

Original Article

Cultural Methods Used by Women Who Give Vaginal Birth to Cope with Birth Labour Pain

Handan Ozcan, PhD

Assistant Professor, Department of Midwifery, Faculty of Health Sciences, University of Health Sciences, Uskudar, Istanbul, Turkey

Inci Samur, PhD

Assistant Professor, Department of Midwifery, Faculty of Health Sciences, University of Health Sciences, Uskudar, Istanbul, Turkey

Fatma Uzun, PhD

Assistant Professor, Department of Midwifery, Faculty of Health Sciences, University of Health Sciences, Uskudar, Istanbul, Turkey

Resul Sahin, PhD

Assistant Professor, Department of Midwifery, Faculty of Health Sciences, University of Health Sciences, Uskudar, Istanbul, Turkey

Correspondence: Handan Ozcan, Adress: Selimiye Neighborhood, Tibbiye Street, No: 38, 34668 Uskudar/ Istanbul, Turkey e-mail: hndnozc@hotmai.com

Abstract

Background: Labour is one of the most severe pain sources known and described today. Many non-pharmacological methods reduce labour pain.

Objectives: The study was planned to identify women who delivered vaginally, who did not participate in any birth preparation classes, the ways they coped with birth pain and the traditional methods they used.

Methods: The sample consisted of a total of 350 women who agreed to participate voluntarily in the study and have given birth by vaginal delivery after the explanation of the purpose of the study. Required permissions have been obtained. Appropriate statistical analyzes were performed.

Results: In the reduction of labour pain, 94.3% of the date eaters, 94.6% of the zam-zam water drinkers, 85.6% of the prayers, 86.1% of those who had massage, 79.4% of the breathing techniques users, 84.4% of those who were supported, 85.1% of the walkers, 87.3% of the worshipers stated that their pain decreased and they psychologically relaxed. Especially in the reduction of the labour pain, women have used methods such as walking, screaming, crouching, showering, massage, breathing exercises, providing calming, warm compress.

Conclusion: Women who have used traditional methods have used methods such as praying, controlling their breath, eating a date, drinking zam-zam water, putting Maryam's flower into water, getting support from someone, getting massage, listening to music. It is important to investigate different applications for health according to the cultures and to support patients in this respect.

Keywords: Fear of birth, birth preference, coping methods, traditional methods

Introduction

Pain is a biological, psychological and cultural experience that involves cognitive processing as well as physical stimulant and emotional which

frequently occur within cultural contexts and specific social. According to the International Association for the Study of Pain (IASP), pain; an unlikeable emotional and sensory experience associated with real or potential tissue damage, or

described in terms of such damage. Labour pain is limited duration, situation specific, and in opposition to many other sources of pain, is not indicative of underlying pathology, but part of a normal physiological process. Labour is in the sense that it is not a product of bodily harm, not pathological but rather a sign that the baby is ready to be born (Gibson, 2014; Lowe, 2002; Mamuk, 2017). New labour pain is only, complex sense or emotional experience that is different from diseases, traumas, surgeries, medical procedures, acute or chronic pains. It is the creation of a new life, that is not only characterized with the pain but also with the most positive situation of life events. Previous studies have indicated that if women have fears in terms of prenatal period, labour pain, they experience more pain. It has been emphasized that pain perception in prenatal period affects the severity of pain experienced at delivery (Anton & David, 2013, Kocak, & Ozcan, 2018). Physiological changes such as labour pain, uterine contractions or cervical dilatation emerge as a result of interaction of psychological factors such as stress, anxiety, fear (Firouzbakht, Nikpour, Salmalian, Ledari, & Khafri, 2014). Labour pain affects a woman's emotional control, this situation may be related to the fear that leads to a long delivery process, and may result in mother's unnecessary cesarean delivery demand (Lang, Sorrell, Rodgers & Lebeck, 2006). Long uncontrolled and intense labour pain may derange mother's health psychologically and can cause long-term excitement imbalances. Furthermore, pain and negative excitement may also constitute negative effects on mother-child relationships in the first days of life. Mothers and caregivers need guidelines for reducing the constant labour pain (Hosseininasab & Taghavi, 2010). Today in most countries, women take or practice pain relieving methods in order to facilitate the birth process. 81% of American women and 90% of women in European countries use medical and non-medical methods (Firouzbakht, Nikpour, Salmalian, Ledari, & Khafri, 2014). In a study conducted, it has been indicated that Muslim women have felt more comfortable during their delivery sometimes when they cried, screamed and when there were someone supporting and because of their confidence in God. Spouses are rarely there during delivery and it has been stated that opioid or epidural anesthesia was

