IMPACT OF SOCIO-ECONOMIC FACTORS ON THE MENTAL HEALTH OF WORKING-CLASS WOMEN IN MAIDUGURI METROPOLITAN COUNCIL, NIGERIA.

Alabi Bukola Elizabeth[1] & M. A. Suleiman, PhD[2]

Abstract

This study examined the impact of socioeconomic factors- income, education, and occupation on the mental health status of working-class women in Maiduguri Metropolitan Council, Nigeria. The study employed an ex post facto research design based on the premise that social determinants play a critical role in shaping mental health outcomes, particularly among vulnerable populations. Data were collected from a sample of 406 participants. To address empty cells in the dataset, six simulated cases were introduced to enable valid three-way analysis of variance (ANOVA). The data were analyzed using a three-way ANOVA to determine the main and interaction effects of income, education, and occupation on mental health status. The results revealed significant main effects of income, $F (2, 394) = 4.388$, $p < .05$, and education, $F (1, 394) = 15.888$, $p < .001$, indicating that both factors significantly influence mental health status. However, the main effect of occupation was not statistically significant, $F (1, 394) = 0.123$, $p > .05$. A significant interaction effect between education and occupation was observed, $F (1, 394) = 11.011$, $p < .05$, while other interaction effects were not significant. The findings underscore the importance of socioeconomic determinants, particularly income and education, in shaping mental health outcomes. The study recommends policies aimed at reducing socioeconomic inequalities to improve mental well-being among working-class women.

Keywords: Mental health; socioeconomic factors; Income; Education; Occupation.

Introduction

Mental health in today's world has risen to the top of the list of societal concerns and understanding the delicate connections between economic conditions and mental health is critical. Mental health is no longer an afterthought but a fundamental obligation of a caring society. Mental health is a serious problem that affects individuals, families and communities all around the world. Income, work and societal support have all been found to have major impact on mental health outcomes (Travasso, 2019). Good mental health is a condition when our minds are in peaceful and calm state, thus enabling us to enjoy everyday life and respect others around (WHO, 2018). A person who is mentally healthy can use his or her abilities or potential to the fullest in facing life's challenges as well as enabling positive relationships with other people. On the other hand, poor mental health can result in disorders such as depression, anxiety and even suicide. Mental health problems have a significant impact on an individual's quality of life, productivity and economic burden (UNDP, 2020).

Mental Health and well-being are shaped by diverse factors at the individual, community and societal levels. One key determinant of mental health and wellbeing is socio-economic status. There is a strong and consistent relationship between a range of socio-economic factors such as education, income, and unemployment and mental health and wellbeing (WHO, 2022). Drawing out the heterogeneity of the relationships between socio-economic factors and mental health and well-being is important for the development and implementation of interventions to address mental health and wellbeing inequalities. Socio-economic factors and mental health is key to ensuring that the development and

[1]Department of Human Kinetics and Health Education, Ahmadu Bello University, Zaria elizabethalabi757@gmail.com 08168397854
[2]Department of Human Kinetics and Health Education, Ahmadu Bello University, Zaria masuleiman50@gmail.com 08063348206

implementation of interventions are effective in addressing mental health issues especially among working class women in Nigeria.

Socio-economic factors are linked with mental health and well-being at every stage in life. Socio-economic disparities especially among working class women can reduce opportunities available for the development of positive mental health and well-being as well as capacity to benefit if ill-health occurs. Societal resources distributed through the public policies of nations, states, regions and cities play a crucial role in the wide variation of mental health and well-being indicating that it is malleable through such policies choices and hence avoidable (Brodowicz, 2024).

The interaction between socio-economic status and mental health is complex and sensitive. It represents a paradigm grown from both medical sciences and social technologies. Social and community contexts play a strong role in forming and maintaining mental health problems, especially the impact mental illness has on one's life and complex relationship with the social system. People suffering from mental illness are particularly susceptible to the influence of certain social factors, forming barriers within their own lives. Socio-economic factors thus serves as the unique social contexts, having strong distinctive difference even towards individuals without mental illness (Brodowicz, 2024).

