



PERCEPTIONS OF PREGNANT MOTHERS IN STIMULATING THE FETUS

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ABSTRACT

Fetal stimulation is an attempt made by parents to stimulate the fetus to increase its fundamental abilities so that it can grow and develop properly after birth. Fetal stimulation is in keeping with the government's First 1000 Days of Life program, which states that from the time the baby is formed in the womb until the kid is 2 (two) years old, there is an accelerated phase of growth and development. This study aimed to ascertain pregnant women's perceptions of stimulating the fetus. As there are still many pregnant women who don't know how to properly stimulate the fetus, this type of research is still uncommon but highly intriguing to examine. A qualitative research method with a phenomenological perspective was employed in this study. 15 pregnant ladies were interviewed in-depth and their conversations were recorded on audio files. employing a system of purposeful sampling to find informants. This study's analysis was conducted using NVivo 12 Plus. The study's findings focused on two themes: how to comprehend fetal stimulation and how gestational age affects fetal stimulation. The mother's comprehension of and gestational age in stimulating the fetus affects the mother's impression of stimulating the fetus. For pregnant women's perceptions of fetus stimulation, the majority of moms already know how to stimulate the fetus, notably through caressing, conversing, reading the Qur'an, and listening to murottal and music. However, there are still women who are unaware of fetal stimulation. The sort of fetal stimulation was administered by pregnant women at the same time in this study, thus it was not committed to specific forms of stimulation.

Keywords: fetus; knowledge; perception; stimulation

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INTRODUCTION

Fetal stimulation is an attempt made by parents to stimulate the fetus to increase its fundamental abilities so that it can grow and develop properly after birth. Fetal stimulation is consistent with the government's First 1000 Days of Life (HPK) program, which states that

the time of accelerated growth and development begins with the fetus' creation in the womb and lasts until the child is two years old (Maisuri, 2016). Pregnant women who are in excellent physical, mental, spiritual, and social health are those who stimulate the baby in the womb. This helps each individual live more effectively, both socially and economically. The stimulation of the fetus to develop into an intellectual generation is one factor that moms must take into account to ensure that their child's growth and development are ideal. Young children's intellect (IQ) is impacted by stimulating stimuli in addition to inheritance. From 8–14 weeks of gestation, the brain has been developing as an organ that is crucial in determining a child's intellect. Therefore, it is highly advised that pregnant women keep a healthy pregnancy. One illustration is through consuming a nutritious, well-balanced meal and stimulating the fetus (Soedjatmiko, 2012).

One of the most important external factors in shaping children's IQ is early stimulation. Intelligence can be identified early because a youngster can exhibit specific characteristics. Memory sharpness can be used to train children's intellect. Exercises to improve young children's memory should begin when they are still in the womb. During the pregnancy, the fetus will absorb all forms of exercise provided by the mother, which will affect the development of her brain in the future (Sasongko, 2010). The process of prenatal stimulation begins with the stimulation of the fetus (the meeting of sperm and the ovum). This process develops until the child is born into the world which takes approximately 9 months and 10 days (Mansur, 2014).

Fetal stimulation is essential for pregnant mothers to stimulate brain growth. Furthermore, according to Dr. Rene Van de Carr's mission, the purpose of prenatal stimulation is to assist parents and family members in providing a better environment for babies, providing opportunities for early learning, and encouraging the development of positive parent-child relationships that can last a lifetime. Stimulation has a significant impact on the growth and development of children, whether they are still in the womb or later in life (Carrdan Lehrer, 1999). Fetal stimulation can be accomplished by praying frequently, reading the holy words of the Qur'an, fostering dialogue of the fetus in the womb, and preserving the mother's behavior during pregnancy and pregnancy (Nurbaity, 2015).

Fetal stimulation is the initial stage in developing a relationship between mother and fetus during pregnancy, which can lead to an affectionate bond throughout a person's life. The creation of an affectionate link between mother and kid has numerous advantages in one's life. The benefits are not only for moms, but they can also improve children's cognitive, emotional, and social lives (Ghodrati and Akbarzadeh, 2018). Fetal stimulation is still performed extremely rarely by pregnant women, owing to a lack of information among pregnant women regarding prenatal stimulation. This prenatal stimulation is an excellent starting point for influencing the creation of an intimate attachment between mother and fetus. This is because if the mother has an unstable condition or is stressed, challenges will arise during implementation. The transition from a woman to a mother occurs throughout pregnancy and the first few days after the baby is born. This is referred to as a vulnerable stage, which is usually accompanied by stress. If the mother is stressed during this time, it will impede the adjustment process in caring for the infant and will also impact the mother's parenting style (Mazzeschi et al, 2015). The purpose of this study was to determine the perception of pregnant women in stimulating the fetus during pregnancy.

