ISSN 2349-7831

International Journal of Recent Research in Social Sciences and Humanities (IJRRSSH)
Vol. 12, Issue 4, pp: (1-14), Month: October - December 2025, Available at: www.paperpublications.org

POSRPARTUM DEPRESSION, PROBLEM SOLVING ABILITY AND RELIGIOUS COPING AMONG POSPARTUM WOMEN ATTENDING SPECIALIST HOSPITAL GASHUA, YOBE STATE NIGERIA

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DOI: https://doi.org/10.5281/zenodo.17864474

Published Date: 09-December-2025

Abstract: **Postpartum Depression is a common maternal mood psychopathology characterized intense sadness, lack of enjoyment in life, suicide and infanticide. Religious coping and problem-solving ability are implicated in lessen or worsen depression. This study examined the relationship between religious coping, problem solving ability and postpartum depression among postpartum mothers attending specialist hospital Gashua, Yobe state Nigeria. The study adopts descriptive cross section research design using convenience sampling of 120 postpartum depressed mothers. Psychological Measure of Islamic Religiousness, Social Problem-Solving Inventory- Revised Form and Edinburgh Postnatal Depression Scale were used in measuring religious coping, problem solving ability and postpartum depression respectively. The linear multiple regression analysis of study revealed a significant negative relationship between positive religious coping (PRC) and postpartum depression (PPD), but a significant positive relationship between negative religious coping (NRC) and postpartum depression. Among the seven predicting variables PRC and NRC are the variables that best predict the criterion with the value (ß = -.405, t = -5.338, p = .000 <0.001), then NRC with a value (ß = .358, t = 4.696, p =.000 < 0.001). Then, the avoidance problem solving style (APSS) came nest with a value (ß = .141, t = 2.052, p = .042 <0.05). The findings from this study have implications for the health care delivery system of all tiers of government, the mental health care policy makers, health care facilities, religious bodies, counsellors/therapist. The findings recommended improve social problem solving while caring for patients with postpartum depression. Strategies that will increase positive religious coping and reduce negative religious coping must be emphasized to boost mental health among health workers.**

Keywords: **Postpartum Depression, Problem Solving Ability and Religious coping.**

I. INTRODUCTION

Depression after delivery constituted both physiological and psychosocial problems negatively detrimental to the health and wellbeing of numerous mothers. It is one of the major psychological disorders with a diverse cultural and religion inclination (Mahmood & Mohammed, 2017). This indicates that postpartum depression is a general and common phenomenon across the globe. The postpartum depression occurs during postpartum period (one to four weeks) after given birth (Chibanda et

al., 2014). This transition period of mood disorder goes alone with tremendous challenges, especially for new mothers. New mothers are struggling with physical and emotional postpartum changes, and also battling with expected societal and cultural roles and demands. Prevalence of post-partum depression shows that about 1 in 10 western women experience various degree of post-partum depression in past study (O'Hara & Swain, 1996), and 44.5% (Obindo et al., 2013) and 45.7% in African women (Mahmood & Nadiyah Bt Elias, 2016).

Unfortunately, many women experienced short-or-long term mood disturbances ranging from postpartum blues, post maternal depression to postpartum psychosis that can transform this postpartum period into a nightmare. Post maternal depression often goes unrecognized because many of the usual discomforts of the puerperium like fatigue, difficulty sleeping, low libido is similar to symptoms of prenatal depression but depression after birth may lead to infanticide and mother's suicide if not resolved (Wu, Chen, & Xu, 2012; Mahmood, Wanan, Suleiman, & Ibrahim, 2025).

For these reasons and possibly because of perceived societal expectations of the new mother, postpartum women are often reluctant to complain about their mood problems (APA, 2013). The interaction of genetic susceptibility with major life events and hormonal changes may explain why postpartum depression affects some women and not others. During postpartum period only nurses among the health workers are the health care provider, especially in the northern part of Nigeria and most African countries (Mahmood & Nadia, 2016; Chibanda et al., 2014). Due to social, cultural and spiritual activities attached to postpartum period and the importance of faith and belief in the interpretation of mental illness and treatment (Meer & Mir, 2014; Ridings, 2013; Sabry, & Vohra, 2013; Koenig, & Al Shohaib, 2014), it is crucial to examine the impact of religious coping together with the problem-solving ability of the postpartum mothers in resolving their depressive disorder.

Research in the field of psychology on the role and practices of religious faith and beliefs on the health and well-being of the individual has become a topical issue with various findings (Koenig, & Al Shohaib, 2014). Religious practices and beliefs are growing past and have a place to sit worldwide with contradictory findings in terms of relationship with mental health and psychological well-being of people (Meer & Mir, 2014). The role of religious coping and the people's problem-solving ability in resolving mental illness has been implicated across numerous studies (Meer & Mir, 2014; Koenig, & Al Shohaib, 2014; Mahmood & Mohammed, 2017).

