

## ORIGINAL ARTICLE

# Identification of the Factors Affecting the Traumatic Childbirth Perceptions and Normal Delivery Beliefs of the Primiparas

## Primiparaların Travmatik Doğum Algısı ve Normal Doğum İnançlarını Etkileyen Faktörlerin Belirlenmesi

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### ABSTRACT

**Objective:** This study was carried out to determine the factors affecting the traumatic childbirth perception and normal delivery beliefs of the primiparous women.

**Method:** This cross-sectional study was conducted with 414 pregnant women who applied to the public hospital in a province in the south of Türkiye. The data of the study were collected with the "Pregnant Introductory Form", "Scale of Traumatic Childbirth Perception" and "Belief Scale for Normal Delivery".

**Results:** It was found that pregnant women living in the city had higher traumatic childbirth perceptions, and their normal delivery beliefs were higher. It was determined that pregnant women who had the desired pregnancy, planned normal delivery, received information about childbirth, and exercised regularly during pregnancy had higher normal delivery beliefs, and as the gestational weeks progressed, the traumatic childbirth perception increased.

**Conclusion:** In line with the results of this study, considering the risk factors that may create the traumatic childbirth perceptions and negatively affect the normal delivery beliefs of pregnant women, it is recommended that childbirth preparation classes be individualized in line with the needs of pregnant women, expanded and accessible to all pregnant women.

**Keywords:** Pregnant, Normal delivery belief, Primipara, Traumatic childbirth perception

### ÖZ

**Amaç:** Bu araştırma primiparaların travmatik doğum algısı ve normal doğum inançlarını etkileyen faktörlerin belirlenmesi amacıyla yapılmıştır.

**Yöntem:** Kesitsel nitelikteki bu araştırma Türkiye'nin güneyinde bulunan bir ildeki bir kamu hastanesine başvuran 414 gebe ile gerçekleştirilmiştir. Araştırmanın verileri "Gebe Tanıtım Formu", "Travmatik Doğum Algısı Ölçeği" ve "Normal Doğuma İnanç Ölçeği" ile toplanmıştır.

**Bulgular:** Kentte yaşayan gebelerin travmatik doğum algıları ile normal doğum inançlarının daha yüksek olduğu belirlenmiştir. İstenilen bir gebelik yaşayan, normal doğum planlayan, doğuma ilişkin bilgi alan ve gebelikte düzenli egzersiz yapan gebelerin normal doğum inançlarının daha yüksek olduğu ayrıca gebelik haftaları arttıkça gebelerin travmatik doğum algılarının arttığı belirlenmiştir.

**Sonuç:** Bu araştırma sonuçları doğrultusunda gebelerde travmatik doğum algısı oluşturabilecek ve normal doğum inançlarını olumsuz yönde etkileyebilecek risk faktörleri göz önünde bulundurularak doğuma hazırlık sınıflarının gebelerin ihtiyaçları doğrultusunda bireyselleştirilmesi, yaygınlaştırılması ve tüm gebeler için erişilebilir olması önerilmektedir.

**Anahtar Kelimeler:** Gebe, Normal doğum inancı, Primipara, Travmatik doğum algısı

### Introduction

Although childbirth, which is a physiological event, is seen as a normal part of life by most societies, it is one of the most important and special experiences of life, which can sometimes contain risks (1). This experience can vary according to women's beliefs, perceptions, and the way they make sense of and interpret events (2). While the perception of childbirth is described as a wonderful and exciting experience for some women, it is described as a negative traumatic experience for others (2, 3). Although it differs between individuals, the women's perspectives on childbirth can be affected by many factors such as their personality traits, birth experience, cultural values of the society they live in, the interventions applied during childbirth, and the attitudes and behaviors of healthcare professionals (2,

4). Having a positive perception of childbirth affects the woman's childbirth process positively, reduces the fear of childbirth and the use of pharmacological methods in childbirth, increases the rates of normal delivery, and decreases cesarean section requiring interventions. In addition, positive perception increases the postpartum satisfaction levels of women, contributing to a stronger bond between mother and baby, and developing a positive perspective for the next birth (5-8). However, a woman with traumatic childbirth perception may perceive delivery at any time during her childbearing age as a threat of death or injury for both herself and her baby (9). The incidence of traumatic childbirth perception varies in the literature. Aktaş (10) found that 23.6% of pregnant women and Türkmen et al. (11),

on the other hand, reported that 68.6% of women in the postpartum period had the traumatic childbirth perception while Yıldırım & Bilgin (12) in their study with pregnant women found that the traumatic childbirth perception scale's mean score was higher in pregnant women in the high-risk group than in the low-risk group.