The mental health of working class women in Nigeria is deeply influenced by a variety of socio-economic factors. These women who often engage in low-income, informal and precarious employment face multiple layers of disadvantage due to poverty, gender inequality, poor access to healthcare and cultural expectations with little job security or access to healthcare (Atilola, 2019). Economic hardship is one of the primary stressors impacting the mental health of Nigerian women in the working class. Many work in informal sectors such as domestic work, petty trading or agriculture which offer low-income and minimal job security. This economic vulnerability often leads to chronic stress, anxiety and depression (Gureje&Lasebikan, 2021).

Furthermore, education and awareness levels among many working-class women limit affects their accessibility to mental health help as lower levels of education among many working class women limit awareness about mental health and available support systems. Health literacy directly influences the ability to identify and seek help for mental illness while lack of it can accept cultural beliefs and frame mental health issues as spiritual or moral failings rather than medical conditions (Abayomi, 2023). More so, Women in the informal economy often face exploitation, long working hours, lack of legal protection and workplace harassment all of which contributes to emotional exhaustion and trauma (International Labour Organization, 2020).

In Maiduguri, socio-economic factors significantly impact the mental health of women, particularly through gender-based violence, poverty and limited access to resources. Studies have shown that women in this region experience higher rates of depression and psychological distress often linked to economic hardship and societal pressures (Okoli, Mohammed, Ononye&Okolie, 2023). Low income and lack of economic opportunities are linked to increased rates of depression and anxiety among working class women in Maiduguri. The financial burden on everyday life can overwhelm individuals, leading to stress and mental health challenges. Working class women in Maiduguri face high rates of gender-based violence including domestic violence, sexual violence and other forms of abuse this violence can lead to significant psychological trauma, depression, anxiety and post-traumatic stress disorder (Okoli, Mohammed, Ononye&Okolie, 2023).

Statement of the Problem

Mental health challenges are increasingly recognized as a critical public health issue yet remain underexplored among working-class women in conflict-affected areas like Maiduguri, Borno State, Nigeria. As a city recovering from long-standing insurgency, Maiduguri presents

unique socio-economic dynamics that significantly impact the daily lives and psychological well-being of its residence (UNDP, 2020; WHO, 2019). Working-class women, who often shoulder the dual burden of income generation and household responsibilities, are particularly vulnerable to stressors such as low income, job insecurity, inadequate healthcare access, poor working conditions and social instability (Ogundipe, Lawal&Bamidele, 2021; Akinyemi&Soyombo, 2018).

Despite the visible struggles these women face, there is limited empirical research that investigates how socio-economic factors specifically influence their mental health in this context. The gap in knowledge makes it difficult for policymakers, mental health practitioners and community leaders to develop targeted interventions that address their unique needs (WHO, 2019; Ajayi, 2019). Without a deeper understanding of the relationship between socio-economic conditions and mental health outcomes in this population, efforts to improve public health and social welfare in Maiduguri may remain ineffective or misdirected. Therefore, this study seeks to examine the impact of socio-economic factors: income level, education and occupation on the mental health of working class women in Maiduguri Metropolitan Council, with the aim of informing evidence-based policies and targeted interventions.

Purpose of the Study

The purpose of this study was to: Examine the impact of income, education and occupation as a socio-economic factor on the mental health status of working-class women in Maiduguri, Nigeria.

Research Questions

1. What is the relationship between income level and the mental health status of working-class women in Maiduguri Metropolitan Council, Nigeria?
2. What is the relationship between educational attainment and the mental health status of working-class women in Maiduguri, Nigeria?
3. What is the relationship between occupational category and the mental health status of working-class women in Maiduguri, Nigeria?

Hypotheses

Ho: There is no significant main or interactive effect of income, education and occupation on the mental health status of working-class women in Maiduguri Metropolitan Council, Nigeria.

