Research Article

ASSOCIATION OF STRESS-RELATED FACTORS WITH ANXIETY AMONG PREGNANT WOMEN WITH HEMORRHAGE IN EMERGENCY SERVICE: A CROSS-SECTIONAL SURVEY

Özge ASLAN KOYUTÜRK[1], Öznur KÖRÜKCÜ[2]

Abstract

Aim: This study was conducted to determine the state anxiety level and the influencing factors in pregnant women with hemorrhage who applied to the Emergency Service.

Methods: This descriptive and cross-sectional study was carried out with 255 pregnant women with hemorrhage who applied to the Emergency Department of Antalya Training and Research Hospital, Antalya, and agreed to participate in the questionnaire. Data were obtained using the Personal Information Form and State Anxiety Inventory. In the analysis of the data, nonparametric analysis methods were used. The Mann-Whitney U test was used to compare the mean values of two groups and the Kruskal-Wallis H test was used to compare the mean scores of three or more groups.

Results: As a result of the study, it was determined that the factors affecting the state anxiety levels of the emergency patients were: the noise caused by the machines in the emergency service environment, the unfamiliar environment, the ward system, the discomfort of the bed/stretcher, the crowded environment, observing the situation of the other patients and the lack of communication between the emergency service personnel and the outside environment.

[1] Corresponding Author: PhD, Akdeniz University, Health Sciences Institute, Department of Obes and Gynecology Nursing, Antalya, Türkiye, ozgeaslan_07_09@hotmail.com. ORCİD: 0000-0003-2875-4528

[2]: Asist. Prof. Dr, Akdeniz University, Health Sciences Faculty, Department of Obes and Gynecology Nursing, Antalya, Türkiye, oznurkorukcu@akdeniz.edu.tr. ORCİD:0000-0001-5840-3-9114

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It was determined that the loss of pregnancy in the past, the cause of bleeding, the way it started, the time of onset, what was done when bleeding first started, transportation, the first place applied to, who decided on medical aid, feeling during bleeding, fear of loss of baby or loss of his/her health, the care given in the emergency room, the noise of telephones and staff, smell, temperature, lighting, ventilation, unfamiliar appliances, number of beds, being visible to others at any time, having no television/radio, witnessing other medical procedures performed, and lack of visitor entry were not statistically significant.

Conclusions: It was determined that the emergency environment affected the anxiety level of the pregnant women while the bleeding did not affect their state anxiety level in the wards. It may be suggested that emergency services should be arranged to improve the psychosocial health of pregnant women.

Keywords: Emergency, Pregnancy, Hemorrhage, Anxiety

Vajinal Kanama Şikâyeti ile Acil Servise Başvuran Gebelerde Durumluk Kaygı ve Etkileyen Faktörler: Kesitsel Bir Çalışma

Amaç: Bu araştırma, acil servise başvuran kanamalı gebelerde durumluk kaygı düzeyi ve etkileyen faktörleri belirlemek amacıyla yapılmıştır.

Yöntem: Tanımlayıcı ve kesitsel tipte olan çalışma Sağlık Bilimleri Üniversitesi Antalya Eğitim ve Araştırma Hastanesi Kadın Doğum Acil Servisine başvuran ve ankete katılmayı kabul eden 255 kanamalı gebe ile gerçekleştirilmiştir. Veriler Kişisel Bilgi Formu ve Durumluk-Kaygı Envanteri kullanılarak elde edilmiştir. Analizde, parametrik olmayan analiz yöntemleri kullanılmıştır. İki grubun ortalama değerleri karşılaştırılırken Mann-Whitney U, üç veya daha fazla grubun ortalama puanları karşılaştırılırken Kruskal Wallis H-testi kullanılmıştır.

Bulgular: Acil servise başvuran gebelerin durumluk kaygı düzeylerini etkileyen faktörlerin; trimester, kendi sağlığının olumsuz etkileneceği düşüncesi, acil servisteki makinaların neden olduğu gürültü, yabancı ortam, koğuş sistemi, yatağın/sedyenin rahatlığı, kalabalık, diğer hastaların durumunu görmek ve acil serviste dış ortam ile iletişimin sınırlı olması olduğu saptandı. Geçmişte gebelik kaybı yaşama, kanamanın nedeni, başlama şekli, başlama zamanı, kanama ilk başladığı anda ne yapıldığı, ulaşım, ilk başvurulan yer, tıbbi yardıma kimin karar verdiği, kanama başladığında kadının hissettikleri, bebeğin sağlıksız doğmasından ve kaybetmekten korkma parametrelerine bakılmış ve istatistiksel olarak anlamlı bulunmamıştır. Ayrıca, acil serviste ilgilenilme süresinin, gürültü, koku, ısı, aydınlatma, havalandırma gibi ortamsal değişkenlerin, her an başkaları tarafından görülebilir olmanın, televizyon ve radyo olmamasının, başka hastalara yapılan tıbbi işlemlere tanık olmanın ve ziyaretçi girişinin olmamasının da kanamalı gebelerin durumluk kaygı düzeyleri üzerinde etkisi olmadığı saptanmıştır.

Sonuç: Kanamanın gebelerde durumluk kaygı düzeyine bir etkisi yokken, acil servis ortamının gebelerin kaygı düzeyini etkilediği saptanmıştır. Acil servislerin gebelerin psikososyal sağlığını geliştirecek şekilde düzenlenmesi önerilebilir.

