



Do the Pregnant Women Want to Use the Labor Mirror during Childbirth?

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ABSTRACT

The labor mirror is an instrument used by the pregnant woman to observe the descent of the fetus and to improve pushing effort in vaginal delivery. The aim of the study was to determine the views of pregnant women about labor mirror use, which is not common in Turkiye. The study was of the cross-sectional descriptive type. Women who did not have any pregnancy-related complications or comorbidities, 37–42 weeks of gestation, had a single pregnancy and volunteered were included in the sample (n=359). Questionnaire form was used in data collection. All of the participants stated that they had never heard of the labor mirror before. While 18.1% agreed with the statement "If I am offered a labor mirror for use during labor, I will be pleased", one of the positive statements regarding the use of the labor mirror during childbirth, it was determined that they did not agree with the other positive statements. It is recommended that the use of the labor mirror in Turkey be evaluated and detailed studies should be carried out in order to increase the pushing efficiency at birth and improve the mother's birth experience.

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I. INTRODUCTION

Labor is an experience that has physical, psychological, and social effects on a woman's life [1]. The second stage of labor covers the process starting when the cervix is completely dilated (10 cm) and ends with the birth of the fetus [2]. As well as being quite stressful for the woman, by triggering intense emotions, this stage of labor can make it difficult for the woman to cope with the process [3]. Besides, as a consequence of the epidural anesthesia that is frequently administered to the woman in the first stage of labor, the woman's power to push the baby down the birth canal can decrease in the second stage of labor [4]. By inducing the pregnant woman to have a reduced sense of control and to feel tired and powerless, this situation can lead to the prolongation of the second stage of labor and an increase in the rate of interventions applied to the pregnant woman [5]. It is emphasized that having a positive labor experience will contribute positively to the enhancement of the woman's self-confidence, the establishment of a stronger relationship between the woman and her baby, and the woman's future childbirth planning [6], [7]. The scientific evidence is in support of the use of certain techniques to help the midwife's

management of the labor process or the development of the mother's labor experience [8], [9]. A variety of methods such as birthing balls, cushions, squat bars, hydrotherapy tubs, and birth stools are utilized to alleviate the pain felt during labor and improve the mother's labor experience. [10]. One of these methods is the labor mirror. There are options for the labor mirror, either mounted on the delivery bed and on the ceiling of the delivery room or hand-held use. The labor mirror, which is often used in the second stage of labor, allows to observe the crowning of the baby's head during vaginal delivery and to instantly visualize the progress of the delivery for the mother or midwife. The labor mirror is utilized to maximize the mother's power to push the baby during labor and urge her to push the baby correctly [8], [9]. During labor and at the moment of birth, the pregnant woman is advised to take an upright position [11], and this situation, in turn, makes it difficult for the midwife to examine and observe the pregnant woman. Thus, in cases when the pregnant woman chooses the upright birth position, the labor mirror provides the midwife with the opportunity to observe the perineum without changing the pregnant woman's position. In the relevant literature, there is a gap

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about the use and effectiveness of labor mirrors in helping to optimize the mother’s experience of labor. No data could be found about the use of labor mirrors in the second stage of labor in Turkey. In this direction, this study aimed to identify pregnant women’s views who presented to a hospital in Turkey regarding the use of labor mirrors in the second stage of labor.

II. METHODS

The study has a descriptive and cross-sectional design as the data are quickly and easily collected at a low cost in this design [12].

The target population was pregnant women who presented to the delivery room of a training and research hospital in Turkey in August-November 2019. In this respect, the women who did not have any pregnancy-related complications or comorbidities, 37–42 weeks of gestation, had a single pregnancy and volunteered to participate in the study (n=359) were included in the research sample.

The women who had a risky pregnancy period, had multiple pregnancies and had a planned or emergency cesarean section were excluded from the study.

The data were collected using the “Descriptive Characteristics Questionnaire,” “Attitude Questionnaire towards the Labor Mirror”.

Descriptive Characteristics Questionnaire: The questionnaire prepared by the researchers in the light of their clinical experience and the relevant literature review, consisting of 7 questions to determine the socio-demographic and obstetric characteristics of pregnant women.

Attitude Questionnaire towards the Labor Mirror: The questionnaire prepared by the researchers the relevant literature review [8], [9], [13], consisting of 16 statements designed to identify pregnant women’s attitudes toward the use of labor mirrors during labor. The Questionnaire included some images displaying the types of labor mirrors set up on the labor bed, installed on the ceiling of the delivery room, and used mobile with hand.

