PROBLEM SOLVING THERAPY FOR POSTPARTUM DEPRESSION AMONG MUSLIMS POSTPARTUM WOMEN IN NIGERIA

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ABSTRACT

Postpartum depression (PPD) is a common maternal physio psychosocial disorder and one of the most frequent emotional problem among Muslims population. It occurs at higher rate among postpartum mothers in the northern part of Nigeria. Depression impaired with individual’s problem solving ability. Problem solving therapy (PST) is effective in reducing postpartum depression (PPD), but the effectiveness has not been empirically tested among predominantly Muslims postpartum mothers and their problem solving abilities. This research tested the effectiveness of problem solving therapy in reducing postpartum depression (PPD) negative problem solving orientation (NPO) and increasing positive problem orientation (PPO) among Muslims postpartum mothers. This research employed quasi-experimental pre-posttest design. 40 postpartum mothers from 18-47years were screened and conveniently sampled. They received six home-visits sessions of PST by post basic student nurses. Edinburgh postnatal depression scale (EPDS) measured (PPD) and social problem solving inventory revised form (SPSI-RF) measured (PPO) and (NPO).

Results of the study revealed that PST is effective reducing the symptoms of PPD (pretest mean = 19.750; posttest mean = 17.505), NPO (pretest = 11.4750; posttest = 10.5000) and PPO (pretest = 10.0750; posttest = 11.7250). This research indicates that PST can be feasible and used in treating postpartum depression and improving the positive orientation of the problem solving ability of postpartum depressed women.

Keywords: Problem solving therapy, postpartum depression, positive problem orientation, negative problem orientation

1. INTRODUCTION

Postpartum depression (PPD) is one of the category of mood disorders that is distinct from major depression in term of onset and features. It is the most common childbirth complication and a major cause of morbidity, infanticide and suicide among postpartum mothers globally (Cheadle et al., 2014; Mann et al., 2008). It affects 7-13% of postpartum mothers in America (Cheadle et al., 2014) where a mother of five children committed suicide after killing her children due to the illness (Trabold, 2007). The incidence rate of the disorder is higher among low and middle income nations ranges from 16% to 35% (Chibanda et al., 2014). Research in a clinical setting indicates a high prevalent rate of postpartum depression of 44.5% in Nigeria

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(Obinda, Ekwempu, Ocheke, Piwuna & Omigbodun, 2013). It has been reported that 1 in 6 mothers suffers the illness and is a major leading cause of suicide in Nigeria (Ekwerike, 2015). Depression weakens individual's problem solving ability (Becker-Weidman et al., 2010) and is more common among Muslims population (Koenig, 2014). Problem solving therapy (PST) is effective in reducing postpartum depression among various population, but engaging Muslims postpartum mothers remains a challenge. More also, the effectiveness of PST has not been extended and tested on the problem solving abilities of this population where they perceived western intervention contravene their beliefs (Koenig, 2014). Hence, this study examined the effectiveness of problem solving therapy (PST) in:

1. Reducing the symptoms of postpartum depression (PPD).
2. Reducing the negative problem solving orientation (NPO) of the postpartum depressed mothers.
3. Increasing the positive problem solving orientation of the postpartum depressed mothers

