

**Araştırma Makalesi/Research Article**

**Evaluation Of High-Risk Pregnant Women's Adaptation to Pregnancy and Motherhood: A Mixed Method Research**

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*Riskli Gebeliklerde Kadının Gebelik ve Anneliğe Uyumunun Değerlendirilmesi*

**ÖZ**

**Amaç:** Bu çalışmanın amacı, riskli gebelerin ve hastanede yatan kadınların gebelik ve anneliğe uyum düzeylerinin ve yüksek riskli gebelik deneyimlerinin değerlendirilmesidir.

**Metod:** Araştırma, nicel ve nitel araştırma desenlerini içeren karma yöntemli bir araştırma türüdür. Araştırmanın nicel bölümü riskli gebelik tanısı ile hastaneye yatırılan 111 kadın ile, nitel bölümü ise 15 kadın ile yapılmıştır. Nicel veriler, Kişisel Bilgi Formu ve Prenatal Kendini Değerlendirme Anketi (PKDÖ) kullanılarak toplanmıştır. Nitel veriler derinlemesine yüz yüze görüşmeler yoluyla toplanmıştır. Araştırmadan elde edilen nicel veriler SPSS 25.0 programı kullanılarak, nitel veriler ise Colaizzi'nin yedi aşamalı içerik analizi yöntemiyle değerlendirilmiştir.

**Bulgular:** Katılımcıların yaş ortalaması  $26 \pm 6,1$  olup, tamamı evlidir ve %90,1'i çekirdek aile yapısına sahiptir. PKDÖ toplam puanı  $180,1 \pm 14,8$  (79-316) olarak bulundu. Sosyal güvenlik durumu, kendisinin ve bebeğinin sağlığı hakkındaki düşünceleri (U:490; p:0,011), Annesi (U:490,5; p: 0,007) ve eşiyle ilişki durumu (U:480,5; p:0,008) Alt boyutlar arasında istatistiksel olarak anlamlı bir ilişki bulunmuştur. Nitel araştırmanın sonuçları, kadınların yüksek riskli gebelik teşhisi konulduktan sonra döngüsel bir fedakarlık ve mücadele dönemi yaşadıklarını göstermiştir. Verilerin analizi sonucunda dört ana tema ve sekiz alt tema belirlenmiştir.

**Sonuçlar:** Kadınların riskli gebelik deneyimlerini anlamak, gebeliğe ve anneliğe uyumlarını etkileyen faktörleri analiz etmek hemşirelerin doğru ve uygun bakım sunmalarını sağlamaktadır. Ayrıca kadınların riskli gebelik deneyimi, eşleri, aile üyeleri ve sağlık profesyonelleri tarafından karşılanması gereken sosyal destek ihtiyacını da beraberinde getirmektedir.

**Anahtar Kelimeler:** Hemşirelik, nicelik, nitel, uyum, primipar, riskli gebelik.

**ABSTRACT**

**Purpose:** The aim of this study is to evaluate high-risk pregnant and hospitalized women's adaptation levels to pregnancy and motherhood as well as their experiences of high-risk pregnancy.

**Methods:** The research is a mixed method research type that includes cross-sectional and qualitative research designs. The quantitative part of the study was conducted with 111 women hospitalized with the diagnosis of risky pregnancy, and the qualitative part was conducted with 15 women. Quantitative data were collected using the Personal Information Form and the Prenatal Self-Assessment Questionnaire (PSEQ). Qualitative data were collected through in-depth face-to-face interviews. Quantitative data from the research were evaluated using the SPSS 25.0 program and Qualitative data were evaluated with Colaizzi's seven-step content analysis method.

**Finding:** The mean age of the participants was  $26 \pm 6,1$ , all of them were married, and 90.1% had a nuclear family structure. The prenatal Self-Assessment Questionnaire means the score was found to be  $180.1 \pm 14.8$  (79-316). Social security status, thoughts about her and her baby's health (U: 490; p:0.011), The status of her relationship with her mother (U:490.5; p: 0.007) and her husband (U:480.5; p: 0.008) A statistically significant relationship was found between the sub-dimensions. Results of the qualitative research showed that women experience a cyclical period of sacrifice and struggle following their diagnosis of high-risk pregnancy. Through data analysis, four main themes and eight sub-themes were identified.

**Conclusion:** Understanding women's experiences through a high-risk pregnancy and analyzing the factors that affect their adaptation to pregnancy and motherhood enable nurses to employ the right and appropriate care practices. Furthermore, women's experience of high-risk pregnancy brings with it the need for social support that is to be met by their spouses, family members, and health professionals.

**Keywords:** Adaptation, nursing, high-risk pregnancy, quantitative, qualitative, primipara.

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## GENİŞLETİLMİŞ ÖZET

### Giriş:

Hayatın dönüm noktalarından biri olarak görülen gebelik ve annelik süreci gelişimsel bir kriz dönemidir. Kadın bu süreçte kendini anne olarak tanımlamakta ve fetüsle ilişkisini geliştirmektedir. Ancak gebelikte yaşanan bazı riskli durumlar gebeliğe ve anneliğe uyum süreçlerini olumsuz etkilemektedir. Hemşireler riskli gebelik yaşayan kadınların gebeliğe ve anneliğe uyumunu etkileyen faktörleri değerlendirmek ve olumlu etkileyebilmek için benzersiz konumdadır. Günümüzde kadınların bireysel olarak ulaşabildikleri rehber, kitap, sosyal media ve internet gibi bilgi kaynakları olmasına karşın, hiçbiri bir anneyle terapötik iletişim kurarak destek olan hemşirenin yerini alamamaktadır. Hemşireler kadının deneyiminin farkında olarak duygularını ifade etmesi için cesaretlendirerek onların yaşadıkları süreci keşfetmelerinde yardımcı olmaktadır. Bu araştırmanın amacı, riskli gebelik tanısı ile hastanede bulunan primigravida kadınların anneliğe ve gebeliğe uyum düzeylerini incelemek ve riskli gebelik ve anneliğe uyumlarına ilişkin benzersiz algı ve deneyimlerini ortaya çıkarmaktır.

