

DETERMINATION OF PREGNANT WOMEN'S PHYSICAL ACTIVITY AND EXERCISE STATUS DURING PREGNANCY AND AFFECTING FACTORS

KADINLARIN GEBELİKLERİ SÜRESİNCE FİZİKSEL AKTİVİTE VE EGZERSİZ YAPMA DURUMLARI VE ETKİLEYEN FAKTÖRLER

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Abstract

Objective: This study aims to determine pregnant women's physical activity and exercise status during pregnancy and affecting factors.

Methods: The research was conducted in a cross-sectional design with 220 low-risk pregnant women who were in their third trimester between March 3 and June 29 2022 at Training and Research Hospital. Research data were collected by face-to-face interview method using the forms developed by the authors.

Results: It was seen that among the pregnant women who participated in the research, 35.9% exercised regularly before pregnancy and 25.9% regularly exercised during pregnancy. The most common exercises performed during pregnancy were walking and pilates. The assessment of the physical activity of pregnant women revealed that 80.5% were sedentary. The rate of exercising during pregnancy was 4.04 times (aOR 4.04, 95% CI 1.33-12.27) higher in women with planned pregnancies compared to unplanned pregnancies and 30.57 times higher in women who exercised regularly before pregnancy compared to those who did not do so (aOR 30.57, 95% CI 12.53-74.55). Likewise, compared to those who were obese during pregnancy, non-obese ones were 0.36 times more physically active (aOR 0.36, 95% CI 0.16-0.84). Similarly, it was established that women who exercised before pregnancy were 10.51 times more physically active than those who did not (aOR 10.51, 95% CI 4.60-24.02).

Conclusion: In the research, it was concluded that the rates of exercising and being physically active during pregnancy were low, that planned pregnancy and regular exercise before pregnancy increased exercise behavior during pregnancy, and that obesity decreases physical activity.

Keywords: Exercise, midwifery, prenatal care, pregnancy, physical activity.

Öz

Amaç: Bu çalışmada gebe kadınların gebelikleri sürecinde fiziksel aktivite ve egzersiz yapma durumlarını ve etkileyen faktörleri belirlemek amaçlanmıştır.

Yöntem: Araştırma kesitsel olarak, 3 Mart ve 29 Haziran 2022 tarihleri arasında üçüncü trimesterde olan 220 düşük riskli gebe ile bir Eğitim ve Araştırma Hastanesi'nde gerçekleştirildi. Araştırma verileri yazarlar tarafından geliştirilen formlar ile yüz yüze görüşme yöntemiyle toplandı.

Bulgular: Araştırmaya katılan gebelerden %35,9'unun gebelik öncesi düzenli egzersiz yaptığı ve %25,9'unun gebelikte düzenli egzersiz yaptığı görüldü. Gebelikte en fazla yapılan egzersizler yürüyüş ve pilates idi. Gebelerin fiziksel aktivitesi değerlendirildiğinde %80,5'inin sedanter olduğu görüldü. Gebelikte egzersiz yapma oranı gebeliği planlı olanlarda planlı olmayanlarla karşılaştırıldığında 4,04 kat (aOR 4,04, %95 GA 1,33-12,27) ve gebelik öncesi düzenli egzersiz yapanlarda yapmayanlara göre 30,57 kat (aOR 30,57, %95 GA 12,53-74,55) daha fazlaydı. Yine gebeliğinde obez olanlarla karşılaştırıldığında obez olmayanların 0,36 kat fiziksel olarak daha aktif oldukları görüldü (aOR 0,36, %95 GA 0,16-0,84). Benzer şekilde gebelik öncesi egzersiz yapan kadınların yapmayanlarla karşılaştırıldığında 10,51 kat fiziksel olarak daha aktif oldukları belirlendi (aOR 10,51, %95 GA 4,60-24,02).

Sonuç: Araştırmada gebelikte egzersiz yapma ve fiziksel olarak aktif olma oranlarının düşük olduğu, gebeliğin planlı olması ve gebelik öncesi düzenli egzersiz yapmanın gebelikte egzersiz davranışını artırdığı ve obezitenin fiziksel aktiviteyi azalttığı sonuçlarına varılmıştır.

