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**RESEARCH**

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## Supportive Postpartum Care Reduces Postpartum Anxiety in Mothers with Twins: A Pilot Study

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### Abstract

Postpartum mothers with twins are more prone to mental health problems, particularly anxiety. However, research regarding the appropriate interventions to overcome anxiety in postpartum mothers with twins is limited. Anxiety has an impact on the health of both mother and baby. We conducted a pilot study to minimize the risks to mothers and babies, which was supportive postpartum care (SPC). The study was performed to five postpartum mothers with twins during hospitalization. SPC was employed by providing physical support, which was in the form of breast care and oxytocin massage, psychological support in the form of relaxation techniques, information support in the form of education, and advocacy support in the form of husband involvement. This method was effective for postpartum mothers with twins in reducing anxiety, increasing breastfeeding effectiveness, increasing knowledge, and improving the husband's involvement in care. This study showed that SPC can reduce postpartum anxiety among postpartum mothers with twins effectively. A very good increase of LATCH score and knowledge were reported in 3 out of 5 mothers. Families, especially husbands, were advised to continue providing care support through the role division at home.

**Keywords:** Anxiety, Postpartum, Supportive Care, Twins

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## 1. INTRODUCTION

The postpartum period is prone to maternal mental health problems. Postpartum mothers have a higher risk of experiencing these problems, particularly anxiety (Atif, et al., 2015). Various levels of anxiety encountered by postpartum mothers are different for each individual. It depends on the condition of the mothers and babies, including postpartum mothers with twins. However, research related to the appropriate interventions to overcome anxiety in postpartum mothers with twins is limited.

Multiple births are on the rise worldwide. This fact is due to the increasing prevalence of multiple pregnancies. It is also caused by high technology in obstetrics and gynecology particularly in Vitro Fertilization (IVF). Data from France and America revealed that 3.6 and 3.4% were multiple pregnancies (Loscul, et al., 2019). Meanwhile, at the practice site, Cipto Mangunkusumo Hospital and Budhi Asih Hospital, researchers discovered 10 cases of postpartum mothers with twins in two different types of hospitals (Rumah Sakit Cipto Mangunkusumo, 2019).

Caring for more than one baby is not an easy task. For postpartum mothers, good physical and psychological adaptation is necessary in conducting their roles, particularly in managing the right time to take care of the two babies (NHS, 2016). At the same time, mothers usually complain of various physical discomfort symptoms such as sleep disturbances, swollen breasts due to inadequate breastfeeding, perineal pain or postoperative wounds, and lack of confidence in caring for the twins (Kim, & Lee, 2017; Furtado, et al., 2019). Kim, (2017), studying on twins discovered that breastfeeding success is associated with no use of formula or instant milk and timing of first breastfeeding. Various challenges in taking care of twins including time management, sleeping disorders, and fatigue trigger the psychological problems, particularly anxiety.

Postpartum anxiety has a major impact on both mother and baby. Wenze, et al., (2015) explained that the level of anxiety of mothers with twin was higher than whom of having single babies. Dubber et al., (2015) added that the anxiety experienced by the mother is related to the bonding between mother and baby. Miller, et al., (2006) emphasized that postpartum anxiety can also lead to postpartum depression. The effects of postpartum anxiety should be prevented during the antenatal through psychological readiness such as counseling and treated with appropriate support.

The support provided during the postpartum period comprises of numerous aspects. Fallon, et al., (2016) stated that the psychological aspects, including postpartum anxiety assessment, can be started within the first 24 hours postpartum. Aspect of physical discomfort as swollen breasts may cause stress to the mother, inhibit breast milk production and make the breastfeeding process ineffective. Thus, it is important to identify the breastfeeding effectiveness (Lisien et al., 2011; Dozier et al., 2012). The involvement of partners in the care specified by Dennis et al., (2017) also functioned as a determinant of postpartum anxiety. Furthermore, Barbosa, et al., (2016) and Shabaan, et al., (2018) asserted that a good mother's knowledge of postpartum care improves self-care abilities and reduces the anxiety levels. The knowledge should be imparted during pregnancy. These various forms of support should be integrated into postpartum care.

Support provided during postpartum care can be in the form of supportive postpartum care. Supportive care is the provision of non-pharmacological care which objective is to help respondents reduce anxiety and discomfort through their own abilities and fulfill their needs during the treatment (Simkin, 2002). Initially, supportive care was implemented in the treatment of oncology and psychological disorders (Carrieri, et al., 2018). However, research by Adams & Bianchi (2008) and Isbir &

Sercekus (2017) examining the delivery outcome revealed that intrapartum supportive care was effective in reducing fear of childbirth. Laela, et al., (2018), measuring the effectiveness of supportive therapy in postpartum mothers discovered a significant reduction in anxiety.

