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Perceptions of primigravida and their husbands regarding the need for maternal-fetal attachment stimulation

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ABSTRACT

Prenatal class programs for primigravidas are important to improve fetal care behavior and reduce infant mortality. In prenatal classes, there is no maternal-fetal attachment stimulation education program which is important for improving maternal-fetal attachment and fetal well-being. The perceptions of pregnant women and their husbands regarding knowledge and experience of pregnancy as well as maternal-fetal attachment (MFA) stimulation are important for assessing the need for MFA educational materials. The research aimed to examine the perceptions of primigravidas and their husbands regarding pregnancy and MFA stimulation. Exploratory descriptive qualitative study method. Data were collected using in-depth interviews with 10 primigravidas and their husbands at the Community Health Center in Bantul, Yogyakarta, Indonesia, using an interview guide. Data analysis by condensing data, presenting data, and drawing conclusions, verbatim results of interviews are presented in coding, found categories, and themes. Four themes were produced: knowledge of pregnancy and fetal growth and development; concept of maternal-fetal attachment skills; management of pregnancy emotional management; and husband's support. The conclusion of this theme's findings underlies the development of maternal-fetal attachment educational materials in prenatal classes to prepare mothers for their role, and improve MFA and maternal-fetal health.

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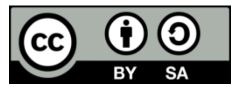

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1. INTRODUCTION

Reducing the infant mortality rate to 12 per 1,000 live births is the target of the global sustainable development goals policy, good health, and well-being. The infant mortality rate in Indonesia in 2021 will reach 19.5 per 1,000 live births, 35.2% of which are due to low birth weight (LBW) and small for gestational age (SGA) [1], [2]. Efforts to reduce infant mortality in Indonesia are stated in Minister of Health Regulation number 21 of 2021 with antenatal care at least six times. During the implementation of antenatal care, educational classes for pregnant women are carried out using maternal and child health book guidelines. The government’s pregnant women’s class program has contributed to reducing infant mortality but has not achieved the expected target [3], [4]. Based on the identification of guidelines in maternal and child health books, the educational material focuses more on physiological maternal-fetal health services. There are no educational services to foster a structured emotional maternal-fetal bonding and there are no guidelines for its

implementation. The problem of emotional changes during pregnancy has a negative impact on the health of pregnant women and fetuses, morbidity, and infant mortality. First pregnancy (primigravida) is the first experience in the process of adapting to hormonal changes, and physical changes that influence emotional changes [5], [6]. During your first pregnancy, you need to be prepared to play the role of being a mother because there is a higher risk of stress, anxiety, and even depression which can lead to less caring behavior towards the fetus, poor prenatal care which has an impact on fetal growth and development problems and LBW and SGA births [7], [8].

The results of a literature review of previous research show that good pregnancy care practices are determined by the action of stimulating the mother-baby bond/maternal-fetal attachment (MFA). The stronger the MFA influences pregnant women to better maintain the health of themselves and their fetus, resulting in the birth of a normal baby, the odds ratio is 0.91 [9]. A study of pregnant women in Iran found that stronger MFA was associated with better maternal and fetal health as a result of normal birth MFA ($p<0.01$ $r=0.23$) and healthy habits ($p<0.05$ $r=0.11$), the average weight of babies is 3052.38 grams [10]. The findings of the next study were that at low MFA mothers were more focused on meeting their own needs and did not carry out antenatal care in an orderly manner. Mothers are less concerned with the needs of the fetus, adequate nutrition, iron, and folic acid which are important for fetal growth. Pregnant women who have a habit of smoking or using alcohol do not stop during prenatal care. This has an effect on reducing the distribution of nutrients and oxygen to body tissue cells and distribution to the placenta for the fetus. The fetus is at risk of hypoxia, growth and development problems, and fetal distress. Poor fetal condition increases the risk of infant death [11].