Another important factor related to the perspective of pregnant women about the childbirth is their normal delivery beliefs (13). Normal delivery has many positive effects such as rapid recovery of the mother, less medical and surgical interventions, early discharge, and it contributes to the national economy by reducing the cost per capita (14, 15). However, especially primiparas whose delivery is approaching may be worried about determining the mode of delivery (16). One of the most important reasons for this is that primiparas do not have their own childbirth experiences and that other women are affected by their childbirth experiences (17). World Health Organization (WHO) reported the worldwide cesarean section rate as 17% in 2015 (18). In Türkiye, the cesarean rate in 2021 was reported as 58.4%, and the primary cesarean section rate was 29.1%. The data presented that at least one out of every two women had a cesarean section in Türkiye (19). In the literature, there are studies showing that primiparas prefer cesarean section as a mode of delivery and that women experience more fear of normal delivery (3, 20, 21). In order to reduce the prevalence and side effects of cesarean section, it is necessary to raise awareness of pregnant women. It is expected that higher awareness, and therefore a correct attitude toward normal delivery would significantly affect the mother's preferences in deciding the mode of delivery (22).

In the present study, it was aimed to determine the factors affecting the traumatic childbirth perceptions and normal delivery beliefs of primiparas, and the results obtained would contribute to the evaluation of the childbirth perspectives of primiparas and to the planning of appropriate birth preparation programs by midwives. For this purpose, the questions of (1) What are the primiparas' traumatic childbirth perceptions?, (2) What are the primiparas' normal delivery beliefs?, and (3) Do primiparas' sociodemographic and obstetric characteristics affect their traumatic childbirth perceptions and normal delivery beliefs? were tried to be answered.

## Materials and Methods

### Design

This cross-sectional study was performed at a public hospital in the south of Türkiye between February and April 2022.

### Population/Sample

The population of the study consisted of pregnant women who applied to the Non Stress Test (NST) unit of a public hospital in a province in the south of Türkiye. The minimum number of pregnant women to be included in the study was calculated based on a study

that evaluated the traumatic childbirth perceptions of pregnant women before (10). In the analysis based on the data of this study, the sample size was calculated as 326 pregnant women by taking G\*Power 3.1.9.2, power 0.95,  $\alpha=0.05$ , effect size 0.40. Considering the possible data losses (30%), 431 pregnant women were invited to the study. However, 17 primiparous women were not included in the study because they did not complete the scales, so the study was completed with 414 primiparous women.

### Study inclusion criteria

Primiparous women who were literate, had no a psychiatric illness, lack of pregnancy complications, had no communication barriers and voluntarily accepted to participate in the study were included.

### Study exclusion criteria

Pregnant women who did not complete the questionnaire form and had cesarean section indication were excluded from the study.

### Measures

In the data collection, "Pregnant Introductory Form", "Scale of Traumatic Childbirth Perception" and "Belief Scale for Normal Delivery" were used.

### Pregnant Introductory Form

In the form prepared by the researchers by scanning the literature, there were 16 questions including the participants' socio-demographic and the obstetric characteristics (e.g., age, educational level, perceived income level, family type, residency, planned/desired pregnancy, gestational week, planned mode of delivery, receiving information about childbirth etc.) (21-25).

### Scale of Traumatic Childbirth Perception (STCP)

The STCP was developed by Yalnız et al. (26), and the scale's Cronbach's alpha internal consistency coefficient was found as .89. The STCP is an 11-point Likert-type scale consisting of 13-items and one dimension. Each item in the scale is scored between 0-10 and there is no item to be reverse scored. The lowest 0 and the highest 130 points can be obtained from the scale. The scale's total score ranges from '130-105' indicates very high, '104-79' indicates high, '78-53' indicates medium, '52-27' indicates low and '26-0' indicates very low traumatic childbirth perception. The increase in the scores obtained from the STCP increases the level of traumatic childbirth perception (26). In the present study, the STCP's Cronbach's alpha internal consistency coefficient was calculated as .87.

