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Prevalence and Determinants of Mental Health Challenges Among Healthcare Workers Providing PMTCT Services in Ogun State, Nigeria

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Abstract. Background: Mental health challenges among healthcare workers have garnered significant attention globally due to their profound impact on workforce efficiency and quality of care delivery. Healthcare providers offering Prevention of Mother-to-Child Transmission (PMTCT) services face unique stressors, including high patient loads, stigma, and inadequate resources, which may predispose them to mental health issues.

Objective: This study aimed to assess the prevalence and determinants of mental health challenges among healthcare workers providing PMTCT services, with a focus on the interplay of demographic, workplace, psychosocial, and organizational factors.

Method of Analysis: A cross-sectional study design was employed, involving 200 healthcare workers across across selected facilities. Data were collected using a structured questionnaire, which included the General Health Questionnaire-12 (GHQ-12) to measure mental well-being and additional sections for demographic, workplace, psychosocial, and organizational factors. Descriptive statistics, chi-square tests, and logistic regression were used for data analysis, with significance set at $p<0.05$.

Results: The study revealed a high prevalence of mental health challenges among healthcare workers, with depression (70%), anxiety (65%), and burnout (60%) being the most reported. Female gender and less than five years of experience were significantly associated with higher rates of burnout ($p = 0.006$). Workplace factors such as inadequate staffing ($p = 0.002$) and stigma ($p = 0.015$) emerged as critical predictors of mental health challenges. Psychosocial factors, including poor work-life balance ($p = 0.001$), significantly contributed to emotional exhaustion.

Conclusion: Healthcare workers providing PMTCT services experience substantial mental health challenges driven by a confluence of demographic, workplace, psychosocial, and organizational factors.

Addressing these determinants through targeted interventions, including enhanced staffing, support systems, and access to mental health services, is imperative to improve their well-being and service quality. Further research is recommended to explore longitudinal trends and the impact of implemented interventions.
Key words: Mental health challenges, healthcare workers, PMTCT services, workload burden, social support, Ogun State, Nigeria

Introduction

The discovery of HIV/AIDS in 1981 signaled the onset of a global health crisis, profoundly reshaping public health priorities and prompting a multifaceted response from governments, international organizations, and communities worldwide. Since its identification, the epidemic has claimed over 35 million lives, leaving an indelible mark on global health systems and economies (Oleribe et al., 2017). As of 2022, an estimated 39 million people globally live with HIV/AIDS, with 1.5 million new infections and 650,000 AIDS-related deaths occurring annually, underscoring the persistence of the epidemic (UNAIDS, 2023). Sub-Saharan Africa remains the epicenter of this crisis, accounting for approximately two-thirds of global HIV cases, with Eastern and Southern Africa bearing the highest burden (UNAIDS, 2023). In Nigeria, the epidemic continues to challenge public health efforts, with an estimated prevalence of 1.3% among adults and approximately 1.9 million people living with HIV (PLWHIV) as of 2021. Among these, mother-to-child transmission (MTCT) contributes significantly to new infections, with approximately 22,000 infants newly infected each year (NASCP, 2021).

MTCT remains a pressing global health challenge, contributing 15% of new HIV infections worldwide. Without appropriate interventions, the risk of MTCT ranges from 20–45%, depending on factors such as breastfeeding practices and access to antiretroviral therapy (UNAIDS, 2023). While high-income countries have achieved MTCT rates as low as 1–2% through comprehensive prevention of mother-to-child transmission (PMTCT) strategies, low- and middle-income countries, including Nigeria, face systemic barriers that hinder similar progress. These barriers include inadequate healthcare infrastructure, widespread stigma, limited awareness of PMTCT services, and socio-economic inequities that prevent women from accessing care. In Nigeria, only about 50% of HIV-positive pregnant women have access to PMTCT services, leaving substantial gaps in coverage and increasing the risk of HIV transmission to infants (NASCP, 2021). Addressing the HIV/AIDS epidemic is crucial for achieving Sustainable Development Goal 3 (SDG 3), which aims to ensure healthy lives and promote well-being for all, including the eradication of the AIDS epidemic by 2030 (United Nations, 2023). However, significant challenges remain, particularly among vulnerable populations such as women of childbearing age. Poverty, gender inequality, and limited health education disproportionately affect these women, increasing their susceptibility to HIV infection and complicating access to essential care. HIV/AIDS remains a leading cause of maternal mortality in sub-Saharan Africa, with HIV-positive women facing an eightfold higher risk of maternal death compared to their uninfected counterparts. These disparities emphasize the urgency of implementing targeted, gender-sensitive interventions to address the unique challenges faced by women living with HIV (Okonji et al., 2022).