Anahtar Kelimeler: Egzersiz, ebelik, doğum öncesi bakım, gebelik, fiziksel aktivite.

Introduction

It is known that physical activity and exercise during pregnancy are safe and beneficial for both the woman and the fetus.¹⁻³ The American College of Obstetrics and Gynecology (ACOG) recommends that women in pregnancy should be physically active and encouraged to engage in exercise that is safe during pregnancy, in the absence of contraindications.⁴ Types of exercises that are considered safe during pregnancy include stationary cycling, swimming, pilates, and yoga adapted to pregnancy.⁵ The World Health Organization (WHO) and ACOG recommended 150 minutes of aerobic physical activity per week in pregnancy and consider women who engage in this level of activity to be "active".^{4,6} The ACOG recommends that pregnant women engage in 30 min of physical activity at least 5 days per week.⁴ Many studies in the literature reveal that regular physical activity and exercise during pregnancy have many benefits during pregnancy, labor, and postpartum processes. It is known that regular physical activity and exercise reduce the risks of excessive weight gain, gestational diabetes mellitus, and preeclampsia during pregnancy.⁷⁻¹⁰ In addition to these, it has been determined that it is effective in reducing the complaints of fatigue, stress, anxiety, depression, and back pain, which are commonly observed in pregnancy, and increasing the well-being of the woman.^{9,11} Physical activity and exercise during pregnancy are effective in reducing the risk of perineal damage to the mother and the probability of injury to the newborn at birth, and increasing breastfeeding rates.^{12,13} Additionally, studies show that physical activity and exercise during pregnancy reduce the rates of preterm labor, sleep disturbance, cesarean delivery, and birth complications, and shorten postpartum recovery time and labor duration.^{10,14-16} Despite all these benefits, during pregnancy, most pregnant women are not physically active or are concerned about exercising.¹⁷ Studies show that regular physical activity and exercise during pregnancy are not associated with miscarriage, stillbirth, preterm delivery, premature rupture of membranes, newborn death, neonatal hypoglycemia, low birth weight, and birth defects.¹⁸ Despite the fact that there is considered evidence of the benefits of physical activity and exercise during pregnancy, studies reported significant declines in physical activity among pregnant women.^{5,19-21} The studies the rate of women who were physically active during pregnancy was found to be 9% in the United States, 11.1% in China, and 54.1% in Türkiye.^{19,22,23} For this reason, it is highly important to determine the physical activity and exercise status of pregnant women and the associated factors. This will contribute to antenatal care, maternal-newborn health, and midwifery care. This study aims to determine pregnant women's physical activity and exercise status during pregnancy and affecting factors.

Methods

Study Design and Setting

A cross-sectional study was carried out at the Training and Research Hospital, in the province of Bursa in Türkiye from March 3 2022 to June 29, 2022.

Study Population

The population of the research consisted of low-risk pregnant women in their third trimester (between 27-42 gestation weeks), who applied to Bursa Yuksek İhtisas Training and Research Hospital for control/follow-up. It was established

that there were approximately 90369 pregnant women admitted to the hospital in 2021. The sample size of the research was calculated using the rate of exercise during pregnancy in a previous study conducted in our country. In this research, it was reported that the exercise rate was 14%.²⁴ Based on these data, the minimum number of individuals to be included in the sample was calculated based on the values of $N=90369$, $p=0.14$, $q=0.86$, and $t=1.96$ ($\alpha=0.05$) and found as 185. The research included 220 pregnant women who were selected by non-probability (random) sampling method. Pregnant women, who could speak and understand Turkish, who were 18 years old or older, whose pregnancy was not risky, who was literate, who lived in Bursa, who had a singleton pregnancy, who were in the third trimester of pregnancy (between 27-42 weeks), and who agreed to participate in the study, were included in the research. Women, who had difficulty understanding written or spoken language or who had physical or psychological disorders that might prevent them from communicating, were excluded from the study.

Data Collection

In the research, the data were collected by a researcher (A.G.) through face-to-face interviews with pregnant women, who applied to the hospital during working hours (08:00 A.M.-04:00 P.M.). Pregnant women, who applied to the hospital, were evaluated in terms of inclusion criteria, and those who were eligible were informed about the study and interviewed after obtaining their consent verbally and in writing. The data were collected using the "Pregnant Women's Information Form" and "The Form for Exercise and Activity Assessment During Pregnancy".