The research data were collected by the researcher via the face-to-face interview technique at the delivery room, between August and November 2019. The Descriptive Characteristics Questionnaire was filled by the researcher in line with the participant’s answers. The Attitude Questionnaire towards the Labor Mirror was completed by the participant herself. Verbal and written information was given to the participants about the purpose of the study, that

their information would be confidential, that they could leave the study at any time, and that their participation was voluntary. It took each participant pregnant woman approximately 10-15 minutes to fill in the questionnaire form. After the data set was created, the questionnaire forms were stored in a locked in the researcher’s cabinet.

The responses were analyzed using the Statistical Package for the Social Sciences (SPSS) Version 21.0. Descriptive statistics, including mean (M) and standard deviation (SD) were used to describe “age” which was one of the sociodemographic variables. Other responses to all questions are reported as frequencies and percentages.

Before starting to collect data for the research, the ethical endorsement was obtained from the Non-Invasive Clinical Trials Ethics Committee of a university (KÜ GOKAEK 2019/241), and also, written permission was received from the institution where the research was conducted. The principles of the Declaration of Helsinki were respected while the study was being carried out. The participants were informed that the confidentiality of their data would be respected, they were free to withdraw from the research any time they wished to do so, and the participation in the research was voluntary, and next, they were asked to consent to participate in the study.

III. RESULTS

Table 1 displays the participant pregnant women’s socio-demographic and obstetric characteristics. It was identified that the participant pregnant women had a mean age of 27.04 ± 5.83 years, most of them were primary school graduates, were working, and lived in the district, and nearly all of them had an income equaling their expenses. Moreover, upon the review of participant pregnant women’s obstetric characteristics, it was discerned that 34.5% of them had their second pregnancy and 39.6% of them had given birth once before.

When participant pregnant women were asked whether they had heard about the labor mirror before, all of them said that they had never heard about it before.

Table 2 exhibited the data on the agreement of participant pregnant women with statements about the use of labor mirrors in the survey form. In this respect, it was found that the participant pregnant women mostly disagreed with positive statements about the use of labor mirrors whilst they agreed more with negative statements about the use of labor mirrors.

Table 1. Participant pregnant women’s socio-demographic and obstetric characteristics (N = 359)

Socio-demographic and obstetric characteristics	Mean±SD	Min-Max
Age	27.04±5.83	18-45
	n	%
Education level		
Primary school	262	73,0

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Secondary school	83	23,1
University or higher education	14	3,9
Employment status		
Working	320	89,1
Not working	39	10,9
Place of residence		
Village	51	14,2
Town	16	4,5
District	291	81,1
Province center	1	0,3
Income level		
Income below expenses	27	7,5
Income equaling expenses	329	91,6
Income above expenses	3	0,8
Gravidity		
1	82	22,8
2	124	34,5
3	87	24,2
4 or above	66	18,3
Parity		
0	94	26,2
1	142	39,6
2	81	22,6
3	32	8,9
4 or above	10	2,8

Table 2. Data on the agreement of participant pregnant women with statements in the survey form about the use of perineal mirrors

	NO	STATEMENTS	I disagree		Neither agree nor disagree		I agree	
			n	%	n	%	n	%
POSITIVE STATEMENTS	1	If I am offered a perineal mirror for use during labor, I will be pleased.	18	52,6	10	29,2	65	18,1
	2	When I can see what is going on via the mirror, I can push the baby down much better.	28	79,1	75	20,1	0	0
	3	It is nice to see the baby’s head coming out via the mirror, and when I need to push the baby down, the mirror helps me visualize the process.	32	90,8	33	9,2	0	0
	4	I think that the mirror is empowering.	18	51,3	17	48,7	0	0
	5	The mirror does not only help me push the baby down, also, seeing what I do via the mirror can motivate me even more.	31	86,6	48	13,4	0	0
	6	Seeing how I progress in pushing the baby down while straining can motivate me.	18	51,0	17	49,0	0	0
	7	At the instant when I am supposed to see my baby’s head coming out via the mirror, I strain and push more regularly and get more motivated.	23	66,0	12	34,0	0	0
	8	I may not know how I am supposed to strain and push, and so the mirror can help me with what to do.	29	83,3	60	16,7	0	0