Anahtar Kelimeler: Acil, Gebelik, Kanama, Kaygı

1.INTRODUCTION

The transition to motherhood, which is one of the most important life events in a woman's life, brings about both a physiological and psychological transformation for a woman (Fan et al., 2021). To support and protect the growing fetus, important physiological and immunological changes are observed in the woman's body during pregnancy (Muralidar et al., 2020). For this reason, pregnant women are expressed as a vulnerable group and may experience psychological problems such as anxiety, fear, and depression during pregnancy (Daryani et al., 2020). In addition to being a physiological process, pregnancy can also bring significant risks for the mother and fetus (Muralidar et al.,2020). Every pregnant woman has the possibility of experiencing pregnancy-related risky situations, and pregnancy-related complications prevent the woman from giving birth at term and cause the pregnant woman to transition from a normal pregnancy to the "high-risk pregnancy" category (Yılmaz and Oskay, 2021). One of the greatest dangers of high-risk pregnancy for the mother is maternal mortality.

Maternal mortality rates in the world are of great importance, as they show the level of development as well as being an indicator of the country's health (Abdulkadir and Rainis, 2020). On the other hand, it is reported that approximately 830 women die every day due to preventable causes such as pregnancy and childbirth, and that 99% of these deaths occur in developing countries, mostly among poor people living in rural areas (Aygar and Metintaş; 2018). While the maternal mortality rate in Turkey was 16.7 in 2010, it showed a decreasing trend in the following years and was recorded as 13.6 in 2018, 13.1 in 2019, 13.0 in 2021 and 12.6 in 2022. (TÜİK; 2021, Ministry of Health, 2023), and 15.3% of maternal mortality between 2015-2019 was due tobleeding (Ministry of Health, 2021). Bleeding is the most common direct cause of maternal death worldwide, and the majority of bleeding-related deaths occur in the postpartum period (WHO, 2019). Despite the technological developments in the field of perinatology, obstetric emergencies still occur in most of the direct maternal deaths in Turkey, as in many countries around the world, and pregnancy and postpartum hemorrhages are among the most common obstetric emergencies (Gültürk and Kukulu, 2022). Vaginal bleeding and spotting attacks, which may occur in the early and late stages of pregnancy, are common conditions and it is stated that approximately 27% of pregnant women have bleeding problems (McAllister et al., 2022).

Although vaginal bleeding during pregnancy can occur due to serious problems, such as miscarriage, ectopic pregnancies, placenta previa, ablatio placentae, it can also be seen in healthy pregnancies (Hernández et al., 2021). However, in order to protect maternal and child health, conditions such as hemodynamic instability due to bleeding require emergency treatment (McAllister et al., 2022). Factors such as the triage process, the risk of losing her baby, and the uncertainty of her health status affect the psychological health of pregnant women who apply to the emergency department due to bleeding and

pain, and the emergency room environment can bring about a difficult wait for them (Hernández et al., 2021; McAllister et al., 2022). Pregnancy is a period with a high risk of encountering many factors that may cause anxiety and stress (Sikar et al.,2021). Women who have complications such as bleeding during pregnancy experience more psychological problems such as stress, anxiety and depression than those who do not (Bayrampour et al., 2018). The mother who has a high-risk pregnancy (bleeding, preeclampsia, eclampsia, etc.) experiences psychological problems with the thought that bleeding will endanger the life of her baby and herself (Karabulutlu and Yavuz, 2021). This situation causes long-term psychological stress (Kossakowska, 2016).

Emergency departments are environments where stress and anxiety are high, as they are complex environments by nature, and patients and their families may have to wait for a long time (Schneider et al., 2019). It is stated that the emergency department environment has different effects on the woman, depending on whether the clinical condition of the pregnant woman who experiences bleeding requires acute intervention or less acute intervention (McAllister et al., 2022). It is necessary to determine the anxiety of women who experience bleeding during pregnancy and the factors affecting them in the emergency department environment in order to provide better quality service in emergency obstetric care. When the studies carried out in recent years are examined, the most common complaints of adolescent pregnant women who applied to the emergency department were found to be abdominal pain (47.2%), admission for delivery (15.4%), bleeding and spotting (13.6%) (Kılıççeker,2019). In a study examining the experiences of women with early bleeding who applied to the emergency department, it was found that pregnant women perceived bleeding as a negative and frustrating situation, and found the emergency department complex, fearful and traumatic (Trostian et al., 2022). A study investigating the emergency room experience of patients with early pregnancy complications stated that women found the emergency department environment overcrowded and complex and that health personnel normalized this environment (Rojas-Luengas et al., 2019).

This study was planned to determine the state anxiety level of women who experienced bleeding during pregnancy and applied to the emergency department and the effect of various factors in the emergency environment (such as sound, light, and lack of visitors) on the anxiety experienced by pregnant women.

2. MATERIAL AND METHODS

2.1. Design and participants

This research used a descriptive-sectional research design, a quantitative research method. This cross-sectional study was conducted between 15 August 2017 and 15 May 2018 in the Emergency Gynecology Service of the Health Sciences University Antalya Training and Research Hospital. The population of the study consists of all bleeding pregnant women who applied to the Emergency Gynecology Department of the Health Sciences University Training and Research Hospital, Antalya.

This study was planned to determine the state anxiety levels of women who experienced bleeding during pregnancy and applied to the emergency department and to determine the relationship between various factors in the emergency environment (such as sound, light, lack of visitors) and the anxiety experienced by the woman.

The sample of the study was decided by power analysis. The sample calculation was made based on the relationship between the two averages in the power analysis. In the calculation, two-way correlation, type 1 error rate (α) = 0.05, and the power of the study (1- β) as 0.80 were taken. In the light of this information, according to the sample formula, the population of which is known, the sample group was determined as 246 pregnant women with bleeding, but due to the margin of error, 255 pregnant women were studied. The population of the study consisted of women who had obstetric bleeding and were admitted to the emergency department, did not have a chronic systemic disease, did not have a sexually transmitted disease, had a single fetus, and could speak and understand Turkish.

2.2. Data Collection

A Personal Information Form was used to determine the sociodemographic characteristics of the sample, and the State Anxiety Inventory was used to determine the level of state anxiety.

