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## Domestic Violence Against Pregnant Women: Prevalence and Related Factors

### Gebe Kadınlara Yönelik Aile İçi Şiddet: Sıklık ve İlişkili Faktörler

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#### ABSTRACT

**Objective:** Violence against women, especially during pregnancy, is a problem affecting the health of both the mother and fetus. The study evaluated the prevalence and associated factors of domestic violence in pregnant women who apply to a healthy life center (HLC).

**Methods:** The population of the cross-sectional and analytical study, in which the surveillance data were analyzed, consisted of 202 pregnant women who applied to the HLC of the district health directorate. The SPSS 22.0 package program was used to analyze the data. The data was examined using Fisher's exact test, Pearson's chi-square and  $p < 0.05$  was considered statistically significant.

**Results:** 2% of pregnant women were exposed to domestic violence before pregnancy and 5.4% of them were exposed to domestic violence during pregnancy. Of the participants, 0.5% were exposed to physical, 2.5% to verbal, 5% to psychological, 1.5% to economic, and 2.5% to social violence. Pregnant women living in rural areas ( $p=0.035$ ), middle income ( $p=0.047$ ), having a nuclear family structure ( $p=0.004$ ), dissatisfaction with marriage life ( $p=0.001$ ) and planned pregnancy ( $p=0.025$ ) significantly increases the frequency of exposed to domestic violence.

**Conclusion:** The most important result of our study is the low frequency of exposure of pregnant women to domestic violence during pregnancy. The most common type of violence is psychological violence. Healthcare professionals should question domestic violence during pregnancy while conducting anamnesis and conduct a detailed examination about violence.

**Keywords:** Pregnant, women, domestic violence, health life center

#### ÖZ

**Amaç:** Kadına yönelik şiddet özellikle gebelik döneminde hem anne hem de fetüs sağlığını etkileyen bir sorundur. Bu çalışmanın amacı bir sağlıklı hayat merkezine başvuran gebelerin aile içi şiddetle karşılaşma sıklığının ve ilişkili faktörlerin değerlendirilmesidir.

**Yöntemler:** Sürveys verisinin analiz edildiği, kesitsel ve analitik tipteki çalışmanın evrenini bir ilçe sağlık müdürlüğü sağlıklı hayat merkezine başvuran 202 gebe kadın oluşturmuştur. Verilerin analizinde SPSS 22.0 paket programı kullanılmıştır. Verilerin değerlendirilmesinde Fisher's exact test, Pearson's ki-kare kullanılmış ve  $p < 0,05$  anlamlılık sınırı kabul edilmiştir.

**Bulgular:** Gebelerin %2'si gebelik öncesi, %5,4'ü ise gebelik döneminde aile içi şiddete maruz kalmıştır. Katılanların %0,5'i fiziksel, %2,5'i sözel, %5'i psikolojik, %1,5'i ekonomik ve %2,5'i sosyal şiddete maruz kalmıştır. Gebelerin kırsal alanda yaşaması ( $p=0,035$ ), gelir durumunun orta olması ( $p=0,047$ ), çekirdek aile yapısına sahip olması ( $p=0,004$ ), evlilik yaşamından memnun olmaması ( $p=0,001$ ) ve gebeliğinin planlı olması ( $p=0,025$ ) gebelikte aile içi şiddetle karşılaşma sıklığını anlamlı olarak artırmaktadır.

**Sonuç:** Çalışmamızın en önemli sonucu gebelerin gebelik döneminde aile içi şiddete maruz kalma sıklığının düşük olmasıdır. En çok karşılaşılan şiddet türü psikolojik şiddettir. Sağlık çalışanları anamnez alırken gebelik döneminde aile içi şiddeti sorgulamalı ve şiddetle ilgili ayrıntılı muayene yapmalıdır.

**Anahtar Sözcükler:** Gebe, kadın, aile içi şiddet, sağlıklı hayat merkezi

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## INTRODUCTION

Violence has existed since the beginning of mankind and can often occur as a result of unequal relations against nations, society, or physically, economically, culturally, or emotionally disadvantaged people. Violence affects the social order both at the institutional level (political, economic, cultural, educational, ethnic-racial) and in interpersonal relationships (familial, domestic, physical, sexual, psychological, moral) (1).

Violence against women is a violation of human rights, based on gender inequality, a public health problem, and an obstacle to sustainable development (2). Women around the world are at risk of gender-based violence, regardless of their country, ethnicity, class, religion, and economic and social status (3).

Acts of violence may be perceived differently in different societies or among social segments of a society because of the role of men and women in society and cultural diversity (1). Adolescent, young, ethnic and other minority, transgender, and disabled women are at higher risk for all forms of violence (2). Domestic violence against women continues to exist worldwide as a violation of human rights that has no cultural, geographical, religious, social, and economic boundaries. Domestic violence against women, which is an important social problem, not only affects women's physical and mental health but also prevents the development of their legal, social, political, and economic status (4).

