Islamic problem solving therapy for postpartum depression among Muslim postpartum women in Nigeria

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Abstract: This research was aimed to compare the difference between conventional problem solving therapy and adapted Islamic problem solving therapy in decreasing postpartum depression and improving the problem solving ability among Muslim postpartum depressed women in Nigeria. Quasi-experimental pre-posttest design was adopted. The study employed systematic random sampling in data collection and 80 participants received six home-visits sessions of either conventional or Islamic problem solving therapy. Descriptive statistics and t-test via statistics package for social science were used for data analysis. The outcome of the research indicated that both the conventional and Islamic problem solving therapy were found significantly effective in reducing postpartum depression and improving the problem-solving ability. However, Islamic problem-solving therapy treatment was significantly more effective for reducing postpartum depression and the two maladaptive dimensions of impulsive-careless skill and avoidance skill. It was also more effective in increasing positive problem orientation, but not more effective than conventional problem solving therapy in decreasing the negative problem orientation and in increasing the rational problem-solving skill. Implications of this study will be of particular interest to clinical obstetrics and gynecology, psychiatrists, psychologist professionals, social workers as well as health-care institutions, government and health policy makers.

Keywords: Postpartum depression, Problem solving ability, Conventional problem solving therapy, Islamic problem solving therapy.

1.0 INTRODUCTION

The episodes of depression during the first year postpartum period is called postpartum depression (Cheadle et al., 2014). It has a similar features of depression in another time, but qualified as postpartum depression when it happens from four weeks after delivery (American Psychiatric Association, 2013). Postpartum depression becomes a frequent mental disorder related to childbirth which is a significant maternal reproductive health issue globally (Tissot et al., 2013), yet a dangerous psychosomatic health problem (Dennis et al., 2012). It cuts across countries and societies (Nasir et al., 2015; Cantilino *et al*., 2010) affecting many women in reproductive age (Cheandle *et al*., 2014) causing a negative consequences for the mother, child and the families at large (Tan & Yadav, 2012; Zhang & Jin, 2014), but one of the neglected illness (Vigod et al., 2010; Chibanda et al., 2014). Drugs and psychotherapy are the two major treatment of postpartum depression, but the side effects of the drugs discouraged mothers form its utilization, while inadequate professionals and cost of psychotherapy constituted another challenged to most of the psychotherapy (Goodman & Tyer-viola, 2010). 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). Thus, the need of discovering a therapy that is simple feasible, acceptable, sustainable and more effective for postpartum depression.

2.0 LITERATURE REVIEW

2.1 Postpartum depression

Postpartum depression is one of the postpartum mood disorder characterized by nervousness, activities intolerance, fatigue, poor concentration, loss of interest in child and maternal role, insomnia, poor appetite, disinterest in pleasurable activities, guiltiness about parenting ability, hopelessness, suicidal thoughts and infanticide (Wu, Chen & Xu, 2012). Postpartum depression has a physiological, psychological and social factors as antecedents (APA, 2013).The prevalence of postpartum depression differs across studies, but substantial studies reported the prevalence of 10-15% (Robertson et al., 2004; O'Hara & Swain, 1996). Postpartum depressive illness constitutes a major problem for the Nigerian women with a reported prevalence rate of 44.5% (Obinda et al., 2013). Some women are committing suicide due to depression (Nelson-Porter, 2014; Shittu *et al*., 2014; Ekwerike, 2015). Recent evidence indicated that 1 in 6 mothers suffers postpartum depression and is one of the leading cause of suicide in Nigerian's postpartum women (Ekwerike, 2015).

Postpartum depression affects and interfere negatively with the quality of life of the mother which a long term significant negative effects on a child cognitive, social and intellectual development (Cheadle *et al.*, 2012). Depression also weakened individual's problem solving ability (Yen et al., 2012).removes away the pleasure and brings about unpleasant persistent feelings to the mother leading to a poor personal social relationship (Wu *et al*, 2012).

Given all these undesirable features and their negative effects, yet the treatment of postpartum depression is inconclusive (Holloway et al., 2015). Chemotherapy is the first line of treatment of postpartum depression, but majority of women preferred psychotherapy due to side effects of drugs (Goodman & Tyer-viola, 2010). Still psychotherapy is resource intensive where many women cannot afford it and inadequate professionals put more challenged, especially in developing countries (Chibanda et al., 2014). Therefore, there is a need to identify treatment intervention that is effective, affordable, feasible, sustainable and acceptable with a sense of ownership to postpartum women with depression.