**Metod:** Bu araştırma nicel ve nitel araştırma yöntemlerinin bir arada kullandığı karma tipte bir araştırmadır. Karma yöntem araştırmalar niceliksel ve niteliksel yöntemlerin güçlü yönlerini temel alarak problemlerin karmaşık ilişkilerini keşfetmeyi sağlamaktadır. Bu araştırmada karma yöntemin kullanılmasının nedeni riskli gebelerde uyum düzeyini belirlemenin yanı sıra uyum sürecini etkileyen faktörlerin birlikte analiz edilerek bütünlük içinde anlaşılmasını sağlamaktır. Araştırmada nicel ve nitel veriler sırayla toplanmış ve birbirleri arasında bir sıra belirlenmemiştir.

**Bulgular:** Araştırmanın sonucunda kadının gebeliği istemesi ve durum hakkında bilgilendirilmesi arttıkça PKDÖ genel puan ortalamalarının arttığı tespit edilmiştir. PKDÖ alt boyutları ile kadınların obstetrik özellikleri incelendiğinde "Gebeliğin Kabulü" ve "Eşi ile İlişkisinin Durumu" alt boyutlarında gruplar arası farkın istatistiksel olarak anlamlı olduğu bulunmuştur ( $U= 389,0$ ,  $p=0,01$ ). Buna göre istenen bir gebeliğe sahip kadının beklenmeyen bir gebelik yaşayan kadınlara göre gebeliği kabul düzeylerinin daha yüksek olduğu belirlenmiştir. Bu çalışmanın nitel boyutunda ise çalışmada riskli gebelerin gebeliğe ve anneliğe uyum sürecinde

yaşadıkları deneyimler, 2 kategori, 4 tema ve 8 alt temada açıklanmıştır. "Anne Olmak: Yaşayan Bilir!" kategori tüm deneyimlerin merkezinde yer almaktadır.

**Sonuç ve öneriler:** Hemşireler, kadına riskli gebelik ile kendi ve fetüs sağlığına ilişkin bilgi verilmesi ve bakıma eş/partner ve yakınlarının katılımını teşvik edilmesi kadınların riskli gebeliğe uyumlarını arttırdığı için uygulama kullanımı önerilmektedir. İstenen gebeliklerde kadınlarda uyum daha yüksek olduğundan, istenmeyen gebelik tanımlayan kadınların uyumuna özel bir önem verilmesi önerilmektedir. Ayrıca, gebelik ve anneliğe uyum sürecinde hem kadın hem de eşi uyumun etkili bileşeni olduğu için, riskli gebeliklerde baba ve diğer aile üyelerinin bulunduğu ve farklı sosyo-kültürel ve ekonomik düzeylerdeki kadınlarla hemşirelik bakım modellerinin kullanıldığı araştırmaların yürütülmesi önerilmektedir.

### INTRODUCTION

The process of pregnancy and motherhood, seen as one of the milestones in life, is a developmental crisis period. During this period, a woman defines herself as a mother and develops her bond with the foetus (Lowdermilk, Cashion and Perry, 2019). However, certain high-risk complications that occur during pregnancy affect this process negatively (Nola Holness, 2018).

In the world, approximately 810 women lose their lives every day due to preventable medical problems during pregnancy (WHO, 2019). In Turkey, 66.1% of women between the ages of 18-34 are included in one of the preventable high-risk pregnancy categories (TNSA,2018). Studies indicate that women having high-risk pregnancies have difficulty in adapting to pregnancy and motherhood (Dollberg et al.,2016; Davis et al, 2020). Nurses are in a unique position to evaluate the factors affecting women's adaptation to pregnancy and motherhood in cases of high-risk pregnancy and to have a positive impact on the process. Today, women have direct access to various sources of information in the form of guides, books, videos etc. that support their adaptation to pregnancy and motherhood. However, none of the above-mentioned materials can replace a nurse who supports the mother by listening to her anxieties. The nurses, being aware of the mother's experience, start a therapeutic interaction process by encouraging the woman to express her feelings and nurses act as a mediator for the woman and her relatives while they explore

their experience and its meaning (Meighan, 2013; Badakhsh, 2020).

While most of the research on high-risk pregnancies focuses on the physical health and treatment of the fetus or mother, it ignores the psychosocial status of the parents (Dollberg et al., 2016). It is seen that the emotional, psychological, and behavioral adjustments of women who have had a high-risk pregnancy cause difficulties in the developmental growth of the fetus as well as its adverse effects both before and after birth. In this context, it has been reported that mothers with high-risk pregnancies have high antenatal and postnatal depression and anxiety levels, decreased fetal activity, increased intrauterine growth retardation, and less parent-infant attachment (Dollberg et al., 2016; Davis et al., 2020).

Although there are studies on adaptation to pregnancy and motherhood in the national and international literature (Yu et al., 2013; Fiskin, Kayirak and Oskay, 2017), no mixed-type study was found on the subject. The aim of this study is to examine the adaptation levels of primigravida women who stay in the hospital due to a high-risk pregnancy diagnosis, to pregnancy and motherhood and to reveal their unique perceptions and experiences regarding their adaptation to high-risk pregnancy and motherhood.

## MATERIALS AND METHODS

### Desing

This study is a mixed method study using both quantitative and qualitative research methods. In this study, mixed method is used to determine high-risk pregnant women's adaptation levels and to ensure that factors affecting the adaptation process are evaluated and understood in a holistic manner.

### Data sample

The study was conducted between June and December 2017 in the perinatology service of a public hospital. In the power analysis, the sample size was determined as 111 women with 95% confidence interval, 80% statistical power and 5% error rate. The study was completed with the participation of 111 pregnant women. The sample was selected via convenient sampling method which is a random sampling method.

In the qualitative phase of the study, the participants were selected with purposeful sampling method. Quantitative and qualitative

data were collected from different women in the study. The interviews were ended when no new data was obtained and data saturation was achieved. The qualitative phase of the study was completed with the participation of 15 women.

### Data collection

In the study, socio-demographic and obstetric information of the women were obtained with "Questionnaire for Socio-Demographic Characteristics" that consists of 15 questions. The semi-structured interview form was used during in-depth interviews. The interview form was prepared by the researchers, it was sent to 3 expert researchers in expert opinion. There are 9 main questions and sub-questions related to them.

