

Living with HIV/AIDS in Balochistan: gendered stigma, social challenges and quality of life among women

Shabana Fazal¹, Nabiha Farasat Khan¹ [✉], Muhammad Saim¹, Usama Saeed²

ABSTRACT

Objective: To explore the impact of HIV/AIDS on the quality of life (QoL) of women living with HIV/AIDS in Balochistan-Pakistan, with specific focus on gender-related stigma, family dynamics, and regional disparities.

Methods: This convergent parallel mixed-methods study was conducted at provincial HIV/AIDS Control Centre, Bolan Medical College Hospital Quetta, Balochistan, between January and April 2025. Ethical approval was obtained from Institutional Review Board of Bolan University of Medical and Health Sciences, (Ref: 1067/BUMHS/25). Registered women aged ≥ 18 years with confirmed HIV infection were eligible. Quantitative data were collected from 150 participants using a structured questionnaire developed with reference to established HIV-specific QoL frameworks, including WHOQOL-HIV. Descriptive statistics and Chi-square tests were applied using SPSS version-27. Qualitative data were obtained through semi-structured in-depth interviews with 15 participants and analyzed using inductive thematic analysis.

Results: Among 150 participants, 60.0% were unaware of HIV/AIDS before diagnosis and 78.1% had disclosed their diagnosis to family members. Increased family support after disclosure was reported by 42.0%. More than half (52.3%) reported no discrimination in public spaces, while 40.6% felt comfortable discussing their diagnosis. Significant associations were observed between awareness and knowledge of transmission routes ($p < 0.001$), diagnosis disclosure and family behavior ($p < 0.001$), comfort discussing diagnosis and anxiety/stress levels ($p = 0.010$), and region and perceived sufficiency of resources ($p = 0.010$). Qualitative analysis identified six major themes reflecting stigma, psychological distress, and social challenges.

Conclusion: Women living with HIV/AIDS experience considerable psychosocial challenges. Strengthening awareness, reducing stigma, and improving psychosocial and family-centered support are essential to improve their lived experiences.

Keywords: Acquired Immunodeficiency Syndrome (MeSH); HIV (MeSH); Quality of Life (MeSH); Social Stigma (MeSH); Balochistan (Non-MeSH); Women (MeSH); Women's Health (MeSH); Pakistan (MeSH); Psychological Distress (MeSH).

THIS ARTICLE MAY BE CITED AS: Fazal S, Khan NF, Saim M, Saeed U. Living with HIV/AIDS in Balochistan: gendered stigma, social challenges and quality of life among women. *Khyber Med Univ J* 2026;18(1):13-8. <https://doi.org/10.35845/kmu.2026.24135>

INTRODUCTION

Human Immunodeficiency Virus (HIV) and acquired immunodeficiency syndrome (AIDS) are persistent as major global public health challenges, with more than 38 million people affected worldwide in 2023. Despite advances in antiretroviral therapy, women in culturally conservative and resource-constrained regions continue to face a disproportionate burden due to entrenched

sociocultural norms, limited health literacy and stigma surrounding sexual and reproductive health.¹ In Pakistan, an estimated 240,000 people are living with HIV, with the studied province contributing over 7,000 registered cases, reflecting a rising epidemic shaped by structural inequities, restricted healthcare access, and pervasive stigma.^{2,3} Evidence from international settings highlights that women living with HIV often experience intersecting challenges

1: Bolan Medical College Quetta, Quetta, Pakistan
2: Basic Health Unit, Mastung, Balochistan, Pakistan

Email ✉: nabihasaheed@hotmail.com
Contact #: +92-334-4119971

Date Submitted: August 31, 2025
Date Revised: February 18, 2026
Date Accepted: February 23, 2026

related to gender-based discrimination, limited autonomy, and inadequate support systems, impacting their mental, social, and physical well-being.^{3,4}

Existing literature from South Asia and other low-and-middle-income regions demonstrates that limited awareness of HIV transmission, social isolation, and stigma significantly impede women's health-seeking behaviors and quality of life (QoL).⁵⁻⁹ However, most studies address stigma as a broad and uniform concept, without examining how it interacts with region-specific cultural norms, gender dynamics, family structures, and access to resources. Research from Pakistan remains scarce, particularly regarding how stigma, discrimination, and family responses shape the lived experiences of women diagnosed with HIV. Similarly, little is known about how regional disparities, especially between rural and urban areas, influence disclosure patterns, coping mechanisms, and access to psychosocial support.

