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Determinants of Attitude Towards Depression and Suicidal Ideation Among Postpartum Women in Southern Nigeria

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Running title: Attitude towards depression and suicidal ideation among postpartum women

Objective: The objective of this study was to assess the determinants of attitude towards depression and suicidal ideation among postpartum women in Southern Nigeria. **Methods:** An analytical cross-sectional study using interviewer-administered structured questionnaires involved 480 mothers attending the postnatal clinics at the University of Benin Teaching Hospital, Benin City, Edo State. Data collected was analyzed using SPSS version 25. 0 statistical software with statistical significance set at $P < 0.050$. **Results:** The mean age of respondents studied was 31.3 ± 5.7 years. Four hundred and forty-four (92.5%) and 36 (7.5%) respondents had negative and positive attitudes towards depression and suicidal ideation, respectively. Age (OR = 0.809; 95%CI = 0.725 – 0.905; P <0.001), marriage type (OR = 0.177; 95% CI = 0.045 – 0.696; P = 0.013), and skill level (OR = 30.240; 95% CI = 2.991 – 305.78; P = 0.004) of respondents were significant predictors of positive attitude. **Conclusion:** The majority of respondents studied had negative attitudes towards depression and suicidal ideation. Women should be encouraged to seek professional help when they notice symptoms and signs suggestive of depression and suicidal ideation.

Keywords: Attitude, Depression, Nursing Mother, Suicidal Ideation, Postpartum

Introduction

Depression is a major public health problem that is twice as common in women than men during their childbearing years.[1] A common mental health problem during the postnatal period is postpartum depression (PPD). According to the Diagnostic and Statistical Manual of Mental Disorders, fourth edition (DSM-IV), an episode of depression is considered to have postpartum onset if it begins within four weeks after delivery.[2] Postpartum depression can evolve from pre-existing postpartum blues or may arise spontaneously; it usually becomes apparent after the first week of delivery and may last for up to fourteen months.[3]

Postpartum depression (PPD) affects about 11% – 42% of women following childbirth. In

Africa, the prevalence of PPD is 10% - 32%. [3] PPD can affect a woman's social adjustment after birth, her marriage, and her bonding with her child.[3] Although the cause of PPD is unknown, it has been linked to a variety of risk factors such as a prior history of depression, cigarette smoking, unplanned and unwanted pregnancy, low socioeconomic status, marital status, maternity blues, poor marital relationship, and endocrine disorders such as postpartum thyroid dysfunction.[3-4]

In PPD, women present with depressive symptoms in addition to feeling inadequate and frustrated with taking care of their babies.[3] Depressive symptoms include depressed mood, loss of interest or pleasure in things previously enjoyed, feelings of guilt, low self-worth, disturbed sleep, low or increased appetite, low energy, poor concentration, substantial impairment in social and occupational functioning, and frequent thoughts of self-harm.[2] The risk of suicide is approximately 10 times greater in women who have a history of suicide attempts and 7 times greater in those who have a history of suicidal ideation.[1]

PPD negatively affects children's development and maternal health.[3-4] It has been linked to hostile mother-child communication and may even lead to suicide or infanticide.[3-4] If left untreated, it can evolve into recurrent depression in the mother and emotional, cognitive, behavioral, and interpersonal problems in her child.[3]

Despite being a harmful condition, postpartum depression is not readily recognized in our society. This could be a result of many factors, such as negligence by physicians to look for tell-tale signs, poor knowledge of PPD in the mothers, lack of facilities to cater to the needs of those suffering from PPD, and social and cultural stigma associated with seeking help and or not accepting or admitting that they are affected.

The specific objective of this study was to assess determinants of attitude towards PPD among postpartum women attending postnatal clinics at the University of Benin Teaching Hospital, Southern Nigeria.

Material and Method

Study Area

The study was conducted in the postnatal clinics at the University of Benin Teaching Hospital (UBTH), Benin City, Edo state, Nigeria. UBTH is located in the South-south geopolitical zone of Nigeria and is a significant reference point for obstetric and gynecological care treatment and support in the country.[5] Edo State has a land mass of 19,743sq/km and lies between latitudes 6°23'55''N to 6°27'39''N and longitudes 5°36'18'E to 5°44'18''E. The projected population of Edo state as of 2021 is 4,847,769.[5-6]

The University of Benin Teaching Hospital (UBTH) is a tertiary health facility in Egor Local Government Area along Benin-Ore Road. It has 33 departments, one of which is the obstetrics and gynecology department.[7] The obstetrics and gynecology department has four units. The antenatal and postnatal clinics are run every Monday, Tuesday, Thursday, and Friday. The average number of women seen per day is 100.