METHOD

This study used a qualitative study with a phenomenological approach. In-depth interviews were used to interview 15 pregnant women which were recorded through audio records. Recruitment of informants was performed based on a purposive sampling strategy. The analysis in this study was carried out by using NVivo 12 plus.

RESULTS

This study's informants were 15 pregnant women, coded IF1-IF15. The informants range in age from 20 to 37 years. The gestational age of the informants varied, with 3 (three) having gestational ages of 36 weeks (IF10, IF13, IF15), 1 (one) having a gestational age of 36 weeks 3 days (IF12), and 2 (two) having a gestational age of 36 weeks 4 days. Furthermore, informants with a gestational age of 37 weeks were 2 (two) informants (IF4, IF5), informants with a gestational age of 37 weeks 5 days were 1 (one) informant (IF11), and informants with a gestational age of 38 weeks were 3 informants (IF2, IF8, IF9) 1 (one) informant (IF1), and informants with a gestational age of 39 weeks were 2 (two) informants (IF1) (IF6, IF7). The informants' latest education also varied, with 3 (three) informants having completed S-1 (IF6, IF8, IF14), 2 (two) informants having completed high school (IF1, IF10), 6 (six) informants having completed SMK or Vocational High School (IF2, IF7, IF9, IF11, IF13, IF15), and 4 (four) informants having completed SMP or Junior High School (IF3, IF4, IF5, IF12).

Meanwhile, the parity of the informants also varied, 6 (six) informants GI P0 A0, 2 (two) informants GII P0 A1 (IF6, IF9), 4 (four) informants GII PI A0 (IF1, IF3, IF4, IF15), 3 (three) informants GIII PII A0 (IF5, IF10, IF13). The majority of informants are housewives (IRT), with as many as 10 (IF1, IF2, IF3, IF4, IF5, IF7, IF9, IF11, IF12, IF13), nurses (IF6, IF14) as many as 2 informants, private employees (IF8, IF10) as many as 2 informants, and 1 factory worker (IF8, IF10) (IF15). Research on the perception of pregnant women in doing stimulation resulted in sub-themes, namely: "*understanding stimulation*" and "*age of pregnancy for stimulation*". Figure 1 below shows the themes and sub-themes about perceptions of stimulation.

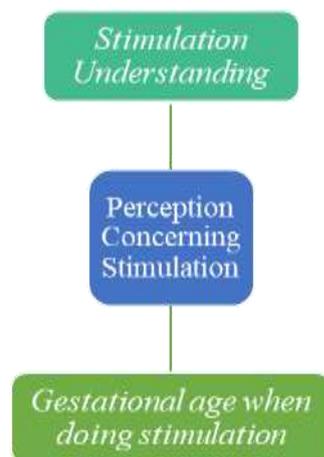


Figure 1. Themes and Sub-themes Perception of Stimulation

Understanding of Fetal Stimulation

The sub-theme "*understanding stimulation*" describes how pregnant women understand stimulating the fetus, the majority of mothers' understanding in this study is conveyed by informants 1, 6, and 10.

"Just talk to him. From my previous pregnancy, I would talk to the child in my womb, as if I hoped he would be a good child. I also stroked it and recited some suras in the Qur'an

because Islam also recommends it. I also play some music so that he can listen to it, though, in this pregnancy, I don't have time to do so." (IF1)

Communication, caressing, reading the Qur'an, and listening to music are all examples of fetal stimulation, according to IF1. However, according to the findings of this interview, IF1 did not specify which suras of the Qur'an were read or what music was played.

"Because in my previous pregnancy, my fetus didn't move, so I was traumatized. What I do if my fetus does not move, then I stroke him. If there's no movement, I'll drink something sweet, sis. I will rub it until my fetus moves. I chatted with him and listened to murottal and classical music." (IF6)

According to IF6, stimulation to the fetus includes touching, communicating, listening to murottal, and playing classical music. IF6 also states that stroking the fetus would result in reflexes in the form of movement, however, communication stimulation, murottal listening, and music playing are not discussed in depth.

"Frequent communication (I invite him to communicate such as asking him to pray, come with me to work, and others). Every afternoon I read to my fetus the Koran. Sometimes I listen to murottal too. I prefer to read the Koran myself. Al-Mulk, I read it in Trimester. I read Surah Yusuf in the second trimester and Surah Maryam in the third trimester. Surah Mulk is beneficial in terms of moral development. As a result, I attempt to read this surah frequently so that my baby's morals are instilled from an early age, namely from the womb. In terms of Surah Yusuf, I pray for the Prophet Yusuf's strength for my child. For Surah Maryam, this is to facilitate childbirth (IF10)

According to IF10, stimulation to the fetus takes the form of conversation, reading the Koran, and listening to murottal. IF10 always communicates with the fetus in daily activities, regardless of what is done. Similarly, reading the Qur'an every day is reading the Qur'an, and the surah that is read in the first trimester is Surah Al-Mulk so that morals are nurtured from an early age, and the surah that is read in the second trimester is Surah Yusuf so that when the fetus is born, his strength is like that of the Prophet Yusuf. and the third trimester of Surah Maryam to make the birth uncomplicated and pleasant.

