

West African Journal of Education

VOL. XXXVIII, 2018 ISSN: 0043-2997

CONTENTS

TAYO OMONIYI, ADEDOYIN A. ADEBANJO & OLUWAKEMI D. OLURINOLA	Effects of Dick and Carey Instructional Model and Learning Styles on Secondary School Students' Attitude Towards Biology
ABIODUN A. ATANDA & JOSEPH A.ADEGBILE	Effect of Dialogic Discourse Instructional Strategy on Reading Comprehension Learning Outcomes among Senior Secondary School Students in Oyo State, Nigeria
OLAYINKA A. ONASOGA, JOEL A. AFOLAYAN, SIMEON K. OLUBIYI, JOEL O. ALUKO, UMAR N. JIBRIL& GBEMI GBEMINIYI	Perception and Willingness of Clinical Students to Care for HIV/AIDS Patients in a Teaching Hospital in Kwara State
SURAJU A. ADEYEMI, TERHEMBA G. ATSUA & NKEM ADEYEMI-ADEWOYIN	Developing Higher Education in Nigeria Through Public- Private Partnership Initiatives
MOJISOLA A. OGUNSANWO	Work-health Information Seeking Behaviour among Manual Workers in Selected Higher Institutions, Nigeria
TITILAYO IYABODE MAMADELO	Teachers' Knowledge of Metacognition, Possession of Textbook and Gender as Predictors of Students' Achievement in English Reading Comprehension in Abeokuta, Ogun State
EZEKIEL OLUSEGUN BABATUNDE & BUKOLA OLUSOLA ELEMIDE	Assessing Determinants of Students' Achievement in Senior Secondary School Biology
ABIMBOLA G. OWOLABI & JOEL O. ALUKO	Postpartum Depression's Risk Factors among Mothers in Ondo State, Nigeria
TAIWO T. SANGODOYIN	Strengthening Mathematics and Science Education Programme: Implications for Mathematics Teachers and Pupils in Primary Schools in Oyo State, Nigeria
FELIX OSA IBODE & GRACE ODOAREFE, OLAMIGOKE	An Assessment of Availability, Adequacy and Utilisation of Information and Communication Technology in Universities in South-West, Nigeria

PUBLISHED BY THE INSTITUTE OF EDUCATION, UNIVERSITY OF IBADAN ON BEHALF OF PARTICIPATING WEST AFRICA UNIVERSITIES AND MINISTRIES OF EDUCATION

EDITORIAL STATEMENT

The XXXVIII Volume of WAJE is presented to the reading public in this edition. Eight equally exciting, carefully researched and well written articles that span many areas of education and evaluation are contained in the edition.

WAJE continues to produce quality articles in order to maintain her leadership position in the West African sub-region as a repository for academic and scientific information in the field of education and evaluation. The 10 articles covered interesting issues that include: Effects of Dick and Carey Instructional Model and Learning Styles on Secondary School Students' Attitude Towards Biology; Effect of Dialogic Discourse Instructional Strategy on Reading Comprehension Learning Outcomes among Senior Secondary School Students in Oyo State, Nigeria; Perception and Willingness of Clinical Students to Care for HIV/AIDS Patients in a Teaching Hospital in Kwara State; Developing Higher Education in Nigeria Through Public- Private Partnership Initiatives; Work-health Information Seeking Behaviour among Manual Workers in Selected Higher Institutions, Nigeria; Teachers' Knowledge of Metacognition, Possession of Textbook and Gender as Predictors of Students' Achievement in English Reading Comprehension in Abeokuta, Ogun State; Assessing Determinants of Students' Achievement in Senior Secondary School Biology; Postpartum Depression's Risk Factors among Mothers in Ondo State, Nigeria; Strengthening Mathematics and Science Education Programme: Implications for Mathematics Teachers and Pupils in Primary Schools in Oyo State, Nigeria and Assessment of Availability, Adequacy and Utilisation of Information and Communication Technology in Universities in South-West.
We present the rich XXXVIII edition for your research consultation and reading pleasure.

Thank you.

