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Comparison of Childbirth Self-Efficacy Levels in Risky and Non-Risky Pregnancies

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ABSTRACT

The research aimed to assess the childbirth self-efficacy perceptions among pregnant women in both risky and non-risky pregnancies. The study's sample comprised pregnant women attending a maternity hospital in Erzurum, eastern Turkey, for prenatal check-ups between February 15, 2017, and April 30, 2017. Research data were collected using a questionnaire form and a short version of the Birth Self-Efficacy Inventory (CBSEI). The SPSS 20.0 statistical package program was employed for coding, statistical analysis, and data evaluation. Results indicated that risky pregnant women had a mean score of 110.04 ± 24.31 on the Expectation for Outcome subscale, 87.91 ± 22.52 on the Expectation of Proficiency subscale, and a total mean score of 197.96 ± 32.60 on the CBSEI. In comparison, risk-free pregnant women scored 115.71 ± 25.23 on the Expectation for Outcome subscale, 93.43 ± 21.55 on the Expectation of Proficiency subscale, and a total mean score of 209.14 ± 38.00 on the CBSEI. The comparison of mean scores between the two groups revealed statistically significant differences across all subscales and the total score of the CBSEI ($p<0.05$). In conclusion, the childbirth self-efficacy levels differ between risky and non-risky pregnancies, with risky pregnant women exhibiting lower birth self-efficacy levels compared to their risk-free counterparts.

Riskli ve Risksiz Gebeliklerde Doğum Öz-yeterlik Düzeylerinin Karşılaştırılması

Makale Bilgisi

Makale Geçmişi

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Anahtar Kelimeler
Doğum,
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Riskli Gebelik,
Öz-Yeterlik.

ÖZET

Araştırma, riskli ve risksiz gebeliklerin doğum öz-yeterlik algılarını belirlemek amacıyla yapılmıştır.Araştırmanın örneklemini 15 Şubat 2017-30 Nisan 2017 tarihleri arasında Türkiye'nin doğusunda Erzurum'da bulunan doğum hastanesine doğum öncesi kontrol için gelen riskli ve risksiz gebeler oluşturmuştur. Araştırma verilerini toplamak için anket formu ve Doğum Öz-yeterlik Envanteri'nin (DÖE) kısa versiyonu kullanılmıştır. Verilerin kodlanması, istatistiksel analizi ve değerlendirilmesinde SPSS 20.0 istatistik paket programı kullanılmıştır. Riskli gebelerin; Ölçeğin Sonuç Beklentisi alt ölçeği puan ortalaması 110.04 ± 24.31, Yeterlilik Beklenti alt ölçeği puan ortalaması 87.91 ± 22.52 ve ölçeğin toplam puan ortalaması 197.96 ± 32.60'dır. Risksiz gebelerin; Sonuç Beklentisi alt ölçeği puan ortalaması 115.71 ± 25.23, Yeterlilik Beklentisi alt ölçeği puan ortalaması 93.43 ± 21.55 ve ölçeğin toplam puan ortalaması 209.14 ± 38.00'dir. Gebelerin DÖE'den aldıkları puan ortalamaları karşılaştırıldığında; tüm alt boyut puan ortalamaları ile DÖE toplam puan ortalamaları arasındaki farkın gruplar arasında istatistiksel olarak anlamlı olduğu bulunmuştur ($p<0.05$). Riskli ve risksiz gebelerin doğum özyeterlilik seviyeleri birbirinden farklıdır. Riskli gebelerin doğum özyeterlilik seviyeleri risksiz gebelerin doğum özyeterlilik seviyesinden daha düşüktür

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INTRODUCTION

Viewed as either a developmental crisis or a critical phase, pregnancy holds significant importance in a woman's life (Coban et al., 2020). It is characterized as a period of crisis that disrupts emotional and psychological equilibrium, necessitating women to adapt to this transformative time. The self-efficacy perception of a woman becomes prominent during this process. In accordance with Bandura's definition, self-efficacy is a cognitive process that assesses an individual's capability to construct reality and engage in behaviors (Bandura, 1997; Barut & Ucar, 2018; Olcer et al., 2016).

