The Relationship between Pregnancy-related Anxiety and Maternal-fetal Attachment among Primigravida

Anjarwati Anjarwati*, Endang Koni Suryaningsih

Midwifery Department, Universitas 'Aisyiyah, Yogyakarta, Indonesia

Abstract

BACKGROUND: Many studies support the hypothesis that pregnancy-related anxiety (PRA) is strongly linked to postpartum depression, preterm births, low birth weight, fetal growth restriction, pregnancy complications, and negative infant outcomes. PRA has also been associated with mother-fetal bond during pregnancy that a special relationship between the mother and infant and growth beyond before the infant is born. Although extensive studies on PRA and maternal-fetal attachment (MFA) have been carried out, little attention on these issues is done in the Indonesian context.

AIM: To fill such a gap, the present study aimed to investigate the relationship between maternal PRA and MFA.

METHODS: Expectant mothers who visit their antenatal care in the primary health community services at Yogyakarta participated in this study. They were recruited using a purposive sampling technique based on the criteria: (a) The 1st time pregnancy, (b) in the late stage of pregnancy, (c) have no complication, (d) mother at any age range, and (e) mother at any education level. G-power 3.1.9.2 with effect size 0.15 has used to determine the number of samples, 84 people. Statistical analysis Pearson correlation has been applied and calculates the t relationship between two variables. General linier model analysis conducted the contribution of demographic variables to PRA and MFA.

RESULTS: There is a significant relationship between maternal anxiety during pregnancy and MFA (p < 0.001) and a significant correlation between PRA and maternal age. However, there were no correlation between MFA and demographic variables.

IMPLICATION FOR PRACTICE: Findings study provides the crucial information as the new approach to enhance the quality of care of mother's and infant's health during pregnancy as well as to promote maternal mental health.

Introduction

Pregnancy-related anxiety (PRA) is a syndrome that is distinct from depression, stress, or generalized anxiety such as fatigue and heart rate, stomach pain, problems during sexual intercourse, headaches, dizziness, and pains in the heart or chest, as well as gastrointestinal discomforts, such as nausea and vomiting [1]. Globally, the prevalence of PRA is varied range from 5.1% to 37.5% [2]. PRA encompasses several dimensions, including fears and worries about the health and survival of the unborn child, having an "abnormal" baby, the birthing process, developing medical problems during pregnancy, and the ability to parent and care for the infant following birth [1], [3], [4], [5], [6], [7]. PRA has been strongly linked to postpartum depression, preterm births, low birth weight, fetal growth restriction, pregnancy complications, and negative infant outcomes [6], [8], [9]. PRA has also been associated with mother-fetal bond during pregnancy [10].

Maternal-fetal attachment (MFA) is a special relationship between the mother and infant that is considered very important, and growth beyond before the infant is born [11]. MFA is a process that begins at the end of the first trimester of pregnancy and develops during the second and third trimesters and is directly related to maternal mental and physical health [12]. Although many scholars define MFA differently [13], [14], [15], the basic concept of MFA is quite similar and distinct from other concept of bonding or attachment includes having a positives emotion to the baby [16]. MFA improves the mother's health during pregnancy and facilitates maternal role attainment and may have a protective role against postpartum depression [14]. Mothers who experience PRA seem to be more exposed unfavorably to those bonding, including detachment, raising the possibility of neglect, rejection, neglection, and impulses to harm the infants [17]. Therefore, MFA playing an important role in promoting maternal mental well-being during pregnancy. This can also be considered as one of the key approaches to enhance the quality of care provided to the infant and his development and growth and also in the quality of life of the mother and infant as prevent the increasing prevalence of PRA [18]. The review of the literature showed that the PRA and the MFA have a direct relationship [10], [19], [20]. In high-income countries, most of the study toward PRA has been positioned. In low- and middle-income countries,

mental health issues have remained a key focus of research and health care [21]. The prevalence of PRA in Asia has been recognized about 20% [22]. Interestingly, in Indonesia, the mother who suffers anxiety in the last trimester of pregnancy was recorded about 76.8%, then 80% from the numbers recognized as the 1st time expectant mother [23].