used in 50% of those who gave birth in private hospitals. Chinese women think it is embarrassing to scream during delivery and they do not scream at delivery, and it has been reported that such actions consume energy and that one of the family members other than father supports during delivery. Maya women who gave birth at home were visited by the village midwife and supported by family members during delivery. Those who gave birth in the state hospital were left unattended and untreated and those who gave birth in private hospital took more analgesia and anesthesia. Sitting on the mantra, saying some cultural words quietly and breathing in between are used as methods of coping with labour pain. The pain perception shows cultural differences, thus it is very important to know the cultural meaning of the pain to facilitate the birth experience (Callister, Khalaf, Semenic, & Kartchner, 2003; Ozcan, Arar, & Cakir, 2018). It is very important to support women for the natural delivery without intervention, to apply and develop physical interventions such as relief and breathing methods in coping with labour pain (Hajian, Shariati, Mirzaii Najmabadi, K., Yunesian, M., & Ajami, 2012). Personal and professional support is important during delivery. Well-supported and self-confident women experience less pain and their satisfaction increases. It is possible to overcome the pain experience with providing comfort to women in prenatal period, a safe and private environment, assurance, information and guidance, improving sources of relaxing information, emotional support (Lowe, 2002). Many studies have been carried out on pain at delivery and women's expectations. In the studies conducted in the UK, Jordan, Ireland and India, it has been reported that women expect a highly intense pain (Karlsdottir, Sveinsdottir, Olafsdottir, & Kristjansdottir, 2015). In a systematic review consisted of 13 qualitative and 19 quantitative studies, four main themes have been examined. Pregnant women's attitudes towards drug-free pain management; pain level and type, painkillers, decision making and participation in the assessment have been assessed. It has been reported that women approach drug-free pain management positively, and there is a significant gap between women's expectations and actual experiences (Lally, Murtagh, Macphail, & Thomson, 2008). Women generally prefer

cesarean section due to fear of birth. Fear of birth causes the disruption of the period and psychological problems. Especially postpartum depression, anxiety, mother-infant connection problems are experienced. In general, fear complicates about 20% of the clinical picture. The importance of breathing exercises has been indicated in controlling the labour pain (Guszkowska, 2014; McCauley, Actis Danna, Mrema, van den Broek, 2018). There are two important consequences in terms of reducing the labour pain. First, in many studies conducted for physical activity and psychology, it has been stated that physical exercise reduces labour pain and trait anxiety levels and ensures relief (Biddle, & Mutrie 2008, with comparative Guszkowska, 2013). Labour pain is lower in physically active pregnant women (Guszkowska, 2013). The second is to reduce woman's muscle tension and to control breathing during delivery. Labour is one of the most severe pain sources known and described today. Many non-pharmacological methods reduce labour pain. These methods are preferred by caregivers and women as an effective and simple method of reducing labour pain. The research was planned in order to determine the methods of coping with labour pain and traditional methods of women who have given birth by vaginal delivery in Gumushane province and who have not participated in any birth preparation training classes.

Method: This descriptive study was planned to determine the methods of coping with labour pain of women who have given birth by vaginal delivery and traditional methods they have used. The study was carried out between 15.01-15.04.2017 following the obtainment of institutional and ethics committee permission (Approval Number=95674917-604.01.02-E.834). Especially women at the age of 40 and older who were more likely to use nonpharmacological methods in delivery, who did not receive any training in birth preparation classes, who lived in Gumushane and who gave birth by vaginal delivery were reached. The sample consisted of a total of 350 women who agreed to participate voluntarily in the study after the explanation of the purpose of the study. The study questions consist of 40 questions prepared following the literature search by the researchers.

Before the study, a face-to-face interview was conducted with each woman, the purpose of the study was explained and the informed verbal consent was obtained from each of them. Survey questions were answered by being read by researchers one-by-one, or women who wanted to answer individually filled themselves.

Statistical Analysis: Obtained data were evaluated with statistical package program and error checks, tables and statistical analyses were made. Percentage, mean and chi-square tests were used for statistical evaluation.

Ethical Statement: - The name of the ethics committee: Gumushane University Scientific Research And Publishing Committee (95674917-604.01.02-E.834).

