

INTERVENTION OF INSUFFICIENT MILK SUPPLY CONCEPT TO MOTHERS PERCEPTION OF BREAST MILK PRODUCTION

Intervensi Berbasis Konsep “Insufficient Milk Supply” terhadap Persepsi Produksi ASI Pada Ibu

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ABSTRAK

Pendahuluan. Salah satu faktor utama yang memengaruhi rendahnya pemberian ASI eksklusif adalah ibu memiliki persepsi produksi ASI kurang. Tujuan penelitian ini adalah untuk mengetahui pengaruh pemberian intervensi berbasis konsep “*Insufficient Milk Supply*” terhadap persepsi produksi ASI kurang. **Metode.** Penelitian ini menggunakan desain *quasy experiment non randomized pretest-posttest with control group*. Ibu postpartum diberikan intervensi berupa pemberian modul berisi materi berbasis konsep “*Insufficient Milk Supply*”. Total sampel adalah 60 responden (30 pada kelompok perlakuan dan 30 pada kelompok kontrol) didapat menggunakan teknik *purposive sampling*. Pengukuran persepsi produksi ASI dilakukan menggunakan *The Nine-items of Lactation Scale*. Analisis data menggunakan *independent t test* dan *paired t test*. **Hasil.** Hasil uji asumsi *t test* menunjukkan bahwa data terdistribusi normal dan variansi homogen. Hasil penelitian menunjukkan tidak ada perbedaan yang signifikan antara skor pre-test pada kelompok kontrol dan intervensi ($p > 0,05$). Terdapat perbedaan yang signifikan antara skor post-test pada kelompok kontrol dan kelompok perlakuan ($t = -3,56, p = 0,01$). Terdapat perbedaan yang signifikan antara skor pre- dan post-test pada kelompok perlakuan ($t = -9,03, p < 0,01$). **Diskusi.** Intervensi berbasis konsep “*Insufficient Milk Supply*” efektif untuk meningkatkan persepsi ibu terhadap produksi ASI.

Kata kunci: Intervensi, *Insufficient Milk Supply*, Persepsi, produksi ASI

ABSTRACT

Introduction. One of the main factors affecting the low exclusive breastfeeding rate was maternal perception regarding having low milk production. This study aimed to investigate the effect intervention program based on *Insufficient Milk Supply* concept on mother's perception of low milk production. **Methods.** This study was a *quasy non-randomized pretest-posttest control group*. Postpartum mothers were provided an intervention using a module based on the concept of “*Insufficient Milk Supply*”. Total samples of this study were 60 respondents (30 on intervention group and 30 on control group). This study used *purposive sampling technique*. The perception of milk production was measured using the *Nine-items of Lactation Scale*. Data were analyzed using *independent t test* and *paired t test*. **Results.** The *t test* assumptions were examined and yielded the data was normally distributed and the variances were homogeneous. The results showed that there were no significant differences between pre-test scores in the control and intervention group ($p > 0.05$). There was significant differences between post-test scores in the control group and the intervention group ($t = -3.56, p = 0.01$). There was significant differences between the scores of pre- and post-test in the intervention group ($t = -9.03, p < 0.01$). **Discussion.** This study offers evidence that *Insufficient Milk Supply* could be used in nursing practice as a concept to improve the perception of the mother's milk supply.

Key words: Intervention, *Insufficient milk supply*, perception, Breast milk production

INTRODUCTION

Previous studies showed that the exclusive breastfeeding provides several advantages to the infants and mothers (Lawrence, R. A., & Lawrence 2011; Pillitteri 2009). However, exclusive breastfeeding rate is still low in Indonesia. Indonesian Demographic Health Survey in 2012 depicted that there were only 35% mothers who breastfeed exclusively. Several factors contribute to low

exclusive breastfeeding rate in Indonesia. A study was conducted by Anggraeni, M. D., Punthmatharith, B., & Petpichetchian (2015) found that sufficient milk supply predicts exclusive breastfeeding duration significantly ($\beta = 0.10, p < 0.05$) among postpartum mothers in Central Java Province. Another study by Afiyanti & Juliastuti (2012) showed that the main cause of non-exclusive breastfeeding practice was perception of insufficient milk supply.

Insufficient milk supply concept was introduced by Hill, P. D., & Humenick (1989) which portrayed the perception of mothers regarding insufficient milk supply to fulfill the infants' need after delivery. Hill, P. D., & Humenick (1996) had developed the research instrument to measure insufficient milk supply concept which is well-known by The H & H Lactation Scale.

The study about perception of breastmilk production has never been conducted. This research aimed to investigate the effect of intervention program based on Insufficient Milk Supply concept on mother's perception of low breastmilk production.

METHODS

This study was a quasy non-randomized pretest-posttest control group. The study was conducted through five months in clinic and Posyandu in Banyumas District. The number of postpartum mothers in Banyumas District was 778,197. A purposive sampling method was used and the inclusion criteria of mothers were: (1) having 1–6 months infants, (2) compos mentis, (3) age > 18 years old, (4) delivered normally, (5) literacy, and (6) willingness to be respondents. Inclusion criteria of the infants were: (1) healthy, (2) aterm, (3) single birth, and (4) birth weight >2.500 gram. Total samples of this study were 60 respondents (30 on intervention group and 30 on control group).

There were two variables in this study; the intervention based on insufficient milk supply concept as independent variable and perception of breast milk production as dependent variable. Confounding factors were age, parity, and infants' sex.

The research instruments used in this study consisted of two questionnaires. There were the respondent's demographic data and The Nine-items of Lactation Scale. Demographic data questionnaire consisted of 9 questions. The Nine-items of Lactation Scale was developed by Hill and Humenick (1996) and has been tested as cross cultural on Thai mothers by Punthmatharith, B., & Singh (2005).