Methodology

The study employed the use of an ex-post facto research design. An Ex –post facto design is a non-experimental research design in which pre-existing groups are compared on dependent variables. It does not include any form of manipulation or measurement by the researcher before the facts occurred (Lammers & Badia, 2015). This research design is deemed appropriate as the research requires the researcher to collect personal and general information for the purpose of assessing the impact of socioeconomic factors on the mental health of working-class women in Maiduguri, Nigeria.

The population of the study consisted of all working-class women in Maiduguri Metropolitan Council which was estimated to be 928,217 (National Population Commission). The sample size for this study was four hundred and six (406) working-class women. Six additional cases were statistically estimated to address empty cells in the dataset and ensure the assumptions required for the three-way analysis of variance (ANOVA) were met. A multi-stage sampling technique which involved a simple random sampling and purposive sampling were used to select the respondents. The instrument used for the purpose of data collection was a researcher developed structured questionnaire. The questionnaire was divided into three sections

targeting the impact of socio-economic factors on the mental health of working-class women based on income, occupation and education. The modified 4 point Likert scale that was used was Strongly Agree (SA) with 4 points, Agreed (A) with 3 points, Disagreed (D) with 2 points and Strongly Disagree (SD) with 1 point. In order to establish face and content validity of the instrument, the questionnaire was vetted by four (4) experts in the Department of Human Kinetics and Health Education, Ahmadu Bello University, Zaria for comments, corrections and suggestions.

The instrument was administered using two research assistants. The researcher collected an introductory letter from the Head of Department, Human Kinetics and Health Education, Ahmadu Bello University, Zaria. The researcher and two research assistants administered and collected the completed copies of the questionnaire. Descriptive statistics of mean and standard deviation were used to answer the research questions and three-way ANOVA was used to test the formulated hypothesis at 0.05 alpha level of significance.

Results

Research Question One

What is the relationship between income level and mental health status outcomes among working-class women in Maiduguri Metropolitan Council, Nigeria?

Table 1: Mean and standard deviation of Income level with mental health outcomes among working-class women in Maiduguri Metropolitan Council, Nigeria.

Income levels	N	Mean	SD
Low	132	66.62	7.390
Medium	142	73.10	7.369
High	132	77.86	6.892
Total	406	72.54	8.526

Table 1 shows that participants with higher income levels had higher mean mental health scores, with the low-income group reporting M = 66.62 (SD = 7.390), the medium-income group M = 73.10 (SD = 7.37), and the high-income group M = 77.86 (SD = 6.892). This indicates a trend where higher income is associated with better mental health.

Research Question Two

What is the relationship between education attainment and mental health outcomes among working-class women in Maiduguri Nigeria?

Table 2: Mean and standard deviation of Education with mental health outcomes among working-class women in Maiduguri Metropolitan Council, Nigeria.

Level of Education	N	Mean	SD
Higher Education(Tertiary/Secondary)	203	67.71	6.888
Lower Education (Primary/Non-formal)	203	77.37	8.526
Total	406	72.54	8.526

Table 2 reported that participants with lower educational attainment (primary/non-formal) have higher mean mental health scores (M = 77.37, SD = 8.526) compared to those with higher educational attainment (tertiary/secondary; M = 67.71, SD = 6.888). This indicates that participants with lower education reported slightly better mental health.

Research Question Three

What is the relationship between occupation and mental health status among working-class women in Maiduguri, Nigeria?

Table 3: Mean and standard deviation of Occupation's relationship with mental health outcomes among working-class women in Maiduguri Metropolitan Council, Nigeria.

Group	N	Mean	SD
Professional/Skilled	203	67.83	6.833
Low/Informal	203	77.25	7.381
Total	406	72.54	8.526

Table 3 shows that participants in the low/informal occupational group had a higher mean on mental health score (M =77.25, SD = 7.381) compared to the skilled/professional group (M = 67.83, SD = 6.833), indicating that women in low/informal occupations reported slightly better mental health.

Test of Hypothesis

Ho: There is no significant main or interactive effect of income, education and occupation on the mental health status of working-class women in Maiduguri Metropolitan Council, Nigeria.