Results

The mean age of participants was 51.03 ± 9.97 . Some socio-demographic characteristics of the participants are given in the table 1. 84.3% of women were housewives and income of 64.6% of women were equal to their expenses. Mean pregnancy was 4.77 ± 2.46 , mean delivery was 3.84 ± 1.85 , mean abort was 1.58 ± 0.95 and mean abortion was 1.41 ± 0.70 . The information status of women about pregnancy, childbirth and labour pain is given in Table 2. 71.7% of the women answered the question of who delivered the baby as a midwife and 7.4% as others (by own ($n=10$), one who delivered baby before ($n=7$), neighbor ($n=4$), mother-in-law ($n=2$)). A 55.1% of women heard about alternative delivery methods. 48.3% indicated that they heard water birth, 22.9% heard home birth, 12.0% heard exercise at delivery, 2.0% heard aromatherapy at delivery, 2.3% heard hypnobirthing at delivery, 7.7% heard breathing techniques at delivery and 17.4% heard yoga and meditation at delivery. Another 43.8% of the participants indicated that they applied to a hospital when their pain started, 24.3% when their pain increased, 21.7% when they felt water break, and 10.2% after the bleeding. When women, who gave vaginal birth, asked "Which delivery method would you prefer if you give birth again?", 78.9% answered as they would prefer vaginal birth and 20.8% would prefer cesarean section. In the reduction of labour pain, 94.3% of the date eaters, 94.6% of the zam-zam water drinkers, 85.6% of the prayers, 86.1% of those who had massage, 79.4%

of the breathing techniques users, 84.4% of those who were supported, 85.1% of the walkers, 87.3% of the worshipers stated that their pain decreased and they psychologically relaxed. There was no significant difference found between the women's pain reduction methods and traditional methods used at delivery and the reduction of the pain ($\chi^2=1.044$, $p=0.593$; $\chi^2=0.367$, $p=0.832$), the ratio of pain reduction and effectiveness of the methods

were higher among the women who used the methods. Women's other information status on pregnancy and delivery of the women are given in Table 3. Of the women, 71.3% stated that they planned their pregnancy on purpose, 15.7% that they did not take any medication at delivery, 47.1% that they had episiotomy at delivery, 64.9% that they had pain after delivery and 22.3% that they had depression after delivery.

Table 1. Some socio-demographic characteristics of the participants

Socio-Demographic Characteristics		
Occupational Status	n	%
Housewife	295	84.3
Retired	9	2.6
Working	46	13.1
Total	350	100.0
Women's Educational Status	n	%
Primary school	248	70.8
Secondary School	43	12.3
High school	46	13.2
College/faculty	13	3.7
Total	350	100.0
Income Status	n	%
Income is less than expense	56	16.0
Income is equal to expense	226	64.6
Income is more than expense	68	19.4
Total	350	100.0
Spouse's Educational Status	n	%
Primary school	127	36.3
Secondary School	63	18.0
High school	91	26.0
College/faculty	69	19.7
Total	350	100.0

Table 2. Women's status of pregnancy, childbirth and labour pain

Status of Pregnancy, Childbirth and Labour Pain		
Age of first pregnancy	n	%
Between 14-18	104	29.6
Between 19-24	206	58.9
Between 25-34	38	10.9
35 and older	2	0.6
Total	350	100.0
Who delivered the baby	n	%
Doctor	65	18.6
Midwife	251	71.7
Nurse	8	2.3
Other	26	7.4
Total	350	100.0
Use of method in coping with labour pain	n	%
Yes	148	42.3
No	202	57.7
Total	350	100.0
Methods used in order to cope with labour pain	n	%
Walking	52	35.9
Screaming	20	13.8
Crouching	15	10.3
Showering	9	6.2
Breathing exercises	5	3.4
Massage	8	5.5
Warm compress	5	3.4
Relieving	13	8.9
Other	20	12.6
Total	145	100.0
Reduction of pain by the method used	n	%
It helped	106	43.8
It did not affect at all	37	15.3
I relaxed psychologically	99	40.9
Total	242	100.0
Where they gave birth	n	%
Hospital	213	60.8
Primary health care center	9	2.6
Home	125	35.7
Other (car, road, farm)	3	0.9
Total	347	100.0
Supporting Person at delivery	n	%
Spouse	59	16.9
Mother/sibling	69	19.7
Relative	124	35.4