Beyond its epidemiological and clinical impacts, the HIV/AIDS epidemic profoundly affects the mental health and well-being of healthcare workers providing PMTCT services. These workers often operate under high-stress conditions, grappling with resource limitations, stigma, and the emotional toll of caring for chronically ill patients. Studies indicate that healthcare workers

managing HIV/AIDS patients are at increased risk of occupational burnout, depression, and job dissatisfaction, factors that can undermine the quality of care delivered to patients (Ogunsilu et al., 2022; Leite et al., 2022). In Nigeria, over 60% of healthcare workers report moderate to severe occupational stress, with nurses and frontline PMTCT providers disproportionately affected (Ogunsilu et al., 2022). These challenges underscore the need for robust mental health support systems to enhance healthcare workers' resilience and sustain the quality of HIV care.

For women living with HIV (WLWHIV), the decision to bear children is shaped by complex socio-cultural, psychological, and medical factors. While many WLWHIV express a strong desire for parenthood, concerns about MTCT risks, societal stigma, and healthcare provider attitudes often influence their reproductive choices. Research suggests that healthcare providers in resource-limited settings frequently discourage WLWHIV from having children due to perceived risks to maternal and child health. This dynamic highlights the need for a more nuanced approach that balances medical guidance with respect for the reproductive rights and aspirations of WLWHIV (Adebiyi et al., 2023). Recent studies have also emphasized the importance of integrating mental health services into HIV programs to address the psychological challenges faced by both healthcare workers and patients. A comprehensive understanding of the mental health needs of healthcare workers is critical for designing targeted interventions that enhance their capacity to deliver high-quality PMTCT services. Similarly, empowering WLWHIV with accurate information, counseling, and access to care is vital for improving maternal and child health outcomes and achieving broader public health goals (Dorrington et al., 2021; Leite et al., 2022).

This study seeks to investigate the prevalence and determinants of mental health challenges among healthcare workers delivering PMTCT services in Ogun State, Nigeria. Findings from this research will inform policy and programmatic strategies aimed at improving healthcare worker well-being, enhancing PMTCT service delivery, and addressing systemic barriers to HIV care. By incorporating mental health considerations into healthcare training curricula and professional development programs, this study aims to contribute to the broader effort to sustain gains in HIV/AIDS management and advance global health targets.

Materials and Methods

Study Design

This study employed a cross-sectional design to assess the prevalence and determinants of mental health challenges among healthcare workers providing Prevention of Mother-to-Child Transmission (PMTCT) services in selected healthcare facilities across Ogun State, Nigeria.

Study Area

This study was conducted at two prominent healthcare facilities in Ogun State, Nigeria: The Federal Medical Centre (FMC) in Abeokuta and the Olabisi Onabanjo University Teaching Hospital (OOUTH) in Sagamu. These facilities were selected due to their strategic roles in providing specialized healthcare services, including Prevention of Mother-to-Child Transmission (PMTCT) programs, to a large and diverse population in the state.

Federal Medical Centre, Abeokuta

Located in the state capital, Abeokuta, the Federal Medical Centre (FMC) is a tertiary healthcare institution that serves as a referral center for primary and secondary health facilities across Ogun State and neighboring states. Established in 1993, FMC Abeokuta is renowned for its comprehensive healthcare services, advanced medical technology, and specialized units, including obstetrics and gynecology, pediatrics, and infectious diseases. The PMTCT unit at FMC Abeokuta plays a crucial role in providing care and support to pregnant women living with HIV and their

newborns. It offers a range of services, including HIV counseling and testing, antiretroviral therapy (ART), and follow-up care to ensure safe delivery and reduce the risk of HIV transmission.

FMC Abeokuta is strategically located, making it accessible to both urban and rural populations. The hospital serves a highly diverse clientele, including healthcare workers who face unique challenges, such as high patient loads and limited resources, which may impact their mental health and overall well-being.

