



# Postnatal Outcomes of the Traumatic Childbirth Perception: An Analysis of the Traumatic Childbirth Perception with Pregnancy Avoidance and Mental Health Outcomes

## Travmatik Doğum Algısının Doğum Sonu Sonuçları: Travmatik Doğum Algısının Gebelikten Kaçınma ve Mental Sağlık Sonuçlarının Analizi

Esra Guney<sup>1</sup>, Esra Karatas Okyay<sup>2</sup>, Tuba Ucar<sup>3</sup>

<sup>1</sup>Inonu University, Faculty of Health Sciences, Department of Midwifery, Malatya, Turkey

<sup>2</sup>Kahramanmaraş Sutcu Imam University, Faculty of Health Sciences, Department of Midwifery, Kahramanmaraş, Turkey

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### Abstract

**Aim:** Several postpartum outcomes of traumatic birth perception have been identified. However, the postpartum results could not be clarified. The study aims were to describe and compare the pregnancy avoidance and mental health outcomes in the women with and without traumatic childbirth perception and to infer which factors may influence the traumatic childbirth perception.

**Material and Methods:** This cross-sectional and comparative study was conducted with 1109 women who were in the 6-12 months of the postnatal period. The Scale of Traumatic Childbirth Perception (STCP), the Desire to Avoid Pregnancy (DAP) Scale, and the Depression Anxiety Stress Scale-21 were used in the collection of research data. In the study, the women with a moderate or higher level of traumatic childbirth perception (53 points or above) were categorized as 'childbirth perception traumatic'.

**Results:** In the study, 74.8% of the women obtained 53 points or above from the STCP. It was found that, of the women with traumatic childbirth perception, 46.4% exhibited depressive symptoms, 54.5% experienced anxiety, 41.1% had stress, and the mean of their DAP scores was 2.13±0.96. Women with traumatic birth perception were higher in avoiding depression, anxiety, stress and pregnancy ( $p<0.05$ ). The logistic regression analysis showed that the variables of being below the age of 30 years (OR=0.543), primiparity (OR=0.459), having depressive symptoms (OR=2.627), having anxiety (OR=1.752), and pregnancy avoidance (OR=1.701) were significant risk factors for traumatic childbirth perception.

**Conclusion:** It has been found that the perception of traumatic birth can lead to psychological problems and pregnancy avoidance in women.

**Keywords:** Anxiety, childbirth perception, depression, pregnancy avoidance, stress, trauma

### Öz

**Amaç:** Travmatik doğum algısının çeşitli postnatal sonuçları tanımlanmıştır. Ancak net değildir. Çalışmanın amacı doğum sonu dönemde travmatik doğum algısı olan ve olmayan kadınlarda gebelikten kaçınma ve mental sağlık sonuçlarını tanımlamak ve karşılaştırmak ve travmatik doğum algısını hangi faktörlerin etkileyebileceğini anlamaktır.

**Materyal ve Metot:** Kesitsel ve karşılaştırmalı tipte tasarlanan araştırma Türkiye'de, 15 Şubat- 15 Mart 2021 tarihleri arasında yürütüldü. Çalışmaya doğum sonu 6-12 ayda olan gönüllü 1109 kadın katıldı. Veriler sosyal medyada (Facebook, Instagram gibi) lohusa kadın grupları aracılığıyla web tabanlı bir çevrimiçi anket kullanılarak toplandı. Veriler toplanırken Kişisel Bilgi Formu, Travmatik Doğum Algısı Ölçeği (TDAÖ), Gebelikten Kaçınma Ölçeği (GKÖ) ve Depresyon Anksiyete Stres Ölçeği (DASÖ-21) kullanıldı. Çalışmada orta düzey ve üzeri travmatik doğum algısı olanlar (53 ve üzeri puan) "travmatik doğum algısı olanlar" olarak sınıflandırıldı.