Pregnant Women's Information Form: The pregnant women's information form was developed by the researchers based on the literature and consists of 24 questions about the socio-demographic and obstetric characteristics of the pregnant woman.^{20,21,25}

The Form for Exercise and Activity Assessment During Pregnancy: This form was developed by researchers based on the literature.^{4,20,21,25,26} The form includes 27 questions about exercise practice in each trimester of pregnancy, including those about exercise status before and during pregnancy as well as the type, duration, frequency, and intensity of exercise. In the research, those who exercised 2-3 times a week for at least 3 months before pregnancy were considered as "regular exercise before pregnancy", and those who continued to exercise during the third trimester were considered as "regular exercise during pregnancy".

In this study, the physical activity category was assessed as the total time spent by the pregnant woman for exercise in a week based on the ACOG recommendations. The ACOG recommends that pregnant women engage in 30 min of physical activity at least 5 days per week.⁴ For these reasons, in this study, women with a total weekly activity time of 150 minutes or more from occupational, exercise, conditioning, housework, or other activities were grouped as "active" and those who did not meet the active criteria (<150 minutes) were grouped as "sedentary".

Statistical Analysis

Data entry and analysis were done using a Statistical Package for Social Sciences (SPSS) version 22.0. The conformity of the data to normal distribution was checked with the Kolmogorov-Smirnov test. Continuous variables were stated as mean \pm standard deviation (SD) values and categorical data as number (n) and percentage (%). Inferential statistics were

explored using Chi-square/Fisher exact test to compare the exercising status during pregnancy (yes or no) and activity status during pregnancy (active or sedentary) with independent characteristics of the women. The $p \leq 0.05$ was considered statistically significant. All those variables found significant in the contingency table were included in binary logistic regression analysis. Both univariate and multivariate logistic regression were applied.

Results

A total of 220 pregnant women were included in this study. Among the pregnant women who participated in the study, 80.5% were 20 to 34 years old, 65.4% were primary and secondary school graduates, 89.1% were housewives, and 69.1% were from the middle-income level. It was established that most of the pregnant women had planned pregnancies (73.2%), were multiparous (60.9%), and obese (47.3%) according to BMI assessment during pregnancy (Table 1).

The distribution of pregnant women's characteristics of exercising before and during pregnancy is summarized in Figure 1. It was established that 35.9% of the women regularly exercised before pregnancy, 29.1% quit exercising during pregnancy, 13.2% started exercising during pregnancy, and 25.9% regularly exercised during pregnancy. Fear of harming the fetus (45.8%), fear of miscarriage (18.8%), and fatigue (12.5%) are the primary reasons for women to stop exercising during pregnancy.

Among pregnant women, 32.3% reported exercising in the 1st trimester, 33.6% in the 2nd trimester, and 32.7% in the 3rd trimester. When the types of exercises performed by pregnant women were analyzed, it was established that pregnant women performed walking, pilates, yoga, and stretching exercises in all three trimesters (Figure 2).

The distribution of the activity status of pregnant women during pregnancy is summarized in Figure 3. The proportion of physically active pregnant women was 13.6%, 13.2%, and 14.5% in the 1st, 2nd, and 3rd trimesters, respectively. It was determined that 80.5% of pregnant women were sedentary during pregnancy.

The comparison of the status of regular exercising during pregnancy and the descriptive characteristics of pregnant women are given in Table 2. It was established that there is a statistically significant difference between regular exercise during pregnancy and having a chronic disease, planned pregnancy, and regular exercise before pregnancy ($p \leq 0.05$).

The status of being physically active or sedentary during pregnancy was compared with some characteristics of pregnant women. As a result of the comparison, it was established that there was a statistically significant difference between women's planned pregnancy status, obesity during pregnancy, regular exercise before pregnancy, and being active during pregnancy ($p \leq 0.05$) (Table 3).