Table 4: Three-way ANOVA table on the impact of Income, Education and Occupation on the mental health status of working-class women in Maiduguri Metropolitan Council, Nigeria.

Source	Type III SS	df	Mean Square	F	Sig	Partial η^2
Income	251.276	2	125.638	4.388	.013	.022
Edu2	454.869	1	454.869	15.888	.000	.039
Occ2	3.524	1	3.524	0.123	.726	.000
Income * Edu2	39.911	2	19.955	0.697	.499	.004
Income * Occ2	32.521	2	16.261	0.568	.567	.003
Edu2* Occ2	315.237	1	315.237	11.011	.001	.027
Income*Edu2*Occ2	95.919	2	47.960	1.675	.189	.008
Error	11280.269	394	28.630			
Total	2165797.452	406				

Table 4 describes a three-way analysis of variance (ANOVA) conducted to examine the impact of income, education and occupation on mental health status. The results revealed a significant main effect of income, F (2, 394) = 4.388, p = .013, partial n^2 = .022, indicating that mental health differed significantly across income levels. There was also a significant main effect of education, F (1, 394) = 15.888, p < .001, partial n^2 = .039, suggesting that educational level had a strong influence on mental health. However, the main effect of occupation was not significant, F (1,394) = 0.123, p = .726, partial n^2 = .000. Regarding interaction effects, the interaction between education and occupation was statistically significant, F (1, 394) = 11.011, p = .001, partial n^2 = .027, indicating that the effect of education on mental health varied across occupational groups. The interactions between income and education, income and occupation and the three-way interaction among income, education and occupation were not statistically significant (p > .05).

Discussion of Findings

This study examined the impact of income, education, and occupation on the mental health of working-class women. The findings revealed that income and education significantly influenced mental health, while occupation alone was not significant, although a significant interaction between education and occupation was observed. These findings

are consistent with a growing body of global evidence on the social determinants of mental health.

The finding of this study revealed that income significantly influences mental health among working class women. This aligns with global evidence that identifies income as a fundamental determinant of psychological well-being. Individuals with higher income levels are less exposed to financial stress and have better access to healthcare services which enhances mental health outcomes. According to the World Health Organization (2024), socioeconomic inequalities, particularly income disparities, are strongly associated with increased vulnerability to mental disorders due to chronic stress, financial insecurity, and limited access to healthcare services. Similarly, Vikram Patel et al. (2022) emphasized that individual in lower-income groups are disproportionately affected by depression and anxiety. Lund et al., 2022; Allen et al., 2023 & Ridley et al., 2020 further confirmed that poverty and income instability significantly predict poor mental health outcomes, especially among women in low and middle income settings. This supports the present finding that variations in income significantly affect mental health.

The study also found that education had a significant effect on mental health. This suggests that educational attainment plays a critical role in shaping psychological well-being. Education enhances cognitive ability, improves health literacy and increases access to better socioeconomic opportunities, all of which contribute to improved mental health outcomes. The World Health Organization (2022; 2024) emphasizes that education is a key structural determinant of mental health, influencing employment opportunities, income level, and health literacy. More so, Dalgard et al., 2021; Lorant et al., 2021; & OECD, 2023 have demonstrated that individuals with higher educational attainment are significantly less likely to experience mental health disorders. Furthermore, education has been shown to promote psychological resilience and social empowerment, particularly among women (Cutler & Lleras-Muney, 2020). This explains why education emerged as a strong predictor of mental health in this study.

In contrast, the non-significant effect of occupation found in this study suggests that occupation may not independently determine mental health when income and education are considered. This indicates that occupational status alone may not function as a direct predictor of psychological well-being among working-class women rather, its influence may be indirect and mediated through more fundamental socioeconomic factors such as income and educational attainment, both of which were found to be significant in this study. This finding is consistent with previous research (Lund et al., 2022; Ridley et al., 2020), which indicates that occupational status often reflects underlying socioeconomic conditions rather than acting as a direct determinant. The International Labour Organization (2022) also notes that while employment conditions can influence mental health, their effects are often mediated by income security and educational background. Therefore, the absence of a significant main effect for occupation in this study is not unexpected.