2.2 PROBLEM SOLVING THERAPY

Problem-solving therapy (PST) is a one of the psychological treatment involving cognitive and behavioral approach that predominantly emphasizing on teaching constructive way of problem-solving abilities and skills to clients. Problem solving therapy is aimed at preventing and reducing psychological problems and improving general health conditions through assisting patients to cope with daily life conflicts and negative life events (Sampson et al., 2014; Hasegawa et al., 2015). PST takes its theoretical base from the social problem solving model of D'Zurilla and Goldfried (1971) which assumed that when patients gain control over their problem through PST, their psychopathology is reduced (Bell & D'Zurilla, 2009). PST solve problem through seven stages. These are problem identification, setting up a realistic objectives, generating multiple solutions, weighing the pros and cons of the solutions, chosen a preferred solution, implementing the solution and evaluation of the performances. It has been reported that negative impact of postpartum depression is reduced by effective problem solving ability while ineffective problem solving ability increases the negative impact of postpartum depression (Chang, 2004).

2.3 PROBLEM SOLVING ABILITY

Problem-solving ability (PSA) is a process in which a person makes an effort in identifying effective solution to a particular problematic situation that lacks instants response (D'Zurilla & Nezu, 1982; Gellis & Nezu 2011). It is a multi-dimensional construct consisting of problem-solving orientation and problem-solving skill. The problem-solving orientation consists of positive problem orientation (PPO) and a negative problem-solving orientation (NPO) while the problem solving skill comprises rational problem-skill (RPS), the impulsive-careless skill (ICS) and the avoidance problem-solving skill (AS).

2.3.1 Positive problem orientation (PPO)

People with positive problem orientation see problems as an opportunities and a challenge not a threat. They are certain of solving problems they face in living. This is a constructive component of problem-solving ability. Increase in the scores of this dimension indicates improvement in problem-solving ability.

2.3.2 Rational problem skill (RPS)

This is another constructive dimension which is refers to the rational and logical approach to problem-solving. People using this skill is deliberate and systematic with a reasoning in handling a problem in life which leads to a successful problem solving. The problem-solving ability is said to be effective and good when this component increased.

2.3.3 Negative problem orientation (NPO)

This is a problem solving approach which a person uses negative problem orientation and perceives problems they encounter as a threat with negative emotional reactions to problem-solving. They lack confidence in their problem-solving abilities. It is a dysfunctional component of problem-solving ability and its increase level demonstrates poor problem-solving ability.

2.3.4 Impulsive-Careless Problem Skill (ICS)

Individuals who use this skill act with the first solution that comes to their minds and cannot think about the possible consequences of the solution alternatives, and do not possess cognitive skills to evaluate and correct their problem-solving processes. Individual using this component also approach problem haphazardly and carelessness. It is also a dysfunctional dimension of problem-solving ability where its increase indicates ineffective problem-solving ability.

2.3.5 Avoidance Skill (AS)

Avoidance skill is the destructive problem solving approach in which a person deal with problems in an avoidance way and display a behavioral characteristics such as procrastination, overlooking and delaying in solving a problem when occurs. Individual using this approach of solving problem pretended that problems do not exist and he postponed a solution to a problem. Decrease in this dimension indicates improvement in problem-solving ability.

Numerous studies have reported that problem solving therapy (PST) is effective in increasing positive problem orientation (PPO) and rational problem skill (RPS), while it decreases postpartum depression (PPD), negative problem orientation (NPO), impulsive careless (ICS) and avoidance

skill (AS) (Erdley, 2013; Alexopoulos et al., 2011; Gellis & Nezu, 2011; Nezu et al., 2010; Chang, 2004; Pech & O'Kearney, 2013; Gellis & Bruce, 2010; Rosen et al., 2011; Sampson et al., 2014; Chibanda et al., 2014). Despite all studies on the treatment of depression, yet the rate of the illness remains higher (Chibanda et al., 2014; Nylen et al., 2006). Among the reasons is lack of the integration of the PST with the people's social, cultural and religious beliefs (Pierce, 2012; Sabry & Vohra, 2013). According to Pierce (2012) indicated that PST is not effective in treating a divinely religious related problems, hence on the need of incorporating it with people's beliefs and practices.