PRA might be associated with the indirect cause of maternal death in Indonesia, since it contributed to the maternal mental condition, which may turn to prolonged labor [24]. There are some maternal causes of maternal mortality in Indonesia which includes bleeding (30.3%), pregnancy hypertension (27.1%), infection (7.3%), prolonged labor (1.8%), abortus (1.6%), and others (40.8%). For many years, the literature investigated the correlation between PRA and MFA are remain scarce in Indonesia, while the study of each variable conducted separately is well documented [16], [25], [26], [27], [28]. This study was conducted to determine the relationship between PRA and MFA among Indonesian primigravida.

Methods

Study design and participants

This cross-sectional study was done from December 2019 to February 2020 on 84 pregnant women who visit antenatal care at a primary health center in Yogyakarta, Indonesia. The entrance criteria were as follows: (1) Primigravida, (2) age ranged 20–35 years, (3) have no complication during the current pregnancy, (4) no perinatal loss/miscarriage history, (5) singleton pregnancy, and (6) gestational age ranged 28–38 weeks. Exclusion criteria include refusing to participate in this study. The sample research was determined using a G-Power software (at 95% CI, effect size 0.15), and 84 expectant mothers were chosen.

Data collection and analysis

Sampling began when the research proposal was approved, and an ethics code was obtained from the Ethics Committee of Aisyiyah University of Yogyakarta (No.1303/KEP-UNISA/XI/2019). In the current study, the primary health center at Yogyakarta was chosen as research setting. Since this primary health center at Yogyakarta includes different cultural and demographic backgrounds due to many reliable midwives and doctors, the study setting was suitable for society. The researcher approached the potential participants based on the participant's antenatal care book according to the criteria and was chosen after providing informed consent (IC). The study's aim was explained which includes the procedure of data collection and about the participant's right. After completing the IC, the process of completing

the instrument was explained to them. An estimated time of 8–10 min was allotted to each participant to complete all the questionnaires. Questionnaires were done either before or after antenatal examinations. If data were missing, the questionnaires were immediately returned to the respondents to obtain the absent information. Researchers in this study thanked the respondents for their cooperation by giving a small gift to them. After gathering data, we run descriptive statistics, Pearson correlation, and general linear model (GLM) using SPSS software version 2.0. Significance level has been considered by 0.05.

Measurement

In this study, researchers have used three different instruments: Demographic questionnaire, pregnancy-related questionnaires anxiety (PRAQ), and prenatal attachment inventory (PAI).

Demographic questionnaire

The researchers have developed a demographic data sheet to gain information about participants' backgrounds, such as maternal age, religion, ethnicity, education, gestational week, occupational status, marital status and duration, and monthly income.

PRAQ

The original instrument, the PRAQ-R1, consisted of 34 items developed by Van Den Bergh [29]. The revised questionnaire, PRAQ-R2, is shorter and consists of a 10-item self-report for multipara women and an 11-item self-report for nulliparas. The scores on each item range from 1 (definitely not true) to 5 (definitely true) [30]. The 10 items consist of three subscales: Items 1, 2, 6, and 8 are related to "fear of giving birth," items 4, 9, 10, and 11 are related to "worries about bearing a physically or mentally handicapped child," and items 3, 5, and 7 are related to body image or "concern about own appearance." In the revised version, Huizink explains the awareness for calculate the new version of PRAQ-R2 which is only addressed to measure pregnancy anxiety for nulliparous, while PRAQ-R applicable for all pregnant women regardless of parity.

Item 8 ("I am anxious about the delivery because I have never experienced one before") will apply in this study since all the proposed participants are nulliparous, instead of item 1 ("I am anxious about the delivery"), which is applicable for all parity. Thus, the minimum and maximum total scores are 11 and 55, respectively [30]. The assumption is that the higher the score, the higher the level of anxiety in pregnancy. The PRAQ-R2 items are all structurally positive statements, and the questionnaire has no cutoff point.

Huizink *et al*. (2016) tested for its validity and reliability in a longitudinal study with a large sample size (1144 pregnant women). The result showed the Cronbach's alpha for the total score was good, ranged from 0.71 to 0.85 for the multiparous, and 0.75 to 0.84 for the primiparas based on values measured at different weeks of gestation [3]. The researchers have followed Brislin guidelines to translate this instrument. The steps include forward translation, back translation, committee review, expert judgment using content validity index, and pilot testing among the targeted population.