Eugenia A. Okwilagwe
Editor

EDITORIAL COMPOSITION

Editor	-	Professor Eugenia A. Okwilagwe
Assistant Editors:	-	Professor Folajogun V. Falaye
	-	Dr Monica N. Odinko
Review Editor	-	Dr J. O. Adeleke
Production Editor	-	Dr B. A. Adegoke
Copy Editors	-	Professor J. A. Adegbile
	-	Dr Ikmat O. Junaid

EDITORIAL BOARD

Professor T. W. Yoloye, Institute of Education, University of Ibadan, Nigeria
Professor J. G. Adewale, Institute of Education, University of Ibadan, Nigeria
Professor J. F. Joseph Aboagye, University of Cape Coast, Ghana
Professor J. F. Wiredu, University of Ghana, Legon Accra Campus, Ghana
Professor Abdul Mansaray, University of Sierra Leone, Sierra Leone
Professor Kafiu Y. A. Etsey, University of Cape Coast, Ghana

EDITORIAL ADVISORS

Professor P. N. Okpala, Institute of Education, University of Ibadan, Nigeria
Professor E. Adenike Emeke, Institute of Education, University of Ibadan, Nigeria

CONSULTING EDITORS

Emeritus Professor P. A. I. Obanya, Institute of Education, University of Ibadan, Nigeria
Professor C. O. Onocha, Institute of Education, University of Ibadan, Nigeria

NOTES ON CONTRIBUTORS

Adebanjo A. Adedoyin, Lecturer, Department of Science and Technology Education, Olabisi Onabanjo University, Ago Iwoye, Ogun State, Nigeria.

Adegbile, Joseph A., Research Fellow, Institute of Education, University of Ibadan, Ibadan, Nigeria.

Adeyemi Suraju A., Ph.D Student, International Centre for Educational Evaluation (ICEE), Institute of Education, University of Ibadan, Ibadan, Nigeria.

Adeyemi-Adewoyin Nkem, Ph.D Student, International Centre for Educational Evaluation (ICEE), Institute of Education, University of Ibadan, Ibadan, Nigeria.

Afolayan, Joel A., Lecturer, Department of Nursing Sciences, Faculty of Clinical Sciences, College of Health Sciences, University of Ilorin, Kwara State, Nigeria.

Aluko, Joel O., Lecturer, Department of Nursing Sciences, Faculty of Clinical Sciences, College of Health Sciences, University of Ilorin, Kwara State, Nigeria

Atanda, Abiodun A., Ph.D Student, International Centre for Educational Evaluation (ICEE), Institute of Education, University of Ibadan, Ibadan, Nigeria.

Atsua, Terhemba G., Ph.D Student, International Centre for Educational Evaluation (ICEE), Institute of Education, University of Ibadan, Ibadan, Nigeria

Babatunde, Ezekiel O., Research Fellow, Institute of Education, University of Ibadan, Ibadan, Nigeria.

Elemide, Bukola O., Ph.D Student, International Centre for Educational Evaluation (ICEE), Institute of Education, University of Ibadan, Ibadan, Nigeria.

Gbeminiyi, Gbemi, Lecturer, Department of Nursing Sciences, Faculty of Clinical Sciences, College of Health Sciences, University of Ilorin, Kwara State, Nigeria

Ibode, Felix O., Reader, Institute of Education, University of Ibadan, Ibadan, Nigeria.

Jibril, Umar N., Lecturer, Department of Nursing Sciences, Faculty of Clinical Sciences, College of Health Sciences, University of Ilorin, Kwara State, Nigeria

Mamadelo, Titilayo I., Ph.D Student, International Centre for Educational Evaluation (ICEE), Institute of Education, University of Ibadan, Ibadan, Nigeria.

Ogunsanwo, Mojisola A., Lecturer, Institute of Education, Olabisi Onabanjo University, Ago Iwoye, Ogun State, Nigeria.

