

EDUCATIONAL LEVELS AND DEPRESSION AMONG CHILDBEARING MOTHERS IN A COMMUNITY IN ENUGU STATE

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Abstract

Depression appears to have become a global canker that is gradually eating up a good number of women without their being aware of experiencing depressive symptoms. This study is aimed at determining the association between education and depression among Childbearing mothers in a community in Enugu State. Two specific objectives with corresponding research questions were posed and one null hypothesis postulated. Descriptive survey design was employed in the study. The population was 6,400 childbearing mothers assessing healthcare services in Nsukka Local Government Area. The sample was 380 child-bearing mothers drawn using multistage sampling procedure from 25 healthcare facilities in Nsukka LGA. The Patient Health Questionnaire (PHQ-9), developed by Spitzer, Kroenke and Williams (1999) was used for data collection. Data was analyzed using frequencies, percentages, mean and standard deviation. The null hypothesis tested at .05 level of significance at appropriate degrees of freedom using Chi-Square statistics. The results showed that the proportion of depressed childbearing was 36.1%. The proportion of depressed child-bearing women based on educational level is as follows; no formal education (63.6%) and primary education (63.6%) experienced depression more than those with secondary education (31.2%) and tertiary education (22.3%). There was a significant difference in the proportion of depression and educational level ($\chi^2 = 40.524$, $p = .000 < .05$) among childbearing mothers assessing healthcare services in Nsukka Local Government Area. It was recommended that health educators, healthcare professionals should create more awareness campaigns, programs and interventions on mental health problems especially depression among childbearing mothers.

Keywords: Proportion, Depression, Education, childbearing mothers

Introduction

Depression appears to have become a global canker that is gradually eating up a good number of individuals without their being aware of experiencing depressive symptoms. This seem to be grave among childbearing mothers who experience all sorts of discrimination in the area Globally, depression is the most common mental disorder, with 350 million people estimated to be living with it (World Health Organization, 2016). Approximately 280 million people in the world have depression (Global Health Data Exchange [GHDx], 2019). Estimates place the lifetime prevalence of depressive disorders in sub-Saharan Africa from 3.3 per cent to 9.8 per cent (Esan & Esan, 2016). WHO (2023) opined that depression is about 50% experienced by women than men. CDC (2023) affirmed that 1 in 10 women in the United States reported symptoms that suggest they experienced an episode of major depression in the last year. In Nigeria, Dr. Edak Okwong, a neuropsychiatrist in Psychiatric hospital, Calabar stated that women are twice more vulnerable to depression with the rate of 1 in 5 Nigerian women (Agency Report, 2023). Nsukka LGA is one the LGAs in Enugu State with health facilities where childbearing mothers access treatment for minor ailments, antenatal and postnatal care. It has been observed that majority of the childbearing mothers that access these health facilities either have no formal education or have just primary/secondary education. These mothers are

primarily farmers or small scale traders who make little or nothing from their strenuous labours. Nnadi, (2016) affirmed that women in Nsukka LGA are oppressed and relegated to low income jobs, denied several rights, sent to early marriages and males given preferences to education, all due to gender bias. The economic downturn in the country seems to have affected the childbearing mothers negatively, resulting in their experiencing sadness, negative thoughts and maladaptive lifestyles.

It is important to note at this juncture that there seem to be a strong relationship between higher education level and income level. Although, income level is not the subject of interest in this study, it's mention is crucial. This is because a highly educated childbearing mother will receive a high income that will be able to take care of her family thereby preventing sadness and negative thoughts which results from scarcity. Meisel, Haikalis, Colby and Barnett (2022) admitted that education is associated with mental health with subsequent effect on physical health, this implies that low level of education is associated with negative health outcomes and vice versa. Therefore, education makes a clear difference between the capability of an individual to confront challenges and the inability to confront it (Organisation for Economic Co-operation and Development (OECD), 2018). Education has the ability to decrease unhealthy behaviors and improves wellbeing (Tran, Pham, Nguyen, 2021). From interpersonal and psychological point of view, mothers with high education have enhanced problem-solving, coping and cognitive capacities to avert adverse health concerns (Raghupathi & Raghupathi, 2020) including depression which arises as a result of adverse life challenges.