Domestic violence against women is defined as a violation of health and human rights and continues to exist all over the world. Studies have shown that 95% of victims of domestic violence are women (5). Domestic violence, partner violence, and spousal violence are terms used to describe violence that occurs between people in a current or previous relationship. Intimate partner violence includes any behavior that can occur in many ways, such as physical, psychological, sexual, and economic violence, and that takes place with the aim of controlling the other person (6). This behavior model includes many types of abuse, such as physical, sexual, verbal, social, and economic abuse. Acts of domestic violence usually include verbally abusing the partner, psychological abuse, stalking, threatening with violence, throwing an object, pushing, slapping, kicking, hitting, beating, threatening with a weapon or using a weapon, depriving the partner of basic resources such as food, clothing, money, transportation, or health, and keeping the partner away from social activities (7). Globally, 30% of women have experienced physical and/or sexual violence by a partner during their lifetime (2).

It has been reported in the literature that the risk of domestic violence increases when a woman becomes pregnant. Although relationships before pregnancy are satisfactory, records show that violence may start in the early stages of pregnancy. Pregnancy is accepted as a period in which the risk of being exposed to violence increases because of factors such as ambivalent feelings during pregnancy, decreased sexual intercourse, and increased economic pressures (8). Because pregnancy is a period when women are vulnerable, the prevalence of violence in the population of pregnant women is important. Violence during pregnancy is of particular concern because of the potential negative consequences for both the mother and her unborn child (9). During pregnancy, women face physical and psychological changes that make them more sensitive or vulnerable, thus attracting more attention from their partners

and family. However, violence is a reality in the lives of many of these women, often triggering losses that are irreparable for the mother and child (1). Worldwide, one in four people are physically or sexually abused during pregnancy, usually by their partner (10,11). Studies in the literature on this subject have reported that the prevalence of violence experienced by pregnant women during pregnancy in the general population is between 1% and 20% (12). Violence against women is a problem that affects both maternal and fetal health, especially during pregnancy. In addition, it may lead to many negative health problems, such as depression, posttraumatic stress disorder, preterm labor, miscarriage, fetal growth retardation, and low birth weight babies, and may even result in the death of the woman (13,14).

Violence against women, which maintains its importance at the global level, is one of the most important social problems in our country. In a study conducted in Türkiye, the rate of women who had been subjected to physical violence by their husbands or ex-husbands in any period of their lives was 36%, and the rate of women who had been subjected to sexual violence was 12% (15). One out of every ten women who have been pregnant at least once in Türkiye has experienced physical violence by her husband or intimate partner(s) during pregnancy (4).

Our research will enable the formulation of targeted policies and programs and the development of existing policies and programs to combat violence against women more effectively. In addition, the data obtained at the local level will contribute to national and international studies. However, the fact that the number of studies providing detailed information and data in this field in our country is quite low constitutes a major obstacle in combating violence against women. This study was planned to meet the need for data at the national level to combat violence against women more effectively and to formulate policies. This study aimed to evaluate the frequency of domestic violence and related factors in pregnant women who applied to a healthy life center (HLC).

## MATERIALS AND METHODS

A cross-sectional, analytical-type research was planned. The study population consisted of 202 pregnant women who applied to the Muğla District Health Directorate HLC between June 15 and December 15, 2019. The researchers interviewed pregnant women at the Child, Adolescent, Women and Reproductive Health Services unit of the HLC. After explaining the purpose of the study, the questionnaire form was applied to those who agreed to participate in the study. The application of the questionnaire form, in which the face-to-face interview method was used, took approximately 15 min.

*The dependent variable of our study was encounters with domestic violence during pregnancy.* The situation of encountering violence was examined under the subheadings of physical, verbal, sexual, psychological (emotional), financial, and social violence.

*The independent variables of our study were analyzed under the subheadings of sociodemographic, marital life, and pregnancy status variables: sociodemographic variables; age, age of, educational status, employment status, occupation, educational status of husband, employment status of husband, health insurance status, income status, place of residence, family type, presence of children, number of children, and number of people living at home. Variables*

related to marital life; marriage type, marriage duration (years), marriage age, number of marriages, and satisfaction with marital life. Variables related to pregnancy status; pregnancy order, pregnancy week, and planned pregnancy status.

### Ethical Approval

This study was conducted within the framework of ethical rules. Approval was obtained from the Human Research Ethics Committee of Muğla Sıtkı Koçman University (approval number: 122, date: 16.07.2019) and the Dean's Office of the Faculty of Medicine before the study. Students and resident physicians were informed that participation in the survey was voluntary.

### Statistical Analysis

The data were first summarized using descriptive statistics. In addition to Kolmogorov-Smirnov and Shapiro-Wilk tests, conformity to normal distribution was checked according to histogram and other visual methods. Fisher's exact test and Pearson's chi-square test were used to determine whether the level of exposure to violence was different according to independent variables in the data obtained by counting. SPSS 22.0 package program was used for data analysis and  $p < 0.05$  significance limit was accepted.