2. REVIEW OF LITERATURE AND HYPOTHESIS

Postpartum depression

Postpartum depression is an affective mood disorder which occurs 4-6 weeks after child birth with symptoms ranging from brief mental depression to severe depression characterized by insomnia, fatigue, anorexia, diminished interest in enjoyable activities, guiltiness, withdrawal sign and hostility to one's child and intimate partner (Cline & Decker, 2012; Zhang & Jin, 2014). Postpartum depression has a negative adverse consequences not only on woman but also on her infant, partner, and family (Zhang & Jin, 2014). It leads to impairment in mother–infant bonding and problems in child’s cognitive, behavioral, and emotional development. The severe outcome if not treated can lead to infanticide and suicide (Gauthier et al., 2010; Hayakawa et al., 2012; Tan & Yadav, 2013). Depression is one out of the four leading emotional problems in addition to stress, anxiety and substance abuse that are more common among Muslims population, but very little studies on these disorders were carried out among this population (Koenig, 2014). The same source reported that in a systematic review of research on religion and health globally up to the middle of 2010, only 3% of quantitative studies (103 out of 3,141) were carried out in Muslim-majority countries. In Nigeria, especially the northern part of the country where majority of the population are Muslims recorded high prevalent rate of postpartum depression of 44.5% (Obinda, Ekwempu, Ocheke, Piwuna & Omigbodun, 2013). Study have indicated that women commit suicide due to depression in the Nigeria (Nelson-Porter, 2014; Shittu et al., 2014).

Depression during pregnancy, number of children, religion, educational level of the mother, personal stressful life events and unemployment status following childbirth are associated with postpartum depression (Hamdan & Tamin, 2010). Studies have indicated that weak problem solving ability and skills are associated with depression (Maddoux et al., 2014; Emam, 2013; Becker-Weidman et al., 2010; Yen et al., 2011; Vasilevskaia, 2010). When problems accumulated and unresolved can lead to depression (Becker-Weidman et al., 2010), and once depressed personal and social problems cannot be solved (Gellis & Kenaley, 2008). It has been indicated that depression during postpartum period is associated to inadequate
problem solving ability and skills of the mothers to overcome their social and personal problems among others reasons (Vasilevskaia, 2010).

Problem solving ability

Problem solving ability (PSA) is a means and approach an individual used to discover an effective solution to his problems that immediate remedies were not available (D'Zurilla & Nezu, 1982). It consists of two partially independent dimensions: (a) problem orientation and (b) problem-solving style. Problem orientation consists of two dimensions (a) positive problem orientation (PPO) and (b) negative problem orientation (NPO). The former dimension is an adaptive and constructive approach to problem solving, while the latter is the maladaptive negative and unconstructive approach to problem solving. Problem solving style is a skillful approach to problems solving consisting of three dimensions (a) rational problem solving style (RPS) which is a rational, systematic, skillful, adaptive and thoughtful approaches to problem solving (b) impulsivity or carelessness style (ICS) which occurs when problem solving is conducted in a haphazard or unsystematic way and (c) avoidance style (AS) that is characterized by procrastination or self-blame in problem solving (D'Zurilla & Nezu, 1982). This study tested the effectiveness of PST on the two problem orientation of problem solving ability (PPO and NPO).

Literatures have shown that non-pharmacological interventions are effective in reducing depression after childbirth (Sampson et al., 2014; Chibanda et al., 2014; Hamdan, 2008; Meer & Mir, 2014). Postpartum mothers prefer psychotherapy over drugs due to the cost and side effects of the drugs (Dennis & Dowswell, 2012). However, lack of professionals and mental health care facilities constituted challenges to psychotherapy as an alternative to drugs (Ayonrinde, Gureje & Lawal, 2004). For example the mental health care facilities in Nigeria are inadequate, with the ratio of ward beds being about 0.4 to 10,000 persons, while that for psychologist professionals is 0.02 to 100,000 persons (Ayonrinde et al., 2004; World Health Organization, 2001). Religion and stigma are another obstacles that prevents mother for seeking western treatment of mental illness like depression. Islamic religious practice has a major role in the treatment of mental illness among the predominant Muslims population (Hamdan, 2008). Interventions outside Islamic teaching were reluctantly accepted with a view of contravening the teachings of the religion. Therefore, an effective, affordable, simple and less cost-effective interventions need to be identified that is patient-centered oriented in the treatment of postpartum depression.