2.4 ISLAMIC PROBLEM SOLVING THERAPY (IPST)

The IPST treatment manual is an adaptation treatment from the conventional PST treatment manual for depression. The PST treatment manual for depression in primary care of Hegel and Arean has been adapted and integrated with some Islamic beliefs, practices, and teachings based on the model of Eastern Asian psychotherapy for Muslim women with mental illness for the treatment of postpartum depression. The goal is not to replace the conventional PST, but rather to examine if there is another more effective and acceptable way of using PST for rapid recovery from maternal depression. The IPST is built on this idea for the treatment of postpartum depression using Islamic beliefs, practices, and teaching. The researcher observed that there are some problematic issues like questions related to life existent, meaning and purpose of life that may not be appropriately and effectively addressed by the conventional PST.

Study has indicated that depression is one of the common emotional problem among Muslim population, but very little studies were conducted among predominantly Muslim population (Koenig & AlShohaib, 2014). Majority of Islamic followers are unwilling to accept conventional treatment for fear of going against their Islamic teachings (Fonte et al., 2005). Huge number of studies have suggested on the crucial needs of integrating religious with psychotherapy (Sabry & Vohra, 2013; Pierce, 2012; Koening et al., 2012). Empirical studies have also confirmed that psychotherapy combined with religious beliefs and practices is more effective compared with conventional therapy (Fonte et al., 2005; Elias, 2005; Propst, 1980; Rizali et al., 1998; Azhar & Varma, 2000; Razali et al., 1998;).

For example Hamdan (2008) combined Islamic views with cognitive behavioral therapy in decreasing depression. Behavioral activation therapy was similarly integrated with Islamic beliefs and practices in the treatment of depression (Meer & Mir, 2014). Depression was equally treated with cognitive behavioral therapy incorporated with Islamic teachings (Razali et al., 1998). However, none of the present studies have integrated PST with Islamic beliefs and practices in treating postpartum depression and improving the five dimensions of problem solving ability. This study adapted the problem solving therapy for primary care of Arean and Hegel (2000) and modified with Islamic beliefs and practices in the treatment of postpartum depression and improvement of problem solving ability among postpartum Muslim women in Nigeria. Therefore, this research is aimed to compare the effectiveness of adapted Islamic problem solving therapy and conventional PST in decreasing postpartum depression and improvement of problem solving ability among Muslim postpartum women. Hence formed the research framework.
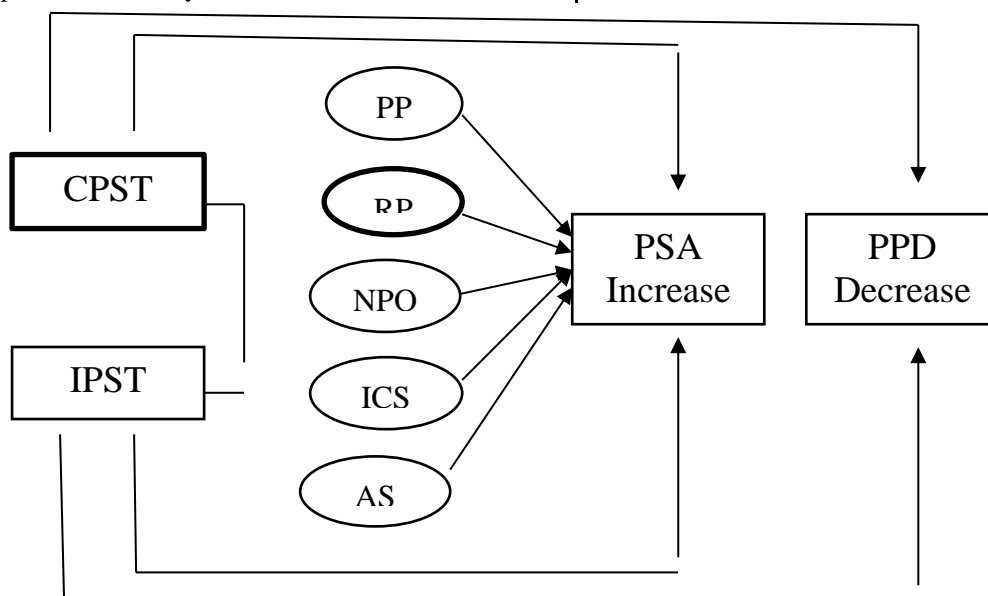

