IOSR Journal Of Humanities And Social Science (IOSR-JHSS)
Volume 21, Issue 4, Ver. I (Apr. 2016) PP 81-89
e-ISSN: 2279-0837, p-ISSN: 2279-0845.
www.iosrjournals.org

Relationship Between Postpartum Depression And Problem Solving Ability Among Postpartum Women In Nigeria

Mahmood Danasabe*[1,2]& Nadiyah Bt Elias[1]
[1]*School of Applied Psychology, Social Work and Policy, Universiti Utara Malaysia, 06010 UMM Sintok, Kedah Darul Aman, Malaysia.*
[2]*Bauchi State College of Nursing and Midwifery, Nigeria.*

Abstract: *Postpartum depression (PPD) constitutes a major problems among postpartum mothers globally, but the rate among Nigerian population is higher 44.5%. Relationship exists between problem solving ability and depression in many studies, but the relationship between postpartum depressions among postpartum mothers remains a challenge. This study examined the relationship between postpartum depression (PPD), positive problem orientation (PPO) and negative problem orientation (NPO). This is a cross-sectional study were 150 samples were obtained through systematic sampling. Edinburgh postnatal depression scale (EPDS) measured postpartum depression and Social problem solving inventory revised form (SPSI-RF) measured positive problem orientation and negative problem orientation. Descriptive statistics and Structural equation model using partial least square (Smart PLS 3.0) have been used for data analysis. Results indicates significance inverse relationship between positive problem orientation and postpartum depression, while the relationship between negative problem orientation and postpartum depression is positively significance.*

Keywords: *Postpartum depression, Problem solving ability, Positive problem orientation, Negative problem orientation.*

I. Introduction

The prevalent rate of postpartum depression is higher and debilitating among less privileged mothers in the developing nations ranging from 16% to 35% (Chibanda et al., 2014). It is the most common cause of maternal morbidity, infanticide and suicide globally if not treated (Sampson, Villarreal & Rubin, 2014; Zhang & Jin, 2014; Trabold, 2007). Postpartum depression in northern Nigeria has been reported to have a higher prevalent rate of 44.5% in a clinical setting (Obinda, Ekwempu, Ocheke, Piwuna & Omigbodun, 2013) compared to the general average findings of 10-15% world-wide (O'Hara & Swain, 1996; 2004). It has been recently reported that 1 in 6 mothers suffers postpartum depression and it is the leading cause of suicide among postpartum women in Nigeria (Ekwerike, 2015).This is attributed to poor problem solving ability of the postpartum mothers, since studies have demonstrated that depression weaken problem solving ability (Emam, 2013; Yen et al., 2011). Positive problem orientation is the adaptive and constructive component of problem solving ability that is negatively related to depression, while the negative problem orientation is the maladaptive or unconstructive component of problem solving ability that is positively related to depression (Vasilevskaia, 2010; Robichaud, 2005). However, these relationships have not been extended to postpartum depression.

II. Postpartum Depression

Postpartum depression is an episode of depression that occurs from 4-6 weeks after childbirth characterized by feeling of sadness nearly every day, lack of enjoyment in maternal role, disinterest and negative feelings toward the new infants, guilt feelings about parenting ability, poor concentration, insomnia and anorexia (American Psychiatric Association, 2013, 1994; Cheadle et al., 2014). The negative consequences of postpartum depression on the health, marriage and the family of the postpartum mothers are enormous, especially as it influences the quality of life of the mother with a significant long-term negative effects on child's cognitive, emotional and social development (Sampson et al., 2014; Cheadle et al., 2014) as well as hostility to the partners (Cline & Decker, 2012; Zhang & Jin, 2014). Postpartum depression if persists and untreated can lead to suicide and infanticide (Zhang & Jin, 2014; Lobato, Moraes, Dias & Reichenheim, 2010).

Several studies have been conducted on the antecedents of postpartum depression world-wide (Hamdan & Tamin, 2010; Sampson et al., 2014; Chibanda et al., 2014; Cheadle et al., 2014; Zhang & Jin, 2014). Many studies in Nigeria were also carried out (Ndukka, Odinka, Muomah & Nwoha, 2015; Obindo et al., 2013; Ukaegbe, Iteke, Bakare, & Agbata, 2012; Abiodun & Adewuya, 2006; Ilyasu et al., 2006; Adewuya, Fatoye, Ola, Ijaodola & Ibigbami, 2005; Abiodun, 2005; Adewuya, Eegunranti, & Lawal, 2005; Adewuya & Afolabi, 2005; Fatoye, Adeyemi & Oladimeji, 2004). Review of literatures have shown that the strongest predictors to postpartum depression are antenatal depression, anxiety during pregnancy, decrease social support, stressful

negative life events, intimate partner violence and previous history of depression (Robertson et al., 2004; Hamdan & Tamin, 2010; Ndukka et al., 2015; Obindo et al., 2013).Given the negative outcomes of postpartum depression it is crucial to identify aspects of mother's lives that may be utilized to alleviate or prevent depression during postpartum period.