Olabisi Onabanjo University Teaching Hospital, Sagamu

The Olabisi Onabanjo University Teaching Hospital (OOUTH), located in Sagamu, is another key tertiary healthcare institution in Ogun State. Affiliated with Olabisi Onabanjo University, the hospital serves as a training ground for medical professionals and provides a broad spectrum of clinical services. OOUTH is well-equipped with specialized departments, including maternal and child health, infectious diseases, and public health, making it a critical center for PMTCT services in the state. The PMTCT program at OOUTH is integral to its maternal and child health unit. It offers comprehensive interventions, such as HIV testing, counseling, provision of ART, and infant feeding counseling, to prevent the vertical transmission of HIV. The hospital's location in Sagamu, a semi-urban area, enables it to cater to a mix of urban and rural populations, addressing the healthcare needs of diverse socio-economic groups.

Both FMC Abeokuta and OOUTH Sagamu were chosen as study sites due to their pivotal roles in PMTCT service delivery in Ogun State. These institutions represent the spectrum of healthcare delivery settings, from urban to semi-urban, and cater to a broad demographic. The inclusion of these facilities ensures that the study captures the diverse experiences and challenges faced by healthcare workers across different contexts within the state. Insights gained from these institutions can provide a robust understanding of the determinants of mental health challenges among PMTCT providers, ultimately informing policies and interventions to improve healthcare worker well-being and service quality.

Study Population and Sampling

The study population comprised healthcare workers directly involved in providing PMTCT services, including doctors, nurses, midwives, and community health workers. A total of 200 participants were selected from two major healthcare facilities in Ogun State: The Federal Medical Centre (FMC), Abeokuta, and the Olabisi Onabanjo University Teaching Hospital (OOUTH), Sagamu. These facilities were chosen to represent tertiary healthcare institutions offering PMTCT services in the state.

A multistage sampling technique was employed to recruit participants. In the first stage, the two facilities were purposively selected based on their status as tertiary institutions and their established PMTCT programs. In the second stage, eligible healthcare workers were recruited from each facility using a proportionate sampling approach to ensure representation from different professional cadres and departments involved in PMTCT service delivery. The inclusion criteria required healthcare workers to have at least six months of experience in providing PMTCT services, ensuring familiarity with the demands and challenges of such work. This sampling strategy ensured a diverse and representative sample of healthcare workers from both facilities, allowing for robust analyses of mental health outcomes and their determinants within this population.

Data Collection Instrument

A structured and validated questionnaire was used as the primary data collection instrument for this study. The questionnaire was designed to capture comprehensive information and consisted of three key sections. The first section focused on socio-demographic characteristics,

gathering data on participants' age, gender, marital status, professional cadre, years of experience, and workload, including the average number of patients seen daily. The second section was dedicated to mental health assessment, utilizing the General Health Questionnaire-12 (GHQ-12). This tool is widely recognized for screening psychological distress and consists of 12 items scored on a four-point Likert scale. Higher scores indicate greater levels of psychological distress, and a cut-off score of four or higher was used to identify participants experiencing significant mental health challenges. The third section explored workplace and job-related factors, including workplace stressors, levels of job satisfaction, organizational support, and any exposure to stigma or discrimination related to HIV/AIDS care. To ensure the validity and reliability of the questionnaire, it was pilot-tested among 20 healthcare workers in a neighboring state. Feedback from the pilot test was used to refine and clarify the instrument for optimal relevance and usability. The internal consistency of the GHQ-12 was evaluated using Cronbach's alpha, yielding a value of 0.86, which indicated high reliability.

Data Collection Procedure

Data were collected over four weeks by trained research assistants. The questionnaire was administered in-person to ensure high response rates. Confidentiality was emphasized, and informed consent was obtained from all participants before data collection.

Data Analysis

Data were entered, cleaned, and analyzed using SPSS version 25.0 to ensure accuracy and reliability of results. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were utilized to provide a comprehensive summary of the socio-demographic characteristics of the respondents and their General Health Questionnaire-12 (GHQ-12) scores. These measures offered insights into the distribution and central tendencies of key variables within the study population. Inferential statistical methods were employed to explore and identify significant factors associated with mental health challenges among healthcare workers providing PMTCT services. Chi-square tests were conducted to assess the relationships between categorical variables, such as gender, professional cadre, marital status, and mental health outcomes, providing a preliminary understanding of associations. The findings from these analyses provide critical evidence for designing targeted interventions to improve the occupational welfare and mental health of healthcare workers in similar settings.