**Bulgular:** Kadınların %74.8'i (n=830, travmatik doğum algısı olanlar) TDAÖ'den 53 ve üzeri puan aldı. Travmatik doğum algısı olanların %46.4'ünün depresif semptom, %54.5'inin, anksiyete ve %41.1'inin stres yaşadığı; GKÖ skorunun 2.13±0.96 olduğu belirlendi. Travmatik doğum algısı olan kadınların depresif semptom, anksiyete, stres ve gebelikten kaçınma olasılığının daha fazla olduğu belirlendi ( $p<0.05$ ). Lojistik Regresyon analizine göre kadınlarda 30 yaş altı olma (OR=0.543), primiparite (OR=0.459), depresif semptom varlığı (OR=2.627), anksiyete varlığı (OR=1.752) ve gebelikten kaçınma (OR=1.701) değişkenlerinin travmatik doğum algısı için önemli risk faktörleri olduğu saptandı.

**Sonuç:** Araştırma bulguları travmatik doğum algısının kadınlarda psikolojik sorunlara ve gebelikten kaçınmaya neden olabileceğini ortaya koymuştur.

**Anahtar Kelimeler:** Anksiyete, doğum algısı, depresyon, gebelikten kaçınma, stres, travma

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Corresponding Author: Esra Karatas Okyay, Kahramanmaraş Sutcu Imam University, Faculty of Health Sciences, Department of Midwifery, Kahramanmaraş, Turkey, E-mail: [esrakaratas44@hotmail.com](mailto:esrakaratas44@hotmail.com)

## INTRODUCTION

Childbirth serves as a critical role transition in the women's lives and is generally viewed as a positive occasion that changes the women's lives (1). Traumatic childbirth is, on the other hand, the case that the woman perceives the act of childbirth as a threat likely to lead to the injury or death of the infant to be born and herself (2). The women with traumatic childbirth experience define the moment of giving birth as a moment of helplessness, strong fear, and horror (1, 3). In relation to the prevalence of traumatic childbirth perception, various percentages are presented. Around 20-45% of the women state that they had a traumatic childbirth experience (4-6). The traumatic childbirth perception that is described as negative is the entire set of perceptions that come into play as a consequence of blending the childbirth theme created by the woman in her mind and all information acquired by her about childbirth with each circumstance that she is likely to experience during the act of giving birth (7). The traumatic childbirth perception is made up of thoughts, behaviors, information, and attitudes related to that the childbirth is quite bloody, painful, and terrifying incident (8).

The childbirth perception is affected by the woman's viewpoint about childbirth, personal characteristics, previous childbirth experience, and the cultural structure of the society (3). Also, tokophobia plays a quite crucial role in the formation of traumatic childbirth perception (2, 9). Having excessive anxiety and fear can have a negative effect on the woman both physically and emotionally, and thus, even if the woman wants to have a baby, she can avoid becoming pregnant and, accordingly, giving birth (10,11). To avoid pregnancy, particularly the women with tokophobia can prefer to use the birth-control family planning methods that have high rates of effectiveness (12,13).

If childbirth takes place as a negative experience for the women, the women can develop conflicting feelings (14). It was ascertained that, in the postnatal period, the traumatic experience was associated with anger, guilt, depression, and suicide (6, 15). In a qualitative study conducted with the participation of women experiencing childbirth trauma, it was put forward that the women had negative feelings such as fear, horror, and sadness during the process of childbirth (16).

The perception that childbirth which is a natural component of the female sexuality is a traumatic experience besides the psychological problems likely to be produced by this perception can lead to negative outcomes for the woman herself, her family, and the future generations (7). Having awareness about the variables that are associated with the traumatic childbirth perception in the woman can make it possible to take psychological initiatives at the early stage. Therefore, this study aimed to define and compare the pregnancy avoidance and mental health outcomes of the women with traumatic childbirth perception and the women with no traumatic childbirth perception in the postnatal period and to understand which factors were likely to affect the traumatic childbirth perception.