Religious coping is the approach to mental or behavioural problem through the use of spiritual or beliefs mechanism to resolve problems (Sabry, & Vohra, 2013). The coping approach could be positive religious coping or negative religious coping. Evidences have shown that positive religious coping plays a beneficial role in the lives of Muslims coping with major life stressors (Abu Raiya et al., 2008). Positive religious coping reflects a secure relationship with God, a belief that there is a greater meaning to be found, and a sense of spiritual connectedness with others (Cheadle, Schetter, et al., 2015). In Nigeria women resort to religious coping and postpartum cultural ritual such as bathing with hot water, drinking hot gruel with high concentration of potash, nursing in a hot room. These rituals are detrimental to their health conditions with a serious physiological implications like hypertension, heart problem and ulceration of skin (Ilyas et al., 2006; Koenig, King, & Carson, 2012).

Even though, religion has both positive and negative implication on mental health or mental illness across studies (Ai, Huang, Bjorck, & Appel, 2013; Mahmood & Mohammed, 2017; Ahmad & Gaber, 2019; Mahmood, Auwal & Mohammed, 2021), yet individual problem-solving ability equally improves or weakened mental illness, especially depression and anxiety (Hasegawa et al., 2015; Emam, 2013; Eskin et al., 2014). Problem solving ability (PSA) is the process by which people attempt to identify or discover effective and adaptive solutions to problems they experience in everyday life (D'Zurilla, Nezu, & Maydeu-Olivares, 2002, 2010). Problem solving ability is a multidimensional construct comprises problem solving orientation (PSO) and problem-solving style (PSS). The former is how individual see problems as a challenge which positive problem-solving orientation (PPSO), while, when problem is perceived as a threat is considered as negative problem orientation (NPSO). On the other hand, the other main component of problem-solving ability is the problem-solving style (PSS) which is the used of behavioural or motor activities in solving problems. This includes, rational problem-solving style (RPS) the positive and constructive style or skill in solving problems. However, the other destructive style of problem solving are the impulsive or careless problem-solving style (IPSS), negative problem-solving style (NPSS) and avoidance problem solving style (APSS). All these three components of problem-solving styles increase mental illnesses like depression, the rational style decreases mental illness (Hasegawa, *et al*., 2013).

Even though, a quite numbers of studies on problem solving ability and depression were conducted (Hasegawa, *et al*., 2013; Mahmood & Nadiyah Bt Elias, 2016; Chibanda et al., 2014), another studies on religious coping and depression (Meer & Mir, 2014; Koenig, & Al Shohaib, 2014; Mahmood & Mohammed, 2017; Koenig, King, & Carson, 2012), yet studies on the relationship between the religious copings with all the combines components of problem-solving ability and postpartum depression is very rare and has not been extended among postpartum mothers in the north east part of Nigeria, especially, where insurgences of Boko Haram and others terrorist displays their heartless activities leaving widowers and orphans helplessness.

In the context of this study, it is expected that postpartum depressed women with positive religious coping, positive problem-solving orientation may apply a constructive and rational problem-solving style, thereby decreasing the symptoms of postpartum depression, while on the other hand women with negative religious coping and the negative problem-solving orientation may apply destructive or negative problem-solving style in their depressive illness that may delay recovery.

Objective of the study

The main purpose of this study is to examine the relationship between postpartum depression, religious coping and problem-solving ability among postpartum women attending specialist hospital Gashua, Yobe state Nigeria:

Specific objectives are:

1. To examine the relationship between positive religious coping (RC) (positive and negative coping) and postpartum depression (PPD) among postpartum mothers attending specialist hospital Gashua.
2. To find out the relationship between problem solving orientation (PSO) (positive and negative orientation) and postpartum depression (PPD) among postpartum mothers attending specialist hospital Gashua.
3. To investigate the relationship between problem solving style (PSS) (rational, impulsive and avoidance problem solving styles)

Hypotheses:

1. There will be no significant relationship between positive religious coping (RC) (positive and negative coping) and postpartum depression (PPD) among postpartum mothers attending specialist hospital Gashua.
2. There will be no significant relationship between problem solving orientation (PSO) (positive and negative orientation) and postpartum depression (PPD) among postpartum mothers attending specialist hospital Gashua.
3. There will be no significant relationship between problem solving style (PSS) (rational, impulsive and avoidance problem solving styles).

