Effectiveness of Smarted B Father Intervention to Reduce a Pregnant Mother's Anxiety in the Third Trimester

M. Ardan[1], Zulkifli Umar[2], Elma Novita Indonesiani[3], Mayela Rochyati Nggode[4], Jihan Patrizia[5]

[1,2,3,4,5] Prodi Administrasi Rumah Sakit, STIKES Mutiara Mahakam Samarinda, Samarinda, Indonesia

ARTICLE INFO	ABSTRACT
Keywords: *Pregnant Mother Anxiety, Smarted B Father.*	Emotional anxiety often occurs in pregnant mothers 29.2% compared to postpartum mothers 16.5%. Anxiety that occurs during pregnancy can affect between 15-23% and can increase the negative risk for mothers and children born. Indonesia reported that 28.7% experienced anxiety in the third trimester of pregnancy, anxiety during pregnancy can increase before delivery which is manifested as anxiety about having a miscarriage, anxiety about fetal abnormalities, fear of giving birth, and pain during delivery. This study aims to analyze the effectiveness of the Smart Education Based on Family Approach Therapy (SMARTED B FATHER) intervention to reduce a pregnant mother's anxiety in the third trimester. This study used a quasi-experimental pretest-posttest research design with a control group design which was divided into 2 groups (17 respondents in the intervention group and 17 respondents in the control group). The results of the normality test of the data obtained that the data were normally distributed, so the results of the analysis using paired t-test showed that there was a decrease in anxiety levels before and after the Smarted B Father Intervention in the intervention group (p-value 0.002) and there was no decrease in anxiety levels in the control group (p-value 0.113), while the results of the analysis using an unpaired t-test showed that there was a difference in the level of depression after the Smarted B Father Intervention between the intervention and control groups with a p-value of 0.001. This research can also provide recommendations to health workers, especially midwives to provide services in the form of complementary care service.
Email : ardan0410@gmail.com zulkifliumar.arsmm@gmail.com elmanovitaindonesiani@gmail.com mayellarochyati244@gmail.com patriziajihan05@gmail.com	

1. INTRODUCTION

Anxiety is a clinical condition that refers to a tendency to be negative such as fear and worry about the situation experienced by being characterized by an unstable perception as a result of threatening environmental stimuli. Emotional anxiety often occurs in pregnant women by 29.2% compared to postpartum mothers by 16.5%. Anxiety that occurs during pregnancy can affect between 15-23%. Anxiety that occurs during pregnancy can have a negative risk impact on mothers and children at birth.

In Indonesia, it was reported that 28.7% experienced anxiety in the third trimester of pregnancy. Anxiety is proven to be a mental disorder that often occurs in pregnant women, of which it is more common in the third trimester of pregnancy. Anxiety during pregnancy can increase before delivery which is manifested as anxiety about having a miscarriage, anxiety about fetal abnormalities, fear of giving birth and pain during delivery. A low level of anxiety in pregnant women can reduce the complications that arise so that it can indirectly reduce maternal and infant mortality, while a high level of anxiety can aggravate complications of maternal and infant mortality.

Previous research stated that social support can affect anxiety directly or indirectly, this is in line with other research that family support such as facility support, emotional support, instrumental support, assessment support and information support such as caring, empathy, love and attention can increase enthusiasm and reduce anxiety levels of pregnant women, therefore health workers are expected to be able to make efforts to improve professional health services in providing social support to pregnant women through the method of implementing family-based education or Smart Education Based on Family. Approach Therapy (SMARTED B FATHER).

SMARTED B FATHER is a method or form of providing education to families that is carried out systematically which focuses on aspects of emotional relationships during maternal pregnancy. Family Approach will be centered on the family which is given to pregnant women in the form of strengthening and emotional support.

