


Original Research Paper

Maternal-fetal attachment and Family Support among pregnant women in Yogyakarta

Endang Koni Suryaningsih*, , Fenny Nur Alvianty, Wantonoro

Universitas 'Aisyiyah Yogyakarta, Indonesia

 koni@unisayogya.ac.id

Submitted: April 20, 2022

Revised: May 8, 2022

Accepted: May 24, 2022

Abstract

Maternal-fetal attachment is crucial for a mother to establish a healthy psychological relationship with her unborn baby. This relationship progresses during the week of gestation. Many studies support the evidence of the impact of maternal-fetal attachment on mothers' mental well-being during both antenatal and postnatal. For a baby, maternal-fetal attachment is essential to determine his development. Family, particularly the husband, plays an essential role in supporting the mother to experience positive maternal-fetal attachment during pregnancy. This study was to investigate the relationship between family support with maternal-fetal attachment among expectant mother. This sample was drawn using the purposive sampling method based on criteria that include mothers in their third trimester, mothers with any age range, mothers with no complications during the current pregnancy, and mothers who stay together with their husbands and or family. Seventy-seven expectant mothers completed the Indonesian version of the Prenatal Attachment Inventory and family support questionnaires. Kendal tau was applied to calculate the statistical relationship between two variables ($p < 0.05$). The results showed that more than 50% mother obtained support from their family, and more than 50% mother have high score of maternal-fetal attachment. There were a significant relationship between family support and maternal-fetal attachment ($p < 0.000$). The conclusion of this study was that there were a significant relationship between family support with maternal-fetal attachment. This finding provides evidence of the significant role of family support for maternal mental well-being through maternal-fetal attachment during pregnancy. Therefore, healthcare providers have to invite the husband or family to engage in support for the mother during their pregnancy.

Keywords: attachment; family; maternal-fetal; social support

1. Introduction

Pregnancy is multifaceted changes, including physical, spiritual, social, and financial. Expectant mothers experience psychological changes during pregnancy, including the mother's emotional relationship with her unborn baby called maternal-fetal attachment. Maternal-fetal attachment is the crucial basis of the mother-child future relationship (E.K Suryaningsih., 2021). Maternal-fetal attachment has the relationship between mother and fetus during pregnancy. The relationship can be seen as the mother's involvement in showing love, care, and commitment to maintaining the fetus's health. There are five aspects of maternal-fetal attachment E.K Suryaningsih (2021), including: attachment of mother and fetus during pregnancy, namely wanting information about the fetus, pleasure to interact with the fetus, wanting to care for the fetus and serve its needs during pregnancy. In the condition of a fetus has no one to love it, then later, he will grow up to be an emotional child (Sandbrook, 2009). Hence the theory about the inner bond has implications for the fetus who has natural abilities send roles when they experience stress or pain and parents will also have the sensitivity to be able to communicate with fetus. Muller states that children are the backbone of the next generation of a nation to produce a brilliant generation determined by women as mothers or candidates mothers who will care



for and educate their children (Muller, 1989). Being a mother is crucial when the bond between mother and child has begun to form during pregnancy (Muller, 1993).

Other scholar mentions a pregnant woman whose family and support husband, the level of love for the fetus is more during pregnancy show more confidence in the role of being a mother later and the level of depression and anxiety decrease postpartum better than in pregnant women who do not get support from family, there will be a lack of attachment to the fetus during pregnancy (Cunningham Facello, 2008). Maternal-fetal attachment plays a vital role in the health of pregnant women and fetuses and has on the mother's decision to live a healthy life during pregnancy (Abasi et al., 2012). In Indonesia, the policy regarding mental health screening during antenatal care service in the last trimester is still absent, yet maternal-fetal attachment screening. The screening is applied when the mother visits the community center health services for the first time.

Based on the regulation about the minimum standard of health service. The expectant mother must visit the community center health services for the first time for antenatal care to get the center service. The service includes physical screening from midwives, mental screening from psychology, nutrition education from a nutritionist, blood test examination from an analyst, and general examination from a physician (Kemenkes, 2021). Maternal-fetal attachment plays a vital role in the health of pregnant women and fetuses and has on the mother's decision to live a healthy life during pregnancy (Abasi et al., 2012). In Indonesia, the study literature supports the hypothesis regarding maternal-fetal attachment during pregnancy (Alvianty & Suryaningsih, 2016; Sukriani & Suryaningsih, 2018b, 2018a), however, the study discuss on the relationship between family support and maternal-fetal attachment is scarce. Therefore this study aim to explore the correlation among those two variables.