PAI

This instrument was developed by Muller (1993) to measure the unique relationship between mothers with their unborn babies. The instrument consists of 21 Likert-type items ranging from 1 ("almost never") to 4 ("almost always"). All items are summed for a single score, and the possible range of scores is 21–84 (Muller, 1993). The 21-item PAI was validated in a Swedish sample of 171 pregnant women by Siddiqui *et al.* [12], Cronbach's alpha coefficient was 0.86, and the mean was 57.22 (SD = 5.916) (Siddiqui and Hägglöf, 2000). In 2003, Gau and Lee tested the instrument's construct validity using confirmatory factor analysis on a sample of 344 pregnant American women in their third trimesters. Cronbach's alpha coefficient was 0.89, and the mean was 63.7 [31]. The researchers have translated, produce the Indonesian version of PAI, and demonstrate high internal reliability (á= 0.93) [28].

Results

The study respondents ranged in age from 19 to 39 years (mean = 36.75, SD = 4.53). In terms of weeks of pregnancy, they ranged from 28 weeks to 39 weeks (mean = 32.35, SD = 3.09). Almost 50% of respondents graduated from college, while only about 25% graduated from senior and junior high school. The majority of the respondent is a worker, while the rest of them are a housewife. The characteristic respondents are shown in Table 1.

Table 1: Respondents' demographic information

Variables	Frequency (n = 84)	Percentage
Maternal age (Mean ± SD)	(26.75 ± 4.63)	
Age week (Mean ± SD)	(32.35 ± 3.09)	
Education level		
Elementary junior	22	16.9
Senior	40	30.8
College	23	17.7
Occupation		
Employed	54	44.2
Unemployed	31	23.8

Table 2 shows a Pearson correlation of PRA and MFA as well as other demographics variables. There is a significant negative correlation between PRA and MFA (p < 0.01). There is a significant correlation between gestational age and occupation (p < 0.05), and there is a significant negative correlation between education and occupation (p < 0.01).

Table 2: Pearson correlation for all variables (n = 84)

	PRA	MFA	Age	Gestational age	Education	Occupation
PRA	1					
MFA	−0.630**	1				
Age	0.120	0.087	1			
Gestational age	0.101	0.096	0.070	1		
Education	−0.024	0.015	−0.042	0.045	1	
Occupation	0.014	−0.011	0.159	0.270*	−0.324**	1

*p < 0.05; **p < 0.01. PRA: Pregnancy-related anxiety.

According to Tables 3 and 4, the increase of 1 point of PRA would decrease 0.52 point of MFA. However, the increase of 1 point of MFA would decrease 0.85 points of PRA. Maternal age contributes to the PRA, while gestational age, mother's education level, and occupation were not correlated to the PRA. However, there were no demographic variables correlated to the MFA.

Table 3: The effect of other variable on PRA (n = 84)

Variable	B	SE	t	p	95% CI
Intercept	23.11	12.47	1.85	0.068	−1.71~47.93
Age	0.43	0.21	2.04	0.045	0.01~0.84
Gestational	0.62	0.32	1.95	0.055	−0.01~1.27
Education (ref: College)					
Elementary junior	1.24	2.65	0.47	0.642	−4.03~−0.38
High school	0.44	2.29	0.19	0.848	−4.10~6.50
Occupation: (ref: Employed)					
Unemployed	1.87	2.12	0.88	0.381	−2.35~6.08
MFA	−0.52	0.07	−7.79	<0.01	−0.65~−0.38

CI: Confidence interval, SE: Standard error, ref: Reference.

Discussion

This study aimed to investigate the relationship between PRA and MFA among primigravida in one of the primary health centers in Yogyakarta, Indonesia. Out of 84 expectant, mothers who met the criteria have completed the questionnaires. The weeks ranged of gestation from 28 to 39. More than 50% of respondents graduate from college, and most respondents are workers. In that primary health center, midwives provide counseling sessions to an addressed question from the mother after the examination.

Table 4: The predictor of MFA (n = 84)

Variable	B	SE	t	p	95% CI
Intercept	37.46	15.76	2.38	0.020	6.09~68.83
Age	0.46	0.27	1.70	0.093	−0.08~0.91
Gestational	0.70	0.41	1.70	0.093	−0.12~1.52
Education (ref: College)					
Elementary junior	0.94	3.39	0.28	0.782	−5.81~7.70
High school	2.29	2.91	0.79	0.434	−3.51~8.09
Occupation: (ref: Employed)					
Unemployed	2.13	2.71	0.79	0.434	−3.27~7.53
PRA	−0.85	0.11	−7.79	<0.01	−1.06~−0.63

CI: Confidence Interval, SE: Standard error, ref: Reference, PRA: Pregnancy-related anxiety.