Problem solving therapy

Problem solving therapy (PST) is as an intervention that teaches clients on how to generate more effective solutions to their problems, particularly regarding pursuing goals and dealing with social and personal conflict. The therapy relies on the belief that effective problem solving skills will help to reduce the effects of stress on mental well-being and thereby lower depression (Bell & D’Zurilla, 2009). PST therapists help clients to learn and effectively apply solution to problem through seven stages. These stages are, identifying problems, setting a realistic goals, generating multiple alternative solutions, selecting the best solution from the alternatives, developing action plan, implementing the action plan, and evaluating the efficacy of problem solving (Rubin & Yu, 2015). Numerous studies have demonstrated
the effectiveness of PST in the treatment of depression in general across different population (Rubin & Yu, 2015; Akechi, 2008; Arean et al., 2008; Nezu & Nezu, 2001; Gellis, 2010; Emam, 2013) and very few literatures were available on the use of PST in the treatment of postpartum depression (Sampson et al., 2014; Chibanda et al., 2014). Even the previous study have not tested the effectiveness of PST among Muslims postpartum mothers and on their problem solving abilities. Therefore, this study tested the followings null hypotheses (Ho):

1. PST is not effective in reducing the symptoms of postpartum depression (PPD).
2. PST is not effective in decreasing the negative problem orientation (NPO).
3. PST is not effective in increasing the positive problem solving orientation (PPO).

3. METHODOLOGY

This is a pilot quasi-experimental research using pretest posttest quantitative design. The sample of this research was obtained from obstetrics and gynecology department of Abubakar Tafawa Balewa University Bauchi, Nigeria. The department gives antenatal gynecological care, postnatal clinics, family planning services, and in and out patient’s management. The hospital receives fresh and referral cases from general and primary healthcare facilities around the hospital.

Participants and procedure

A convenient sampling was used to obtain 40 postpartum mothers as participants of this study within the age of 18-47. Inclusion criteria are English speaking Muslims postpartum mothers who have their child birth from four to ten weeks and voluntarily agreed by signing consent. More also those not on any psychoactive drugs. 123 participants were contacted and only 62 (50%) met the research criteria. The total number of 62 questionnaires were mostly and collectively distributed during immunization day and when mothers come for follow-up with the help of the research assistants and the medical health record officers in the unit. The questionnaires returned were 49 (79%), 13 not returned and 9 were rejected due to damaged. The remaining 40 fully participated in the research and provides valid response for this study (Creswell, 2014). The distribution and collection of the questionnaires were done by the research assistance, researcher and the medical health officers of the department.

The independent variables in this study is the intervention (Problem-Solving Therapy) and the dependent variables are postpartum depression (PPD), positive problem orientation (PPO) and negative problem orientation (NPO). The effectiveness of the PST intervention is assessed and evaluated by the outcome of the scores in the PPD, PPO and NPO before and after the intervention.

Table 1: Response Rate of the questionnaires

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency/Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of distributed questionnaires</td>
<td>62</td>
</tr>
<tr>
<td>Returned questionnaires</td>
<td>49</td>
</tr>
<tr>
<td>Returned and usable</td>
<td>40</td>
</tr>
<tr>
<td>Returned and excluded</td>
<td>9</td>
</tr>
<tr>
<td>Response rate</td>
<td>79.0%</td>
</tr>
<tr>
<td>Valid rate</td>
<td>64.5%</td>
</tr>
</tbody>
</table>
Edinburgh Postnatal Depression Scale

Edinburgh Postnatal Depression Scale (EPDS) was developed 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 depressive symptoms (Zhang & Jin, 2014). The Cronbach’s alpha reliability of the scale has been demonstrated across studies, such as .80 among African-American (Cheadle et al., 2014), .86 among Chinese women (Zhang & Jin, 2014), .88 among Zimbabwean mothers (Chibanda et al., 2014) and .90 among Nigerian postpartum women (Ukaegbe et al., 2012). In this study, the Cronbach’s alpha is .875.