2. Methods Research

This study is a quantitative design using cross sectional approach to measure the relationship between family support and maternal-fetal attachment. The population in this study are pregnant women who visit to the Community Health Center Service (Puskesmas) at the Jetis Health Center, Yogyakarta City. Totally 344 pregnant women visited from January to December 2015. The sample drawn using purposive sampling according to inclusion criteria such as first time pregnancy, mother at any age ranged, pregnant women at third trimester, have no complication during current pregnancy, and belong to her husband.

Pregnant women who are not willing to become respondent are excluded automatically. Out of 77 pregnant women who met the criteria were join in this study and complete the questionnaire. The researcher used an antenatal care book to identify the potential respondent based on the criteria. Then, the researcher approached the proposed respondents while waiting for their turn in the examination room. The researcher explains the study purpose and the absence of consequence if the mother refuses as the respondent. The time duration information for questionnaire filling includes informed consent also delivered to the respondent after they agreed.

This study using two questionnaires, Indonesian version of Prenatal Attachment Inventory (PAI) and family support questionnaire. The Indonesian version of PAI as the original version of the Prenatal Attachment Inventory (PAI) by Muller (1993), was later adopted and adapted into Indonesian by Suryaningsih (2015), with reliability results based on Cronbach Alpha of 97. This value has a higher value than the reliability test of the Muller (1994), questionnaire, namely Cronbach's Alpha of 83. This questionnaire measures the independent variables with the type of tiered statement. Namely, each statement has provided a graded answer choice according to the feelings or behaviors that tend to represent and feel the mother for the last three months. The number of statements is 21 items (Likert scale). Examples of IPAI statements are "I imagine what my baby will look like now," "I plan things I

will do with my baby," and "I buy/make things for my baby." The mother's answer choice is represented on a scale of 4=always, 3=often, 2=almost sometimes, 1=almost never. Family support questionnaires are used to measure the independent variables with a closed questionnaire type; namely, respondents choose alternative answers that have been provided according to the instructions.

3. Results and Discussion

3.1. Results

Characteristic of the respondents including educational background, parity, maternal age. Family support and maternal-fetal attachment as well as the relationship between two variables described in this part.

Table 1. Frequency distribution of characteristics by education

| Category | Frequency | Percentage (%) |
|--------------------|-----------|----------------|
| Sd | 4 | 5.2 |
| Junior High School | 13 | 16.9 |
| Smk/Sma | 47 | 55.8 |
| D3/S1 | 17 | 22.1 |
| Total | 77 | 100 |

Source: Primary data, 2016

Based on the table 1, more than 50% respondents are graduate form senior high school, while only less than 6% the respondents graduate form elementary school.

Table 2. Frequency distribution by parity

| Category | Frequency | Percentage (%) |
|--------------|-----------|----------------|
| Primipara | 52 | 67.5 |
| Multipara | 25 | 32.5 |
| Total | 77 | 100 |

Source: Primary data, 2016

Based on table 2, it is known that most of the respondents primiparas as many as 52 (67.5%) and multiparas as many as 25 (32.5%).

Table 3. Frequency distribution by age

| Category | Frequency | Percentage (%) |
|-------------------|-----------|----------------|
| 20-25 years | 37 | 48.1 |
| 26 - 35 years old | 40 | 51.9 |
| Total | 77 | 100 |

Source: Primary Data, 2016

Based on table 3, the majority of respondents aged 26-35 years as many as 40 people (51.9%) and age 20- 25 years as many as 37 people (48.1%).

Table 4. Frequency distribution of family support

| Category | Frequency | Percentage (%) |
|--------------|-----------|----------------|
| Tall | 62 | 80.5 |
| Currently | 15 | 19.5 |
| Total | 77 | 100 |

Source: Primary data, 2016

Based on table 4, most of them gain high support from their families, namely 42 respondents (54.5%) and moderate support from their families is 15 respondents (19.5%).

Table 5. Frequency distribution maternal-fetal attachment

| Category | Frequency | Percentage (%) |
|--------------|-----------|----------------|
| High | 42 | 54.5 |
| Low | 35 | 45.5 |
| Total | 77 | 100 |

Source: Primary data, 2016

Based on table 5, shows that respondents who have maternal-fetal attachment high as 42 people (54.5%) and respondents who have maternal-fetal attachment as low as 35 people (45.5%).