The qualitative data of the study were collected by the same researchers through face-to-face individual interviews with women who agreed to be interviewed in the perinatology service. Before the interview, the purpose of the meeting was stated by meeting with the women, and the most appropriate time for the woman and the interviewer was determined mutually. Interviews were conducted in the woman's room using a voice recorder in a quiet and comfortable environment. Individual interviews lasted an average of 13 minutes. The interviews ended when the women's statements started to be repeated, and no new data could be obtained. Interviews were written down after listening word for word, including local expressions.

### Data Analysis

Descriptive statistics were used in the analysis of demographic information. Kolmogorov-Smirnov examined the suitability of the data to the normal distribution. Independent samples t-test and one-way analysis of variance (ANOVA) were used to compare normally distributed data, and non-parametric Mann Whitney U and Kruskal Wallis tests were used to comparing data that did not show normal distribution. Qualitative data was analysed with constant comparative method which is the thematic analysis method of Colaizzi. Each researcher read written texts separately, and the meanings were categorized. Later, the researchers came together and discussed the categorized meanings until they reached a consensus. In this process, the interpretation's accuracy was checked by repeatedly returning to the original data. Themes were created with determined common and meaningful expressions. After the themes

were created, the views of a lecturer who was not involved in the study were consulted to measure the integrity (internal consistency) of the codes under the themes that emerged and to review the situation of the themes that emerged to explain the data (external consistency).

### Ethical Approval

The ethics committee approvals for this study are obtained from a public hospital in the (54103609-604.02) and the ethics committee (B.30.2.ODM.0.20.08/70). Additionally, to comply with the principles of the "Informed Consent Form," all participants were informed about the purpose of the study before data collection.

## RESULTS

The mean age of the participants was  $26 \pm 6.1$ , all of them were married and 90.1% had a nuclear family structure. 82.9% of the women did not participate in waged labor, and the majority of them were living in an urban area (85.6%). The rate of the pregnant women having social security was 84.7%. The gestational weeks of the women were on average  $34 \pm 4.4$ . The rate of participants who had a high-risk pregnancy in their family was 19.8%. It was determined that the reasons for high-risk pregnancy were mostly problems related to pregnancy and the fetus (60.4%) and the women were partially informed about their condition (61.3%). Table 1 shows the mean scores and standard deviations of the participants at PSEQ main scale and subscales. (Table 1).

Among the participants the lowest PSEQ score was 120 and the highest score was 219. The mean PSEQ score was determined to be  $180.1 \pm 14.8$ . This score was above the total mean score that can be obtained from the scale (158). The women had the lowest ( $20.8 \pm 3.3$ ) mean score in the "Relationship with her spouse" subscale of PSEQ. This was followed by the relationship with her own mother ( $21.9 \pm 3.5$ ) and fear of childbirth ( $23.9 \pm 2.7$ ) subscales. The two subscales having a score of 30 and higher were "adaptation to motherhood role" ( $31.9 \pm 4$ ) and "adaptation to pregnancy" ( $30 \pm 3.7$ ).

Table 2 shows the characteristics of participants in qualitative research. As seen in table, gestational weeks of women vary between 30-41 weeks, and they are hospitalized due to preterm labor, preeclampsia, and postmature labor diagnoses.

### Women's Level of Adaptation to Pregnancy and Motherhood

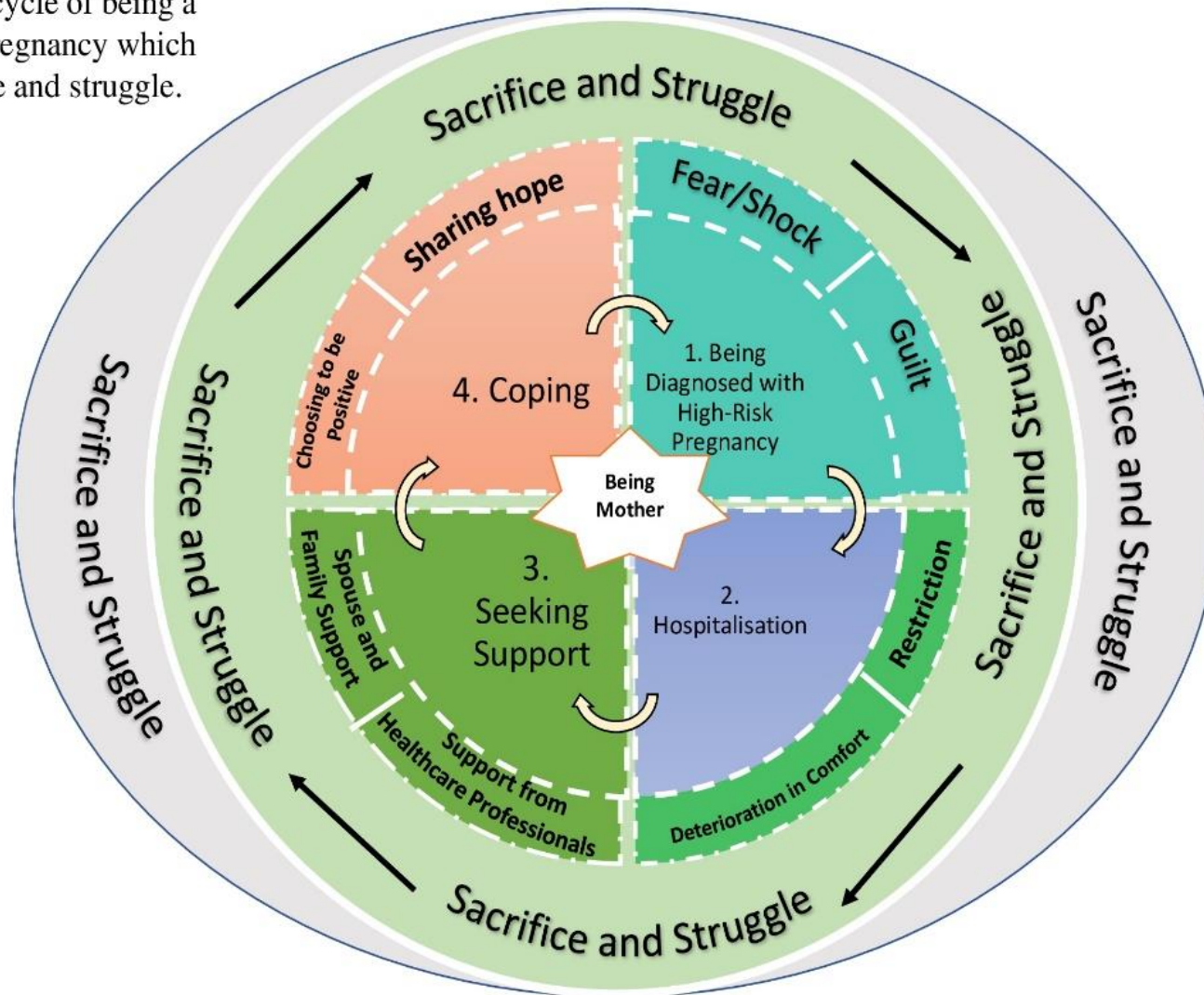
Table 3 shows the comparison of PSEQ mean scores of participants and their socio-demographic characteristics. As seen in Table 3, PSEQ overall mean scores decreased when the women had a high level of education, were employed, and resided in an urban setting. In the comparison of PSEQ subscales with socio-demographic data, the difference between the "Concern for well-being of self and the baby" subscale median score and the presence of social security was found to be statistically significant ( $U=490.0, p=0.011$ ). A statistically significant difference was also observed between "adaptation to motherhood role" subscale median score and family type ( $U=310.0, p=0.017$ ). A statistically significant difference was found between "Fear of childbirth" subscale and the family type ( $U=305.0, p=0.015$ ). Social security was the cause of difference in three PSEQ subscales ("relationship with Own Mother," "relationship with her spouse", and "concern for the well-being of self and the baby"). There was a statistically significant difference between the "relationship with her own mother" subscale median score of pregnant women and the presence of social security ( $U= 490.5, p=0.007$ ). (Table 3).