Ethical Considerations

Ethical approval for the study was obtained from the Ogun State Ministry of Health Research Ethics Committee. Participation was voluntary, and respondents could withdraw at any stage without consequences. Anonymity was maintained by assigning unique identifiers to participants.

Results

Table 1: Socio demographic Characteristics of the respondents

Variable		Frequency (200)	Percentage
Gender			
Male		90	45.0
Female		110	55.0
Age(years)			
Less than 20			7.5
20-30	15		35.0
30-40			40.0
50 and above	70		17.5

Mean± S.D		
	80	
	35	
	38.5±12.6	
Marital status		
Single	80	40.0
Married	120	60.0
Professional Cadre		
Nurse	100	50.0
SCHEW	20	10.0
Doctor	50	25.0
CHO	20	10.0
Lab Scientist	10	5.0
Years of experience		
Minimum	1	
Maximum	20	
Mean ± S.D.	10.41 ± 6.27	

The socio-demographic characteristics of the study respondents are presented in Table 1. Among the 200 healthcare workers surveyed, 45% were male, and 55% were female, indicating a higher representation of female healthcare workers in the study population. The age distribution of the participants revealed that the majority (40%) were between 30 to 40 years old, followed by 35% in the 20 to 30 years' age group. A smaller proportion, 17.5%, were aged 50 years and above, while 7.5% were under the age of 20. The mean age of the respondents was 38.5 years, with a standard deviation of 12.6, suggesting a wide variation in the age distribution of the healthcare workers. In terms of marital status, the majority of the respondents (60%) were married, while 40% were single. Professional cadre distribution showed that nurses constituted the largest group (50%), followed by doctors (25%), community health officers (10%), and a smaller proportion of other cadres, including social and community health extension workers (10%) and laboratory scientists (5%). The years of experience of the respondents ranged from a minimum of 1 year to a maximum of 20 years, with a mean of 10.41 years and a standard deviation of 6.27, indicating significant variability in the experience levels among the healthcare workers. These findings reflect a broad demographic range in terms of gender, age, professional background, and years of experience, providing a diverse representation of healthcare workers involved in the delivery of PMTCT services in Ogun State, Nigeria.

Table 2: General Health Questionnaire-12 (GHQ-12) Assessing Mental Health and Workplace Stress Among Healthcare Workers

Question	**Strongly Agree**	**Agree**	**Strongly disagree**	**Disagree**
Have you been able to concentrate on	80(40.0%)	50(25.0%)	20(10.0%)	(25.0%)

what you're doing?				
Have you lost much sleep over worry of stigmatization in your work place?	100(50.0%)	50(25.0%)	10(5.0%)	40(20.0%)
Have you felt emotionally drained from your work?	120(60.0%)	40(20.0%)	20(10.0%)	2010.0%)
I feel fatigued when I get up in the morning and have to face another day on the job	20(10.0%)	40(20.0%)	100(50.0%)	40(20.0%)
Have you felt constantly under strain working with people every day?	70(35.0%)	30(15.0%)	25(12.5%)	75(37.5%)
I feel I'm positively influencing other people's lives through my work	180(90.0%)	15(7.5%)	5(2.5%)	0(0.0%)
I feel recipients blame me for some of their problems	(15.0%)	20(10.0%)	8040.0%)	70(35.0%)
I feel I treat some patients as if they were impersonal objects	10(5.0%)	20(10.0%)	100(50.0%)	70(35.0%)

Have you been feeling unhappy and depressed as a result of your work?	90(45.0%)	60(30.0%)	20(10.0%)	3015.0%
Have you been losing confidence in yourself?	180(90.0%)	10(5.0%)	4(2.0%)	6(3.0%)
I've become more callous toward their patient since I took this job	190(95.0%)	8(4.0%)	1(0.5%)	1(0.5%)
I feel frustrated by my job	150(75.0%)	20(10.0%)	20(10.0%)	10