Various roles of midwives occur in supportive care. Apart from being a caring provider for physical and psychological comfort support, nurses as educators should also provide information support required by mothers during the postpartum care. The information support is expected to make the postpartum mothers with twins adapt to the changes undergone and perform self-care and care for the babies. Thus, the objective of this study is to show the effectiveness of supportive postpartum care implementation in reducing anxiety of postpartum mothers with twins.

## 2. RESEARCH METHOD

The research method used was a pilot study. This study is used to evaluate the feasibility and improve upon the study design prior to a full-scale research project's performance. The data obtained were then analyzed and presented in a tabular form. The research design used a pilot study with a convenience sampling technique that is taking samples that are easy to find. This study got ethical approval from Ethics Committee No. 109/UN2.F12.D/HKP.02.04/2019.

The subjects in this study were five postpartum mothers with twins who were treated in the general postpartum ward, multiparous, and accompanied by their husbands/families, healthy mothers, and didn't experience previous anxiety. We collected data within six months. The instruments used include the LATCH score (Latch-on, Audible Swallowing, Type of nipple, Comfort, Hold position) to measure breastfeeding effectiveness. It consisted scale from 0 to 2 each point. The highest score was 10. The Postpartum Specific Anxiety Scale (PSAS) consisted of a 51-items scale with Likert to measure specific anxiety levels. Postpartum activity questionnaires are ten self-directed questionnaires to determine knowledge levels and observation sheets to observe husband support for postpartum mothers.

Supportive postpartum care consists of providing support, including physical comfort support in the form of breast care like hot-cold compress, hand massage, and oxytocin massage along fifth-sixth costae bone. For perineal or cesarean section incision, we conducted mixed therapy breathing relaxation and cold compress. Psychological support in the form of breathing relaxation, it's also used for releasing pain. Information support in the form of postpartum education and advocacy support through the involvement of husbands. The mothers would share experiences when they arrived at the postpartum ward. The PSAS questionnaire and postpartum activities were given at the first day of the postpartum period. Then, the respondent was explained about the benefits of doing activities immediately after giving birth. The respondent stated that she would start the activity as soon as possible. The midwives assessed the effectiveness of breastfeeding with LATCH score when they started breastfeeding within an hour for spontaneous delivery and five hours for cesarean delivery. Midwives observed the role of the husband or family during the postpartum period. Respondents were given breast care and taught oxytocin massage and breathing relaxation techniques. The five respondents expressed interest in the intervention given and would do it regularly.

Implementations of breast care were using hot-cold compress techniques alternately on both breasts, followed by a massage, done every morning and evening.

The husband carried out oxytocin massages by gently massages the mother's back area using baby oil or olive oil twice a day (morning and evening) along the fifth -sixth costae bone. Breathing relaxation techniques were carried out in a comfortable and relaxed position, close both eyes and inhale for 4 seconds until the chest expands, hold the breath for 2 seconds, then exhale through the slightly open mouth. Rest for two counts, then continue up to 5 times. Breathing relaxations were carried out three times a day. Husbands were welcome to accompany respondents during treatment and play an active role in providing support through oxytocin massage. The intervention was carried out for two days. The evaluation of the results was carried out when the respondent was preparing to go home.

### 3. RESULTS AND DISCUSSION

**Table 1.** Respondents Characteristics

<b>Respondent</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Age	38	37	39	43	25
Education	High school	High school	High school	High school	Junior high school
Parity	P4A0	P3A0	P5A0	P7A1	P3A0
Rooming-in	Yes	Yes	Yes	No	Yes
Mode of delivery	CS	Vaginal	CS	CS	Vaginal

CS: Cesarean Section

From table 1, it can be identified that most mothers were over 35 years of age, had a high school education level, were multiparous, and treated rooming-in with their babies. Only 2 of 5 respondents experienced vaginal delivery.

**Table 2.** Evaluation of LATCH scores before and after supportive postpartum care

<b>Respondent</b>	<b>Before</b>	<b>After</b>
1	8	9
2	6	8
3	5	8
4	2	6
5	6	8

Based on table 2, it can be implied that there was a very good increase in LATCH scores for respondents 2, 3,4, and 5after the supportive care was applied.

**Table 3.** Evaluation of anxiety scores before and after supportive postpartum care

<b>Respondent</b>	<b>Before</b>	<b>After</b>
1	42	14
2	55	15
3	87	28
4	98	28
5	61	20

According to table 3, it is presented that majority of respondent experienced reduction in anxiety. A good reduction in anxiety was also seen in respondents 2, 3, and 4. The more point decreased, the more anxiety level declined.