II. CONCEPTUAL FRAMEWORK

A. Postpartum Depression (PPD)

Postpartum depression is a postnatal mood disorder characterized by weight gain or loss, nervousness, retardation in body activities, loss of energy, and lack of concentration, loss of interest in child and maternal role recurrent thoughts of death, disturbed sleep, poor appetite, decrease interest from social and emotional activities, guiltiness about parenting ability, hopelessness, helplessness, suicidal thoughts and infanticide (APA, 2013; Tissot *et al*., 2013; WHO, 2012, 2022; Matsumura, Hamazaki et al., 2019). Postpartum depression was recognized as an affective mood illness with similar features to general depression, but occurring during the postpartum period. Later, postpartum depression became a definite diagnosis as a mental illness in the ICD meaning the international classification of diseases as part of behavioral and mental disorders related with puerperium. It has been placed in a subcategory of depressive disorders in DSM-IV meaning the diagnostic and statistical manual of mental disorders, fourth edition and American psychological association (DSM-IV-TR; APA, 2013; WHO, 2022; Monroe, Slavich, & Gotlib, 2014). Postpartum period is regarded as the time of rejoicing and happy because of the newborn baby in the family but turns to be a period of sadness, stress, and unpleasant emotional state to some mothers due to depression. It is clearly documented that postpartum depression negatively affects the health of the mothers, child, and families. This leads to poor mother-child relationship and causes impairment in learning, reasoning, emotional, mental and social development of the child up to school level (American Nurses Association (ANA), 2014; Tissot *et al*., 2013; Patino, Lara, Benjet et al., 2024; Mahmood & Nadiyah, 2017; Patino et al., 2024).

Postpartum depressive illness constitutes a major problem for the Nigerian women. A study has reported that from 1990 to 2008, about 49 percent of patients attending health institutions in Nigeria suffered depression (Adewuya, Ola, Aloba, Mapayi, & Okeniyi, 2008). The prevalence among postpartum mothers in the North central of Nigeria was 44.5% (Obinda, Ekwempu, Ocheke, Piwuna & Omigbodun, 2013) while 30.6% was reported in the southern eastern Nigeria (Ukaegbe, Iteke, Bakare & Agbata, 2012). In a study among 876 women attending a postnatal clinic in western Nigeria indicated a prevalence of 14.6% at a cut-off of 9 in EPDS (Adewuya, 2005). The higher rate of postpartum depression in Nigeria may be attributed to the environmental and socioeconomic factors such as high poverty rate, lack of social welfare, increased rate of infectious diseases, inflation, illiteracy, corruption, unemployment and ethnoreligious crisis and insurgences, especially in this study area where everyday husbands are killed living pregnant and postpartum mothers unsupported. Depression weakens problem-solving ability of an individual and once depression occurs, the patient is not able to solve personal and social problems (D'Zurilla & Nezu, 2010).

Problem Solving Ability (PSA)

Problem-solving ability as a process in which a person makes an effort in identifying effective solution or means of coping strategies to response to the particular problematic situation that lacks instants response (Gellis & Bruce, 2010; Nezu, Nezu, & D'Zurilla, 2012). It is a construct with more than one dimension involving different related components. It comprises two general and partially independent components. These components are the problem-solving orientation and the problem-solving styles. The first component of the problem-solving orientation consists of positive problem orientation (PPO) and a negative problem-solving orientation (NPO) while the problem-solving style comprises rational problem-skill (RPS), the impulsive-careless skill (ICS) and the avoidance problem-solving skill (AS) (D'Zurilla & Goldfried, 1971). The adaptive or constructive components of problem-solving ability were the positive problem orientation (PPO) and the rational problem-solving skill (RPS). Increase in these two dimensions signifies effective and improvement in problem solving ability. The other three dimensions, the negative problem-solving orientation (NPO), the impulsive-careless skill (ICS) and the avoidance skill (AS) are considered maladaptive and dysfunctional dimensions of the problem-solving ability. Decrease in these dimensions indicates effective and improvement of the problem-solving ability, while increase signify poor and ineffective problem-solving ability. Numerous researches have documented an association or relationship between depression and problem-solving ability across different population (Nezu, Nezu, Damico, & Gerber, 2023; Hasegawa *et al*., 2015; Visser et al., 2015; Hasegawa, Kunisato, Morimoto, Nishimura, & Matsuda, 2018; Hasegawa, Yoshida et al., 2015; Klein, Leon, Li, et al., 2011; Maddoux et al., 2014; Ranjbar, Bayani & Bayani, 2013; Yen, Rebok, Gallo, Jones & Tennstedt, 2011). Pierce (2012) has indicated that some life problems and purpose of living related to negative thoughts expressed from the religious beliefs cannot be sufficiently addressed without exploring the spiritual and cultural aspect of people's life.

A recent study was conducted to assess social problem-solving ability among depressed patients using a descriptive cross section design through convenience sampling of 65 patients with depression diagnosis at the inpatient and out-patient psychiatric department of Mansoura university hospital. Sociodemographic and Social Problem-Solving Inventory were employed and the results research indicated that the majority of patients (80%) demonstrate poor social problem-solving ability (WHO, 2023; Nahed, Rania, & Eletrby, (2024). This study revealed that depressed patients had poor social problem-solving ability.