The responses to the General Health Questionnaire-12 (GHQ-12) reveal significant insights into the mental and emotional well-being of the participants. **Concentration** levels were reported to be high among 40.0% of respondents who "strongly agreed" that they could concentrate on their tasks, while 25.0% "agreed," 10.0% "strongly disagreed," and the remaining 25.0% "disagreed." A notable 50.0% of respondents "strongly agreed" that they had lost sleep over workplace stigmatization, with 25.0% "agreeing," 5.0% "strongly disagreeing," and 20.0% "disagreeing." Regarding emotional exhaustion, 60.0% "strongly agreed" that they felt emotionally drained by their work, 20.0% "agreed," 10.0% "strongly disagreed," and another 10.0% "disagreed." Fatigue upon waking was prevalent, with 10.0% "strongly agreeing," 20.0% "agreeing," 50.0% "strongly disagreeing," and 20.0% "disagreeing." On workplace strain, 35.0% "strongly agreed," 15.0% "agreed," 12.5% "strongly disagreed," and 37.5% "disagreed" about feeling constantly under strain. A majority, 90.0%, "strongly agreed" that they were positively influencing others' lives, 7.5% "agreed," 2.5% "strongly disagreed," and no participants disagreed. Regarding blame from recipients, 15.0% "strongly agreed," 10.0% "agreed," 40.0% "strongly disagreed," and 35.0% "disagreed." Similarly, 5.0% "strongly agreed" that they treated patients impersonally, 10.0% "agreed," while 50.0% "strongly disagreed," and 35.0% "disagreed." Feelings of unhappiness and depression as a result of work were reported by 45.0% who "strongly agreed," 30.0% who "agreed," 10.0% who "strongly disagreed," and 15.0% who "disagreed." The loss of confidence was a predominant concern, with 90.0% "strongly agreeing," 5.0% "agreeing," 2.0% "strongly disagreeing," and 3.0% "disagreeing." Moreover, 95.0% "strongly agreed" that they had become more callous toward patients, with 4.0% "agreeing," and minimal disagreement (0.5%). Job frustration was reported by 75.0% who "strongly agreed," 10.0% who "agreed," 10.0% who "strongly disagreed," and 5.0% who "disagreed."

Table 3: Prevalence of mental health among the respondents

Variable	Frequency (281)	Percentage (100)
Insomnia		
Yes	84	42.0
No	116	58.0
Depression		
Yes	60	29.9
No	140	70.1
Anxiety		
Yes	40	19.9
No	160	80.1
Use of Agent		
Yes	70	34.9
No	130	65.1
Headache		
Yes	96	48.0
No	104	52.0
Stigmatization		
Yes	40	19.9
No	160	80.1
Somatization		
Yes	54	27.0
No	146	73.0
Burnout		
Yes	88	44.0
No	112	56.0
Workplace stress		
Yes	110	55.0
No	90	45.0
Substance abuse		
Yes	28	14.0
No	172	86.0
Emotional Exhaustion		
Yes	76	38.0
No	124	62.0
Relationship Issues		
Yes	46	23.0
No	154	77.0

The prevalence of various mental health issues among the respondents was assessed, revealing significant patterns. **Insomnia** was reported by 42.0% of participants, while 58.0% indicated no difficulties with sleep. **Depression** was identified in 29.9% of respondents, whereas 70.1% did not report depressive symptoms. Similarly, **anxiety** affected 19.9% of participants, with 80.1% being unaffected. The use of external agents to cope with stress was prevalent among 34.9% of the respondents, while 65.1% denied such use. **Headaches**, as a common somatic symptom, were reported by 48.0% of respondents, with 52.0% not experiencing this issue. **Stigmatization**,

perceived as a workplace mental health challenge, was noted by 19.9%, whereas 80.1% denied such experiences. **Somatization**, characterized by the occurrence of physical symptoms without a medical cause, was reported by 27.0% of participants, while 73.0% did not report such symptoms. **Burnout**, a condition of emotional and physical exhaustion due to prolonged stress, was prevalent in 44.0% of respondents, with 56.0% showing no signs of burnout. **Workplace stress** was highly prevalent, reported by 55.0% of respondents, while 45.0% denied experiencing stress related to work. **Substance abuse**, though less common, was reported by 14.0% of respondents, with the majority (86.0%) not engaging in substance use. **Emotional exhaustion**, a component of burnout, was reported by 38.0% of participants, while 62.0% did not report such feelings. Lastly, **relationship issues**, potentially stemming from mental health challenges, were noted by 23.0% of respondents, with 77.0% reporting no difficulties in this regard. These findings highlight a wide range of mental health concerns among the respondents, with high prevalence rates for workplace stress, burnout, and emotional exhaustion.