The Personal Information Form: The Personel İnformation Form consists of three parts. The first part consists of introductory questions such as the age of pregnant women, gestational week, and educational status. The second part includes questions about bleeding such as the reason for bleeding, the time of onset of bleeding, and the amount of bleeding. The third part of the questionnaire consists of questions about the psychosocial effects of the emergency department environment.

The State Anxiety Inventory: The State Anxiety Inventory was developed by Spielberger and Gorsuch in 1964 to measure the level of state anxiety in normal and abnormal individuals. The scale consists of 20 items. The items in the scale are numbered from 1 to 4 and are of the Likert type. In the State Anxiety Inventory, 1 means “not at all” and 4 means “completely”. The scores obtained from

the scale theoretically vary between 20 and 80. Scale items include direct (straight) and reversed statements. When reversed statements expressing positive emotions are scored, those with a weight of 1 are converted to 4, and those with a weight of 4 are converted to 1. In direct statements expressing negative emotions, responses with a value of 4 indicate high anxiety. In reversed statements, answers with a value of 4 indicate low anxiety, and answers with a value of 1 indicate high anxiety. 10 items (items 1, 2, 5, 8, 10, 11, 15, 16, 19, and 20) in the State Anxiety Inventory are reversed statements. The Cronbach's alpha value of the scale, which was adapted to Turkish by Öner and Le Compte (1985), was determined as 0.94 (Aydemir and Köroğlu, 2009). In our study, the Cronbach's alpha value of the scale was 0.84.

2.3. Analysis

To determine the appropriate analysis type, the conformity of the data to the normal distribution was examined and it was determined that all State Anxiety Inventory items did not show normal distribution according to both the Kolmogorov-Smirnov and Shapiro-Wilk tests ($p>.05$). According to this result, non-parametric analysis methods were used. These are frequency, percentage, mean, standard deviation, median, simple regression analysis, Mann-Whitney U test, chi-square, and Kruskal-Wallis H test.

2.4. Ethics

Ethical approval was obtained from the Akdeniz University Clinical Research Ethics Committee (Date: 14.06.2017 No: 371) to conduct the study. At the same time T.C. Institutional permission was obtained from the Ministry of Health, Turkey Public Hospitals Institution, the General Secretariat of the Antalya Province Public Hospitals Union, to conduct the research in the Health Sciences University Antalya Training and Research Hospital Emergency Gynecology Service. The purpose of the study was explained and written consent was obtained from the pregnant women who participated in the study.

3. RESULTS

3.1. Demographic Characteristics

Considering the demographic characteristics of the pregnant women with bleeding who applied to the obstetric emergency unit and participated in the study, it was found that the mean age was 29.9±7.0, the mean gestational trimester was 1.3±0.6, the mean week of gestation was 11.1±8.2, their mean parity was 1.0±1.2, the mean marriage year was 6.6±5.8, the mean total family income was 3001.9±1354.3, the mean total number of pregnancies was 2.5±1.8, the mean number of living children was 1.0±1.2, and the mean total pregnancy loss was 1.4±1.1. Considering the educational status of the bleeding pregnant women who applied to the emergency department, it was found that 3.9% were illiterate, 31.4% were

primary school graduates, 40.8% were high school graduates and 22% were university graduates. The majority of the bleeding pregnant women who participated in the study were high school graduates (Table 1).

Table 1. Distribution of Demographic Characteristics of Pregnant Women (n=255)

Demographic Features	**M±SS**	
Age	29.9±7.0	
Trimester	1.3±0.6	
Pregnancy week	11.1±8.2	
Parity	1.0±1.2	
Length of marriage	6.6±5.8	
Family total income (TL)	3001.9±1354.3	
Total number of pregnancies	2.5±1.8	
Number of living children	1.0±1.2	
Total pregnancy losses	1.4±1.1	
Demographic Features	**n**	**%**
Education status		
İlliterate	10	3.9
Literate	5	2.0
Primary School	80	31.4
High School	104	40.8
University	56	22.0
Working Status		
Working	93	36.5
Not Working	162	63.5
Experiencing pregnancy loss in the past		
Yes	73	28.6
No	182	71.4
Past pregnancy loss causes		
Missed abortion	60	71.4
Curettage	13	28.6
Regular pregnancy follow-ups		
Yes	247	96.9
No	8	3.1
The status of receiving childbirth preparation training		
Yes	6	2.4
No	249	97.6
Pre-pregnancy gynecological examination experience		
Yes	171	67.1
No	84	32.9
Desired and planned state of pregnancy		
A desired and planned pregnancy	167	65.5
A desired but not planned pregnancy	83	32.5
An unwanted and unplanned pregnancy	5	2.0
Spousal support during pregnancy		
Yes	212	83.1
No	7	2.7
Partially	36	14.1

n=255

Considering the employment status of the pregnant women participating in the research, 63.5% of them worked in any job. Considering the rate of pregnancy loss in the past, 71.4% of them had experienced pregnancy loss. Considering the reasons for the loss of pregnancy in the past, it was found that 71.4% of them had experienced loss due to missed abortion. Considering the rates of having pregnancy follow-ups, 96.9% of them stated that they had regular pregnancy follow-ups. The rate of those who had not received birth preparation training was found to be higher than those who had received birth preparation training (97.6%). When the gynecological examination experience was questioned, the rate of those who had experienced gynecological examination was found to be high, with a rate of 67.1%. Considering the desire and planning status of pregnancy, a desired and planned pregnancy response was obtained with a rate of 64.5%. When the support of the spouse during pregnancy was questioned, it was found that the support of the spouse was 83.1% (Table 1).