Some informants believe that fetal stimulation is just conversation and stroking, as stated by IF3 and IF13.

"Talk to the fetus. I also stroked it and what else yes, hmmm that's all I think. As for other stimulation, there seems to be none." (IF3)

"Rubbing the fetus and talking to her. There is no other stimulation I think. That's all. Because I don't know much either. What I did was just what I could and my previous pregnancy was like that too." (IF13)

Stroking and communicating are done IF3 and IF13 not every day and are done according to what the mother knows. However, there is also an informant who does not know that stroking and communicating are forms of stimulation as conveyed by IF7:

"I don't know it (laughing) (researcher directs) o, I just noticed that when I stroke the fetus inside my womb, it's called stimulation. I stroke and talk to the fetus too. But sorry, I didn't know that it is called stimulation." (IF7)

Gestational Age for Stimulation

The sub-theme "Age of Pregnancy for Stimulation" describes the extent to which mothers know to do stimulation at *their* gestational age. The majority of mothers do stimulation at 4 months of gestation (16 weeks) because at that age the baby has already given reflexes in the form of movements as conveyed by informants 2, 5, 8, 9, 15.

"When 3 or 4 months, I have started to do stimulation, stroking and listening to murottal ". (IF2)

"From 4 months pregnancy, because at 4 months the baby can hear. If we caress, he can feel it too, Ms. (IF5)

"For myself, when I was 4 months old and above, because of that, I already felt the movement of the fetus starting, so if I stroked it and talked to him, he had reflexes." (IF8)

"Three or four months." Because I've had a miscarriage, I need to be extra cautious with this pregnancy. When the fetus is 4 months or older and I am caressing and talking, there are movements from the fetus." (IF9)

"In 4 months I have started to stimulate, because, at 4 months, the fetus has started to move". (IF15).

DISCUSSION

Prenatal stimulation is an effort or action undertaken to boost the capabilities of the fetus for it to grow and develop properly. Stimulation can stimulate the sensory system, namely the senses of hearing, sight, touch, smell, and taste. Furthermore, it can increase gross mobility, smooth movement of the feet, hands, and fingers, as well as communication and pleasant sensations for the fetus (Ministry of Health RI, 2010). The fetus is stimulated by touching, conversing, reciting the Qur'an, listening to murottal, and playing music. The findings of this study are consistent with the findings of (Maeda, K., & M, T, 2017) that voice stimulation through communication is a type of prenatal stimulation. When the mother communicates, the fetus will be able to hear the mother's voice, allowing the fetus to hear the vocabulary spoken by the mother. Furthermore, connecting with the fetus is critical for pregnant women since the fetus will gradually identify with the mother through dialogue. The intimate link between mother and fetus can be created deeper through communication that begins as early as the infant is in the womb (Amalia, 2011). Communicating with the fetus will give the mother the impression that the fetus is already present in her daily life, making it easier for the mother to adjust to her new role after the baby is born (Azmira, 2013).

Reading the Qur'an and listening to murottal are two of the most effective sources of sound stimulation for the fetus. In contrast to other languages, Arabic contains long and short rules for pronunciation, resulting in a highly beautiful cadence. The rhythm of the Qur'an can encourage brain cell development while avoiding cell death (Azmira, 2013). Al-Qur'an is a way of life that is full of significance and the finest life lessons for mankind. Moral teaching for the fetus is the meaning of the Qur'an. The mother has shaped the IQ and EQ of the fetus by providing stimulation in the form of reading the Qur'an. Another advantage that women might get from this stimulation is that their children will find it easier to remember the Qur'an because they are accustomed to reading from an early age, specifically while the fetus is in the womb.

Islam teaches the need to provide stimulation to the fetus in QS. al-A'raf: 172, as follows: *"And [mention] when your Lord took from the children of Adam - from their loins - their descendants and made them testify of themselves, [saying to them], "Am I not your Lord?" They said, "Yes, we have testified." [This] - lest you should say on the day of Resurrection, "Indeed, we were of this unaware." (QS. alA'raf: 172).*

According to previous research, specifically, the research of Al-Qadhi in 1984 in his book Nurhidayah (2010), which was conducted at the Florida Clinic in the United States, someone who reads the Qur'an verses can feel major physiological changes, a decrease in depression, sadness, and more peace of mind that can be felt by people who have become the object of research. The Qur'an has a 97% effect in producing peace of mind and sickness healing. Other research findings indicate that the Koran may greatly lower the degree of worry in pregnant women so that in addition to stimulating the fetus, it can also bring calm to pregnant women who read aloud or listen to audio (Hamidiyanti et al, 2019). Other studies have found that listening to the murottal Surah Ar-Rahman can help pregnant women cope with the stress of childbirth. This therapy may also improve cortisol levels and shorten labor time (Irmawati et al, 2020).