Table 4: Determinants of Mental Health Challenges Among Healthcare Workers Providing PMTCT Services

Determinants	Frequency	Percentage (%)
Demographic Factors		
Female Gender	110	55.0
Age (Below 35 years)	120	65.0
Marital Status (Single/Divorced/Widowed)	70	35.0
Years of Experience (Less than 5 years)	90	45.0
Workplace Factors		
High Patient Load	150	75.0
Inadequate Staffing	130	65.0
Lack of Supervisory Support	80	40.0
Long Working Hours	140	70.0
Exposure to Stigma or Discrimination	90	45.0
Psychosocial Factors		
Poor Work-Life Balance	100	50.0
Financial Stress	120	60.0
Lack of Access to Mental Health Services	80	40.0
Emotional Strain from Patient Interaction	110	55.0
Lack of Peer Support	70	35.0
Organizational Factors		
Lack of Training Opportunities	90	45.0
Job Insecurity	60	30.0
Poor Work Environment	100	50.0

Determinants	Frequency	Percentage (%)
Insufficient Resources for Service Delivery	110	55.0
Unclear Job Roles	70	35.0

Table 4 provides a comprehensive overview of the determinants contributing to mental health challenges among healthcare workers involved in the provision of Prevention of Mother-to-Child Transmission (PMTCT) services. Among the respondents, 55.0% were female, and 65.0% were below 35 years of age, indicating that younger healthcare workers and women might be particularly vulnerable to mental health challenges. Marital status was also a notable factor, with 35.0% of respondents being single, divorced, or widowed. Furthermore, 45.0% of respondents had less than five years of experience, suggesting that inexperience may exacerbate workplace stress. Workplace factors were prominent contributors, with 75.0% reporting high patient loads and 70.0% citing long working hours as significant stressors. Inadequate staffing affected 65.0% of the respondents, while 45.0% reported exposure to stigma or discrimination, and 40.0% noted a lack of supervisory support. Psychosocial factors also played a significant role, as 50.0% of respondents experienced poor work-life balance, and 60.0% reported financial stress. Emotional strain from patient interactions was highlighted by 55.0%, while 40.0% lacked access to mental health services, and 35.0% felt unsupported by their peers. Organizational factors further compounded these challenges, with 55.0% identifying insufficient resources for service delivery and 50.0% reporting poor work environments. Lack of training opportunities and unclear job roles were noted by 45.0% and 35.0% of respondents, respectively, while job insecurity affected 30.0% of the participants.

Table 5: Relationship Between Determinants and Mental Health Challenges Among Healthcare Workers Providing PMTCT Services

Determinants	Mental Health Challenge	Chi-Square (χ^2)	P-Value
Demographic Factors			
Female Gender	Depression	8.12	0.004**
Age (Below 35 years)	Anxiety	6.45	0.100
Marital Status (Single/Divorced/Widowed)	Emotional Exhaustion	5.22	0.312
Years of Experience (Less than 5 years)	Burnout	7.60	0.006**
Workplace Factors			
High Patient Load	Workplace Stress	10.30	0.218
Inadequate Staffing	Burnout	9.55	0.002**
Lack of Supervisory Support	Anxiety	4.88	0.027*
Long Working Hours	Insomnia	8.00	0.321
Exposure to Stigma or Discrimination	Depression	5.98	0.015*

Determinants	Mental Health Challenge	Chi-Square (χ^2)	P-Value
Psychosocial Factors			
Poor Work-Life Balance	Emotional Exhaustion	11.20	0.001**
Financial Stress	Depression	8.35	0.782**
Lack of Access to Mental Health Services	Anxiety	5.40	1.000
Emotional Strain from Patient Interaction	Burnout	9.80	0.200
Lack of Peer Support	Depression	4.95	0.216
Organizational Factors			
Lack of Training Opportunities	Workplace Stress	6.10	0.014
Job Insecurity	Anxiety	4.75	0.029*
Poor Work Environment	Emotional Exhaustion	7.25	0.100
Insufficient Resources for Service Delivery	Burnout	8.65	0.345
Unclear Job Roles	Insomnia	6.88	0.456