Table 6. Distribution of family support relationships with maternal-fetal attachments

| Family support | Maternal-fetal Attachment | | | | | | P Value |
|----------------|---------------------------|-------------|-----------|-------------|-----------|------------|---------|
| | High | | Low | | Total | | |
| | f | % | f | % | f | % | |
| High | 40 | 51.9 | 22 | 28.6 | 62 | 80.5 | 0.000 |
| Moderate | 2 | 2.6 | 13 | 16.9 | 15 | 19.5 | |
| Total | 42 | 54.5 | 35 | 45.5 | 77 | 100 | |

Source: Primary data, 2016

Based on the result, in total 62 pregnant women in the third trimester, 40 people (51.9%) had high family support with maternal fetal attachment high, 22 people (28.6%) had high family support with maternal-fetal attachment which low, out of 15 pregnant women in the third trimester there are 2 (2.6%) who have support family with maternal-fetal attachment tall, 13 people (16.9%) have moderate family support with maternal- low fetal attachment.

3.2. Discussion

The results showed that the number of pregnant women with high family support is 62 people (80.5%), and support the low family that is 15 people (19.5%). Judging from the respondents' education, most of the respondents have vocational/high school education, and as many as 43 people (55.8%) have primary education. A total of 4 people (5.2%), junior high school education as many as 13 people (16.9%) and 17 people with D3/S1 education (22.1%). Education affects the family's mindset and ability to make decisions in overcoming problems appropriately and correctly (Sjariati & Primana, 2020). The results showed that the score Maternal-fetal Attachment in the third trimester, pregnant women at the Jetis Health Center are mostly high (about 42 people or 54.5%), and pregnant women who score low maternal-fetal attachment about 35 people (45.5%). The phenomena happen because of the factors that affect score maternal-fetal attachment, including mother, parity, education, and gestational age (E.K Suryaningsih et al., 2021).

In terms of age, most of the respondents are 26-35 years old. As many as 40 people (51.9%) of this age belong to the reproductive age, and respondents aged 20-25 as many as 37 people (48.1%). According to Yang et al., (2018), states that age is one of the determinants that can describe a person's maturity both physically, psychologically, and socially. Age will affect a person's actions and behavior because, with increasing age, a person will be more mature in responding to something. In addition, in terms of the respondent's education, most of the respondents. Respondents with vocational/high school education are as many as 43 people (55.8%), elementary school is 4 people (5.2%), SMP education is

13 people (16.9%) and 17 people have D3/S1 education (22.1%). One of the factors contributing to maternal-fetal attachment is the level of the mother's education—however, some previous research has different results. In line with the results of research conducted by Chen et al. In line with other study, the mother's education level had a significant role in influencing maternal-fetal attachment. The result is that the mother's education level impacts the capacity of a mother to absorb the knowledge about pregnancy (Sukriani & Suryaningsih, 2018a).

Regarding respondent parity, most of the respondents' primipara has as many as 52 people (67.5%) and multipara as many as 25 people (32.5%). Other scholar reported that mothers' primiparas express more fantasy and love to share when compared to multiparous mothers (Cristin Malm et al., 2016). Therefore, maternal-fetal score attachment is higher than in multiparous mothers. Then, the same thing mentions that expectants mothers are more focused on their pregnancy, related to the development of the fetus. On the contrary, multiparous mothers are more focused on work and the environment, such as situations or problems finance. The results showed that in 62 pregnant women in the third trimester, 40 people (51.9%) had high family support with maternal-fetal- attachment high, 22 people (28.6%) had good family support height with maternal-fetal attachment low and 15 pregnant women.

In the third trimester, two people (2.6%) had moderate family support with high maternal-fetal attachment, and 13 people (16.9%) had moderate family support with strong maternal-fetal attachment low. The result can be interpreted if someone has high family support, then the score maternal-fetal attachment Trimester Pregnant Women III improves and has increased self-confidence in being a mother later. Furthermore, children born to mothers who have a score of maternal-fetal attachment the high one will not emotional because children are the backbone of the nation's next generation. To produce a brilliant generation, eating is determined by women as a mother or prospective mothers who will care for and educate, and pregnant women, after giving birth, will experience decreased anxiety during postpartum because of the support of the family (Endang Koni Suryaningsih, 2016a). The latter is ready to help and help if needed at any time.