**Table 4.** Evaluation of the score of knowledge before and after supportive postpartum care

Respondent	Before	After
1	75	100
2	62.5	100
3	50	87.5
4	50	75
5	37.5	75

Table 4 shows that the majority of postpartum mothers with twins had increased score of knowledge. A good increase of knowledge particularly shows on respondents 2, 3, and 5.

**Table 5.** Evaluation of husband's support before and after supportive postpartum care

Respondent	Before	After
1	Not appropriate	Appropriate
2	Lessappropriate	Appropriate
3	Not appropriate	Appropriate
4	Not appropriate	Appropriate
5	Lessappropriate	Appropriate

According to table 5, after the implementation of supportive care, it is understood that all respondents received proper support from their husbands.

Comprehensive care was seen from the nurse's role. As an implementer, physical comfort support was provided through breast care and psychological support through relaxation techniques. The role of nurses as educators was to provide information support by postpartum education. Advocacy support by the husband involvement was conducted through the oxytocin massage and the involvement during treatment. Adequate support during the postpartum period form which was immediate until late postpartum was obtained through the supportive postpartum care.

One of the physical discomforts experienced by postpartum mothers was related to breastfeeding. The results indicate that the problem of breastfeeding effectiveness can be treated by hot-cold compresses, breast massage, and oxytocin massage. Research result by [Karatay & Gurarslan Baş \(2018\)](#) in postpartum mothers who underwent swollen breast problems with hot-cold compresses presents similar result. Moreover, research result by [Mirzaie, et al., \(2018\)](#) also shows that massage increased breastmilk production. Meanwhile, [Amir \(2014\)](#) advised mother and baby to be taken care in the rooming-in setting so that they are able to breastfeed continuously. The comfort felt by postpartum mothers will make the breastfeeding process more effective.

The method of delivery is related to the breastfeeding effectiveness. [Gunes \(2017\)](#) discovered that prolactin levels and LATCH scores in mothers with spontaneous delivery were higher than those with cesarean section. However, cesarean section under the spinal anesthesia has enabled more mothers to start breastfeeding immediately after 30 minutes. The study is in line with the study that spontaneous postpartum mothers possess higher LATCH scores. Postpartum post-cesarean mothers should be more motivated to breastfeed their babies.

A study by [Isbir & Sercekus \(2017\)](#) on the intranatal period explained that supportive care was effective in reducing anxiety and fear. This study also revealed that supportive postpartum care was effective in reducing the postpartum anxiety in mothers with twins. [Toosi, et al., \(2017\)](#) added that the continuous relaxation method may

reduce the postpartum maternal anxiety. Proper breathing relaxation techniques can also reduce the anxiety.

Information support through education can be implemented in the postpartum period. The results indicates that the education was effective in increasing the maternal knowledge on postpartum care. This result was supported by [Barbosa, et al., \(2016\)](#) and [Shabaan, et al. \(2018\)](#) who explained that providing education can reduce maternal discomfort and increase mother's ability on self-care during the postpartum period.

Support from husband is an essential factor in postpartum care. [Davis, et al., \(2018\)](#) asserted that health workers and husbands require to provide support to postpartum mothers, especially for those who experience anxiety. The results of this study show the necessity of appropriate husband support after supportive care. These results were supported by research in Canada and America which presents that the support of those closest to the mother is required in the postpartum recovery process, and is associated with self-efficacy during breastfeeding ([Mannion, et al., 2013](#); [Negron et al., 2013](#)). The role of family and husband in supportive postpartum care is to provide care and to help the activities of mothers and babies. The involvement of family and husband is manifested as motivation and role division so that mothers are able to conduct optimal postpartum care.

The application of nursing care to postpartum mothers with twins should be more comprehensive to facilitate the optimal self-care needs both for the mothers and baby so that they are in good condition. The role of nurse as researcher is to conduct research in improving nursing care for postpartum mothers with twins through supportive postpartum care to achieve the expected outcome.

#### 4. CONCLUSION

This pilot study revealed that supportive postpartum care was effective for postpartum mothers with twins in reducing anxiety, increasing breastfeeding effectiveness, increasing knowledge, and improving the husband's involvement in care. These changes can be identified after the assessment before and after the supportive postpartum care. With optimal support from both the nurse and husband, postpartum maternal care was more optimal. Families, especially husbands, are expected to continue in providing support through care and roles division at home so that the benefits are sustainable.

The application of supportive postpartum care can be implemented in the clinical areas by first conducting research on a larger scale and with a larger number of samples. There is a limitation, which was we had only one group without a control group, so the result could not be generalized. A randomized controlled trial study design could also be conducted to prove supportive postpartum care effectiveness in mothers with twins cases.

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