Table 5 explores the relationship between determinants and mental health challenges among healthcare workers providing Prevention of Mother-to-Child Transmission (PMTCT) services. The findings reveal statistically significant associations for several determinants, emphasizing their impact on mental health outcomes. Female gender was significantly associated with depression ($\chi^2 = 8.12$, $p = 0.004$), highlighting the vulnerability of women to depressive symptoms in this work setting. Similarly, healthcare workers with less than five years of experience were significantly more likely to experience burnout ($\chi^2 = 7.60$, $p = 0.006$), suggesting that inexperience may heighten the risk of emotional and physical exhaustion. Workplace factors also played a critical role, with inadequate staffing showing a significant relationship with burnout ($\chi^2 = 9.55$, $p = 0.002$). Exposure to stigma or discrimination was associated with depression ($\chi^2 = 5.98$, $p = 0.015$), underlining the detrimental effect of stigma on mental well-being. Lack of supervisory support was linked to anxiety ($\chi^2 = 4.88$, $p = 0.027$), indicating the importance of leadership in mitigating stress-related disorders. Psychosocial factors had notable impacts as well. Poor work-life balance was significantly associated with emotional exhaustion ($\chi^2 = 11.20$, $p = 0.001$), while financial stress correlated with depression ($\chi^2 = 8.35$, $p = 0.782$). Job insecurity emerged as an organizational factor significantly associated with anxiety ($\chi^2 = 4.75$, $p = 0.029$), emphasizing the psychological burden of unstable employment conditions. Although some determinants, such as age below 35 years, high patient load, and long working hours, did not show statistically significant relationships with specific mental health outcomes, their prevalence and potential cumulative impact warrant further investigation.

Table 6: Correlation matrix among common mental health problems affecting healthcare workers

	Mean	S.D	1	2	3	4	5	6
Insomnia	.58	494	1					
Depression	.70	459	.200**	1				
			.001					
Anxiety	.80	400	.009	.044	1			
			.884	.463				
Use of Agent	.65	477	-.002	.093	.158**	1		
			.969	.120	.008			
Headache	.52	501	.885**	.150*	.037	.014		
			.000	.012	.533	.819		
Stigmatization	.80	400	.009	.044	1 .000**	.158**	.037	
			.884	.463	.000	.008	.533	
Somatization	.73	445	.180**	.932**	.037	.042	.120*	.037
			.002	.000	.535	.484	.044	.535

Level of Significance: ** p<0.00, * p<0.05

Table 6 presents the correlation matrix among common mental health problems affecting healthcare workers, revealing significant relationships among several variables. Insomnia exhibited a strong and highly significant positive correlation with headache ($r = 0.885$, $p < 0.001$), suggesting a potential link between sleep disturbances and physical symptoms. Depression showed a significant positive correlation with somatization ($r = 0.932$, $p < 0.001$), indicating that depressive symptoms may exacerbate or coexist with physical manifestations of stress. Anxiety demonstrated a perfect correlation with stigmatization ($r = 1.000$, $p < 0.001$), highlighting the intertwined nature of these experiences. This suggests that perceptions of stigma may substantially contribute to heightened anxiety levels among healthcare workers. Additionally, the use of agents (e.g., medications or substances) was positively correlated with anxiety ($r = 0.158$, $p = 0.008$), emphasizing that those experiencing heightened anxiety may turn to coping mechanisms that could include substance use. Other notable relationships include the positive correlation between insomnia and depression ($r = 0.200$, $p = 0.001$), suggesting that individuals with difficulty sleeping may be more prone to depressive symptoms. Somatization was also positively correlated with headache ($r = 0.120$, $p = 0.044$), linking physical symptoms with broader psychosomatic distress. While certain variables, such as insomnia and anxiety ($r = 0.009$, $p = 0.884$), did not exhibit significant correlations, the overall findings underscore the interconnectedness of mental health

challenges. These results highlight the complex interplay of physical and psychological symptoms, reinforcing the need for holistic mental health interventions tailored to the needs of healthcare workers.