3.2. Findings Related To The Emergency Department And Bleeding

When the bleeding characteristics of pregnant women who applied to the emergency obstetrics service were examined, the most common reason for admission was abortus imminens with a rate of 23.7%, followed by missed abortion with a rate of 23.9%. Vaginal bleeding in pregnant women started spontaneously with a rate of 93.3%. Considering the time of onset of bleeding, it was found that 82.7% of the pregnant women started bleeding one- four hours ago. Bleeding amounts were 57.6% low (less than 1 pad in 4 hours). When the things that were done at the time the bleeding started were questioned, the number of those who came to the emergency department without wasting time was found to be the highest at 73.3%. Considering the mode of transportation to the emergency department due to bleeding, the rate of those who came in their private vehicle was found to be the highest at 85.5%. When the women were questioned about how they felt when the bleeding started, the number of those who were afraid of losing their baby was found to be high with a rate of 76.1%. The number of those who were afraid of losing their baby due to bleeding was found to be higher at 90.6% compared to those who were not afraid. The number of those who thought that their health would be adversely affected due to bleeding was found to be higher with a rate of 94.5% compared to those who thought that they would not be affected. When the opinions of the pregnant women within the scope of the study regarding the emergency environment were examined, the number of those who had applied to the emergency service in the past was 79.2%, while the number of those who applied to the emergency department for the first time was 20.8%. The obstetric emergency service responded to the basic needs of 87.8% of the bleeding pregnant women who participated in the study. In the obstetric emergency department setting, 83.9% of pregnant women with bleeding stated that their individuality was given importance, while 16.1% stated that no importance was given. Again, 86.7% of the bleeding pregnant women who applied to the

obstetric emergency department stated that their privacy was respected, while 13.3% stated that their privacy was not respected (Table 3). Considering the features related to the emergency department environment, 70.2% of the pregnant women with bleeding found the temperature, 78.4% the lighting, and 74.1% the ventilation of the emergency room environment positive. 50.2% of the pregnant women were immediately taken care of after applying to the emergency service, while 81.6% of them were found to be unaffected by the noise caused by the machines, 80.8% of them by phone calls, 72.9% of them by the noise caused by the personnel, and 83.1% of them by the smell, 52.5% of them by being in an unfamiliar environment, 61.2% of them by the unfamiliar appliances, 67.8% by the ward system, 61.2% by the number of beds, 69.0% by being visible to others, % 60.8% of them by having no television or radio, 43.1% of them by the discomfort of the bed and stretcher, 65.9% of them by the crowded environment, 64.3% of them by seeing the condition of other patients, and 56.9% of them by witnessing medical procedures performed on other patients. It was determined that 43.1% of the pregnant women were adversely affected by the lack of visitor access to the emergency department and 59.6% by the limited communication between the obstetric emergency service staff and the external environment (Table 3).

3.3. Findings Regarding The Level Of State Anxiety

In this study, the State Anxiety Scale was used to determine the state anxiety level of pregnant women who applied to the obstetric emergency department, and the total score of the scale applied to pregnant women with bleeding was found to be 61.419. It was found that the level of trimester affected anxiety in pregnant women who applied to the obstetric emergency unit due to bleeding. While anxiety was observed at the highest level in the 1st trimester (n:192), it was determined that the state of anxiety decreased in the 2nd and 3rd trimesters. When the experiences due to bleeding are examined, the anxiety level of those who thought that their health would be adversely affected was determined to be higher than those who thought that their health would not be adversely affected. (Table 2).

Table 2. Distribution Of Pregnant Women's State Anxiety Inventory Total Score By Trimesters

	N	Minimum	Maximum	Mean	Standard Deviation	Median
1st trimester	192	37.00	77.00	62.19	8.27	62.00
2nd trimester	37	42.00	77.00	60.91	8.15	61.00
3rd trimester	26	32.00	70.00	56.42	10.02	59.00
STAI total	255	32.00	77.00	61.41	8.59	63.00

In the data related to the emergency department, while the anxiety level was highest in the pregnant women who were negatively affected by the noise caused by the machines in the environment (n:29),

the anxiety level was the lowest in those who stated that they were positively affected. It was highest in those who stated that they were adversely affected by being in an unfamiliar environment (n:108) and at the lowest level in those who stated that they were not affected at all. It was highest in those who stated that they were adversely affected by the presence of the ward system (n:63) and at the lowest level in those who stated that they were positively affected. It was highest for those who stated that they were negatively affected by the discomfort of the bed/stretcher (n:44), and at the lowest level for those who stated that they were positively affected. It was highest for those who stated that they were negatively affected by the crowded environment (n:78), and the lowest for those who stated that they were positively affected. It was determined that it was at the highest level in those who stated that they were adversely affected by those who saw the condition of other patients (n:79), and at the lowest level in those who stated that they were positively affected, and that it was at the highest level in those who stated that they were adversely affected by limited communication with the external environment (n:152) , and it was at the lowest level in those who stated that they were positively affected (Table 3).

Table 3. H-Test Results Of The Relationship Between The State Of Being Affected By The Features Of The Emergency Department And The State Anxiety Levels Of Pregnant Women

Features Of The Emergency Department	N	Rank Mean	Chi-Square	Df	P
Noise caused by machines in the environment					
Positive	18	55.50	8.172	2	**.017**
Negative	29	65.00			
Unaffected	208	61.00			
Being in an unfamiliar environment					
Positive	13	61.00			
Negative	108	64.50	6.059	2	**.048**
Unaffected	134	61.00			
Presence of the ward system					
Positive	19	59.00			
Negative	63	65.00	8.114	2	**.017**
Unaffected	173	61.00			
Degree of comfort of the bed/stretcher					
Positive	101	61.00			
Negative	44	62.00	6.711	2	**.035**
Unaffected	10	61.00			
Crowded environment					
Positive	9	57.00			
Negative	78	64.00	9.226	2	**.010**
Unaffected	168	61.00			
Seeing other patients' status					
Positive	12	60.00			
Negative	79	65.00	9.226	2	**.010**
Unaffected	164	60.00			
Limited communication with the outside environment					
Positive	50	58.00	6.750	2	**.034**
Negative	152	62.00			
Unaffected	53	61.00			

* mean, chi-square, and Kruskal-Wallis H test were used.