Friend	19	5.4
No one	76	21.7
Other	3	0.9
Total	350	100.0
Use of traditional methods at delivery	n	%
Yes	240	68.6
No	110	31.4
Total	350	100.0
Traditional Methods*	n	%
Maryam's flower	12	3.4
Eating date	35	10.0
Drinking zam-zam water	37	10.6
Praying	209	59.7
Massage	36	10.3
Listening to music	3	0.9
Breathing exercises	97	27.7
Support of someone	45	12.9
Areas where the labour pain was intense*	n	%
Waist	233	66.6
Groin	139	93.7
Belly	32	9.1
Back	13	3.7
Other (hip, leg)	6	1.7

*Multiple answers were given

Table 3. Women's other information status on pregnancy and delivery

Information on Pregnancy and Delivery	Yes		No		Partially	
	n	%	n	%	n	%
Was your pregnancy/pregnancies on purpose?	429	71.3	20	5.7	80	22.9
Did you receive information about what you will do during pregnancy, at delivery?	99	28.3	201	57.4	50	14.3
Do you have any information about pregnancy training classes?	34	26.6	226	64.6	30	8.6
Would you like to participate in pregnancy training classes?	230	65.7	97	27.7	23	6.6
Has any medication been given at delivery?	55	15.7	290	82.9	5	1.4
Was labour induced during delivery?	114	32.6	233	66.6	3	0.9
Was anesthesia applied during delivery?	14	4.0	335	95.7	1	0.3
Did the episiotomy open during delivery?	165	47.1	184	52.6	1	0.3
Have you ever thought about cesarean section?	70	20.0	267	76.3	13	3.7
Did you have pain after childbirth?	227	64.9	75	21.4	48	13.7
Is there any difference between your first and other childbirths in terms of stress and pain?	267	76.7	56	16.1	25	7.2
Have you experienced depression after pregnancy?	78	22.3	241	68.9	31	8.9

Discussion

The study was conducted in order to determine the methods of coping with labour pain and the traditional methods used in women especially at the age of 40 and older. The mean age of the participants was 51.03 ± 9.97 and their educational status was low (70.8% primary education). Spouses have higher educational status than women. It was determined that the first pregnancy of 29.7% of the women was at the age of 14-18 years, the ratio of those who gave birth in places other than hospitals, especially at home, was 35.7% and the majority of the deliveries were realized by midwives (71.7%). Previous studies have shown that midwives support the vaginal birth and less intervention was required at these deliveries. In a study examining the attitudes of gynecologists and midwives on cesarean section in Italy, 65% of the midwives and 34% of the physicians have stated that the cesarean rates were high. In the same research, midwives were more supportive on the fact that the vaginal birth was more beneficial than physicians, and a statistically significant difference was found (Arslan, Karahan, & Cam, 2008). Again, in a study comparing childbirths administered by midwives and physicians, it has been found that narcotic analgesia, amniotomy, cesarean section and fetal monitoring were lower at deliveries managed by the midwives (Janssen, Ryan, Etches, Klein, & Reime, 2007).

78.3% of the women had someone who supported their childbirth. Especially, her husband, mother, sibling, friend or relative has supported the woman. Social support and companion preferences of women at childbirth may vary according to the countries and cultures. Apart from health workers, social support providers can be woman's husband, relatives or an experienced close female person during the childbirth process (Pascali-Bonaro & Kroeger, 2004; Rosen, 2004). There are many studies in the literature regarding the positive effect of social support given at birth on the birth process (Pascali-Bonaro & Kroeger, 2004; Price, Noseworthy, & Thornton, 2007; Rosen, 2004). The presence of a person who supports the woman at delivery ensures the psychological relief of the woman, meeting the needs, application of interventions that reduce the pain such as massage.

42.3% of the women stated that they used a method in coping with labour pain and 68.6% of them stated that they used traditional methods. It was determined that the pain was less in women using the method. Women have stated that the labour pain was particularly more on waist and groins.

It is known that labour pain, which can not be tolerated despite it is physiological, affects maternal and fetus health negatively. For this reason, The American Society of Anesthesiologists (ASA) and The American Congress of Obstetricians and Gynecologists (ACOG) have accepted labour pain as an indication for the treatment (Edirne, 2007). In the literature, simplicity, reliability and fetal hemostasis protection features are necessary for labour pain control methods that are investigated in two major themes, pharmacological and nonpharmacological method (Edirne, 2007; Kayhan, 2007).

Especially in the reduction of the labour pain, women have used methods such as walking, screaming, crouching, showering, massage, breathing exercises, providing calming, warm compress. Women who have used traditional methods have used methods such as praying, controlling their breath, eating a date, drinking zam-zam water, putting Maryam's flower into water, getting support from someone, getting massage, listening to music.