## RESULTS

When the distribution of pregnant women who applied to the HLC was evaluated according to their sociodemographic characteristics, the mean age of the applicants was  $28.9 \pm 4.7$  years, 89.1% were younger than 35 years, and the mean age of their husbands was  $32.2 \pm 5.4$  years, 70.8% were younger than 35 years. The education level of 60.4% of the participants was university level. 49.5% of the participants were employed. The occupation of 38.1% of the participants was housewife, 17.3% were self-employed, and 13.9% were teachers. The education level of 50.5% of the husbands of the participants was high school and below. 96.5% of the husbands of the respondents were employed. 95.5% of the respondents had health insurance for themselves or their husbands. 27.2% of the participants described their income status as good, 71.3% as fair, and 1.5% as poor. 74.3% of the respondents lived in urban areas. The family type of 93.6% of the participants was nuclear family. 64.9% of the participants had no children (Table 1).

When the distribution of pregnant women who applied to the HLC was evaluated according to their characteristics related to their marital status, 78.2% of the participants had civil and imam marriages. The mean duration of marriage was  $4.2 \pm 3.8$  years. While 28.7% had been married for 1 year, 54% had been married for more than 2 years. The mean age at marriage was  $24.7 \pm 4.3$  years. 57.4% of the participants were married at the age of 25 years or younger. It was the first marriage of 93.6% of the participants. 86.1% of the participants reported that they were satisfied with their marital life (Table 2).

When the distribution of pregnant women who applied to the HLC according to their pregnancy status was examined, 55% of the participants were in their first pregnancy. When the gestational week of the participants was analyzed, it was found that 42.6% were in the 2<sup>nd</sup> trimester and 40.1% were in the 3<sup>rd</sup> trimester. The pregnancies of 82.7% of the participants were planned pregnancies (Table 3).

**Table 1.** Distribution of pregnant women according to sociodemographic characteristics

Feature	Number (n)	Percent (%)
<b>Age (year)</b>		
<35	180	89.1
≥35	22	10.9
<b>Age of husband (year)</b>		
<35	143	70.8
≥35	59	29.2
<b>Education status</b>		
High school and below	80	39.6
University	122	60.4
<b>Employment status</b>		
Working	100	49.5
Not working	102	50.5
<b>Profession</b>		
Housewife	77	38.1
Health worker	22	10.9
Officer	22	10.9
Teacher	28	13.9
Self-employment	35	17.3
Engineer	7	3.5
Worker	7	3.5
Other	4	1.9
<b>Education status of the husband</b>		
High school and below	102	50.5
University	100	49.5
<b>Employment status of the husband</b>		
Working	195	96.5
Not working	7	3.5
<b>Health insurance</b>		
There is	193	95.5
No	9	4.5
<b>Income status</b>		
Good	55	27.2
Middle	144	71.3
Bad	3	1.5
<b>Place of residence</b>		
Urban	150	74.3
Break	52	25.7
<b>Family type</b>		
Nuclear family	189	93.6
Extended family	13	6.4
<b>Child presence</b>		
There is	71	35.1
No	131	64.9

**Table 2.** Distribution of pregnant women according to their characteristics related to marital status (n=202)

Status of marriage	Number (n)	Percent (%)
<b>Form of marriage</b>		
Civil marriage	44	21.8
Civil and religious marriage	158	78.2
<b>Duration of marriage</b>		
1 year	58	28.7
2 years	35	17.3
>2 years	109	54.0
<b>Age at marriage</b>		
≤25 years	116	57.4
>25 years	86	42.6
<b>How many marriages</b>		
First marriage	189	93.6
Two and above	13	6.4
<b>Satisfaction with the married life</b>		
Satisfied	174	86.1
Not satisfied	28	13.9

**Table 3.** Distribution of pregnant women according to pregnancy status (n=202)

Status of pregnancy	Number (n)	Percent (%)
<b>Pregnancy sequence</b>		
First pregnancy	111	55.0
Two and above	91	45.0
<b>Pregnancy week</b>		
1 <sup>st</sup> trimester	35	17.3
2 <sup>nd</sup> trimester	86	42.6
3 <sup>rd</sup> trimester	81	40.1
<b>Planned pregnancy status</b>		
Yes	167	82.7
No	35	17.3

When the distribution of pregnant women who applied to the HLC according to the variables related to violence was evaluated, 2% of the participants reported that they were exposed to violence in the pre-pregnancy period. 5.4% of the participants reported being exposed to any type of domestic violence during pregnancy. Among the pregnant women who participated in our study, 0.5% were exposed to physical violence, 2.5% to verbal violence, 5% to psychological violence, 1.5% to economic violence, and 2.5% to social violence. None of the participants who were subjected to violence were sexually abused. Of those who were subjected to violence, 1.5% reported being subjected to violence by their husbands, 1.5% by their mothers-in-law, and 97% did not report by whom they were subjected to violence. None of the victims of violence suffered any injury because of this violence, nor did they receive any treatment. None of the victims of violence reported to the judicial authorities because of this violence (Table 4).