The found indicate that pregnant women in the third trimester have supported a high family with score maternal-fetal attachments all influenced by educational factors because most of the respondent's high school/vocational education. According to Wayuntari and friends, education needed to get information, for example, things that support health to improve the quality of life, in general (Wahyuntari & Puspitasari, 2020). The higher a person's education, the easier it is to receive information. Education also affects the learning process. With higher education, someone will tend to get information from others and the mass media. The more information that comes in, the more knowledge gained about health. So that high education will affect the level of good knowledge also (Prihandini & Primana, 2019; Wahyuntari, Listyaningrum, & Istiyati, 2019).

In line with Kinci and Nalini, the maternal-fetal attachment the fetus increases during pregnancy indicates more most authentic self in the role of being a mother later, and the level of depression and anxiety decreased during postpartum better than pregnant women who had less get support from family, there will be a lack of attachment to the fetus during pregnancy (Rincy & Nalini, 2014). Family support is shown through involvement and care the health of pregnant women during pregnancy. According to Xiong and colleagues, pregnant women who get attention and family support tend to be easier to accept and follow the advice given by health workers compared to pregnant women who receive less support and attention from husbands and family (Xiong et al., 2016).

Family support for pregnant women can be realized by helping overcome the problems experienced by pregnant women during pregnancy and by deciding to care for or carry pregnant women's health services available at the right time. Family is the closest person and becomes a support system which most valuable for pregnant women. In addition, family support is vital in improving maternal-fetal attachment (Sukriani & Suryaningsih, 2018b).

In line with the results of research conducted by Abasi (2013), that the interaction between mother and fetus is closely related to the psychology and behavioral health of pregnant women. Pregnant women with unplanned pregnancies have low attachment to the fetus than pregnant women whose pregnancy was planned and supported by their husbands and families (Abasi et al., 2013). The psychological aspect shows that love develops between mother and fetus during pregnancy. This relationship will continue to increase gradually during pregnancy, especially after the fetus's movement. Therefore, it can be concluded that family support affects maternal-fetal attachment indicated by the value-value $0.000 < 0.05$. Statistical test results using Kendall Tauit found that p-value of $0.000 < 0.05$, which means a relationship between family support and maternal-fetal attachments in the third trimester of pregnant women at Jetis Health Center. The city of Yogyakarta which has a correlation value of 0.407 with closeness moderate relationship.

4. Conclusion

Based on the discussion it may conclude that mostly the expectant mother gain support from their family. In term of score, more than fifty percent mother have high score of their attachment to the baby. There is a significant relationship between family support and maternal-fetal attachment for pregnant women in the third trimester at Jetis Public Health Center, Yogyakarta City. This finding result provide evidence for midwives about the basic information related with maternal-fetal attachment and family support.

Midwives could encourage husband to involve during childbearing and childrearing. Midwives need to advocate the husband during antenatal care and particularly prenatal education in which invite husband participation during the session. Midwives could also approach the family and provide education for them regarding the process. In addition, pregnant women are expected to be more active in seeking information in print, electronic media, and among health workers About maternal-fetal attachment since pregnancy. The validation of the instrument for family support and maternal-fetal attachment among broader targets also needs to be considered by the next future researcher.

References

- Abasi, E., Tafazzoli, M., Esmaily, H., & Hasanabadi, H. (2013). The effect of maternal-fetal attachment education on maternal mental health. *Turkish Journal of Medical Sciences*, 43(5), 815–820. <https://doi.org/10.3906/sag-1204-97>
- Abasi, E., Tahmasebi, H., Zafari, M., Gholamreza, & Takami, N. (2012). Assessment on effective factors of maternal-fetal attachment in pregnant women. *Life Science Journal*, 9(1 Supplemen.), 68–75. <https://doi.org/10.7537/marslsj0901s12.12>
- Alvianty, F. ., & Suryaningsih, E. . (2016). Hubungan dukungan keluarga dengan matrenal-fetal attachment pada ibu hamil trimester III di Puskesmas Jetis kota Yogyakarta. Universitas 'Aisyiyah Yogyakarta, Yogyakarta. Retrieved from [http://digilib.unisayogya.ac.id/1992/1/FEenny Nur Alvianty_201510104385_naskah publikasi.pdf](http://digilib.unisayogya.ac.id/1992/1/FEenny%20Nur%20Alvianty_201510104385_naskah%20publikasi.pdf)
- Cristin Malm, M., Hildingsson, I., Christine, R., Radestard, I., & Lindgren, H. (2016). Prenatal attachment and its association with foetal movement during pregnancy – A population based survey. *Women and Birth*, 29, 482–486. <https://doi.org/10.1016/j.wombi.2016.04.005>
- Cunningham Facello, D. (2008). *Maternal/fetal attachment: associations among family relationships, maternal health practices, and antenatal attachment*. ProQuest Dissertations Publishing, 386. <https://doi.org/10.1177/001088048102200214>
- Muller, M. E. (1989). The development and testing of the Muller prenatal attachment inventory. *Western Journal of Nursing Research*. University of California, San Fransisco.