Literature review regarding efforts to improve MFA in previous research, namely training or counseling for pregnant women. The results of the study show that providing training in counting fetal movements can increase sensitivity, sensibility and develop maternal-fetal intimacy, increase adaptation and MFA scores, mean standard deviation of the intervention group (7.63+3.85), control group (0.63+1, 61), $p<0.001$. The educational material provided includes personal hygiene, nutrition for pregnant women, signs of a risky pregnancy, delivery methods, lactation management, and baby care [12]. The limitations are that the subject focuses on pregnant women with a history of abortion only, the material provided is about maintaining pregnancy and preparation for childbirth according to standard guidelines, there is no MFA stimulation material, it does not involve the husband as a source of support, and it does not provide prenatal anxiety management. Another study on the effectiveness of MFA education on the quality of maternal mental health showed results that were not proven to be effective, $p=0.321$ [13]. Limitations in previous research were: the MFA material was limited to the concept of prenatal attachment, has not provided skills that can be used as a reference for acting on MFA stimulation, there was no role for the husband and there were no efforts to overcome anxiety, the duration of follow-up and evaluation was carried out in a relatively short time. In Indonesia, pregnant women's classes use maternal and child health book guidelines, but focus on guidelines for physical problems only, there are no guidelines for MFA stimulation education, both for pregnant women and husbands. The development of MFA stimulation education guidelines is needed through the identification of material development needs in pregnant women and their husbands, so that it can be used to improve MFA behavior, fetal well-being, and maternal and infant health.

Based on the findings of this study, there are important MFA education issues for pregnant women and their husbands in implementing MFA stimulation, but there are no guidelines for health workers to provide MFA stimulation education, so an MFA stimulation education package is needed. Depth of material is needed to formulate appropriate development, can be implemented, and has an impact on the strong emotional bond between mother and fetus as well as the health of mother and fetus. The perceptions of pregnant women and their husbands regarding knowledge and experience of pregnancy and MFA stimulation are important information in assessing the need for developing MFA stimulation educational materials. The research aims to examine the perceptions of pregnant women and their husbands regarding MFA to develop the depth of the MFA educational package material. Identification of the perceptions of pregnant women and their husbands was carried out using a qualitative in-depth interview study, the resulting keywords were analyzed in categories and themes. The themes obtained are used as a basis for developing MFA educational package materials which will be integrated into pregnant women's classes in routine educational programs according to government standards.

2. METHOD

The research uses a qualitative design, an exploratory descriptive approach, namely research to determine the phenomenon of the research object and the conclusions drawn are phenomena that occur in the research object [14]. The method uses in-depth interviews, with a population of pregnant women and husbands in 27 community health centers in Bantul, Yogyakarta, Indonesia. The sampling technique uses purposive sampling [15]. The inclusion criteria were women who were primigravida pregnant in the Community Health Center in Bantul, Yogyakarta, Indonesia, singleton pregnant, normal pregnancy, and willing to become

participants. Exclusion criteria were being able to communicate fluently and having no history of mental disorders. The number of samples was 10 participants, pregnant women and their husbands. The interview instrument is the researcher using an interview guide. In-depth interviews are carried out in a mutually agreed upon and conducive place. The in-depth interviews were recorded, and documented with the participants' consent. The recording results were made verbatim in a Microsoft Word document [16].

The data analysis stage refers to the opinions expressed by Miles and Huberman. Three stages in analyzing qualitative research data: i) data compression, ii) data presentation, and iii) conclusion drawing/verification. Researchers use data validity to confirm the truth of the research. Validity criteria consist of credibility, transferability, dependability, and confirmability [17]. Data compression includes condensing the meaning expressed by participants into shorter formulations and concise, to capture diverse participant perspectives and synthesize data to maintain diverse communicated experiences [6]. Data presentation is carried out by coding analysis, categorizing, and defining. Coding is done by formulating the transcript into words with the same meaning and is used to create a code. A re-check is carried out to ensure that all codes have been condensed properly. The similarities in the codes obtained were then formulated into appropriate categories, then grouped into themes. The results of the analysis are presented in tables/diagrams consisting of codes, categories, and themes. Drawing conclusions/verification was an iterative process of checking and adjusting transcripts, coding, categorization, and inference of themes.

The research was carried out after obtaining approval from the research ethics committee of Universitas Diponegoro with number: 42/EC/KEPK/FK-UNDIP/II/2023 and research permission from the Bantul Yogyakarta District Health Service, Indonesia with number: 070/01578. During the research, participants were given information about the research objectives and interview methods. Participants were also informed that at the time of the interview, documentation would be carried out with recordings and photos. Participant data is made anonymous, and verbatim, protocols and all documentation are archived for research purposes only. Participant consent was demonstrated by signing informed consent.