The results of the initial survey in November – December 2021 in 5 (five) maternity clinics in Samarinda City, it was found that on average 15-20 pregnant women in the third trimester of each clinic Visited Antenal Care (ANC), 10-20% of them were pregnant women. pregnant women do not understand the risks or danger signs of pregnancy, 23.4% of pregnant women feel anxious about childbirth, 40-60% are delivered by their husbands, while in health facilities, medical personnel only provide education to pregnant women by conducting pregnancy counseling. If the patient's level of anxiety continues, it will be able to cause trauma or negative reactions to the delivery process, so it requires an educational method that can be used by medical personnel to provide understanding to the family during the process of a mother's pregnancy.

Based on the above background that has been described, it becomes the basis for researchers to analyze the effectiveness of the Smart Education Based on Family Approach Therapy (SMARTED B FATHER) intervention in an effort to reduce the anxiety of third trimester pregnant women.

2. METHOD

This type of research was quantitative using a quasi-experimental research design pre and post-with a control group design. This study was taken as many as 34 samples for both groups (17 respondents in the intervention group and 17 respondents in the control group) using a purposive sampling technique that had the following inclusion criteria: 1). Living in the city of Samarinda and being willing to be a respondent; 2). The third trimester of pregnancy; 3). A pregnancy that the mother wants; 4). Mother is experiencing symptoms of anxiety. While the exclusion criteria are as follows: 1). Mother cannot communicate well; 2). Mother has a mental disorder or depression. The intervention group and the control group according to the inclusion criteria were analyzed for anxiety levels using the Perinatal Anxiety Screening Scale (PASS) questionnaire, then the intervention group was given treatment using the SMARTED B FATHER method to pregnant women who experienced anxiety levels. The SMART B FATHER method is given through structured stages according to the guidelines, starting with inviting pregnant women in a relaxed state, listening to the holy verses of the Koran and/or sourced from the holy bible according to the mother's religion for 5 minutes with a volume that is not too loud, then play the relaxation instrument for about 3 minutes, then the facilitator invites pregnant women to praise the gift of God Almighty, encourage and motivate mothers who will become mothers for their children, after that touch the mother's meridian points using the Emotional Fredom Technique concept during 3 minutes, in addition to the SMARTER Method, pregnant women are also given reading books about the physiological and psychological changes of pregnant women. While the control group was only given reading material. After being given intervention treatment, both groups were given the same questionnaire again to see the depression level of pregnant women. Both groups were not carried out pretest and posttest simultaneously due to the timing of the mother's ANC visit on different days, but all samples were taken in the same time range, starting on July 12 - August 26, 2022 at the same clinic. The posttest was carried out 30 minutes after the SMARTED B FATHER method was implemented using the same questionnaire.

The characteristics of the respondent's data collected in this study were: Mother's Age, Mother Occupation, Mother Education, Maternal Pregnancy Status, and the level of anxiety of pregnant women.

The anxiety level of pregnant women was taken using a validated Perinatal Anxiety Screening Scale (PASS) questionnaire, respondents would fill out the questionnaire according to the feelings faced by the mother listed on the questionnaire, then the researchers analyzed the level of anxiety of pregnant women. PASS is a reliable measuring tool to detect the presence or absence of anxiety and can show the severity of the sufferer. The respondents will fill out 31 questions, and each question has a score of 0 to 3, after the respondent has answered all the questions and then add up the scores, the highest score is 93 if the respondent fills in 3 points for the whole question. The lowest score is 0 if the respondent fills in 0 points on the whole question. The objective criteria for anxiety levels were: 0-20 (no symptoms), 21-41 (mild-moderate anxiety), and 42-93 (severe anxiety/panic).

Data analysis was done first by looking at the normal distribution of each data. If the data is normally distributed, then to test the differences in a pre-post group, use a paired T-test, while to see the effectiveness of the intervention, use an unpaired t-test with alpha = 0.05.