Touching a person may provide positive messages such as care, attention, relief, trust, or love. Massage is "the deliberate and systematic manipulation made softly to the body tissues that improve the healing and health value." It is used to ensure relaxation and to reduce the pain during delivery (Tasçı, & Sevil, 2007). Massage applied to the areas such as waist, leg, shoulder etc. during delivery is suggested since it reduces the pain and ache, it supports the relaxation and positive thinking at delivery, it also relieves the depressed mood (Leeman, Fontaine, King, Klein, & Ratcliffe, 2003; Siimkin & Bolding, 2004). The pleasing relaxation that massage brings to the muscles leads to mental relaxation at the same time. Superficial warm compress techniques, which get high attention at childbirth, are used to relieve waist pain due to occiput posterior labour in the first

stage of delivery, to reduce perineal pain and to protect the perineum against traumas in the second stage of delivery (Albers, Sedler, Bedricik, Teaf, & Peralta, 2005; Dahlen, Homer, Cooke, Upton, Nunn, & Brodrick, 2009).

Labour is one of the most severe pain sources known and described today. Women generally have negative attitudes towards future pregnancies as a result of the first childbirth of women and the pain they could not cope with. In the study conducted, 76.7% of the women answered the question of "Is there any difference between your first and other childbirths in terms of stress and pain?" as "yes" and 7.2% answered as "no". In studies conducted it has been also reported that 60% of primiparous women and 40% of multiparous women have experienced severe labour pain. Different methods of analgesia for obstetric pain are used in different regions of the world. Future mothers show different reactions against this pain according to the traditions and customs of societies and definition of labour pain. Women's labour pain is affected by many factors including previous experiences of pain, coping skills, psychosocial factors (Leeman, Fontaine, King, Klein, & Ratcliffe, 2003; Siimkin & Bolding, 2004). As seen in the study conducted and in the literature review, the type and the severity of pain that women experience at delivery differ according to pregnancies.

Conclusion

Methods such as walking, screaming, crouching, showering, massage, breathing exercises, providing relaxation, warm compress methods are used in coping with labour pain among the women who did not receive training and who gave birth by vaginal delivery. On the other hand, among traditional methods, women prefer methods such as praying, controlling the breath, eating date, drink zam-zam water, getting someone around for support, massage, putting Maryam's flower, which is a cultural herb, into water. These attempts lead to a psychological relief of women and a decrease in the labour pain. Especially local practices which are considered important from religious aspects such as drinking zam-zam water, praying, eating date, and putting Maryam's flower into water lead women to feel relaxed. It is important to

investigate different applications for health according to the cultures and to support patients in this respect.

Acknowledgements: The authors thank all the women who participated in the study. This study did not receive any funding or financial assistance.

References

- Albers, L.L., Sedler, D.K., Bedricik, J.E., Teaf, D., & Peralta, P. (2005). Midwifery care measures in the second stage of labor and reduction of genital tract trauma at birth: A randomized trial. *Journal Midwifery Womens Health*, 50, 365-372.
- Anton, R., & David, D. (2013). Response expectancy versus response hope in predicting birth relate demotional distress and pain. *International Journal of Psychology*, 48(5), 954-63. doi:
- Arslan, H., Karahan, N., & Cam, C. (2008). The nature of midwifery and its effect on the mode of delivery. *Maltepe University Journal of Nursing Science and Art*, 1(2), 55-59.
- Biddle, S.J.H., & Mutrie, N. (2008). *Psychology of physicalactivity*. London, Routledge.
- Callister, L.C., Khalaf, I., Semenic, S., & Kartchner, R. (2003). Vehvilainen-Julkunen K. The pain of childbirth: perceptions of culturally diverse women. *Pain Management Nursing*, 4(4), 145-154.
- Dahlen, H.G., Homer, C.S., Cooke, M., Upton, A.M., Nunn, R.A., & Brodrick, B.S. (2009). Soothingthe ring of fire': Australian women's and midwives' experiences of using perineal warm packs in the second stage of labour. *Midwifery*, 25, 39-48.
- Edirne, S. (2007). Pain. 1 st Edition, Nobel Medical Bookstores, Istanbul, 30-106. [Original work published in Turkish]
- Firouzbakht, M., Nikpour, M., Salmalian, H., Ledari, F.M., & Khafri, S. (2014). The Effect of Perinatal Education on Iranian Mothers' Stress and Labor Pain. *Global Journal of Health Science*, 6(1), 61-68. doi:10.5539/gjhs.v6n1p61.
- Gibson, E. (2014). Women's expectations and experiences with labour pain in medical and midwifery models of birth in the United States. *Women and Birth*, 27, 185-89. doi:10.1016/j.wombi.2014.05.002.
- Guszkowska, M. (2013). Physical activity and psyche the benefits and risks. Torun: Wydawnic two Adam Marszałek.
- Guszkowska, M. (2014). The effect of exercise and child birth classes on fear of child birth and locus of labor pain control. *Anxiety Stress Coping*, 27(2), 176-89. doi:10.1080/10615806.2013.830107.