Selection Criteria

Nursing mothers in their reproductive age (15-49 years) attending post-natal clinics who were willing to participate in the study were interviewed. This category of respondents was selected for the study because they have gone through the experience of pregnancy and childbirth and, as such, will be most appropriate to share their expertise and knowledge on this crucial subject matter of post-natal depression. As such, those respondents who met the above inclusion criteria and were willing to participate in the study were included, while those who were unwilling to participate and declined were excluded.

Research Design

An analytical cross-sectional study was conducted among 426 nursing mothers receiving postnatal care at the University of Benin Teaching Hospital, who were selected using a systematic sampling technique. This sample size was calculated using the Cochrane formula[8] using a PPD prevalence of 52.3% from an earlier study[9] and a nonresponse rate of 10%. A semi-structured self-administered questionnaire was used to collect data. Pretesting was conducted among 40 respondents at the postnatal clinic's Obstetrics and Gynaecology Department in Central Hospital, Benin City.

Statistical Analysis

Data was collected, screened, and collated thoroughly for completeness and correctness. The data was coded and entered into the International Business Machines Corporation Social Sci-

ence (IBM SPSS) version 25.0 statistical software for analysis. Results were presented as prose, frequency, and proportion for univariate analysis, while bivariate analysis to test for association of outcome variables (attitude towards postpartum depression) was done using a chi-square test with Fisher's exact tests conducted when frequency in cells was less than 5 in about 20% of the cells of the contingency tables. Furthermore, multivariate analysis was performed using logistic regression modeling to identify predictors of attitude towards postpartum depression (PPD) among study respondents, with statistical significance set at P< 0.050 at a 95% confidence interval.

The attitude was assessed using 23 questions (with a reliability value of 0.762). On the Likert scale, every appropriate response was given a score of "1," while an inappropriate response was a score of "0," making a total of 23-point scores. This was converted into percentage scores, and respondents who scored 50% and above were categorized as having positive attitudes toward depression and suicidal ideation. In comparison, those with < 50% were classified as having negative attitudes towards depression and suicidal ideation.

Ethical Statement

Ethical approval (ADM/E 22/A/VOL.VII/148301976) was obtained from the Ethical and Research Committee, UBTH. Departmental approval was obtained from the Head of the Department of Obstetrics and Gynaecology at the University of Benin Teaching Hospital before the commencement of the study. Furthermore, individual verbal consent was obtained from each respondent before administering the questionnaire, and they were assured of the anonymity and confidentiality of the information provided. At the end of the interview, respondents were provided health information on the definition, risk factors, joint presentation, and where to seek care when affected.

Results

In relation to the socio-demographic characteristics of respondents studied (Table 1).

Table 1. Socio-demographic characteristics of respondents (n = 480)

Variable	Frequency (%)
Age group (years)	
20 – 29	175 (36.5)
30 – 39	268 (55.8)
≥ 40	37 (7.7)
Mean ± SD = 31.3 ± 5.7	
Parity	
1 – 4	448 (93.7)
> 4	32 (6.7)
Mean ± SD = 2.7 ± 1.1	
Religion	
Christianity	408 (85.0)
Islam	66 (13.8)
ATR	6 (1.3)
Marital status	
Ever married	451 (94.0)
Never married	29 (6.0)
Marriage type	
Monogamous	331 (85.8)
Polygamous	68 (14.2)
Level of education	
No formal education	20 (4.2)
Primary	75 (15.6)
Secondary	154 (32.1)
Tertiary	231 (48.1)
Skill level	
Skill level 0	12 (2.5%)
Skill level 1	14 (2.9)
Skill level 2	285 (59.4)
Skill level 3	38 (7.9)
Skill level 4	131 (27.3)
Household size	
1 – 6	363 (75.6)
> 6	117 (24.4)
Household income	
< 30,0000 naira	34 (7.1)
≥ 30,000 naira	446 (92.9)

The mean age of respondents was 31.3 ± 5.7 years. Majority 408 (85.0%), and 451 (94.0%) practiced Christianity and were married respectively. The majority, 331(83.0%) of those who were married were in a monogamous marriage Most, 231 (48.1%) and 285 (59.4%) of the respondents had a tertiary level of education and were in skill level 2, respectively. The mean parity was 2.7 ± 1.1 children. Two hundred and fifty-five (53.1%) had a household size of 1 – 5, and 306 (63.7%) had monthly income of 30,000 – 100,000 naira. With awareness of depression and suicidal ideation, all the respondents studied had heard of the term depression 480 (100.0%), while a gap exists in terms of suicidal ideation. The primary source of information was the internet [241 (50.2); 284 (80.2)] and television [366 (76.3); 274 (77.4)] for depression and suicidal ideation, respectively

Also, concerning attitudinal responses of respondents studied towards depression and suicidal ideation (Table 2).

