Association Between Age and Prevalence of Depression Among Childbearing Mothers in a Community in Enugu State, South East Nigeria

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Abstract

The harmony of inner space is crucial for overall well-being, particularly for women in their reproductive years. During this phase, the intricate balance of physical, emotional, and mental health can be disrupted, leading to emotional health challenges like depression. This study aimed to investigate the prevalence of depression among childbearing mothers assessing healthcare services in Nsukka Local Government Area of South East Nigeria and its association with age.

A descriptive cross-sectional study was conducted on 380 childbearing mothers assessing healthcare services in ten healthcare facilities in Nsukka Local Government Area. The sample for the study was selected by a multi-staged sampling technique. The Patient Health Questionnaire (PHQ-9) was the tool used to collect the data. Frequency measures and chi-square were used to analyze the data.

It was revealed that childbearing mothers assessing healthcare services aged 35 years and above experience depression more than those aged 25 to 34 years and 15 to 24 years.

The study's findings underscore the need for targeted interventions to address depression among childbearing mothers, particularly considering age-related variations. Public health educators should prioritize awareness programs that empower mothers to recognize and manage depression, promoting holistic well-being for themselves, their children, and families.

Keywords: Depression, Childbearing mothers, Woman, Mental health, Age

Introduction

The harmony of inner space is crucial for overall well-being, particularly for women in their reproductive years. During this phase, the intricate balance of physical, emotional, and mental health can be disrupted, leading to emotional health challenges like depression, which is a significant public health problem. Depression is a risk component for all-cause mortality rates (1). Mental health should be prioritized towards achieving optimal health as poor mental health is now a major public issue, with depression being identified as one of the leading mental health issues among different populace (2).

The importance of harmonizing inner space is underscored by the growing prevalence of depression globally, where over 350 million individuals of various ages suffer from depression, with women being disproportionately affected (3-5). In 2019, 2.8% of individuals reported having severe symptoms of depression, 4.2% reported having moderate symptoms, and 11.5% reported having light symptoms (6). Studies in Nigeria have shown a significant prevalence of depression, with 23.1% of outpatient clinic attendees in Nigeria experiencing depression, exceeding national demographic estimates; 46.7% were slightly depressed, 50% were moderately depressed, and 3.3% were seriously depressed, with the majority (40%) falling between the ages of 30-39 years. Notably, 69.2% of the study participants were female, and 46.9% of them were bereaved or separated from their spouses (7). Furthermore, research suggests that depression affects 7 million Nigerians, representing a 3.9% prevalence rate, thereby constituting a serious public health issue (8). In Enugu, South East Nigeria, high depression prevalence rates have been reported, including 14.9% among healthcare personnel (9) and 22.9% among postpartum women (10).

Disruptions to inner harmony can manifest as depression, a significant public health issue marked by mood disorders, fatigue, and loss of appetite (11). When women experience challenges during maternity care, the risk of depression increases, threatening their overall well-being and ability to function (12, 13). Depressive symptoms, including sorrow, emptiness, and irritability, can impair daily functioning and impact parenting behaviors, leading to inadequate attention, poor mother-infant attachment, and compromised emotional, social, and cognitive development in children (14). Furthermore, factors such as unwanted pregnancy, lack of social support, stress, anxiety, financial strain, poor sleep quality, limited education, gestational hypertension, low resilience, and marital dissatisfaction can contribute to depression among childbearing mothers, underscoring the need for holistic approaches to promote inner harmony and outer well-being (15-18).

The intricate balance of inner space can be disrupted by various factors, including age. While conventional wisdom suggests that older generations may experience higher rates of depression due to social, economic, and functional challenges (19-20), recent findings indicate that younger adults (18-29 years) report the highest percentage of depressive symptoms (21.0%), followed by those aged 30-44 (16.8%), 45-64 (18.4%), and 65 and above (18.4%) (6). This trend highlights the need for harmonizing inner space across the lifespan, particularly among women, to promote overall well-being and resilience.

The experiences of life are interpreted differently by various age groups, influencing their inner harmony and well-being. Childbearing mothers, spanning 15-49 years (21), can be categorized into three distinct groups, each with unique characteristics that impact their ability to harmonize their inner space. The first category, comprising teenagers/adolescents (15-24 years), is marked by significant biological and psychological changes (22), such as rapid emotional shifts, identity formation, and peer influence, which can disrupt their inner balance and make it challenging for them to prioritize their health and well-being. As they navigate this stage, they are still developing their sense of self and may struggle with adhering to health instructions, highlighting the need for tailored support and guidance to help them cultivate inner resilience. In contrast, the second category (25-34 years) is characterized by maturity, brain development, and a desire for independence, autonomy, and social connection (23). During this period, women experience gradual biological and psychological changes, including steady weight gain, and are more likely to consider and adhere to health advice as they seek to establish their roles and responsibilities. The third group, comprising women 35 years and above, has achieved greater emotional stability, moral maturity, and extraversion (24), enabling them to better harmonize their inner space and prioritize their well-being. This group has likely developed coping strategies and support networks, allowing them to navigate challenges with greater ease and confidence.