Religious coping (RC)

Religious coping is the application of faith, beliefs and spiritual practices in problem solving. Religious coping could be positive (PRC) or constructive coping and negative or destructive coping (NRC). Religion has been reported as a guard against depression from different literatures (Cheadle et al., 2014; Meer & Mir, 2014; Hamdan, 2008; Sabry & Vohra, 2013). Hamdan, (2008) reported that religion has been used as a valuable means and instruments for handling life problems. Empirical evidences proved that religious beliefs and practices are commonly applied worldwide in resolving depression, improving health and coping with daily life problems (Koenig, 2012; Cheadle, Schetter, Lanzi, et al., 2015; AI et al., 2013; Abu Raiya & Pargament, 2010; Koenig, & AlShohaib, 2014; Keshavarzi, & Haque, 2013; Francis, Gill, Han et al., 2019).

Studies have shown that religious coping is effective in reducing levels of depression and it has been found that people from Islamic backgrounds use religious coping approach in their personal problem solving (Abu Raiya & Pargament, 2010; Sharak, Bonab, Jahed, 2017; Francis, Gill, Han et al., 2019). Psychological techniques like behavioral activation

intervention (BA) were used and combined with Islamic teaching in the management of depression among Muslims adherence depressed patients in London. The result of the study tallied and maintained that integration of religious teachings in the psychological therapies sessions among the Islamic faithful is very effective (Meer & Mir, 2014). This finding is consistent with the previous studies outcome (Thomas & Barbato, 2020; AI et al, 2013; Abu Raiya & Pargament, 2010). Some of the Islamic believers show a positive Islamic religious coping in handling their problems, while other coped negatively (Nahed, Rania, & Eletrby, 2024; Haghighi, 2013; Chow, Francis, Ng et al., 2020).

Research was also carried out aimed to assess the prevalence of anxiety and depression among 200 health care workers within pandemic area and their association with religious coping using cross-sectional design with Malay versions of the Brief Religious Coping Scale and Hospital Anxiety and Depression Scale. The result indicates higher scores in positive religious coping (mean: 21.33) than negative religious coping (mean: 10.52) and the prevalence of anxiety and depression was 29.5%. Both positive and negative religious coping were significantly associated with anxiety ($p < 0.01$) and depression ($p < 0.05$, $p < 0.01$). Positive coping predicted reduction in anxiety and log-transformed depression scores. Negative coping predicted increment of anxiety and log-transformed depression score and Positive religious coping is vital in reducing anxiety and depression among the participants (Chow, Francis, Ng, Naim et al., 2021).

Positive Religious Coping (PRC)

Positive religious coping (PRC) is an act of securing good relationship with God. It is a belief that there is a greater meaning to be found in submitting to the destiny as well as having a sense of spiritual relationship with others (Pirutinsky, S.; Cherniak, A.D.; Rosmarin, 2020; Pargament, Koenig & Perez, 2000). Studies have shown that religious coping is effective in reducing depression and people from Muslim backgrounds are more likely to use religious coping techniques. Islamic teaching was combined with Behavioral Activation therapy (BA) was applied in the treatment of depression among Muslims with depressive symptoms in London (Meer & Mir, 2014).

Different studies have indicated positive religious coping plays a crucial role in the lives of Muslims faithful coping with mental health problems (Meer & Mir, 2014; Sabry & Vohra, 2013; Abu Raiya et al., 2008; Abu Raiya & Pargament, 2010; Aflakseir & Coleman, 2009; Ai, Peterson, & Huang, 2003; Khan & Watson, 2006). Positive religious coping approach is an indication to a safe relationship with God, a greater meaning in life, and a sense of divinely links with others people (Carter & Rashidi, 2010; Pargament, Feuille, Burdzy, 2011; Pargament, Tarakeshwar, Ellison, Wulff, 2001).

Studies have shown that higher level of religiousness is positively related to positive religious coping and higher hope in life. Data was collected on psychological trauma during war from the immigrant Muslims population staying in U.S.A that escape from Kosovo war. These data were examined and tested with their coping to the war trauma and found that positive religious coping is positively significant in coping with their stressors among highly religious individuals (Ai et al., 2003; Aflakseir & Coleman, 2009; Zhu, Sun, Zhang et al., 2020).

According to Khan and Watson (2006) revealed that religious beliefs and practices have been utilized as a coping mechanism against depression and anxiety to the sample of university students in Pakistan. Higher levels of religious motivation negatively related with lower levels of depression (Abu Raiya et al., 2008; Carter & Rashidi, 2010; Thomas, Yang, Contractor, & Weiss, 2024; Kataria, Lakhan R; Shah et al., 2016). Other literature revealed that the higher level of Islamic positive religious coping is regularly and powerfully linked to higher levels of positive health status and is related to lower levels of negative well-being and depression (Abu Raiya et al., 2008; Abu Raiya & Rashidi, 2010).