3. RESULTS AND DISCUSSION

3.1. Results

The participants of this study were 10 primigravida and their husbands who performed antenatal care at the community health center in Bantul Yogyakarta, Indonesia. The participants were pregnant women aged between 20-30 years and husbands aged between 21-37 years. Most of the pregnant women and husbands had a university education, namely 6 (60%) participants. There were 4 (40%) participants in the second trimester (12-28 weeks gestation) and 6 (60%) participants in the third trimester (28-40 weeks), the details are shown in Table 1. This study found four themes: knowledge of pregnancy and fetal growth and development, the concept of maternal-fetal attachment skills, emotional management during pregnancy, and husband support, see Table 2.

Table 1. Participant characteristics

Participants	Age (Years)		Gestational age	Education	
	Pregnant women	Husbands		Pregnant women	Husband
P1	25	24	37 weeks	Vocational school	Senior high school
P2	23	23	32 weeks	Vocational school	Vocational school
P3	22	29	37 weeks	Bachelor's degree	Senior high school
P4	24	26	26 weeks	Bachelor's degree	Bachelor's degree
P5	21	29	21 weeks	Vocational school	Vocational school
P6	30	29	32 weeks	Bachelor's degree	Bachelor's degree
P7	20	26	33 weeks	Senior high school	Bachelor's degree
P8	28	30	22 weeks	Bachelor's degree	Bachelor's degree
P9	25	27	23 weeks	Bachelor's degree	Bachelor's degree
P10	26	28	31 weeks	Bachelor's degree	Bachelor's degree

Description: P: Participants are pregnant women and their husbands

Table 2. Derivation of the maternal-fetal attachment perception themes

Keywords	Category	Sub-themes	Theme
Weight gain, enlarged stomach, stretch marks	Body changes	Physical changes	Knowledge of pregnancy and fetal growth and development
Tired, aches, back pain, feel tight, trouble sleeping	Physical complaints		
Appetite increased, frequent urination	Changes in adaptation patterns		
Mood swings, angry, irritable, cry, sad, sensitive, irritable, scare, happy	Mood changes	Emotional changes	
Afraid, anxious, worried, difficult to sleep	Worry		
The fetal weight increases, the fetus get bigger	Fetal growth	Fetal growth and development	
The fetus kicks, listens, responds	Fetal development		
Fetus can feel and hear from outside the mother's body so he kicks; the fetus responds by kicking	Understanding maternal-fetal attachment	Maternal-fetal attachment knowledge	The concept of maternal-fetal attachment skills
Increase the intelligence of the fetus's brain; understanding parents and fetus	Benefit		
Inviting to pray, listening *murrotal,* music, stroking the fetus	Interaction with the fetus	Maternal-fetal attachment skills	
Movement, active of the fetus, feel the same	Understanding fetal characteristics		
Improve to look after the baby, be a mother, caring the baby	Role acceptance		
Changing position, the fetus's organs, gender of the baby, complete of the body	Differentiation with the fetus		
Counting fetal movements, routine control, caring, pregnancy exercise, monitor fetal activity	Caring for pregnancy		
Cry easily, can't sleep, be quiet, irritability, offence	Response	Emotional changes	Emotional management during pregnancy
Listening to music, watching funny videos, watching movies, crying, being quiet, riding a motorbike, buy food, a walk alone	Distraction	Efforts to overcome emotion	
Take a deep breath, yoga	Exercise	Knowledge of relaxation techniques	
Praying, providing calm, listen to music	Reduce emotions		
Invites to pray and *tadarus* together	Spiritual approach	Affective	Husband's support
Kissing, strokes, chats with the baby	Expression of affection		
Informed to food restrictions, nutrition, vitamins	Nutrition	Pregnancy care	
Informed to yoga practice, gymnastics, accompany the morning walk	Activity		
Buying of the favorite food wife's, perfume, clothes, attention, helping his wife with chores	Concern	Appreciation /Reward	
More free time with my wife	Time		
Costs of pregnancy and childbirth care	Budget	Material	
Deliver, prepare transportation	Transportation		
Funds to fulfill nutrition, vitamins of pregnant women	Equipment		

3.1.1. Theme 1: Knowledge of pregnancy and fetal growth and development

The categories underlying the findings of this theme are as:

1) Physical changes in pregnancy

The information stated that there are changes in the body during pregnancy such as gaining fat, enlarged stomach, and breasts, and stretch marks, resulting in physical complaints of fatigue, back pain, shortness of breath, difficulty sleeping, frequent urination, and dizziness. Participant expressions are:

"Stomach gets bigger and weight gain" (P1, P10)

"...lots of acne" (P7)

"Blackened skin...stretch marks appear" (P2, P6)

"Aches easily..." (P3, P4, P7)