Depression's impact on inner harmony varies across age groups, with distinct prevalence rates and experiences. Notably, younger adults are disproportionately affected, with those aged 18-24 years old reporting a 21.5% prevalence rate (5) and 18-25-year-olds experiencing a 20.1% rate in the US (25). Among childbearing women, age also plays a significant role, with primiparous women under 30 years old exhibiting lower depression levels compared to those above 30 (26). However, women aged 25-29 years old experience more severe depression than those aged 30-34 years old, while

women who give birth between 35-44 years old have a higher prevalence of depression than younger mothers (26). Interestingly, research suggests that older adults may experience more severe depression than younger adults (4), yet others find that younger adults (16-29 years old) are more likely to experience depression (27). Conversely, women aged 35 years and above may experience a lower rate of depression (18), highlighting the complex interplay between age, life experiences, and inner well-being.

While depression among childbearing mothers in Nsukka Local Government Area of Enugu State, South East Nigeria (NLGAESSEN) has been studied, there is a notable gap in research exploring the specific relationship between age and depression in this population. This study aims to investigate the association between age and depression among childbearing mothers accessing healthcare services in NLGAESSEN, providing valuable insights for health educators to develop targeted programs that cater to the unique needs of mothers across different age groups, ultimately enhancing maternal mental health outcomes and promoting healthier families

Materials and Methods

A cross-sectional descriptive study was conducted in healthcare facilities within Nsukka Local Government Area (NLGA).

The study sample comprised childbearing mothers aged 15 years old and above. All participants met the inclusion criteria of being childbearing mothers assessing healthcare services in NLGA. The sample of this study consisted of 380 out of the 6,400 childbearing mothers accessing healthcare services in NLGA and this sample is suggested to be sufficient (28).

The sample for the study was selected by a two-staged sampling technique. Using a basic random sample technique, the first stage comprised selecting ten healthcare facilities from the 25 healthcare facilities in the NLGA utilizing balloting without replacement. In the second stage, 38 pregnant mothers were chosen by convenience from each of the ten healthcare. This give a total of 380 childbearing mothers to be used for the study. Convenience in this context means that only childbearing mothers who were willing and provided consent were used for the study.

A standardized instrument based on a thorough examination of related literature and specific objectives of the study served as a tool for gathering data. The Patient Health Questionnaire (PHQ-9) served as the data collection tool. The PHQ-9 was developed in 1999 by Spitzer et al., (29). The PHQ-9 is a 9-question multiple choice instrument made up of nine factors that are related to

depressive symptoms, like lack of interest in or enjoyment from activities, hopelessness, poor appetite or overeating, and fatigue or low energy. Since each of the nine items on the PHQ-9 has a possible score ranging from 0 (not at all) to 3 (almost every day), the scores can vary from 0 to 27. Cut off points for the presence of depression are represented by scores greater than 10. When evaluating healthcare services in NLGA, childbearing mothers were given the PHQ-9.

To facilitate access to childbearing mothers assessing healthcare services in NLGA, an introductory letter from the researchers' institutions was obtained and presented to the heads of the sampled healthcare facilities in NLGA, to obtain their permission to distribute the questionnaires to the childbearing mothers in the healthcare facility. The respondents received three hundred and eighty (380) copies of the questionnaires from the researchers in each of the selected healthcare facilities. All the completed copies of the questionnaires from each of the sampled healthcare facilities were collected on the spot to ensure a maximum return rate and 100% of the questionnaires were returned. The completeness of the responses was carefully examined in the returned copies of the questionnaires. Out of 380 returned copies, 363 were used for the study because 17 were filled out incorrectly and were discarded, resulting in the return rate of 95.5%. The data collected were analyzed using the Internal Business Machine Statistical Package for Social Sciences (IBM-SPSS) version 23.0. To respond to the research questions, percentages and frequencies were used. Chi-Square was used to test the null hypotheses with the proper degrees of freedom and at 0.05 level of significance. If the p-value was higher than 0.05, the null hypotheses were not rejected. On the other hand, if the p-value was less than or equal to 0.05, the null hypotheses were rejected.

Results

This study was conducted on 363 childbearing mothers assessing healthcare services in Nsukka aged 15 years old and above.

Table 1 shows that overall, childbearing mothers assessing healthcare services in NLGA aged 35 years and above (40.7%) experience depression more than those aged 25 to 34 years (36.0%) and 15 to 24 years (30.7%).