Figure 2.1 Research frame work

NB: Showing the difference between conventional problem solving therapy (CPST) and Islamic problem solving therapy (IPST) in decreasing postpartum depression (PPD) and increasing problem solving ability (PSA)

Based on this objective, the followings hypotheses were tested:

H_1: Islamic problem solving therapy (IPST) is significantly more effective compared to conventional problem solving therapy (CPST) in decreasing PPD.

H_2: Islamic problem solving therapy (IPST) is significantly more effective compared to conventional problem solving therapy in increasing PPO.

H_3: Islamic problem solving therapy (IPST) is significantly more effective compared to conventional problem solving therapy in increasing RPS.

H_4: Islamic problem solving therapy (IPST) is significantly more effective compared to conventional problem solving therapy in decreasing NPO.

H_5: Islamic problem solving therapy (IPST) is significantly more effective compared to conventional problem solving therapy in decreasing ICS.

H_6: Islamic problem solving therapy (IPST) is significantly more effective compared to conventional problem solving therapy in decreasing AS.

3.0 METHOD

Obstetrics and gynecology department of Abubakar Tafawa Balewa University teaching was the study site. This is because patients from all social status across ethnic groups attended the hospital, but majority of the patient are middle and low income Muslim patients. Quasi-experimental method using pretest posttest quantitative design was employed. Obstetrics and gynecology department of the hospital was used for obtaining the sample of the study

3.1 Study Criteria

The inclusion criteria are out-patients postpartum depressed mothers from 4 to 10 weeks after childbirth and a those Muslim that can read and write in English language who were not on any psychoactive drugs treatment. The age ranges from 18 to 45 years and must score from 10 and above from depression scale of Edinburgh postnatal depression scale. The exclusion criteria are those outside the inclusion criteria.

3.2 Participants and procedure

Systematic random sampling was employed to obtain 276 postpartum mothers from 802 from register book of the department. The record file of these women which contain all information about themselves were furthered checked to identify those that met the study criteria. 115 women were screened for depression and met the cutoff point of 10 and above in the EPDS. These 115 women met the study criteria and they received the study questionnaires with details explanation and practical description on how to fill the questionnaires. The researcher, research assistants and the departmental staff were fully involved in explaining and assisting in filling the questionnaires. Telephone numbers of the respondents were exchanged with that of the research team for clarification. The questionnaires were returned via the same people. After data cleansing, 80 questionnaires of the respondents were used throughout the study analysis. See details in table 3.1.

Table 3.1 *Response Rate of the Questionnaires*

Response	Frequency	Rate (%)
Distributed questionnaires	115	100
Returned questionnaires	91	79
Returned and used questionnaires	80	69.5
Returned but rejected	11	9.5
Not returned	24	20.8

Source: Researcher

These respondents were furthered matched and assigned into Islamic problem solving therapy as experimental group and conventional problem solving therapy as treatment as usual group (TAU) as control group. Matching technique was used because the study is quasi-experimental (Rubin & Donald, 1973; Kupper et al., 1981). Each group has 40 respondents and they were matched based on their similarity in their scores depression scale. Treatment as usual is used as a control group because of its unique suitability in determining whether the introduction of new intervention will improve result compared to the existing situation in practice (West & Spring, 2014). TAU assists in balancing group, since both groups receive the same intervention, but those in the new intervention still expected something that is distinct. Islamic beliefs and practices were the new distinct added to the experimental group (IPST).

3.3 Edinburgh Postnatal Depression Scale

Edinburgh Postnatal Depression Scale (EPDS) was used to measure postpartum depression (Cox et al., 1987). The items in this scale were scored from 0–3 and the total scores (30) are 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 depression. The Cronbach's alpha reliability of the scale has been demonstrated across studies, such as .80 (Cheadle et al., 2014), .86 (Zhang & Jin, 2014), .88 and .90 (Ukaegbe et al., 2012). In this study, the Cronbach's alpha is .88.