This gap emphasizes the need for context-specific evidence from culturally conservative and underserved regions where women may face unique constraints. A nuanced understanding of how HIV/AIDS affects women's quality of life is critical for designing targeted interventions that address not only clinical needs but also the sociocultural barriers that impede coping, resilience, and recovery. Therefore, this study aimed to explore the multifaceted impact of HIV/AIDS on the QoL of women in Balochistan province of Pakistan, with a particular focus on gender-specific stigma, family dynamics,

psychological experiences, and regional disparities. The objective was to generate actionable evidence to inform the development of culturally sensitive and regionally appropriate public health strategies.

METHODS

This study employed a convergent parallel mixed-methods design at the Provincial HIV/AIDS Control Centre located at Bolan Medical College Hospital, Quetta, the capital of Balochistan Province of Pakistan.

Ethical approval was obtained from the Institutional Review Board Bolan University of Medical and Health Sciences, Quetta (Reference #: 1067/BUMHS/25; dated: January 15, 2025). All participants provided verbally informed consent, consistent with IRB approval and documented by the research team before participation. Quantitative and qualitative data were collected concurrently between January and April 2025, and findings were integrated during interpretation to examine convergence and divergence across strands.

The target population comprised women (≥ 18 years) living with HIV/AIDS and registered at the provincial HIV/AIDS Control Centre, Quetta. Based on programmatic records indicating $\sim 7,000$ registered people living with HIV in the province and an estimated 15% women, the quantitative sample size ($n = 150$) was determined for a single-proportion estimate using Cochran's formula with finite population correction, assuming 95% confidence ($Z = 1.96$) and $p = 0.15$, following WHO guidance on sample size determination. A convenience sampling approach was used to enroll eligible attendees. Inclusion criteria were female gender, age ≥ 18 years, confirmed HIV infection, and current residence in Balochistan province. Patients who refused to participate in the study were excluded from the study.

Quantitative data were collected using a researcher-developed structured questionnaire tailored to the study's aims and local sociocultural context. The questionnaire was drafted after reviewing established HIV-specific and general quality-of-life frameworks,

including the WHOQOL-HIV BREF (2012 revision),¹⁰ comprehensive descriptions of its domain structure, the broader WHOQOL conceptual model,¹¹ a recent global systematic review of QoL instruments for people living with HIV,¹² and contemporary HIV-specific QoL frameworks such as the PozQoL model.¹³ Face, content, and construct validity were established by two senior medical educationists; the tool was piloted on 10 women living with HIV/AIDS, and items were refined for clarity and cultural appropriateness. The final version demonstrated acceptable internal consistency ($\alpha = 0.75$). Key sections assessed awareness/knowledge, disclosure and family response, perceived stigma, mental stress/anxiety, comfort with open discussion, perceived resource sufficiency, and self-perception post-diagnosis.

Qualitative data were obtained from 15 participants through semi-structured, in-depth interviews conducted in Urdu in a private room at the Control Centre to ensure comfort and confidentiality. Interviews averaged 30-35 minutes, used a pre-tested guide (awareness, family concerns/support, stress, stigma, and lived QoL experiences), and continued until thematic saturation was observed. Audio recordings were transcribed verbatim; translations were produced by a bilingual expert and back-translated by another to preserve semantic equivalence. To protect confidentiality, personal identifiers were not recorded; transcripts were deidentified, stored on a device

accessible only to the research team.