III. Problem Solving Ability

Problem solving ability is a cognitive and affective behavioral process where individual tries to discover an effective solution to problems. It consists of problem orientation and problem-solving skill which are partially independent components (D'Zurilla & Nezu, 1982). The problem orientation component which is the focused of this study comprises of positive problem orientation and negative problem orientation.

3.1 Positive Problem Orientation (PPO)

Positive problem orientation is the adaptive constructive approach to problem solving. Individual with this orientation believed that problems are solvable (optimism) and has the ability to solve problems successfully (problem-solving self-efficacy). They also believed that successful problem solving takes time and effort, and commit oneself to solve problems with dispatch rather than avoiding them.Studies have demonstrated that positive problem orientation is inversely related to depression (Emam, 2013; Yen et al., 2011; Vasilevskaia, 2010; McCabe, 1999).Negative relationship was also found with positive problem orientation ($r = -.29$, $p<.01$) in a study among depressed patient with a sight problems (Emam, 2013) These findings were supported by previous literatures (Vasilevskaia, 2010; McCabe, 1999; D'Zurilla et al., 1998;Perri et al., 2001).

3.2 Negative Problem Orientation (NPO)

This is a maladaptive approach or irrational reaction to problem solving. Individuals with problem solving orientation viewed problem as a significant threat to their well-being and doubt on ability to solve problems successfully. They easily become frustrated and upset when confronted with problems (D'Zurilla & Nezu, 1982). Literatures revealed that negative problem orientation is positively related to depression (Maddoux et al., 2014; Emam, 2013; Robichaud, 2005). A cross-sectional study of 285 battered women were studied about their social problem-solving ability, and mental health symptoms of depression. Higher negative problem-solving scores were positively associated with depression (Maddoux et al., 2014). Similar finding was obtained when measures of NPO and depression were administered to 110 participants with visual problem in Egypt. Regression analysis shows that negative problem-solving orientation (NPO) was the strongest predictors of depressive symptoms among the participants (Emam, 2013). This finding was supported in a study among pregnant women using the dependent variable of Edinburgh Postnatal Depression Scale which revealed a significant positive relationship between depression and Negative Problem Orientation ($r = .47$, $p<.01$) (Vasilevskaia, 2010)

These findings indicate that when the score on independent variable (negative problem orientation) increases so as the same increase in the depressive symptoms as the dependent variable (depression), while for the increase in positive problem orientation, the correlation is negative, indicating that depressive symptoms decreases in the Edinburgh postnatal depression scale.

It has been observed that studies on the relationship between positive and negative problem orientation with depression in other times are numerous, but the studies have not been extended to postpartum depression. Therefore, this study examined(a) the relationship betweenpositive problem orientation (PPO) and postpartum depression (PPD) and (b) the relationship between negative problem orientations (NPO) and postpartum depression (PPD) among postpartum mothers.

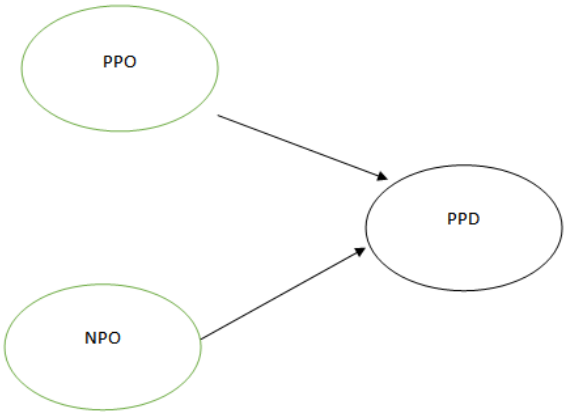

Fig. 1: Research framework

IV. Method

This is a cross-sectional correlation study where relationship between two independent variables (positive problem solving orientation: PPO and negative problem orientation: NPO) and one dependent variable (postpartum depression: PPD) were examined. The participants of this research were recruited from obstetrics and gynecology department of Abubakar Tafawa Balewa University Teaching hospital Bauchi state, Nigeria after getting approval from the ethic committee. The department runs prenatal gynecological services, postnatal clinics, management of in and out patients and family planning services.