"Tired,... " (P3, P9)

"Back pain" (P9, P10)

"Sometimes my stomach hurts if I kick it hard" (P2)
"Pregnancy means you eat a lot...appetite increases" (P4, P6)

"Frequent urination" (P2)

"I have trouble sleeping because I often feel tight" (P1)

2) Emotional changes in pregnancy

The results of participant interviews produced keywords: mood swing, irritable, crying, sad, upset, offended, sensitive, afraid, anxious, worried, happy, happy, insomnia. The statements made by participants are:

"My emotions often have mood swings... my emotions are unstable; I get angry easily" (P6)

"I often cry easily, I'm sad and angry" (P7); "I get irritated easily, I'm easily sensitive..." (P4)

"Feeling scared, anxious, worried that the baby isn't moving enough, worried about what's wrong" (P2)

"Fear of not being able to have a normal delivery" (P3)

"Feel happy and happy to be pregnant, given it quickly" (P10)

"It's hard to sleep, I often stay up late at night, I'm sleepy during the day" (P9)

3) Fetal growth and development

The resulting keywords are: increase in size, increase in weight, kick, hear, and respond. The expressions conveyed by participants were as:

"The fetus gets bigger over time..."(P1)

"Every time you check, the estimated fetal weight increases..." (P8)

"Feeling the baby kick... makes me tickle" (P9)

"When you're sad, it's like feeling the baby... keeps kicking" (P3)

“The fetus seems to be able to listen me when I talk and responds by kicking” (P10)

3.1.2. Theme 2: The concept of maternal-fetal attachment skills

The categories underlying the findings of this theme are:

1) Maternal-fetal attachment knowledge

Understanding of MFA results from the keywords: inner bond, affection, caring, and benefits derived from the keywords: Maternal-fetal closeness, intelligence, stimulating fetal activity, and affection. Following are the participant's expressions:

– Understanding maternal-fetal attachment:

"If I feel sad and stressed, it seems like the fetus feels it too, it moves less" (P2)

"A bond that can foster mother-fetus love" (P10)

"The bond between mother and child and father" (P6)

"The fetus can feel and hear from outside the mother's body so it kicks" (P7)

"When asked to chat, he responded by moving/kicking" (P8)

– Benefits of maternal-fetal attachment:

"Maternal-fetal attachment can increase the intelligence of the fetus's brain" (P4)

"Understanding the situation of parents and the environment" (P7)

2) Maternal-fetal attachment skills

This sub-theme is based on the categories: interaction with the fetus, understanding the characteristics of the fetus, accepting the role, differentiation with the fetus, and caring for the pregnancy. Keywords in generating categories are generated from participant expressions as:

- Differentiation with the fetus:

  "The fetus is tickled to move, perhaps changing position" (P8)

  "During the ultrasound, the fetus's organs, head, hands, and heartbeat were visible" (P4)

  "Imagining the gender of the baby" (P6)

  "Sometimes I think whether the body parts are complete or not." (P7)

- Understanding fetal characteristics:

  "Movement is a sign of a healthy fetus, an active baby means it is healthy" (P4, P5)

  "I feel the same as my fetus..." (P1)

- Interaction with the fetus:

  "Inviting him to recite the Koran, listening to murrotal" (P10)

  "Listen to music" (P7, P9)

  "Inviting to chat/talk while stroking the fetus." (P10)

- Role acceptance:

  "There are things I have to improve to look after the baby" (P3)

  "Preparing yourself to be a mother, in caring for your baby well." (P4)

- Caring for pregnancy:

  "Counting fetal movements" (P1, P4)

  "Routine control..." (P2)

  "Always take care of your health, eat regularly to maintain the health of the fetus" (P5)

  "Want to take part in pregnancy exercises, exercise...to prepare for childbirth" (P8)

  "How to monitor fetal activity" (P9)

3.1.3. Theme 3: Emotional management during pregnancy

The theme is built from two sub-themes, namely emotional changes, which are indicated by the keywords: Irritability, sadness, annoyance, worry, mood swings, and crying. The second sub-theme, dealing with emotions is done by diverting attention by listening to music, watching funny videos, crying, being silent, and riding a motorbike. The expressions conveyed by participants in each sub-theme are as:

1) Emotional changes:

   "I often cry easily, especially when I'm alone and fall asleep" (P9)

   "Can't sleep, often stays up late because I have trouble sleeping" (P1)

   "Just be quiet ..." (P6)

2) Efforts to overcome emotions:

   "Listening to music, watching funny videos on TikTok, watching movies" (P1)

   "Calm yourself by riding a motorbike" (P7)

   "Go out to buy food, go for a walk alone" (P4)

3) Knowledge of relaxation techniques:

"Breathing in through the nose and exhaling through the mouth" (P2)

"Yoga exercise…" (P3)

"Techniques to reduce emotions, such as listening to music, reciting the Koran, praying, providing calm" (P9)

"Exercise in the morning if someone accompanies you" (P10)

"You can do pregnancy exercises, if you have time..." (P10)

3.1.4. Theme 4: Husband's support

Material about husband's support was extracted from interviews involving pregnant women and husbands separately. The expressions conveyed by pregnant women participants were as:

1) Affective:

"My husband invites us to pray together" (P2, P3)

"My husband often kisses me, every time I relax or go to sleep" (P1)

"Husband strokes, kisses the stomach and chats with the baby." (P9)

2) Maintaining pregnancy:

"...avoid being near people who smoke" (P3)

"...food to avoid...don't do strenuous activities" (P5)

"...information about eating lots of vegetables and fruit" (P6)

"...don't eat food that is burnt, still raw and cracked" (P8)

"...avoid heavy work, do lots of yoga, pregnancy exercise, accompany the walk in the morning." (P10)

3) Appreciation:

"More protective, pampers me, helps with work" (P6)

"Bought your favorite food...parfum, clothes…" (P5, P8)

"More free time with my wife…" (P6)

"Helping my wife with chores…" (P9)

4) Material:

"Pregnancy financing, childbirth preparation..." (P2, P5)

"Transportation to deliver the birth has been prepared" (P7)

"...take your wife, but if you can't prepare a motorbike taxi" (P9)

"Preparing funds to fulfil the nutrition, vitamins of a pregnant wife" (P9, P10)

3.2. Discussion

3.2.1. Knowledge of pregnancy and fetal growth and development

Pregnant women's perceptions about pregnancy and fetal growth and development can influence adaptation in dealing with physical, emotional, and social changes during pregnancy. Pregnancy is a process of fetal growth and development. The first pregnancy is a new experience for pregnant women and their husbands. It can be a pleasant and happy experience, but it can also cause discomfort that triggers emotional

problems [6]. Physical changes in pregnant women such as changes in body shape, becoming fat, and enlarged breasts. These changes trigger physical complaints such as back pain, fatigue, and difficulty sleeping, thus affecting daily activities. Emotional changes also occur due to physical changes and hormonal changes in pregnancy [18]. The results of previous studies indicate that the physical and emotional changes of pregnancy are a strong stressor that causes anxiety, stress, and depression [19]. Knowledge about fetal growth and development also influences emotional problems during pregnancy. Pregnant women who know the development of the fetus, are able to adapt to the physical and emotional changes of pregnancy, which will influence the response of care and affection for the fetus, feelings of happiness, and the desire to stimulate fetal development, care for the pregnancy so that the fetus grows healthily until birth. Studies show that pregnant women who pay attention to the development of their fetus and stimulate fetal development behavior such as stroking the fetus or inviting the fetus to talk will be better, thus increasing the bond between the fetus and mother and better care during pregnancy [20]. Knowledge of pregnant women in fetal care is influenced by the level of education, with higher education, access to information and knowledge in pregnancy care will be better and have a positive impact on MFA behavior. Research shows that the higher the level of education, the better the level of knowledge and understanding of the individual [1], [21].

