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THE FEAR OF LABOR AND THE ROLES OF MIDWIVES

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Abstract

Pregnancy is a period in which women experience bio psychosocial changes and adapt to these changes. Women are prepared for labor and parenting. Despite the developments in health care services, many women are afraid of these processes even though the pregnancy, labor, and postnatal processes now result in relatively few complications. It is quite difficult to accurately define the fear of labor. One of the main factors of the fear of labor is the fear of unknown. Women may experience fear of labor, a process that is unpredictable, especially in pregnancy. Besides, the definition of the fear of pregnancy varies according to each woman who experience fear. Also,

superstitious beliefs, the level of civilization of the society, and culture are the most important factors that affect women's idea of pain, causing anxiety and fear of labor to be expressed differently. It is impossible to get rid of the fear of labor completely. An acceptable level of fear can help a woman prepare for her labor. However, the level of fear needs to remain at the optimal limits. For this, the woman has to learn to cope with the fear of labor. Midwives are the most important supporters in labor, and they also need to have sufficient knowledge and skills in this regard. With this paper, the frequency of fear of labor, the causes, the effect of this fear on hormonal balance and results, active communication with women who fail to cope with fear of labor, and about roles of midwives responsible for pre-pregnancy, pregnancy, labor and postnatal services have been compiled based on relevant literature and updated.

Keywords

Fear, Labor, Midwife, Roles

1. Introduction

Fear is identified as an emotional response to a real or an anticipated danger and an intense pain. However, fear is also experienced in many cases where the results are unknown. As labor is a process whose result is not foreseen accurately and that includes uncertainties, a lot of women experience the fear of labor.

The definition of fear of labor is different for every woman who expresses the fear during her pregnancy. In almost all cultures, labor can be related to losing control, pain, and death. As women's expectations are shaped by prior experiences and social learning, the fear of labor with women in different cultures can be at different levels.

When the fear of labor is particularly severe, it negatively affects the process of labor and thus can lead to the development of both maternal and neonatal complications.

The health care providers and midwives, in particular, take an important role in minimizing the fear of labor and providing a healthy and happy process of labor to mother-infant and minimizing the complications that may arise due to the fear. It is important that midwives who have the responsibility for the period of pre-pregnancy, pregnancy, labor, and postnatal services

recognize the reasons for the fear of labor, symptoms, and consequences, intervene in the situation, and take the necessary precautions.

1.1 The Fear of Labor

Pregnancy is a period in which biopsychosocial changes are experienced, and the woman prepares for the labor and parenting by adapting those changes. In parallel with the developments in health care services, although pregnancy, labor, and postnatal processes have recently resulted in relatively fewer complications, a lot of women experience the fear concerning these processes (Adams, Eberhard-Gran & Eskild, 2012; Kilicarslan, 2008; Sercekus, 2011).

There is not a commonly accepted definition for the fear of labor although it is a common clinical problem. The definition differs depending on the women who experience the fear during their pregnancy. Besides, superstitious beliefs, the level of civilization of the society, and culture are the most important factors affecting pain in women, causing the anxiety and fear of labor to be expressed differently (Hofberg and Brockington, 2000). The related studies in the field showed that nearly 20% of the women were identified to experience the fear of labor. It is stated that an acceptable level of fear can help women prepare for the labor. However, if the fear occurs before pregnancy or reaches to a severe level, it is called "tokophobia." The term tokophobia was coined by Hofberg and Brockington. Hofberg and Brockington defined tokophobia as a certain kind of anxiety that is pregnancy-specific and the fear of death during labor. Tokophobia in the recent literature is considered to be a pathological fear of labor. It is categorized into three groups as primary, secondary, and prenatal depression symptoms (Hofberg and Brockington, 2000).