When the characteristics of bleeding are examined, there was no statistically significant difference between the women's level of state anxiety and past pregnancy loss, the way the bleeding started, the time of onset of bleeding, the amount of bleeding, what they did when the bleeding first started, how they reached the emergency room due to bleeding, the place where they first applied to when bleeding started, who decided to seek medical attention for bleeding, how the woman felt when the bleeding started in the woman's current pregnancy, and the fear of losing the baby due to bleeding.

It was found that there was no statistically significant difference between the women's level of state anxiety and passing time in the emergency room, the sound of the telephones, the noise caused by the health care personnel, the smell, temperature, ventilation, and lighting of the environment, unfamiliar appliances in the environment, the number of beds, being visible to others at any time, having no TV and radio, witnessing medical procedures performed on other patients, and lack of visitor access (Table 3).

4. DISCUSSION

In the study, the state anxiety levels of pregnant women with bleeding who applied to the emergency department and the affecting factors and their reflections on pregnant women were determined**.** Thus, by knowing the state anxiety level of pregnant women with bleeding who applied to the emergency department and the affecting factors, pregnant women with hemorrhage were asked to receive more effective care. In this study, the State Anxiety Scale was used to determine the state anxiety level of pregnant women who applied to the obstetric emergency service, and the total score of the scale applied to pregnant women with bleeding was 61.419. In the study the total score of the state anxiety scale was found to be high (43.8±4.5) in pregnant women with bleeding who applied to the emergency service, similar to this study (Çevik Ateş, 2019). In the study the state anxiety score of pregnant women was found to be 37.25±9.42. (Öztürk and Erbaş, 2021). Altay and Baltacı, found a score of 53.16±7.28 in their study to determine the state anxiety level before amniocentesis, and this score was found to be 60.7±11.6 (Altay ve Baltacı, 2019). in the study with women whose pregnancies would be terminated due to fetal anomaly, similar to the current study (Geylani et al., 2019). Compared to the previous studies, the state anxiety level of the participants in the present study is higher. The reason for this may be that pregnant women applied to the emergency department due to bleeding during an unexpected period and the research data were collected in the emergency department

In this study, it was determined that the model defining the pregnancy trimester status as the independent variable and the anxiety status of the pregnant woman as the dependent variable was statistically significant ($p>.05$). According to this result, a one-unit increase in the trimester level will cause a

decrease of -2.53 units in the anxiety level of the pregnant woman. Accordingly, as the trimester level increases, anxiety decreases.When the literature is examined, different results have been obtained. Kaya Zaman et al. and Zhang et al. found the anxiety scores of pregnant women in the third trimester to be high, while the findings of Stepowicz et al. and Altuntuğ et al. support those of the present study (Kaya and Zaman, 2019; Zhang et al., 2021; Stepowicz et al., 2020; Altuntuğ et al., 2019). Like the result of this study, they found state anxiety to be higher in the first trimester. Accordingly, different results have been reached in the literature.

It was determined that the anxiety level of the pregnant women differed significantly according to their fear that their health would be adversely affected due to bleeding in their current pregnancies ($u=1072.50$, $p<.05$). For this reason, it can be said that those who thought that their health would be negatively affected had a higher level of anxiety. The literature supports the present study. Silva et al. and Arslantaş et al. stated that risks such as bleeding during pregnancy cause anxiety in pregnant women as they may cause poor fetal and maternal outcomes (Silva et al.,2017; Arslantaş et al., 2020).

Anxiety levels differed significantly according to the state of being affected by the noise caused by the machines in the environment ($\chi2 =1.384$, $p<.05$). Accordingly, the anxiety level was determined to be the highest in those who were negatively affected by the noise caused by the machines in the environment. On the other hand, statistically significant results were not obtained regarding the extent to which the state anxiety levels of pregnant women who applied to the obstetric emergency service were affected by the noise caused by telephones and personnel. Looking at the literature, Punches et al. stated that the complexity and noise of the emergency environment would increase anxiety (Punches et al.,2019). Accordingly, the present study supports the literature. The noise in the emergency department increased the anxiety level of pregnant women with bleeding. The reason for this may be that pregnant women and patients who applied to the emergency department were already worried about their current situation and the noise exacerbated this situation.

Anxiety levels differed significantly according to the state of being affected by being in an unfamiliar environment in the emergency room ($\chi2 =6.059$, $p<.05$). The anxiety level of pregnant women was highest among those who stated that they were negatively affected by being in an unfamiliar environment. For pregnant women at risk, being sick and being hospitalized affect their quality of life and increase anxiety (Onat Köroğlu, 2020). Since bleeding during pregnancy is a risky situation, it increases the anxiety levels of pregnant women. Pregnant women are exposed to some stressors, as emergency room environments are complex, unfamiliar, worrying, and frightening environments (Baird et al., 2018). Stressors experienced by pregnant women in the hospital environment are listed as increasing the feeling of loneliness in the hospital environment, having to sleep alone, having to share a

room with a stranger, having to be dependent on others, having to give information about themselves to health personnel whom they do not know, loss of control and power, lack of respect for their privacy, inability to understand medical terms, and not being given information about the situation (Ölçer and Oskay,2015). Inevitably, the anxiety states of pregnant women with bleeding who apply to the emergency department with the complaint of bleeding during pregnancy are affected by the unfamiliar emergency room or hospital environment.