It was determined that there was a statistically significant difference between PSEQ's "relationship with her spouse" subscale median score and the presence of social security ( $U= 480.5, p=0.008$ ). Table 4 shows the comparison of women's PSEQ general and subscale median scores with their obstetric characteristics. As seen in table 4, women's PSEQ general mean scores were higher for intended pregnancies and when the women were informed about her condition. In "adaptation to pregnancy" and "relationship with her spouse" subscales, the difference between the groups was found to be statistically significant ( $U= 389.0, p=0.01$ ).

### Experiences of Adaptation to Pregnancy and Motherhood in High-risk Pregnant Women: Qualitative Data

In this study, the unique and authentic experiences of high-risk pregnant women in their adaptation process to pregnancy and motherhood were explained under 2 categories, 4 themes and 8 subthemes (Figure 1). The category "Being a mother: only mothers can understand" was at the centre of all experiences as a core category.

**Fig. 1.** The cycle of being a mother in risky pregnancy which includes sacrifice and struggle.



**Figure 1:** The cycle of being a mother in risky pregnancy which includes sacrifice and struggle. (The figure was created by the authors)

**Table 1.** Distribution of participants based on PSEQ main scale and subscale mean scores

PSEQ subscales	Number of Items		$\bar{x} \pm S.D.$
Concern about the well-being of self and the baby	10	10-40	24.3 $\pm$ 4.4
Adaptation to pregnancy	14	14-56	30 $\pm$ 3.7
Adaptation to motherhood role	15	15-60	31.9 $\pm$ 4
Readiness for childbirth	10	10-40	25 $\pm$ 2.4
Fear of childbirth	10	10-40	23.9 $\pm$ 2.7
Relationship with her mother	10	10-40	21.9 $\pm$ 3.5
Relationship with her spouse	10	10-40	20.8 $\pm$ 3.3
Main Scale	79	79-316	180.1 $\pm$ 14.8

$\bar{x}$ : Mean, Min.: Minimum, Max.: Maximum, S.D.: Standard Deviation

**Table 2.** Characteristics of Participants in Qualitative Research

No	Pregnancy week	Diagnosis	Time in hospital
1	39 week	Oligohydramnios	4th day
2	38 week	Preeclampsia	11th
3	36 week	Preeclampsia	8th
4	36 week	Preterm labor	5th day
5	31 week	Preeclampsia	5th day
6	33 week	Cholestasis+Preterm labor	1th day
7	38 week	Kidney problem	2nd day
8	35 week	Preterm labor	5th month
9	37 week	Oligohydramnios	2nd day
10	33 week	Intrauterine growth retardation	7th day
11	41 week	Postmature labor	2nd day
12	33 week	Intrauterine growth retardation	7th day
13	40+3 week	Postmature labor	3rd day
14	41 week	Postmature labor	2nd day
15	30 week	Preterm labor+Bleeding	2nd day

**Figure 1:** The cycle of being a mother in risky pregnancy which includes sacrifice and struggle. (The figure was created by the authors)

### **Category I: Being a mother: only mothers can understand**

This core category emerged from the unique and striking expressions of the women about motherhood. The process of being a mother was present in every step of women's experiences of adaptation to high-risk pregnancy and it was situated at the centre of all their experiences (Figure 1). All of the women stated that motherhood was an indescribable, unique and transformative process.

*"I can't define motherhood. Being a mother is a very different feeling. I have never been able to describe being a mother and the sense of motherhood..." (Participant 11).*

### **Category II: Sacrifice and Struggle**

The category of sacrifice and struggle includes 4 themes and 8 interrelated subthemes. The processes of sacrifice and struggle are two intertwined concepts at the centre of which is situated the experience of motherhood. In this study, themes and subthemes related to this category emerged as sequential parts of a cycle. As the nature of these processes did not allow clear demarcation, they were represented with dashed lines in the figure (Fig. 1).

#### **Theme I. Being Diagnosed with High-Risk Pregnancy**

"Being Diagnosed with High-risk Pregnancy" was a common theme that emerged from all participants' statements. This theme includes the fear/shock and guilt subthemes.