Music is sometimes used to stimulate fetal development. Musical stimulation, particularly classical music, can begin when the fetus is four months old since the fetus is in the process of generating brain cells at that age and is considered to be able to respond to sound at that age. Classical music stimulation should be done every day for at least half an hour or 30 minutes. The learning process in the fetus in the womb is thought to take place through neurotransmitters in the mother's blood (Musbikin, 2009).

According to Dr. Van De Carr's research, the embryo in the womb can respond to the rhythm of the music that penetrates its surroundings. The fetal heart rate, which sounds more regular when classical music is performed, demonstrates this. Music stimulates the brain, particularly in the sphere of language. Fetuses who are exposed to music develop quicker in terms of releasing words, comprehending language, and demonstrating cognitive maturity (Azmira, 2013). Another study found that prenatal music intervention might be a valuable and effective technique for lowering anxiety in term pregnant women and improving the labor process in nulliparous women by shortening the first stage of labor (Garzia, et al, 2017).

According to research conducted by The Prenatal Enrichment Unit at Huachiew General Hospital Bangkok (in Van de Carr and Lehrer, 2001), infants who receive prenatal stimulation can speak quickly, imitate sounds, say the first word, spontaneously smile, turn their heads towards their parents' voices, are more responsive to music, and develop better social patterns as they mature. This qualitative study also discovered that several respondents were unaware that caressing and conversing were kinds of prenatal stimulation. The qualities of schooling have a significant impact on the stimulation of the fetus. The results revealed that the informants' average education was SMA/SMK; the more a person's education, the better the mother's understanding of stimulating the fetus. Mothers must be knowledgeable about child development and how to stimulate their children's growth. Knowledge has a significant impact on child development because well-informed women are more concerned with their children's growth. However, if the mother does not pay attention to the kid's growth and does not offer stimulation for it, the infant may face developmental delays (Suherman, 2003).

Furthermore, parity affects stimulating the fetus; primiparous moms are not experienced in providing stimulation, therefore stimulation is not delivered to the fetus to the greatest extent possible; one's experience influences one's conduct (Anwar, 2013). Previous stimulation of children will influence the mother's behavior while stimulating the fetus during this pregnancy. A mother's experience shapes her conduct, and behavior is the consequence of all types of experiences and human interactions with the environment that appear as knowledge, attitudes, and behaviors. Behavior is defined as an individual's

response/reaction to external or internal stimuli (Notoatmodjo, 2010). This qualitative investigation discovered the gestational age of pregnant women who stimulate the fetus in addition to comprehending the stimulation of the fetus. Fetal stimulation during 4 months of gestation (16 weeks). According to the notion, the fetus will begin to hear via the conduction of waves through the amniotic fluid during the 16th week of pregnancy. The mother's voice is the baby's favorite. The sound of the mother's heartbeat and digestive system is likewise known to the fetus. The fetus possesses sensors that detect the source of the sound, which is a wave. These waves are captured by the eardrum through air conduction, but the fetal ear is filled with amniotic fluid so that it hears sound through vibrations in the cranium.

As a result, the fetus prefers the mother's voice. When the sense of hearing detects sound, it converts it into impulses or stimuli that are sent to the brain via nerve cells. Synapses connect one nerve cell to another nerve cell to form a network. The brain will then evaluate and store the sound's qualities. The fetus cannot grasp the mother's language at first, but with consistent stimulation, the fetus will be able to understand it (Azmira, 2013). According to the theory, fetal nerve cells (neurons) have been produced since the fetus's age of 3-4 months in the womb. After birth, the number of neurons continues to grow to billions until the baby is three years old. However, these nerve cells cannot operate on their own and must be linked together to create a synapse (the connection between neurons). External stimulation determines the synapse's quality. The stimulation in issue is applied not only to newborns but also to fetuses while they are still in the womb, to make the child's brain circuit denser (Wardani, 2008). Overall, there are maternal difficulties in stimulating the fetus, according to Nuraina et al, 2021 research, the challenges for pregnant women in conducting stimulation include time and the mother's expertise. Due to a lack of time and understanding, the mother does not provide adequate stimulation to the fetus throughout pregnancy (Nuraina et al, 2021).

CONCLUSION

For pregnant women's perceptions of fetus stimulation, the majority of moms already know how to stimulate the fetus, notably through caressing, conversing, reading the Qur'an, and listening to murottal and music. However, there are still women who are unaware of fetal stimulation. The sort of fetal stimulation was administered by pregnant women at the same time in this study, thus it was not committed to specific forms of stimulation

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