Negative Religious Coping (NRC)

Although positive religious coping reported to be a source of solution, cure and support. It has been debated that positive religious coping is a source of worry when it becomes negative as religious struggles. Negative religious coping (NRC) or negative religious struggles can be an expression of conflict, questioning and doubting about the issues of beliefs, God and anything associated with the matters of religion (Abu Raiya & Rashidi, 2010; Koenig, & Al Shohaib, 2014). Literature identified three kinds of religious struggle exist which includes divine, intrapsychic, and interpersonal as indicated by the same source. Divine struggles is a tension in the individual ‘s relationship with the divine (Ahmad AA, Gaber, 2019; Mahmood, Auwal, & Mohammed, 2021). This tension might be manifested in questions about the benevolence and power of God, feelings of divine abandonment and anger toward God. Intrapsychic religious struggles are characterized by questions and doubts about religious beliefs and issues, such as the belief in the afterlife, and conflicts between religious

teachings and human impulses and appetites (Ai, Huang et al., 2013). Interpersonal religious struggles include religiously-related conflicts with family, friends, and institutions.

Antecedent and consequences in an association between and depression and religion faiths (Tamin & Hamdan & Tamim, 2011; Sabry, & Vohra, 2013). Struggling with bundles of day-day affairs and stressors increases the chance of postpartum mothers to depression. More also, depression lowers the individual to cope with higher domestic works and everyday problems that may resulted to worsen the depressive illness. Though, the bases of depression among postpartum mothers might be from intimate partner violence or prenatal depression. It is assumed by this study that since postpartum mothers in different social settings incline to develop a unique emotional or mood problem due to pressure of domestic task and maternal societal role expectations. It is therefore, their orientation to problem solving and religion coping mechanisms to depression may determine their chance of recovery or deterioration of their problems.

III. METHODOLOGY

Study settings

Specialist hospital Gashua where this study was conducted was located at the northern senatorial district of Yobe state with an estimated of about 153,015 (NPC, 2006). This town was selected through purposive sampling because of the availability of target sample area and health centre where most of the records of the postpartum women that went for antennal and postnatal care are available. These population of 173 obtained were screened for postpartum depression and 120 were found with symptoms of postpartum depression.

Research Design

This study adopted a descriptive cross-sectional survey research design with the used of questionnaires for measuring the relationship between the independent variables (PRC, NRC, PPSO, NPSO, RPS, ICPSS, APSS) and dependent variable (Postpartum depression). Means, standard deviation and regression analysis were used for data analysis

Population, sample and sampling techniques

A purposeful sampling technique was employed in selecting the participants of the study. This is because the items in the questionnaire are more appropriate to Muslim. The total participants obtained were 173 postpartum women attending maternity, postnatal care and post operative unit of gynaecology ward. This number was screened for depression and 120 were found with moderate and severe postpartum depression using Edinburg postnatal depression scale with cutoff point ≥ 12 moderate depression and **greater or above** 13 with severe depression.

Data collection procedure

The study questionnaires were distributed among 173 postpartum women and they were all screened for postpartum depression. 132 were found with postpartum depression and met the criteria for this study. Out of the 132 number, only 127 participants responded and returned the questionnaires. 120 were correctly filled, returned and used throughout the study analysis. Other remaining 5 questionnaires were returned but rejected due to damaged. Purposive and convenient sampling technique were used for selecting the participants. This is because the sample are reluctant to participate due to religious and cultural reasons and some their husbands resisted and denied their wives. The samples were further identified and cross-checked through using the register book (sampling frame) of each hospital unit. Some of the respondents were met in their houses by the researcher.

Instruments

Psychological Measure of Islamic Religiousness (PMIR)

Positive religious copping (PRC) and negative religious copping (NRC) were measured by psychological measure of Islamic religiousness (PMIR; Abu Raiya, 2008) which has 7 items in positive religious copping and 6 items for the negative religious copping. The 7 items in Positive religious copping (PRC) ranked on 4-Linkert scale from 1(I do not do this at all), 2 (I do this a little), 3 (I do this medium amount) and 4 (I do this a lot). Example of the items is when I face a problem I look for a stronger connection with Allah or I seek Allah ‘s care. Higher scores reflect more of the construct indicating higher positive religious copping. The Cronbach ‘s alpha coefficient of the construct in this research is 76%. The 6 items of negative religious coping (NRC) ranked on 5-Linkert scale from 0 (never), 1 (rarely), 2 (sometimes), 3 (often), and 4 (very

often). Example of the items is; when I face a problem, I find myself doubting the existence of Allah. Similarly, higher scores reflect more of the construct indicating higher negative religious copping. The Cronbach 's alpha coefficient of the construct in this study is 85%.

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), and .90 among Nigerian postpartum women (Ukaegbe et al., 2012). In this study, the Cronbach's alpha is .775.