4.1 Samples and Procedure

The participants were obtained through systematic sampling. 150 postpartum mothers within the age of 18-47 and who have their child birth from four to ten weeks.Participants were also eligible if they agree voluntarily by signing a consent and are those who can read and understand English language.269 were screened and met diagnostic criteria for postpartum depression using Edinburgh postnatal depression scale (EPDS) and diagnostic and statistical manual for mental disorders (DSM IV)(APA, 1994) for major depression. Out of the 269 sample 163 (61%) met the criteria for this study. The questionnaires were collectively distributed to 163 mothers during immunization days and follow-up care by the researcher, research assistants and the medical health record officers in the unit. 154 (94%) questionnaires were returned after been filled through the same people. 9 (6%) were not returned and 4 (2%) were rejected due to damaged. The remaining 150 (92%) became and provides valid responses for this research. The distribution and collection of the questionnaires lasted for 26 days (2^{nd}-27^{th} July, 2015)**.**

4.2 Edinburgh Postnatal Depression Scale

The Edinburgh postnatal depression scale (EPDS) was developed to screen women with postpartum depression (Cox, Holden, & Sagovsky, 1987). The scale contains items that correspond to several features of clinical depression, like insomnia, anorexia, fatigue, guiltiness, poor concentration, withdrawal symptoms and suicidal tendency. Items were scored from 0 – 3 and the total scores (30) is determined by summing up together the score for each of the 10 items. Scores from 10 and above indicate depression in this study. Higher scores indicate more depressive symptoms. (Zhang & Jin, 2014). The reliability of the EPDS has been demonstrated across various population, for example, a Cronbach's alpha of .80 among African-American (Cheadle et al., 2014), .86 among Chinese women (Zhang & Jin, 2014), .88 among Zimbabwe (Chibanda et al., 2014) and .90 among Nigerian postpartum women (Ukaegbe et al., 2012). In this study, the Cronbach's alpha is .875.

4.3 Social Problem Solving Inventory- Revised Form

Social Problem-Solving Inventory – Revised, Short Form (SPSI-RF) was developed to measure five components of problem solving ability(D'Zurilla, Nezu & Maydeu-Olivares, 2002). These components are: positive problem orientation (PPO), negative problem orientation (NPO), rational problem-solving (RPS), impulsivity-carelessness style (ICS) and avoidance style (AS). The scale consists of 25 items with 5 items per dimension. Each item is rated on a Likert scale ranging from 0 (not at all true of me) to 4 (extremely true of me). The sum of the scores on the items for each component constitute that scale's total score. This research used only positive problem orientation (PPO) the adaptive part of the dimension and negative problem orientation (NPO) the maladaptive part of the problem solving ability.SPSI.RF has been used extensively in researches across different population with good reliability. Example, internal consistency of alpha Cronbach's reliabilities for PPO: $\alpha = .76$ and NPO $\alpha = .91$ (Vasilevskaia, 2010), PPO: $\alpha = .76$ and NPSO: $\alpha = .80$ (Emam, 2013). In this study the Cronbach's alpha reliability for the two dimension are PPO, $\alpha = .808$ and NPO, $\alpha = .849$.

V. Data Analysis

Partial Least Squares-Structural Equation Modeling (PLS-SEM) was employed for this study because it is well better to be used as a research tool in social sciences and other management research (Hair, Ringle, & Sarstedt, et al., 2011; Hair Jr, Sarstedt, Hopkins, & Kuppelwieser, 2014). Descriptive analyses were carried out by calculating the number and percentage of the categorical or demographic variable and the mean and standard deviation of the variables. PLS-SEM was used for measurement model to assess the goodness of fit represented by the indicators of each variable (Peng et al., 2013; Zhang et al., 2014). The structural equation modeling was also tested using maximum likelihood estimation.

VI. Results

6.1 Assessment of Measurement Model

Common method bias was assessed in the first place using Harman's single factor test in SPSSS. The 20 items factor analysis indicated that the first factor accounts for only 35.67% of the total variance. Secondly, PLS-SEM analysis used reliability and validity as the two major criteria to assess the outer model (Hair Jr., Hult,

Ringle, & Sarstedt, 2013). Outer model specifies the relationships between the latent variables and their observed indicators (Wong, 2013). The Composite Reliability (CR) is used to evaluate reliability while validity is evaluated by convergent validity Average Variance Extracted (AVE). The discriminant validity is assessed by using Fornell-Larcker criterion and examination of cross-loadings. Table 1 below and Figure 2 have shown that the CR value in this study is between 0.867 and 0.891, this indicate adequate internal consistency (Nunnally & Bernstein, 1994). Additionally, all CR values exceeded the suggested threshold value of 0.70 (Hair et al., 2013; Henseler, Ringle, & Sinkovics, 2009).

Table 1. Loadings, reliability and convergent validity values

Constructs	Items	Loadings	CR	AVE	Discriminant validity?
Postpartum Depression	PPD1	0.725	0.891	0.507	Yes
	PPD2	0.654			
	PPD3	0.676			
	PPD6	0.676			
	PPD7	0.681			
	PPD8	0.701			
	PPD9	0.754			
	PPD10	0.815			
Positive Problem Orientation	PPO1	0.852	0.867	0.568	Yes
	PPO2	0.786			
	PPO3	0.688			
	PPO4	0.701			
	PPO5	0.730			
Negative Problem Orientation	NPO1	0.661	0.890	0.622	Yes
	NPO2	0.869			
	NPO3	0.744			
	NPO4	0.873			
	NPO5	0.744			