The materials and methods of this research are described in the following plot:
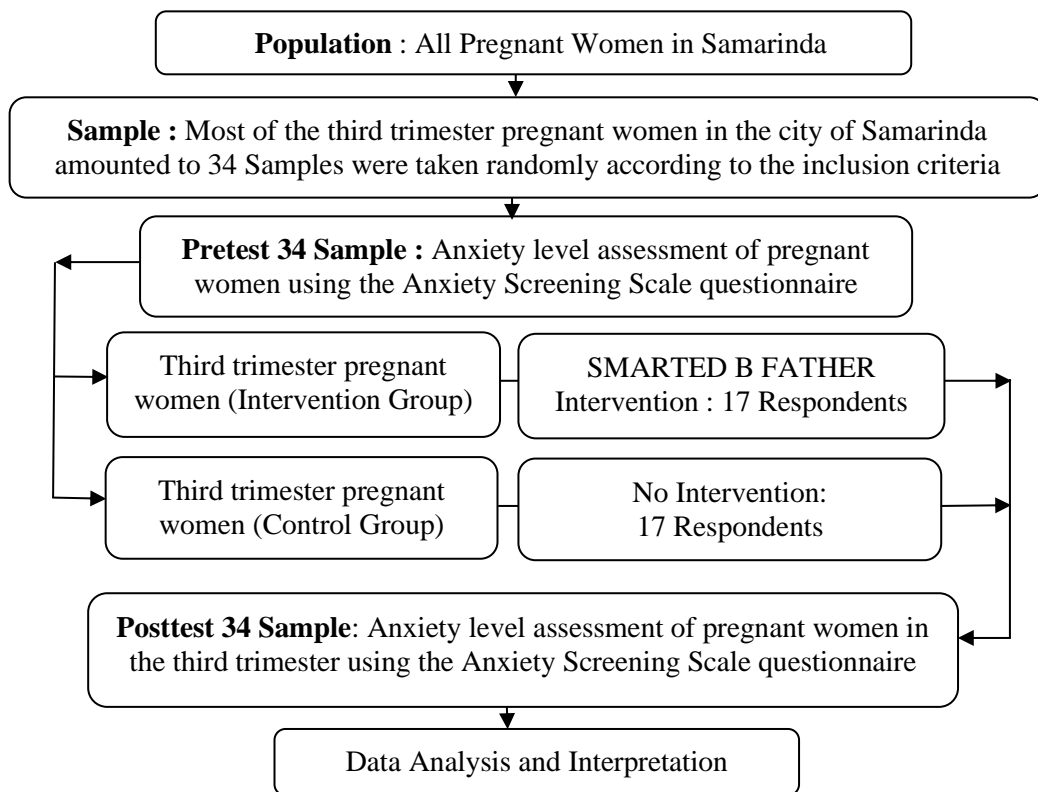

Figure 1. Flow of Materials and Research Methods

3. RESULTS AND DISCUSSION

Smarted B Father is a contemporary method of health care that can provide education as well as a sense of calm and confidence in a person so that they can become more relaxed and enthusiastic so that this study obtained the following results:

Characteristics of respondents

Characteristics of respondents is a description of the object of research that is given treatment to produce a picture of the respondent's data taken. The characteristics in this study include age, occupation, education and parity. The results of the respondent's characteristic data are described as follows:

Table 1. Results of Analysis Based on Characteristics of Respondents

Characteristics of Respondents	Intervention Group	Control Group

Effectiveness of Smarted B Father Intervention to Reduce a Pregnant Mother's Anxiety in the Third Trimester;
M. Ardan, Zulkifli Umar, Elma Novita Indonesiani, Mayela Rochyati Nggode, Jihan Patrizia

480

	n	%	n	%
Age				
17–25 years	4	23,5	3	17,6
26–35 years	9	52,9	12	70,6
> 35 years	4	23,5	2	11,8
Work				
civil servant	4	23,5	3	17,6
Private employees	3	17,6	3	17,6
Self-employed	5	29,4	4	23,5
IRT	5	29,4	7	41,2
Education				
Elementary School	2	11,8	1	5,9
Junior High School	1	5,9	2	11,8
Senior High School	9	52,9	8	47,1
Graduated	5	29,4	6	35,3
Pregnancy Status				
First Pregnant	4	23,5	3	17,6
Second Pregnant	11	64,7	12	70,6
Pregnant > Third	2	11,8	2	11,8

Table 1 shows that the age characteristics of the research respondents were dominated by the productive age of 26-35 years as many as 9 respondents (52.9%) and in the intervention group and 12 respondents (70.6%) in the control group. The distribution of the work characteristics of the research respondents was dominated by housewives 5 (29.4%) and entrepreneurs 5 (2.9.4%) in the intervention group and 41.2% housewives in the control group. The table also shows that the average education of the respondents is High School (SMA) and Higher Education (PT) including 52.9% (SMA) and 29.4% (PT) in the intervention group while 47 in the control group. 1% (SMA) and 35.3% (PT). Pregnancy status from the data illustrates that the average respondent with a second pregnancy, namely the intervention group, was 64.7% and 70.6% in the control group.