Depression is a common but severe mood disorder that causes severe symptoms that affect how one thinks, feels and manages daily activities, such as sleep, eating and working (National Institute of Mental Health, 2016). Most mothers accessing healthcare facilities appear to be depressed as a result of their inability to meet up with responsibilities for themselves and their family owing to their no or low education. Javed and Khan. (2016) noted that mothers with limited educational competencies and skills are debarred of good jobs with little or no prospects for financial success. Mothers with limited education have less financial and social resources to handle episodes of depression (Aartsen, Veenstra & Hansen, 2016). Therefore, Low educational is associated with high risk of depression (Nguyen et al., 2017). However, Patria (2022) averred that high education level has the capacity to reduce the risk of depression. Dom and Yi (2018) opined that education is strongly associated with women empowerment. Higher degrees of depression are witnessed among individuals with low education levels compared to people with high education levels (Bauldry, 2015). The ongoing, implies that mothers who are educated are empowered financially, cognitively and socially to face the challenges of life and evade depression, while the uneducated mothers lack the capacity to handle depressive episodes.

Certain factors can bolster the influence of education on depression among childbearing mothers. Some social factors that bother around a childbearing mother's lifespan could reinforce the relationship between low education and depression (Cohen, Nussbaum, Weintraub, Nichols & Yen, 2020). European Alliance against Depression (2017) opined that depression results from a complex interaction of social, psychological and biological factors. Smith, Saisan and Segal (2016) stated that lack of social support, recent stressful life experiences, history of depression, financial strain, early childhood trauma or abuse, alcohol or drug abuse, unemployment or chronic pain are the causes of depression. Canadian Medical Health Association (2022) noted that discrimination is an unfair treatment due to a person's identity. The discrimination or unfair treatment could be as a result of the identity of illiteracy among childbearing mothers accessing healthcare facilities in Nsukka LGA. In this case, the uneducated mother who might be very intelligent but was constrained by certain unforeseen factors from being educated would likely be depressed. Educational processes are designed for

adult role self-preparation and agent of socialization and connection between the society and the family (Dom & Yi, 2018). Childbearing mothers who for one reason or the other could not pass through educational processes may lack the potentials in dealing with depressive symptoms.

The theoretical anchor of this study was theory of operant conditioning. Operant conditioning was invented by Skinner in 1948. The principal focus of the operant conditioning theory is that an individual makes an association between a particular behaviour and a consequence (Skinner, 1948). The postulation of the theory is that reinforcement is a powerful tool in the shaping and control of behaviour. This theory explains depression is of caused when a positive reinforcement is isolated from the environment (Lewisohn, 1974) of a childbearing mother. Certain events, no education, low education, difficulties arising from poverty, loss or no good source of livelihood can result in depression among childbearing mothers because the aforementioned situation has the tendency of not fostering positive reinforcement. Studies on depression among childbearing mothers have been broadly conducted, but to the best of the researchers knowledge there seem to be dearth of research on association between education and depression among childbearing mothers in Nsukka Local Government Area. It is against this backdrop that the researchers investigated the association between education and depression among childbearing mothers accessing healthcare facilities in Nsukka LGA

Purpose of the Study

The general purpose of the study was to examine the association between education and depression among childbearing mothers accessing healthcare facilities in Nsukka LGA. Specifically, the study determined the:

1. Proportion of childbearing mothers assessing healthcare services in Nsukka Local Government area experiencing depression
2. Proportion of childbearing mothers assessing healthcare services in Nsukka Local Government area experiencing depression based on educational level

Research Questions

1. What is the proportion of childbearing mothers assessing healthcare services in Nsukka Local Government Area experiencing depression?
2. What is the proportion of childbearing mothers assessing healthcare services in Nsukka Local Government Area experiencing depression based on educational level?

Hypothesis

1. There is no significant difference in the proportion of childbearing mothers assessing healthcare services in Nsukka Local Government Area who experienced depression based on level of education.