Oguntade, Mary M., Lecturer, Department of Nursing Sciences, Faculty of Clinical Sciences, College of Health Sciences, University of Ilorin, Kwara State, Nigeria

Olabiyi, Simeon K., Lecturer, Department of Nursing Sciences, Faculty of Clinical Sciences, College of Health Sciences, University of Ilorin, Kwara State, Nigeria

Olamigoke, Grace O., Ph.D Student, International Centre for Educational Evaluation (ICEE), Institute of Education, University of Ibadan, Ibadan, Nigeria.

Olurinola, Oluwakemi O., Lecturer, Department of Science and Technology Education, Olabisi Onabanjo University, Ago Iwoye, Ogun State, Nigeria

Omoniyi, Tayo, Lecturer, Department of Science and Technology Education, Olabisi Onabanjo University, Ago Iwoye, Ogun State, Nigeria

Onasoga, Olayinka A., Lecturer, Department of Nursing Sciences, Faculty of Clinical Sciences, College of Health Sciences, University of Ilorin, Kwara State, Nigeria

Owolabi, Abimbola G., Lecturer, Faculty of Nursing Sciences, University of Medical Science, Ondo City, Ondo State, Nigeria

CONTENTS

Effects of Dick and Carey Instructional Model and Learning Styles on Secondary School Students' Attitude Towards Biology
Tayo Omoniyi, Adedoyin Adebanjo A. & Oluwakemi Olurinola D. 1

Effect of Dialogic Discourse Instructional Strategy on Reading Comprehension Learning Outcomes among Senior Secondary School Students in Oyo State, Nigeria *Abiodun A. Atanda & Joseph A. Adegbile* 14

Perception and Willingness of Clinical Students to Care for HIV/AIDS Patients in a Teaching Hospital in Kwara State
Olayinka A. Onasoga, Joel A. Afolayan, Simeon K. Olubiyi, Joel O. Aluko, Umar N. Jibril & Gbemi Gbeminiyi 27

Developing Higher Education in Nigeria through Public- Private Partnership Initiatives
Suraju A. Adeyemi, Terhemba G. Atsua & Nkem Adeyemi-Adewoyin 38

Assessing Determinants of Students' Achievement in Senior Secondary School Biology
Ezekiel Olusegun Babatunde & Bukola Olusola Elemide 50

Work-health Information Seeking Behaviour among Manual Workers in Selected Higher Institutions, Nigeria
Mojisola A. Ogunsanwo 62

Teachers' Knowledge of Metacognition, Possession of Textbook and Gender as Predictors of Students' Achievement in English Reading Comprehension in Abeokuta, Ogun State
Titilayo Iyabode Mamadelo 71

Postpartum Depression's Risk Factors among Mothers in Ondo State, Nigeria *Owolabi Abimbola G. & Aluko Joel O.* 81

Strengthening Mathematics and Science Education Programme: Implications for Mathematics Teachers and Pupils in Primary Schools in Oyo State, Nigeria *Taiwo T. Sangodoyin* 93

Assessment of Availability, Adequacy and Utilisation of Information and Communication Technology in Universities in South-West, Nigeria *Felix Osa Ibode & Grace Odoarefe, Olamigoke* 102

Postpartum Depression's Risk Factors among Mothers in Ondo State, Nigeria

ABIMBOLA G. OWOLABI
Faculty of Nursing Sciences, University of Medical Science, Ondo City, Ondo State, Nigeria
abimbolaowolabi2018@gmail.com[1]

and

JOEL O. ALUKO
Department of Nursing Science, Faculty of Clinical Sciences, College of Health Sciences, University of Ilorin, Ilorin, Nigeria
joelforfavour@gmail.com[2]

Abstract

Studies from the developed countries, particularly in the West, have stressed psychosocial risk factors of postpartum depression (PPD). In developing nations like Nigeria, poor obstetrics practice and socio-demographic factors may contribute significantly to the risk of PPD. Mothers commonly experience some degree of depression during the first weeks after birth. Childbirth is accompanied by sudden hormonal changes that affect emotions. If not properly monitored, it may have actual or potential effects of varying severity. The postpartum period is a time to interact with mothers to elicit certain information so as to deduce their risk of PPD. The main objective of the study was to determine the postpartum depression risk factors among mothers in Ondo State, Nigeria. A cross sectional descriptive study design was used to select mothers purposively in various hospitals for maternal and child health services that were given at subsidised rate is to encourage the inflow of patients to the selected hospitals. Among the women, 43.8% had normal levels, 20.5% had mild mood disturbance, while 15.9% had moderate depression. The integration of six weeks appointment after childbirth is key to preventing PPD and identifying mothers at risk early enough.

