Prenatal Education and Postpartum Well-being

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Abstract

Background: Postpartum adjustment to the first-time parents is a great challenge in life. Failure to adjust and adapt in the early period of postpartum could lead to a more serious psychological disorders in the mothers as well as the fathers. Therefore, this study aimed to review the effectiveness of prenatal education as an early intervention toward postpartum adjustment and psychological well-being among the parents.

Methods: An online electronic database searched was conducted and the relevant studies were selected and included based on the selection criteria.

Result: Six studies were included in this review, however no consistent results were found in the studies. Three of the studies reported significant differences between the intervention and standard care groups. One of the studies indicate a significant difference of the intervention in the prenatal period but no differences during the postpartum period. Studies which focused on specific psychological issues in the postpartum period would show a more significant result if the issues were presented during prenatal intervention.

Conclusion: Prenatal education had different level of effectiveness in the postpartum adjustment and psychological well-being of a parent. The early intervention aimed at specific psychological issues during the postpartum period. There were no standardized prenatal education program for the expecting parents but most of the studies structured the education programs according to their targeted needs of the study.

Keywords: Prenatal education; Early intervention; Postpartum adjustment; Psychological well-being

Introduction

Antenatal education had been one of the early intervention programs provided for the expectant mothers and had been part of the routine care in some developing countries including Malaysia. Its role in disseminating the important knowledge related to pregnancy, childbirth and parenthood, helped the expecting parents to understand their health condition and adaptation. Thus, it occupied an important role as an early intervention regardless of its structure or delivery methods [1].

Adjustment issues during postpartum

The shifting of role and the additional responsibilities are among possible vulnerabilities affecting the psychological well-being of the couples after the arrival of their babies [2]. There were a lot of risk factors for postpartum maladjustment presented in the pregnancy period [3]. Previous study reported that stressful life events, marital conflict and lack of social support are among the psychosocial variables which might affect the psychological well-being of parents [4]. However, despite the specific stressors in the parents’ life, any everyday stimuli would contribute to the individual’s general stress. Report from previous study showed that a first-time father may experience stress from common daily annoyances, financial strain and role of many responsibilities [5]. Those factors contributed to the psychological well-being of the fathers such as anxiety and depression symptoms would most likely affecting the marital and father-child relationship.

Prolonged and undetected vulnerabilities during the postpartum period of the mothers would contribute to further negative outcome on psychosocial aspects of the person. Women with history of postpartum depression were more likely to develop depression in the future and could deteriorate the mother-infants interactions [3,4]. The mothers’ psychological well-being is extremely important not only for the mother-infant relationship but prolonged depression or anxiety has the tendency to develop postpartum psychosis in the future. Mothers with postpartum psychosis would lead to the mother neglecting, harming and even killing the baby, with higher risk for suicide among themselves [4,6].

Early intervention program

There are various early prevention programs that can be provided to the expecting parents during the pregnancy period. Based on previous studies, few papers reviewed suggested their own characteristics for effective antenatal education program as an early intervention towards the expecting parents. There was suggestion that the intervention program is being provided in a longer period of time as an empowerment method to the parents [5]. The suggested duration for antenatal education and postpartum care should be started at the early phase of pregnancy and the guidance is continued throughout the childbearing moments [5].
Another study suggested a variety of characteristics for the antenatal education program for the expecting parents [4]. The program should be initiated at the antenatal period or in the early postpartum period in group or individual sessions. Intensive class or multiple contacts on the intervention program is sufficient and the intervention can be delivered by any health professionals such as midwife, nurse or psychologist or any lay individuals such as experienced mothers recruited from the community. One of the benefits that could be derived from this prolonged and frequent contact among the service providers and the parents is that, it could create a support system and makes available an emergency professional help, should the parents be in need. With such situation, the parents would continually feel safe and guided as well as empowered during the early stage of their parenthood journey [4].