Anxiety levels differed significantly according to the state of being affected by the presence of the ward system in the emergency room ($\chi2$ =8.114, p<.05). The anxiety level of pregnant women was highest among those who stated that they were adversely affected by the ward system. On the other hand, Akar et al. stated that due to the physical conditions of the emergency room and to protect the privacy of the patient, examination units should be separated from each other with a curtain (Akar et al., 2019). The reason why the bleeding pregnant women who applied to the obstetric emergency unit were negatively affected by the ward system and their anxiety levels increased may be that they experienced anxiety towards the sudden opening of the curtain during the examination due to the gynecological examination.

Anxiety levels differed significantly according to the state of being affected by the discomfort of the bed/stretcher in the emergency room ($\chi2$ =6.711, p<.05). The anxiety level was highest in pregnant women who stated that they were negatively affected by the discomfort of the bed/stretcher. Chauny et al. stated that the discomfort of the stretcher in the emergency room affected sleep quality (Chauny et al., 2019). Duran, stated that mental problems increased in patients with impaired sleep quality (Duran, 2020). Çelik Yavuz, stated that the comfort of the stretchers/bed increased patient satisfaction (Çelik Yavuz, 2020). The literature supports the current study, and it is thought that the degree of comfort of the bed/stretcher in the emergency setting affects the anxiety of pregnant women and patients. It is thought that the gynecological table in the examination room in the obstetric emergency unit also affects the anxiety levels of pregnant women.

Anxiety levels of pregnant women with bleeding differed significantly according to the impact of the crowded environment in the emergency room ($\chi2$ =9.226, p<.05). In addition, the anxiety level of pregnant women was the highest among those who stated that they were adversely affected by the crowded environment. Özdaş and Kızılkaya, stated that stress and anxiety in the emergency department were inevitable for employees, patients, and their relatives (Özdaş and Kızılkaya, 2021). Doğru et al. stated that approximately 15% of pregnant women may develop complications that will require emergency intervention, and they may need an emergency service (Doğru et al., 2017). In the same study, the rate of admission to the emergency department due to vaginal bleeding was found to be 12.1%, and the hospitalization of only 4% of the pregnant women supports the idea that most of the pregnant

women applied to the emergency service inappropriately. Şimşek, drew attention to the unnecessary use of emergency services, ranging between 10% and 90%. Inappropriate admissions to the emergency services cause unnecessary patient traffic and crowding, while it causes stress and anxiety for patients and pregnant women who apply to the emergency services (Şimşek, 2015). The current study supports the literature, and it is thought that inappropriate applications to the emergency department cause crowding and prevent the provision of services to people who need emergency intervention.

Anxiety levels differed significantly according to the state of being affected by seeing other patients' conditions ($\chi 2 = 9.226$, $p<.05$). The anxiety level was highest in pregnant women who stated that they were negatively affected by those who saw the condition of other patients. When the literature is examined, Özdaş and Kızılkaya, stated that the emergency room environment is an environment that increases anxiety, and Çevik Ateş and Topatan stated that because pregnant women may experience anxiety due to bleeding, seeing the condition of other pregnant women who are examined may increase their current anxiety levels (Özdaş and Kızılkaya, 2021; Çevik Ateş and Topatan, 2019).

In the current study, the level of anxiety of pregnant women showed a significant difference according to the state of being affected by the limited communication with the external environment in the emergency room ($\chi 2 = 9.226$, $p<.05$). The anxiety level of pregnant women was highest in those who stated that they were negatively affected by limited communication with the external environment, and the lowest in those who stated that they were positively affected. When the literature is examined, no study has been found on this subject, but in our study, most pregnant women found it appropriate not to have visitors, but they argued that communication with the outside environment should be easy if no visitors are allowed. It is thought that the anxiety levels of pregnant women may increase due to both the lack of visitor access and the limited communication with the external environment.

This research has some limitations. The limitations of the study include the refusal of the bleeding pregnant women who applied to the Emergency Obstetrics Service to be interviewed due to the anxiety they experienced and the lack of a room where pregnant women could be interviewed privately in emergency service conditions. Furthermore, the fact that women who experienced bleeding during pregnancy did not come to the emergency obstetrics service is another limitation of the study.

5. CONCLUSION

As a result of the evaluation of the data obtained from the study, among pregnant women with bleeding who applied to the Emergency Department, it was found that as their trimesters increased, their state anxiety levels decreased, that their state anxiety levels were increased by the thought that their own health would be adversely affected, the noise of the machines in the emergency room, the presence of

pregnant women in the emergency room, being in an unfamiliar environment, the ward system, the discomfort of the bed/stretcher, the crowded environment, seeing the situation of other patients in the emergency room, and limited communication with the outside environment in the emergency environment, while their state anxiety levels were not affected by having lost a pregnancy in the past, the reason for the bleeding, the time it started, the way it started, what was done when the bleeding first started, mode of transportation to the emergency room, who decided to seek medical help, the first place they applied to, how they felt when the bleeding started, the state of being afraid of the baby being born unhealthy and losing the baby, waiting time in the emergency room, noise from telephones and personnel, smell, temperature, lighting and ventilation, unfamiliar appliances, the number of beds, the state of being visible to others at any time, the absence of television and radio, witnessing medical procedures performed on other patients, and the lack of visitor access. As a result of the study, it can be suggested that it should not be forgotten that the anxiety levels of pregnant women with bleeding who apply to the emergency department may be high, and that pregnant women with bleeding who apply to the emergency department may need not only physiological but also psychological support.

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Conflict of Interest

The authors declare no conflict of interest.

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REFERENCES

Abdulkadir, M. and Rainis, R. 2020. Clean Delivery Kit Use and Maternal Health Outcome in Jigawa State, Nigeria. *International Journal of Academic Research in Business and Social Sciences*,10(2),84–102.: http://dx.doi.org/10.6007/IJARBSS/v10-i2/6874.