Quantitative analyses were conducted in SPSS v27. Variables were summarized using frequencies and percentages. Given the categorical nature of key variables, Chi-square tests were applied to examine associations (two-tailed $p < 0.05$ considered statistically significant). Qualitative data were analyzed using inductive thematic analysis. Two researchers independently performed open coding, developed a codebook iteratively, and met to reconcile discrepancies through discussion; the principal investigator provided oversight for analytic consistency. Methodological triangulation across interviews, observations, and document review was employed to enhance credibility. Integration of quantitative and qualitative findings occurred at the interpretation stage via convergent triangulation, comparing patterns to identify agreement, complementarity, or divergence. Qualitative elements were reported in accordance with COREQ recommendations.¹⁴

RESULTS

A total of 150 women living with HIV/AIDS participated in the quantitative phase of the study, and 15 women participated in the qualitative interviews.

Quantitative descriptive findings: Sixty percent of the women ($n = 90/150$) reported being unaware of HIV/AIDS prior to their diagnosis. More than three-quarters ($n = 118/150$;

Table I: Quantitative descriptive findings among women living with HIV/AIDS (n = 150)

Variable	Response/Category	N	Percentage
Awareness before diagnosis	Unaware	90	60.0*
Diagnosis shared with family members	Yes	118	78.1
Family support after disclosure	Increased support	63/118	42.0
Experienced discrimination in public spaces	No	79	52.3
Comfort discussing diagnosis	Comfortable	61	40.6
Perceived sufficiency of resources	Sufficient	81	54.2
Self-perception after diagnosis	Same as before	82	54.8

HIV: Human Immunodeficiency Virus; AIDS: Acquired Immunodeficiency Syndrome

78.1%) had shared their diagnosis with family members. Among those who disclosed, 42% (n=63/118) reported receiving increased support from family, whereas others reported no change or mixed responses. Slightly over half of the participants (52.3%, n=79/150) stated that they had not experienced discrimination in public spaces, while

40.6% (n=61/150) felt comfortable discussing their diagnosis. Details are given in Table I.

Quantitative inferential findings: Significant associations were identified across key variables using Chi-square analysis. Awareness of HIV/AIDS was significantly related to knowledge of transmission routes ($p < 0.001$).

Disclosure of diagnosis showed a strong association with subsequent changes in family behavior ($p < 0.001$). Comfort in discussing the diagnosis was significantly linked to levels of anxiety or stress ($p = 0.010$). Full results are presented in Table II.

Qualitative findings: Qualitative data from fifteen participants were analyzed using inductive thematic analysis. Six major themes and associated subthemes emerged, each reflecting the lived experiences, challenges, and coping mechanisms of women living with HIV/AIDS. Verbatim participant quotes are presented in Table III with assigned participant codes (P01-P15) as recommended by COREQ.¹⁴

Table II: Inferential associations between key study variables

S.no	Variables Tested	Statistical Test	p-value	Significance
1	Awareness of HIV/AIDS × Knowledge of transmission	Chi-square	<0.001	Significant
2	Diagnosis disclosure × Changes in family behavior	Chi-square	<0.001	Significant
3	Comfort discussing diagnosis × Anxiety/stress levels	Chi-square	0.010	Significant
4	Region (urban/rural) × Perceived sufficiency of resources	Chi-square	0.010	Significant

DISCUSSION

Balochistan is the largest and most underserved province of Pakistan, characterized by a low literacy rate and