3.2.2. The concept of maternal-fetal attachment skills

The expressions conveyed by pregnant women state the level of understanding and behavioral activities of MFA that have been carried out. This perception and knowledge of MFA underlie the need for education about the stimulation of maternal-fetal bonding, including the knowledge, benefits, and skills of MFA that need to be carried out every day on a regular basis. The affectionate relationship between mother and fetus is a fundamental relationship that can influence the well-being of the fetus and predict the health status of the mother and baby after birth [20]. Therefore, it is important to pay more attention to the predictive factors that promote MFA. At 20 weeks of gestation, the mother can feel the development of the fetus, especially from its kicks which affects concern for the fetus [22]. Recognition of the mother's identity, attachment to the fetus, and interaction with the fetus are active, cumulative processes during pregnancy which are key elements in adaptation to the role of the mother (maternal role attainment) according to Rubin's theory [23]. Maternal-fetal attachment will strengthen pregnancy care practices and behaviors [23], [24]. Adherence of pregnant women to a healthy diet, regular rest and sleep, regular exercise during pregnancy, staying away from abstinence such as smoking, drugs, and involvement in pregnant women classes. The practice of MFA can also influence the development of the fetal brain and autonomic nervous system which triggers cognitive, emotional, and social development so that the fetus can feel and respond to stimulation provided by the mother and the environment [25]. The research results show that the quality of MFA is the basis for the mother-infant relationship after birth. Mothers who demonstrated more intense MFA behavior showed more involvement in mother-infant interactions around 12 weeks postnatal. Mothers who experience MFA disorders show a decreased ability to understand and interpret the baby's signals and respond inappropriately to the baby's needs [11], [26]. Babies born with a history of good MFA, and good mother-baby bonding after birth, produce healthy babies, and more optimal cognitive, mental, and social development of the baby. Maternal-fetal attachment is associated with factors such as age, gravida status, planned pregnancy, and participation in pregnancy classes. and family support [27]. This underlies the importance of embedding MFA education in pregnant women's classes to improve MFA behavior.

3.2.3. Management of pregnancy emotional management

In pregnancy, there is an increase in the hormone estrogen nine times and progesterone twenty times compared to non-pregnancy. Hormonal changes cause emotions during pregnancy to change, easily feeling sad, offended, angry or otherwise feeling very happy. In pregnant women, the heavier the burden of the womb and the greater the number of physical discomforts, the psychological condition becomes disturbed. Signs of pregnant women with emotional problems include frequent worry, unstable emotions, difficulty concentrating or getting dizzy easily [26], [28]. This emotional change was expressed by all participants. The research results also prove that physical changes cause body image disturbances and fear of giving birth causes increased anxiety which influences a decrease in pregnant women's ability to adapt to pregnancy. Anxiety in pregnant women can interfere with positive affective experiences and cognition in the fetus resulting in low MFA [29].

This research participant's understanding and practice of relaxation techniques in an effort to obtain physical and emotional comfort is relatively limited. Relaxation exercises are important for pregnant women because they can reduce tension in the muscles, involve voluntary contraction and relaxation of muscles throughout the body [30]. Relaxation is useful for reducing muscle tension, making you more comfortable and relaxed, so that the circulation of oxygen and nutrients throughout the body and fetus is optimal [31]. Previous findings prove that relaxation interventions for pregnant women improve sleep quality compared to those who were not taught relaxation techniques ($p<0.05$) [32]. This proves that relaxation reduces emotional tension and increases comfort, so it is important to practice during pregnancy.

3.2.4. Husband's support

Husband's support is an important factor influencing the safety and comfort of pregnant women. The husband is the closest source of support emotionally, able to provide calm, safety and comfort to pregnant women which affects the fetus, stimulates optimal growth and development [26], [28], [33]. Participants who were pregnant women and their husbands expressed the support provided by their husbands, but limited to meeting the needs of the pregnancy, accompanying them on walks, taking check-ups but waiting outside. Concern for the fetus is expressed through kissing, stroking, and talking to the fetus on a regular basis. Pregnant women and their husbands need to understand the importance of their husband's support for pregnant women and their fetuses. Social support, especially from husbands, can reduce the intensity of stress related to pregnancy, thereby increasing women's energy to invest in their emotional well-being and build and improve MFA. Attachment experiences obtained before pregnancy stimulate the activation of internal working models and are manifested by emotional and behavioral responses to pregnancy [33]. Previous findings regarding social support show that increasing social support, especially husband's, is significantly correlated with higher MFA scores (p=0.001) [27].

4. CONCLUSION

The qualitative study of primigravidas and husband's perceptions of maternal-fetal attachment stimulation resulted in four themes. First, knowledge of pregnancy and fetal growth and development, with sub-themes: physical changes, emotional changes, and fetal development. Second, the concept of maternal-fetal attachment skills, with sub-themes: knowledge of MFA and MFA skills. Third, management of pregnancy emotions, with sub-themes: emotional changes, coping with emotions, and knowledge of relaxation techniques. Fourth, husband's support, with sub-themes: affective support, pregnancy care, appreciation/rewards, and material. The findings of this theme underlie the need for educational development for pregnant women and their husbands in prenatal classes to prepare for the role of mother, and improve MFA and maternal and fetal health. These findings are relevant to the theory of Maternal Role Attainment (Becoming a mother) that to achieve the role of mother process is needed, and one of the achievements is the establishment of an interaction relationship between mother-fetal and MFA.

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