**Table 4.** Distribution of pregnant women according to variables related to violence (n=202)

Variables related to violence	Number (n)	Percent (%)
<b>Exposure to violence before pregnancy</b>		
Yes	4	2.0
No	198	98.0
<b>Exposure to violence during current pregnancy</b>		
Yes	11	5.4
No	191	94.6
<b>Physical violence</b>		
Yes	1	0.5
No	201	99.5
<b>Verbal violence</b>		
Yes	5	2.5
No	197	97.5
<b>Psychological (emotional) violence</b>		
Yes	10	5.0
No	192	95.0
<b>Sexual violence</b>		
Yes	0	0
No	202	100
<b>Financial (economic) violence</b>		
Yes	3	1.5
No	199	98.5
<b>Social violence</b>		
Yes	5	2.5
No	197	97.5
<b>Number of encounters with violence</b>		
1 time	5	2.5
2 and more	197	97.5
<b>Person subjected to violence</b>		
Wife	3	1.5
Mother-in-law	3	1.5
Unanswered	196	97.0
<b>Injury because of violence</b>		
Yes	0	0
No	202	100
<b>Receiving treatment after violence</b>		
Yes	0	0
No	202	100
<b>Reporting to the judicial authorities after violence</b>		
Yes	0	0
No	202	100

There was no significant difference between the age, educational status, employment status, and health insurance status of the pregnant women who participated in our study and the frequency of encountering domestic violence during pregnancy ( $p>0.05$ ). There was no significant difference between the age, education level, employment status, and frequency of encountering violence during pregnancy of the husbands of the pregnant women who participated in our study ( $p>0.05$ ).

Among the participants, the frequency of violence was found to be significantly higher among those with moderate income than among those with good and poor income ( $p=0.047$ ).

Among the participants of our study, the frequency of exposure to violence among those living in rural areas was found to be significantly higher than that among those living in urban areas ( $p=0.035$ ).

Among the participants, the frequency of violence among those with a nuclear family structure was found to be significantly higher than that among those with an extended family structure ( $p=0.004$ ) (Table 5).

No significant correlation was found between the type of marriage, duration of marriage, age at marriage, and number of marriages of pregnant women who participated in our study and the frequency of domestic violence during pregnancy ( $p>0.05$ ).

The frequency of violence among participants who were dissatisfied with their marital life was found to be significantly higher than that among those who were satisfied ( $p=0.001$ ).

Among the pregnant women who participated in our study, the frequency of violence during pregnancy was found to be significantly higher in those who had not been exposed to violence before pregnancy compared to those who had been exposed to violence before pregnancy ( $p=0.004$ ) (Table 6).

There was no significant relationship between the number of pregnancies of pregnant women who participated in our study and the frequency of domestic violence during pregnancy ( $p>0.05$ ).

The frequency of domestic violence among the participants in the 2<sup>nd</sup> trimester was found to be significantly higher than that in the 1<sup>st</sup> and 3<sup>rd</sup> trimesters ( $p=0.025$ ).

Among the participants of our study, the prevalence of domestic violence among those with planned pregnancies was found to be significantly higher than that among those without planned pregnancies ( $p=0.025$ ) (Table 7).

## DISCUSSION

While the mean age of the pregnant women who participated in our study was  $28.9\pm 4.7$  years, it was found to be  $28.4\pm 4.4$  years in a study on intimate partner violence against pregnant women in Manisa (16),

**Table 5.** Relationship between sociodemographic characteristics of pregnant women and their exposure to domestic violence

Features	Experience of domestic violence during pregnancy		p-value
		(%) <sup>*</sup>	
Age	<35 (8)	72.7	0.104 <sup>**</sup>
	≥35 (3)	27.3	
Age of the husband	<35 (5)	45.5	0.084 <sup>**</sup>
	≥35 (6)	54.5	
Education status	High school and below (3)	27.3	0.532 <sup>**</sup>
	University (8)	72.7	
Employment status	Working (5)	45.5	0.769 <sup>***</sup>
	Not working (6)	54.5	
Husband's education status	High school and below (4)	36.4	0.335 <sup>***</sup>
	University (7)	63.6	
Husband's employment status	Working (11)	100	0.518 <sup>***</sup>
	Not working (0)	0	
Presence of health insurance	There is (10)	90.9	0.443 <sup>***</sup>
	None (1)	9.1	
Income status	Good (1)	9.1	0.047 <sup>***</sup>
	Medium (9)	81.8	
	Bad (1)	9.1	
Place of residence	Urban (5)	45.5	0.035 <sup>**</sup>
	Break (6)	54.5	
Family type	Nuclear family (8)	72.7	0.004 <sup>***</sup>
	Extended family (3)	27.3	

<sup>\*</sup>: Percentage of exposure to domestic violence during pregnancy, <sup>\*\*</sup>: Fisher's exact test, <sup>\*\*\*</sup>: Pearson's chi-square.