3.3.1 Social Problem-Solving Inventory – Revised Form

Social Problem-Solving Inventory – Revised Form (SPSIRF) measured problem solving ability (D'Zurilla, et al., 2002). The scale measures five dimensions of problem solving ability, positive problem orientation (PPO), rational problem skill (RPS), negative problem orientation (NPO), impulsive careless skill (ICS) and avoidance skill (AS). Each dimension consists of 5 items which is rated on a five Likert scale ranging from 0 (not at all true of me) to 4 (extremely true of me) with a higher score of 20 and lowest score of 0. The sum of the scores on the items for each scale constitute the scale's total score. SPSI.RF has been used extensively in researches across different population with good alpha Cronbach's reliabilities for PPO α = .76 and NPO α = .91 (Vasilevskaia, 2010), PPSO, α = .76 and NPSO, α = .80 (Emam, 2013). In this study the alpha reliability for the dimensions have a Cronbach alpha of: PPO = .80, RPS = .83, NPO = 86, ICS = .83 and AS = .79.

3.4 Adaptation Process of IPST

The Islamic problem solving therapy (IPST) relied on the technique of the social problem solving theory (D'Zurilla & Goldfried, 1071) and the philosophy of the Eastern Asian model of psychotherapy for the treatment of Asian women with mental illness (Carter & Rashidi, 2003). The PST manual for the treatment of depression in primary care of Hegel and Arean was adapted and combined Islamic beliefs and practices as Islamic problem solving therapy to suit postpartum depressed women that are Muslims who were mostly uncomfortable with conventional treatment (Sabry & Vohra, 2013; Abu Raiya & Rashidi, 2010). Adaptation process for IPST manual followed the third stage of Rounsaville et al. (2001) model. One of the main issue in this stage is to test whether the already existing treatment manual is effective with different caregivers, clients, and situations. The main principle of IPST is to encourage and teach patients to be independent in conflicts resolution. Where the problem is spiritually and beyond the patient's capability, the patient is guided to defer the obligation of solving problem to God or through a joint responsibility between the patient and God. Some Islamic components such relying on Allah, prayers, meditation, recitation of Holy Qur'an, patience and God mercifulness were integrated into the IPST.

The adapted Islamic problem-solving therapy (IPST) manual after critical reviewing relevant literature, it has then been subjected to rigorous vetting by the relevant experts. The experts include Muslims clinical psychologists in the department of general and applied psychology, University of Jos, Nigeria, medical psychiatrists and mental health experts, educational psychologists and International Institute for Islamic Thought (IIIT) under the leadership of a Professor who is a scholar in Islamic educational psychology. Inter-rater agreement (percent agreement) and intra class correlation coefficient were applied for manual reliability and the result showed 85% and .95 correlation coefficient Cronbach 'alpha reliability. Finally, the IPST manual was piloted in one of the government specialist hospital (specialist hospital Ningi, Nigeria).

3.5 Procedure for PSTs Intervention

The therapy was delivered by the research team headed by the researcher. The team comprises the researcher and ten qualified midwives as research assistants after they received five days theoretical and practical PST training. Patients were requested to identify problems, setting goals, generating multiple solutions, brainstorm on possible solutions, and come up with a specific action plan to be carried as homework on how to solve the initially identified problem. The research team was divided into five groups, two people in each group. These groups delivered six home visits sessions. Each group attended four patients in a day. We used four days in a week for the treatment. Each of the five groups attended 16 patients in a week and all the five groups attended 80 patients in a week. Therefore, the same eighty patients were attended weekly for six weeks therapy sessions. Subsequent sessions followed the same procedure. Finally, Further additional two weeks were used by the principal researcher to check and received complains or observation from each patients.

Table 3.2 *Islamic Problem solving therapy intervention*

Structures for Islamic problem solving therapy given by researcher and post basic students nurses	
Theoretical basis	Based on principals of problem solving therapy & Easter Asian model of psychotherapy
Mode of delivery	Researcher and Post basic students nurses with basic knowledge of midwifery care.