The midwives also provide prenatal education for the couple on a regular basis. However, there were no classes during we conducted this study due to some logical reasons. In this situation, midwives have time limit to provide such counseling and discussion for mothers to address their anxiety that may arise during the preparedness of birth. In this cross-sectional study,

we measured the variables in one time series. The maternal PRA was measured using PRAQ-2 consist of a 10-item Likert scale. The MFA was measured using the Indonesian version of the PAI consist of a 21-item Likert scale. The researchers explained the procedures on its administration to the respondent to reassure they were read slowly and carefully. The researcher also provided the particular room to fill out the instruments to avoid bias due to distraction. Based on data analysis, the researcher found a significant negative relationship between PRA and MFA in which they have a correlation reversely. The researcher also found a significant positive correlation between PRA and maternal age. Older mothers tend to be more potential suffer anxiety during pregnancy in their last trimester.

The finding of this study is confirmed by a previous study conducted by Abazari *et al.* [10]. They invited 360 preterm expectant women to complete the questionnaire based on the criteria include mothers aged range 18–38 years, weeks of pregnancy between 20 and 40 weeks, and have no complications. They found mothers who have high categorized anxiety tend to be have low scores on MFA. In that study, preterm pregnancy may also contribute to maternal anxiety [10]. Similarly, Wahyuntari and Puspitasari investigated the relationship between pregnant women's anxiety and their attachment to the unborn baby in Indonesia using Zung self-rating anxiety to measure the PRA and the same tools as used in this study to measure MFA. They found a significant relationship between anxiety and MFA [32]. Another study found that maternal age has contributed to the MFA during pregnancy [27]. We have different criteria including for maternal age in our study, while in that study, the researcher invites mother with all ranged of old.

In this study, there was a significant relationship between PRA and MFA among primigravida in a primary health center in Yogyakarta. The correlation between PRA and MFA has a negative mark, which indicates a negative relationship. The lower scores on anxiety during pregnancy, the higher score on the MFA. Otherwise, the higher maternal anxiety, the lower scores on MFA. In addition, when they got pregnant, the older mother can be considered a predictor of the PRA onset. Since there was no prenatal education in some period in this primary health center due to midwives' need to prepare the annual report, we may recommend for the policy-maker in a primary health center to a recruited facilitator from outside to conduct prenatal education. Since PRA has strongly correlated to MFA, the policy maker also needs to consider providing training skills to enhance the MFA skills for midwives as the main provider health care for pregnant women at the primary health center. Furthermore, midwives could transfer the knowledge of MFA skill to the mother when they were providing counseling with the mother. Hopefully, this innovation could diminish the prevalence of PRA among pregnant women at the primary health center in Yogyakarta. We collect the PRA score through our data collection. However, there was no such screening for mothers to screen their anxiety level, particularly in their last trimester, as the critical time point to preparing for birth. Therefore, we may recommend the policymaker at a primary health center in Yogyakarta consider providing a screening test for all pregnant women in the last trimester using a current tool we used as a standard procedure for a birth plan. However, some limitation should be noted in this study. First, since we just conduct a quantitative study to investigate PRA and MFA's relationship, the qualitative study approach to explore mother thought and feeling among anxiety sufferers may consider for the sequential research. Second, even though the reliability of the used tool is quite acceptable in this study, the generality needs to be considered in terms of the number of participants. Therefore, since the tool we used is highly important for such study, for the next researcher, we strongly recommended inviting a huge number of participants to reassure the validity and reliability of the instruments using complex methods.

Health-care providers in particular midwives put more attention to the 1st time expectant mother in the last trimester. Specific education and counseling should be provided to diminish the potential to experience anxiety during pregnancy. Second, health policy-makers in the primary health community center have to establish a screening process for pregnant mothers who come to health center. Third, the next researcher prompted conducting the study to test the effectiveness specific intervention to enhance MFA skills to decrease maternal anxiety during pregnancy.

Conclusion

We may conclude that pregnancy-related anxiety has a significant correlation with maternal-fetal attachment, while maternal pressure during pregnancy also linked to maternal age. This study confirmed the new approach to promote maternal psychological well-being during pregnancy. Therefore, the policymaker and healthcare providers should consider enhancing maternal-fetal attachment to help mothers decrease their anxiety during pregnancy.