Keywords: Postpartum depression, Risk factors, Multipara mothers, multigravida women, Ondo State

Introduction

Giving birth to a baby is a life changing event for a woman, her baby and the family. The period after childbirth is a time when the mother's body, including hormone levels and uterus size, return to the non-pregnant state. Postpartum depression (PPD) is a mental disorder that is related to several health and psychosocial problems in the mother and child (Barber, East &Graver, 2011).World Health Organisation (2014), described the

postpartum period as the most critical and yet the most neglected phase in the lives of mothers and babies; most deaths occur during this period. The United States reported 8 maternal postpartum depression cases per 100,000 births. In Nigeria, it affects 15% of women (Obindo, Ekwempu, Ocheke, Piwuna, Adegbe & Omigbodun, 2013) and it is one of the most recorded complications affecting women after childbirth. The onset of postpartum depression is gradual and may persist for many months. Mothers commonly experience some degree of depression during the first weeks after birth, because pregnancy and birth are accompanied by sudden hormonal changes that affect emotions.

Additionally, the 24 hours responsibility (involving immediate care of the new-born) for a new-born infant represents a major psychological and lifestyle adjustment for most mothers, even after the first child (American Psychiatric Association, 2010). Mothers experience several symptoms that are accompanied by important risk factors such as stress, lack of sleep, poor nutrition, lack of support from one's partner, problems with the baby's health, separation of mother and baby (Duffy, 2014) and changes in the hormones after delivery. However, the changes are essential for the well-being of the mother as they prepare her body for breastfeeding (Patel, Bailey, Jabeen, Ali, Barker, & Osiezagha, 2012). Postpartum depression can result from inadequate support from relatives and significant others, psychosocial factors, individual or family history of postpartum depression and having passed through mood depression or pregnancy induced anxiety. Relationship issues in pregnancy, stressful life events and experiences in former pregnancies and low socio-economic status have also been recognised as part of the risk factors for postpartum depression (Marian, 2010).

According to Earl (2010), the effects of postpartum depression include undesirable cerebral and social-emotional development of the child which may continue over time if the mother's state of health remains unresolved. The family, as a whole, is also disturbed by PPD and can lead to child abuse and abandonment, spousal problems, family violence, separation, and divorce (Marian, 2010). It affects the mood of the mother and makes her look shabby, irritable and guilty. The disorder can cause distress and impair a mother's ability to carry out her normal tasks, care for herself, and care of her baby (Beck, Hatton, Nakku, Nakasi & Mirembe, 2012). It can also lead to low self-esteem, and poor communication.

Screening of mothers six weeks after childbirth, having one-on-one interview and good communication with the mother may lead to identifying postpartum depression early so that timely interventions can be made (Araoye, 2013). The intervention consists of identifying women at risk, counselling, answering and providing solutions to some questions and fear from mothers and examining their ability in the new role. Since identifying postpartum depression in mothers is vital for mother and child's health and well-being, health professionals, especially midwives, are tasked with the responsibility of recognising and acknowledging the experiences of mothers with postpartum depression. They are to give adequate appointments at four to six weeks after birth and use risk assessment tools to ascertain women at risk of postpartum depression in order to take necessary steps to eliminate the disorder. Beck, (2010) observed that prevention of

this mood disorder is possible if midwives screen during appointments four to six weeks after childbirth. Secondary and tertiary prevention can also minimise the prevalence of postpartum depression if timely diagnosis, appropriate treatment and follow-ups are carried out.

Research Questions

This study was designed to answer the following research questions:
What are the socio-demographic characteristics of the postpartum mothers who bring their babies to child welfare clinics for immunisation?
What are the risk factors associated with postpartum depression among participants?
What are the levels of depression exhibited by the women at the time of data collection?