The findings of the multivariable analysis showed that after adjusting the variable mentioned in Table 4. Regular exercise during pregnancy was 4.04 times more common in those with planned pregnancy compared with those without a planned pregnancy (aOR 4.04, 95% CI 1.33 - 12.27). Likewise, compared to those who did not regularly exercise before pregnancy, regular exercisers were 30.57 times more likely to exercise regularly during pregnancy (aOR 30.57, 95% CI 12.53 - 74.55).

The results of the multivariable analysis examining the factors affecting physical activity status during pregnancy are shown in Table 5. Women who were not obese during pregnancy were 0.36 times more likely to be physically active during pregnancy compared to those who were obese (aOR 0.36, 95% CI 0.16 - 0.84). Additionally, compared to those who did not regularly exercise before pregnancy, those who regularly exercised before pregnancy were 10.51 times more physically active during pregnancy (aOR 10.51, 95% CI 4.60-24.02).

Discussion

In the present study, 35.9% of pregnant women exercised regularly before pregnancy and 29.1% stopped exercising after pregnancy. Likewise, in a study, it was seen that 23.3% of pregnant women exercised before pregnancy and half of the women stopped exercising during pregnancy.²⁰ Studies showed that exercise during pregnancy reduces nausea-vomiting, fatigue, and stress.^{27,28} However, in our study and some other studies in the literature reveal that women did not exercise for these reasons. In our study, fear of harming the fetus, fear of miscarriage, and fatigue were the main reasons for women to stop exercising during pregnancy. Likewise, in other studies, fear of miscarriage and feeling tired were the reasons for women to stop exercising during pregnancy.^{22,29} These findings reveal that it is quite important to inform and counsel pregnant women that exercise during pregnancy is not harmful and encourage them to do so.

In the present study, it was established that 25.9% of pregnant women exercised regularly during pregnancy. Likewise, in a study conducted in Brazil, it was seen that the rate of women exercising during pregnancy was 20.1%, and in another study conducted in Ethiopia, this rate was 27.1%.^{20,30} These findings show that the rates of exercising during pregnancy are low. The fact that particularly women who exercise before pregnancy may stop exercising because of some fears and anxieties may be listed as the primary reasons.

Our study determined that when the types of exercises performed by pregnant women during pregnancy were analyzed, pregnant women mostly walked in all three trimesters, which is followed by pilates, yoga, and stretching. Likewise, the other studies found that walking was the most preferred type of exercise performed by pregnant women, which was followed by pilates, aerobics, and relaxation exercises.^{20,26,30} The fact that walking is the most preferred type of exercise in pregnancy may be because of the fact that it does not require any special equipment or cost. Additionally, ACOG recommends stationary cycling, swimming, pregnancy-adapted Pilates, and yoga as safe types of exercise in pregnancy.⁴ This shows that pregnant women in our study performed safe types of exercise.

In this study, we found that only a small percentage of women met ACOG recommendations for physical activity during pregnancy. Likewise, in other studies, the rate of women who were physically active during pregnancy was found to be 9% in the United States and 11.1% in China.^{19,22} These findings show that physical activity during pregnancy is quite insufficient. This may be because of the lack of adequate exercise during pregnancy and the restriction of movement due to women's perception of pregnancy as a disease.

Table 1. Distribution of descriptive characteristics of pregnant women (n=220).

Characteristics	n	%
Age, year		
≤19	20	9.1
20-34	177	80.5
35-39	19	8.6
≥40	4	1.8
Education level		
Primary and secondary school	144	65.4
High school	53	24.1
University	23	10.5
Working in an income-generating job		
Working	24	10.9
Housewife	196	89.1
Working status during pregnancy		
Yes	24	10.9
No	196	89.1
Perceived income level		
Low	68	30.9
Middle	152	69.1
Marital status		
Single	9	4.1
Married	211	95.9
Living place		
Urban area	213	96.8
Rural area	7	3.2
Chronic disease		
Yes	24	10.9
No	196	89.1
The planned state of pregnancy		
Planned	161	73.2
Unplanned	59	26.8
Parity		
Primiparous	86	39.1
Multiparous	134	60.9
Status of receiving antenatal care		
Received	216	98.2
Not received	4	1.8
Smoking during pregnancy		
Yes	24	10.9
No	196	89.1
Pre-gestational BMI (kg/m ²)		
Weak (<18.5)	12	5.5
Normal (18.5-24)	98	44.5
Overweight (25-29)	51	23.2
Obese (30 and over)	34	15.5
Gestational BMI (kg/m ²)		
Weak (<18.5)	1	0.5
Normal (18.5-24)	18	8.2
Overweight (25-29)	97	44.1
Obese (30 and over)	104	47.3

BMI: Body mass index.