Objectives of the Intervention

Postpartum adjustment is not only crucial for the family well-being as a whole, but may negatively affect the society at large. A healthy mother should be able to foster the infant's cognitive and emotional development thus, enhancing the mother-child attachment and in turn help in reduction of serious mental health incidents such as maternal suicide and infanticide [7]. To achieve a healthy postpartum adjustment and psychological well-being, mothers should be healthy from the antenatal moment and thus, any early intervention should be started from the pregnancy period as one of the preventive measure for postpartum well-being.

Most of the early intervention programs aimed at saving the life of both mother and infant, improve the mother-infant and family relationship and cost effective [6]. It would also helped the mothers to seek early help if they are experiencing any psychological despair during their antenatal and postpartum period and thus improved in their symptoms from a more severe disorders [8].

Objectives

There were a lot of trials and studies related to the intervention of the postpartum depression and stress, however, less were done with focus towards the parental emotional well-being and adjustment which were among the initial care after birth. Postpartum adjustment to the first-time parents is a great challenge in life. Failure to adjust and adapt in the early period of postpartum could lead to a more serious psychological disorders in the mothers as well as the fathers. Thus, the main objective of this review was to assess the effectiveness of the previous antenatal education programs towards postpartum well-being and adjustment of the mothers as well as their partners. Another objective of this review was to examine the differences of the antenatal education program delivered towards the mothers and their effects on the postpartum adjustment.

Method

This review was guided by PRISMA. Literature search was conducted through online databases such as Cochrane, Springer, PubMed and Science Direct. The search terms being used were "prenatal intervention", "prenatal education", "postpartum adjustment AND psychological well-being","postpartum anxiety AND depression".

Selection Criteria

Types of studies

The studies included any method of research done. There was no duplication of studies during the search process. Various methods were applied in the study and only randomized control trials, quasi experiment and repeated measures design were included.

Types of participants

Either mother or both expectant parents were included.

Types of interventions

Any structured or unstructured antenatal education program delivered during pregnancy period either in group or individual classes were included. The early intervention included any aspects on birth, mother and infant care as well as the psychological care for the parents.

Types of outcome measures

The intervention should be including the following criteria in postpartum care:

- Parental psychological and social adjustment
- Psychological well-being of the mother
- Depressive symptoms
- Anxiety symptoms

With all the inclusion and exclusion criteria being met, six relevant studies were included in this review.

Result

Description of studies

Table 1 described the general characteristics of the included studies. Two studies were on randomized control trials, two studies were on quasi-experiment and two systematic reviews were reviewed.

<table>
<thead>
<tr>
<th>Study</th>
<th>Methods</th>
<th>Participants</th>
<th>Intervention</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clatworthy</td>
<td>Review onRCTs of interventions to prevent postpartum depression through electronic database and reference list search.</td>
<td>11 studies met the inclusion criteria.</td>
<td>Psychological and educational interventions.</td>
<td>6 out of 11 studies included reported antenatal interventions showed significantly reduced postpartum depression symptoms.</td>
</tr>
<tr>
<td>Gagnon and Sandall</td>
<td>Systematic review.</td>
<td>9 trials were included with total participants of 2284 women. The studies structured antenatal education programs offered to any group or individuals related to the</td>
<td>Three of the studies showed beneficial effects on the knowledge gained through the education process. Other studies were</td>
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</table>
Compared to the standard care group [10-12]. It was found out that treatments and focus on interpersonal on the postpartum following the intervention received [10]. Similar result was found at 6 weeks postpartum where the women receiving childbirth education only Most cases reported lower scores on psychoeducation program reported

Mathey et al. Randomized Control Trials to determine the effectiveness of psychosocial intervention on the postpartum adjustment of women and men.

268 participants were recruited antenatally. Data were collected from 202 of these participants at 6 weeks postpartum and 180 participants at 6 months postpartum. Preparation for Parenthood classes which consists of 6 weekly classes offered by the hospital as the control condition. The second condition was the experimental condition (Empathy) focus on the postpartum psychosocial issues and the third condition was the non-specific control condition (Baby Play).

Mathey et al. Randomised Control Trial (RCT).