Materials and Methods

(i.) Research Design

The study adopted a cross sectional descriptive design to determine the risk factors of PPD among mothers in some selected hospitals in Ondo State.

(ii.) Target Population

The target population comprised postpartum mothers who utilised child welfare clinics of the State Specialist Hospital, Akure (SSHA), Mother and Child, Akure, State Specialist Hospital, Ondo (SSHO), and Mother and Child, Ondo for child immunization at six weeks after childbirth. This is equivalent to the end of the postpartum period.

(iii.) Sampling Technique and Sample

Accidental sampling technique was used to recruit 196 postpartum women for this study. The study participants were selected at the child welfare clinics of each purposively selected hospital based on its proximity and high client flow.

(iv.) Instrumentation

A four-section structured questionnaire was used as instrument for data collection. Section A elicited the socio-demographic characteristics of the participants, while Section B tested the participants' knowledge of postpartum depression. Section C contained postpartum depression-related items, while Beck's depression inventory was incorporated into the questionnaire as Section D. The instrument was validated by midwifery, obstetrics experts through scholarly review and critiquing. Consequently, vague and ambiguous items were restructured based on the comments and recommendations of the experts before data collection. The reliability of the questionnaire was determined using Cronbach's alpha and was found to be 0.8.

(v.) Method of Data Collection

The collection of the data spanned eight weeks. Two weeks were spent collecting data in each selected hospital. The participants were accessed at the regular child welfare clinics where they brought their babies for immunization. Written informed consent was obtained from the mothers before the questionnaire was administered.

First week

An introductory letter from the head of department of the Department of Maternal and Child Health Nursing, Babcock University, and a copy of the ethical clearance issued by the Ondo State Health Research and Ethics Committee were delivered to the heads of the study settings. The prospective participants were recruited and adequately informed about the study and its purpose.

Second week

Table 1: Participants' Population Distribution across Four Selected Hospitals

Days	SSHA	Mother & Child, Akure	SSHO	Mother &Child, Ondo
Tuesday	29	28	32	24
Thursday	22	23	20	18
Total	**51**	**51**	**52**	**42**

Table 1 shows the participants' population distribution across the four purposively selected hospitals. Informed consent was obtained from the participants in each selected facility across the state. Copies of the questionnaire were administered to all willing participants with the help of six (6) research assistants. A period of two weeks was spent for data collection in each facility; i.e. eight (8) weeks in all.

(vi.) Method of Data Analysis

Data collected were analysed using the statistical package for social sciences (SPSS). Descriptive statistics, such as frequency counts and percentages, were used to provide answers to the research questions. Thus, the findings were presented in frequency or percentage tables.

(vii.) Ethical Consideration

Ethical clearance was obtained from Ondo State Health Research and Ethics Committee. The clearance number for the study was "OSHREC/09/03/2018/041".

Results

Out of the 196 copies of the questionnaire administered to the participants 176 were retrieved and found suitable for analysis. Therefore, the response rate was 89.8%.

Research Question 1: What are the socio-demographic characteristics of postpartum mothers who bring their babies to child welfare clinics for immunisation?

In answering the question, the frequency count or percentage of each socio-demographic variable was performed as shown in Table 2.

Table 2: Socio-demographic Characteristics of the Postpartum Women (N = 176)

Socio-demographic Characteristics	Frequency	Percent
Age Group		
18 -34 years	133	75.6
35 - 50 years	43	24.4
Marital Status		
Single	15	8.5
Married	130	73.9
Cohabiting	27	15.3
Divorced/separated	1	0.6
Widowed	3	1.7
Ethnic Group		
Yoruba	123	69.9
Igbo	13	7.4
Hausa	4	2.3
Ebira	12	6.8
Others	24	13.7
Level of Education		
None	66	37.5
Primary	28	15.9
Secondary	35	19.9
College/university	47	26.7
Occupation		
Student	14	8.0
Self-employed	50	28.4
Formal employment	43	24.4
Unemployed	69	39.2

(N = 176; Mean age = 31 years ± 5.5 Std. Deviation)

Table 2 shows the socio-demographic characteristics of the postpartum mothers studied. The mean age of the women was 31 years ± 5.5 standard deviation. Results from the study indicate that 75.6% of the participants were between the ages of 18-34 years, which is the major reproductive age for women. Seventy-five percent (75.0 %) were Christians, 73.9% were married, 37.5% had no formal education, and 39.2% were unemployed.