Note: CR=Composite Reliability, AVE=Average Variance Extracted

Table 2. Cross loadings

	NPO	**PPD**	**PPO**
NPO1	**0.660934**	0.177481	0.027215
NPO2	**0.869199**	0.365118	-0.17807
NPO3	**0.743674**	0.244056	-0.05379
NPO4	**0.873264**	0.360236	-0.15874
NPO5	**0.774369**	0.298693	-0.20835
PPD1	0.280653	**0.724873**	-0.502
PPD10	0.269368	**0.814638**	-0.61297
PPD2	0.238767	**0.654051**	-0.48853
PPD3	0.284051	**0.676062**	-0.52774
PPD6	0.195886	**0.676448**	-0.45896
PPD7	0.260815	**0.680537**	-0.4783
PPD8	0.322376	**0.701129**	-0.48105
PPD9	0.313961	**0.754485**	-0.49284
PPO1	-0.08337	-0.61217	**0.852097**
PPO2	-0.06977	-0.4864	**0.786426**
PPO3	-0.20061	-0.50674	**0.68805**
PPO4	-0.1493	-0.54226	**0.700992**
PPO5	-0.12729	-0.52497	**0.730178**

Note: NPO: Negative problem orientation, PPD: Postpartum depression and PPO: Positive problem orientation.

Table 3: Discriminant Validity

Constructs	NPO	PPD	PPO
Negative Problem Orientation	**0.7883692**		
Postpartum depression	0.381537	**0.7119916**	
Positive Problem Orientation	-0.165858	-0.713089	**0.7539887**

Note: The bolded values represent square root of Average Variance Extracted (AVE), NPO: Negative Problem Orientation, PPD: Postpartum Depression, PPO: Positive Problem Orientation.

The next is the convergent validity, all AVE values shown in Table 1 are beyond the threshold value of 0.50, which indicates convergent validity of the measurement in this study (Hair et al., 2013). Finally, in this study, two popular approaches for assessing the constructs' discriminant validity were used(Hair et al., 2013; Henseler et al. 2009). This include Fornell and Larcker (1981) criterion and examination of cross loadings (Hair et al., 2013). Table 3 shows that each construct's square root of AVE is higher than its correlation with all of the other constructs. In addition, the result revealed that no indicator loaded higher on any opposing construct. In conclusion, both approaches evidently indicate that the study constructs show discriminant validity.

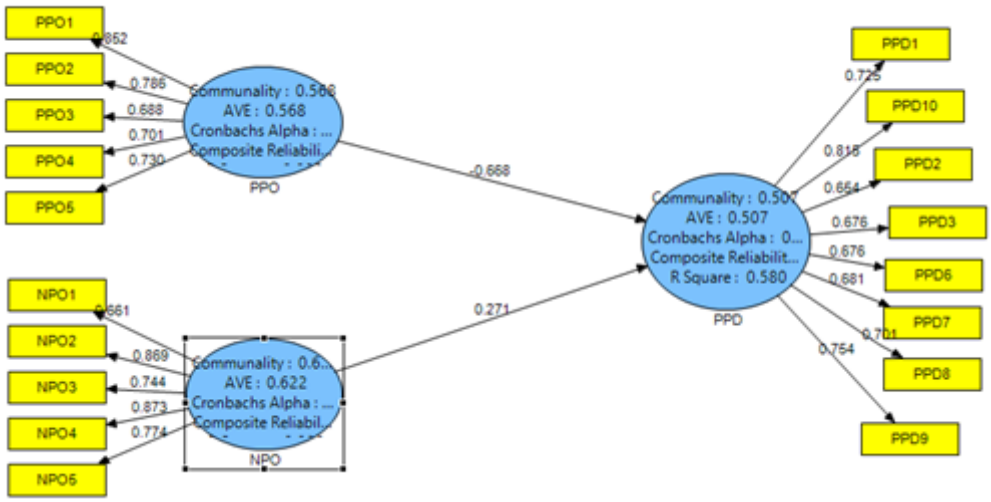

Figure. 2: Measurement model

6.2 Assessment of Structural Model

According to Hair Jr. et al. (2013), structural model assessment include collinearity examination, assessing the significance and relevance of the structural model relationships, R^2, effect size f^2 and predictive relevance Q^2. Thus, before assessing the structural model, this study assessed the collinearity among the exogenous variables. Table 3 shows that there no multicollinearity problem among the exogenous variable, since the VIF values are below 5 as agued by Hair Jr. et al. (2013). More also, the independent variables are only two.