Pregnant women were screened by the midwives using Edinburgh Posnatal Depression Scale (EPDS) and Risk Assessment Checklist. Those with scores of ≥ 13 were invited to participate. Out of 254 women who were offered to participate, 143 were randomized with 43 had high screening scores and 100 with low screening scores.

Ngai et al. Pre-test post-test, Quasi-experiment with repeated measures.

184 Chinese women attending the childbirth education program were recruited based on the inclusion criteria. Childbirth psychoeducation program with the routine childbirth education.

Sercekus and Mete Roy Adaptation Model-based quasi-experimental study.

120 women who met the inclusion criteria were recruited for the study. 52 participants were assigned to group education, 41 to individual education and 54 to the control group. Individual antenatal education program of 10 hours. Group antenatal education for 14 hours and longer duration was allocated for group intervention to encourage questions and interaction between group members and educator.

<table>
<thead>
<tr>
<th>Study</th>
<th>Design</th>
<th>Population</th>
<th>Intervention</th>
<th>Outcome</th>
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</thead>
<tbody>
<tr>
<td>Mathey et al.</td>
<td>Randomized Control Trials</td>
<td>268 participants</td>
<td>Preparation for Parenthood classes</td>
<td>Maternal adjustment at 6 weeks postpartum.</td>
</tr>
<tr>
<td>Mathey et al.</td>
<td>Randomised Control Trial (RCT)</td>
<td>Pregnant women</td>
<td>1) Community networking pamphlet consist of information on the importance of support network and relevant contact numbers to enable help-seeking. 2) Towards Parenthood self-help workbook.</td>
<td>Intervention group reported significant improvement in learned resourcefulness at 6 weeks postpartum and reduction of depressive symptoms from baseline to 6 months postpartum as compared to control group. No significant difference related to maternal role competence in both groups.</td>
</tr>
<tr>
<td>Ngai et al.</td>
<td>Pre-test post-test, Quasi-experiment with repeated measures</td>
<td>184 Chinese women</td>
<td>Childbirth psychoeducation program with the routine childbirth education.</td>
<td>Intervention group reported significant improvement in learned resourcefulness at 6 weeks postpartum and reduction of depressive symptoms from baseline to 6 months postpartum as compared to control group. No significant difference related to maternal role competence in both groups.</td>
</tr>
<tr>
<td>Sercekus and Mete</td>
<td>Roy Adaptation Model-based quasi-experimental study</td>
<td>120 women</td>
<td>Individual antenatal education program of 10 hours. Group antenatal education for 14 hours and longer duration was allocated for group intervention to encourage questions and interaction between group members and educator.</td>
<td>Significant differences reported between the group during prenatal adaptation and no difference was found in postpartum adjustment.</td>
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</table>

Table 1: Descriptive characteristics of the included studies (N=6).

Effectiveness of the education program

Previous reviewed papers on this subject revealed inconsistent result on the effectiveness of the antenatal education as an intervention program [1,9]. The incorporation of evidence-based psychological treatments and focus on interpersonal difficulties delivered towards pregnant women who were depressed was found to be most likely effective in order to help reducing the postpartum depression [1].

Individual studies with specific focus on the postpartum adjustment issues reported significant differences in their result when being compared to the standard care group [10-12]. It was found out that women with low self-esteem were better adjusted at 6 weeks postpartum following the intervention received [10]. Similar result was found at 6 weeks postpartum where the women receiving psychoeducation program reported significant improvement in learned resourcefulness as compared to those who received routine childbirth education only Most cases reported lower scores on depression/anxiety symptoms at postpartum assessment following the antenatal intervention as compared to routine care group thus, reducing the parenting stress [12].

Some of the studies showed significant differences in the earlier postpartum period of 6 weeks but when being reviewed in their 6 months postpartum period, both groups showed no significant differences [10,12]. The reason behind the finding could be that the participants with low self-esteem had caught-up in their adjustment by 6 months period and thus, there was no more difference between groups [10].