Akar, Y., Özyurt, E., Erduran, S., Uğurlu, D., Aydın, İ. 2019. Hasta mahremiyetinin değerlendirilmesi. *Sağlık Akademisyenleri Dergisi*, 6(1), 18-24. Retrieved from https://dergipark.org.tr/tr/pub/sagakaderg/issue/43967/543098

Altay, B. and Baltacı, N. 2019. Amniyosentez Öncesi Gebelerde Anksiyete Düzeyi ve Etkileyen Faktörler. *Anadolu Hemşirelik ve Sağlık Bilimleri Dergisi*, 22(2): 95-104.

Arslantaş, H., Çoban, A., Dereboy, F., Sarı, E., Şahbaz, M., Kurnaz, D. 2020. Son trimester gebelerde doğum korkusunu etkileyen faktörler ve doğum korkusunun postpartum depresyon ve maternal bağlanma ile ilişkisi, *Cukurova Medical Journal*, 45(1):239-250. DOI:10.17826/cumj.647253.

Aygar, H. And Metintaş, S. 2018. Bir Kalkınma Göstergesi Olarak Anne Ölümleri. *ESTÜDAM Halk Sağlığı Dergisi*, 3(3):63-70. Microsoft Word - hatice makale.docx (dergipark.org.tr)

Aydemir, Ö. and Köroğlu, E. 2009. *Psikiyatride kullanılan klinik ölçekler*. Hekimler Yayın Birliği Yayıncılık, Ankara, 221- 232.

Baird, S., Gagnona, M.D., deFiebrea, G., Brigliac, E., Crowdera, R., Prinea, L. 2018. Women's experiences with early pregnancy loss in the emergency room: A qualitative study. Sexual & Reproductive Healthcare, 16, 113-117. https://doi.org/10.1016/j.srhc.2018.03.001.

Bayrampour, H., Vinturache, A., Hetherington, E., Lorenzetti, DL., Tough, S. 2018. Risk factors for antenatal anxiety: A systematic review of the literatüre. *J Reprod Infant Psychol*,36(5): 476-503. doi: 10.1080/02646838.2018.1492097. Epub 2018 Oct 8.

Chauny, JM., Paquet, J., Carrier, J., Lavigne, G., Marquis, M., Cournoyer, A., Manzini, C., Daoust, R. 2019. Subjective sleep quality and its etiology in the emergency department. *CJEM*, 21(2):249-252. DOI 10.1017/cem.2018.394

Çelik-Yavuz, S. (2020). Hastaların Genel Hastane Hizmetlerinden Memnuniyetlerinin ve Hemşireye Olan Güveninin Belirlenmesi. Yüksek lisans tezi, Ankara.

Çevik-Ates, A. 2017. Kanama Şikâyetiyle Acile Başvuran Abortus İmminens (Düşük Tehdidi) Tanısı Almış Çiftlerin Sosyal Destek Sistemleri ile Kaygı Düzeyleri Arasındaki İlişki Yüksek Lisans Tezi, Samsun.

Çevik-Ateş, A., Topatan, S. 2019. The relationship between support systems and anxiety in couples admitted to the emergency department with vaginal bleeding. *International Emergency Nursing*, 46, 100781. https://doi.org/10.1016/j.ienj.2019.06.004.

Daryani, FE., Zarai, S., Mohammadi, A., Hemmati, E., Yngyknd, S.G., & Mirghafourvand, M. 2020. Depression, stress, anxiety and their predictors in Iranian pregnant women during the outbreak of COVID-19. BMC Psychology, 8:99. doi: 10.1186/s40359-020-00464-8.

Doğru, HY., Oktay, G., Özsoy, AZ., Çakmak, B., Delibaş, İB., Esen, M. 2017. Acil Servise Başvuran Gebelerin Değerlendirilmesi: Üçüncü Basamak Tek Merkez Deneyimi. *Van Tıp Dergisi*, 24(3): 157-162. DOİ: 10.5505/vtd.2017.68442.

Duran, B. 2020. Hastaların Ameliyat Bekleme Süresinin Kaygı ve Uyku Kalitesine Etkisi. Yüksek lisans tezi, İzmir.

Fan, S., Guan, J., Cao, L., Wang, M., Zhao, H., Chen, L., Yan, L. 2021. Psychological effects caused by COVID-19 pandemic on pregnant women: A systematic review with meta-analysis. *Asian Journal of Psychiatry,* 56:102533. DOI:10.1016/j.ajp.2020.102533.

Geylani, M., Doğan, S., Atayoğlu, A.T. 2020. Anxiety Level of Pregnant Women before Pregnancy Termination for Fetal Abnormality. *The Anatolian Journal of Family Medicine*, 3(1):52–58. DOI: 10.5505/anatoljfm.2019.05706.

Gültürk, E. And Kukulu, K,. 2022. Reliability and validıty analysis of the obstetric triage acuıty scale. *Hastane Öncesi Dergisi*, 7(1), 1-14. https://doi.org/10.54409/hod.1004455.

Hernández, E., Camacho, M., Leal-Costa, C., Ruzafa-Martínez, M., Ramos-Morcillo, A.J., Cazorla, E., Díaz-Agea, JL. 2021. Does multidisciplinary team simulation-based training improve obstetric emergencies skills? Multidisciplinary Digital Publishing Institute. In *Healthcare*, 9(2): 170. DOI: 10.3390/healthcare9020170.

Karabulutlu, Ö. and Yavuz, C. 2021. Yüksek Riskli Gebeliklerde Depresyon ve Anksiyete Düzeylerinin Sıklığının Değerlendirilmesi. / *Caucasian Journal of Science*, 8(1), 51-69. https://doi.org/10.48138/cjo.940892.

Kaya- Zaman, F., Özkan, N., Toprak, T. 2018. Gebelikte Depresyon ve Anksiyete. *Konuralp Tıp Dergisi,* 10(1):20-25. https://doi.org/10.18521/ktd.311793.