Self-efficacy entails a self-assessment of one's own capability to perform tasks (Lazoglu & Apay, 2018). Childbirth self-efficacy plays a role in influencing women during the intrapartum period and has implications for babies in the postpartum period (Duncan et al., 2017; Sun et al., 2020). Presently, childbirth self-efficacy is conceptualized as a dynamic process representing women's confidence in their ability to navigate through the challenges of childbirth (Bostan & Kabukcuoglu, 2022; Soh et al., 2020). The assessment of pregnant women's childbirth self-efficacy levels serves to gauge their capacities for self-confidence and coping behaviors during pregnancy.

Women's motivation plays a crucial role in influencing the choice of vaginal delivery (Darsareh et al., 2018). A study involving nulliparous women revealed that those with a severe fear of childbirth exhibited lower levels of childbirth self-efficacy and were more prone to experiencing psychological issues. It has been observed that women with low childbirth self-efficacy often lean towards opting for a cesarean section. Conversely, women with high self-efficacy tend to express higher satisfaction with a normal birth, especially when supported by midwives (Cicek & Okumus, 2017; Sercekus & Baskale, 2016). Lazoglu and Apay (2018) emphasized that pregnant women with elevated levels of childbirth self-efficacy tend to have lower levels of fear associated with childbirth.

A study conducted on primiparous pregnant women, aiming to explore the connection between fear of birth and birth self-efficacy, revealed that those with a high fear of birth experienced elevated helplessness and reduced self-confidence. Additionally, these pregnant women reported a heightened sense of loss of control and increased perception of labor pain (Soh et al., 2020). In cases where childbirth self-efficacy is low, anxiety levels tend to rise, contributing to an increase in postpartum depression symptoms (Ayers, 2017). This, in turn, is associated with an elevated risk of experiencing post-traumatic stress disorder during the postpartum period (Abdollahi et al., 2020; Isbir et al., 2016).

Women with high-risk pregnancies encounter physical, emotional, and social challenges. Factors contributing to an increased likelihood of complications during pregnancy may stem from preexisting medical conditions such as heart disease, diabetes, and hypertension, as well as health issues emerging during pregnancy like preeclampsia, eclampsia, bleeding, and hypertension (Sogukpinar et al., 2018). The health risks associated with pregnancy can intensify stress and anxiety levels in women, augmenting the existing pregnancy-induced stress. Research indicates that pregnant women experiencing elevated stress and anxiety tend to exhibit lower levels of childbirth self-efficacy (Cincioglu et al., 2020; Maxon et al., 2016; Razurel et al., 2017).

There is a scarcity of literature comparing the self-efficacy levels between risky and non-risky pregnant women. It is crucial to assess this gap for the involvement of caregivers and midwives in the care process and the self-care of pregnant women. This study seeks to determine and compare the perception of childbirth self-efficacy in both risky and non-risky pregnancies.

Research Question

- What is the level of childbirth self-efficacy in both risky and non-risky pregnancies?

METHOD

Research Design

This research was designed as a descriptive type.

Research Sample

The study's sample comprised pregnant women attending the obstetrics and gynecology clinic in an eastern Turkish province for prenatal care check-ups between February 15, 2017, and April 30, 2017. To determine the minimum sample size, a sampling method suitable for an unknown population size was employed. The higher-risk group included pregnant women in their 26th to 40th weeks of gestation, those with over four gestations, individuals aged 18 or younger/35 or older, those with any systemic disease (such as cardiac disease during pregnancy), diagnosed with hyperemesis gravidarum, having urinary tract infections during pregnancy, and at risk for preterm birth. In contrast, the no-risk group encompassed pregnant women in their 26th to 40th weeks of gestation, with a single healthy fetus, open to communication, without psychological or mental issues, conceiving spontaneously, and lacking any pregnancy-related risks.