### Belief Scale for Normal Delivery (BSND)

The BSND was developed by İbici Akça & Aksoy Derya (25) in line with the model of health beliefs and the scale's Cronbach's alpha internal consistency coefficient was found as .83. The scale analyzes the beliefs and tendencies of pregnant women about normal delivery. The BSND consists of 6 subscales and 24 items. The subscales of BSND are perceived

sensitivity, perceived seriousness, perceived benefits, perceived barriers, perceived self-efficacy and health motivation. The items in the scale are in the form of a 5-point Likert-type. Each item is scored from 5 (I totally agree) to 1 (I strongly disagree). All items belonging to the BSND's perceived barriers subscale are reverse scored. A score between 24 and 120 can be obtained from the scale. According to the scale total scores, the beliefs and tendencies of pregnant women regarding normal delivery are evaluated as low between 24 and 56, medium between 57 and 88, and high between 89 and 120. The increase in the scores obtained from the BSND increases the level of beliefs and tendencies of pregnant women about normal delivery (25). In the present study, the BSND's Cronbach's alpha internal consistency coefficient was calculated as .88.

### Data Collection

The data of the study was collected between 09:00 and 16:00 on weekdays within the specified date range. The study data were collected three days a week. First, the pregnant women were informed about the study, written consents were obtained from the pregnant women who agreed to participate in the study, and the pregnant introductory form was filled using face-to-face interview technique. Then, the pregnant women were informed about how to fill the STCP and BSND. They were provided to fill in these forms based on self-report. It took approximately 10-15 minutes for each participant to fill out all data collection forms.

### Analysis of the data

Analysis of the data were performed in a computer environment with the 'SPSS (Statistical Package for Social Sciences)' software version 25.0. In the analysis of the data, firstly, the Kolmogorov-Smirnov test was used to assess normality. For some variables, the data showed normal distribution while for others, it did not show normal distribution. Therefore, parametric tests were preferred for normally distributed data, and non-parametric tests were preferred for non-normal distributed data. Descriptive statistical methods (number, percentage distributions, mean, median, standard deviation) were used while evaluating the study data. Independent-samples t-test was used for the evaluation of normally distributed data between two groups. Kruskal Wallis test was employed in the evaluation of non-normal distributed data between more than two groups; One way ANOVA test was used in the evaluation of normally distributed data between more than two groups. Pearson correlation test was used in the evaluation of the relationship between continuous variables and normally distributed data. The results were analyzed at a  $p < 0.05$  significance level.

### Ethical considerations

In order to carry out the study, approval was obtained from the Medical Research Ethics Committee of the XXXXXX University (Session Number: 2022/07, Decision Number: 04, Date: February 15, 2022). Prior to the study,

written permission was obtained from the relevant institution where the study would be conducted, and informed consent was obtained from all pregnant women before the study.

### Results

The mean age of the pregnant women was  $22.84 \pm 3.33$  (min: 17, max: 43), and the mean age of their spouses was  $27.35 \pm 3.35$  (min: 18, max: 39). It was determined that 45.7% of the pregnant women were high school graduates, 91.3% of them were unemployed, 61.6% perceived their income as "moderate", 83.6% had core families and 69.3% were living in the city. In Table 1, some sociodemographic characteristics of the pregnant women and their total mean scores from the STCP and BSND are compared. A statistically significant difference was found between the residency of the pregnant women and the total mean scores of the STCP and BSND. The total mean scores of the pregnant women living in the city from the STCP and BSND were statistically significantly higher than those living in the rural areas ( $p < 0.05$ ;  $p < 0.001$ ). No statistically significant difference was found between the educational level, employment status, perceived income level, family type variables of the pregnant women, and the total mean scores of the STCP and BSND ( $p > 0.05$ ) (Table 1).