1.1.1 Primary Tokophobia

Primary Tokophobia is the fear that occurs in pre-pregnancy. It can occur at the adolescence and early adulthood, and the woman may avoid pregnancy due to the fear of labor. The pregnant woman who has primary tokophobia may terminate the pregnancy or demand elective cesarean from her doctor due to the fear of labor although she wants the infant (Hofberg and Brockington, 2000).

1.1.2 Secondary Tokophobia

Secondary tokophobia, unlike primary tokophobia, develops after the secondary traumatic obstetric event. "Traumatic delivery" is the most typical example of this traumatic obstetric event.

However, vaginal delivery can sometimes be traumatic in the period following abortion, dead fetus or termination of pregnancy (Hofberg and Brockington, 2000).

1.1.3 Tokophobia as Prenatal depression symptom

The depression in prenatal period can rarely manifest itself with tokophobia. Though rarely takes place, some women may exhibit intense phobia and birth avoidance as the symptoms of depression in the prenatal period. In such cases, a woman constantly thinks that she will fail in delivery, or she will die even if she delivers the infant (Hofberg and Brockington, 2000).

1.2 Physiology of Fear of Labor

One of the important brain regions in the formation of fear is the "prefrontal cortex". Prefrontal cortex evaluates the state of the danger before the fear occurs. The prefrontal cortex also plays an important role in unlearned fear behavior. Another factor that plays a role in the process of fear is the hypothalamus. Hypothalamus forms a response to fear in the body by releasing some hormones for the fear signals received. The fear of labor is also effective during the labor and enables important structures in the head to become active. While these fear signals that occur during the labor cause the secretion of certain hormones in mother's body, they can also reduce or prevent the secretion of certain hormones that are required during labor (Fenwick et al, 2009).

1.3 The Impact of Fear of Labor on Hormones in Labor

The power to give birth is an intrinsic ability given to women. The instinctive power given to women enables them to give birth spontaneously and smoothly. The hormonal activity in labor is also considerably important for a smooth and spontaneous birth.

There are four major hormones that are effective during labor. These include a high level of love hormone 'oxytocin', hormones of happiness 'endorphins' and 'norepinephrine,' and prolactin, which increases maternal sensitivity, during the labor pain and labor (Fenwick et al, 2009; Handelzalts et al, 2012).

1.3.1 Oxytocin

Oxytocin produced in hypothalamus is secreted from the posterior lobe of pituitary gland, which is the main gland. Oxytocin is secreted from hypophysis by the stimuli from hypothalamus. Therefore, the stimuli from hypothalamus can suppress the secretion of oxytocin. Any stressor may cause reduced oxytocin secretion. Oxytocin is the most known of the hormones in labor. Oxytocin,

the love hormone, is secreted during sex and male and female orgasms, during labor and during breastfeeding (Uzun & Sulu, 2002).

During pregnancy and labor, oxytocin is secreted from both the mother and fetus. Therefore, the progress of pregnancy, and therefore the fetus development, is related to the level of oxytocin. Studies have shown that the oxytocin secreted by the mother during labor affects the brain of the fetus by passing to the placenta. The oxytocin that affects the brain reduces the oxygen need in the brain minimizing the possible damage to the brain of the fetus during labor. During breastfeeding, oxytocin stimulates the reflex of breast milk secretion. The breast milk continues to be pumped by means of infant's suction and stimulation of the nipples through the suction. The oxytocin that is secreted as breastfeeding continues helps the mother have a healthy diet and relax (Uzun & Sulu, 2002).