Structure of Intervention	**Session 1** Give and explain the questionnaires to the patient (EPDS and SPSI-RF). Introduce the Islamic views on disease that no disease exists without care. Lives is determined by destiny and freewill. Problem identification: (A) The sign and symptoms of postpartum depression should be discussed between therapists and the patients. (B) Involve patient to talk much about her immediate disturbing problems to start working on and encouraged patient to put hope in Allah for resolution to her problem. (C) Assist patients to set up a realistic and achievable goals. (D) Brainstorm with patient to come up with many practical workable solutions on how to achieve the sets goals. Such as prayer, meditation, recitation of Holy Qur'an. Example in reducing weight, perform 10 long *Rak'ats* (Supplementary or voluntary prayer), going out for exercise and love play with husband, preparing meal together with husband (G) Final step on the first session is evaluating the session's performance. Encourage patient to do her homework and follow action plan. **Session 2** (E) List the available options, and encourage patient to think over the pros and cons of each solution identified with less cost, effort, energy and simple to execute. Review identified problems from last session, discuss the patient's homework, what she did and what she did not. Praise achievement and encourage to identify solution to obstacles. Address both desirable and undesirable changes from the beginning to the present. **Session 3** (F) Use the initial 10-15 minutes to summarize the first and the second sessions. (G) Agree with the patient to implement prefer chosen solution(s) through making an action plan or schedule of activities which will be carried out. Given and doing homework to the patient aiming at accomplishing the solution on the problem identified. The action plan will address, how, when, and what assistance is needed and indication to show the success or failure of the solution implementation. Make provision for expert's advice when needs arise and encourage patient to practice PST seek for support even after six session of the therapy. **Session 4.** (H) Brief summary of session 3 review of session three briefly, and discuss how patient practice PST after the 6th sessions or end of the therapy. (I) Action plan Implementation which involves what has happened? How will the patient know that things have changed? Strengthen achievements and identify obstacles and reasons of the obstacles. **Session 5** How the patient feels about the therapy activities with the therapist working together and when she is alone and the treatment working in the group? Find out the support systems she realized and discovered during the past five sessions. (J) Make follow up to find out what has been achieved, what are the obstacles if any and the check back action plan in the third session. **Session 6** (k) Strengthen sessions 3 and 4. Find out what has been achieved and repeat the administration of the questionnaires EPDS and SPSI-RF scores. (L) If there is no improvement then refer to experts (psychiatrist, gynecologist, physician or Islamic clergy) for further action.
The scope of the areas the IPSTs covered.	Depression state of the postpartum mothers' mood and other related personal health like insomnia, anorexia, fique etc. The child-mother relationship and her relationship with intimate partners from. These problems were handled based on Islamic beliefs and practices.
Instruments	EPDS, SPSI-RF and the adapted IPST manual from conventional Arean & Hegel, 1999; Chibanda et al. 2014; Sampson et al., 2014). Handouts and checklist for PST treatment and videotapes.
Training	Five-day training on PSTs and postpartum depression and supportive supervisions of the research assistants during therapy sessions.
Supervision	Supportive supervision during therapy by the principal researcher

3.6 Data analysis

Prior to inferential analyses Descriptive statistics, including percentage and frequency counts were obtained for all demographic variables. Independent t-tests was used for comparing the difference in the effectiveness of the conventional and Islamic problem solving therapy for decreasing postpartum depression (PPD), negative problem orientation (NPO), impulsive careless skill (ICS), avoidance skill (AS) and increasing positive problem orientation (PPO) and rational problem skill (RPS). The treatment groups CPST and IPST are the independent variables and PPD, PPO, RPS, NPO, ICS and AS are the dependent variables

4.0 RESULTS AND DISCUSSIONS

This section presents the result of the study analysis and the discussion of the findings. The demographic characteristics of the respondents (postpartum women) was presented. Prior to inferential analyses descriptive statistics which includes, frequencies, percentage, of the respondents profile was presented. The mean and standard deviation for the sociodemographic variables were calculated. These categorical variables are marital status, employment status, age, educational background and mode of delivery.