Methods

The study adopted a descriptive survey design. The population of the study comprised childbearing mothers accessing healthcare services in Nsukka Local Government Area. Nsukka Local Government Area is in Enugu-North senatorial district, located 60 kilometers North of Enugu State Nigeria. The inhabitants comprise mainly of Igbo ethnic nationality. They are mainly farmers, palm wine tappers, petty traders, civil servants and childbearing mothers who assess healthcare services within the area. The population of the study consisted of 6,400 childbearing mothers assessing healthcare services in Nsukka Local Government Area, Enugu State. The sample of this study consisted of 380 childbearing mothers accessing healthcare services in Nsukka Local Government Area. This is in line with the suggestion of Cohen,

Manion and Morrison (2011), that when population size is 5000 and above at 95 per cent confidence level (5% intervals), the sample size should be 357 and above. The instrument for data collection was Patient Health Questionnaire (PHQ-9). The PHQ-9 was developed by Spitzer, Kroenke, and Williams in 1999. The PHQ-9 is a 9-question multiple choice instrument composed of 9 items relating to symptoms of depression such as little interest or pleasure in doing things; hopelessness; poor appetite or overeating as well as feeling tired or having little energy. The PHQ-9 scores can range from 0 to 27, since each of the 9 items can be scored from 0 (not at all) to 3 (nearly every day). Scores from 10 and above represent cut points for the presence of depression. The research questions were answered using frequencies and percentages. The null hypotheses were tested at .05 level of significance and appropriate degrees of freedom using Chi-Square statistics.

Results

The findings are presented in tables according to data answering the research questions and data testing the hypotheses.

Research question one: What is the proportion of childbearing mothers assessing healthcare services in Nsukka Local Government Area who experienced depression? Data answering this research question are contained in Table 1.

Table 1

Mean Responses on PHQ-9 and Proportion of Childbearing Mothers Assessing Healthcare Services in Nsukka Local Government Area Who Experienced Depression (n=363)

s/n	Items on PHQ-9	\bar{x}	SD
1	Little interest or pleasure in doing things	.89	.984
2	Feeling down, depressed, or hopeless	.83	.951
3	Trouble falling or staying asleep, or sleeping too much	1.14	1.075
4	Feeling tired or having little energy	1.00	1.000
5	Poor appetite or overeating	1.08	1.117
6	Feeling bad about yourself or that you are a failure or have let yourself or your family down	.65	.970
7	Trouble concentrating on things, such as reading the newspaper or watching television	1.44	1.232
8	Moving or speaking so slowly that other people could have noticed. Or the opposite being so fidgety or restless that you have been moving around a lot more than usual	.64	.879
9	Thoughts that you would be better off dead, or of hurting yourself	.52	.887
Depression status of childbearing mothers		F	%
Depressed		131	36.1
Not depressed		232	63.9

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

Results in Table 1 show that overall, 36.1 per cent of childbearing mothers assessing healthcare services in Nsukka Local Government Area experienced depression.

Research question two: What is the proportion of childbearing mothers assessing healthcare services in Nsukka Local Government Area who experienced depression based on level of education? Data answering this research question are contained in Table 2.

Table 2

Proportion of Childbearing Mothers Assessing Healthcare Services In Nsukka Local Government Area Who Experienced Depression Based on Level of Education (n=363)

s/n	Depression status of childbearing mothers	NFE (n=11) f(%)	PE (n=77) f(%)	SE (n=154) f(%)	TE (n=121) f(%)
1	Depressed	7(63.6)	49(63.6)	48(31.2)	27(22.3)
2	Not depressed	4(36.4)	28(36.4)	106(68.8)	94(77.7)

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

Key: NFE=No formal education, PE=Primary education, SE= secondary education, TE=Tertiary education

Results in Table 2 show that overall, childbearing mothers assessing healthcare services in Nsukka Local Government Area with no formal education (63.6%) and primary education (63.6%) experienced depression more than those with secondary education (31.2%) and tertiary education (22.3%).

Hypothesis: There is no significant difference in the proportion of childbearing mothers assessing healthcare services in Nsukka Local Government Area who experienced depression based on level of education. Data testing this hypothesis are contained in Table 3.

Table 3

Chi-Square Test of No Significant Difference in the Proportion of Childbearing Mothers Assessing Healthcare Services in Nsukka Local Government Area who Experienced Depression Based on Level of Education (n=363)

Level of Education	N	Depressed O(E)	Not depressed O(E)	X ²	Df	p-value
No formal Education	11	7(4.0)	4(7.0)	40.524	3	.000
Primary Education	77	49(27.8)	28(49.2)			
Secondary Education	154	48(55.6)	106(98.4)			
Tertiary Education	121	27(43.7)	94(77.3)			

Key: O = Observed frequencies; E = Expected frequencies

Results in Table 7 showed the Pearson Chi-square value with the corresponding p-value for hypothesis of no significant difference in the proportion of childbearing mothers assessing healthcare services in Nsukka Local Government Area who experienced depression based on level of education. ($\chi^2 = 40.524$, $p = .000 < .05$). Since the p-value was less than .05 level of significance, the null hypothesis was therefore rejected. This implies that there was a significant difference in the proportion of childbearing mothers assessing healthcare services in Nsukka Local Government Area who experienced depression based on level of education.