The mean gestational week of the pregnant women was  $35.84 \pm 4.62$  (min: 10, max: 40). It was determined that 76.3% of the pregnant women planned pregnancy, 83.8% had the desired pregnancy, 8.7% had experienced abortion/curettage before, and 88.4% planned normal delivery. It was determined that 69.1% of the pregnant women received information about the childbirth, 88.2% of them felt ready to become a mother, 25.6% exercised regularly during pregnancy. In Table 2, some obstetric characteristics of the pregnant women and their total mean scores from the STCP and BSND are compared. A statistically significant difference was found between the pregnant women who had a desired pregnancy, a planned delivery method, the status of receiving information about the childbirth and regular exercises during the pregnancy, and the BSND total mean scores. The BSND total mean scores of the pregnant women who had the desired pregnancy, planned normal delivery, received information about childbirth, and exercised regularly during pregnancy were statistically significantly higher than the others ( $p < 0.05$ ). There was no statistically significant difference between having a planned pregnancy, experiencing miscarriage/curettage, and feeling ready to become a mother, and the STCP and BSND total mean scores ( $p > 0.05$ ) (Table 2).

The total mean score of the pregnant women from STCP is  $57.85 \pm 21.73$ . The mean total score of the pregnant women from the BSND is  $81.13 \pm 11.33$ , from the BSND's subscale of "perceived sensitivity" is  $10.40 \pm 2.82$ , from the BSND's subscale of "perceived seriousness" is  $14.44 \pm 3.13$ , from the BSND's subscale of "perceived benefits" is  $14.94 \pm 3.37$ , from the BSND's subscale of "perceived barriers" is  $14.76 \pm 4.78$ , from

**Table 1.** The distribution of the mean scores of the Scale of Traumatic Childbirth Perception and the Belief Scale for Normal Delivery according to the sociodemographic characteristics of the pregnant women (n=414)

Sociodemographic Characteristics			STCP		BSND	
Educational Level	n	%	Med	Test and p values	Med	Test and p values
			(%25-%75)		(%25-%75)	
Literate	10	2.4	53.5 (29.0-73.5)	X <sup>2</sup> =1.692 p=0.792	85.5 (79.2-88.7)	X <sup>2</sup> =3.966 p=0.411
Primary School	46	11.1	58.5 (37.5-71.2)		78.0 (72.7-87.5)	
Middle School	116	28.0	59.5 (41.5-76.0)		80.5 (76.0-89.0)	
High School	189	45.7	58.0 (46.0-74.0)		81.0 (74.0-87.5)	
University or above	53	12.8	56.0 (46.5-69.0)		84.0 (73.0-91.0)	
Employment Status	n	%	$\bar{x}\pm SD$	Test and p values	$\bar{x}\pm SD$	Test and p values
Employed	36	8.7	58.31±19.17	t=0.131	78.69±17.04	t=-0.922
Unemployed	378	91.3	57.81±21.98	p=0.896	81.36±10.63	p=0.362
Perceived Income Level	n	%	$\bar{x}\pm SD$	Test and p values	$\bar{x}\pm SD$	Test and p values
Income less than expenses	119	28.7	58.14±22.81	F=0.329 p=0.720	80.18±11.34	F=0.793 p=0.453
Income is equal to expenses	255	61.6	58.13±21.84		81.68±11.20	
Income is more than expenses	40	9.7	55.20±17.64		80.43±12.14	
Family Type	n	%	$\bar{x}\pm SD$	Test and p values	$\bar{x}\pm SD$	Test and p values
Core	346	83.6	58.10±20.96	t=0.461	81.11±11.48	t=-0.095
Extended	68	16.4	56.59±25.43	p=0.646	81.25±10.60	p=0.924
Place of Residency	n	%	$\bar{x}\pm SD$	Test and p values	$\bar{x}\pm SD$	Test and p values
City	287	69.3	59.42±21.58	t=2.213	82.67±10.69	t=4.227
Rural	127	30.7	54.31±21.74	<b>p=0.027</b>	77.66±11.99	<b>p=0.000</b>
<b>Mean Age</b>	22.84±3.33 (min:17, max:43)					
<b>Mean Age of the Spouses</b>	27.35±3.35 (min:18, max:39)					