## MATERIAL AND METHOD

### Study design and setting

Designed as a cross-sectional and comparative study, the research was carried out in Turkey on 15 February - 15 March in 2021. The research data were collected with a web-based online survey form shared via puerperal women groups in social media (Facebook, Instagram, and so on). The survey form was created by using the application, Google Forms (Google LLC, Mountain View, CA, the USA), and the survey link was shared with the women through social media. The first page of the online survey form presented information on the aim and content of the research besides a form for the women to express consent to participate in the study. The women who consented to participate in the research and satisfied the required inclusion criteria were included in the study. The criteria prescribed for being included in the research were for the woman to be in the 6-12 months of the postnatal period, to be aged 18 years or above, and to have no complications developing in her or her newborn in the postnatal period. A total of 1132 women responded to the online survey. The survey forms with missing data, incomplete parts, or inaccurate coding were identified, and accordingly, 23 respondents were left out of the evaluations as their survey forms were deemed ineligible for evaluations. Thus, the research sample was comprised of 1109 women in total. In the research, upon the collection of research data, the women were categorized into two groups as per having traumatic childbirth perception. In this respect, the women who obtained 52 points or below from the Scale of Traumatic Childbirth Perception were categorized as 'childbirth perception non-traumatic' whereas the women who had 53 points or above were grouped as 'childbirth perception traumatic'. There were 279 women in the group categorized as 'childbirth perception non-traumatic' whilst 830 women were present in the group categorized as 'childbirth perception traumatic', and the data obtained from the two groups were compared.

### Measures

The research data were collected by using the Personal Information Form, the Scale of Traumatic Childbirth Perception (STCP), the Desire to Avoid Pregnancy (DAP) Scale, and the Depression Anxiety Stress Scale-21 (DASS-21).

### Personal Information Form

This form had questions designed to find out the women's socio-demographic and obstetric characteristics (age, education level, income level, employment status, marriage duration in years, method of childbirth, parity, pregnancy planning, and using contraceptive methods).

### STCP

Yalnız H, et al. (2016) developed the scale was to evaluate the traumatic childbirth perception levels of the women in the reproductive age and performed the study to

test its validity and reliability in Turkish (2). The scale is comprised of 13 questions aspiring to uncover the thoughts and feelings such as anxiety, fear, and worry that the woman has when she thinks of the childbirth concept. Each problem is scored from 0 (I am not afraid at all) to 10 points (I am extremely afraid). The minimum and maximum scores to be obtained by a respondent from the scale are respectively 0 and 130 points. The scores ranging from 0 to 26 points, from 27 to 52 points, from 53 to 78 points, from 79 to 104 points, and from 105 to 130 points successively refer to 'very low-level', 'low-level', 'moderate-level', 'high-level', and 'very high-level' traumatic childbirth perception. The Cronbach's alpha coefficient was found as 0.89 for the scale (2). The women with a medium or higher level of traumatic childbirth experience (53 points or above) were categorized as 'childbirth perception traumatic' in this current study. The Cronbach's alpha coefficient was calculated as 0.90 for the scale under the current study.

### DAP Scale

The scale was developed by Rocca, Ralph, Wilson, Gould, and Foster (2019) and the study to test its validity and reliability in Turkish was conducted by Karataş Okyay, Güney, and Uçar (2021) (17,18). The scale addresses a woman's future preferences about pregnancy and childbirth. Comprised of 14 items, the scale pertains to the woman's emotions and thoughts about becoming pregnant and childbirth. The items of the five-point Likert-type scale are scored as 0 (I strongly agree), 4 (I strongly disagree). Seven items of the scale are reverse-scored. After the scores calculated from the reverse-scored items are also converted into straight scores, they are added to the scores obtained from the straight-scored items. Subsequently, this sum is divided by 14 and hence, the final score is obtained. The minimum and maximum scores to be obtained from the scale are consecutively 0 and 4 points. A high score obtained from the scale shows that the woman has a high-level desire to avoid pregnancy. As per the analysis of internal consistency conducted to find out the reliability of the scale, the Cronbach's alpha coefficient was found as 0.94 for the scale (18).18 In this current study, the Cronbach's alpha coefficient was calculated as 0.94 for the scale.