Another result found in this review showed that there were no significant differences in their postpartum psychological well-being despite the provision of early intervention [1,9]. One of the previous findings concluded that, the education program did provide positive effects for the parents during the prenatal adaptation process however, it did not provide any effect towards the postpartum adaptation [1].
Regardless of the outcome, the study still suggested that in any situation, it is a better choice to provide a group education program rather than individualized education session, due to the difference in term of its social benefits that the group intervention could provide [1].

### Content of intervention

Based on the studies, there was no standardized content on intervention administered to the participants. The interventions included were cognitive behavioral therapy workbook for parenting needs [11] and extra antenatal education classes [1,10,12]. One of the studies focus on the psychological intervention for postpartum adjustment and psychological well-being through cognitive behavioral therapy [11] while other studies included more comprehensive attention to various aspects of the prenatal and postpartum needs of adjustment for the expectant parents.

Prenatal education program for the purpose of early intervention should be able to educate and empower the parents to a healthy postpartum life [13]. A longer period of education was proposed for the delivery period, the mother would have a more realistic attitudes, adjustment for the expectant parents.

Therefore, it was suggested that the prenatal education program should not only focus on the postpartum adjustment of the parenthood roles but should be able to help screening the parents for any possibilities of stress or depressive symptoms in their prenatal period [14].

### Delivering of intervention

The studies reviewed in this papers delivered their intervention during the pregnancy period either individually or in group. Study found that group antenatal classes was preferred over individual classes as it is less costly and provided more social benefits for the group. However, in terms of its effectiveness, participants who received either group or individual intervention showed better adaptation in their prenatal period and no difference in terms of postpartum adaptation in both groups [1].

Two of the studies reviewed delivered their intervention during the pregnancy period and assessed the participants in two time intervals, 6 weeks and 6 months postpartum [10]. The other two studies delivered the intervention antenatally and the post-intervention assessment was done at 6 weeks postpartum [1,11].

The intervention provided was as brief as one session up to eight sessions of discussion on relevant aspects and postpartum issues for expecting parents. Booster session was provided for the brief intervention in their antenatal and postpartum period [10].

The intervention delivered in either group or individual sessions showed no significant differences in between them [1]. However, the group intervention was more preferable and recommended due to its cost effectiveness and social supports that the parents could receive. Both methods of delivering intervention were reported to have significant reduction in the symptoms of postpartum depression and anxiety among the mothers with positive increment in the attitudes towards motherhood [1,9].

### The outcome measurement

Table 2 summarizes the outcome assessment being used in the studies and the timing of data collection for the post-intervention assessment. All of the studies measured the outcome of the interventions objectively by using the validated measures for adjustment and psychological well-being of the parents.