Table III: Inferential associations between key study variables

Theme	Subtheme	Summary of Participants' Concerns	Illustrative Quote
Social Stigma	Discrimination	Most participants (10/15) reported discrimination or avoidance in public and social settings after disclosure; misconceptions about HIV transmission were common.	"People behave differently in public once they know about it." (P04).
	Workplace Stigmatization	Nearly half (7/15) described stigma at the workplace, including exclusion, altered interactions, and fear-based behavior from colleagues.	"We face stigma in our workplaces." (P09).
	Personal & Social Relationships	All participants (15/15) limited disclosure to immediate family due to fear of social rejection; some experienced segregation of personal items.	"They separate our crockery and avoid sharing spaces with us." (P07).
Physical Health & Well-Being	Pain and Discomfort	The majority (12/15) experienced physical discomfort worsened by emotional distress and exclusion by others.	"The behavior of people causes more pain than the illness itself." (P02).
Psychological Health	Cognitive Distress	More than half (10/15) reported intrusive thoughts, sadness, loss of motivation, and emotional overwhelm related to their diagnosis.	"Sometimes we lose the will to do anything." (P10).
Level of Independence	Dependence	A minority (6/15) relied on family members or caregivers for daily activities, reporting stress and reduced autonomy.	"Being dependent on others is very painful." (P12).
	Independence	Most participants (8/15) maintained independence in daily tasks and expressed gratitude for functional ability.	"I thank Allah that I can still do my work myself." (P08).
Spirituality	Fear of Future & Death	Participants described fear, sadness, and anxiety related to uncertainty about the future, loneliness, and death.	"Thinking about the future and death makes us panic." (P14).
Quality of Life (QoL)	Overall QoL Impact	Most participants (11/15) perceived their overall quality of life as negatively affected, especially social relationships and emotional well-being.	"This disease has changed every part of my life." (P05).

inadequate access to healthcare services, particularly for women in remote areas.^{13,15,16} The findings of this study highlight substantial knowledge gaps and persistent challenges, emphasizing the urgent need for comprehensive public health strategies to address the sociocultural and structural barriers faced by women living with HIV/AIDS in this region. Nearly two-thirds (64%, 96/150) of the women were educated, which contributed to better understanding and more cooperative health-seeking behavior. Perceptions regarding availability of resources showed mixed responses, with 54.2% (81/150) acknowledging that sufficient resources were available. Sixty-one percent of women (92/150) did not experience isolation after disclosing their diagnosis, while 28% (42/150) reported receiving increased family support and 47.3% (71/150) observed no change. Nineteen percent (29/150) reported stress and discomfort when discussing their diagnosis, underscoring the importance of interventions aimed at improving awareness, reducing stigma, and strengthening community-based support systems. A substantial majority (78%, 118/150) openly shared their diagnosis with family members. However, despite this openness, fifty-nine percent (89/150) still reported discomfort discussing their diagnosis publicly, indicating persistent social stigma and mental health concerns. Similar patterns were noted by McIntosh RC, et al., who emphasized that mental health interventions can significantly mitigate psychological distress among women living with HIV/AIDS.¹⁷ Counseling services and peer-support groups may therefore play a critical role in enhancing coping and communication.

Self-perception following diagnosis varied considerably. More than half (54.6%, 82/150) reported that they felt the same as before their diagnosis, while 25.3% (38/150) felt worse, indicating the psychological burden of the disease. A smaller proportion (19.3%, 29/150) reported feeling better, which may indicate empowerment through access to treatment, acceptance, or family support. Regional differences were also observed: 27.3% (41/150) of women in

urban areas reported more positive experiences compared to those in rural settings. This aligns with findings from Zimbabwe, where women in rural regions face greater HIV-related stigma.¹⁸

Experiences of public discrimination were divided. Fifty-two-point six percent (79/150) did not report discrimination, whereas forty-seven point three percent (71/150) faced some form of it, reflecting polarized societal attitudes. Comparable results were reported by Holtz et al., who identified public stigma as a major barrier to support-seeking among women living with HIV/AIDS.¹⁹ This underscores the need for public awareness campaigns to normalize discussions around HIV/AIDS and reduce discriminatory attitudes.