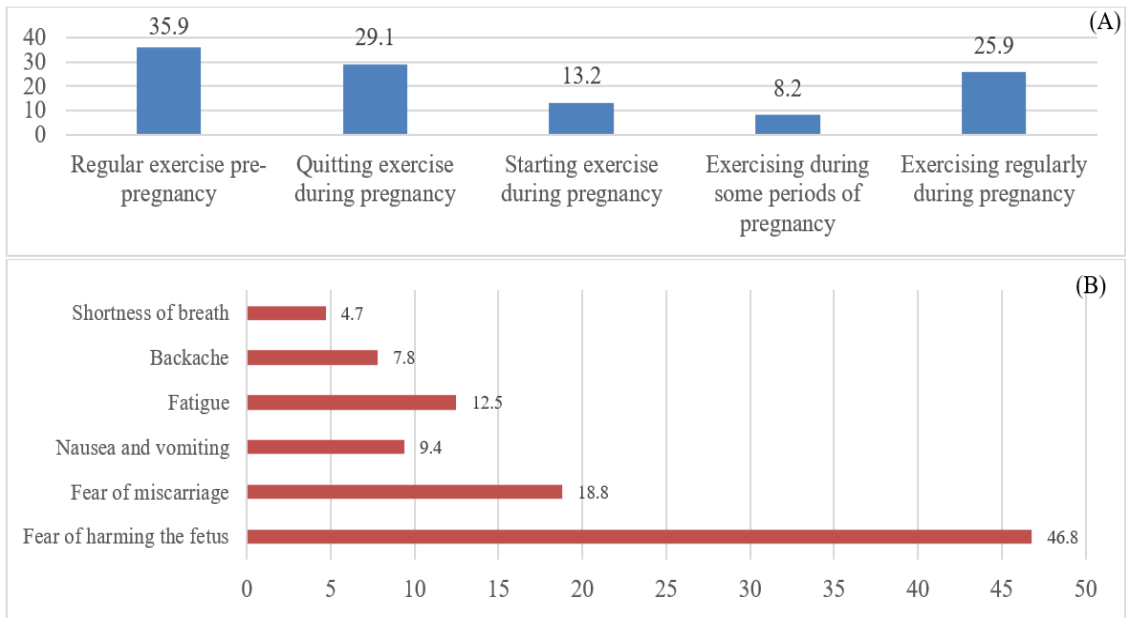


Figure 1. (A) Distribution of exercise characteristics of pregnant women before and during pregnancy, (B) Reasons for pregnant women to quitting exercising activities during pregnancy.