### DASS-21

The DASS-21 is the measurement tool abridged from the 42-item scale that was developed by Lovibond and Lovibond to evaluate the individual's depression, anxiety, and stress levels (19). The study to test the validity and reliability of the scale in Turkish was performed by Sariçam (2018). The scale has three sub-scales, that is, depression, anxiety, and stress. Each sub-scale has seven items and thus, the overall scale has 21 items. The items of the four-point Likert-type scale are scored from 0 (Never) to 3 (Always). The scores obtained by a respondent from items under each sub-scale are summed

and the sum is evaluated as per a score range specific to each sub-scale. In this regard, the score ranges that are taken into consideration in the evaluations are exhibited in Table 1 (20).

**Table 1. DASS-21 Scoring Ranges**

Level	Depression	Anxiety	Stress
Normal	0-4	0-3	0-7
Mild	5-6	4-5	8-9
Moderate	7-10	6-7	10-12
Severe	11-13	8-9	13-16
Extremely severe	14+	10+	17+

DASS-21: Depression Anxiety Stress Scale

As the measure of internal consistency, the Cronbach's alpha coefficient was found successively as 0.87, 0.85, and 0.81 for the depression, anxiety, and stress sub-scales (20). Under this current study, the Cronbach's alpha coefficient was calculated consecutively as 0.79, 0.87, and 0.85 for the above DASS-21 sub-scales.

In this current study, the women were divided into two groups as per their depression, anxiety, and stress levels. The women who were deemed to have normal levels of depression, anxiety, and stress as per Table 1 were evaluated as 'having no depression', 'having no anxiety', and 'having no stress'. In this context, firstly, the women who obtained 0-4 points from the depression sub-scale were categorized as 'having no depression' while the women who obtained 5-21 points were categorized as 'having depression', secondly, the women who obtained 0-3 points from the anxiety sub-scale were categorized as 'having no anxiety' whilst the women who obtained 4-21 points were categorized as 'having anxiety', and thirdly, the women who obtained 0-7 points from the stress sub-scale were categorized as 'having no stress' whereas the women who obtained 8-21 points were categorized as 'having stress'.

### Statistical analysis

The research data were evaluated with SPSS 25.0 for Windows (SPSS, Chicago, IL, USA). The descriptive statistics were expressed as number, percentage, mean, and standard deviation. While analyzing the research results, the women who obtained 0-52 points from the STCP were categorized as 'childbirth perception non-traumatic' whereas the women who obtained 53-130 points from the STCP were characterized as 'childbirth perception traumatic'. The chi-squared test was used in the comparison of the categorical independent variables. In the evaluation of the continuous data, firstly, whether the variables were normally distributed was checked via the Kolmogorov-Smirnov test. As the data were normally distributed, independent samples t-test was utilized in the comparison of the two groups whilst one-way analysis of variance was employed in the comparison of multiple groups. The variables affecting the traumatic childbirth

perception in the women were evaluated with logistic regression analysis. In the context of identifying the variables to be considered under the regression model, the variables that had a statistically significant relationship ( $p < 0.05$ ) with the traumatic childbirth perception were included in the model. In this regard, the regression model covered the age, income level, parity, and the use of contraceptive methods together with the scales that identified the levels of depression, anxiety, stress, and pregnancy avoidance. The statistical significance was identified if the P-value was lower than 0.05.

### Ethical aspect of the research

Before collecting the research data, the ethical endorsement was obtained from the Health Sciences Non-Invasive Clinical Trials and Publications Ethics Committee (Endorsement no. 2021/1694). Upon getting information about the research on the first page of the survey form, the respondents were informed that the confidentiality of their personal data would be protected.

