeconomic, and cultural factors, and developing effective approaches required an understanding of these vulnerabilities.

Biological and Socio-economic Factors

Women generally have been reported to have higher biological susceptibility to HIV infection compared to men. Factors such as the larger mucosal surface area in the female genital tract and hormonal fluctuations have influenced vulnerability. The reproductive health of women including pregnancy, menstruation, and menopause, have also complicated HIV management. For example, during pregnancy, the risk of vertical transmission to the child increases, necessitating specialized care.[7]

Women, especially in low-income countries, have often been more vulnerable to poverty, which limits their access to education, healthcare, and economic opportunities. Economic dependency had hinderedtheir ability to negotiate safer sex practices and lower levels of education among women had led to decreased awareness of HIV prevention and treatment options. Additionally, limited employment opportunities also resulted in reliance on partners for financial support and increased the risk of exposure to HIV.[8][9]

In addition to other factors, women with HIV also were victimizedby significant social stigma, not only related to their HIV status but also connected to gender norms. This resulted in social isolation, decreased mental health, and reluctance to seek care. Women with HIV were at a heightened risk of experiencing gender-based violence (GBV).[10] Intimate partner violence has been both a cause and consequence of HIV infection, creating a vicious cycle that exacerbated vulnerabilities. Also, this fear of violence preventedthem from disclosing their status or seeking necessary medical care.[11][12]

Healthcare Access and Treatment Adherence

According to recent studies, women faced obstacles while trying to access healthcare, notably shortage of transportation, subpar medical

facilities, and gender bias from the perspective of healthcare professionals. Delays in diagnosis and treatment have reportedly resulted from these challenges. Comprehensive reproductive health care, which is essential for HIV prevention and treatment, was frequently unavailable to women. Their well-being may be further complicated when they are unable to get prenatal care or family planning.[13]

Women from marginalized communities and transgender women reportedly faced compounded vulnerabilities and intersectional factors such as race, socioeconomic status, and sexual orientation have amplified the challenges they encounter, affecting their healthcare access and social support.[14]

Access to quality healthcare and treatment for women with HIV has been met with several obstacles preventing them from getting timely and effective care. Women's access to healthcare services has been significantly hampered by economic uncertainty as poverty frequently affected women the most, which caused them to put their basic necessities ahead of their health.

Few significant barriers included the costs of childcare, treatment, and travel, and in many places, particularly rural ones, healthcare services were either inadequate or were too distant. Women in various low and middle-income countries including India were reported to be unable to attend appointments or obtain necessary treatments due to a lack of transportation choices.[15][16]

Gender biases among healthcare providers have negatively impacted the qualityofcarereceived by women as theywere reported to undergo dismissal of their symptoms or concerns by their respective families, which has led to delayed diagnoses and inadequate treatment.Healthcare systems often prioritized reproductive health issues over HIV-specific care for women and this resulted in women not receiving comprehensive HIV treatment or support tailored to their unique needs.[17][11]

HIV-positive women and transgender people were also more likely to suffer from mental health issues such as anxiety and depression. These illnesses have impacted general health outcomes by interfering with antiretroviral therapy (ART) adherence. Women have been reluctant to seek care altogether or to speak candidly with clinicians about their health concerns due to the stigma associated with their HIV status. A cycle of disengagement from health services has also been brought about by this social stigma.[18][19]

Quality of Life and Policy Implications – The Future

Integrated healthcare services that address HIV and other health concerns, like mental and reproductive health, are crucial for the effective treatment of women living with HIV. Holistic treatment is nevertheless limited by the fact that many healthcare systems continue to function in divisions. It has been essential to provide care that would be considerate of the social and cultural circumstances of women. Culturally competent care should be customized to improve treatment adherence and health outcomes by fostering trust between patients and healthcare professionals.[20]

Healthcare providers needed ongoing training to understand the specific needs of women living with HIV. Education on gender-sensitive approaches has been reported to enhance the quality of care and promote better health outcomes.Creating supportive peer groups and non-judgmental healthcare environments has empowered women to engage in their care.[21].

Conclusion

Thus, it has been found essential to understand the impact of gender-based factors on the health and well-being of women and their children and improve health workers' and managers' understanding of the requirements to ensure survivor-centered, effective responses. It has thus become crucial to support laws that ensure fair and adequate access to healthcare for women living with HIV.

This also involved making sure that women's health needs were given priority in HIV/AIDS policies and providing money for initiatives that addressed care-related barriers. Programs for community health should be designed to help fill in care shortages. Women-specific outreach, education, and support initiatives can be promoted to increase treatment adherence, access to healthcare, and improved quality of life.

References:

[1]UNAIDS. Global HIV & AIDS statistics — Fact sheet [Internet]. 2024 [cited 2024 Oct 16]. Available from: https://www.unaids.org/en/resources/fact-sheet

[2]WHO. HIV Epi Sheet [Internet]. 2023 [cited 2024 Oct 17]. Available from: https://cdn.who.int/media/docs/default-source/hq-hiv-hepatitis-and-stis-library/j0294-who-hiv-epi-factsheet-v7.pdf

[3]WHO. UNAIDS DATA 2023 [Internet]. 2023 [cited 2024 Oct 17]. Available from: https://www.aidsdatahub.org/sites/default/files/resource/india-data-book-2023.pdf

[4]Shri N, Bhattacharyya K, Dhamnetiya D, Singh M, Jha RP, Patel P. Long-term trends of HIV/AIDS incidence in India: an application of joinpoint and age–period–cohort analyses: a gendered perspective. Front Public Health. 2023 May 16;11:1093310.