Table 4. Collinearity using VIF

	Collinearity Statistics	
	Tolerance	VIF
Positive Problem Orientation	.977	1.024
Negative Problem Orientation	.977	1.024

Based on satisfactory result of collinearity assessment, then the key criteria for assessing the structural model was assessed. Firstly, the structural model relationships were assessed using PLS-SEM Algorithm for the coefficient and PLS-SEM bootstrapping for the significance of the relationship. The SmartPLS 3.0 was used and original number of cases was used as the number of cases, 5000 sample was used for bootstrapping procedure (Hair, Ringle, & Sarstedt, 2011; Hair et al., 2013). Figure 3 and Table 4 illustrates the results of relationship between the exogenous variables and endogenous variable of the PLS-SEM analysis. Specifically, the result of the structural model shows that there is significant positive relationship between Negative problem orientation (NPO) and postpartum depression (PPD). However, Positive problem orientation (PPO) has a significant negative relationship with postpartum depression (PPD).

Table 5. Result of Hypothesis Testing

Hypothesis	Beta	Standard error	T-Statistics	Decision
NPO -> PPD	0.2707	0.0583	4.6465	Supported
PPO -> PPD	-0.6682	0.0471	14.1831	Supported

Note: NPO: negative problem orientation, PPO: Positive problem orientation, PPD: Postpartum depression.

Then, R^2 is another central criterion for the structural model's assessment. It is also called the coefficient of determination which is the proportion of variation in the dependent variable that can be explained by one or more predictors (Hair et al, 2010). This study has an acceptable R^2 value of 60.3% which is substantial (Cohen, 1988).

Table 6. Variance Explained in the Endogenous Variable

Latent variable	Variance Explained (R^2)	Cohen (1988) Assessment
PPD	60.3%	Substantial

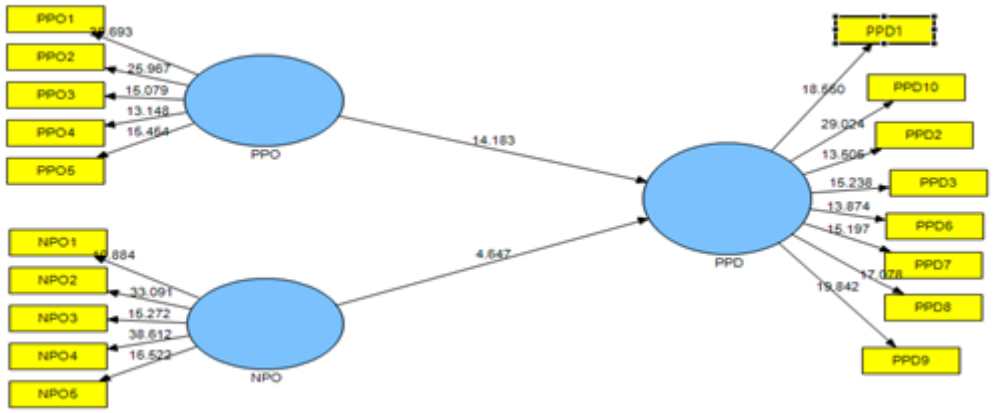

Fig. 3: Structural model

VII. Discussion

The objective of this study was to investigate the relationship between the two independent variables, positive problem orientation (PPO) and negative problem orientation (NPO) and their relationship with one dependent variable postpartum depression (PPD). Firstly, the result shows that there is a significant negative relationship between PPO and PPD. Therefore, this finding suggests that the higher the positive problem orientation of the postpartum women, the less likely they would suffer from postpartum depression. The lower the positive problem orientation of the postpartum women, the higher the probability that they might suffer from postpartum depression. This is in line with several findings (Emam, 2013; Ranjbar et al., 2013; Vasilevskaia, 2010; Robichaud, 2005).

Reasons for this relationship could be due to underestimation of positive events and thoughts in which depressed people always ignore favorable events and overestimate negative thoughts (Zhang & Jin, 2014; Trivedi et al., 2004). Their orientation toward problem solving is poor because of their irrational negative evaluation of events and feeling of hopelessness in positive thinking toward identifying problem and solutions. Problems when accumulated and unresolved weaken positive problem solving orientation of an individual's to overcome problems and once one is depressed can hardly solve problem (Becker-Weidman et al., 2010; Yen et al., 2011; Arean et al., 2004). The finding is not surprising, since many antenatal and postnatal clinics in health care facilities give less or no emphasis on screening mental health problems, especially depression due to inadequate facilities and professionals in Nigerian. These contributed tremendously in lack of awareness and stigma attached to the illness. Depression is perceived as a psychiatric problem, so women diagnosed with postpartum depression develops negative thinking about her social and personal problem as well as feelings of inferiority complex (Ndukka et al., 2015).

Secondly, the research result indicates that there is a positive relationship between Negative problem orientation (NPO) and postpartum depression (PPD). This signifies that when the negative problem orientation of postpartum women is higher, there is likelihood of postpartum depression to be higher as well, likewise if the negative problem orientation is low so as the postpartum depression may also be low. This confirmed the results of others studies on depression in other times (McCabe, 1999; D'Zurilla et al., 1998; Dreer et al., 2005; Vasilevskaia, 2010). Problem solving ability is the cognitive-affective behavioral process one apply to solve problem, while, the negative problem orientation is a negative and unconstructive approach to problem solving.