Research Question 2: What are the risk factors associated with postpartum depression among participants?

The above question was answered by determining the frequency count and percentage of each of the participants' responses to items on risk factors (such as social and economic, stressful life events, participants' obstetric, neonatal and postnatal states). The results are as shown in Tables 3, 4, 5, and 6.

Table 3: Social and Economic Factors Associated with Depression among Participants (N = 176)

Socio-economic Factors	Frequency	Percent
Participants' employment status		
Employed	106	60.2
Not employed	70	39.8
Spouse's employment status		
Employed	83	47.2
Not employed	93	52.8
Financial difficulty affecting basic needs		
Able to meet basic needs	67	38.1
Unable to meet basic needs	109	51.9
Rating of financial support from spouse		
Very poor	9	5.1
Poor	23	13.1
Satisfactory	57	32.4
Good	64	36.4
Very good	23	13.1

Table 3 displays the social and economic factors that may trigger depression among participants. A significant number of the participants, 39.8%, were unemployed, while 52.8% of their spouses were also unemployed. A large percentage of them, 51.9%, agreed that they were unable to meet their basic needs. However, 36.4% of the participants rated support from their spouses as good.

Table 4: Stressful Life Events Associated with Postpartum Depression (N = 176)

Stressful Life Events	Frequency	Percent
Life Threatening Experience (Obstetric complications & emergencies e g bleeding, etc)		
Experienced	93	52.8
Not experienced	47	26.7
Declined response	36	20.5
E: erience of Verbal/Physical Abuse		
Verbally and physically abused	65	36.9

Not verbally and physically abused	111	63.1
Recent Loss of Dear One		
Experienced loss of dear one	46	26.1
No experience of loss of dear ones	130	73.9
Struggle to Meet Needs		
Struggling to meet needs	72	40.9
Not struggling to meet needs	104	59.1
Demanding Nature of Job		
Self-demanding	68	38.6
Not self-demanding	108	61.4

Table 4 shows participants exposure to stressful life events. A total of 93(52.8%) had experienced life threatening events while 47 (26.7%) had not, 36.9% of the women were verbally or physically abused and 26.1% had experienced the loss of a dear one. The table also shows that 40.9% of the participants struggled to meet needs, while 59.1% did not experience such struggles and 38.6% described their job as self-demanding.

Table 5: Participants' Obstetric Factors Capable of Causing Depression (N= 176)

Obstetric Factors	Frequency	Percent
Were you expecting this pregnancy?		
Yes	102	58
No	59	33.5
Undecided	15	8.5
Mode of delivery		
Vaginal	120	68.2
Through caesarean section	44	25
Instrumental delivery (Forceps or ventous)	6	3.4
Undisclosed mode of delivery	6	3.4
Number of previous pregnancies		
One	28	15.9
Two	47	26.7
Three and more	101	57.4
Number of miscarriages/abortion		
One	78	44.3
Two	35	19.9
Three and more	35	19.9
None	28	15.9

Table 5 presents participants' obstetric factors capable of causing depression. A good number of the participants, 33.5%, were not expecting their pregnancy. More than half of the participants, 68.2% had delivered per vagina, 84.1% had been pregnant for 2 - 4 times (multigravida women), while 44.3% of the participants had one miscarriage/abortion, while 15.9% had none. A total of 64.8% of the participants had delivered babies between 2 – 4 times (multipara mothers).