## RESULTS

In the context of this study, it was found that, of the women, 7.4% had very low-level traumatic childbirth perception ( $n=82$ ), 17.8% had low-level traumatic childbirth perception ( $n=197$ ), 30.4% had moderate-level traumatic childbirth perception ( $n=337$ ), 29.8% had high-level traumatic childbirth perception ( $n=331$ ), and 14.6% had very high-level traumatic childbirth perception ( $n=162$ ). In the study, 74.8% of the women obtained 53 points or above from the STCP ( $n=830$ , childbirth perception traumatic) whereas 25.2% of them had 52 points or below (Figure 1). On the basis of the STCP scores, Table 2 displayed the comparison of traumatic childbirth perception according to the characteristics of the women. It was discerned that the women who were aged 30 years or below, who had moderate/high-level income, who were primiparous, and who currently used contraceptive methods had higher frequencies of having 'childbirth perception traumatic' and the differences between the groups were statistically significant ( $p < 0.05$ , Table 2).

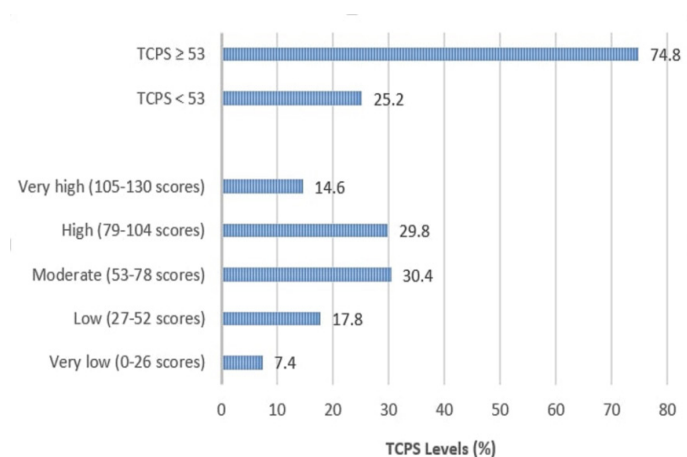


Figure 1. Women's Perception of Traumatic Childbirth Levels

Table 2. Comparison of traumatic childbirth perception (according level of STCP) according to the characteristics of the women ( $n=1109$ )

Characteristics	STCP < 53 score (n=279)		STCP ≥ 53 score (n=830)		Total (n=1109)		Test* and p value
	n	%	n	%	n	%	
<b>Age, y</b>							
≤30	112	40.1	422	50.8	534	48.2	$\chi^2=9.576$
>30	167	59.9	408	49.2	575	51.8	$p=0.002$
<b>Educational level, y</b>							
≤12	170	60.9	535	64.5	705	63.6	$\chi^2=1.121$
>13	109	39.1	295	35.5	404	36.4	$p=0.290$
<b>Income status</b>							
Low	6	2.2	45	5.4	51	4.6	$\chi^2=5.093$
Moderate/High	273	97.8	785	94.6	1058	95.4	$p=0.024$
<b>Employment status</b>							
Employed	79	28.3	204	24.6	283	25.5	$\chi^2=1.534$
Unemployed	200	71.7	626	75.4	826	74.5	$p=0.215$
<b>Marriage, y</b>							
≤5	100	35.8	330	39.8	430	38.8	$\chi^2=1.349$
≥6	179	64.2	500	60.2	679	61.2	$p=0.245$
<b>Mode of birth</b>							
Vaginal	165	59.1	489	58.9	654	59.0	$\chi^2=0.004$
Caesarean section	114	40.9	341	41.1	455	41.0	$p=0.948$
<b>Parity</b>							
Primipara	35	12.5	159	19.2	194	17.5	$\chi^2=6.325$
Multipara	244	87.5	671	80.8	915	82.5	$p=0.012$
<b>Planning to pregnancy</b>							
Yes	95	34.1	242	29.2	337	30.4	$\chi^2=2.364$
No	184	65.9	588	70.8	772	69.6	$p=0.124$
<b>Current contraceptive use</b>							
Yes	172	61.6	569	68.6	741	66.8	$\chi^2=4.491$
No	107	38.4	261	31.4	368	33.2	$p=0.034$