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 (PPSO), negative problem orientation (NPSO), rational problem-solving (RPSS), impulsivity-carelessness style (ICPSS) and avoidance style (APSS). 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 both dimensions of the scale that is positive problem-solving orientation (PPSO) the adaptive part of the dimension and negative problem-solving orientation (NPSO) the maladaptive part of the problem-solving ability. The others components are the rational problem-solving style, impulsive careless problem-solving style and avoidance problem solving style. 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 dimensions are PPO, $\alpha = .708$ and NPO, $\alpha = .749$.

TABLE 3.I: Study Scales, Constructs and their Reliability results

Scales	Constructs	Cronbach Alpha reliability
Edinburg Postnatal Scale	Postpartum Depression (PPD)	.89
SPSI-R-SF	Positive Problem Orientation (PPO)	.70
SPSI-R-SF	Negative problem orientation (NPO)	.74
SPSI-R-SF	Rational Problem-Solving Style (RPSS)	.72
SPSI-R-SF	Impulsive problem-solving style ICPSS	.84
SPSI-R-SF	Avoidance problem solving style (APSS)	.81
PMIR	Positive Religious Coping (PRC)	.85
PMIR	Negative Religious Coping (NRC)	.83

Data Analysis

Descriptive statistics and multiple regression analysis via SPSS were used for this study analysis. Descriptive was used for the analysis of means, standard deviation and regression was used for sorting out the relationship between the constructs.

IV. RESULTS AND DISCUSSION

This research examined the role of religious coping and problem-solving ability of postpartum mothers handling their depressive problems after delivery. The presence of postpartum depression (PPD) and how the application of problem-solving ability (PPSO, NPSO, RPSS, ICPSS and APSS), religious coping (PRC, NRC) and individual's coping predicts the illness. The study equally investigated whether postpartum mothers' differences in the application of Islamic religious coping approaches would decrease or increase the postpartum depression. It has been assumed by this study that negative religious coping to deteriorate the illness of depression and positive religious coping will lessening the depressive symptomatology.

4.1 Sociodemographic Characteristics

The demographic variables as shown in table 4.1 bellow revealed that out of the 120 respondents, almost all that were screened for postpartum depression were married 81(67.50%) and were withing the age range of 25- and above years. This indicates that most of the participants were matured women and most of them give birth within married cycle as it is a taboo for a woman to give birth without husband, hence, the insignificance nonmarried mothers. This is associated with their religion and culture. Most of the widowers lost their husbands during insurgences of Boko Haram. The educational status of the participants was low and many had normal delivery. Most of them were unemployed and were fully house wives.

Table 4.1: Socio-Demographic Characteristic of the Participant (N=120)

Variables	N	Percentage
Marriage		
Married	81	67.50%
Divorce	14	11.67%
Widow	25	20.83%
Employment status		
Employed	44	36.67
Unemployed	76	63.33
Age		
14 - 19	14	11.67
20 - 24	36	30.00
25 - above	85	70.83
Educational background		
A - Level	33	27.5
O - Level	87	72.5
Mode of Delivery		
Normal	106	88.3
Caesarean section	14	11.67

Screening for Postpartum Depression

Based on the Edinburg postnatal scale for screening depression after delivery, the EPDS cut of point of those that scored 10 but less than 12 were 29 (16.76%) and were considered having less depression, but those that scored greater than 12 38 (21.7%) or equal to 13 53(30.64%)were moderately depressed, but for those who scored above 13 are considered severely depressed according to the scale as can been seen in table 4.2 bellow. Non-depressed were 53 (30.6%). Therefore, based on this study's screening, 132 participants out of 173 screened were postpartum depressed and met the criteria for this study. Out of the 132 number that received the questionnaires, only 127 returned their questionnaires and seven (7) were discarded because of improper filling. Therefore, 120 questionnaires were used throughout for the data analysis of this study.

Table 4.2: Result Screening for Postpartum Depression at Different Cut off Scores in EPD (N=173)

EPDS Scores	Depressed	%
≥ 10 (mild)	29	16.76
≥ 12 (moderate)	38	21.97
≥ 13 (severe)	53	30.64
	120	
	Non-depressed	**%**
	53	30.635
Total	**173**	**100**

The statistical means and standard deviation of each construct can be seen in Table 4.3.

Table 4.3: Constructs and their statistical mean and standard deviation

Constructs	Mean	Std. Deviation	N
DP	1.8178	.51199	120
PRC	2.3782	.75504	120
NRC	1.6087	.69888	120
PPSO	2.0567	.74391	120
NPSO	2.3217	.90537	120
RPSS	1.8600	.75129	120
IPSS	2.6550	.81908	120
APSS	2.6567	.77663	120

Table 4.3 above from the descriptive statistics shows that among the postpartum women, the mean score of positive religious copping (2.378) is higher as compared to the mean score of negative religious coping (16.087). As such, the postpartum mothers showed more positive religious copping and less negative religious coping against postpartum depression. The result also indicated that the negative problem orientation (NPSO) mean score for postpartum depressed mothers was higher (2.3217) as compared to the positive problem orientation (PPSO) mean score of (2.0567).