$\bar{x}$  = Mean, SD= Standard Deviation, Med=Median, t=independent samples t test, F=one way ANOVA, X<sup>2</sup>= Kruskal Wallis test, STCP= The Scale of Traumatic Childbirth Perception, BSND= Belief Scale for Normal Delivery

**Table 2.** The distribution of the mean scores of the Scale of Traumatic Childbirth Perception and the Belief Scale for Normal Delivery according to the obstetric characteristics of the pregnant women (n=414)

Obstetric Characteristics			STCP		BSND	
The Status of Having a Planned Pregnancy	n	%	$\bar{x}\pm SD$	Test and p values	$\bar{x}\pm SD$	Test and p values
Planned	316	76.3	57.60±20.67	t=-0.378	81.72±11.11	t=1.901
Unplanned	98	23.7	58.65±24.95	p=0.706	79.23±11.87	p=0.058
The Status of Having a Desired Pregnancy	n	%	$\bar{x}\pm SD$	Test and p values	$\bar{x}\pm SD$	Test and p values
Desired pregnancy	347	83.8	58.43±21.55	t=-1.223	81.86±11.20	t=-3.017
Unintended pregnancy	67	16.2	54.88±22.56	p=0.222	77.34±11.30	<b>p=0.003</b>
Experiencing Miscarriage/ Curettage	n	%	$\bar{x}\pm SD$	Test and p values	$\bar{x}\pm SD$	Test and p values
Experienced	36	8.7	55.11±23.77	t=0.792	78.78±15.62	t=0.968
Non experienced	378	91.3	58.11±21.54	p=0.429	81.35±10.83	p=0.339
Planned Mode of Delivery	n	%	$\bar{x}\pm SD$	Test and p values	$\bar{x}\pm SD$	Test and p values
Normal Delivery	366	88.4	57.75±22.10	t=-0.262	81.84±10.92	t=3.575
Caesarean section	48	11.6	58.63±18.86	p=0.794	75.71±12.96	<b>p=0.000</b>
Receiving Information About Childbirth	n	%	$\bar{x}\pm SD$	Test and p values	$\bar{x}\pm SD$	Test and p values
Informed	286	69.1	58.86±20.02	t=1.296	82.29±11.14	t=3.146
Uninformed	128	30.9	55.60±25.08	p=0.196	78.54±11.36	<b>p=0.002</b>
Feeling Ready to Become a Mother	n	%	$\bar{x}\pm SD$	Test and p values	$\bar{x}\pm SD$	Test and p values
Ready	365	88.2	57.83±20.71	t=-0.40	81.34±10.86	t=1.039
Unready	49	11.8	58.00±28.50	p=0.969	79.55±14.41	p=0.299
Exercising Regularly During Pregnancy	n	%	$\bar{x}\pm SD$	Test and p values	$\bar{x}\pm SD$	Test and p values
Present	106	25.6	56.95±20.47	t=-0.494	83.55±12.86	t=2.338
Absent	308	74.4	58.16±22.17	p=0.622	80.30±10.65	<b>p=0.021</b>
<b>Mean Gestational Week</b>	35.84±4.62 (min:10, max:40)					

$\bar{x}$ = Mean, SD= Standard Deviation, Med=Median, t=independent samples t test, F=one way ANOVA, X<sup>2</sup>= Kruskal Wallis test, STCP=The Scale of Traumatic Childbirth Perception, BSND= Belief Scale for Normal Delivery

the BSND's subscale of "perceived self-efficacy" is 14.86±3.26, from the BSND's subscale of "health motivation" is 11.74±2.48 (Table 3).