**Table 6.** Relationship between marital status characteristics of pregnant women and their exposure to domestic violence

Marriage status	Experience of domestic violence during pregnancy		p-value
		(%)*	
Form of marriage	Civil marriage (9)	81.8	1.000**
	Civil and religious marriage (2)	18.2	
Duration of marriage	1 year (2)	18.2	0.683***
	2 years (2)	18.2	
	>2 years (7)	63.6	
Age at marriage	≤25 years (5)	45.5	0.534**
	>25 years (6)	54.5	
How many marriages	First marriage (10)	90.9	0.712***
	Two or more (1)	9.1	
Satisfaction with the married life	Satisfied (5)	45.5	0.001**
	Not satisfied (6)	54.5	
Exposure to violence before pregnancy	Yes (2)	18.2	0.004**
	No (9)	81.8	

\*: Percentage of exposure to domestic violence during pregnancy, \*\*: Fisher's exact test, \*\*\*: Pearson's chi-square.

**Table 7.** Relationship between pregnancy characteristics of pregnant women and their exposure to domestic violence

Features	Experience of domestic violence during pregnancy		p-value**
		(%)*	
Pregnancy sequence	First pregnancy (6)	54.5	1.000**
	Two or more (5)	45.5	
Pregnancy week	1 <sup>st</sup> trimester (1)	9.1	0.025***
	2 <sup>nd</sup> trimester (9)	81.8	
	3 <sup>rd</sup> trimester (1)	9.1	
Planned pregnancy state of being	Yes (6)	54.5	0.025**
	No (5)	45.5	

\*: Percentage of exposure to domestic violence during pregnancy, \*\*: Fisher's exact test, \*\*\*: Pearson's chi-square.

26.5±0.2 years in another study conducted in Malatya (17) and 23.2±4.2 years in a study conducted in Tripura, India (18). It can be said that the results of our study are compatible with the literature.

In a study on intimate partner violence against pregnant women in Manisa, 90.5% of pregnant women were younger than 34 years of age (16), 66.8% of pregnant women were between 20 and 34 years of age in a study conducted in Colombia (19), and 85.6% were younger than 35 years of age in a study conducted in Tanzania (20). The results of our study are compatible with those of these studies.

In a study conducted in Manisa, it was found that 9.5% of pregnant women had university education (16), in a study conducted in Düzce, 5.7% had university education (21), in a study conducted in İzmir, 24.3% had high school and university education (22), in a study conducted in Colombia, 47.9% had university education (19), and in a study conducted in South Africa, 55.1% had university education (23). The result of our study is high compared with studies conducted in our country and abroad.

While the mean age of the husbands of the pregnant women who participated in our study was 32.2±5.4 years, the mean age of the

husbands was found to be 31.1±5.6 years in a study conducted in Yozgat (24), 31.2±5.2 years in a study conducted in Çanakkale (25) and 29.6±4.4 years in a study conducted in Delhi, India (26). The results of the studies conducted in Yozgat, Çanakkale and India are similar to those of our study.

In a study conducted in Sivas, it was found that 45.7% of the husbands of the participants had a university education (27), in a study conducted in İstanbul, 33.9% of the husbands of pregnant women had a university education (28), and in a study conducted in İzmir, 30% had a high school education or higher (22). In a study conducted in India, it was found that 17.6% had a university education (18). The results of our study were higher than those of studies conducted in Türkiye and abroad.

In a study conducted in Yozgat, 51.8% of pregnant women lived in rural areas (24); in a study conducted in Malatya, 29.6% (17); in a study conducted in India, 72.2% (18); and in a study conducted in Colombia, 28.4% (19). The results of studies conducted in Türkiye and abroad differ.

In a study conducted in India, 88.9% (18) and in a study conducted in Malatya, 97.3% (17) of the pregnant women were housewives. These results were higher than those of our study.

In a study conducted in Tanzania, 25.3% of pregnant women were not working (20), in a study conducted in Manisa, 91.5% of pregnant women were not working (16), and in a study conducted in İzmir, 86.5% of pregnant women were not working (22). The results of the study conducted in Tanzania were lower than those of our study, while the results of the studies conducted in Manisa and İzmir were higher than those of our study.

In a study conducted in Manisa, most of the pregnant women had a moderate income level (16). In a study conducted in İzmir, 68.3% of pregnant women had a moderate income level (22), in a study conducted in Çanakkale, 76.1% had a good or moderate income level (25), and in a study conducted in Düzce, 72.3% of pregnant women had a moderate income level (21). These results are compatible with the results of our study.

The majority of the participants in our study had a nuclear family structure. In a study conducted in Çanakkale, 86.3% (25), in a study conducted in İzmir, 76.5% (22) and in a study conducted in Malatya, 58.6% (17) of the participants had a nuclear family structure. The results of our study are consistent with those of these studies.

In a study conducted in Manisa, 9.8% (16), in a study conducted in Düzce, 8.9% (21) and in a study conducted in İzmir, 28.3% (22) of pregnant women did not have health insurance.