**Subtheme 1. Fear/Shock:** The women stated that diagnosis of high-risk pregnancy was a sudden and unexpected situation and they experienced fear and shock (8 Women): *"We were going through the last weeks. I ne ver thought this problem would happen. When everything was going well, this popped up as an obstacle" (Participant 13*

**Subtheme 2: Guilt:** Some women (5 women) stated that they thought the high-risk pregnancy was caused by their own negligence and that they felt guilty. *"Child's development has slowed*

*down a bit due to my blood pressure. I was afraid of losing the baby. What if the baby dies? I felt remorse. It happened because I worry about everything. It would not have happened, if I did not do that." (Participant 3).*

#### **Theme II. Hospitalisation**

Hospitalisation of women to ensure round the clock follow up on both the women's and the babies' health was recognized as a theme.

**Subtheme 3. Restriction:** Participants (12 women) stated that their daily routine was altered due to hospitalisation and that they had to put up with that. A woman's statement regarding her situation was as follows: *"I was always on the move at home. I was engaged with domestic daily chores. But at the hospital, I have to stay in bed." (Participant 1).*

**Subtheme 4. Deterioration in Comfort:** The course of hospitalisation and the situation experienced affected the sleep patterns and overall comfort of women negatively (8 women): *"I can't sleep in the hospital. It is not because of the noise but because of knowing that I am in a hospital ...I also have nausea and sensitivity to smell. I cannot eat..." (Participant 14).*

#### **Theme III. Seeking Support**

Women's need for "spouse and family" and "healthcare professionals" during high-risk pregnancy and hospitalisation processes emerge as a theme.

#### **Subtheme 5. Spouse and Family Support**

Women expressed that they needed social support in the process of high-risk pregnancy and hospitalisation (13 women). *"I needed someone to support me. I wanted my husband to be with me the most "(Participant 3*

#### **Subtheme 6. Support from Healthcare Professionals**

Eight women stated that they were encouraged by healthcare professionals while adapting to the medical procedures and life-changes related to high-risk pregnancy: *"when I asked a question or was worried, they gave me enough information. I acted in accordance with what they said. This made me feel very comfortable." (Participant 1).* Some women stated that the lack of support from healthcare professionals made their adaptation difficult: *"They did not say anything that will*

*facilitate my adaptation to pregnancy or motherhood. They never talk about those issues; they always focus on treatment. This made it difficult for me to adapt to everything” (Participant 9).*

#### **Theme 4. Coping**

The unique experiences of high-risk pregnant and hospitalised women during they endeavor to cope with the process-related difficulties emanated from the “coping” theme.

**Subtheme 7. Choosing to be Positive:** Women stated that they coped with the difficulties caused by high-risk pregnancy by thinking positively and staying away from bad thoughts (6 women): *“In fact, I am consoling myself. I'm telling myself that nothing bad will happen. I am trying to think positively...” (Participant 7).*

#### **Subtheme 8. Sharing hope**

Women expressed that during their process of coping with high-risk pregnancy sharing experiences with other pregnant women in a similar condition had a positive effect. (6 Women): *“I met a friend in this service. We supported each other. We talked about the process. When she was hopeful about me, I was relieved. When I spoke positively, she felt relieved.” (Participant 1).*

### **DISCUSSION**

In this study, prenatal adaptation levels of women were found to be high and this result contradicts related literature (Wilhelm, Alves and Demori, 2015; Isaacs and Antipatin, 2020). In the study, the adaptation level increased when there was no social security. The women without social security stated more positive relationships with their husbands and mothers. According to this result, having social security seems important in determining the woman's relations with herself and others. When women had no social security, they tended to keep their social relations and especially their relations with their husbands stronger, or to see positive aspects in their relations in order to exist in life, continue living, and to realize themselves (Agarwal and Mazumer, 2013).

In this study, women with social security were found to have a more positive attitude towards the well-being of self and the baby, and this result corresponds to related literature. Social security also increases the level of knowledge about the

cases of seeing a doctor during pregnancy and enables women to benefit more from prenatal health services (Senol, Göl and Ozkan, 2019). Another study result emphasizes that lack of social and financial support during pregnancy leads to an increase in negative perception in all spheres (Yurdakul, 2018). In this study, women who had an intended pregnancy were found to have higher adaptation levels to pregnancy. This result is similar to the related literature. Having an intended pregnancy contributes to an easier process of accepting and adapting to the physical and psychological changes that occur during pregnancy (Coskuner Potur, Mamuk and Şahin, 2017). It was determined that women with unintended pregnancies had difficulty in accepting pregnancy and were at a higher risk for psycho-social disorders (Horvarth and Schreiber, 2017).

It was determined that women's increased level of knowledge about their high-risk pregnancy diagnosis had a positive effect only on their relationship with their spouse among all variables. This result is compatible with the related literature. When high-risk pregnant and hospitalized women are not informed about their condition, they focus on health problems and possible risks and this tendency may lead to deterioration in their social interactions and their communication with their spouse (Tugut, Golbasi and Bulbul, 2017; Biaggi et al., 2016).

In this study, the women living in an extended family setting were found to experience more fear of childbirth. the related literature points out that for women living in an extended family setting the negative delivery experiences of other women increases fear of childbirth (Okumus and Sahin, 2017; Kızıllırmak and Başer, 2016; Erkaya et al., 2017). On the other hand, it was found in this study, women living in extended family accepted the motherhood role more easily. Although formal support given during pregnancy and postpartum period in Turkey is limited, women generally have a strong informal social support network. This result is similar to the findings in literature stating that the most effective factor in improving adaptation to changes concerning maternal role in prenatal and postnatal period is the presence of social support coming from extended family (Song, Chae and Ko, 2020; Kim, 2021).