All women in the study (100%) reported receiving adequate diagnostic information from healthcare providers, demonstrating effective facility-level communication. However, the high proportion unaware of HIV/AIDS before diagnosis (60%, 90/150) reveals a critical gap in public health education. Similarly, women in Central Asia, also demonstrated limited awareness prior to diagnosis.²⁰ In Balochistan, low literacy rates and restricted access to health information contribute to this issue.²¹ Strengthening school-based awareness initiatives and community-driven education programs may help address this deficiency.²²

Familial transmission dynamics were evident, with seventy-six-point six percent (115/150) reporting that their husbands were also infected with HIV. This finding aligns with Mpofu's work, which highlighted the importance of family dynamics in HIV transmission.¹⁸ Incorporating spousal and family education into prevention efforts is therefore essential for reducing intra-household transmission.

Education emerged as an important determinant of positive health outcomes, with 64% (96/150) of women reporting that it contributed to better understanding and management of their condition. This supports findings by Bhowmik J, et al., who emphasized the value of education in improving

HIV/AIDS knowledge and reducing misconceptions.²³ Despite this, 23.3% (35/150) of women perceived available resources as insufficient, and 22% (33/150) were uncertain, indicating the need for improved regional resource allocation. Similar disparities were observed in South Africa, where resource shortages exacerbated challenges for women living with HIV/AIDS.²⁴

Statistically significant associations were found between awareness and knowledge of transmission, and between diagnosis disclosure and changes in family behavior ($p < 0.001$). Bhowmik et al. highlighted the importance of education in dispelling misconceptions about HIV transmission.²³ Sowell RL, et al., noted that disclosure patterns are shaped by perceived stigma and available support systems.²⁵ Although awareness improved knowledge, it did not consistently influence willingness to disclose. This aligns with findings by Davtyan M, et al. who reported that internalized stigma remains a major barrier to disclosure even in supportive environments.²⁶

Comfort discussing the diagnosis was significantly associated with lower anxiety and stress levels ($p = 0.010$). Similar findings by Beres LK, et al., support the value of psychosocial interventions in improving mental health among women living with HIV/AIDS.²⁷ Encouraging open dialogue may therefore help reduce the psychological burden associated with stigma.

This study is limited by its single-center setting, which may restrict generalizability, especially for women in remote areas or those not actively seeking healthcare. Additionally, social desirability bias may have influenced responses due to the sensitive nature of the topic.

RECOMMENDATIONS

Addressing resource allocation and stigma reduction requires a multi-pronged approach, including community-driven education programs, enhanced resource distribution, and policies aimed at reducing regional

disparities. Future research should adopt longitudinal designs to track changes over time and establish causal relationships between stigma, family dynamics, and health outcomes in women living with HIV/AIDS and incorporate stratified or community-based sampling methods.

CONCLUSION

Awareness reduces HIV/AIDS transmission, particularly in regions where stigma and limited resources persist. The findings emphasize the role of family dynamics, with disclosure impacting relationships. Holistic efforts to reduce stigma, including education, equitable resource allocation, and stigma reduction, are necessary to improve the QoL for women living with HIV/AIDS. Creation of supportive environments is essential to alleviate psychological burdens.

ACKNOWLEDGMENT

The authors acknowledged Mr Qadeem Achakzai; Senior Councilor ART Treatment Center, (AIDS Control Centre), BMC Hospital, Quetta, for facilitating data collection and participants who courageously and voluntarily shared their experiences.