Discussion

Results in Table 1 showed that overall, 36.1 per cent of childbearing mothers assessing healthcare services in Nsukka Local Government Area experienced depression. This finding was expected and not surprising because childbearing mothers are faced with different challenges at this stage of their lives. The process of adapting to new schedules and workloads, adjusting to life with a child or without a child can pose a great challenge to these childbearing mothers. Dealing with these challenges can trigger depression among childbearing mothers.

This is in line with Wemakor and Mensah (2016) who found depression among Northern Ghana mothers to be 27.8 per cent. The rate increased two years after as reported by Wemakor and Iddrisu (2018) that depression in Northern Ghana mothers was 33.5 per cent. The findings were also consistent with Kardaş and Okumuş, (2021) who reported that 33.9 per cent of the women of reproductive age evaluated had depression. The findings contradict Gebregziabher et al. (2020) who reported that depression among postpartum mothers was 7.4% per cent. The findings also contradict Zhou, Ko, Haight and Tong (2019) whose findings indicated depression among childbearing mothers to be 1.6 per cent. The findings of the present study could be as result of childbearing mothers experiencing more stress due to pressures from raising children. The findings will have implication for health educators who will utilize the result in educating childbearing mothers on the high risks of depression as a result of motherhood. The results would also be beneficial to the ministry of health in planning appropriate health interventions centered on preventing depression among childbearing mothers.

Findings in Table 3 showed that overall, childbearing mothers assessing healthcare services in Nsukka Local Government Area with no formal education and primary education experienced depression more than those with secondary education and tertiary education. The corresponding hypothesis in Table 7 showed that there was a significant difference in the proportion of childbearing mothers assessing healthcare services in Nsukka Local Government Area who experienced depression based on level of education. The findings were expected and not surprising because childbearing mothers with high educational attainments are more exposed to health awareness programmes that will prevent them from being depressed. This is in line with the findings of Matsumura, Hamazaki, Tsuchida, Kasamatsu and Inadera (2019) that a lower education level was associated with a higher prevalence of postpartum depression and related symptoms. It is also in line with Kotimäki, Härkönen, Karlsson, Karlsson and Scheinin (2020) that higher education predicted lower maternal depressive symptoms. The findings disagree with Bener, Sheikh and Gerber (2012) that depression was higher in women with higher level of education. The findings also disagree with Agarwala, Arathi Rao and Narayanan (2019) that higher level of education of the mothers increased the risks of developing maternal depression. This discrepancy is likely to be related to the influences of study time and location. The findings may be beneficial to the ministry of education in providing educational opportunities that take care of the mental health of childbearing mothers.

Conclusion

The study investigated depression among childbearing mothers assessing healthcare services in Nsukka Local Government Area, Enugu State. The findings showed that, childbearing mothers assessing healthcare services in Nsukka Local Government Area experienced depression. Depression among childbearing mothers assessing healthcare services in Nsukka Local Government Area varied among socio-demographic variables. There was no significant difference in the proportion of childbearing mothers assessing healthcare services in Nsukka Local Government Area who experienced depression based on age. There was a significant difference in the proportion of childbearing mothers assessing healthcare services in Nsukka Local Government Area who experienced depression based on level of education, marital status and level of income.

Recommendations

1. Health educators should plan adequate health programs that reach out to childbearing mothers who do not have access to formal education

2. The government at all levels, should provide quality healthcare services with mental health professionals that will be helping depressed mothers.
3. Health educators and counselors should provide adequate guidance that address the mental and emotional health problems of childbearing mothers such as depression.

Limitations of the Study

The following limitations were encountered in the course of this study:

1. The study was conducted only among childbearing mothers in Nsukka Local Government Area, which is not a representative of the entire Enugu State and therefore restricts the findings of the study.

Suggestions for Further Studies

1. Further studies should be carried out on knowledge of the effects of depression among childbearing mothers assessing healthcare services in Nsukka Local Government Area, Enugu State.
2. Further studies should be carried out on prevalence of depression among childbearing mothers assessing healthcare services in South East, Nigeria.

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