Table 1. Association between age and proportion of childbearing mothers assessing healthcare services in NLGA who experienced depression (n=363)

Note: PHQ-9 Score < 10= Not depressed; PHQ-9 Score ≥ 10=Depressed

S/N	Depression status of childbearing mothers	15-24 years (n=101)	25-34 years (n=139)	35 years and above (n=123)
		f(%)	f(%)	f(%)
1	Depressed	31(30.7)	50(36.0)	50(40.7)
2	Not depressed	70(69.3)	89(64.0)	73(59.3)

Table 2 shows the Pearson Chi-square value with the corresponding p-value for the hypothesis of no significant difference in the proportion of childbearing mothers assessing healthcare services in NLGA who experienced depression based on age. (x2 = 2.385, p= .303 < .05). Since the p-value was greater than the .05 level of significance, the null hypothesis was therefore not rejected. This implies that there was no significant difference in the proportion of childbearing mothers assessing healthcare services in NLGA who experienced depression based on age.

Table 2. Chi-Square Test of No Significant Association between Age and the Proportion of Childbearing Mothers Assessing Healthcare Services in NLGA who Experienced Depression Based on Age (n=363)

Age	Number	Depressed O(E)	Not depressed O(E)	X^2	Df		p-value
15-24 years	101	31(36.4)	70(64.4)				
25-34 years	139	50(50.2)	89(88.8)	2.385	2		.303
35 years and above	123	50(44.4)	73(78.6)				

Key: O = Observed frequencies; E = Expected frequencies

Discussion

This study's exploration of depression among childbearing mothers in NLGA highlights the importance of harmonizing inner space during the critical period of motherhood. Our findings reveal that mothers aged 35 years and above experience higher rates of depression, underscoring the need for targeted interventions to promote inner balance and well-being. The results show that childbearing mothers assessing healthcare services in NLGA aged 35 years old and above

experience depression more than those aged 25 to 34 years and 15 to 24 years. Although the hypothesis testing revealed no significant variation in depression based on age, the observed trend is consistent with previous research indicating that older mothers face increased maternal responsibilities and decreased engagement in health-promoting behaviors such as quality sleep and physical activity (30-31). This imbalance in inner space can have far-reaching consequences for both mothers and their children.

The findings agree with previous studies that confirmed older mothers experience far greater rates of depression (26, 32). It is also in line with previous research that validates that older maternal age is associated with symptoms of depression (32). The hormonal and psycho-social changes that occur during childbirth put a woman's sociological, physiological, and mental health in danger, making it a difficult time in her life (35). By cultivating outer support systems, such as social support and routine screening for postpartum depression, healthcare providers can help childbearing mothers harmonize their inner space and promote regenerative sustainable development.

Incorporating mental health services into antenatal care (18) and promoting holistic well-being can aid in reducing feelings of depression and fostering a more balanced inner space. Previous studies have suggested that social support for childbearing mothers and routine screening for postpartum depression should be encouraged for early detection and immediate intervention (36). Healthcare service providers should be aware that depression is a common phenomenon among childbearing women (37).

Ultimately, this study's findings may inform public health educators in planning age-specific health programs that support the unique needs of childbearing mothers, promoting a more sustainable and regenerative approach to maternal health. By harmonizing inner space and cultivating outer support systems, we can foster a more balanced and healthier environment for mothers and their children, contributing to regenerative sustainable development.

While this study provides valuable insights into the relationship between age and depression among childbearing mothers, several limitations warrant consideration. The reliance on self-reported questionnaires may introduce bias, as some participants may not provide entirely honest responses. Furthermore, the absence of clinical assessments to confirm depression diagnoses may limit the accuracy of the findings. Additionally, the study's geographical scope, focused solely on

Nsukka Local Government Area, may restrict the generalizability of the results to the broader population of Enugu State. Despite these limitations, the study boasts several strengths. Notably, the use of ten healthcare facilities for sampling enhances representation within the local government area. Moreover, the employment of a standardized instrument for data collection ensures reliability and consistency in the findings. These strengths contribute to a robust foundation for understanding the complex relationship between age and depression among childbearing mothers in this context.

Conclusion

This study's findings highlight the prevalence of depression among childbearing mothers accessing healthcare services in NLGASEN, with varying experiences across different age groups. Although age did not significantly impact the proportion of mothers experiencing depression, the results underscore the need for targeted interventions. Based on these findings, we recommend that public health educators develop age-specific depression health programs to educate childbearing mothers about the risks of depression and strategies for managing symptoms. Additionally, childbearing mothers should prioritize their emotional and mental well-being by accessing and utilizing available healthcare services focused on depression prevention. Furthermore, health educators and professionals at the Ministry of Health, at both national and state levels, should implement awareness campaigns, programs, and interventions to address mental health issues, particularly depression, among childbearing mothers.

Declaration

Conflicts of interest

The authors declared no conflicts of interest.

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Ethical considerations

Ethical considerations were adhered to in the data collection process. The participants were informed that their involvement in the study was voluntary and they could withdraw from the study

at any time. It was also explained that the data would be used for research purposes without using their names, and the Helsinki Declaration

was followed.

Code of Ethics

The Research Ethics Committee of the Faculty of Education, University of Nigeria, Nsukka, Nigeria, approved this study ethically (REC/FE/2024/00007).

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