The sociodemographic profile of the respondents as can be seen in table 4.1 shows that the majority of the respondents were married women 54 (67.5%) while 14 (17.5%) were widows and the remaining 12 representing 15.0% divorced mothers. On the case of employment status, the majority of the postpartum depressed mothers were unemployed 51 (63.85%), whereas, the remaining 29 (36.3%) represented the employed postpartum depressed mothers. This result has a similar distribution with the previous study among postpartum mothers in the southern part of Nigeria (Owoeye *et al*., 2006).This may be associated with the present socioeconomic decline in Nigeria where about 86.5% of the population are inaccessible to medical healthcare (Owoeye *et al*., 2006). Most of the hospital or healthcare charges relied on the women were only few husbands are taking care of the women.

Table 4.1 *Respondent's Demographic*

Demographic variables	Frequency	Percentage
Marital status		
Married	54	67.5
Divorced	12	15.0
Widow	14	17.5
Employment status		
Employed	29	36.3
unemployed	51	63.8
Age		
18-27	31	38.8
28-37	43	53.8
38-47	6	7.5
Educational level		
O-Level	50	62.5
A-Level	30	37.5
Delivery mode		
Normal delivery	52	65.0
Cesarean section	28	35.0

The descriptive statistics of the constructs were similarly presented and discussed. The sample of this research indicates that postpartum depression has a mean of 19.9 and standard deviation of 4.83, demonstrating that, almost all of the respondents in this research suffered symptoms of postpartum depression. The highest scores in problem solving ability for this sample represented dysfunctional problem-solving dimensions of ICS (M = 13.36, SD = 4.13), AS (M = 12.75, SD = 3.33) and NPO (M = 11.80, SD = 4.51). Constructive dimensions of problem solving ability scored lower: PPO (M = 9.94, SD = 3.82) and RPS (M = 9.36, SD = 3.71). This results revealed that the respondents perceived their problem-solving ability in a negative and dysfunctional manners that need intervention. This pattern of scores was congruent to the past study (D'Zurilla *et al*., 2002).

Table 4.2 *Descriptive Statistics for Latent Variables*

Latent variables	No. of items	Means	Std. Deviation
PPD	10	19.19	4.83
PPO	5	9.94	3.82
RPS	5	9.36	3.71
NPO	5	11.80	4.51
ICS	5	13.36	4.13
AS	5	12.75	3.33

The independent t-test before and after the two interventions were presented before interventions were carried out in order to establish a baseline of the comparison. It can be seen in table 4.3 that before intervention, there was no any significant difference between the conventional problem solving therapy (CPS) and the Islamic problem solving therapy (IPSR) against the study variables. The significance values before the interventions were greater than the significant value of 0.05. However, there was a significant difference after the interventions.

Table 4.3 *Independent t-test before and after CPST and IPST Interventions*

		Before CPST and IPST interventions				After CPST and IPST interventions				
	Intervention	Mean	SD	t	Sig	Intervention	Mean	SD	t	Sig.
PPD	CPST	19.0	4.89	-207	.84	CPST	17.05	4.84	2.57	.012
	IPST	19.3	4.83			IPST	14.58	3.71		
PPO	CPST	10.08	3.59	.320	.75	CPST	11.73	3.31	-1.96	.055
	IPST	9.80	4.08			IPST	13.15	3.23		
RPS	CPST	9.30	3.96	-179	.86	CPST	10.90	3.42	-2.55	.013
	IPST	9.45	3.51			IPST	12.68	2.78		
NPO	CPST	11.48	4.44	-642	.52	CPST	10.5	3.73	1.89	.063
	IPST	12.13	4.61			IPST	8.96	3.61		
ICS	CPST	13.13	3.99	-512	.61	CPST	11.83	3.30	2.20	.031
	IPST	13.60	4.30			IPST	10.2	3.31		
AS	CPST	12.73	3.94	-130	.89	CPST	11.35	3.39	3.10	.003
	IPST	12.83	2.86			IPST	9.33	2.38		

The independent sample t-test was employed in testing the study hypotheses. All of the tests were 2-tailed, with the probability P value < 0.05 as considered significant. The differences in means and standard deviations, t-statistics, and significance level were computed for all the research variables as shown in table 4.3.