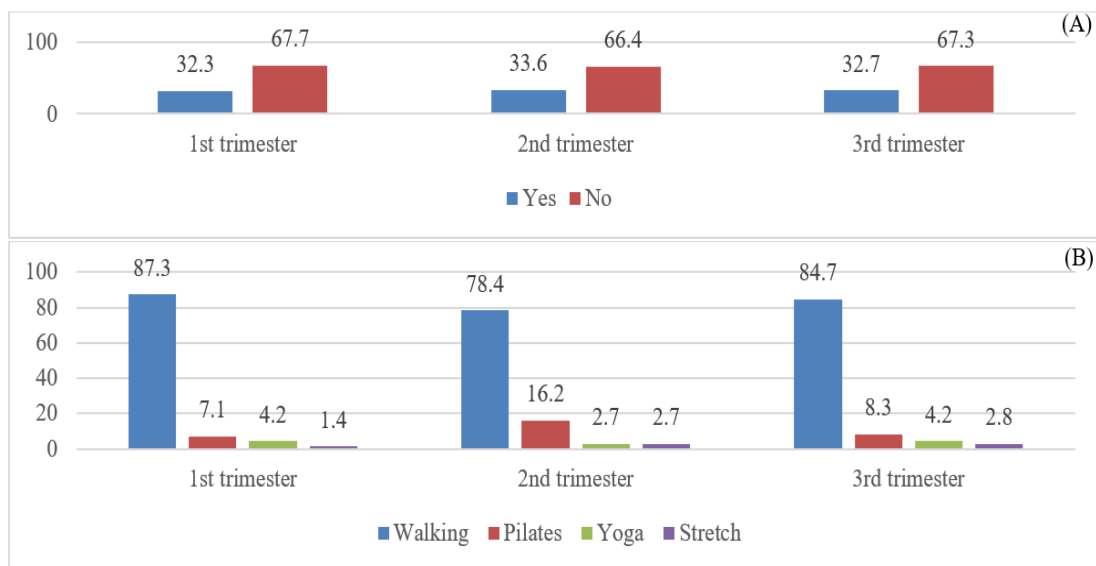


Figure 2. (A) Distribution of exercise characteristics of pregnant women by trimester, (B) Distribution of exercise types performed by pregnant women.

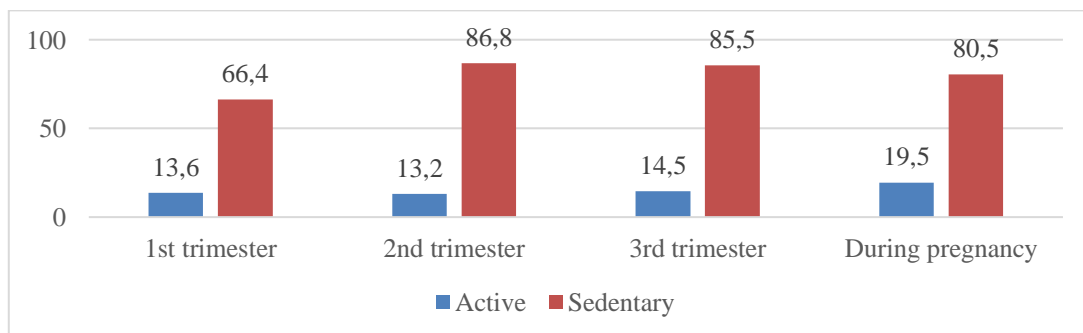


Figure 3. Distribution of activity status of pregnant women according to ACOG criteria.

Table 2. Comparison of pregnant women with the characteristics of regular exercise during pregnancy (n=220)

Characteristics	Regular exercise during pregnancy		<i>p</i> [†]
	Yes (n=57)	No (n=163)	
Age, year			
≤19	7 (35.0)	13 (65.0)	0.346
20-34	47 (26.6)	130 (73.4)	
35-39	3 (15.8)	16 (84.2)	
≥40	0 (0.0)	4 (100.0)	
Education level			
Primary and secondary school	32 (22.2)	112 (77.8)	0.222
High school	17 (32.1)	36 (67.9)	
University	8 (34.8)	15 (65.2)	
Working in an income-generating job			
Working	8 (33.3)	16 (66.7)	0.379
Housewife	49 (25.0)	147 (75.0)	
Working status during pregnancy			
Yes	7 (29.2)	17 (70.8)	0.700
No	50 (25.5)	146 (74.5)	
Perceived income level			
Low	15 (22.1)	53 (77.9)	0.383
Middle	42 (27.6)	110 (72.4)	
Marital status			
Single	1 (1.1)	8 (88.9)	0.452
Married	56 (26.5)	155 (73.5)	
Living place			
Urban area	56 (26.3)	157 (73.7)	0.680
Rural area	1 (14.3)	6 (85.7)	
Chronic disease			
Yes	2 (8.3)	22 (91.7)	0.046
No	55 (28.1)	141 (71.9)	
The planned state of pregnancy			
Planned	50 (31.1)	111 (68.9)	0.004
Unplanned	7 (11.9)	52 (88.1)	
Parity			
Primiparous	30 (34.9)	56 (65.1)	0.015
Multiparous	27 (20.1)	107 (79.9)	
Status of receiving antenatal care			
Received	57 (26.4)	159 (73.6)	0.575
Not received	0 (0.0)	4 (100.0)	
Smoking during pregnancy			
Yes	3 (12.5)	21 (87.5)	0.112
No	54 (27.6)	142 (72.4)	
Obesity during pregnancy			
No	33 (28.4)	83 (71.6)	0.364
Yes	24 (23.1)	80 (76.9)	
Doing regular exercise before pregnancy			
Yes	49 (62.0)	30 (38.0)	0.000
No	8 (5.7)	133 (94.3)	

[†]Chi-square tests/Fisher exact test.