However, the significant interaction between education and occupation observed in this study highlights the complex and interdependent nature of socioeconomic determinants. This finding suggests that the effect of education on mental health varies across occupational groups, reinforcing the need to consider socioeconomic factors collectively rather than in isolation. According to the World Health Organization (2024), social determinants of mental health operate interactively, meaning that factors such as education and occupation jointly influence exposure to stress, access to resources, and overall well-being. In line with this, OECD, 2023 & Allen et al., 2023 shows that individuals with higher education tend to access more stable and less stressful occupations, which enhance their mental health outcomes. This interaction effect reinforces the need to consider socioeconomic variables collectively rather than in isolation.

Overall, the findings of this study are consistent with global evidence that mental health is shaped by a complex interplay of socioeconomic factors. The World Health Organization (2024) emphasizes that addressing social determinants such as income inequality, educational access, and employment conditions is critical for improving population mental health. Additional studies (Patel et al., 2022; Lund et al., 2022; OECD, 2023; Allen et al., 2023) further support this position, highlighting that reducing socioeconomic disparities is essential for promoting mental well-being, particularly among vulnerable populations such as working-class women.

Conclusion

Based on the findings of this study, it can be concluded that socioeconomic factors play a critical role in shaping mental health outcomes among working-class women. Specifically, income and education emerged as significant predictors of mental health, highlighting the importance of financial stability and educational attainment in promoting psychological well-being.

The non-significant effect of occupation suggests that its influence may be indirect and largely dependent on other socioeconomic factors such as income and education. However, the significant interaction between education and occupation underscores the complexity of these relationships, indicating that the benefits of education on mental health are influenced by occupational context.

These findings are consistent with global evidence, particularly reports by the World Health Organization (2024), which emphasize that mental health is strongly influenced by social determinants such as income inequality, educational access, and employment conditions. Therefore, mental health should not be viewed solely as a medical issue but as a broader socioeconomic concern.

Recommendations

1. Policy Interventions on Income Inequality: Government and policymakers should implement strategies aimed at reducing income inequality, such as job creation, wage improvements, and social protection programs. Improving financial stability among working-class women can significantly enhance their mental health outcomes.
2. Promotion of Female Education: Although education was not found to have statistically significant effect on mental health in the study, promoting female education is important. Educational empowerment can enhance women's skills, knowledge, and socioeconomic opportunities, which may indirectly support overall wellbeing.
3. Integration of Mental Health into Primary Healthcare: Mental health services should be integrated into primary healthcare systems to ensure accessibility, especially for low-income populations. This aligns with recommendations by the World Health Organization (2022), which advocates for community-based mental health care.
4. Workplace Mental Health Programs: Employers should implement workplace policies that promote mental well-being, including stress management programs, flexible working conditions, and supportive work environments.

References

Ajayi, K. V., Musa, T. H., & Yakubu, D. (2019). *Mental health and psychosocial support in conflict-affected regions of Nigeria.* African Journal of Psyciatry, 22(3), 112-119.

Akinyemi, O. O., & Soyombo, O. M. (2018). Socioeconomic determinants of mental health in Nigeria: A review Journal of public health in Africa, 9(2), 154-160.

Allen, J., Balfour, R., Bell, R., & Marmot, M. (2023). Social determinants of mental health. Public Health Reviews.

Atilola, O. (2019). Mental health service utilization in sub-Saharan Africa: Is public mental health literacy the problem? *Setting the perspective right. Global Health Promotion,* 21 (4), 31-40. https://doi.org/10.1177/1757975975914523012

Cutler, D. M., & Lleras-Muney, A. (2020). Education and health: Evaluating theories and evidence.

Dalgard, O. S., Mykletun, A., Rognerud, M., Johansen, R., Zahl, P. H. (2021). Education and mental health inequalities. European Journal of Public Health.