- Hajian, S., Shariati, M., Mirzaii Najmabadi, Yunesian, & Ajami, M.S. (2012). The effect of the extended parallel process model of child birth education for decreasing the rate of Caesarean section among Iranian women. *Life Science Journal*, 9(3), 445-52.
- Hosseininasab, D., & Taghavi, S. (2010). The effectiveness of prenatal education in decreasing the child birth pain and anxiety. *Medical Journal of Tabriz University of Medical Sciences & Health Services*, 31(4), 24-30.
- Janssen, P.A., Ryan, E.M., Etches, D.J., Klein, M.C., & Reime, B. (2007). Outcomes of planned hospital birth attended by midwives compared with physicians in British Columbia. *Birth*, 34(2), 140-7.
- Karlsdottir, S.I., Sveinsdottir, H., Olafsdottir, O.A., & Kristjansdottir, H. (2015). Pregnant women's expectations about pain intensity during child birth and their attitudes towards pain management: Findings from an Icelandic national study. *Sexual & Reproductive Healthcare*, 6, 211-18.
- Kayhan, Z. (2007). Clinical Anesthesia, 3 rd edition, Logos Publishing, Istanbul, 510-530. [Original work published in Turkish]
- Kocak, D.Y., & Ozcan, H. (2018). Postnatal maternal attachment: Retrospecific study. *Perinatal Journal*, 26(2), 78-86. [Original work published in Turkish]
- Lally, J.E., Murtagh, M.J., Macphail, S., & Thomson, R. (2008). More in hope than expectation: a systematic review of women's expectations and experience of pain relief in labour. *Bio Med Central Medicine*, 14, 6-7.
- Lang, A.J., Sorrell, J.T., Rodgers, C.S., & Lebeck, M.M. (2006). Anxiety sensitivity as a predictor of labor pain. *European Journal Pain*, 10, 263-270.
- Leeman, L., Fontaine, P., King, V., Klein, C.M., & Ratcliffe, S. (2003). The nature and management of labor pain: Part I. Nonpharmacologic pain relief. *American Family Physician*, 68, 1109-12.
- Lowe, NK. (2002). The nature of labor pain. *American Journal Obstetric Gynecology*, 186(1), 16-24.
- Mamuk, R. (2017). The effect of intradermal sterile water injection applied to the lumbosacral region on the pain perception at birth. Doctoral Thesis, İstanbul. [Original work published in Turkish]
- McCauley, M., Actis Danna, V., Mrema, D., van den Broek, N. (2018). We know it's labour pain, so we don't do anything": healthcare provider's knowledge and attitudes regarding the provision of pain relief during labour and after childbirth. *BMC Pregnancy Childbirth*, 18(1), 444.
- Ozcan, H., Arar, I, Cakır, A. (2018). Fathers and pregnancy process. *Zeynep Kamil Medical Bulletin*, 49(1), 72-76.
- Pascali- Bonaro, D., & Kroeger, M. (2004). Continuous female companion ship during childbirth: A crucial resource in times of stressor calm. *Journal Midwifery Womens Health*, 49(2), 19-27.
- Price, S., Noseworthy, J., & Thornton, J. (2007). Women's experience with social presence during child birth. *The American Journal of Maternal Child Nursing*, 32(3), 184-91.
- Rosen, P. (2004). Supporting women in labor: analysis of different types of caregivers. *Journal Midwifery Women's Health*, 49(1), 24-31.
- Simkin, P., Bolding, A. (2004). Update on non pharmacologic approaches to relieve labor pain and prevent suffering. *Journal Midwifery Womens Health*, 49, 489-504.
- Tascı, E., Sevil, U. (2007). Non-pharmacological approaches to birth pain. *Journal of General Medicine*, 17, 181-6.