P value ≤ 0.05 values are shown in bold.

Table 3. Comparison of the physical activity status of pregnant women during their pregnancies (n=220).

Characteristics	Activity status during pregnancy		<i>p</i> [†]
	Active (n=43)	Sedentary (n=127)	
Age, year			
≤19	5 (25.0)	15 (75.0)	0.259
20-34	37 (20.9)	140 (79.1)	
35-39	1 (5.39)	18 (94.7)	
≥40	0 (0.0)	4 (100.0)	
Education level			
Primary and secondary school	23 (16.0)	121 (84.0)	0.184
High school	14 (26.4)	39 (73.6)	
University	6 (26.1)	17 (73.9)	
Working in an income-generating job			
Working	7 (29.2)	17 (70.8)	0.208
Housewife	36 (18.4)	160 (81.6)	
Working status during pregnancy			
Yes	6 (25.0)	18 (75.0)	0.475
No	37 (18.9)	159 (81.1)	
Perceived income level			
Low	13 (19.1)	55 (80.9)	0.915
Middle	30 (19.7)	122 (80.3)	
Marital status			
Single	1 (11.1)	8 (88.9)	1.000
Married	42 (19.9)	169 (80.1)	
Living place			
Urban area	42 (19.7)	171 (80.3)	1.000
Rural area	1 (14.3)	6 (85.7)	
Chronic disease			
Yes	2 (8.3)	22 (91.7)	0.179
No	41 (20.9)	155 (79.1)	
The planned state of pregnancy			
Planned	37 (23.0)	124 (77.0)	0.034
Unplanned	6 (10.2)	53 (89.8)	
Parity			
Primiparous	21 (24.4)	65 (75.6)	0.144
Multiparous	22 (16.4)	112 (83.6)	
Status of receiving antenatal care			
Received	43 (19.9)	173 (80.1)	1.000
Not received	0 (0.0)	4 (100.0)	
Smoking during pregnancy			
Yes	3 (12.5)	21 (87.5)	0.585
No	40 (20.49)	156 (79.6)	
Obesity during pregnancy			
No	32 (27.6)	84 (72.4)	0.001
Yes	11 (10.6)	93 (89.4)	
Doing regular exercise before pregnancy			
Yes	34 (43.0)	45 (57.0)	0.000
No	9 (6.4)	132 (93.6)	

[†]Chi-square tests/Fisher exact test.

P value ≤ 0.05 values are shown in bold.

Table 4. Logistic regression analysis for variables predicting regular exercise in pregnant women during pregnancy

Characteristics	Univariate analysis		Multivariable analysis	
	OR (95% CI)	<i>p</i>	aOR (95% CI)	<i>p</i>
Chronic disease				
Yes	0.23 (0.05-1.02)	0.054	0.20 (0.03-1.12)	0.069
No	1		1	
The planned state of pregnancy				
Planned	3.34 (1.42-7.88)	0.006	4.04 (1.33-12.27)	0.013
Unplanned	1		1	
Parity				
Primiparous	2.12 (1.15-3.91)	0.016	1.01 (0.42-2.42)	0.974
Multiparous	1		1	
Doing regular exercise before pregnancy				
Yes	27.15 (11.65-63.27)	0.000	30.57 (12.53-74.55)	0.000
No	1		1	

CI: confidence interval, OR: odds ratio, aOR: adjusted odds ratio.

P value ≤ 0.05 values are shown in bold.

Table 5. Logistic regression analysis for variables predicting activity status of pregnant women during pregnancy

Characteristics	Univariate analysis		Multivariable analysis	
	OR (95% CI)	<i>p</i>	aOR (95% CI)	<i>p</i>
The planned state of pregnancy				
Planned	2.63 (1.05-6.61)	0.039	2.16 (0.78-5.95)	0.136
Unplanned	1		1	
Parity				
Primiparous	1.64 (0.84-3.21)	0.146	-	-
Multiparous	1		1	
Obesity during pregnancy				
No	0.31 (0.14-0.65)	0.002	0.36 (0.16-0.84)	0.018
Yes	1		1	
Doing regular exercise before pregnancy				
Yes	7.55 (3.40-16.78)	0.000	10.51 (4.60-24.02)	0.000
No	1		1	

CI: confidence interval, OR: odds ratio, aOR: adjusted odds ratio.
P value ≤ 0.05 values are shown in bold.