Social Problem-Solving Inventory – Revised Form

The other questionnaire use was Social Problem-Solving Inventory – Revised Form (SPSI-RF) was developed to measure problem solving ability (D’Zurilla, et al., 2002). The scale measures five dimensions of problem solving ability, but this study examined only two dimension of the scale, the positive problem orientation (PPO) and negative problem orientation (NPO). The two dimensions consists of 10 items with 5 items per dimension. Each item is rated on a five 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 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 $\alpha = .76$ and NPO $\alpha = .91$ (Vasilevskaia, 2010), PPSO, $\alpha = .76$ and NPSO, $\alpha = .80$ (Emam, 2013). In this study the alpha reliability for the two dimension are PPO = .808 and NPO = 849.

PST Intervention

Problem solving therapy manual (PST-PC) developed by Arean and Hegel (1999) was adapted after the approval from the developers. We modified its structures based on theoretical basis, mode of delivery, intervention structures, scope or area covered, instrument, training and supportive supervision (Gellis, 2010; Chibanda et al., 2014) as seen in Table 2. Ten post basic student nurses were trained on PST and used instead of qualified nurses or social workers in delivering the therapy. They were certified as licensed professional midwives and were used in meeting each participants at home for the therapy. Individual patient were met at six home visits instead of group treatment.

Problem solving therapy is a cognitive and behavioral treatment used to teach patients on how to increase his adaptive social problem solving skills against problems through seven components. These components are problem identification, setting up an achievable and measurable goals, generating a list of solutions, brainstorming about the pros and cons of the solutions, choosing a possible solution with less effort, energy and cost, implementation of the choosing solution through action plan and trying the solution at home and lastly performance evaluation (Gellis, 2010; Chibanda et al., 2014). Interventions were delivered through guided sessions by the therapist to the patient through the seven components, given homework, and recording treatment progress on worksheets. The therapist and participant discuss efficacy of the attempted problem solving each week or session. The primary
outcomes of the six-week PST intervention were on reducing postpartum depression among the postpartum women. Secondary outcomes were measurements changes in increasing PPO and reducing NPO.

Table 2: Structure of problem solving therapy intervention delivered by researcher and post basic student nurses

<table>
<thead>
<tr>
<th>Theoretical basis</th>
<th>Based on principals of problem solving therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode of delivery</td>
<td>Post basic students nurses with basic knowledge of midwifery care (antenatal &amp; postnatal).</td>
</tr>
</tbody>
</table>

**Structure of Intervention**

**Session 1**
- Give and explain the questionnaires to the patient (EPDS and SPSI-RF).
- Problem identification: (A) Explaining and sharing knowledge on the signs and symptoms of postpartum depression between therapists and the patients. (B) Actively encourage mother to talk much about what is disturbing her and to identify her key problems and prioritize the most crucial to start working on. (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. (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 or physician) for further action.

The scope of the areas the PST 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.

**Instruments**
- EPDS, SPSI-RF and the PST manual of Arean and Hegel (1999) and Chibanda et al. (2014) that has seven stages of treatment. Handouts and checklist for PST treatment and videotapes.

**Training**
- Two-day training on PST and postpartum depression and supportive supervisions of the research assistants during therapy sessions.

**Supervision**
- Supportive supervision during therapy by the principal researcher.

**Abbreviations:** PST (problem solving therapy; EPDS, Edinburgh postnatal depression scale), SPSI-RF (social problem solving inventory revised form).

**Data analysis**

Prior to inferential analyses descriptive statistics, including distributions, means, standard deviations, percentage and frequency counts were obtained for all variables. Tests for differences on the postpartum depression, positive problem orientation and negative problem orientation were carried out using t-tests after descriptive statistics.
Ethics issues

Approval was given by the research ethics committee of the hospital. The details explanation and descriptive of the study to the participants at every level of the research. Consent forms were duly signed voluntarily and participants were free to withdraw in case they need at any stage of the study. The confidentiality and the integrity of the participants were duly considered.