Research Instruments and Processes

The research data were gathered through face-to-face interviews with pregnant women who voluntarily agreed to participate in the study. Two instruments were used for data collection: the "Personal Information Form," consisting of questions related to demographic characteristics and obstetric histories, developed by the researchers based on existing literature, and the "Short Form of the Childbirth Self-Efficacy Inventory."

Personal Information Form

The "Personal Information Form" comprises questions developed by the researchers, aligning with the literature and covering demographic characteristics and obstetric histories of pregnant women (Coban et al., 2020; Bandura, 1997; Isbir et al., 2016; Soh et al., 2020).

Short Form of The Childbirth Self-Efficacy Inventory (CBSEI)

The "Short Form of The Childbirth Self-Efficacy Inventory (CBSEI)" was initially developed by Lowe in 1993 (Lowe, 1993). This 62-item tool assesses women's confidence in managing labor. In 2005, Ip et al. created a 32-item shorter version of Lowe's (1993) original 62-item tool. This abbreviated inventory, developed by Ip et al., specifically measures self-efficacy levels during labor. The Turkish validity and reliability study of the inventory was conducted by Ersoy, who recommended its application for pregnant women between 26-40 weeks of gestation (Ersoy, 2011). The inventory consists of two subscales: outcome expectancy and self-efficacy expectancy. The Cronbach’s alpha coefficient was determined as 0.90. In this study, Cronbach’s alpha coefficients were found to be 0.93, 0.85, and 0.89 for Outcome Expectancy, Self-Efficacy Expectancy subscales, and the overall scale, respectively. Each subscale comprises 16 items, with scores ranging from 16 to 160, indicating higher self-efficacy and outcome expectancies for labor with higher scores. The CBSEI's overall scores range from 32 to 320, reflecting higher self-efficacy levels during labor with higher scores. Items 1 to 13 in the self-efficacy expectancy were reverse coded.

Data Analysis

For statistical analysis, the SPSS Statistics 20.0 software package was employed. Descriptive statistical methods, including number, percentage, mean, and standard deviation, were used. Furthermore, Chi-Square and t-test analyses were employed for the statistical analysis of the data. The results were assessed at the 95% confidence interval, and the significance level was set at $p < 0.05$.

RESULTS

In the high-risk pregnancies group, 51.3% of pregnant women fell within the 30-39 age range, while 80.6% of those in the group with no risk factors were in the 20-29 age range. Primary school graduates constituted 55.2% of pregnant women in the high-risk group and 44.7% in the group with no risk factors. Regarding employment status, 94.2% and 89.3% of pregnant women in the high-risk group and the group with no risk factors were unemployed, respectively. Additionally, 66.9% and 63.1% lived in a nuclear family arrangement, while 58.5% and 63.1% resided in a province, respectively. Spouses of 57.8% of pregnant women in the high-risk group and 54.4% in the group with no risk factors were in the 30-39 age range and had completed high school (31.2% and 32%, respectively). Furthermore, 64.3% of pregnant women in the high-risk group and 86.9% in the group with no risk factors stated that their pregnancies were 'planned.'

In the high-risk group, 55.8% of pregnant women had experienced four or more pregnancies, 33.8% had three or more live births, 61.7% did not receive prenatal care, and 94.8% received support from their spouses during pregnancy, with 53.9% also receiving social support from sources other than their spouses. In contrast, in the group with no risk factors, 49.5% experienced their first pregnancy, 54.4% had no living births, 52.9% did not receive prenatal care, and 96.6% received support from their spouses during pregnancy, with 63.6% also receiving social support from other sources. Statistically significant differences between the groups were observed in certain socio-demographic and obstetric characteristics, including age, educational status, age of spouses, planned pregnancy, number of pregnancies, and number of living births. However, no significant differences were found between the groups in terms of other socio-demographic and obstetric characteristics, indicating similar characteristics in these aspects (Table 1).