1.3.2 Beta Endorphins

Endorphins, the natural narcotics (opiates), have similar features with such narcotics as pethidine, morphine, and heroin. Beta-endorphin is secreted from the pituitary gland as well as from other parts of the brain and nervous system. The level of beta-endorphin secreted from the pituitary gland increases in the cases of pregnancy, labor, breastfeeding, and sex. As it is a natural narcotic, the level increases in every case where the pain is experienced. The level of beta-endorphin that increases in pregnancy goes even higher in labor. Hence, it reduces mother's pain during labor. Moreover, it ensures a positive emotional state during labor. Beta-endorphin also stimulates the secretion of prolactin during labor. With the secreted prolactin hormone, the mother's breasts are prepared for the secretion of breast milk. This hormone is also contained in breast milk. It helps mother-infant begin and maintain a relationship. As labor progresses, the level of catecholamine in mother's body begins to increase. In parallel with this increase, beta-endorphin levels also begin to increase. However, high level of beta-endorphin causes a decrease in the secretion of oxytocin in the body. Therefore, there should be a balance between the two levels (Ergin, 2013).

1.3.3 Epinephrine and Norepinephrine (Fight or Flight Response)

Epinephrine and norepinephrine hormones (adrenaline and noradrenaline) are catecholamines, also known as fight or flight hormones. In any kind of physiological or psychological stress (fear, anxiety, cold, excitement etc.) these hormones are secreted from the adrenal glands. Also, they activate the sympathetic nervous system in the body. Noradrenaline is an

important stimulatory hormone that increases alertness and both stimulates the fight or flight response in the sympathetic nervous system and is stimulated by this response. Low level of catecholamines at the beginning of labor increases during the pushing stage of labor. With this excretory reflex generated by catecholamines, the mother instantly becomes energized and usually in an upright and alerted position. Due to high adrenalin, in other words, the epinephrine, her mouth dries, and she starts to breathe deeply. Furthermore, the mother can feel fear and anger because of the increase in catecholamine at that moment. During the last phase of the labor, maternal catecholamines begin to function in the opposite direction. There is an increase in these stress hormones to help the fetal excretion at the end of labor and the second stage. With this increase, fetal respiration is stimulated, fluid absorption in the lungs increases, and the surfactant production is stimulated. With a drastic decrease in the level of catecholamines immediately after labor, the mother develops such responses as shivering and feeling cold. In the case of no decrease in the level of catecholamines after labor, oxytocin is stopped to rise to an adequate level. Lack of sufficient level of oxytocin after labor causes a decrease in uterine contractions. As a result, it increases the risk of postpartum hemorrhage. On the other hand, high level of catecholamines allows newborn to be active and calms it down by decreasing rapidly through the immediate contact of mother-infant (Ergin, 2013).

1.3.4 Prolactin

Prolactin is also known as motherhood hormone. It has an essential effect on the synthesis of breast milk and breastfeeding. Besides, it affects the immune system, growth hormones, and lactation. Prolactin increases in level during the pregnancy. During labor, the level firstly decreases and then increases again during the last phase of labor. The level of prolactin peaks at the stage of delivery of the infant. Some studies have shown that prolactin causes the level of anxiety to increase. The anxiety due to prolactin, particularly during breastfeeding, allows the mother to be attentive and continue breastfeeding by taking care of the needs of the infant. The fetus in the womb also produces prolactin, and the level of this hormone starts to rise after labor helping the mechanisms that regulate respiration and body temperature of the fetus (Ergin, 2013).

1.4 Hormonal Response to Fear of Labor in Mother's Body

Fear signals perceived in mother's body stimulate hypothalamus. As a result of these stimuli received in hypothalamus, corticotropin-releasing hormone (CRH) is secreted. Corticotropin