Dohrenwend, B. P., Levav, I., Shrout, P. E., Schwartz, S., Neveh, G., Link, B. G., & Stueve, A. (2022). Socioeconomic status and psychiatric disorders: The causation-selection issue. Science, 255(5047), 946-952. https://doi.org/10.1126/science. 1546291

Gureje, O., Lasebikan, V. O., Kola, L., & Makanjuola, V. A (2021). Lifetime and 12-month prevalence of mental disorders in Nigerian: A survey of Mental Health and Well-being. The British Journal of Psychiatry, 188(5), 465-471. https://doi.org/10.1192/bjp.188.5.465

International Labour Organization. (2022). Mental health at work: Policy brief. Geneva: ILO.

Karasek, R., & Theorell, T. (2021). Healthy work: Stress, productivity and the reconstruction of working life. Basic Books.

Lorant, V., et al. (2021). Socioeconomic inequalities in depression. International Journal of Public Health.

Lund, C., Breen, A., Flisher, A. J., Kakuma, R., Corrigall, J., Joska, J. A., & Patel, V. (2020).Poverty and common mental disorders in low- and middle- income countries: A systematic review. Social Science & Medicine, 71(3), 517-528. https://doi.org/10.1016/j.socscimed.2020.04.027.

Lund, C., Brooke-Sumner, C., Baingana, F., et al. (2022). Social determinants of mental disorders. The Lancet Psychiatry.

Marmot, M., Friel, S., Bell, R., Houweling, T.A. J., Taylor, S., & Commission on Social Determinants of Health. (2019). Closing the gap in a generation: Health equity through action on the social determinants of health. The Lancet, 372(9650), 1661-1669. https://doi.org/10.1016/S0140-6736(08)61690-6

OECD. (2023). Health at a glance: Mental Health and Education. Paris: OECD Publishing.

Ogundipe, A, A., Lawal, R. A., & Bamidele, M. O. (2012).*Socioeconomic stressors and women's mental health in Northeast Nigeria.* Nigerian Journal of Psychological Research, 5(1), 45-60

Patel, V., Burns, J. K., Dhingra, M., Tarver, L., Kohrt, B. A., & Lund, C. (2019). Income inequality and depression: A systematic review and meta-analysis of the association and a scoping review of mechanisms. *World Psychiatry*, 17(1), 76-89. https://doi.org/10.1002/wps.20492.

Patel, V., Saxena, S., Lund, C., Thornicroft, G., Baingana, F., Bolton, P., et al. (2022). Global mental health and sustainable development. The Lancet Psychiatry.

Ridley, M., Rao, G., Schilbach, F., & Patel, V. (2020). Poverty, depression, and anxiety. Causal evidence and mechanisms. Science, 370(6522), eaay0214. https://doi.org/10.1126/science.aay0214

Ross, C. E., & Mirowsky, J. (2021). Sex differences in the effect of education on depression: Resource multiplication or resource substitution? *Social Science & Medicine*, 63(5), 1400-1413. https://doi.org/10.1016/j.socscimed.2021.03.013.

Solar, 0., & Irwin, A. (2021). A conceptual framework for action on the social determinants of health: *Social determinants of health discussion paper 2* (policy and practice). World Health Organization.https://apps.who.int/iris/handle/10665/44489

Travasso, S., M., (2019). "A qualitative study of factors affecting mental amongst low-income working mothers in Bangalore, India. "BMC Women's Health, vol. 14, no. 1. https://doi.org/10.1186/1472-6874-14-22.

United Nations Development Programme (UNDP). (2020). *Recovery and peace building assessment: Northeast Nigeria*. United Nations Development Programme.

WHO. (2019). *Mental health in emergencies*: Key facts. World Health Organization.

WHO. (2022). *Social determinants of mental health*. World Health Organization.

World Health Organization. (2022). World mental health report: Transforming mental health for all. Geneva: WHO.

World Health Organization. (WHO). (2018). Social determinants of mental health. WHO press.https://www.who.int/publications/i/item/9789241506809.