NEGATIVE STATEMENTS							
1	I need nothing to help me push down the baby.	34	9,5	11 1	30,9	21 4	59,6
2	It is a good idea, but I cannot use the mirror.	38	10,6	15 3	42,6	16 8	46,8
3	I cannot dare to use the mirror.	49	13,6	15 3	42,6	15 7	43,7
4	Seeing my baby’s head coming out via the mirror affects my straining and pushing negatively, I can stop straining and pushing.	52	14,5	16 8	46,8	13 9	38,7
5	I think that this will frighten me too much, I do not want to see what is going on over there.	4	1,1	62	17,3	29 3	81,6
6	If I witness the moment of birth, I can be afraid of my own body.	2	0,6	5	1,4	35 2	98,1
7	During labor, I do not want to see my perineum.	15 2	42,3	11 9	33,1	88	24,5
8	The less I see my perineum, the better off I will be.	1	0,3	33	9,2	32 5	90,5

IV. DISCUSSION

In the relevant literature, it is known that the labor mirror is utilized to enhance the mother’s power to push the baby by enabling the mother to observe the baby’s descent and visualize the progress of birth [14]. However, the labor mirror used in numerous countries across the world is not used in conventional and contemporary midwifery practices in Turkey. Also, the use of labor mirror is not present in research studies and course books about birth-aiding tools and the use of these materials.

In the current study, as per pregnant women’s views about the use of the labor mirror in the second stage of labor, it was discerned that none of the pregnant women had ever heard about the labor mirror before. In the education of midwives in Turkey, the prospective midwives are lectured about several birth-aiding non-pharmacological methods and are equipped with skills to use these methods. However, there is no lecture about the use of labor mirror. The reason for this may be that the use of a labor mirror is not common in Turkey. It is known that, in prenatal classes, midwives introduced birth-aiding methods to prospective mothers and ensured that the prospective mothers acquired experience in using these methods. The finding that the pregnant women had never heard about the labor mirror before in Turkey is an expected result as the labor mirror was not known and not used also by midwives in Turkey. Additionally, there was no scientific study about the use of labor mirrors in Turkey. Besides, even if it is known that there are certain countries where the labor mirror is used in the delivery room, the number of studies about the use of labor mirrors is quite small in the relevant literature [13].

Doyle et al. (2016) conducted a study on 500 postpartum women in a tertiary perinatal center in the United States, examining the frequency of use of the labor mirror in the second stage of labor and the experience of women using a labor mirror. As a result of the study, the researchers stated

that the labor mirror was offered to 39.6% of the participants for use in the second stage of labor and only 28% of these participants accepted this offer [8]. In the current study, one-fifth of the participant pregnant women told that they would be pleased if they were offered a labor mirror for use during labor. It is considered that this finding may have been obtained in the current study since the participants had had no information about the labor mirror before.

In the current research, it was found that the participant pregnant women disagreed with all positive statements about the use of labor mirrors in the second stage of labor. In the study by Doyle and colleagues, researchers found that using labor mirrors during labor enabled 53% of pregnant women to focus on pushing the baby down, and helped 55.5% have a positive birth experience [8]. As a result of the study by Becerra-Maya and colleagues, in which they aimed to determine the attitudes of women and their spouses about mirror use in the second stage of labor, they reported that primiparous pregnant women and their spouses evaluated the use of a labor mirror positively in the second stage of labor. [13]. In another quasi-experimental design study by Palompon and colleagues analyzing the effect of visual biofeedback on the duration of the second stage of labor, the researchers identified two groups as experimental and control. In the study, visual biofeedback was provided to the experimental group with a labor mirror in the second stage of labor, and no intervention was made to the control group. As a result of the study, the researchers reported that there was a statistically significant difference between the experimental and control groups and that the second stage of birth was shorter in the group that used the labor mirror during birth [9]. Purnama and colleagues conducted a post-test control group design study to determine the effect of labor camera use on the second stage of labor in primiparous pregnant women who presented to an independent midwife's practice in Indonesia. As a result of the study, the

researchers reported that the intervention group had a shorter birth time than the control group [15]. The results of studies in the relevant literature show that the use of labor mirrors in the second stage of labor created a positive childbirth perception, was effective in shortening the second stage of labor, provided the midwife with an angle of view in upright birth positions, increased woman’s power to push the baby in a controlled manner, and had a low cost. Unlike the findings in the relevant literature, the finding of the current study that the participant pregnant women did not agree with statements about the use of labor mirrors in the second stage of labor captures attention. It is considered that this finding may have been obtained in the current study as participant pregnant women had no information about the use of labor mirrors.

In the current research, it was discerned that nearly all pregnant women agreed with the negative statement, “If I witness the moment of birth, I can be afraid of my own body.”. It is known that numerous factors affected women’s childbirth fears [16]. In the meta-analysis conducted by Wigert et al. on 14 qualitative research studies that analyzed women’s childbirth fears and experiences, the childbirth fear was described via the metaphor of being at a point with no return [17]. Besides, in the meta-analysis, it was stated that “being forced to face fear” was one of the themes coming to the fore. It is admitted that the avoidance response could be the most effective strategy utilized to cope with fear and stress. The possibility to witness the moment of birth via the labor mirror can tempt pregnant women to give avoidance responses to prevent being faced with a stressful reality [13]. In the current research, the childbirth fear can explain the high percentage of participant pregnant women who agreed with statements putting forward that witnessing the moment of birth via a mirror would frighten them.