- Muller, M. E. (1993). Development of the prenatal attachment inventory. *Western Journal of Nursing Research*, 15(2), 199–215. <https://doi.org/10.1177/019394599301500205>
- Kemendes. (2021). Laporan Kinerja Direktorat Kesehatan Keluarga Tahun ANggaran 2021. Direktorat Kesehatan Keluarga. Jakarta
- Prihandini, S., & Primana, L. (2019). Faktor-faktor yang Memengaruhi Hubungan Kelekatan Ibu terhadap Janin dalam Kandungan. *Buletin Psikologi*, 27 (2); p. 125-135.
- Rincy, K., & Nalini, S. J. (2014). Effect of fetal movement counting on prenatal attachment and maternal worries among primigravidae. *Asian Journal of Nursing Education and Research*, 4(2), 224–227. <https://doi.org/10.5958/2454-2660.2018.00045.5>
- Sandbrook, S. (2009). Love or protection? defining and measuring maternal-fetal attachment from the woman's perspective. Volume One, (December).
- Sjariati, N.T., & Primana, L. (2020). Persepsi Dukungan Keluarga terhadap Kelekatan Ibu dan Janin. *Jurnal Psikologi Sains dan Profesi*, 4 (3); p: 154-161.
- Sukriani, W., & Suryaningsih, E. K. (2018a). Factor contributed to the maternal-fetal attachment. *Jurnal Kesehatan*, 9, 185–191. Retrieved from <http://ejurnal.poltekkes-tjk.ac.id/index.php/JK%0AFaktor>
- Sukriani, W., & Suryaningsih, E. K. (2018b). Faktor yang berhubungan dengan skor maternal-fetal attachment pada ibu hamil. Factor associated with maternal-fetal attachment among pregnant women. *Health Journal*, 9(2), 185–191. <https://doi.org/https://doi.org/10.26630/jk.v9i2.840>
- Suryaningsih, E.K, Gau, M.-L., Chien, H.-K., & Lee, T. (2021). Translation and validation of the indonesia version of prenatal attachment inventory : a preliminary study. *International Journal of Caring Science*, 14(1), 543–549.
- Suryaningsih, E.K, Gau, M. ., & Wantonoro, W. (2020). Concept analysis of maternal-fetal attachment. *Belitung Nursing Journal*, 6(5), 157–164.
- Suryaningsih, Endang Koni. (2016a). Father's involvement during pregnancy. In 4 th ICRIEMS Proceedingsthe ICRIEMS Proceedings (pp. 9–14). Yogyakarta.
- Suryaningsih, Endang Koni. (2016b). The Association of maternal-fetal attachment and mother's education level among pregnant women in Indonesia. In International Conference on Health Science and Technology (ICHST) (pp. 435–439). Yogyakarta: Universitas Aisyiyah Yogyakarta.
- Wahyuntari, E., Listyaningrum, T. H., & Istiyati, S. (2019). Faktor yang berpengaruh terhadap maternal-fetal attachment (factors affecting maternal-fetal attachment). *Media Ilmu Kesehatan*, 8(2), 141–146.
- Wahyuntari, E., & Puspitasari, I. (2020). Anxiety and maternal fetal attachment. *International Journal of Health Science and Technology*, 2(2), 64–70.
- Xiong, M., Stone, T. E., Turale, S., & Petrini, M. A. (2016). Women's experiences of making healthcare decisions about their breast cancer: A phenomenological study. *Nursing and Health Sciences*, 18(3), 314–320. <https://doi.org/10.1111/nhs.12270>
- Yang, P., Di, M., & Tabanan, K. (2018). Pengambilan keputusan rumah tangga. *E-Jurnal Ekonomi Dan Bisnis Universitas Udayana*, 4, 1023–1050.