4. RESULT

Descriptive statistics

Descriptive statistics including, frequencies, percentage, mean and standard deviation were calculated for the sociodemographic variables. Married women (60%) that are unemployed (62%) are more depressed than the employed postpartum mothers. Likewise the participants with low level of education (52.5%) within the reproductive age (28-37) 60% are more depressed after delivery as shown in table 1. This tallies with previous findings which indicated that postpartum depression is more common among women within the reproductive age and with low and middle income mothers (Cheadle et al., 2014; APA, 2013; Chibanda et al., 2014).

Table 3: Demographic profile of the respondents

<table>
<thead>
<tr>
<th>Demographic variable</th>
<th>Categories</th>
<th>Frequency</th>
<th>Percentage</th>
<th>mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital status</td>
<td>married</td>
<td>24</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>divorce</td>
<td>8</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>widow</td>
<td>8</td>
<td>20</td>
<td>2.60</td>
<td>.810</td>
</tr>
<tr>
<td>Employment status</td>
<td>employed</td>
<td>15</td>
<td>37.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>unemployed</td>
<td>25</td>
<td>62.5</td>
<td>1.63</td>
<td>.490</td>
</tr>
<tr>
<td>Age</td>
<td>18-27</td>
<td>14</td>
<td>35.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>28-37</td>
<td>24</td>
<td>60.0</td>
<td>1.70</td>
<td>.564</td>
</tr>
<tr>
<td></td>
<td>38-47</td>
<td>2</td>
<td>5.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational status</td>
<td>o-level</td>
<td>21</td>
<td>52.5</td>
<td>1.48</td>
<td>.506</td>
</tr>
<tr>
<td></td>
<td>a-level</td>
<td>19</td>
<td>47.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Pair sample t-test was carried out to test the null hypothesis of no difference and to compare difference for pretest and posttest before and after PST at 95% confidence interval. All tests were 2-tailed, and a P value of <.05 was considered statistically significant. Means, and standard deviations, means differences, t-statistics and significance level are utilized for all continuous variable study measures (EPDS, PPO, and NPO).

Table 4: Summary outcomes of Pair sample t-test for the variables.

<table>
<thead>
<tr>
<th>Measures</th>
<th>Pretest mean</th>
<th>Posttest mean</th>
<th>Mean differences</th>
<th>t</th>
<th>Sig. (2.tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPD</td>
<td>17.8250 (4.7170)</td>
<td>14.9000 (3.9470)</td>
<td>2.92500</td>
<td>12.854</td>
<td>.000</td>
</tr>
<tr>
<td>PPO</td>
<td>11.4250 (3.7885)</td>
<td>13.6500 (3.5049)</td>
<td>-2.22500</td>
<td>-11.643</td>
<td>.000</td>
</tr>
<tr>
<td>NPO</td>
<td>11.9750 (4.1416)</td>
<td>10.0500 (3.3737)</td>
<td>1.92500</td>
<td>9.447</td>
<td>.000</td>
</tr>
</tbody>
</table>

*Standard deviation in parenthesis. Degree of freedom df(39)
The results of this study revealed that there was significant difference in the PST intervention and the scores in PPD and PPO. Therefore the hypotheses of this study is not accepted.

1. There was a significant difference in PPD scores for the effectiveness of PST intervention. PPD: t(39) = 12.854, p(.000) < 0.05. The PST intervention showed a significant decrease in postpartum depression (PPD) scores from pretest (pretest mean = 17.8250) as compared to the posttest (posttest mean = 14.9000).

2. There was a significant inverse difference in PPO scores for the effectiveness of PST intervention. PPO: t(39) = -11.643, p(.000) < 0.05. The PST intervention showed a significant increase in PPO mean scores from pretest (pretest mean = 11.4250) as compared to posttest (posttest mean = 13.6500).