REFERENCES

- Nicolau IA, Moineddin R, Brooks DJ, Antoniou T, Gillis JL, Kendall CE, et al. Associations of CD4 cell count measures with infection-related and infection-unrelated cancer risk among people with HIV. *J Acquir Immune Defic Syndr* 2024; 96(5): 447-56. <https://doi.org/10.1097/qai.0000000000003452>
- Khan MA, Ullah S, Zaman MA, Anwar M, Haq EU, Khan S, et al. Comparative study on the incidence, risk factors and clinical aspects of HIV/AIDS in patients of Quetta district, Balochistan. *Insights J Life Soc Sci* 2025;3(3):32-9. <https://doi.org/10.71000/kkat1q10>
- Shah SA. Balochistan has 'over 7000 HIV patients', 2022. [Accessed on: July 4, 2025]. Available from URL: <https://tribune.com.pk/story/2387722/balochistan-has-over-7000-hiv-patients>
- Moyo E, Moyo P, Murewanhema G, Mhango M, Chitungo I, Dzinamarira T. Key populations and Sub-Saharan Africa's HIV response. *Front Public Health* 2023;11:1079990. <https://doi.org/10.3389/fpubh.2023.1079990>
- Baloch R, Muzammil M, Raza S, Naz S, Butt S, Malikzai A. Epidemic of HIV in Pakistan: an emerging health issue threatening to derail progress toward the SDGs. *Int J Surg Glob Health* 2023;6(6):e0365. <https://doi.org/10.1097/GH9.0000000000000365>
- Childress S, Shrestha N, Kreniske P, Small E, Gilbert L, Mukambetov A. Social stigma and vulnerabilities of women living with HIV/AIDS in Kyrgyzstan: service providers' perspectives. *Fam Soc* 2024;107(1): 66-89. <https://doi.org/10.1177/10443894241272203>
- Dadi TL, Wiemers AMC, Tegen Y, Medhin G, Spigt M. Experiences of people living with HIV in Low and middle income countries and their perspectives in self-management: a meta-synthesis. *AIDS Res Ther* 2024;21(1):7. <https://doi.org/10.1186/s12981-024-00595-7>
- PhamDo V, Naymathi AM, Ekstrand ML, Sinha S, Yadav K, Shin SS. Association between maternal HIV stigma among South Indian mothers living with HIV and CD4 count among children living with HIV. *AIDS Behav* 2022;26:1871-9. <https://doi.org/10.1007/s10461-021-03537-w>
- Kim SH, Bonett S, Bauermeister J, Starbird LE. Association between HIV related stigma, trust and testing behaviors among the general U.S adult population. *AIDS Behav* 2025; 29: 2196-204. <https://doi.org/10.1007/s10461-025-04684-0>
- Ahmed A, Saqlain M, Akhtar N, Hashmi F, Blebil A, Dujaili J, et al. Translation and cross-cultural adaptation of WHOQOL-HIV Bref among people living with HIV/AIDS in Pakistan. *Health Qual Life Outcomes* 2021;19(1):48. <https://doi.org/10.1186/s12955-021-01693-0>
- Zhang Y, He C, Peasgood T, Hulse ESG, Fairley CK, Brown G, et al. Use of quality-of-life instruments for people living with HIV: a global systematic review and meta-analysis. *J Int AIDS Soc* 2022; 25: e25902. <https://doi.org/10.1002/jia2.25902>
- Hilton P. Poz QoL project, 2021. [Accessed on: February 18, 2026]. Available from URL: <https://w3framework.org/pozqol-project/>
- Khan NF, Saeed M, Ayub A, Butt AK. An updated insight into the learning approach of government sector dental students in Balochistan. *Proc Shaikh Zayed Med Complex* 2021; 35(4): 51-7. <https://doi.org/10.47489/PSZMC-815354-51-57>
- Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care* 2007;19(6):349-357.
- Zahra S. Tribalism and Women Empowerment in Balochistan – Strafasia, 2024. [Accessed on: January 29, 2025]. Available from URL: <https://strafasia.com/tribalism-and-women-empowerment-in-balochistan/>
- Khan NF, Ilyas M, Mohammed R, Saeed U, Saim M, Saeed M. Gender disparities in medical and dental admissions: students' perspectives on barriers. *J Univ Coll Med Dent* 2025; 4(S): 32-7. <https://doi.org/10.51846/jucmd.v4iS.3731>
- McIntosh RC, Rosselli M. Stress and coping in women living with HIV: a meta-analytic review. *AIDS Behav* 2012; 16(8): 2144-59. <https://doi.org/10.1007/s10461-012-0166-5>
- Mpofu L, Ganga-Limando M. Exploring the lived experiences of women living with HIV in rural Zimbabwe: a qualitative study.