TCP. Traumatic Childbirth Perception, STCP. The Scale of Traumatic Childbirth Perception, \*chi-square test

On the basis of the STCP scores, Table 3 displayed the pregnancy avoidance and mental health outcomes of the traumatic childbirth perception. It was ascertained that 46.6% of the women with traumatic childbirth perception and 21.1% of the women with no traumatic childbirth perception exhibited depressive symptoms, 54.5% of the women with traumatic childbirth perception and 30.5% of the women with no traumatic childbirth perception had anxiety, 41.1% of the women with traumatic childbirth perception had stress, and the differences between the groups were statistically significant. Besides, it was identified that the women with traumatic childbirth perception had a higher mean of DAP Scale scores than the women with no traumatic childbirth perception (2.13±0.96 points vs. 1.73±0.99 points, p<0.001, Table 3).

**Table 3. Comparison of traumatic childbirth perception (according level of STCP) of women according to the DASS-21 and DAP (n=1109)**

Scales	STCP<53 score (n=279)		STCP≥53 score (n=830)		Total (n=1109)		Test* and p value
	n	%	n	%	n	%	
	<b>Depression</b>						
Yes (5-21 score)	59	21.1	385	46.4	444	40.0	$\chi^2=55.404$ p<0.001
No (0-4 score)	220	78.9	445	53.6	665	60.0	
<b>Anxiety</b>							
Yes (4-21 score)	85	30.5	452	54.5	537	48.4	$\chi^2=48.125$ p<0.001
No (0-3 score)	194	69.5	378	45.5	572	51.6	
<b>Stress</b>							
Yes (8-21 score)	71	25.4	341	41.1	412	37.2	$\chi^2=21.865$ p<0.001
No (0-7 score)	208	74.6	489	58.9	697	62.8	
	<b>Mean ± SD</b>		<b>Mean ± SD</b>		<b>Mean ± SD</b>		<b>Test** and p value</b>
<b>DAP score</b>	1.73±0.99		2.13±0.96		2.03±0.99		t=-5.974 p<0.001

\* chi-square test, \*\*Independent Samples t Test, SD: Standard Deviation, STCP. The Scale of Traumatic Childbirth Perception, DASS-21: Depression Anxiety Stress Scale, DAP. Desire to Avoid Pregnancy Scale

In the context of the model created with the variables that had a statistically significant relationship with traumatic childbirth perception as per the above bivariate analyses, the results of the logistic regression analysis were shown in Table 4. According to the results of the logistic regression analysis, it was identified that the variables of

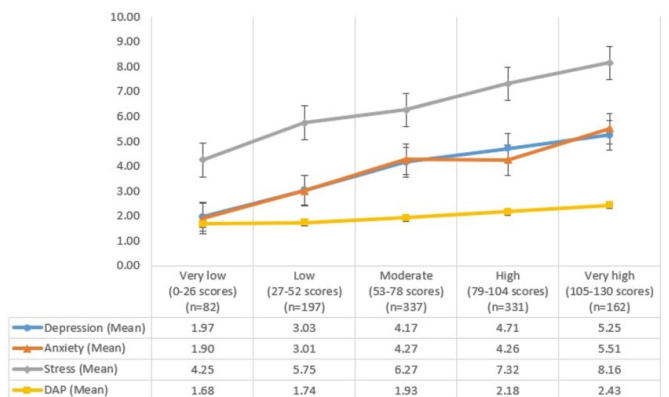
being below the age of 30 years (OR=0.543), primiparity (OR=0.459), exhibiting depressive symptoms (OR=2.627), having anxiety (OR=1.752), and pregnancy avoidance (OR=1.701) were significant risk factors for traumatic childbirth perception.