Table 2. Attitudinal responses towards Suicidal Ideation and Depression (DSI) among Respondents (n=480)

№	Frequency (%)	Attitudinal Responses	
		Appropriate Freq (%)	Inappropriate Freq (%)
1.	Suicidal ideation can occur after pregnancy	241 (50.2)	239 (49.8)
2.	Postpartum women with suicidal ideation need help	260 (54.2)	220 (45.8)
3.	Postpartum women with suicidal ideation should be stigmatized and considered weak	342 (71.3)	138 (28.7)
4.	Persons with suicidal ideation do not need help	348 (72.5)	132 (27.5)
5.	Suicidal ideation is a normal healthy process after pregnancy	375 (78.1)	105 (21.8)
6.	Persons with suicidal ideation should be allowed to go through it on their own	360 (75.0)	120 (25.0)
7.	Persons with suicidal ideation have demons and should seek spiritual help	354 (73.8)	126 (26.2)
8.	Discussions on suicidal ideations are a taboo	308 (64.2)	172 (37.8)
9.	Persons with suicidal ideation should see a psychologist	308 (64.2)	172 (37.8)
10.	Persons with suicidal ideation should talk to friends and family	296 (61.7)	184 (38.3)
11.	Persons with suicidal ideation should talk to trusted family members	315 (65.6)	165 (34.4)
12.	Persons with suicidal ideation should immediately report to a mental facility	235 (49.0)	245 (51.0)
13.	Depression can occur after birth	158 (32.9)	322 (67.1)
14.	Persons with depression need help	303 (63.1)	177 (26.9)
15.	Persons with depression should be stigmatized and regarded as weak	340 (70.8)	140 (29.2)
16.	Depression after pregnancy does not require treatment	365 (76.0)	115 (24.0)
17.	Depression is a normal healthy process after pregnancy	353 (73.5)	127 (26.5)
18.	Persons with depression should be allowed to go through it on their own	400 (83.3)	80 (16.7)
19.	Persons with depression have demons and should seek spiritual help	401 (83.5)	79 (16.5)
20.	Discussions on depression is a taboo	388 (80.8)	92 (19.2)
21.	Persons with depression should see a psychologist	260 (54.2)	220 (45.8)
22.	Persons with depression should talk to trusted friends and family members	363 (75.6)	117 (24.4)
23.	Persons with depression should immediately report to a mental health facility	248 (51.7)	232 (48.3)

Half (50.2%) and almost a third (32.9%) of respondents had appropriate attitudinal responses that suicidal ideation and depression could occur after pregnancy, respectively. In more than three quarters, 78.1% (375) had an appropriate attitudinal response that suicidal ideation is a normal healthy process after pregnancy, and 64.2% (308) respondents appropriately asserted that discussions about suicidal ideation were not taboo. Similarly, 83.5% (401) appropriately affirmed that individuals with depression do not have demon's spiritual help. The majority, 83.3% (400), disagreed that postpartum women with depression should be allowed to go through it on their own.

Most, 64.4% (309) and about half, 49.0% (235), appropriately agreed that persons with suicidal ideation should see a psychologist and report to a mental health facility. Similarly, 54.2% (260) and 51.7% (248) of respondents agreed that individuals with depression should see a psychologist and immediately report to a mental health facility.

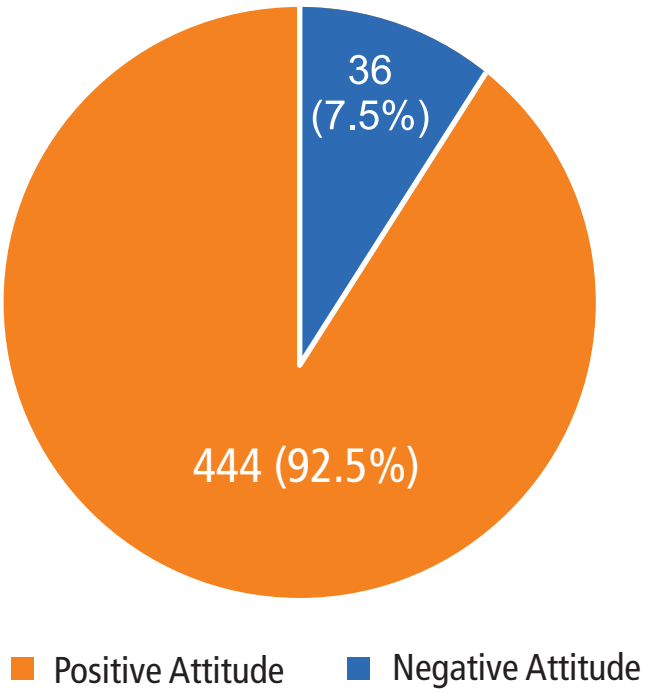

Figure 1: Attitude toward Depression and Suicidal ideation (DSI) among respondents