hormone affects suprarenal glands and leads to secretion of Adrenocorticotrophic hormone (ACTH). Increased ACTH stimulates adrenal cortex and results in secretion of cortisol. Cortisol contributes to increase of blood glucose that is initiated by other hormones (glucagon, oestrogen, gonadotropins) and this effect is defined as "permissive" for other hormones. Cortisol prepares the body for defense together with the activation of sympathetic nervous system. As an outcome of fear during labor, due to cortisol's effect sympathetic system becomes activated and stress hormones get secreted. When the sympathetic system is activated in the body, eyes become dilated, respiration accelerates and heartbeat increases. Major vessels tighten and the blood travelling to the organs decreases. Thus, the whole body starts to deal with the danger. As a result of blood travelling to organs that play a role in defense system of the body during labor, arteries that are connected to uterus shrinks since uterus is not a part of defense system. Uterus starts to receive less blood and oxygen. In fact, blood and oxygen are very important for the functioning of uterus muscles. As a result of decreasing blood and oxygen that is transferred through blood, cervix becomes tense and hardens. Since limited oxygen to uterus means limited oxygen for the fetus, immediate treatment may be necessary in such situations. As a result of stress during pregnancy period experienced by women with fear of labor, secretion of catecholamine increases in mother's body. Increased catecholamine levels lead to an increase in artery resistance of uterus and thus, decrease the blood flow towards uterus. Consequently, the muscles in uterus cannot contract regularly. This situation leads to prolonging of labor, increase in complex labor risks and the need for immediate g sarean section. The fear of labor is an emotional stress that affects mental health and well-being of the mother. Extreme fear may raise the blood pressure of the mother and result in early labor or may affect the communication between mother-infant adversely in postnatal period (Nerum et al, 2006; Varlik, 2004).

1.5 Reasons for Fear of Labor

Biological (labor pain), psychological (personality, previous traumatic events, becoming a parent), social (lack of social support, financial reasons) or secondary (previous labor experiences) factors may affect the fear of labor. The studies on the reasons for fear of labor indicate diverse reasons and these reasons are listed below.

- Negative thoughts and beliefs about labor,
- Pregnancy complications,

- Pain experienced during labor,
- Fear of death during labor,
- Lack of trust in health care professionals that will assist labor,
- Lack of support during labor,
- Desperation during labor,
- Loneliness during labor,
- Negative stories shared by other women,
- Disability or Stillbirth,
- Fear of not having anyone for support during labor,
- Need for immediate C section,
- Obstetric damage,
- Not knowing how the labor will progress,
- Lack of confidence in being able to complete the labor,
- Changes that will occur within family relations after delivery,
- Situations that may develop out of control,
- Injury or rupture in expulsion phase,
- Obstetric complications such as deformation in genital area,
- Indecisiveness,
- Lack of partner support,
- Uncertainty of emotions, experiencing panic control loss during labor ,
- Negative experiences such as fear of death (Demirsoy & Aksu, 2015; Kitapcioglu et al, 2008; Sahin, Dinc & Dissiz, 2009).

1.5.1 Symptoms of Fear of Labor

Adrenalin and cortisol secreted in response to increased sympathetic activity during fear result in some physiological changes in the body. These physiological changes may be listed as increase in metabolic rate, increase in heart rate, blood pressure changes, dizziness, shivering, muscle tension, changes in vasomotor responses, increase in respiration rate, dyspnea, thauria, and speech disorders (Kitapcioglu et al, 2008; Sahin, Dinc & Dissiz, 2009).

1.5.2 Consequences of Fear of Labor

An individual experiencing a fearful situation becomes distracted; she focuses on the factor that causes the threat and her anxiety increases. This leads women into a negative mood during pregnancy and paves the way for thoughts of inability to complete the labor successfully. This cycle results in realization of negative expectations. Many pregnant women may prefer g sarean section due to their fear of labor. Fear of labor leads to many complications during labor. The hormones that are activated as a result of fear of labor increase the level and effect of complications. The complications do not affect only the mother, but also the fetus. These negative consequences caused by fear of labor can be analyzed in two different periods as during labor and in postpartum period (Korukcu, 2009; Lazoglu, 2014; Sercekus & Okumus, 2009).