There were some limitations in our study. The questionnaire was not externally verified as it was created by the researchers. Closed-ended questions were generally used in the questionnaire, and women's views could be understood more clearly with open-ended questions.

V. CONCLUSION

According to the findings obtained in this research, it was discerned that the participant pregnant women had never heard about the labor mirror before, and a high percentage of them agreed with negative statements about the use of labor mirrors in the second stage of labor. During pregnancy, the women should be informed about the use of labor mirrors, and they should be provided with the choice to use this mirror or not. Prospective studies that will analyze the midwives’ views about the use of labor mirrors during labor can be planned.

REFERENCES

1. Bossano CM, Townsend KM, Walton AC, et al. The maternal childbirth experience more than a decade after delivery. *Am J Obstet Gynecol* 2017; 217: 342.e1-342.e8.
2. Berta M, Lindgren H, Christensson K, et al. Effect of maternal birth positions on duration of second stage of labor: Systematic review and meta-analysis. *BMC Pregnancy Childbirth* 2019; 19: 1–8.
3. Huang J, Zang Y, Ren LH, et al. A review and comparison of common maternal positions during the second-stage of labor. *Int J Nurs Sci* 2019; 6: 460–467.
4. Gilboa Y, Frenkel TI, Schlesinger Y, et al. Visual biofeedback using transperineal ultrasound in second stage of labor. *Ultrasound Obstet Gynecol* 2018; 52: 91–96.
5. Shmueli A, Salman L, Orbach-Zinger S, et al. The impact of epidural analgesia on the duration of the second stage of labor. *Birth* 2018; 45: 377–384.
6. Taheri M, Takian A, Taghizadeh Z, et al. Creating a positive perception of childbirth experience: Systematic review and meta-analysis of prenatal and intrapartum interventions. *Reprod Health* 2018; 15: 1–13.
7. Martins ACM, Giugliani ERJ, Nunes LN, et al. Factors associated with a positive childbirth experience in Brazilian women: A cross-sectional study. *Women and Birth* 2021; 34: e337–e345.
8. Doyle J, Lyzen A, McCarroll M, et al. Maximizing maternal birth experience through the use of a labor mirror. *J Pregnancy Child Heal* 2016; 3: 5–10.
9. Palompon D, Bono DM, Pastrano M, et al. Visual Biofeedback: Adjunct Mirror Intervention during Stage Two Labor among Primiparous Women. *Asian J Heal* 2011; 1: 204–216.
10. Aktaş S, Öztürk Can H. Birth centers: Canada impressions. *Gümüşhane Univ J Heal Sci* 2019; 8: 474–480.
11. Gupta J, Sood A, Hofmeyr G, et al. Position in the second stage of labour for women without epidural anaesthesia. *Cochrane Libr*. Epub ahead of print 2017. DOI:10.1002/14651858.CD002006.pub4.www.cochranelibrary.com.
12. Cvetković Vega A, Maguiña JL, Soto A, et al. Cross-sectional studies. *Rev la Fac Med Humana* 2021; 21: 164–170.
13. Becerra-Maya EJ, Lapuente-Jambrina G, Alonso-Ortego VM. Use of the mirror in the second stage of labor: Evaluation by means of semantic differential. *Index de Enfermería* 2011; 20: 6p.
14. Lin YC, Gau ML, Kao GH, et al. Efficacy of an ergonomic ankle support aid for squatting position in improving pushing skills and birth outcomes

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during the second stage of labor: A randomized controlled trial. *J Nurs Res* 2018; 26: 376–384.

15. Purnama Y, Dewiani K, Yusanti L. Effect of labor camera on the duration of the second stage labor in primipara. *Glob Med Heal Commun* 2021; 9: 103–109.
16. Nilsson C, Hessman E, Sjöblom H, et al. Definitions, measurements and prevalence of fear of childbirth: A systematic review. *BMC Pregnancy Childbirth* 2018; 18: 1–15.
17. Wigert H, Nilsson C, Dencker A, et al. Women’s experiences of fear of childbirth: a metasynthesis of qualitative studies. *Int J Qual Stud Health Well-being*; 15. Epub ahead of print 2020. DOI: 10.1080/17482631.2019.1704484.