References

1. Andersson I, Nilsson S, Candidate RN. How women who have experienced one or more miscarriages manage their feelings and emotions when they become pregnant again-a qualitative interview study. Scand J Caring Sci. 2012;26(2):262-70. https://doi.org/10.1111/j.1471-6712.2011.00927.x
   PMid:21967678

2. Chaudron LH, Nirodi N. The obsessive-compulsive spectrum in the perinatal period: A prospective pilot study. Arch Womens

Ment Health. 2010;13(5):403-10. https://doi.org/10.1007/s00737-010-0154-6
PMid:20221779

3. Bayrampour H, Ali E, Mcneil DA, Benzies K, Macqueen G, Tough S. Pregnancy-related anxiety: A concept analysis. Int J Nurs Stud. 2016;55:115-30. https://doi.org/10.1016/j.ijnurstu.2015.10.023
PMid:26626973

4. Furber CM, Garrod D, Maloney E, Lovell K, Mcgowan L. A qualitative study of mild to moderate psychological distress during pregnancy. Int J Nurs Stud. 2009;46(5):669-77. https://doi.org/10.1016/j.ijnurstu.2008.12.003
PMid:19150062

5. Gourounti K, Kouklaki E, Lykeridou K, Dean D. Childbirth efficacy: Validating the childbirth self-efficacy inventory in a Greek sample of pregnant women. Midwifery. 2015;31(7):742-9. https://doi.org/10.1016/j.midw.2015.03.013
PMid:25896370

6. O'Donnell KJ, Bugge A, Freeman L, Khalife N, Connor TG, Glover V. Maternal prenatal anxiety and downregulation of placental 11β-HSD2. Psychoneuroendocrinology. 2012;37(6):818-26. https://doi.org/10.1016/j.psyneuen.2011.09.014
PMid:22001010

7. Skouteris H, Wertheim EH, Rallis S, Milgrom J, Paxton SJ. Depression and anxiety through pregnancy and the early postpartum: An examination of prospective relationships. J Affect Disord. 2009;113(3):303-8. https://doi.org/10.1016/j.jad.2008.06.002
PMid:18614240

8. Abasi E, Tahmasebi H, Zafari M, Gholamreza, Takami N. Assessment on effective factors of maternal-fetal attachment in pregnant women. Life Sci J. 2012;9(1):68-75.

9. Yuksel F, Akin S, Durna Z. Prenatal distress in Turkish pregnant women and factors associated with maternal prenatal distress. J Clin Nurs. 2013;23(1-2):54-64. https://doi.org/10.1111/j.1365-2702.2012.04283.x
PMid:23305376

10. Abazari F, Pouraboli B, Tavakoli P, Aflatoonian M, Kohan M. Anxiety and its relationship with maternal-fetal attachment in pregnant women in Southeast of Iran. I-Manag J Nurs. 2019;7:16-27.

11. Horgas AL, Yoon SL, Nichols AL, Marsiske M. Considerations in determining sample size for pilot studies. Res Nurs Health. 2008;31(4):341-54.
PMid:18231972

12. Siddiqui A, Hagglof B. Does maternal prenatal attachment predict postnatal mother-infant interaction? Early Hum Dev. 2000;59(1):13-25. https://doi.org/10.1016/s0378-3782(00)00076-1
PMid:10962164

13. Condon JT, Corkindale C. The correlates of antenatal attachment in pregnant women. Br J Med Psychol. 1997;70(4):359-72. https://doi.org/10.1111/j.2044-8341.1997.tb01912.x
PMid:9429755

14. Maas AJ, Vreeswijk CM. Determinants of maternal fetal attachment in women from a community-based sample. J Reprod Infant Psychol. 2014;32(1):37-41.