Table 6: Participants' Neonatal and Postnatal Factors Capable of Causing Depression

Neonatal and Postnatal Factors	Frequency	Percent
Health status of your baby since delivery		
Sick	48	27.3
Healthy	128	72.7
Have you ever had a male child before?		
Have at least a male child	98	55.7
Have no male child	71	40.3
Declined	7	4.0
Have you ever had a female child before?		
Have at least a female child	113	64.2
Have no female child	56	31.8
Declined	7	4.0
What is your desired sex for this baby?		
Male	86	48.9
Female	77	43.8
Either of the sexes	13	7.4
What is the actual sex of your baby?		
Male	42	23.9
Female	72	40.9
Declined response	62	35.2

Table 6 presents participants' neonatal and postnatal factors capable of causing depression. Results from the study indicate that 27.3% of the babies had been sick since delivery. A good percentage of the participants, 40.3% had never had a male child, while 31.8% had never had a female child. However, most of the participants, 48.9%, desired a male child, while 40.9% currently have a female child.

Research Question 3: What are the levels of depression exhibited by the women as at the time of data collection?

In answering this question, the responses of each woman to items on Beck's depression scale was analysed. The data were analysed descriptively and presented in Table 7.

Table 7: Participants' Levels of Depression Using Beck Postpartum Depression Screening Scale

Level of depression	Frequency	Percent
Normal (0 -10)	77	43.7
Mild mood disturbance (11-16)	28	15.9
Borderline clinical depression (17-20)	17	9.6
Moderate depression (21-30)	36	20.5
Severe depression (31-40)	13	7.5
Extreme depression (41-51)	5	2.8
Total	**176**	**100.0**

Table 7 shows participants' level of depression using Beck's screening tool. Results from the study indicate that 43.8% of the participants have a normal level, as they scored between 0 -10, 15.9% have a mild mood disturbance, as they scored between 11-16. The table also shows that 20.5% have moderate depression, as their scores ranged between 21 and 30.

Discussion

One hundred and seventy-six (176) copies of the questionnaire were retrieved from the 196 that were administered to the recruited participants. More than three quarters of the respondents (75.6%) were within ages 18-34 years, which is the major reproductive age for women .Yoruba ethnic group constituted more than half (69.9%) of the participants of the study. This was because the study was conducted in a South-Western city dominated by Yoruba ethnic group. This is in line with a study by Araoye (2013) in a clinical setting in North-Central, Nigeria, where majority of the respondents were women of reproductive age and belonged to Yoruba ethnic group.

A significant number (39.2%) of the participants were unemployed, while 52.8% of their spouses were also unemployed. This is likely to contribute to inadequate care for the women as reflected in 51.9%not being able to meet their basic needs. If a mother does not have a stable employment outside the home, she is not likely to make financial contributions to the family and as a result, becomes economically dependent on her husband. Child rearing is a major task, and a mother must spend a number of months caring for her new-born child. This becomes difficult if she does not have independent earnings; this can increase the financial burden on the family. The results of this study are similar to the study by Marian (2010), which revealed that many women were either not employed or engaged in petty trading. The association between unemployment and postpartum depression in this study could be due to the present socioeconomic decline in Nigeria, where people cannot meet basic needs. This places financial burden on the patients and their relatives and shows that socio economic factor is a major cause of PPD. That 36.9% of the women described an experience of being verbally or physically abused

is alarming and a strong predictor of PPD in the study. In addition, that 26.1% of participants had experienced the loss of a dear one is another major factor associated with postpartum depression (Owoeye, Aina & Morakinyo, 2010). Patel, Rodrigue and Desouza, (2014) found life events to be the most powerful predictor of postpartum depression .Earlier researchers on life events proposed that losses (e.g. loss of beloved one, money or properties) were more significantly associated with PPD.

A good number of the participants (33.5%) were not expecting their pregnancies. This is likely to be common among participants that were not employed, or who engaged in premarital sex that led to pregnancy. The second most popular mode of delivery for the participants is through Caesarean section (25.0%).This is a strong indicator for postpartum depression. A Canadian prospective cohort study of 2,560 women found caesarean sections to be associated with postpartum depression in Canadian-born women, but not in women born outside Canada (Hollen, 2010; Sharma & Sharma, 2012; Mauthner, 2016).