Table 2 presents the range of scores for pregnant women in the CBSEI, including the lowest and highest scores, and compares the mean scores of pregnant women. In the high-risk group, pregnant women scored as follows: the lowest and highest scores for the Outcome Expectancy and Competence Expectation subscales of the CBSEI were 32:160 and 27:148, respectively, and for the overall score, it ranged from 121 to 305. Pregnant women in the group with no risk factors scored as follows: the lowest and highest scores for the Outcome Expectancy and Competence Expectation subscales of the CBSEI were 30:160 and 34:158, respectively, and for the overall score, it ranged from 77 to 313.

Pregnant women in the high-risk group had mean scores of 110.04±24.31 for the Outcome Expectancy subscale, 87.91±22.52 for the Competence Expectation subscale, and 197.96±32.60 overall on the CBSEI. In the group with no risk factors, pregnant women had mean scores of 115.71±25.23 for the Outcome Expectancy subscale, 93.43±21.55 for the Competence Expectation subscale, and 209.14±38.00 overall on the CBSEI.

The comparison of mean scores from the CBSIE revealed a statistically significant difference between the groups for all subscales and the total score ($p<0.05$), as indicated in Table 2.

Table 1

Comparison of Individual Characteristics of Pregnant Women

Individual Characteristics	**GROUPS**				**Test value**
	Risky Group		**Non-Risky Group**		**p**
Age					
20-29	56	36.4	166	80.6	X^2=80.45
30-39	79	51.3	40	19.4	**p=0.001**
≥40	19	12.3	-	-	
Education status					
Primary school	85	55.2	92	44.7	X^2=7.63
Middle School	20	13.0	31	15.0	p=0.05
High school	24	15.6	55	26.7	
University	25	16.2	28	13.6	
Working status					
Not working	145	94.2	184	89.3	X^2=3.22
Working	9	5.8	22	10.7	p=0.20
Family Type					
Nuclear family	103	66.9	130	63.1	X^2=0.55
Extended family	51	33.1	76	36.9	p=0.45
Living place					
Province	90	58.5	130	63.1	X^2=1.05
County	33	21.4	36	17.5	p=0.59
Rural	31	20.1	40	19.4	
Age of husband					
20-29	26	16.9	92	44.7	X^2=66.82
30-39	89	57.8	112	54.4	**p=0.001**
≥40	39	25.3	2	1.0	
Education status of husband					
Primary school	45	29.2	47	22.8	X^2=4.82
Middle School	32	20.8	36	17.5	p=0.18
High school	48	31.2	66	32.0	
University	29	18.8	57	27.7	
State of pregnancy be planned					
Planned	99	64.3	179	86.9	X^2=25.60
Not planned	55	35.7	27	13.1	**p=0.001**
Pregnancy trimester					
1. trimester	2	1.3	4	1.9	X^2=0.89
2. trimester	16	10.4	27	13.1	p=0.64
3. trimester	136	88.3	175	85.0	
Number of pregnancies					
1	16	10.4	102	49.5	X^2=163.29
2	21	13.6	53	25.7	**p=0.001**
3	31	20.1	51	24.8	
≥4	86	55.8	-	-	
Number of living children					
0	23	14.9	112	54.4	X^2=120.08
1	32	20.8	64	31.1	**p=0.001**
2	47	30.5	30	14.6	
≥3	52	33.8	-	-	
State of women received antenatal care					
I received antenatal care					
I did’nt received antenatal care	59	38.3	97	47.1	X^2=2.76
	95	61.7	109	52.9	p=0.09
Spousal support					
Yes	146	94.8	199	96.6	X^2=0.71
No	8	5.2	7	3.4	p=0.39
Presence of social support					
Yes	83	53.9	131	63.6	X^2=3.43
No	71	46.1	75	36.4	p=0.06

X^2: Ki-kare; p<0. 05

Table 2

Distribution and Comparison of the Min-Max Points obtained from the CBSI of the Pregnant Women and the Average Points of the Pregnant Women