There was a significant difference in PPD scores for the main effect of CPST and IPST. The IPST intervention was significantly more effective than CPST interventions in reducing PPD: t (78) = 2.57, p (0.012) < 0.05. The IPST intervention group indicated a significant more decrease in postpartum depression mean scores (14.58) as compared to the mean score of CPST (17.05). Indicating that IPST decreases PPD more than the CSPT. Hence hypothesis H_1 is accepted and supported. Contrarily, the interaction of IPST, CPST and PPO scores was not significant. The IPST was not significantly more effective than CPST in increasing PPO: t (78) = -1.96, p (0.055) > 0.05. This showed that IPST intervention was not more effective than CPST in increasing PPO dimension. Therefore, hypothesis H_2 was not accepted

The IPST intervention was significantly more effective than CPST interventions in increasing the

RPS: t (78) = -2.55, p (0.013) < 0.05. The IPST intervention group showed more increase in the mean score of RPS (12.78) compared mean score (10.90) in CPST indicating that IPST increased RPS more than CSPT. This supported H_3, hence the hypothesis is accepted. The IPST was insignificantly more effective than CPST in decreasing the NPO: t (78) = 1.89, p (0.063) > 0.05. This means that IPST was not more effective than CPST in decreasing NPO. Therefore, H_4 was not accepted.

On the other hand, the independent t-test showed that IPST was significantly more effective than CPST in decreasing ICS: t (78) = 2.20, p (0.031) < 0.05. The IPST intervention group showed more decrease in the mean score of ICS (10.2) as compared to ICS scores (11.83) after CPST group. This shows that IPST decreases ICS more than the CPST intervention. Therefore, the hypothesis H_5 is accepted and supported by the study's result. Similarly, the effectiveness of IPST was more significant than CPST in decreasing AS: t (78) = 3.10, p (0.003) < 0.05. The mean score of AS after IPST (9.33) decreases more compared to ICS scores (11.35) in CPST. This revealed that IPST

decreases AS more as compared to CPST. In this case, the hypothesis H$_6$ is accepted.

The overall result of the independent t-test demonstrated that postpartum Muslims women who received Islamic problem-solving therapy showed more decreased in the symptoms of postpartum depression, ICS and AS compared to those who received the conventional problem-solving therapy (CPST). It also indicated IPST was not more effective than CPST in decreasing NPO and for increasing PPO. This supported the Eastern Asian model of psychotherapy who asserts that believing and putting hope in God and agreeing in destiny assisted in decreasing postpartum depression. The response of the participants felt strongly higher in the avoidance skill dimension indicating having higher maladaptive problem-solving ability compared to the positive problem-solving dimension. This was not surprised because all the participants were depressed and avoidance skill of problem solving ability is one of the characteristics of depression (D'Zurilla et al., 2004; Hasegawa et al., 2015).

These findings were similar and supported the previous studies results who integrated Islamic beliefs and practices with behavioral activation and cognitive behavioral therapy in reducing the symptoms of depression (Hamdan, 2008; Meer & Mir, 2014; Azhar & Varma, 2000; Razali et al., 1998; Sabry & Vohra, 2013; Koening, 2014; Fonte et al., 2005; Cater & Rashidi, 2003).

5.0 CONCLUSION AND POLICY IMPLICATIONS

1. It is found that conventional problem-solving therapy combined with Islamic beliefs and practices is sound and effective in the treatment of postpartum depression.
2. IPST has been effective in improving the problem solving ability of the Muslim postpartum depressed women.

3. It could be equally be concluded that IPST is better and more effective in reducing PPD, ICS, NPO, ICS, AS and RPS among Muslims postpartum depressed women.

5.1 Recommendations

Based on the study findings, the followings recommendations were made:

1. Policy makers should ensure that all postpartum depressed women no necessarily Muslim have access to IPST intervention.
2. Adequate resources should be committed towards the successful implementation of the IPST in various health center
3. Health professionals should acknowledged the effectiveness of IPST and use it in the treatment of postpartum depression
4. The hospital management should reinforced routine screening of the women for depression during antenatal and postnatal care which helps in early diagnosis and treatment of the postpartum mood illness.

5.2 Limitations and suggestions for further study

This research is a quasi-experimental design with small sample size. There need to carried out the with large sample size using randomized control trial to compare the findings. The respondents were only Islamic adherents where generalization to other religious faiths is not possible, as such there is need to carry out the study with other faiths like Christian religious to compare results. This is a cross sectional with point data entry research, there is need to conduct a longitudinal study from third trimester to one year postpartum period for details result.

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