1.5.2.1 Negative Consequences of Fear of Labor during Labor

During labor, expectant mother's tolerance for pain and ache becomes lower, unexpected cognitive perceptions regarding motherhood may arise and problems regarding maternal-fetal attachment may occur. Motherhood stress increases the epinephrine and norepinephrine hormones and this leads to a decrease in quantity of blood and oxygen travelling towards fetus and thus paves the way for certain problems for the fetus or the infant in postpartum period. Fear activates autonomous nervous system during labor and causes certain negative physical effects on the body. Negative consequences of fear of labor can be listed as follows;

- Prolonging of labor
- Increase in analgesic use
- Increase in equipped (vacuum, forceps etc.) vaginal delivery
- Fetal distress
- Increase in necessity for medical intervention
- Preference for g sarean section
- Decrease in satisfaction regarding labor
- Halting of dilatation in cervix (Korukcu, 2009; Lazoglu, 2014; Sercekus & Okumus, 2009).

1.5.2.2 Negative Consequences of Fear of Labor in Postnatal Period

Fear of labor has significant negative consequences during the period following the labor. Lack of positive experiences during labor and the effects caused by fear of labor on hormonal system set the base for these consequences.

Negative consequences of fear of labor in postpartum period can be listed as delay in the adaptation to motherhood role and delay in breastfeeding and developing attachment to the infant. In addition, postpartum traumas that may cause very significant and irrecoverable consequences may also be based on fear of labor (Lazoglu, 2014).

1.6 Strategies for Coping with Fear of Labor

Minimizing the fear of labor is important in order to facilitate a healthy and happy labor process for the mother and infant and also to reduce complications that may arise as a result of fear. Psychotherapy, hypnosis, cognitive and behavioral exercises are used as methods in coping with fear of labor. In addition, it is observed that providing sufficient education to mother before pregnancy about processes during labor and post-delivery period, providing psychological and social support during pregnancy are also very effective in reducing the fear of labor. Adaptation to labor process has positive effects on perception of labor. Lamaze, the philosophy that is based on accepting the labor process as it is and reducing outer interventions, is found to have positive effects on perception of labor (Cosar and Demirci, 2012).

Another study indicated that in cases where health professionals enable women that demand cesarean section despite low obstetric risk express their fears, 93% change their attitude and opt for vaginal delivery (Nerum et al, 2006). In this process, fear must be coped with and orientation of the pregnant women must be ensured.

Another method in coping with fear of birth is Hypno-Birthing which considers labor an art. Hypno-Birthing is a method that resolves fears in the subconscious. All the fears that cause a pregnant woman suffer during labor are actually hidden in her subconscious because, the mother who will go through labor has been storing all the negative statements regarding labor in her subconscious since her early childhood. Hypno-Birthing uncovers these fears and negative emotions and clears them away (Sercekus, 2011).

1.7 Role of Midwives in Management of Fear of Labor

In order to reduce the fear of labor, it is important that women use coping strategies and believe that the labor pain will be low. Midwives that provide care for women with fear of labor should focus on monitoring during pregnancy, preparation for labor, assessment, support and postpartum follow-up. Women with extreme levels of fear should be monitored attentively since

they tend to have postpartum depression. Postpartum depression caused by fear of labor leads to problem of insufficiency in baby care and breastfeeding. Therefore, it is an important role for midwives that women do not feel alone during pregnancy, labor and postpartum periods (Ust & Pasinlioglu, 2015).

Midwife care for fear of labor should begin firstly in pre-conceptual period. If that is not the case, it should begin in first antenatal check during pregnancy. Midwives should encourage pregnant women to express their fear of labor during pregnancy; they should listen to women's previous labor experiences and identify their fear of labor. In their assessments, midwives should consider factors such as fear of the pregnant woman, labor stories of her and the others, readiness for motherhood, familial and marriage relations, career, socioeconomic and cultural background, perception level regarding health, presence or absence of supportive people, previous experiences of harassment (physical, sexual, etc.), effect of fear on everyday activities, potential of loneliness and social isolation based on fear. Finding out about the factors that set the base for women's fear of labor would be effective in their coping with the fear. However, coping with the fear of labor only during pregnancy is not sufficient. During consultations in pre-conceptual period, women's fear of labor should also be assessed. Midwives should maintain this supportive role that begins in pre-conceptual period, in labor and postpartum periods a well (Sercekus, 2005; Ust & Pasinlioglu, 2015).