Differences between Pretest and Posttest of Postpartum Maternal Depression in the Intervention Group

Pretest and posttest are activities to compare the average value of changes in the value of the data obtained and then analyzed and interpreted so as to provide an overview of the significance of the research conducted. The following is an illustration of the value of the difference in anxiety levels of third trimester pregnant women in the Smarted B Father intervention group.

Table 2. Differences in Postpartum Maternal Depression Levels Before and After Intervention

Pregnancy Anxiety Level	Smarted B Father Intervention Group		P value
	Pre-test	Post-test	
No Symptoms	0 (0%)	4 (23,5%)	
Mild-moderate anxiety	10 (58,8%)	11 (64,7%)	0,002
Severe anxiety/panic	7 (41,2%)	2 (11,8%)	

Based on the results of the analysis in table 2 above, it shows that the level of anxiety of the respondents at the time of the pretest mostly experienced symptoms with a level of severe anxiety/panic as much as 7 (41.2%) and mild anxiety as much as 10 (58.8%) while after the intervention SMARTED B FATHER anxiety level of pregnant women in the third trimester changed to 2 (11.8%) with severe anxiety and as many as 4 (23.5%) did not feel anxious. This table also shows that there is an average difference with a p value of 0.002 which means there is a significant change in the level of anxiety of pregnant women in the third trimester after the SMARTED B FATHER intervention.

Differences Pretest and Posttest Postpartum Maternal Depression Control Group

The control group is a comparison group to determine the experimental effectiveness of a given method. In this group, no intervention was given, but a pretest and the same posttest were given to the intervention group. The following are the results of the differences in the level of depression in the pretest and posttest postpartum mothers in the control group.

Table 3. Differences in Postpartum Maternal Depression Levels Before and After Control Group

Pregnancy Anxiety Level	Control Group		P value
	Pre-test	Post-test	
No Symptoms	0 (0%)	0 (0%)	
Mild-moderate anxiety	9 (529%)	7 (41,2%)	0,113
Severe anxiety/panic	8 (47,1%)	10 (58,8%)	

Based on the results of the analysis in table 3 above, it shows that the level of anxiety of the respondents at the time of the pretest mostly experienced symptoms with severe anxiety/panic levels as much as 8 (47.1%) and mild anxiety as much as 9 (52.9%). Meanwhile, at the time of the posttest, respondents experienced an increase in the level of severe anxiety/panic to 10 (58.8%) and moderate anxiety to 7 (41.2%) this happened along with the close delivery process that pregnant women would face, causing anxiety. mother is increasing. This table also shows that there is no difference in the average anxiety of pregnant women in the third trimester when the pretest and posttest were carried out with a p value of 0.113.

Effectiveness of SMARTED B FATHER Intervention

The effectiveness of the intervention is a description of the results of a study that has been carried out. The effectiveness of the intervention gives an idea of whether or not there is an effect of a method being tested. The following are the results of data interpretation in the intervention group and control group in analyzing the effectiveness of the intervention:

Table 4. Differences in the level of anxiety of pregnant women after SMARTED B FATHER intervention in the intervention group compared to the control group

Statistics	Before Intervention		After Intervention	
	Mean	SD	Mean	SD
SMARTED B FATHER Intervention Group	35,47	12,04	29,41	10,97
Control Group	38,29	8,44	40,88	5,31
P value	0,223		0,001	

Based on the results of the analysis in table 4 above, it shows that the posttest results show that the average value has a difference and the p value also shows a value of 0.001 which means the SMARTED B FATHER intervention can affect the anxiety level of pregnant women.