In a study conducted in Manisa, 79.5% of the pregnant women had children (16), in a study conducted in Yozgat, 61.4% (24), in a study conducted in İzmir, 52.2% (22) and in another study conducted in Manisa, 61% of the pregnant women had children (29). These results are higher than those of our study.

In a study conducted in South Africa, the mean number of years of marriage was found to be  $4.7 \pm 4.3$  years (23), and in a study conducted in Çanakkale, it was found to be  $4.9 \pm 7.1$  years (25). These results are compatible with the results of our study.

In a study conducted in Manisa, 96.3% of pregnant women had both civil and religious marriages (29). The results of the study conducted in Manisa are compatible with the results of our study.

In a study conducted in Manisa, 85.5% of the pregnant women were in their first marriage (16). The results of the study conducted in Manisa are compatible with the results of our study.

In a study conducted in South Africa, 36.9% of pregnant women had their first pregnancy (23), in a study conducted in İstanbul 42.4% (28) and in a study conducted in İzmir 43% (22). These results are lower than those in our study.

In a study conducted in South Africa, 79.7% of pregnant women had unplanned pregnancies (23), in a study conducted in Manisa, 19% (16), in a study conducted in Manisa, 25.4% (28) in a study conducted in İstanbul, and 17% in a study conducted in İzmir (22). The result of the study conducted in South Africa is higher than that of our study. The results of the studies conducted in Manisa, İstanbul, and İzmir are compatible with our study.

In a study conducted in South Africa, the gestational week was found to be  $23.8 \pm 5.6$  weeks (23). In a study conducted in İzmir, 55.2% of the pregnant women were in the 3<sup>rd</sup> trimester (22). In a study

conducted in Manisa, 38.3% of the pregnant women were in the 2<sup>nd</sup> trimester and 56.7% were in the 3<sup>rd</sup> trimester (29). The majority of the participants in our study were pregnant women in the 2<sup>nd</sup> and 3<sup>rd</sup> trimesters.

In a study conducted in India, 43.2% of pregnant women (18), in a study conducted in Manisa, 22.9% (16), and in another study conducted in Manisa, 32.7% (30) of pregnant women were reported to have been exposed to violence before pregnancy. In a study conducted in Çanakkale, 18.5% of pregnant women reported that they were exposed to physical violence before pregnancy (25). In our study, the frequency was found to be 2%. This may be due to the small number of participants in our study and differences in development, social, cultural, and even economic levels between countries and cities.

In our study, the prevalence of those who experienced domestic violence during pregnancy was 5.4%. In a study conducted in Malatya, 31.7% of pregnant women (17), in a study conducted in Düzce, 64.2% of pregnant women (21), in a study conducted in İstanbul, 50.8% of pregnant women (28), in a study conducted in Van, 64.6% of pregnant women (31), in a study conducted in Nigeria, 14.2% of pregnant women in a study conducted in Nigeria (32), 8.9% of pregnant women in a study conducted in Colombia (19), 21.3% of pregnant women in a study conducted in South Africa (23), 21.5% of pregnant women in a study conducted in Peru (33), and 4.3% of pregnant women in a study conducted in Sweden were exposed to domestic violence during pregnancy (34). When we look at the literature, although the result of the study conducted in Sweden is similar to the result of our study, the results of other studies are quite high. As seen in the literature, the frequency of violence varies between 4.3% and 64.6%, although it varies between countries. The results of our study are also within the range stated in the literature.

In our study, the prevalence of those who experienced domestic physical violence during pregnancy was 0.5%. In a study conducted in Manisa, 24.8% (30); in a study conducted in Çanakkale, 10.3% (25); in a study conducted in İzmir, 10.9% (22); in a study conducted in Mexico, 6.7% (35); in a study conducted in Pakistan, 12.6% (36); in a study conducted in Peru, 11.9% (33); and in a study conducted in China, 3.6% (37) were exposed to physical violence during pregnancy. As seen in the literature, the prevalence of physical violence varies between 3.6% and 24.8% although it varies between countries. The results of our study are below the range stated in the literature.

In our study, the prevalence of those who experienced domestic verbal violence during pregnancy was 2.5%. In a study conducted in Texas, 5.1% of pregnant women were exposed to verbal violence (38), in a study conducted in Yozgat, 1.6% (24), in a study conducted in India-Tripura, 40.6% (18) and in a study conducted in Nigeria, 66.2% (32). When the literature was examined, it was observed that the frequency of verbal violence among societies was in a wide range due to the existence of measurement and evaluation methods and cultural differences, and because it varied according to the perception of the individual.

In our study, the prevalence of those who experienced domestic psychological violence during pregnancy was 5%. In a study conducted in 20 large cities in the USA, 13.1% of pregnant women were exposed to psychological violence (39), in a study conducted

in Peru, 15.6% of pregnant women were exposed to psychological violence (33), in a study conducted in Düzce, 26.5% of pregnant women were exposed to psychological violence (21), and in a study conducted in Ethiopia, 14.6% of pregnant women were exposed to psychological violence (40). In our study, the frequency of those who were exposed to domestic psychological violence during pregnancy was found to be low compared with the literature. More studies on this subject are required.