This result indicated that postpartum mothers who were depressed have a weak positive problem-solving orientation and strong negative problem-solving orientation toward problems solving leading to lower mean score for the rational problem-solving style (RPSS). This means that postpartum mothers due to their depressive symptoms see their depression as a threat not a challenge. It is signified negative interpretation of self, situation and behavior (Chibanda et al., 2014; Chinwe et al., 2017; Denis, Ponsin & Callahan, 2012; Bandura, 1977).

The mean score for the impulsive problem style (IPSS) (2.6550), and avoidance problem solving style (APSS) (2.6567) are higher than the mean score of the positive religious coping (2.378) and positive problem-solving orientation and rational problem-solving style which are all the adaptive and constructive dimension of problem-solving ability. These findings account for depressive symptoms of the participants. Positive religious coping is higher (2.378) which is the reason for the lower mean score for negative solving orientation (2.321) in this study. The impulsive problem-solving style and the avoidance problem solving style increases the chance of the participants of depression and may increase the chance of negative religious coping which is inconsistence the finding of past study (Mahmood & Mohammed, 2017).

Multiple regression analysis was conducted in determining the relationship between positive religious coping, negative religious coping, positive problem-solving orientation, negative problem orientation, rational problem-solving style, impulsive careless problem-solving style and avoidance problem solving style and postpartum depression. The results as indicated in table 4.4 revealed three of the predictors were significant (0.05), R = .736, R^2 = .541, Adj. R^2 = .512, F-Change (18.869). The multiple correlation coefficients between the predictors and the criterion variable were .736. The predictor accounted for 54.1% of the variance in postpartum depression. Based on the Cohen (1988) classification of R^2, 0.02 as weak, 0.13 as moderate and 0.26 as substantial. Therefore, this study has a substantial value of R^2 54.1% The significant F-test shows that the relationship (18.869, $p < 0.001$) signified the overall significant prediction of independent variables to the dependent variable. But did not explain the relative contribution of each independent variable to the dependent variable (Greer, &, Salkind, 2008). Among the seven predicting variables PRC and NRC are the variables that best predict the criterion with the value (ß = -.405, t = -5.338, p = .000 <0.001), then NRC with a value (ß = .358, t = 4.696, p =.000 < 0.001) and then the APSS with a value (ß = .141, t = 2.052, p = .042 <0.05). In this study, the results show that postpartum mothers with high positive religious coping and low religious negative coping may less likely suffers depression. Additionally, from this study results indicated that the participants may suffer postpartum depression because of the higher negative solving orientation and higher avoidance problem solving style with low rational problem-solving style which is consistence with the past literatures (Cheadle, Schetter, Lanzi et al., 2015; Mahmood, Nadiyah, 2017; Kataria, Lakhan, Shah, et al., 2016; Thomas, Yang et al., 2024; Chow, Francis, Ng et al., 2020).

Table 4.4: Multiple Regression

Constructs	Unstandardized coefficient B	Standardized coefficient Beta	T-Value	Sig.
PPD				
PRC	-.275	-.405	-5.338	.000
NRC	.262	.358	4.696	.000
PPSO	-.059	-.086	-1.301	.196
NPSO	.028	.050	.717	.475
RPSS	.013	.019	.269	.788
ICPSS	-.050	-.080	-1.145	.254
APSS	.093	.141	2.052	.042
R	**R^2**	**Adj. R^2**	**R^2 Change**	**F-Change**
.736	.541	.512	.541	18.869

Dependent Variable PPD: df1 = 7, df2 = 112, Durbin Watson = 1.582

Table 4.4 shows that there exists a significant negative relationship between positive religious coping (PRC) (.000) and postpartum depression (PPD) among postpartum mothers, but a significant positive relationship between negative religious coping (NRC) and postpartum depression at .000 significant. This indicates that when the positive religious coping of the participants increases, then the postpartum depression decreases and vice versa. This finding is consistent with the study of Yen et al., (2011) reported that, a high level of positive religious coping (PRC) is related with a low level of depression. Previous studies have a similar outcome (Sharak, Bonab, Jahed, (2017; Francis, Gill, Han et al., 2019; Haghighi, 2013)

The study also shows insignificant inverse relationship between positive problem-solving orientation (PPSO) and postpartum depression (PPD) at insignificant level of .196. This means that when there is increase in positive orientation of the participant toward depression, the postpartum depression symptoms are decreases. The linear regression revealed insignificant positive relationship between negative problem-solving orientation (NPSO) and postpartum depression (PPD) (.475). The obtained coefficient is insignificant at the 0.05 level of significance. This shows that as the negative problem-solving orientation of the participants increases so as the depressive symptoms increases as well. This finding tallied with the past studies (Klein, Leon, Li et al., 2011; Nezu, Nezu, Damico, & Gerber, 2023)

Additionally, the study indicates insignificant positive relationship between rational problem-solving style (RPSS) and postpartum depression (.788), but insignificant negative or inverse relationship between impulsive careless problem-solving style (ICPSS) and postpartum depression (.254). Finally, the study found significant positive relationship between avoidance problem solving style (APSS) and postpartum depression (.042) and postpartum depression at the 0.05 level of significance.