2. Conclusions and Recommendations

In conclusion, women experience fear of labor due to many reasons in present time. Fear of labor is a serious problem that affects both pregnancy and the labor period adversely. Fear experienced during labor discomforts pregnant women and the infant and influences the labor process negatively. In order to reduce the fear of labor, an understanding of care should be formed that begins with women's plans for pregnancy and continues during pregnancy and labor. As the fear of labor decreases, labor pain, labor complications, labor duration, oxytocin use, cesarean section rates, newborn complications and postpartum psychological problems will also start to decrease. In addition, readiness for labor would not only ensure a healthy labor but also contribute to an effective breastfeeding and early formation of maternal-infant attachment.

Decrease in the fear of labor constitutes an important part of reducing health problems both for the mother and newborn. Therefore, midwives that work actively in pre-pregnancy, pregnancy, labor and postpartum periods hold significant responsibilities in reducing the fear of labor. First of all, midwives should be efficient in term of knowledge. Then, they should maintain active communication with women starting from pre-pregnancy period and during pregnancy, labor and postpartum periods. Midwives should encourage pregnant women to express their fear of labor during pregnancy; they should listen to women's previous labor experiences and identify their fear of labor. In their assessments, midwives should consider factors such as fear of the pregnant woman, labor stories of her and the others, readiness for motherhood, familial and marriage relations, career, socioeconomic and cultural background, perception level regarding health, presence or absence of supportive people, previous experiences of harassment (physical, sexual, etc.), effect of fear on everyday activities, potential of loneliness and social isolation based on fear.

Finding out about the factors that set the base for women's fear of labor would be effective in their coping with the fear. However, coping with the fear of labor only during pregnancy is not sufficient. During consultations in pre-conceptional period, women's fear of labor should also be assessed. Midwives should maintain this supportive role that begins in pre-conceptional period, in labor and postpartum periods a well.

An overview of the disparate but extensive literature related to fear of labor. Limitation of this study is that it is a review article.

Conducting qualitative studies in order to identify fear of labor in pregnant woman would enable individuals to express themselves better and thus facilitate the identification of necessary improvements to that end and contribute to the provision of such support.

References

- Adams, S. S., Eberhard-Gran, M., Eskild, A. (2012). Fear of Childbirth and Duration of Labour: A Study of 2206 Women with Intended Vaginal Delivery. *BJOG*, 119(10), 1238-46
<https://doi.org/10.1111/j.1471-0528.2012.03433.x>