**Table 4. Logistic Regression Analysis of significant variables related to STCP**

	B	SE	df	P	OR	95% CI	
						Lower	Upper
<b>Age, y</b>							
≤30	(Reference)						
>30	-0.610	.165	1	<0.001	.543	.543	.750
<b>Income status</b>							
Moderate/ High	(Reference)						
Low	0.614	.467	1	0.188	1.848	.740	4.614
<b>Parity</b>							
Primipara	(Reference)						
Multipara	-0.780	.235	1	0.001	.459	.289	.727
<b>Current contraceptive use</b>							
Yes	(Reference)						
No	-0.201	.162	1	0.215	.818	.595	1.124
<b>Depression</b>							
Yes(5-21 score)	(Reference)						
No (0-4 score)	0.966	.180	1	<0.001	2.627	1.846	3.738
<b>Anxiety</b>							
Yes(4-21 score)	(Reference)						
No (0-3 score)	0.561	.173	1	<0.001	1.752	1.249	2.457
<b>Stress</b>							
Yes(8-21 score)	(Reference)						
No (0-7 score)	0.026	.184	1	0.886	1.027	.716	1.472
<b>DAP score<sup>a</sup></b>	0.531	.089	1	<0.001	1.701	1.430	2.023

a Numerical data were used, B: Regression Coefficient; SE: Standard Error; OR: Odds Ratio; CI: Confidence Interval. DAP: Desire to Avoid Pregnancy Scale

Figure 2 indicated the means of the women's depression, anxiety, stress, and DAP Scale scores as per their traumatic childbirth perception levels. The means of depression scores of the women with very low-level, low-level, moderate-level, high-level, and very high-level traumatic childbirth perception were successively  $1.97 \pm 2.11$ ,  $3.03 \pm 2.28$ ,  $4.17 \pm 3.15$ ,  $4.71 \pm 3.21$ , and  $5.25 \pm 3.40$  points, the means of anxiety scores of the women with very low-level, low-level, moderate-level, high-level, and very high-level traumatic childbirth perception were respectively  $1.90 \pm 2.78$ ,  $3.01 \pm 3.12$ ,  $4.27 \pm 3.76$ ,  $4.26 \pm 3.77$ , and  $5.51 \pm 3.98$  points, the means of stress scores of the women with very low-level, low-level, moderate-level, high-level, and very high-level traumatic childbirth perception were consecutively  $4.25 \pm 3.74$ ,  $5.75 \pm 4.19$ ,  $6.27 \pm 3.78$ ,  $7.32 \pm 4.16$ , and  $8.16 \pm 4.40$  points, and the means of the DAP Scale scores of the women with very low-level, low-level, moderate-level, high-level, and very high-level traumatic childbirth perception were successively  $1.68 \pm 0.97$ ,  $1.74 \pm 1.00$ ,  $1.93 \pm 0.91$ ,  $2.18 \pm 0.99$ , and  $2.43 \pm 0.92$  points. It was discerned that there were statistically significant differences in the means of the women's depression, anxiety, stress, and DAP Scale scores as per their STCP levels (respectively,  $F=25.886$ ,  $F=18.355$ ,  $F=18.124$ ,  $F=17.048$ ;  $p < 0.001$ , Figure 2).



**Figure 2.** Means of the participant women's depression, anxiety, stress, and DAP Scale scores as per their STCP levels

## DISCUSSION

In this study in which the women's traumatic childbirth perceptions were analyzed, it was found that approximately three fourth of the women (74.8%) had traumatic childbirth perceptions. In relation to the traumatic childbirth perception prevalence, various percentages are present. Just as the changes in these percentages are affected by a variety of factors, they can also be affected by the use of a different measurement tool. In the study by Alcorn et al. (2010), it was ascertained that 45.5% of the women characterized their childbirth experiences as traumatic according to the criteria outlined in the DSM-IV (Diagnostic and Statistical Manual of Mental Disorders, 4th Version) (6). The study by Boorman et al. (2014) found that 29.4% of the women satisfied the criteria for traumatic childbirth (11). In these two studies, the Posttraumatic Diagnostic Scale was utilized. In Turkey, until 2016, no scale measured the traumatic childbirth perception. The finding of this

current study is closer to the prevalence rate, 69.5%, that was obtained in the study performed by Aktaş (2018) on multigravidas with the STCP (21). The STCP that was used in this current study is a relatively new scale that helps to measure any form of childbirth trauma.