The prevalence of sexual violence during pregnancy was found to be 4.3% in a study conducted in Düzce (21), 8.3% in a study conducted in İzmir (22), 32.5% in a study conducted in Sivas (27), 9.7% in a study conducted in Malatya (17), 3.9% in a study conducted in Peru (33) and 4.3% in a study conducted in China (41). When we looked at the literature, we observed that sexual violence during pregnancy was not questioned in some studies on violence in pregnant women. In the studies in which it was questioned, we mostly encountered information that its frequency was low. In our study, no one encountered domestic sexual violence during pregnancy.

In our study, the most common type of violence was psychological violence. In studies conducted in Malatya, İstanbul, Düzce, İzmir, Sivas, USA, Pakistan, South Africa, India-Delhi, the most common type of violence encountered by pregnant women was psychological violence (17,21-23,26-28,36,39). In studies conducted in Nigeria, India-Tripura, and Texas, verbal violence was found to be the most common type of violence (18,32,38). In studies conducted in Van, Mexico, Peru, and Uganda, the most common type of violence was physical violence (31,33,35,42). When we look at the literature, pregnant women most frequently encounter psychological violence in studies on violence.

In a study conducted in Çanakkale, 33.3% of pregnant women were exposed to violence (25); in a study conducted in Malatya, 11.9% (17). In a study conducted in Sweden, 13% (34) and in a study conducted in Peru, 11.9% (33) were 35 years of age or older. These results are similar to those of our study.

In a study conducted in İzmir, 86.5% of pregnant women exposed to violence were non-working pregnant women (22). In a study conducted in Yozgat, 86.6% of the pregnant women exposed to violence were unemployed (24), in a study conducted in Tanzania 25.4% were unemployed (20) and in a study conducted in Peru 41.8% were unemployed (33). The results of our study were found to be higher than the results of studies conducted abroad and lower than the results of studies conducted in our country. According to studies conducted in our country, we found that most pregnant women exposed to violence were not working.

In our study, 54.5% of the pregnant women who encountered domestic violence had their first pregnancy, whereas in a study conducted in İzmir, the majority of the pregnant women who encountered violence had their first pregnancy (22). It was the first pregnancy of 39.3% in a study conducted in Peru (33), 36.9% in a study conducted in South Africa (23) and 38.8% in a study conducted in Delhi, India (26). The result of our study is higher than those of these studies.

In Uganda, İstanbul, and our study, no statistical significance was found between the frequency of violence during pregnancy and age (28,42). In studies conducted in South Africa, India-Delhi, Malatya, Çanakkale and İzmir, a significant relationship was found between

violence during pregnancy and age (17,22,23,25,26). There is a need for further studies on this subject.

In our study, we did not find statistical significance between violence in pregnancy and educational level. The results of studies conducted in Sweden, South Africa, İstanbul, and Yozgat support our study (23,24,28,34). In studies conducted in Sivas, Malatya, İzmir, and Brazil, statistical significance was found between educational level and violence during pregnancy, contrary to the results of our study (17,22,27,43,44).

In a study conducted in Sivas, a significant correlation was found between the low education level of the husband and violence (27). In a study conducted in Malatya, it was observed that the frequency of violence was strongly associated with the educational level of the pregnant woman's husband (17). In a study conducted in Çanakkale, a significant relationship was found between the educational level of the husband and violence (25). In a study conducted in İzmir, a statistically significant difference was found between the low level of education of the pregnant woman's husband and the exposure of the pregnant woman to violence by her husband (22). In a study conducted in Mexico, a significant relationship was found between a low level of education and violence (35). In a study conducted in Pakistan, a significant relationship was found between the low educational level of the husband and violence (36). In a study conducted in Yozgat, no significant statistical difference was found between the educational level of the pregnant woman's husband and the encounter with violence (24). The results of our study are compatible with those of the study conducted in Yozgat. However, most literature contradicts the results of our study.

In a study conducted in Delhi, India, Malatya, and İstanbul, no significant difference was found between non-working and working pregnant women in terms of the frequency of violence (17,26,28). These results are compatible with the results of our study.

In a study conducted in Sivas, a significant relationship was found between the unemployment of the pregnant woman's husband and all types of violence against pregnant women (27). In studies conducted in Van and İzmir, no significant correlation was found between the employment status of the pregnant woman's husband and violence against pregnant women (22,31).

In a study conducted in Sivas, a significant relationship was found between lack of health insurance and exposure to violence (27). In a study conducted in İzmir, a significant relationship was found between lack of social security and physical and emotional violence (22). The results of the studies conducted in Sivas and İzmir are not compatible with the results of our study.

In studies conducted in Malatya, Van, İzmir, and Delhi, India, a relationship was found between the frequency of violence against pregnant women and family income (17,22,26,31). These results are compatible with the results of our study.