Furthermore, with the attitude of respondents towards depression and suicidal ideation (See Figure 1), 444 (92.5%) respondents studied had negative attitudes towards depression and suicidal ideation, while the remaining 7.5% (36) had positive attitudes.

In relation to factors associated with attitude towards depression and suicidal ideation (see Table 3), a significant association was identified with age ($p<0.001$), religion ($p=0.003$), marriage type ($p=0.004$), level of education ($p=0.003$), skill level ($p<0.001$), household size ($p=0.002$), and knowledge of depression ($p=0.003$). Parity ($p=0.287$), Marital Status ($p>0.999$), and Household income ($p=0.164$) were not significant factors associated with knowledge of depression and suicidal ideation among respondents studied.

Finally, with determinants of attitude towards depression and suicidal ideation among nursing mothers studied (Table 4), respondent's age, marriage type, and skill level were identified as statistically significant determinants of attitude towards suicidal ideation and depression. Positive attitude towards depression and suicidal ideation was found to decrease with increasing age in years significantly (OR = 0.859, CI = 0.783 – 0.942, P = 0.001). Respondents who were in a monogamous marriage were less likely to have a positive attitude towards depression and suicidal ideation when compared with those who were in a polygamous marriage (OR = 0.229, CI = 0.084 – 0.628, P = 0.004). Respondents who were Skill level 2/3 were more likely to have a positive attitude (OR = 39.346, CI = 5.215 – 296.854, P = 0.165) towards depression and suicidal ideation when compared to those with Skill level 1.

Discussion

The mean age of respondents studied is in keeping with the female reproductive age group. Most respondents were married and had a secondary level of education. The high level of literacy can be linked to the study location. It has been shown that persons in the South-South region of Nigeria have the second highest literacy level after the South-west geographical region of Nigeria.[10]

The majority of the respondents studied had a high level of awareness of depression and suicidal ideation. This may be in keeping with the high literacy rate of the respondents studied,

Table 3: Factors associated with attitude towards depression and suicidal ideation (DSI) among respondents (n = 480)

Variable	Attitude towards DSI		χ^2	P-value
	Negative attitude (n = 444) Freq (%)	Positive attitude (n = 36) Freq (%)		
Age group (years)				
<30	151 (86.3)	24 (13.7)	15.423	0.001*
≥30	293 (96.1)	12 (3.9)		
Parity				
1 – 4	416 (92.9)	32 (7.1)	0.584**	0.287
> 4	28 (87.5)	4 (12.5)		
Religion				
Christianity	384 (94.1)	24 (5.9)	11.065	0.003*
Islam/ATR	60 (83.3)	12 (16.7)		
Marital status				
Ever married	417 (92.5)	34 (7.5)	0.016**	> 0.999
Never married	27 (93.1)	2 (6.9)		
Marriage type				
Monogamous	319 (96.4)	12 (3.6)	10.448	0.004*
Polygamous	59 (86.8)	9 (13.2)		
Level of education				
No formal education	15 (75.0)	5 (25.0)	15.539	0.003*
Primary	66 (88.0)	9 (12.0)		
Secondary	141 (91.6)	13 (8.4)		
Tertiary	222 (96.1)	9 (3.9)		
Skill level				
Skill level 0,1,2,3	317 (90.8)	32 (9.2)	20.002**	<0.001*
Skill level 4	127 (96.9)	4 (3.1)		
Household size				
1 – 6	344 (94.8)	19 (5.2)	11.021	0.002*
> 6	100 (85.5)	17 (14.5)		
Household income				
< 30,0000 naira	29 (85.3)	5 (14.7)	2.739	0.164
≥ 30,000 naira	415 (93.0)	31 (7.0)		
Knowledge of DSI				
Good	298 (95.2)	15 (4.8)	9.507	0.003*
Poor	146 (87.4)	21 (12.6)		

Table 4: Determinants of Attitude towards Depression and Suicidal Ideation (DSI)