[5]HIV.gov. HIV.gov. 2024 [cited 2024 Oct 16]. HIV and AIDS Epidemic Global Statistics. Available from: https://www.hiv.gov/hiv-basics/overview/data-and-trends/global-statistics

[6]Murphy E. 2023 Global AIDS Update Asia and the Pacific launch. 2023;

[7]Abbai NS, Wand H, Ramjee G. Biological factors that place women at risk for HIV: evidence from a large-scale clinical trial in Durban. BMC Womens Health. 2016 Dec;16(1):1–7.

[8]Gilad J, Walfisch A, Borer A, Schlaeffer F. Gender differences and sex-specific manifestations associated with human immunodeficiency virus infection in women. Eur J Obstet Gynecol Reprod Biol. 2003 Aug 15;109(2):199–205.

[9]Frew PM, Parker K, Vo L, Haley D, O'Leary A, Diallo DD, et al. Socioecological factors influencing women's HIV risk in the United States: qualitative findings from the women's HIV SeroIncidence study (HPTN 064). BMC Public Health. 2016 Aug 17;16(1):803.

[10]Wise JM, Azuero A, Konkle-Parker D, Raper JL, Heaton K, Vance DE, et al. Socioeconomic, Psychosocial, and Clinical Factors Associated With Employment in Women With HIV in the United States: A Correlational Study. J Assoc Nurses AIDS Care JANAC. 2022 Feb;33(1):33.

[11]Cornelius LJ, Erekaha SC, Okundaye JN, Sam-Agudu NA. A Socio-Ecological Examination of Treatment Access, Uptake and Adherence Issues Encountered By HIV-Positive Women in Rural North-Central Nigeria. J Evid-Inf Soc Work. 2018;15(1):38–51.

[12]Dale SK, Cohen MH, Kelso GA, Cruise RC, Weber KM, Watson C, et al. Resilience Among Women with HIV: Impact of Silencing the Self and Socioeconomic Factors. Sex Roles. 2014 Mar 1;70(5):221–31.

[13]Correa-Salazar C, Amon JJ, Page K, Groves AK, Bilal U, Vera A, et al. Barriers and facilitators to HIV prevention and care for Venezuelan migrant/refugee women and girls in Colombia. J Migr Health. 2023 Nov 10;8:100206.

[14]Ngoma-Hazemba A, Chavula MP, Sichula N, Silumbwe A, Mweemba O, Mweemba M, et al. Exploring the barriers, facilitators, and opportunities to enhance uptake of sexual and reproductive health, HIV and GBV services among adolescent girls and young women in Zambia: a qualitative study. BMC Public Health. 2024 Aug 13;24:2191.

[15]Sabino TE, Avelino-Silva VI, Cavalcantte C, Goulart SP, Luiz OC, Fonseca LAM, et al. Adherence to antiretroviral treatment and quality of life among transgender women living with HIV/AIDS in São Paulo, Brazil. AIDS Care. 2021 Jan;33(1):31–8.

[16]Pontiki G, Sarantaki A, Nikolaidis P, Lykeridou A. Factors Affecting Antiretroviral Therapy Adherence among HIV-Positive Pregnant Women in Greece: An Exploratory Study. Healthc Basel Switz. 2022 Mar 31;10(4):654.

[17]Barr E, Marshall LJ, Collins LF, Godfrey C, Vil NS, Stockman JK, et al. Centering the health of women across the HIV research continuum. Lancet HIV. 2024 Mar 1;11(3):e186–94.

[18]Orza L, Bass E, Bell E, Crone ET, Damji N, Dilmitis S, et al. In Women's Eyes: Key Barriers to Women's Access to HIV Treatment and a Rights-Based Approach to their Sustained Well-Being. Health Hum Rights. 2017 Dec;19(2):155–68.

[19]Sok S, Hong R, Chhoun P, Chann N, Tuot S, Mun P, et al. HIV risks and recent HIV testing among transgender women in Cambodia: Findings from a national survey. PloS One. 2020;15(9):e0238314.

[20]Fernandez SB, Lopez C, Ibarra C, Sheehan DM, Ladner RA, Trepka MJ. Examining Barriers to Medication Adherence and Retention in Care among Women Living with HIV in the Face of Homelessness and Unstable Housing. Int J Environ Res Public Health. 2022 Sep 13;19(18):11484.

[21]Cabrera DM, Chen M, Cornejo MP, Pinedo Y, Garcia PJ, Hsieh E. Health-related quality of life among women aging with and without HIV in Peru. PLoS ONE. 2022 Jun 9;17(6):e0269000.

© Copyright 2025 BioMedSciDirect Publications IJBMR -ISSN: 0976:6685.