**Table 3.** Distribution of participants' PSEQ main and subscale mean scores in accordance with their socio-demographic characteristics

Characteristics		Concern about the well-being of self and the baby	Adaptation to pregnancy	Adaptation to motherhood role	Readiness for childbirth	Fear of childbirth	Relationship with her own mother	Relationship with spouse	Total
		$\bar{x} \pm SD$	$\bar{x} \pm SD$	$\bar{x} \pm SD$	$\bar{x} \pm SD$	$\bar{x} \pm SD$	$\bar{x} \pm SD$	$\bar{x} \pm SD$	$\bar{x} \pm SD$
<b>Level of Education</b>	Primary school	25.9 ± 5.6	27.6 ± 3.9	30.7 ± 4.5	25.0 ± 2.3	24.2 ± 2.6	21.8 ± 5.5	22.5 ± 3.8	177.6 ± 18.3
	Middle school	26.0 ± 4.8	27.8 ± 4.0	30.8 ± 2.9	24.6 ± 1.9	25.5 ± 3.1	20.7 ± 3.8	21.7 ± 3.1	176.9 ± 13.3
	High school	23.4 ± 3.9	26.7 ± 3.5	29.7 ± 3.0	24.4 ± 2,8	24,8 ± 3,3	21,3 ± 3,5	21,4 ± 2,8	171,6 ± 10
	University	23,4 ± 4,6	26,5 ± 2,3	30,8 ± 2,9	24,1 ± 2,5	23,4 ± 2,6	20,5 ± 3,6	20,8 ± 2,8	169,4 ± 12,4
<b>Test statistic</b>		F= 2,7	F= 0,8	F= 0,7	F= 0,5	F= 2,4	F= 0,4	F= 0,9	F= 2,1
<b>p</b>		0.052	0.493	0.556	0.714	0.075	0.728	0.427	0.102
		<b>Median (Min-Max)</b>	<b>Median (Min-Max)</b>	<b>Median (Min-Max)</b>	<b>Median (Min-Max)</b>	<b>Median (Min-Max)</b>	<b>Median (Min-Max)</b>	<b>Median (Min-Max)</b>	<b>Median (Min-Max)</b>
<b>Status of waged employment</b>	Employed	24 (19-32)	26 (23-39)	30 (26-39)	25 (20-30)	25 (18-32)	19 (18-34)	22 (16-30)	170 (154-214)
	Not employed	25 (15-37)	27 (20-36)	30 (21-40)	25 (20-31)	25 (19-32)	19 (10-34)	21 (16-32)	173.5 (150-227)
<b>Test statistic</b>		U= 801.0	U= 770.5	U= 848.5	U= 848.0	U= 847.0	U= 770.0	U= 802.5	U= 804.0
<b>p</b>		0.566	0.415	0.841	0.837	0.832	0.388	0.571	0.583
<b>Family type</b>	Nuclear	25 (16-36)	27 (20-39)	31 (25-40)	25 (20-31)	25 (18-32)	19 (17-34)	21 (16-32)	173 (154-227)
	Extended	22 (15-37)	25 (22-35)	28 (21-33)	25 (23-27)	27 (22-29)	20 (10-25)	21 (16-25)	173 (150-183)
<b>Test statistic</b>		U= 384.0	U= 435.5	U= 310.0	t= -0.552	U= 305.0	U= 509.5	U= 541.0	U= 472.5
<b>p</b>		0.100	0.256	<b>0.017</b>	0.582	<b>0.015</b>	0.672	0.928	0.444
<b>Place of residence</b>	Urban	25 (16-36)	26 (20-39)	30 (25-40)	25 (20-31)	25 (18-32)	19 (17-34)	21 (16-32)	173 (154-227)
	Rural	24 (15-37)	27 (22-35)	30 (21-38)	25 (20-29)	25.5 (20-30)	19 (10-34)	22 (16-29)	176 (150-208)
<b>Test statistic</b>		U= 727.5	U= 716.5	U= 752.5	U= 670.5	U= 643.5	U= 627.0	U= 612.0	U= 632.0
<b>p</b>		0.784	0.713	0.949	0.448	0.325	0.236	0.209	0.282

F: Single-direction variance analysis test statistic, U: Mann Whitney U for parametric data, Min.: Minimum, Max.: Maximum

**Table 3.** Distribution of participants’ PSEQ main and subscale mean scores in accordance with their socio-demographic characteristics (Cont.)

		Concern about the well-being of self and the baby	Adaptation to pregnancy	Adaptation to motherhood role	Readiness for childbirth	Fear of childbirth	Relationship with her own mother	Relationship with her spouse	Total
Characteristics		Median (Min-Max)	Median (Min-Max)	Median (Min-Max)	Median (Min-Max)	Median (Min-Max)	Median (Min-Max)	Median (Min-Max)	Median (Min-Max)
<b>Access to Social Security</b>	Yes	24 (15-36)	26 (22-36)	30 (25-40)	25 (20-31)	25 (18-32)	19 (18-34)	21 (16-32)	173 (150-227)
	No	26 (20-37)	27 (20-39)	31 (21-39)	25 (20-27)	25 (21-32)	19 (10-27)	20 (16-27)	173 (154-211)
<b>Test statistic</b>		U= 490,0	U= 645,0	U= 782,0	U= 756,5	U= 634,5	U= 490,5	U= 480,5	U= 732,0
<b><i>p</i></b>		<b>0.011</b>	0.205	0.889	0.726	0.175	<b>0.007</b>	<b>0.008</b>	0.583
<b>Harmful Habit</b>	Yes	26 (18-33)	27 (20-39)	28 (27-40)	26 (23-27)	25 (22-32)	19 (18-34)	19 (16-31)	173 (160-224)
	No	24.5 (15-37)	26.5 (22-36)	30 (21-39)	24.5 (20-31)	25 (18-32)	19 (10-34)	21 (16-32)	173.5 (150-227)
<b>Test statistic</b>		U= 455.0	U= 520.5	U= 529.0	U= 398.0	U= 499.0	U= 536.0	U= 414.5	U= 545.5
<b><i>p</i></b>		0.347	0.770	0.835	0.13	0.613	0.884	0.176	0.965

F: Single-direction variance analysis test statistic, U: Mann Whitney U for parametric data, Min.: Minimum, Max.: Maximum

**Table 3.** Distribution of participants' PSEQ main and subscale mean scores in accordance with their socio-demographic characteristics (Cont.)