In the present study, a significant relationship was found between regular exercise during pregnancy and planned pregnancy and regular exercise before pregnancy. Likewise, Nascimento et al. (2015) reported that women who exercised before pregnancy exercised 6.45 times more during pregnancy.²⁰ This may be because of the continuation of exercise behavior due to habituation. These findings reveal the importance of acquiring exercise behavior before pregnancy. On the other hand, it is known that unwanted pregnancies have many negative consequences for the mother and the newborn. Unwanted pregnancies lead to negative feelings about their pregnancies in pregnant women, leading to behaviors such as receiving less antenatal care and malnutrition.^{31,32} Our study is important since it reveals the information that women with unwanted pregnancies exercise less during their pregnancies.

In the present study, a significant relationship was found between physical activity status during pregnancy and obesity during pregnancy, and regular exercise before pregnancy. Likewise, in another study, it was seen that women who exercised before pregnancy were 2.14 times more physically active during pregnancy.²² This may be because of the positive effects of the habit acquired during pregnancy, such as in exercise. It is known that the most important factors associated with excessive weight gain and obesity during pregnancy are unhealthy diet and lack of physical activity.³³ In a study, it was found that pregnant women who were physically active during pregnancy gained 1.38 kg less weight on average.³⁴ On the other hand, ACOG recommends that overweight and obese pregnant women should be encouraged to engage in physical activity and exercise.³⁵ However, in our study, it was found that obese pregnant women had less physical activity. In our study, inadequate physical activity may have been the cause of obesity in women, and inadequate energy and effort due to obesity may have led to activity restriction. These findings reveal the importance of encouraging and supporting obese women to be physically active during pregnancy.

Conclusion

In this study, in which 220 pregnant women were included to determine the physical activity and exercise status of pregnant women during pregnancy and the factors affecting them, the main findings were as follows: A significant part of women stopped exercising after pregnancy, 25.9% of pregnant women exercised regularly during pregnancy, fear of harming the fetus, fear of miscarriage, and fatigue were the

main reasons for women to stop exercising during pregnancy; walking was the most common exercise followed by pilates, yoga, and stretching; more than half of the pregnant women were not physically active (sedentary); women who planned pregnancy and exercised regularly before pregnancy exercised more during pregnancy; and pregnant women who exercised regularly before pregnancy and were not obese were more physically active during pregnancy. Based on these results, it is recommended that all health professionals involved in antenatal care, especially midwives, should inform and encourage women about exercise and activity before and during pregnancy, systematic training on pregnancy exercise should be organized in primary health care institutions, pregnant information classes should be increased, policies should be developed in institutions on this issue, and new studies on a similar subject should be planned with a larger sample, including qualitative research methods.

Limitations

This study has some limitations. First, no observation or measurement was made to obtain the data obtained in the research, but it was based on women's responses. Second, the data from this cross-sectional study do not indicate exercise conditions during pregnancy. Therefore, longitudinal studies should be conducted in the future, as a longitudinal follow-up is warranted. Third, because the research was conducted in a single center, the results cannot be generalized.

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This study was presented as a summary oral presentation at the 7th International Congress on Healthy Life in Istanbul, Turkey on 17-18 December 2022.

Conflict of Interest

The authors have no conflict of interest to declare

Compliance with Ethical Statement

The ethical committee of Health Sciences University Bursa Yuksek Ihtisas Training and Research Hospital Clinical Research approved the study formally on 26 January 2022 (2011-KAEK-25 2022/01-11). Moreover, signed informed consent had been taken from all the participants and the objective of the study had been explained to them.

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Author Contributions

Study idea/Hypothesis: DA; Study desing: DA; Data collection: AG; Analysis: DA; Manuscript writing: DA, AG; Critical review: DA

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