Smart Education Based on Family Approach Therapy is a method used in the form of healing with non-pharmacological distraction to treat or reduce various kinds of complaints, both physical and psychological. SMARTED B FATHER is a method or form of providing education to families that is carried out systematically which focuses on aspects of emotional relationships during maternal pregnancy. Family Approach will be centered on the family which is given to pregnant women in the form of strengthening and emotional support. So SMARTED B FATHER will provide a form of motivational encouragement to pregnant women during their pregnancy to continue to be confident and reduce their level of anxiety in facing childbirth.

Physical and psychological changes will be interrelated and affect during pregnancy, it can happen that during pregnancy there will be an increase in the hormones estrogen and progesterone

compared to during normal menstruation. The existence of these hormonal changes will cause women's emotions during pregnancy to tend to fluctuate, so that for no apparent reason pregnant women feel sad, irritable, angry or on the contrary feel very happy, this becomes the focus of attention from the family during the mother's pregnancy until the delivery process in particular. in the third trimester.

Previous research conducted by Tangkas and Sari (2019) with education for pregnant women and their families can reduce anxiety levels in pregnant women by providing health promotions so as to create positive attitudes towards childbirth for pregnant women in the third trimester. Education from health workers, especially midwives will be able to reduce the level of anxiety in third trimester primigravida mothers coupled with education provided to families. Previous research has shown that anxiety is one of the most common negative emotions during pregnancy, especially during the third trimester. Other research shows that there is a need to improve prenatal services, especially in providing physical and psychological health services for pregnant women. Factors related to the anxiety of pregnant women are influenced by maternal age, pregnancy recognition, relationships with family members which can be done professionally by collaborating with families to improve the mental health of pregnant women. Increased family social support can improve maternal mental health during pregnancy

4.   CONCLUSION

The results of data analysis showed that there was a difference in decreasing the level of depression in postpartum mothers before and after the SMARTED B FATHER intervention. While in the control group the level of anxiety remained at the level of moderate anxiety. This research can also provide recommendations to health workers, especially midwives in order to provide services in the form of contemporary care services.

REFERENCES

[1]   Asmayanti.Hubungan Dukungan Suami Dengan Kejadian Depresi Postpartum Di Rsud Panembahan Senopati Bantul Yogyakarta. Universitas Jendral Achmad Yani. (2017)
[2]   Dennis CL, Falah-Hassani K, Shiri R. Prevalence of antenatal and postnatal anxiety: Systematic review and meta-analysis. Br J Psychiatry. 2017;210(5):315–23.
[3]   Komariah N. Hubungan Antara Usia Ibu Dengan Tingkat Kecemasan Ibu Postpartum Di BPM Teti Herawati Palembang. JPP (Jurnal Kesehat Palembang). 2018;12(2):103–7.
[4]   Hasim RP. Gambaran Kecemasan Ibu Hamil. Skripsi [Internet]. 2016;4(4):373–85. Available from: http://eprints.ums.ac.id/63124/1/Naskah Publikasi Ilmiah.pdf
[5]   Sinesi A, Maxwell M, O'Carroll R, Cheyne H. Anxiety scales used in pregnancy: systematic review. BJPsych Open. 2019;5(1):1–13.
[6]   Siallagan D, Lestari D. Tingkat Kecemasan Menghadapi Persalinan Berdasarkan Status Kesehatan, Graviditas Dan Usia Di Wilayah Kerja Puskesmas Jombang. Indones J Midwifery. 2018;1(2):104–10.
[7]   Silva MMDJ, Nogueira DA, Clapis MJ, Leite EPRC. Anxiety in pregnancy: prevalence and associated factors. Oroginal Artic. 2017;
[8]   Widyastuti C, Anggorowati, Apriana R. Hubungan Pengetahuan Ibu Tentang Persalinan Kala I Dengan Kecemasan Persalinan Kala I Pada Ibu Bersalin Di Rsia Bahagia Semarang. Semin Nas Univ Muhammadiyah Semarang. 2010;48–55.
[9]   Isnaini I, Hayati EN, Bashori K. Identifikasi Faktor Risiko, Dampak dan Intervensi Kecemasan Menghadapi Persalinan pada Ibu Hamil Trimester Ketiga. Analitika. 2020;12(2):112–22.
[10]   Yue C, Liu C, Wang J, Zhang M, Wu H, Li C, et al. Association between social support and anxiety among pregnant women in the third trimester during the coronavirus disease 2019

(COVID-19) epidemic in Qingdao, China: The mediating effect of risk perception. Int J Soc Psychiatry. 2021;67(2):120–7.