		Concern about the well-being of self and the baby	Adaptation to pregnancy	Adaptation to motherhood role	Readiness for childbirth	Fear of childbirth	Relationship with her own mother	Relationship with her spouse	Total
Characteristics		Median (Min-Max)	Median (Min-Max)	Median (Min-Max)	Median (Min-Max)	Median (Min-Max)	Median (Min-Max)	Median (Min-Max)	Median (Min-Max)
<b>Access to Social Security</b>	Yes	24 (15-36)	26 (22-36)	30 (25-40)	25 (20-31)	25 (18-32)	19 (18-34)	21 (16-32)	173 (150-227)
	No	26 (20-37)	27 (20-39)	31 (21-39)	25 (20-27)	25 (21-32)	19 (10-27)	20 (16-27)	173 (154-211)
<b>Test statistic</b>		U= 490.0	U= 645.0	U= 782.0	U= 756.5	U= 634.5	U= 490.5	U= 480.5	U= 732.0
<b>P</b>		<b>0.011</b>	0.205	0.889	0.726	0.175	<b>0.007</b>	<b>0.008</b>	0.583
<b>Harmful Habit</b>	Yes	26 (18-33)	27 (20-39)	28 (27-40)	26 (23-27)	25 (22-32)	19 (18-34)	19 (16-31)	173 (160-224)
	No	24.5 (15-37)	26.5 (22-36)	30 (21-39)	24.5 (20-31)	25 (18-32)	19 (10-34)	21 (16-32)	173.5 (150-227)
<b>Test statistic</b>		U= 455.0	U= 520.5	U= 529.0	U= 398.0	U= 499.0	U= 536.0	U= 414.5	U= 545.5
<b>P</b>		0.347	0.770	0.835	0.13	0.613	0.884	0.176	0.965

F: Single-direction variance analysis test statistic, U: Mann Whitney U for parametric data, Min.: Minimum, Max.: Maximum

**Table 4.** Distribution of Participants’ PSEQ main and subscale mean scores in accordance with their obstetric characteristics

Characteristics		Concern about the well being of self and the baby	Adaptation to pregnancy	Adaptation to motherhood role	Readiness for childbirth	Fear of childbirth	Relationship with her own mother	Relationship with her spouse	Total
		Median (Min-Max)	Median (Min-Max)	Median (Min-Max)	Median (Min-Max)	Median (Min-Max)	Median (Min-Max)	Median (Min-Max)	Median (Min-Max)
<b>Intention Status of Pregnancy</b>	Yes	25 (15-37)	26 (20-39)	30 (21-40)	25 (20-31)	25 (18-32)	19 (10-34)	21 (16-32)	173(150-227)
	No	25 (20-33)	30,5 (24-35)	30 (26-35)	24 (21-28)	26 (20-29)	19,5 (18-32)	21 (16-27)	175,5(159-195)
<b>Test statistic</b>		U= 632.0	U= 389.0	U= 640.0	U= 607.5	U= 613.5	U= 678.0	U= 614.0	U= 556.5
<b>p</b>		0.675	<b>0.010</b>	0.727	0.522	0.558	0.992	0.559	0.276
<b>Status of getting regular health-checks</b>	Yes	25 (15-36)	26.5 (20-39)	30 (25-40)	25 (20-31)	25 (18-32)	19 (17-34)	21 (16-32)	173(150-227)
	No	24 (17-37)	28 (24-31)	30 (21-35)	24 (20-26)	22 (20-29)	19 (10-24)	21 (16-27)	172(154-184)
<b>Test statistic</b>		U= 366.0	U= 411.0	U= 406.0	U= 375.0	U= 395.5	U= 375.0	U= 421.5	U= 367.5
<b>p</b>		0.314	0.602	0.564	0.360	0.490	0.336	0.682	0.323
<b>Sex of the baby</b>	Female	25 (15-34)	26 (20-36)	30 (26-40)	25 (20-31)	25 (18-31)	19 (18-34)	21 (16-32)	174(150-227)
	Male	24.5 (17-37)	27 (22-39)	30 (21-39)	25 (20-29)	25 (19-32)	19 (10-34)	20 (16-30)	172(154-214)
<b>Test statistic</b>		U= 1469.0	U= 1497.5	U= 1492.5	U= 1478.5	U= 1508.0	U= 1360.5	U= 1416.5	U=1426.5
<b>p</b>		0.687	0.815	0.791	0.728	0.863	0.269	0.472	0.514
<b>Status of having a relative with a history of high-risk pregnancy</b>	Yes	25 (15-34)	27 (20-35)	30 (27-38)	24.5 (20-29)	23 (19-30)	19 (18-34)	21 (19-30)	173 (150-209)
	No	24 (16-37)	26 (22-39)	30 (21-40)	25 (20-31)	25 (18-32)	19 (10-34)	21 (16-32)	173 (154-227)
<b>Test statistic</b>		U= 954.0	U= 876.0	U= 962.0	U= 970.0	U= 735.0	U= 941.0	U= 959.5	U=977.5
<b>p</b>		0.853	0.444	0.899	0.946	0.069	0.766	0.884	0.991

U: Mann Whitney U test statistic,  $\chi^2$ :Kruskal Wallis test statistic, Min.: Minimum, Max.: Maximum,  $p < 0,005$ , a-b: There is no difference between groups with the same letter.

**Table 4.** Distribution of participants' PSEQ main and subscale mean scores in accordance with their obstetric characteristics (Cont.)