Findings from the study indicate that 27.3% of the babies had been sick since delivery. Also, 18.8% of the babies did not sleep soundly. An important association with symptoms of PPD was having an infant who was sick in the period between giving birth and the time of the interview. Mothers with sick infants were more likely to have PPD symptoms than mothers whose infants were healthy (27.3 %);a sick new-born was a factor related to PPD. Clearly, the health of an infant can have a considerable effect on the mother's mood (Owoeye, Aina & Morakinyo, 2010). A good percentage of the participants (40.3%) had never had a male child, and most of them, (48.9%) desired a male. This may have accounted for the stress and struggles they experienced and is a predictor of PPD. While 31.8% had never had a female child, 40.9% currently have a female. All these are good signals of PPD. The preference for sons over daughters originated from Confucianism and patriarchal societal norms, which stipulated that property and family names were to be inherited by males only. Similarly, a study by Cunningham, and Cunningham, (2013) revealed that 6.2% of women were forced into divorce by their husband's family because they were unable to deliver male children. Cohen (2010) and Murray (2009) found that, while having an infant that was not the expected gender affected maternal well-being, it was significantly associated with postpartum depressive symptoms. The inconsistent findings about this association from a number of studies indicate that more research into the effect of son preference and family planning policies on maternal and child health is needed in the state.

Conclusion and Recommendations

The 30.2% incidence of postpartum depression among mothers in selected hospitals in Ondo State using Beck's depression inventory is alarming. More than half of the women were not able to meet basic needs. Moreover, quite number of them has been victims of stressful life events such as: life threatening experience (e.g. obstetric complications and obstetric emergencies), verbal and physical abuse, recent loss of dear ones, struggle to meet needs, and demanding job nature.

Therefore, midwives are to embark on appropriate interventions that are designed to help women cope favourably with, during and after childbirth. Also, routine screening of postpartum women for psychological wellbeing using appropriate tools such as 'Beck's inventory' will enhance early detection and treatment of postpartum depression.

Conflict of Interest

The authors declare no conflict of interest in any form.

References

Araoye, M. O, (2013). *Research methodology with statistics for postpartum depression health and social sciences*. (1st Ed.). Ilorin, Nathadox Publishers, 115-120.

American Psychiatric Association. (2010): *Diagnostic and statistical manual of mental disorders.* American Psychiatric Pub. 4th Edition, Washington, DC.

Beck, C. T. (2010). Postpartum depressed mothers' experiences interacting with their children and risk factors. *Nursing Research, 45,* 98-104.

Cohen, J. (2010). *Statistical power analysis for the behavioural sciences*. Revised edition NewYork: Academic Press.

Duffy, C. L. (2014). Postpartum depression among developed and developing countries: Identifying women at risk. *Genesis Publishers,* 11, 21.

Earl, M. F. (2010). Committee on psychosocial aspects of child and family health American academy of pediatrics: Incorporating recognition and management of perinatal and postpartum depression into pediatric practice. *Pediatrics Journal*, 1032-1039.

Hollen, V. C. (2010). HIV/AIDS and the gendering of stigma in Tamil Nadu, South India. *culture, Medicine, and Psychiatry*, 34(4), 633-657.

Marian, F. E. (2010). Incorporating recognition and management of perinatal and postpartum depression into pediatric practice. *Pediatrics Journal*, 126, 1032-1039.

Mauthner, N. S. (2016). Un/re-making method: Knowing/enacting post-humanist performative social research methods through 'diffractive genealogies' and 'metaphysical practices'. In *mattering: Feminism, science and materialism*, 258-283. NYU Press.

Obindo, T. J., Ekwempu, C. C., Ocheke, A. N., Piwuna, C. G., Adegbe, E. O., & Omigbodun, O. O. (2013). Prevalence and correlates of postpartum depression in a teaching hospital in Nigeria. *Highland Medical Research Journal*, 13(2), 71-75.

Owoeye, A. O., Aina, O. F., & Morakinyo, O. (2010). Risk factors of postpartum depression and EPDS scores in a group of Nigerian women. *Tropical Doctor*, 36(2), 100-103.

Patel, M., Bailey, R. K., Jabeen, S., Ali, S., Barker, N. C., & Osiezagha, K. (2012). Postpartum depression: A review. *Journal of Health Care for The Poor and Underserved*, 23(2), 534-542.