3. There was a different in NPO scores for the main effect of PST intervention. NPO: t(39) = 9.447, p(.000) < 0.05. The PST intervention showed a significant decrease in the mean of NPO pretest (pretest mean = 11.9750) as compared to posttest (posttest mean = 10.0500).

5. DISCUSSION

The whole aim of this study was to test the possibility of employing PST intervention for reducing the symptoms of postpartum depression, negative problem orientation and increasing the positive problem orientation. The results of this study revealed that PST is feasible and effective in reducing the symptoms of postpartum depression among Muslims postpartum mothers during postpartum period from 4-12 weeks after childbirth. The therapy is also effective in reducing negative problem orientation and increasing the positive problem orientation of the participants. The PST intervention can be easily learned and implemented by average health workers with less educational level that received brief training as suggested by previous studies (Sampson et al., 2014; Pierce, 2010). The role of PST in treating postpartum depression in this research is comparable with two previous studies identified during review of literatures, one is a pilot study among American pregnant mothers that were at risk of postpartum depression (Sampson et al., 2014) and the other one was the study among postpartum women in Zimbabwe with HIV/AIDS negative and positive. (Chibanda et al., 2014). However, the application of PST in the treatment of depression in general were numerous across many studies (Emam, 2013; Gellis & Bruce, 2012; Gellis, 2010; Gellis et al., 2008; Arean et al., 2008; Akechi et al., 2008; Bell & D’Zurilla, 2009).

Given the situation of inadequate professionals and the high cost of chemotherapy as well as the drugs side effects on the lactating mothers and pregnant mothers, PST is the alternative intervention which has been proven effective and affordable among patients in both clinical and community setting. This research indicates that PST is feasible, effective, acceptable among Muslims population and can be used in the treatment of postpartum depression. It can also be effective in reducing the negative problem orientation and improving the positive problem orientation of postpartum mothers. The outcome of this research are also reassuring and promising for postpartum Muslims mothers with affective mood disorders and PST can be successful implemented without contravening their faith and beliefs. Barriers such as stigma, cost of drugs and religion can be overcome when patients are principally involve and central to the treatment intervention like PST.
The findings suggest that the hospital management in Nigeria may consider using the post basic student nurses in the maternity for in and out patients in early detection and screening of patients from antenatal and postnatal clinical services in reducing emotional problem like depression. Patients who cannot afford drugs due to expensiveness or side effects will be supplemented with PST which is easy, less expensive and easily sustainable even after the therapy session. The use of EPDS in detecting maternal depression (Chibanda et al., 2010, 2014) and SPSI-RF (Erdley, 2013) in identifying the level of the problem solving ability of the postpartum mothers in preparation to tackle their psychopathology and other social and personal problems are recommended by this research.

6. CONCLUSION

This study demonstrated the possibility of adapting PST for the treatment of postpartum depression at using home visiting-based approach with less educationally therapists after brief training. The feasibility and acceptability of the intervention was supported by complete retention of the participants from beginning to the end of the sessions of the therapy. The findings of this research is an evidence that PST improved problem solving ability of the Muslims postpartum women leading to decreased in postpartum depression and can be applied across different religion beliefs. This study recommends the use of problem solving therapy as supplementary and or complement to chemotherapy intervention in treating postpartum depression and for improving the problem solving orientation and skills of the postpartum mothers.

Limitation and Suggestion for further studies

One of the shortcomings of this research was the lack of control group, but the study adapted already intervention (PST) that has a strong literatures support for its effectiveness and efficiency in reducing depression and other psychological problems (Emam, 2013; Sampson et al., 2014; Chibanda et al., 2014). Another limitation was the used of only English speaking participants. This is due to the cost of translating the therapy’s documents and time approved by the host of the study. There is need for further studies of this kind with large sample size. It is also suggested on the need of conducting the study using different native language and religious of patients, especially in reducing cultural and religious barrier in the treatment of mental illness or emotional problem.

REFERENCES