The instrument in Indonesian language has been tested to Indonesian mothers which previously has been done the validity and reliability test (Anggraeni, M. D., Punthmatharith, B., & Petpichetchian 2015). The Content Validity Index of The Nine-items of Lactation Scale with score of 0.92 and the reliability showed that the value of Cronbach's Alpha of The Nine-items of Lactation Scale was 0.85. Data were analyzed using independent t test and paired t test.

RESULT

Respondents' age and parity were similar because we conducted the matching technique. The majority of respondent's age was 20–35 years old both groups (77% in both groups respectively), the average age of respondent was 29.82 years and 27.43 years on control and intervention group, respectively. All respondents were married (100%). The majority of respondents on both groups had more than one children (56.7%). On intervention group, mothers with normal birth were 60% and 40% with Sectio Caesarean (SC). While in control group, there were one third of mothers (37%) delivered with SC. Family type on intervention and control groups dominates by extended family (63.3% and 73.3% respectively).

The majority of respondent's education levels were senior high school graduate (46.7% and 40% in control group and intervention group, respectively). In addition, mothers who graduate from university (diploma/bachelor) were less than 6.6% and 10% in the control group and the intervention group, respectively. The occupation of mothers were dominated by working mothers, 70% in the intervention group and 73.3% in the control group. Respondents' incomes were dominantly higher than Rp 2,500,000 (43% in the intervention group and 30% in the control group). The three major information sources regarding breastfeeding were midwives (72%, pediatricians (42%, and nurses (24%).

The data normality was examined using Skewness-Kurtosis. The value of Skewness-Kurtosis of the pre test and post test score were

2.13 and 2.34, respectively in the intervention group. While in the control group the value of Skewness-Kurtosis of the pre test and post test score were 2.75 and 1.62 respectively. Homogeneity of Variance was evaluated using one-way ANOVA. The results showed that there was no difference between pre test score among intervention and control group ($p = 0.26$).

The mean of pre test score was 42.53 (SD = 5.26) in the intervention group and 41.74 (SD = 4.49) in the control group. The t dependent test showed that there was no significant difference in pre-test scores between control group and the intervention group ($p > 0.05$).

The study showed that there was an increase in post-test scores in the intervention group. The mean of post test scores in the intervention and control group were 53.57 (SD = 5.83) and 41.94 (SD = 5.12), respectively. The post score improvement among intervention group was 11.83 point comparing to pre test score. The t independent test showed that there was a significant difference on pre and post test scores among intervention group ($t = -9.03$, $p < 0.01$).

DISCUSSION

In term of respondent's age, the researcher found that there were no significant different results on both groups. This study results was consistent with previous study. According to Fatimah, S., Martini, M., Rostyaningtyas, D., & Soemarmi (2013) the mean of mother's age in their study was 31.2 years old and 74% among them was in 23-42 years old.

All respondents in this study were married. It is not a surprising, Indonesian social, culture, and belief obligate women to get married before having sexual intercourse and getting the children. In both groups, the researcher discovered that the majority of respondents had more than one children (56.7%). Mothers who have had previous experience of breastfeeding more likely to breastfeed their children compared to women who had never had a previous breastfeeding

experience (Jessri 2013). Type of delivery influences early breastfeeding initiation, exclusive breastfeeding duration, and total breastfeeding duration. Mothers who had SC were more likely to delay early breastfeeding initiation and had shorter exclusive breastfeeding comparing to mothers with normal delivery.

This study revealed that the majority of mothers had extended family. Living with other family members besides nuclear family is a strong culture in Indonesian, particularly Javanese. In this study, the majority of mother's educational level was senior high school. Education builds the ability to solve the problems, and search and receive information. Evidence showed that level of education affects mother motivation to give exclusive breastfeeding and early breastfeeding initiation (Jessri 2013). Occupational status has important role in exclusive breastfeeding duration. Staying at home gives more time to give exclusive breastfeeding.

The data analysis in the intervention group showed that there was a significant influence of insufficient milk supply concept based intervention to the enhancement of mother's perception regarding breastmilk production ($p < 0.01$) with the increasing score was 11.83. According to Hill, P. D., & Humenick (1996) the higher score of The nine-item H & H Lactation Scale indicated the more positive perception of mothers to their own sufficient milk supply. This perception was extremely important because if mothers think that they had insufficient milk supply they will easily gave supplementary food to their infants (Khassawneh, M., Khader, Y., Amarin, Z., & Alkafajei 2006; Otoo, G. E., Lartey, A. A., & Perez-Escamilla 2009)

Hill, P. D., & Humenick (1996) found that there was significant relation between the total score of the nine-item H & H Lactation Scale, the score of each sub-scale, and breastfeeding status in the third month ($r = .62, .66, .48, \text{ and } .53$, $p < .05$). Mothers perception of insufficient milk supply caused early supplementary feeding to the aterm infants (OR = 10.4, 95% CI = 3.0 – 37.6) and premature infants (OR = 11.16, 95% CI =

3.18 – 39.22) (Hill, P. D. & Humenick 2007). Those correlation and regression research conclude that the higher score of the nine-item H & H Lactation Scale showed the positive perception to the sufficient breastmilk production for their infants. Perception about breast milk production associated with breastfeeding duration and predicted the time of supplementary food providing to the infants before six months of infant's age.

CONCLUSION

Insufficient Milk Supply concept can enhance mother's perception to breastmilk production.

RECOMMENDATION

Insufficient Milk Supply concept based intervention may be used by nurses to enhance mother's perception regarding breastmilk production. Nurses can deliver counseling/health education to the clients with Insufficient Milk Supply concept.

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