People using the negative dimension view problem as unchangeable and irrationally believed that the occurrence of the problem is due to their own perceived deficits. NPO and PPD has a significant positive relationship in this study because, mothers in Nigeria during postpartum period are vulnerable to depression, negative events and negative emotions as indicated in the previous study (Ilyasu et al, 2006).

Reasons for negative problem orientation with postpartum depressed mothers has been discussed. It has been reported that person with negative problem solving orientation may possess cognitive schema with a chain of ideas of cognitive distortions (Zhang & Jin, 2014). Beck's cognitive theory of depression has postulated that individuals with depression schema, such as irrational dysfunctional beliefs,guilty feelings, self-blamed, misinterpretation of events and situation or personal experiences are more likely to experience depression (Aalto, Elovainio, Kivimäki, Uutela,& Pirkola, 2012). For example a postpartum woman with such schema who ambivalently thinks of perfection, or a loser will end up with an assumption that she is not a lovely person, especially if her husband or close partner disagrees with her.The inability to control or regulate negative emotions may render her problem solving ability weak with a long term poor health condition and more vulnerable to prolonged experiences of unpleasant moods which consequently developed into symptoms of postpartum depression or other psychopathologies. This argument is in line with previous study (Robichaud, 2005).

Additionally, postpartum mothers need to restore their bodies and take care of their babies, the families and to shoulder her maternal role. These are new and substantial task to them which can cause excess stress and pressures on them and in-turn resulting to lowself-efficacy thereby decreasing their positive orientation and increasing their negative orientation to problem solving. This explanation tallied with the views of Fulton et al.(2012).Furthermore, most postpartum mothers may lack answers to their questions and seek for help for utilizing their problem solving ability in confronting the excess stressful situation which will make them weaker to think positively over answers to their problems. This leads them to less resistance to problems and weaken their problem solving ability, hence negative problem solving orientation overweight their positive problem orientation and becomes an important factor to depression (Yen et al., 2011). Finally, negative problem orientation reflects a precise problem solving deficiencies which not only blocks positive action toward solving problems, but also weakens problem solving ability in general leading to the development of postpartum depression.

VIII. Conclusion

This research findings is essential in addressing problem-solving ability of postpartum mothers by coming up with treatment intervention that may be helpful for mothers with depression problems and other psychopathology. This study is beneficial to the administrators and health policy makers in addressing emotional mental health problem. Mothers who are aware of their problem solving ability might have control over their problem and constructively handle questions in life, thereby relieving their depressive symptoms.

8.1 Limitations

This research is cross-sectional, there is need for longitudinal studies from first trimester of pregnancy to six months postpartum period. This is will give more time to assess all the dimensions of the problem solving ability. The Edinburgh Postnatal Depression Scale (EPDS) and the Social Problem Solving Inventory- Revised Form (SPSI-RF) need to be translated and carry out this type of research in Hausa language being the most popular language used in the northern part of Nigeria. This will cover wide range of participants. Furthermore, this study focused only on postpartum women in north east geopolitical part of Nigeria, thus, findings of this study should be extended to postpartum women in other part of the country. Additionally, this kind of research need to be carried out among internally displaced postpartum women in various camps who were victims of Boko Haram insurgents. It will be of interest if future studies among this category of people will combine both quantitative and qualitative methods.

8.2 Recommendation

Going by this research findings, there is need to improve the problem solving ability of the postpartum depressed mothers through identification and implementation of an intervention that is chief, affordable, effective and sustainable to postpartum mothers. Problem solving therapy (PST) is recommended as it is one of the scientific evidence-bases and patient's centered intervention that has all these qualities for the treatment of depression and improvement of problem solving ability.More also, regular screening for depression and assessment of problem solving ability during antenatal and postnatal care is recommended for early detection and prevention of mental illness.

Reference

[1]. Aalto, Anna-Mari, et al. The Beck Depression Inventory and General Health Questionnaire as measures of depression in the general population: a validation study using the Composite International Diagnostic Interview as the gold standard.Psychiatry research (2012): 197(1): 163-171.

[2]. Abiodun, O. A. Postnatal depression in primary care populations in Nigeria. General hospital psychiatry (2006): 28(2): 133-136.

[3]. Adewuya, Abiodun O. Early postpartum mood as a risk factor for postnatal depression in Nigerian women.American Journal of Psychiatry (2006): 163(8): 1435-1437.

[4]. Adewuya, Abiodun O., Adekunle B. Eegunranti, and Adejare M. Lawal. Prevalence of postnatal depression in Western Nigerian women: a controlled study. International Journal of Psychiatry in Clinical Practice (2005): 9(1): 60-64.

[5]. Adewuya, Abiodun O., and O. T. Afolabi. The course of anxiety and depressive symptoms in Nigerian postpartum women. Archives of women's mental health (2005): 8(4): 257-259.