When the literature is examined, there are studies that found a significant relationship between family type and violence against pregnant women in line with our study (18,29,43-46). However, no relationship was found in some studies (17,24,26).

In studies conducted in India, Tripura, Ethiopia, and Çanakkale, a statistically significant relationship was found between place of residence and violence (18,25,40). The results of these studies

support the results of our study. However, unlike the results of our study, no significant difference was found between living in rural or urban areas and the frequency of violence in studies conducted in Malatya, Yozgat, and Delhi, India (17,24,26). There is a need for further studies on this subject.

In studies conducted in Manisa, Malatya, and Van, a statistically significant relationship was found between increasing the number of children of pregnant women and the frequency of violence (17,30,31). In a study conducted in Yozgat, no significant statistical difference was found between the number of children of pregnant women and exposure to violence, similar to the result of our study (24).

In a study conducted in Delhi, India, Malatya, Van and Manisa found a significant relationship between increased duration of marriage and exposure to violence (17,26,30,31). The results of these studies are contrary to the results of our study, but a study conducted in China supports our study (41).

In a study conducted in Çanakkale, a statistically significant relationship was found between marital status and violence during pregnancy (25). In studies conducted in İstanbul and Yozgat, similar to our study, no significant statistical relationship was found between the type of marriage and exposure to violence (24,28).

In a study conducted in İstanbul, 39.3% of pregnant women described their marriages as very good/good, but no significant relationship was found between exposure to violence during pregnancy and satisfaction with marital life (28). In our study, the frequency of those who were satisfied with their marital life was higher than that of the study conducted in İstanbul. In addition, unlike the study in İstanbul, we found that the frequency of exposure to violence was significantly higher in those who were dissatisfied with their marital life. There are not many studies on this subject in the literature.

While a statistically significant relationship was found between unplanned pregnancy and the frequency of violence in a study conducted in Malatya, Van and İzmir (17,22,31), in a study conducted in İstanbul, although it was observed that those with unplanned pregnancy were exposed to more violent behavior, no statistically significant relationship was found between exposure to violence during pregnancy and planned pregnancy (28). In a study conducted in Sivas, a statistically significant difference was found between unplanned pregnancy and exposure to physical and emotional violence, whereas no significant relationship was found with exposure to sexual and economic violence (27). In our study, the frequency of violence was significantly higher in women with planned pregnancy. It is seen that more studies are needed on this subject.

In studies conducted in Malatya and İstanbul, it was observed that pregnant women in the second trimester-encountered domestic violence significantly more frequently (17,28). These results are compatible with those of our study.

In studies conducted in Sweden and İzmir, no significant relationship was found between the order of pregnancy and violence (22,34). The results of our study are compatible with those of studies conducted in Sweden and İzmir. However, the result of a study conducted in Delhi, India is different from our study and the literature (26).

In studies conducted in Uganda, South Africa, İstanbul, and Van, it was determined that those who were exposed to violence before

pregnancy were exposed to violence more frequently in their current pregnancies ( $p < 0.05$ ) (23,28,31,42,47).

### Study Limitations

The collection of data from a single center is the most important limitation of our study. In addition, the fact that the population is not large may make it difficult to generalize the results obtained.

### CONCLUSION

The most important result of our study is that the frequency of exposure to violence during pregnancy is low. Other important results of our study are that the type of violence experienced by pregnant women who were exposed to violence during pregnancy was mostly psychological violence, and no pregnant women were exposed to sexual violence. The fact that none of the pregnant women who were exposed to violence received any treatment after the violence and did not apply to judicial authorities can be said to be a remarkable finding. The frequency of exposure to domestic violence during pregnancy significantly increased if the pregnant women had moderate income, lived in rural areas, had a nuclear family structure, were dissatisfied with their marital life, and had a planned pregnancy.

Women apply to health institutions more frequently to receive health care during pregnancy. Therefore, healthcare professionals have important responsibilities in detecting domestic violence during pregnancy and in monitoring, treating, and rehabilitating those who experience violence. It may be recommended that healthcare professionals should question domestic violence during pregnancy and conduct a detailed examination related to violence while performing anamnesis. In addition, it would be useful to inform a wider audience to increase the application of disadvantaged groups to HLCs.

### Ethics

**Ethics Committee Approval:** This study was conducted within the framework of ethical rules. Approval was obtained from the Human Research Ethics Committee of Muğla Sıtkı Koçman University (approval number: 122, date: 16.07.2019) and the Dean's Office of the Faculty of Medicine before the study.

**Informed Consent:** Students and resident physicians were informed that participation in the survey was voluntary.

### Author Contributions

Surgical and Medical Practices: M.P., Ş.A., R.Ü.K., M.O.V., Concept: M.P., Design: M.P., Data Collection or Processing: M.P., Ş.A., Analysis or Interpretation: M.P., Ş.A., Literature Search: M.P., Ş.A., R.Ü.K., M.O.V., Writing: M.P., Ş.A.

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