The Childbirth Self-Efficacy Inventory		**GROUPS**		
		Risky Group	**Non-Risky Group**	**Test value**
				p
Outcome Expectancy Sub-Dimension	Min-Max Scores	32-160	30-160	t=-2.14
	Mean scores	110.04±24.31	115.71±25.23	**p=0.03**
Competence Expectation Sub-Dimension	Min-Max Scores	27-148	34-158	t=-2.35
	Mean scores	87.91±22.52	93.43±21.55	**p=0.01**
Total	Min-Max Scores	121-305	77-313	t=-2.93
	Mean scores	197.96±32.60	209.14±38.00	**p=0.004**

t: T-test; p<0. 05

DISCUSSION

Childbirth is intricately linked to a woman's self-confidence and belief in her ability to successfully navigate the labor process. The concept of childbirth self-efficacy refers to a woman's confidence in her capacity to handle the challenges of labor (Ip et al., 2005). How a woman perceives her childbirth self-efficacy can profoundly impact her entire birthing experience, either positively or negatively (Barut & Ucar, 2018; Lazoglu & Apay, 2018; Olcer et al., 2016). Analyzing the childbirth self-efficacy levels of pregnant women is essential for understanding their coping behaviors and self-assurance during pregnancy. This is particularly crucial as the motivation of pregnant women significantly influences the likelihood of vaginal delivery (Lazoglu & Apay, 2018; Zhaoa et al., 2021).

The research involved two distinct groups of pregnant women, one with identified risk factors and the other without. A comparative analysis of the research sample revealed no statistically significant differences between the groups concerning educational level, employment status, family type, place of residence, spouse education, pregnancy trimester, receipt of prenatal care, spousal support, and the presence of non-spousal social support. This suggests that women in both groups share similar identifying characteristics. However, a noteworthy distinction was observed in the age of the pregnant women, age of their partners, planned nature of the pregnancy, and the number of pregnancies and living children. The significance of these differences stems from their consideration as determinants of risk status.

It was determined in the study that pregnant women in the high-risk group got lower scores from the Childbirth Self-Efficacy Inventory compared to those in the group with no risk factors. Comparing the difference of childbirth self-efficacy inventory mean scores of the groups, the difference between them was found to be statistically significant at the p <0.05 level. Lazoglu and Apay (2018) found that childbirth self-efficacy scores of pregnant women with high fear of giving birth were lower. Munkhondya et al. (2020) determined that childbirth self-efficacy levels of pregnant women with high fear of giving birth were lower. Barut and Ucar concluded that pregnant women with low fear of giving birth got the highest overall mean scores from the Childbirth Self-Efficacy Inventory (Barut & Ucar, 2018).

The fear of childbirth experienced during pregnancy can stem from physiological or psychological issues within the woman's ongoing pregnancy. In the case of women classified in the high-risk pregnancy group, there may be concerns related to potential risks for both the mother and the baby. The successful completion of pregnancy and the birth of a healthy baby are jeopardized in high-risk pregnancies (Aksoy, 2015; Arslantas et al., 2020). Pregnant women in this category have diverse

health needs that require attention. Failure to address these needs may lead to heightened stress and anxiety for the expectant mother, potentially impacting the outcomes of pregnancy negatively (Baran et al., 2020; Ozcetin & Erkan, 2019;). Some studies have identified associations between stress hormones during pregnancy and maternal health issues.

These challenges encompass risks such as hypertensive disease, an elevated rate of episiotomy, increased uterine artery resistance, antenatal bleeding, placental abnormalities, spontaneous abortion, operative deliveries, premature and difficult labor, prolonged labor, premature rupture of membranes, infection, and depression. The association of these issues with fetal complications includes developmental problems, malpresentation, intrauterine growth retardation, low birth weight, premature birth, alterations in fetal heart rate and activity, meconium aspiration, fetal death, and low APGAR score (Atasever & Celik, 2018; Baltaci & Baser, 2020;Taskin, 2016) . Gumusdas et al. (2014) found that pregnant women in the high-risk group experienced higher levels of stress, anxiety, and associated depression compared to those in the group with no risk factors.