[6]. Adewuya, Abiodun O., et al. Sociodemographic and obstetric risk factors for postpartum depressive symptoms in Nigerian women. Journal of Psychiatric Practice (2005): 11(5): 353-358.

[7]. American Psychiatric Association. *Diagnostic and statistical manual of mental disorders (DSM-5)*. American Psychiatric Pub, 2013.

[8]. Arean, Patricia, et al. Effectiveness of problem-solving therapy for older, primary care patients with depression: results from the IMPACT project. The Gerontologist (2008): 48(3) 311-323.

[9]. Ayonrinde, Oyedeji, Oye Gureje, and Rahmaan Lawal. Psychiatric research in Nigeria: bridging tradition and modernization.The British Journal of Psychiatry (2004): 184(6) 536-538.

[10]. Brewin, C. R., et al. Intrusive memories in depression: an index of schema activation?Psychological medicine (1996): 26(6): 1271-1276.

[11]. Cameron, Jill I., et al. A brief problem-solving intervention for family caregivers to individuals with advanced cancer. Journal of psychosomatic research (2004): 57(2): 137-143.

[12]. Cheadle, Alyssa CD, et al. Spiritual and Religious Resources in African American Women Protection from Depressive Symptoms after Childbirth. Clinical Psychological Science (2015): 3(2): 283-291.

[13]. Chibanda, Dixon, et al. Group problem-solving therapy for postnatal depression among HIV-positive and HIV-negative mothers in Zimbabwe. Journal of the International Association of Providers of AIDS Care (JIAPAC) (2014): 13(4): 335-341.

[14]. Cline, Krista MC, and Jessica Decker. Does weight gain during pregnancy influence postpartum depression?Journal of health psychology (2012): 17(3) 333-342.

[15]. Cohen, Jacob. A power primer.Psychological bulletin (1992): 112(1): 155.

[16]. Cox, John L., Jeni M. Holden, and Ruth Sagovsky. Detection of postnatal depression. Development of the 10-item Edinburgh Postnatal Depression Scale. The British journal of psychiatry (1987): 150(6): 782-786.

[17]. D'Zurilla, Thomas J., and A. Nezu. Social problem solving. Advances in cognitive-behavioral research and therapy. Vol. 1. Academic Press New York, 1982. 201-274.

[18]. D'Zurilla, Thomas J., et al. Social problem-solving deficits and hopelessness, depression, and suicidal risk in college students and psychiatric inpatients. Journal of clinical psychology (1998): 54(8): 1091-1107.

[19]. Ekwerike. (2015, October 27). Postpartum-depression-awareness and support in Nigeria. Retrieved from **Welcome To ExclusiveRawNaija Blog gSS7W9tV0-_aXUSkglFR6rg4tGU**on 15th December, 2015.

[20]. Emam, Mahmoud M. Problem-solving orientation and attributional style as predictors of depressive symptoms in Egyptian adolescents with visual impairment. British Journal of Visual Impairment (2013): 31(2): 150-163.

[21]. Fatoye, Femi O., Adebanjo B. Adeyemi, and Benedicta Y. Oladimeji. Postpartum Depression Following Normal Vaginal Delivery among Nigerian Women 1, 2. Psychological reports (2004): 94(3): 1276-1278.

[22]. Fornell, Claes, and David F. Larcker. Evaluating structural equation models with unobservable variables and measurement error. Journal of marketing research (1981): 18(1): 39-50.

[23]. Fried, Eiko I., and Randolph M. Nesse. The impact of individual depressive symptoms on impairment of psychosocial functioning. PLoS One (2014): 9(2): 90311.

[24]. Fulton, Janet M., et al. Maternal perceptions of the infant: Relationship to maternal self-efficacy during the first six weeks' postpartum. Infant Mental Health Journal (2012): 33(4): 329-338.

[25]. Hair Jr., J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. *A primer on partial least squares structural equation modeling (PLS-SEM)*. SAGE Publications, Incorporated (2013): 1-307.

[26]. Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. An assessment of the use of partial least squares structural equation modeling in marketing research Journal of the Academy of Marketing Science, *(2012): 40*(3), 414-433.

[27]. Hamdan, A., & Tamim, H. Psychosocial risk and protective factors for postpartum depression in the United Arab Emirates. Archives of women's mental health, (2011):*14* (2), 125-133.

[28]. Henseler, Jörg, Christian M. Ringle, and Rudolf R. Sinkovics. The use of partial least squares path modeling in international marketing. Advances in international marketing(2009): 20(1): 277-319.

[29]. Iliyasu, Z., et al. Postpartum beliefs and practices in Danbare village, Northern Nigeria. Journal of obstetrics and gynecology (2006): 26(3): 211-215.

[30]. Lobato, Gustavo, et al. Alcohol misuse among partners: a potential effect modifier in the relationship between physical intimate partner violence and postpartum depression. Social psychiatry and psychiatric epidemiology (2012): 47(3): 427-438.