In this current study, it was identified that the women with traumatic childhood perception were more likely to have emotional distress (depression, anxiety, stress) and pregnancy avoidance. Also in the previous studies, it was asserted that the traumatic childbirth experience could be associated with a minimum of one post-natal emotional health problem and the childbirth-related negative emotions could give rise to outcomes such as preferring not to get pregnant again (6,22,23). Grenfield et al. (2019) found that the women with traumatic childbirth perception made research and analysis about pregnancy and childbirth to prevent their previous childbirth experiences from occurring once again (24). James (2015) ascertained that the women exhibited avoidance behaviors to control threats and symptoms emerging in the wake of the traumatic childbirth experience (25). In the study by Boorman et al. (2014), it was put forth that stress, anxiety, and depression were predictors of the traumatic childbirth criteria (11). In the study by Simpson and Catling (2016), it was reported that there was a relationship between traumatic childbirth and mental diseases in women (26). Of course, this study and other similar studies do not indicate that there is causation between a traumatic childbirth experience and emotional problems. The postnatal period is not the sole factor for the traumatic childbirth perception as the perinatal period is characterized by the physical, social, and psychological transitions that are likely to influence a woman's emotional well-being (25).

Under this current study, it was found that being young and being primiparous were significant risk factors for the women to have traumatic childbirth perception. Considering this finding, it is inevitable that the primiparous women at a relatively early age view childbirth as an unknown phenomenon and, as it is an unknown phenomenon for them, they cannot avoid having fears and hence, their childbirth perceptions become negative (11,27). Likewise, Boorman et al. (2014) set forward that the primipara, the women who gave birth for the first time, were more likely to find childbirth as a traumatic experience (11). In this current study, it was identified that the women that used contraceptive methods were more likely to have traumatic childbirth perception. It can be considered that the women with traumatic childbirth experience might have escaped from becoming pregnant to avoid having this experience again and used contraceptives for this purpose. As a matter of fact, in the study by Gipson, Bornstein, Berger and Rocca (2021), it was stated that the women with a high percentage of using contraceptives exhibited pregnancy avoidance attitudes (28). Thus, it is discerned that the result of the study by Gipson et al. supported the finding of this current study.

As per this current study, the women with medium/high-level income were more likely to have traumatic childbirth perception. Güleç et al. (2014) asserted that there was a relationship between childbirth fear and income level (29). On the other hand, Üst and Pasinlioğlu (2015) put forward that the income level had no effect on childbirth and post-natal worries (30). In this sense, it can be considered that the income level is not the sole factor affecting childbirth perception, nevertheless, as it is accompanied by other negative circumstances such as the place of childbirth, setbacks in accessing the necessary information, and the lack of social support, it can have an effect on the traumatic childbirth perception held by the women.

## CONCLUSION

This study indicated that pregnancy avoidance and psychological factors (depression, anxiety, and stress) affected the traumatic childbirth perception and were significant risk factors for the traumatic childbirth perception. To ensure that childbirth which is considered as a physiological process does not turn to be a traumatic experience by being estranged from its normal course, the identification of risk factors in the prenatal period and the application of necessary midwifery approaches at an early stage are quite essential. Raising the individuals' awareness about these risk factors, restructuring negative memories if any, and reducing risk factors by referring the women who have depression, anxiety, and stress to the specialists when necessary will also lower the risk of having traumatic childbirth perception. Moreover, it is considered that the psychoeducational interventions will be effective in alleviating the tokophobia and, accordingly, changing the traumatic childbirth perception.

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