		Concern about the well being of self and the baby	Acceptance of pregnancy	Identification with motherhood role	Readiness for childbirth	Fear of childbirth	Relationship with her own mother	Relationship with her spouse	Total
Characteristics		Median (Min-Max)	Median (Min-Max)	Median (Min-Max)	Median (Min-Max)	Median (Min-Max)	Median (Min-Max)	Median (Min-Max)	Median (Min-Max)
<b>Diagnosis</b>	Diseases related to the fetus and pregnancy	24 (15-35)	30 (17-38)	32 (17-38)	25 (18-31)	23 (16-31)	25 (10-28)	19 (16-30)	182 (120-195)
	Systemic Diseases	23 (15-35)	30 (19-37)	32 (17-42)	25 (20-29)	24 (20-30)	20 (19-31)	21 (10-30)	181,5 (124- 213)
<b>Test statistic</b>		U= 1395.5	U= 1650.0	U= 1395.0	U= 1597.5	U= 1728.0	U= 1665.5	U= 1232.0	U= 1443.0
<b>p</b>		0.635	0.284	0.453	0.587	0.123	0.221	0.140	0.956
<b>Status of being informed</b>	Informed	26.5 (18-36)	27 (22-32)	30 (27-38)	22.5 (21-27)	24 (20-31)	19 (18-34)	19 (16-30)a	169(160-214)
	Partially informed	25 (16-34)	27 (20-39)	30 (26-40)	25 (20-31)	25 (18-32)	19 (17-34)	21(16-31) ab	174(154-224)
	Not informed	24 (15-37)	26 (23-36)	30 (21-39)	24 (20-29)	25 (20-30)	20 (10-34)	22 (16-32) b	173(150-227)
<b>Test statistic</b>		$\chi^2 = 2.4$	$\chi^2 = 0.0$	$\chi^2 = 0.1$	$\chi^2 = 3.7$	$\chi^2 = 0.1$	$\chi^2 = 2.9$	$\chi^2 = 8.1$	$\chi^2 = 0.4$
<b>p</b>		0.295	0.984	0.929	0.156	0.955	0.232	<b>0.017</b>	0.826

U: Mann Whitney U test statistic.  $\chi^2$ : Kruskal Wallis test statistic, Min.: Minimum, Max.: Maximum,  $p < 0,005$ , a-b: There is no difference between groups with the same letter

## Discussion of Qualitative Results

The most original result of the qualitative side of this study was that women experienced the high-risk pregnancy process that had “being a mother” in its centre as a life period defined by “sacrifice and struggle.” Motherhood is a socially constructed process that accumulates meaning via cultural structures. In societies like Turkey where the patriarchal ideology is dominant, the purpose of women’s existence is presented as being a mother, devoting themselves to their children and prioritizing their children’s interests under all conditions. This forces high-risk pregnant women to try to be a mother under all circumstances and to fight with all adversities (Karaman and Dogan, 2018). In this study, women’s fulfilment of the motherhood role without complaining or expressing unhappiness or fatigue and reflect the perception of “super mother” in the society (Bhaumik, 2018). Women taking the responsibility of motherhood are equated with a mythological deity bearing the weight of the world on their shoulders (Shloim et al., 2015). In the study by Shelton and Johnson (2006), the process of sacrifice and struggle is likened to running on an endless treadmill. In this case, the fact that the concept of being a mother, along with the processes of sacrifice and struggle are situated at the centre of high-risk pregnant women’s experiences appears as an inevitable result of the social construction of motherhood (Shelton and Johnson, 2006).

In the accessed national and international literature, there are studies supporting this result (Kulakaç et al., 2006; Liamputtong, 2006; Tsai et al., 2011; Nillson et al., 2013; Watts et al., 2015; Benza and Liamputtong, 2017). It was determined in this study that women’s definitions of the motherhood process did not change and they defined it as an indescribable and unique feeling. In consideration of this finding, motherhood-related emotions and thoughts were observed to have similar universal definitions in high-risk or non-high-risk pregnancy situations.

In the study it was observed that “high-risk pregnancy” situation gave rise to the experiences of fear and shock (Isaacs and Antipatin, 2020). These results are similar to the studies in which high-risk pregnancy diagnosis is explained by women with reference to “fear”, “pain”, “anxiety” and “a shocking condition” (Wilhelm et al., 2015; Isaacs and Antipatin, 2020).

In the literature, the hospitalization process is defined as a disturbing, tiring, restricting and stressful situation (Smorti et al., 2021). Yet despite the deterioration in comfort and restriction on freedom, women wanted to be in the hospital and they endured this difficulty “to be a mother.”

In this study, women “tried to cope by choosing to be positive”. The women who described that they were playing Pollyannaism expressed that they retained the hope of having a baby against all difficulties. In the study by Wilhelm et al. (2015), the expression of a woman supported this result: “...I’m afraid of this condition (high-risk pregnancy) (Wilhelm et al., 2015). However, I am also trying to discover the beautiful side of my pregnancy...”. Some women feel helpless from time to time but they continue to cope with the process by accepting the situation. This can be socially and culturally defined with the common Turkish proverb “what can’t be cured must be endured.”.

Furthermore, women experiencing high-risk pregnancy contribute to the coping process of themselves and others by sharing hope and thus constitute an informal support network. The theme of “sharing hope” in this study showed similarities with the expressions of women who participated in Brand et al. (2014) study where women expressed that they shared their problems and concerns with other high-risk pregnant women and they did not feel alone.

Adaptation to pregnancy and attachment takes place primarily with social acceptance and then psychological acceptance. It is stated that spouse support cannot be replaced with anything during the process of becoming a mother (Saeieh, Rahimzadeh and Yazdkhasti, 2017). Women in the study stated that their need to receive support especially from their spouse and mother increased in this process. In the study by Lederman et al., (2013), family support in pregnancy is emphasized with the “strengthening the relationship with the family” theme. This support was described by women as an “escape from darkness” (Lederman, Boyd and Pitts, 2013). The results about the importance of social support and family and spouse relationship stand out in both qualitative and quantitative parts of this study and support each other.

## CONCLUSION

The use of mixed method research design in this study facilitated a more comprehensive understanding of the subject matter. The study results were visualized via “the sacrifice and struggle cycle of being a mother in high-risk pregnancy.” The results of this study show that women’s experiences of adaptation to pregnancy and motherhood are affected by high-risk pregnancy. In light of the study findings, practice and research recommendations are provided below. In high-risk pregnant women’s care, nurses’ high-level participation in social support networks should be ensured, appropriate activities should be planned and sensitive and therapeutic communication techniques should be developed.

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**Author Contributions** Idea/Concept:NGDÖ, ÖK;Design: NGDÖ, ÖK;Supervision/Counseling: ÖK; Data Collection and/or Processing: NGDÖ; Analysis and/or Interpretation: NGDÖ, ÖK;Literature Review: NGDÖ;

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