[31]. Lowry, Paul Benjamin, and James Gaskin. Partial least squares (PLS) structural equation modeling (SEM) for building and testing behavioral causal theory: When to choose it and how to use it. Professional Communication, IEEE Transactions on (2014): 57(2): 123-146.

[32]. Mann, J. R., McKeown, R. E., Bacon, J., Vesselinov, R., & Bush, F. Do antenatal religious and spiritual factors impact the risk of postpartum depressive symptoms? Journal of Women's Health, (2008):*17* (5): 745-755.

[33]. McCabe, Randi E., Kirk R. Blankstein, and Jennifer S. Mills. Interpersonal sensitivity and social problem-solving: Relations with academic and social self-esteem, depressive symptoms, and academic performance. Cognitive Therapy and Research (1999): 23(5): 587-604.

[34]. Maddoux, John, et al. Problem-solving and mental health outcomes of women and children in the wake of intimate partner violence. Journal of environmental and public health (2014).

[35]. Ndukuba, A. C., et al. Clinical and socio-demographic profile of women with post-partum psychiatric conditions at a federal neuropsychiatric hospital in southeast Nigeria between 2009 and 2011. Annals of medical and health sciences research (2015): 5(3): 168-172.

[36]. Nunnally, J., and I. Bernstein. Psychometric Theory 3rd edition (McGraw-Hill, New York). (1994).

[37]. Obindo, T. J., et al. Prevalence and correlates of postpartum depression in a teaching hospital in Nigeria. Highland Medical Research Journal (2014): 13(2): 71-75.
[38]. O'Hara, Michael W., and Annette M. Swain. Rates and risk of postpartum depression—a meta-analysis. International review of psychiatry (1996): 8(1) 37-54.
[39]. Perri, Michael G., et al. Relapse prevention training and problem-solving therapy in the long-term management of obesity. Journal of consulting and clinical psychology (2001): 69(4): 722.
[40]. Peng, Jiaxi, et al. The impact of psychological capital on job burnout of Chinese nurses: the mediator role of organizational commitment. PloS one (2013): 8(12): 84193.
[41]. Podsakoff, Philip M., et al. Common method biases in behavioral research: a critical review of the literature and recommended remedies. Journal of applied psychology (2003): 88(5): 879.
[42]. Ranjbar, Mansour, Ali Asghar Bayani, and Ali Bayani. Social problem solving ability predicts mental health among undergraduate students. International journal of preventive medicine 4.11 (2013): 4(11): 1337.
[43]. Robertson, Emma, et al. Antenatal risk factors for postpartum depression: a synthesis of recent literature. General hospital psychiatry (2004): 26(4): 289-295.
[44]. Robichaud, Melisa. *An in-depth investigation of social problem-solving ability*. Diss. Concordia University, 2005.
[45]. Rubin, Allen, and Miao Yu. Within-Group Effect-Size Benchmarks for Problem-Solving Therapy for Depression in Adults. Research on Social Work Practice(2015).
[46]. Sampson, McClain, Yolanda Villarreal, and Allen Rubin. A Problem-Solving Therapy Intervention for Low-Income, Pregnant Women at Risk for Postpartum Depression. Research on Social Work Practice (2014): 106-143.
[47]. Trabold, Nicole. *The interrelationship between intimate partner violence and postpartum depression in a sample of women living in an impoverished section of an urban community*. STATE UNIVERSITY OF NEW YORK AT BUFFALO, 2007.
[48]. Trivedi, Madhukar H., et al. A computerized clinical decision support system as a means of implementing depression guidelines. Psychiatric Services (2004).
[49]. Ukaegbe, C. I., et al. Postpartum Depression among Igbo Women in an Urban Mission Hospital, South East Nigeria.EMJ (2012): 11(1&2): 29-36.
[50]. Vasilevskaia, Tatiana. *Social Problem Solving as a Moderator in the Relationship between Pregnancy-Specific Stressors and Depressive Symptoms*. Diss. Drexel University, 2010.
[51]. World Health Organization. *The World Health Report 2001: Mental health: new understanding, new hope*. World Health Organization, 2001.
[52]. Wong, Ken Kwong-Kay. Partial least squares structural equation modeling (PLS-SEM) techniques using SmartPLS. Marketing Bulletin (2013): 24(1): 1-32.
[53]. Yen, Yung-Chieh, et al. Depressive symptoms impair everyday problem-solving ability through cognitive abilities in late life.The American Journal of Geriatric Psychiatry (2011): 19(2): 142-150.
[54]. Zhang, Jiaxi, et al. The impact of core self-evaluations on job satisfaction: The mediator role of career commitment. Social Indicators Research (2014): 116(3): 809-822.
[55]. Zikmund, William, et al. *Business research methods*. Cengage Learning, 2012.
[56]. Zhang, Yanjun, and Shenghua Jin. The impact of social support on postpartum depression: The mediator role of self-efficacy. Journal of health psychology (2014):