<table>
<thead>
<tr>
<th>Authors</th>
<th>Outcome assessment</th>
<th>Timing</th>
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<tbody>
<tr>
<td>Matthey et al.</td>
<td>Coopersmith Self-Esteem Inventory (CSEI)</td>
<td>During antenatal, the participants completed Background Questionnaire; EPDS (women); CSEI; POMS; SOS; CES-D (men). At 6 weeks postpartum interview, both men and women (otherwise indicated) completed SOS; POMS; PSOC; CES-D (fathers only); EPDS; WDW; the ‘Partner Awareness’ scale. They were also interviewed separately based on the DIS module. At 6 months postpartum, the couples completed POMS, SOS, PSOC, CES-D and the Six-Month Experiences Questionnaire. For the women, they completed the EPDS and WDW as well as the 6 months Structured Interviewed and the modules of DIS.</td>
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<tr>
<td></td>
<td>Edinburgh Postpartum Depression Scale (EPDS)</td>
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<td></td>
<td>Profile of Mood States (POMS)</td>
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<tr>
<td></td>
<td>The Centre for Epidemiological Studies-Depression Scale (CES-D) (fathers only)</td>
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<tr>
<td></td>
<td>Diagnostic Interview Schedule (DIS)</td>
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<td></td>
<td>Significant Others Scale (SOS)</td>
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<tr>
<td></td>
<td>Who does What?/Who will do What? (WDW)</td>
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<td></td>
<td>Parenting Sense of Competence Scale (PSOC)</td>
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<td></td>
<td>The ‘Partner Awareness’ Scale</td>
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<td></td>
<td>Six-Month Experiences Questionnaire.</td>
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<tr>
<td>Milgrom et al.</td>
<td>Edinburgh Postpartum Depression Scale (EPDS)</td>
<td>EPDS and RAC were used during the baseline and pre-randomization period. BDI-II and DASS short form were used at the baseline and post-treatment (12 weeks after birth). PSI was collected at the post-treatment (12 weeks after birth).</td>
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<td></td>
<td>Risk Assessment Checklist (RAC)</td>
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<td></td>
<td>Beck Depression Inventory-II (BDI-II)</td>
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<td></td>
<td>Depression Anxiety Stress Scales short form (DASS)</td>
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<tr>
<td></td>
<td>Parenting Stress Index (PSI).</td>
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<tr>
<td>Ngai et al.</td>
<td>Self-Control Schedule (SCS)</td>
<td>SCS, PSOC-E and EPDS were completed at baseline, immediately post-intervention, at 6 weeks and 6 months postpartum.</td>
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<tr>
<td></td>
<td>Parenting Sense of Competence Scale- Efficacy subscale (PSOC-E)</td>
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Table 2: The outcome and timing of assessment.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Outcome</th>
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</table>
| Edinburgh Postpartum Depression Scale (EPDS)                           | PSEQ was completed before the education program and at the end of the program.
| Medical Outcomes Study Social Support Survey                           | PPSEQ was completed at 6 weeks after birth.                             |
| Social Readjustment Rating Scale (SRRS)                                |                                                                        |

Implication for future practice

Antenatal classes and programs are more common nowadays, offered by any individuals or organizations with the objectives to help the mothers or both parents to prepare towards birth and parenthood [9]. It is mostly impossible to make each and every program similar in its content but it is suggested that the education program does not only focus on one part of the postpartum issues only, rather to provide a wide range of knowledge about other postpartum issues including the psychosocial adjustment and emotional well-being of the parents.

Discussion

Antenatal education program had been one of the popular topic nowadays with the program being offered by either individuals or organization with special interest in the topic. Participants who joined the classes reported various reasons for attending the program such as to reduce their anxiety about labor and birth, to learn about basic infant care, to get more information on psychological and physical changes during pregnancy and self-care during labor and postpartum [9].

Even though there was no clear evidence that suggested the implementation of prenatal education classes as an early intervention, but it would help in early identification of possible psychological symptoms and encouraged for early treatment [3,8,14]. The early identification and seeking help behaviour would help to decrease the negative outcomes of the postpartum adjustment and lead to a healthier life for the mothers and their families.

This review found that there were significant variations and limitation among all the studies conducted such as the structure of the program itself, the methods of delivering of the program, the methodology of the studies as well as the measurement and assessment of the intervention. Multiple factors and could have confounded the findings and thus, might gave the inconsistent results across the studies.

Conclusion

Implication for future practice

Antenatal classes and programs are more common nowadays, offered by any individuals or organizations with the objectives to help the mothers or both parents to prepare towards birth and parenthood transition [15-17]. It is mostly impossible to make each and every program similar in its content but it is suggested that the education program does not only focus on one part of the postpartum issues only, rather to provide a wide range of knowledge about other postpartum issues including the psychosocial adjustment and emotional well-being of the parents.

Implication for future research

Most of the studies and trials are needed in order to examine the effectiveness of the education programs regardless of their content and structure as the topic is become more popular nowadays. Regardless of its popularity, even if the women are recruited and randomly assigned to any of the intervention program, it is more challenging to make them attend the classes and comply with the intervention [9]. Thus, to overcome this challenge, there is a need to establish a short, precise and structured education program in order to help the participants getting the crucial knowledge and information, with effective outcome that would be helpful in their postpartum period.

References