[11] Hasibuan SMH, Santosa H, Asfriyati A. Relationship of Family Income and Family Support with Maternal Reference in Pregnant Women in Pantai Cermin BEmONC, Langkat District, 2019. Budapest Int Res Critics Inst Humanit Soc Sci. 2020;3(1):486–93.

[12] Yeni CM. Maternal Mental Wellbeing During Pregnancy, Birth, Postnatal Period and Infant Development. 2020;276–9.

[13] Rinata E, Andayani GA. Karakteristik ibu (usia, paritas, pendidikan) dan dukungan keluarga dengan kecemasan ibu hamil trimester III. Medisains. 2018;16(1):14.

[14] Wulandari S, Januar R, Noviadi P. Analisis Hubungan Kecemasan Ibu Hamil Dengan Kesiapan Menghadapi Persalinan Di Masa Pandemi Covid-19 Di Kota Palembang. Jmj. 2021;9(3):324–32.

[15] Khoiriyani K, Gulo NW. Gambaran Pengetahuan Ibu Primigravida Tentang Perubahan Fisiologis Trimester I,Ii,Iii Di Klinik Sehati Medan. Evidance Bassed J. 2021;2(1).

[16] Prabandari F, Novyriana E, Mutoharoh S, Gombong UM, Gombong UM, Gombong UM. Pengaruh Video Persiapan Persalinan Terhadap Kesiapan Menghadapi Persalinan Pada Primigravida Trimester III. 2021;21–8.

[17] Wulandari S, Wantini NA. Ketidaknyamanan Fisik Dan Psikologis Pada Ibu Hamil Trimester Iii Di Wilayah Puskesmas Berbah Sleman Daerah Istimewa Yogyakarta. J Kebidanan Indones. 2021;12(1):54–67.

[18] Alfiani R, Realita F. Literature Review : Kecemasan Ibu Hamil Tm Iii Dalam Menghadapi Persalinan Romayana Alfiani dan Friska realita Universitas Islam Sultan Agung , Indonesia Diterima : Abstrak Direvisi : Disetujui : Literature Review : Kecemasan Ibu Hamil Tm Iii dalam Mengha. 2021;1(11):1481–6.

[19] Puspitasari I, Wahyuntari E. Gambaran Kecemasan Ibu Hamil Trimester III. Proceeding of The URECOL. 2020;116–20.

[20] Ersila W, Zuhana N, Prafitri LD. Analisis Faktor Yang Berhubungan Dengan Pelaksanaan Pemenuhan Kebutuhan Dasar Pada Ibu Hamil Di Kabupaten Pekalongan. J Ilm Kesehat Keperawatan. 2020;16(1):68.

[21] Tantona MD. Gangguan Kecemasan Pada Wanita Hamil di Saat Pandemi COVID-19. J Penelit Perawat Prof. 2019;2(4):381–92.

[22] Krzepota J, Sadowska D, Biernat E. Relationships between physical activity and quality of life in pregnant women in the second and third trimester. Int J Environ Res Public Health. 2018;15(12):1–12.

[23] Hu Y, Wang Y, Wen S, Guo X, Xu L, Chen B, et al. Association between social and family support and antenatal depression: A hospital-based study in Chengdu, China. BMC Pregnancy Childbirth. 2019;19(1):1–10.

[24] Friedman LE, Gelaye B, Sanchez SE, Williams MA. Association of social support and antepartum depression among pregnant women. J Affect Disord. 2020;264(1):201–5.