**Table 3.** Distribution of the mean scores of the pregnant women from the Scale of Traumatic Childbirth Perception, the Belief Scale for Normal Delivery, and its subscales (n=414)

Scales	$\bar{x}\pm SD$	Min-Max Values That Were Taken	Min-Max Values That Could Be Taken
<b>STCP</b>	57.85±21.73	6-118	0-130
<b>The BSND's Subscales</b>	Perceived Sensitivity	10.40±2.82	3-15
	Perceived Seriousness	14.44±3.13	4-20
	Perceived Benefits	14.94±3.37	4-20
	Perceived Barriers	14.76±4.78	6-29
	Perceived Self-efficacy	14.86±3.26	4-20
	Health Motivation	11.74±2.48	3-15
<b>BSND Total</b>	81.13±11.33	41-110	24-120

$\bar{x}$ = Mean, SD= Standard Deviation, STCP=The Scale of Traumatic Childbirth Perception, BSND= Belief Scale for Normal Delivery

In Table 4, the correlations between the gestational week, traumatic childbirth perception, and normal delivery beliefs of pregnant women were examined. There was a statistically significant positive and weak correlation between the gestational weeks of the pregnant women and the STCP total mean score ( $r=0.198, p<0.001$ ). According to these results, as the gestational week of pregnant women increased, the total mean score of STCP increased (Table 4).

**Table 4.** The correlations between the gestational week of pregnant women, the scale of traumatic childbirth perception, and the belief scale for normal delivery (n=414)

Variable	STCP	BSND
<b>Gestational week</b>		
<b>r</b>	0.198	0.026
<b>p</b>	<b>0.000</b>	0.591

$r$ =Pearson correlation, STCP=The Scale of Traumatic Childbirth Perception, BSND= Belief Scale for Normal Delivery

Table 5 presents the classification of the levels of traumatic childbirth perceptions of pregnant women according to their STCP total mean scores. It was determined that 43.5% of the pregnant women had a moderate level of traumatic childbirth perception (Table 5).

**Table 5.** Classification of the levels of traumatic childbirth perceptions of pregnant women according to their STCP total mean scores (n=414)

The levels of traumatic childbirth perception	n	%
Very low	40	9.7
Low	122	29.5
Moderate	180	43.5
High	65	15.7
Very high	7	1.6

Table 6 presents the classification of the levels of normal delivery beliefs of pregnant women according to their BSND total mean scores. It was determined that 72.7% of the pregnant women had a moderate

level of normal delivery beliefs, and 25.4% of them had a high level of normal delivery beliefs (Table 6).

**Table 6.** Classification of the levels of normal delivery beliefs of pregnant women according to the their BSND total mean scores (n=414)

The levels of normal delivery beliefs	n	%
Low	8	1.9
Moderate	301	72.7
High	105	25.4

### Discussion

Childbirth is an important experience in the lives of many women. This experience changes according to women's beliefs, perceptions, and the way they make sense of and interpret events (2). The results of the research conducted to determine the factors affecting the traumatic childbirth perceptions and normal delivery beliefs of primiparas were discussed with the relevant literature.

Women's perceptions of childbirth and the meaning they attribute to delivery may differ according to personal characteristics and cultural values (27, 28). Görgün (29) reported that although there was no statistically significant difference between the groups, the total mean score of the traumatic childbirth perceptions of pregnant women living in cities was higher than those living in rural areas (29). Similarly, in the present study, traumatic childbirth perceptions of pregnant women living in the city were found higher than those living in rural areas. In addition, it was determined in the current study that the normal delivery beliefs of pregnant women living in the city were higher than those living in rural areas. Pregnant women's health beliefs about childbirth are important factors in deciding the mode of delivery, and residency can affect women's preferences for mode of delivery (30-33). In the study of Temizkan & Mete (34) with primiparous women, it was determined that residency did not affect their preferences for mode of delivery, but it was established that the women who preferred normal delivery mostly lived in the city centers and districts. In the study of Elkin (35), on the other hand, the rate of normal delivery of women living in city centers/districts was found significantly higher. It was thought that the differences between the results might be due to the fact that the studies were conducted in regions with different cultural and social structures and with different sample groups.