Vehmeijer et al. (2019) concluded that pregnant women with two or more diseases experienced more psychosocial stress, leading to more negative childbirth outcomes. In another study, it was found that intrusive thoughts and emotional distress related to the fetus were associated with a reduced placental blood flow volume in the third trimester (Helbig et al., 2013). Dahlerup et al. (2018) identified that high-anxiety women exhibited a significant reduction in uterine blood flow, coupled with elevated plasma cortisol levels in both the mother and child.

Reduced placental volume blood flow and elevated plasma cortisol levels may impact fetal brain development, potentially leading the child to suffer from attention deficit, social behavior disorder, and high stress in their future life (Dahlerup et al., 2018; Olcer & Oskay, 2015). In a study investigating self-efficacy and social support, high levels of self-efficacy and social support were found to be effective in diabetes management (Hunt et al., 2012). It is observed that high self-efficacy positively affects disease management. The decrease in self-efficacy perception triggers an increase in helplessness, anxiety, depression, concern, and stress, leading to a decrease in self-confidence and self-esteem, along with pessimistic thoughts about individual achievement and development (Barut & Ucar, 2018; Olcer et al., 2016). Thus, the anxiety and stress experienced by pregnant women in the high-risk group negatively affect their self-efficacies, and the literature supports the research findings.

CONCLUSION AND SUGGESTIONS

Midwives, who provide care to women from the antenatal period, play a crucial role as healthcare professionals capable of identifying factors that negatively impact self-efficacy by diagnosing childbirth self-efficacy perceptions. The study results revealed that, in the comparison between groups, the Birth Self-Efficacy Inventory Outcome Expectation and Self-Efficacy Expectation sub-dimensions, along with the total scale scores, were lower for pregnant women in the risky group than for those in the non-risky group. This difference between groups is statistically significant. To enhance women's self-efficacy in childbirth, midwives should closely observe or utilize short evaluation forms to assess the self-efficacy levels of pregnant women.

Women with low self-efficacy should receive support to enhance their coping abilities during childbirth, fostering increased self-confidence and awareness of their capabilities. Prenatal trainings should incorporate assessments of self-efficacy levels to determine women's self-confidence and coping behaviors for childbirth. Care plans must be devised to alleviate fear, anxiety, and stress in women with low self-efficacy during labor. Providing positive information about the normal process of vaginal birth and encouraging participation in birth preparation classes are essential. Midwives can positively impact the labor process and subsequently influence mother-baby attachment and family ties by evaluating a

woman's childbirth self-efficacy through counseling during pregnancy. Therefore, it is recommended that midwives design initiatives and training programs to enhance their ability to counsel pregnant women and increase their childbirth self-efficacy.

LIMITATIONS

The study is limited to pregnant women who sought care at the specific hospital where the data were collected, and its findings may not be applicable to pregnant women nationwide. Additionally, relying on participant statements gathered through survey methods represents a limitation in data collection.

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Ethic Approval

Prior to commencing the study, Ethics Committee Permission was acquired on 30/11/2016 under the number 2016/11/04. Additionally, written permission (dated 10.02.2017 and numbered 98003106-604.01.01-E.454-00039187511) was obtained from the hospitals where the study was to be conducted. As obtaining information from participants in research requires voluntary responses, special care was taken to ensure that the pregnant women included in the study participated willingly and were informed that their participation was entirely optional. To uphold the voluntary nature of responses in all research involving participant information, careful attention was given to ensuring that the inclusion of pregnant women in the study was based on their voluntary and willing participation. They were clearly informed of their freedom to decide whether or not to participate in the research.

Conflicts of interest

The authors declared they do not have anything to disclose regarding conflict of interest with respect to this manuscript.

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Authorship Contributions

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