Kılıççeker, R. 2019. Acil Servise Başvuran Adölesan Gebelerin Retrospektif İncelenmesi. Yüksek Lisans Tezi, Mersin.

Kossakowska, K. 2016. Incidence and Determinants of Postpartum Depression Among Healthy Pregnant Women and High-Risk Pregnant Women. Advances in Psychiatry and Neurology, 25: 1-21. https://doi.org/10.1016/j.pin.2016.02.002Get.

McAllister, A., Lang, B., Flynn, A., Meisel, ZF., Abernathy, A., Sammel, MD., Schreiber, CA. 2022. Pregnant and bleeding: A model to assess factors associated with the need for emergency care in early pregnancy. *The American journal of emergency medicine*, 53, 94-98. https://doi.org/10.1016/j.ajem.2021.12.052.

Muralidar, S., Ambi, S.V., Sekaran, S., Krishnan, U.M. 2020. The emergence of COVID-19 as a global pandemic: Understanding the epidemiology, immune response and potential therapeutic targets of SARS-CoV-2, 179:85–100. doi: 10.1016/j.biochi.2020.09.018.

Onat-Köroğlu, C. 2020. Hastanede Yatak İstirahatindeki Riskli Gebelerde Anksiyete ve Uyku Kalitesi Üzerine Müziğin Etkisinin Belirlenmesi Yüksek Lisans Tezi, Adana.

Ölçer, Z., and Oskay, U. 2015. Yüksek Riskli Gebelerin Yaşadığı Stresörler ve Stresle Baş Etme Yöntemleri. *Hemşirelikte Eğitim ve Araştırma Dergisi*, 12(2):85-92. doi:10.5222/HEAD.2015.085.

Özdaş, İ. And Kızılkaya, M. 2021. Acil servis hemşirelerinin algıladıkları stres kaynakları: Nitel bir araştırma. *Sağlık Akademisyenleri Dergisi*, 8 (1), 64-70. Retrieved from https://dergipark.org.tr/tr/pub/sagakaderg/issue/60517/796899.

Öztürk, B., and Erbaş, N. 2021. Gebelerde prenatal bağlanma ve durumluk anksiyete düzeyinin belirlenmesi. *Jinekoloji-obstetrik Neonatoloji Tıp Dergisi*, 18(3):873-882. DOI: 10.38136/jgon.717129.

Punchesa, BE., Johnsona, KD., Acquavitab, SP., Felblingera, DM., Gillespie, GL. 2019. Patient perspectives of pregnancy loss in the emergency department. *International Emergency Nursing*, 43: 61-66. DOI: 10.1016/j.ienj.2018.10.002

Rojas-Luengas, V., Seaton, B., Dainty, K., McLeod, S., Varner, C. 2019. The emergency department experience of patients with early pregnancy complications: a qualitative study. *CJEM*, 21(6):798-802. DOI: 10.1017/cem.2019.398.

Schneider, A., Wehler, M., Weigl, M. 2019. Effects of work conditions on provider mental well-being and quality of care: a mixed-methods intervention study in the emergency department. *BMC Emergency Medicine,* 19:1. https://doi.org/10.1186/s12873-018-0218-x.

Matvienko-Sikar, K., Flannery, C., Redsell, B., Hayes, C., Kearney, PM., Huizing, A. 2021. Effects of interventions for women and their partners to reduce or prevent stress and anxiety: A systematic review. Women and Birth, 34: 97–117. DOI: 10.1016/j.wombi.2020.02.010.

Silva, MMJ., Nogueira, DA., Clapis, MJ., Leite, EPRC. 2017. Anxiety in pregnancy: prevalence and associated factors. Rev Esc Enferm USP, 51: 3253. DOI: http://dx.doi.org/10.1590/S1980-220X2016048003253

Stepowicz, A., Wencka, B., Jan-Bienkiewicz, J., Horzelski, W., Grzesiak, M. 2020. Stress and Anxiety Levels in Pregnant and Post-Partum Women during the COVID-19 Pandemic. *International Journal of Environmental Research and Public Health,*17: 9450. DOI: 10.3390/ijerph17249450.

Şimşek, P. 2015. Acil Servis Sağlık Çalışanlarının Acil Servislerin Uygunsuz Kullanımına İlişkin Görüşleri. Yüksek lisans tezi, Trabzon.

T.C. Ministry of Health. 2021.Turkey maternal mortality report. (2015-2019). Ankara.

T.C. Ministry of Health. 2023. Health Statistics Yearbook 2022 Newsletter. Ankara

T.C. Ministry of Health. 2018. General Directorate of Health Information Systems. Health Statistics Yearbook 2017 Newsletter.

Trostian, B., Curtis, K., McCloughen, A., Shepherd, B., Munroe, B., Davis, W., Hirst, E., Tracy, S.K. 2022. Experiences and outcomes of women with bleeding in early pregnancy presenting to the Emergency Department: An integrative review. Australasian Emergency Care, 25:55–83. DOI: 10.1016/j.auec.2021.04.006.

Turkish Statistical Institute. 2021. Sustainable Development Indicators, 2010-2019:37194. 2021.

Yılmaz, B., and Oskay, ÜA. 2021. Current View of Care of High Risk Pregnancy. Bezmialem Science, 9(1):112-119. DOI: 10.14235/bas.galenos.2020.3815.

Zhang, L., Wang, L., Cui, S., Yuan, Q., Huang, C., Zhou, X. 2021. Prenatal Depression in Women in the Third Trimester: Prevalence, Predictive Factors, and Relationship With Maternal-Fetal Attachment. Front. Public Health, 8:602005. DOI: 10.3389/fpubh.2020.602005

World Health Organization: Maternal mortality. 2019. maternalmortality (who.int) Erişim tarihi:24.03.2022.