- Medicine (Baltimore) 2024; 103(36):e39485. <https://doi.org/10.1097/md.000000000039485>
19. Holtz CS, Sowell R, Velasquez G. Oaxacan women with HIV/AIDS: resiliency in the face of poverty, stigma, and social isolation. *Women Health* 2012;52(6):517-35. <https://doi.org/10.1080/03630242.2012.690839>
 20. Kasymova S. Awareness and knowledge about HIV/AIDS among women of reproductive age in Tajikistan. *AIDS Care* 2020; 32(4): 518-21. <https://doi.org/10.1080/09540121.2019.1695736>
 21. Khan NF, Saeed M, Majid R, Butt AK. Academic success and failure amongst dental students: a mixed method study of what matters. *Khyber Med Uni J* 2022;14(4):256-62. <https://doi.org/10.35845/kmu.j.2022.22744>
 22. Chikwari DC, Dauya E, Bandason T, Tembo M, Mavodza C, Simms V, et al. The impact of community-based integrated HIV and sexually transmitted infections in Zimbabwe: protocol for the CHIEDZA cluster-randomized trial. *Wellcome Open Res* 2022;7:54. <https://doi.org/10.12688/wellcomeopenres.17530.2>
 23. Bhowmik J, Biswas RK. Knowledge about HIV/AIDS and its transmission and misconceptions among women in Bangladesh. *Int J Health Policy Manag* 2022;11(11):2542-51. <https://doi.org/10.34172/ijhpm.2022.6321>
 24. Simbayi LC, Mabaso MLH, Cloete A. Prevalence and predictors of HIV disclosure to adult family members: a cross-sectional survey among people living with HIV in South Africa. *J Psychol Psychother Res* 2021; 8: 48-55. <https://doi.org/10.12974/2313-1047.2021.08.6>
 25. Sowell RL, Lowenstein A, Mone-yham L, Demi A, Mizuno Y, Seals BF. Resources, stigma, and patterns of disclosure in rural women with HIV infection. *Public Health Nurs* 1997; 14(5): 302-12. <https://doi.org/10.1111/j.1525-1446.1997.tb00379.x>
 26. Davtyan M, Kacanek D, Lee J, Ber-man C, Chadwick EG, Smith R, et al. The role of internalized HIV stigma in disclosure of maternal HIV sero status to children perinatally HIV-exposed but uninfected: a prospective study in the United States. *J Int AIDS Soc* 2023;26(Suppl 4):e26167. <https://doi.org/10.1002/jia2.26167>
 27. Beres LK, Narasimhan M, Robinson J, Welbourn A, Kennedy CE. Non-specialist psychosocial support interventions for women living with HIV: a systematic review. *AIDS Care* 2017; 29(9): 1079-87. <https://doi.org/10.1080/09540121.2017.1317324>

AUTHORS' CONTRIBUTION

The following authors have made substantial contributions to the manuscript as under:

SF: Conception and study design, acquisition of data, drafting the manuscript, approval of the final version to be published

NFK & US: Analysis and interpretation of data, drafting the manuscript, critical review, approval of the final version to be published

MS: Acquisition, analysis and interpretation of data, drafting the manuscript, approval of the final version to be published

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

CONFLICT OF INTEREST

Authors declared no conflict of interest, whether financial or otherwise, that could influence the integrity, objectivity, or validity of their research work.

GRANT SUPPORT AND FINANCIAL DISCLOSURE

Authors declared no specific grant for this research from any funding agency in the public, commercial or non-profit sectors.

DATA SHARING STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.



This is an Open Access article distributed under the terms of the [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).