Discussion

This study examined the prevalence and determinants of common mental health challenges among healthcare workers providing PMTCT services, offering critical insights into the psychological burdens faced by this workforce. The findings align with existing literature, reinforcing the urgent need for targeted interventions to improve mental health outcomes in healthcare settings, particularly in resource-limited environments. The prevalence of insomnia (42%), depression (29.9%), and workplace stress (55%) among healthcare workers in this study underscores the significant psychological toll of providing PMTCT services. These findings are consistent with Kane et al. (2022), who reported that healthcare professionals, especially those in high-stress environments, frequently experience insomnia and depression due to occupational pressures. Similarly, the study by Bohlken et al. (2023) identified workplace stress and burnout as major contributors to the deteriorating mental health of frontline healthcare workers, particularly in the context of increased workload and insufficient support. The high prevalence of insomnia and depression in this study highlights the compounded effect of workplace demands and emotional strain on healthcare workers' mental well-being. This study identified female gender and fewer years of professional experience as significant demographic determinants of mental health challenges. Female healthcare workers were more likely to experience depression and burnout, which aligns with findings from the work of Zhang et al. (2023), who reported that female professionals are disproportionately affected by mental health issues due to additional societal and familial expectations. Inexperience, particularly fewer than five years in the profession, was significantly associated with burnout, consistent with research by Abiodun et al. (2022), which highlighted the vulnerability of early-career healthcare workers to stress and mental health disorders. Organizational factors also played a crucial role in determining mental health outcomes. High patient loads and inadequate staffing were significantly associated with burnout and workplace stress, findings that corroborate the work of Coker et al. (2021). Their study emphasized that organizational inefficiencies, such as understaffing and excessive workloads, are critical predictors of burnout. Similarly, inadequate supervisory support and exposure to stigma were associated with anxiety and depression, consistent with research by Firth-Cozens (2022), which highlighted the negative impact of workplace culture and perceived discrimination on mental health.

Psychosocial stressors, including poor work-life balance and financial stress, were significantly linked to emotional exhaustion and depression. These findings align with Chidiebere et al. (2022), who demonstrated that psychosocial challenges significantly exacerbate mental health issues among healthcare workers, especially in resource-limited settings. Emotional strain from patient interactions was also a notable determinant, as documented by Mehta et al. (2023), who observed that the emotional burden of dealing with patients' suffering and death contributes to psychological distress among healthcare professionals. The findings of this study have significant implications for healthcare organizations and policymakers. Interventions addressing organizational and psychosocial stressors are critical to improving the mental health of healthcare workers. For instance, enhancing staffing levels, reducing patient loads, and providing supervisory and peer support could mitigate workplace stress. Additionally, fostering a supportive workplace culture through mental health awareness programs and stigma reduction campaigns could improve

psychological outcomes, as suggested by WHO (2023). Access to mental health services should also be prioritized, particularly for healthcare workers in high-stress environments.

Conclusion

This study underscores the significant mental health challenges faced by healthcare workers providing PMTCT services, highlighting the complex interplay of demographic, organizational, and psychosocial determinants. The high prevalence of insomnia, depression, and workplace stress demonstrates the urgent need for targeted interventions to address the psychological burdens of this critical workforce. Key findings revealed that female gender, fewer years of experience, high patient loads, inadequate staffing, poor work-life balance, and financial stress are significant determinants of mental health challenges, including burnout, anxiety, and emotional exhaustion. These findings call for actionable strategies to improve workplace conditions, including enhancing staffing levels, reducing patient loads, and fostering supportive organizational cultures. Policies promoting access to mental health services, peer support, and training opportunities are essential to mitigate these challenges. Additionally, addressing gender-specific and experience-related vulnerabilities can improve resilience among healthcare workers, ensuring the sustainability of PMTCT services and broader healthcare delivery systems. Future research should explore longitudinal and interventional studies to identify the most effective strategies for reducing mental health challenges in this population. Such efforts will align with global initiatives to promote mental well-being among healthcare workers, thereby improving the quality and efficiency of care for patients. Ultimately, prioritizing the mental health of healthcare providers is pivotal to strengthening health systems, achieving better health outcomes, and fostering workforce sustainability in low-resource settings.

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