15. Muller ME, Mercer RT. Development of the prenatal attachment inventory. West J Nurs Res. 1993;15(2):199-211; discussion 211-5.
PMid:8470375

16. Suryaningsih E, Gau M, Wantonoro W. Concept analysis of maternal-fetal attachment. Belitung Nurs J. 2020;6(5):157-64. https://doi.org/10.33546/bnj.1194

17. Edhborg M, Hogg B, Kabir ZN. Impact of postnatal maternal depressive symptoms and infant's sex on mother-infant interaction among Bangladeshi women. Health. 2013;5(2):237-44. https://doi.org/10.4236/health.2013.52032

18. Deklava L, Lubina K, Circenis K, Sudraba V, Millere I. Causes of anxiety during pregnancy. Soc Behav Sci. 2015;205:623-6. Available from: http://www.linkinghub.elsevier.com/retrieve/pii/s1877042815051150. https://doi.org/10.1016/j.sbspro.2015.09.097. [Last accessed on 2021 May 16].

19. Akbarzadeh M, Toosi M, Zare N, Sharif F. Effect of learning attachment behaviors on anxiety and maternal fetal attachment in first pregnant women. Evid Based Care. 2011;1(1):21-34. Available from: http://www.ebcj.mums.ac.ir/article_3762.html. [Last accessed on 2021 Mar 05].

20. Göbel A, Stuhrmann LY, Harder S, Schulte-Markwort M, Mudra S. The association between maternal-fetal bonding and prenatal anxiety: An explanatory analysis and systematic review. J Affect Disord. 2018;239:313-27. https://doi.org/10.1016/j.jad.2018.07.024
PMid:30031251

21. Rahman A, Surkan PJ, Cayetano CE, Rwagatare P, Dickson KE. Grand challenges: Integrating maternal mental health into maternal and child health programmes. PLoS Med. 2013;10(5):e1001442. https://doi.org/10.1371/journal.pmed.1001442
PMid:23667345

22. Roomruangwong C, Epperson CN. Perinatal depression in Asian women: Prevalence, associated factors, and cultural aspects. Asian Biomed. 2011;5:179-93. https://doi.org/10.5372/1905-7415.0502.024

23. Setyaningsih MM, Setyowati S, Kuntarti K. Decrease maternal high risk-related anxiety to face up labor process using "harmonic" package. J Keperawatan Indones. 2013;16(3):176-82. https://doi.org/10.7454/jki.v16i3.328

24. Rofi'ah M. Menghadapi Persalinan Pada Ibu Hamil Primigravida Trisemester Ke-Iii di Rsnu Tuban. Indonesia: Universitas Islam Negeri Maulana Malik Ibrahim; 2015. Available from: https://www.core.ac.uk/reader/34003906. [Last accessed on 2021 Apr 10].

25. Alza N, Ismarwati I. Factors influence mother anxiety in the third trimester. Kebidanan Keperawatan. 2017;13(1):2. https://doi.org/10.31101/jkk.205

26. Mardhiyah U, Khaerani NM. Dzikir training for coping anxiety during pregnancy. J Psikol Integr. 2017;5(2):157-74. Available from: http://www.ejournal.uin-suka.ac.id/isoshum/pi/article/view/1413. [Last accessed on 2021 May 16]. https://doi.org/10.18860/psi.v0i1.1543

27. Sukriani W, Suryaningsih EK. Factor contributed to the maternal-fetal attachment. J Kesehat. 2018;9:185-91. Available from: http://www.ejurnal.poltekkes-tjk.ac.id/index.php/jk%0afaktor. [Last accessed on 2021 May 16].

28. Suryaningsih EK, Gau ML, Chien HK, Lee T. Translation and validation of the Indonesia version of prenatal attachment inventory: A preliminary study. Int J Caring Sci. 2021;14(1):543-9.

29. van den Bergh BR. The influence of maternal emotions during pregnancy on fetal and neonatal behavior. J Prenat Perinat Psychol Health. 1990;5(2):119-30. Available from: https://www.pure.uvt.nl/ws/portalfiles/portal/1041624/influen2.pdf. [Last accessed on 2021 May 16].

30. Dubber S, Reck C, Müller M, Gawlik S. Postpartum bonding: The role of perinatal depression, anxiety and maternal-fetal bonding during pregnancy. Arch Womens Ment Health. 2015;18(2):187-95. https://doi.org/10.1007/s00737-014-0445-4
PMid:25088531

31. Gau M, Lee TY. Construct validity of the prenatal attachment inventory: A confirmatory factor analysis approach. J Nurs Res. 2003;11(3):177-87. https://doi.org/10.1097/01.jnr.0000347634.18218.2f
PMid:14579195

32. Wahyuntari E, Puspitasari I. Anxiety and maternal fetal attachment. Int J Health Sci Technol. 2020;2(2):64-70.