Determinants	Odds ratio	95% CI for OR		P-value
		Lower	Upper	
Age	0.809	0.724	0.905	< 0.001*
Parity	1.566	0.955	2.571	0.076
Religion				
Christianity	0.942	0.231	3.835	0.934
Islam/ ATR	1			
Marriage type				
Monogamous	0.177	0.045	0.696	0.013*
Polygamous	1			
Level of Education				
Marital status				
No Formal Education	7.374	0.970	56.059	0.054
Primary	1.679	0.380	7.422	0.495
Secondary	1.371	0.327	5.749	0.667
Tertiary	1			
Skill level				
Level of education				
Skill level 0	0.965	0.042	22.038	0.982
Skill level 1	30.240	2.991	305.787	0.004*
Skill level 2 & 3	3.212	0.536	19.249	0.202
Skill level 4	1			
Household Size	0.856	0.626	1.171	0.331
Household income				
< 30,0000 naira	3.854	0.353	42.049	0.269
≥ 30,000 naira	1			

*CI = Confidence Interval, OR = Odds Ratio *statistically significant*

which is also in keeping with the location of the study.[10] However, it is worth noting that none of the respondents studied attributed their source of information to the healthcare providers. Therefore, this provides an excellent opportunity to leverage the postnatal clinics and the resources inherent to provide verifiable information on this growing public health concern to aid early detection, treatment, care, and support.

Furthermore, the majority of the respondents had a negative attitude toward postpartum depression and suicidal ideation in this study. Nearly two-thirds did not agree that discussing suicidal ideations among women with postpartum depression was taboo, and about half thought that women with postpartum depression should seek help from a psychologist.

About factors associated with depression and suicidal ideation, respondent's age, religion, marriage type, level of education, skill level, household size, and knowledge of depression were identified as significant factors based on bivariate analysis. Still, multivariate analysis to address possible confounders narrowed the predictors of attitude towards depression and suicidal ideation in this study to the age of respondents, marital type, and skill level. The findings in this study are similar to those of a study done in Malaysia[11], where most had a negative attitude

towards postpartum depression and suicidal ideation, but in contrast to studies in the southwest[9], where most respondents had a positive attitude towards postpartum depression and suicidal ideation. This identified attitude towards depression and suicidal ideation among respondents is suggestive and reflective of growing concern and prevalence of depression and suicidal ideation among women in their reproductive cycle and the need to pay additional attention to their mental health as reported in the literature[12-18]

The effect of age may be linked to the fact that older women are more likely to have more experience and coping mechanisms for life challenges and stress, including postpartum depression and suicidal ideation, when compared to the younger respondents. Furthermore, respondents who were in a polygamous setting were significantly more likely to have a positive attitude towards depression and suicidal ideation compared to those in a monogamous setting. This may be a result of stress, unhealthy competition, and other vices that may be associated with such settings that may impact negatively on the mental health and well-being of the respondents. With the large household size in polygamous settings, respondents were preoccupied with the care of the many members, which resulted in poor attention to issues relating to mental wellness. Finally, respondents in the higher-skill class were more likely to have positive attitudes toward depression and suicidal ideation compared to those in the lower class. This could be attributed to additional mental and work stress associated with the work environment, thus possibly providing additional opportunities to impact negatively on the respondent's mental health if not well managed. This finding further highlights the need to screen periodically the mental health of women in their reproductive age both in formal public and private sectors. A negative attitude towards postpartum depression and suicidal ideation may be beneficial as it would allow for the provision of adequate support for affected women, contributing positively to their care, support, and recovery.[9,11, 19-20] This is because affected women can speak up and seek help early without any associated stigma. Also, mental health literacy awareness during postnatal clinic visitation will be helpful and effective in addressing the concerns on this fundamental subject matter, as relevant questions can be easily raised in such settings to improve further knowledge and prevention of postpartum depression and suicidal ideation.

Limitations

Data collected was based on self-reporting as we had to rely on information provided by the respondents, in addition to the time lag between childbirth and the actual interview, which may have introduced some recall bias in the study. The above concerns may have influenced the study's outcome, although timelines were used to reduce the recall bias. Areas of future research would be to ascertain the actual prevalence and attendant predictors of depression and suicidal ideation among nursing mothers in the study area; this will help assess the actual burden of this public health challenge.

Conclusion

The majority of respondents studied had negative attitudes towards depression and suicidal ideation. There is a need to raise awareness and leverage the opportunities from postnatal care clinics to raise awareness on depression and suicidal ideation, especially by health care providers. Women should be assisted with support systems and encouraged to seek professional help when they notice symptoms and signs suggestive of depression and suicidal ideation.

Conflict of interest

The authors state this study has no conflict of interest. The Authors entirely sponsored the research.

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