- Cosar, F., Demirci, N. (2012). The effect of childbirth education classes based on the philosophy of lamaze on the perception and orientation to labour process. *Journal of Suleyman Demirel University Institute of Health Sciences*, 3(2), 18-30.
- Demirsoy, G., Aksu, H. (2015). Reasons of Fear And Coping Associated With Childbirth. *Journal of Women's Health Nursing*, 2(2), 36-45.
- Ergin, A. (2013). Labor pain and management. N. Komurcu (Ed), *Non-pharmacologic methods for control of labor pain* (pp. 125-129). Istanbul: Nobel Medical Publishing.
- Fenwick, J., Gamble, J., Nathan, E., Bayes, S., & Hauck, Y. (2009). Pre- and postpartum levels of childbirth fear and the relationship to birth outcomes in a cohort of Australian women. *Journal of Clinical Nursing*, 18(5), 667-677. <https://doi.org/10.1111/j.1365-2702.2008.02568.x>
- Gencoz, T. (2010). Fear: Causes, Consequences, and Ways of Coping. *Journal of Crisisis*, 6 (2), 9-16.
- Handelzalts, J. E., Fisher, S., Lurie, S., Shalev, A., Golan, A., & Sadan, O. (2012). Personality, fear of childbirth and cesarean delivery on demand. *Acta Obstetrica et Gynecologica Scandinavica*, 91(1), 16-21 <https://doi.org/10.1111/j.1600-0412.2011.01287.x>
- Hofberg, K., Brockington, I. F. (2000). Tokophobia: an unreasoning dread of childbirth. A series of 26 cases. *The British Journal of Psychiatry*, 176(1), 83-85 <https://doi.org/10.1192/bjp.176.1.83>
- Karacam, Z., Akyuz, E. (2011). Supportive Care in Labor and The Rol of Midwife / Nurse. *Florence Nightingale Journal of Nursing*, 19(1), 45-53.
- Kilicarslan, S. (2008). Sociodemographic characteristics, health qualities and anxiety levels of third trimester pregnant women living in Edirne. *Trakya University Faculty of Medicine Family Medicine Speciality Thesis*, Edirne, Turkey.
- Kitapcioglu, G., Yanikkerem, E., Sevil, U., Yuksel, D. (2008). Fear of childbirth and the postpartum period: a scale development and validation study. *Adnan Menderes University Journal of Medicine Faculty*, 9(1), 47 – 54.
- Korukcu, H. O. (2009). The Validity and Reliability Study of Wijma Delivery Expectancy/Experience Questionnaire. *Akdeniz University Institutes of Health Sciences Obstetrics and Gynecology Nursing Master Thesis*. Antalya, Turkey.

- Lazoglu, M. (2014). Comparison of the Self-efficacy Perceptions of Pregnant Women based on degree of the Fear of Delivery. Ataturk University Institutes of Health Sciences Midwifery Department Master Thesis, Erzurum, Turkey.
- Nerum, H., Halvorsen, L., Sørli, T., Øian, P. (2006). Maternal Request for Cesarean Section due to Fear of Birth: Can it be Changed Through Crisis-Oriented Counseling? *Birth*, 33(3), 221-28 <https://doi.org/10.1111/j.1523-536X.2006.00107.x>
- Rouhe, H., Salmela-Aro, K., Halmesmaki, E., Saisto, T. (2009). Fear of childbirth according to parity, gestational age, and obstetric history. *BJOG*, 116, 67– 73 <https://doi.org/10.1111/j.1471-0528.2008.02002.x>
- Sahin, N., Dinc, H., Dissiz, M. (2009). Fears of Labor of Pregnant and Related Factors. *Medical Bulletin of Zeynep Kamil*, 40(2), 57-62.
- Serçekus, P. (2005). Investigation that fears associated with normal spontaneous delivery and their reasons. Dokuz Eylül University Institutes of Health Sciences Nursing Department Master Thesis. İzmir, Turkey.
- Serçekus, P. (2011). Intervention for Fear of Childbirth: Hypnobirthing. *TAF Preventive Medicine Bulletin*, 10(2), 239-242 <https://doi.org/10.5455/pmb.20101123011947>
- Serçekus, P., Okumus, H. (2009). Fears Associated with Childbirth Among Nulliparous Women in Turkey. *Midwifery*, 25(2), 155-62 <https://doi.org/10.1016/j.midw.2007.02.005>
- Ust, Z., Pasinlioglu, T. (2015). Determination of Anxieties Related To Delivery and Postpartum Period in Primiparous and Multiparous Pregnant Women. *Journal of Health Sciences and Professions*, 2(3), 306-317.
- Uzun, M., Sulu, N. (2002). Oxytocin and Its Physiological Effects. *Kafkas University Journal of Veterinary Faculty*, 8(1), 91-97.
- Varlik, A. (2004). Relation with Term and Preterm Birth Levels of Myometrial Progesterone Receptor and Maternal Progesterone and Oestrogen. Ministry of Health Zeynep Kamil Women and Children Diseases Training and Research Hospital Clinic of Women Diseases and Labor Speciality Thesis. Istanbul, Turkey.