This explains that as the maladaptive component (APSS) of problem-solving style increases, so as the postpartum depression increases, this is due to poor application of approach to problem solving. This finding of the study may also account for the high level of negative problem-solving orientation of the participants. Postpartum mothers with a high level of depression have low positive religious coping and low positive problem-solving orientation toward problem-solving, as shown by the present study which is consistent with the previous study (Aburezeq, & Kasik, 2023; Emam, 2013; Hasegawa, Kunisato et al., 2018; Maddoux, John, et al. 2014)

From the finding of this study, it indicates that postpartum mothers with a high level of positive religious coping were less likely to have depression. This is because of their good beliefs with destiny and less fair of unknown as well as making their depression as a challenge not a threat. This is consistent with the study of Abu Raiya and Pargament, (2010). As the level of negative religious coping decreases and the positive relationship though insignificant for negative problem-solving orientation in this study equally indicates that depression may be higher because of the maladaptive approach to problem. This is congruent with the finding of Yen et al., (2011) that depression and other mental illness weaken individual's problem-solving ability. This means that and going by this study results, the postpartum mothers with a high level of negative religious coping have a higher level of depression, negative problem-solving orientation, impulsive careless problem-solving style. These results were supported with past literatures (Aburezeq, & Kasik, 2023; Visser et al., 2015; Rees et al., 2015; Carpenter et al., 2012; Jackson & Dritschel, 2016; Yen et al., 2011).

The findings of this study show that the postpartum mothers attending specialist hospital in Gashua suffered postpartum depressed as a result of low and poor problem-solving orientation and rational problem-solving style with increase impulsive careless and avoidance problem solving style, meaning that their hope for success is low and viewed their problems as a threat, not a challenge. This situation may contribute to their acts of resorting to positive religious coping, though their surrender to positive religious coping is helpful (Aburezeq, & Kasik, 2023).

V. CONCLUSION

This study outcome revealed that when positive religious coping is higher and practiced, then the likelihood of depression after birth is less. When negative religious coping is higher, then the likelihood of postpartum depression may be higher. Study also indicated that increase in positive problem-solving orientation increases the chance of applying rational problem-solving style and thereby decreasing the symptoms of depression. However, the increased in the negative problem-solving orientation increases the chance of applying the maladaptive components of impulsive careless and avoidance problem solving style, thereby increasing the chance of postpartum depression. The results of this research also shows that majority of the postpartum mothers attending specialist hospital Gashua suffered depression after delivery.

This study findings highlight the role of religion in coping with mood disorders, especially depression after delivery. The study revealed the orientation and awareness of postpartum mothers toward mental illness and how such orientation determines their action and approach to depressive problems through rational or avoidance and careless impulsive styles. There is evidence to suggest that long-term effects of postpartum depression on mothers may be influenced by positive religious coping and deteriorated with negative religious coping. Thus, integration of people beliefs and approach to problems are key solution to mental health well-being of mothers after birth. This study's finding is evidence that effective interventions for depression solution has to do with people's faith linking their orientation and behavioural action towards problem-solving with resilience to mental illness Therefore, the findings from this study have implications for the health care delivery system of all tiers of government, the mental health care policy makers, health care facilities, religious bodies, counsellors/therapist and hospital authorities. The mothers are encouraged by this study to be screened routinely and treated using their religious beliefs in a humane manner and respectable manners so that the born child can be free from psychological negative care.

Suggestions

Routine screening of mothers before and after delivery in all health facilities is helpful in alleviating the symptom of depression and should be discouraged in both clinical and counselling management. Clinical psychologist, hospitals, School counsellors and professional social workers should take into consideration the findings of this study to assist the mothers to develop effective poor problem-solving orientation and skills to safeguard postpartum mothers against depression after delivery. There is a need to identify mothers who have low problem-solving ability and their religious coping who are exposed to or experiencing high level destructive stressful life events like domestic violence, family high expectation from the antenatal women and family disharmony because they are at increased risk for postpartum depression. The findings of this study recommended improve social problem solving while caring for patients with postpartum depression. Strategies that will increase positive religious coping and reduce negative religious coping must be emphasized to boost mental health among health workers.

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