Many medical, individual and socio-cultural factors significantly affect mothers' preferences of the mode of delivery. In the literature, it was clearly stated that the preference and recommendation of normal delivery by mothers would increase the rate of positive perception of normal birth in society (16). In the study, it was determined that the normal delivery beliefs were higher in pregnant women who had desired pregnancy, planned to have a normal birth, received information about birth, and exercised regularly during pregnancy. When the literature is examined, in the study of Temizkan & Mete (34) although there was no statistically significant difference between the groups,

it was determined that women who gave normal delivery had higher desired pregnancy levels. In the study of Vatansever & Okumuş (24), it was reported that 77.3% of the pregnant women wanted to have normal delivery, and in the study of Karabulutlu (23), 78.8% of the pregnant women preferred normal delivery. In the present study, it was stated that 72.7% of the pregnant women had moderate and 25.4% of them had a high level of normal delivery beliefs. Although the rates of those who had desired pregnancy and planned to have a normal delivery are high in the studies conducted in Türkiye, it is thought-provoking why the cesarean rates (58.4%) are so high (19). In line with these results, it is considered that it is necessary to evaluate the perspectives of women and their families about childbirth, inform them more about their childbirth preferences, and increase the positive support for normal delivery. In fact, in the present study, normal delivery beliefs of women who received information about normal delivery were higher. Likewise, Karabulutlu (23) reported in her study that 90.9% of women who preferred normal delivery received information about their birth preferences (23). Additionally, exercise is very effective in regulating the muscle activity required for childbirth (36). Exercise is effective in reducing both the complications that can be experienced in childbirth as well as the cesarean section rates and the use of analgesics (36). In the current study, it was found that pregnant women who exercised had higher normal delivery beliefs. Although no study was detected in the literature that examined the effects of the status of exercising regularly on the normal delivery beliefs, Sanda et al. (37) stated that women with high physical activity levels had lower cesarean rates; In their meta-analysis study, Poyatos-Leon et al. (38) reported that regular physical exercise increased the frequency of normal deliveries and decreased cesarean section rates when exercise was performed in the second and third trimesters.

Fear of childbirth in women increases as the gestational week progresses and the time of delivery approaches (39-41). Laursen et al. (41) stated that the fear of childbirth of pregnant women at the 31st gestational week was higher than those of the 16th gestational week, and Rouhe et al. (39) found that the fear of childbirth increased from the beginning of the 20th gestational week. Fear of childbirth causes women to perceive birth as trauma (2). In the present study, as the gestational weeks of the pregnant women increased, the traumatic childbirth perception scale's total mean score increased. Şahin (42) similarly reported in her study that the traumatic childbirth perception scale's total mean scores of pregnant women in the third trimester of pregnancy were higher than other pregnant women. The results of the current study demonstrate parallelism with the literature, and it is possible to say that the advancing gestational week is an important parameter in determining the traumatic childbirth perception.

## Conclusion

In the present study, it was determined that the normal delivery beliefs of those who lived in the city centers,

who had desired pregnancy, who planned normal delivery, who received information about birth, and who exercised regularly during their pregnancy were high. In addition, it was determined that the traumatic childbirth perception was higher in pregnant women living in the city centers, and the traumatic childbirth perception increased as the gestational week progressed.

In line with the research results; in order to increase normal delivery beliefs and to reduce the traumatic childbirth perception of pregnant women, it is recommended to expand childbirth preparation classes so that all pregnant women can obtain complete and reliable information about the preparation processes, taking into account the place factor they live in. Considering the possible effects of the advancing gestational week on the traumatic childbirth perception, it can be suggested that the childbirth preparation programs be individualized in line with the needs of the pregnant women by screening the pregnant women in terms of the traumatic childbirth perception in the early period. In addition, it is thought that it is important for midwives to provide information and counseling to pregnant women during prenatal follow-ups, including the benefits of exercise during pregnancy and delivery, and the importance of regular exercise.

## Limitations

The current study was conducted with primiparous women admitted to the NST unit of a hospital in Türkiye. Therefore, the findings cannot be generalized to all women. This study provides solid evidence to reveal the risk factors that may create the traumatic childbirth perceptions and negatively affect normal delivery beliefs of the primiparous women.

## Author Contributions

E.I.A: Conceptualization, Data curation, Investigation, Visualization, Writing - original draft, Writing - review & editing. N.G: Formal analysis, Investigation, Methodology, Supervision, Validation, Writing - original draft, Writing - review & editing. H.G.Ö: Formal analysis, Investigation, Methodology, Supervision, Validation, Writing - original draft

## Declarations

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