

The Relationship Between Perceived Social Support and Exercising During Pregnancy and Factors Affecting this Relationship

Gebelikte Egzersiz ile Algılanan Sosyal Destek Arasındaki İlişki ve Etkileyen Faktörler

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ABSTRACT

There are many benefits of exercise practices during pregnancy. However, pregnant women do not exercise or continue despite their benefits. Social support is needed to keep the exercise going. This study aimed to investigate the relationship between perceived social support and exercising during pregnancy and the factors affecting this relationship. This descriptive cross-sectional study was conducted on 164 pregnant women. In the collection of the research data, a questionnaire form, Multidimensional Scale of Perceived Social Support (MSPSS), and Women's Physical Activity Self-Worth Inventory (WPASWI) were used. It was determined that 74.7% of the participants exercised during their pregnancy period and 36.5% of them exercised regularly. The mean total MSPSS score of the pregnant women was found to be 25.37 ± 12.06 and it was determined that the social support they received was low. The mean total WPASWI score of the pregnant women was found to be 107.27 ± 18.35 and it was determined that their physical activity levels were good. A statistically significant correlation was found between MSPSS and WPASWI in the negative direction ($p < 0.001$). As a result of this study, it was determined that perceived social support affects exercising during pregnancy.

Keywords: Physical activity; pregnancy; social support

ÖZ

Gebelikte egzersiz uygulamalarının birçok faydası vardır. Ancak gebeler bu faydalarına rağmen egzersiz yapmazlar veya egzersize başlasalar bile devam etmezler. Egzersizi sürdürmek için sosyal desteğe ihtiyaç vardır. Bu çalışma, gebelikte algılanan sosyal destek ile egzersiz arasındaki ilişkiyi ve bu ilişkiyi etkileyen faktörleri incelemeyi amaçlamıştır. Tanımlayıcı kesitsel tipteki bu çalışma 164 gebe kadın üzerinde yapılmıştır. Araştırma verilerinin toplanmasında anket formu, Çok Boyutlu Algılanan Sosyal Destek Ölçeği ve Kadın Fiziksel Aktivite Özdeğer Ölçeği kullanılmıştır. Katılımcıların %74,7'sinin gebelik döneminde egzersiz yaptığı ve %36,5'inin düzenli egzersiz yaptığı belirlenmiştir. Gebelerin toplam MSPSS puan ortalaması 25.37 ± 12.06 olarak bulunmuş ve aldıkları sosyal desteğin düşük olduğu belirlenmiştir. Gebelerin toplam WPASWI puan ortalaması 107.27 ± 18.35 olarak bulundu ve fiziksel aktivite düzeylerinin iyi olduğu belirlenmiştir. MSPSS ile WPASWI arasında negatif yönde istatistiksel olarak anlamlı bir ilişki bulunmuştur ($p < 0,001$). Bu çalışma sonucunda algılanan sosyal desteğin gebelikte egzersiz yapmayı etkilediği belirlenmiştir.

Anahtar Kelimeler: Fiziksel aktivite; gebelik; sosyal destek

INTRODUCTION

Pregnancy is one of the most important experiences a woman experiences and is also a normal physiological process that affects all systems of the body (1). Musculoskeletal system is one of these systems that is affected during pregnancy. The displacement of the center of mass of the body, which is the result of growing

of the fetus, the enlargement of the abdomen, and the increase in body weight predisposes to the changes in the pregnant posture. Pregnancy-related weakening of the abdominal muscles causes an increase in lumbar lordosis, shortening of paravertebral muscles and decreased support to the uterus (2). These postural changes during pregnancy are not pathological, however they can cause acute or chronic low back pain, when uncontrolled. It should be ensured that the pregnant woman goes through this process healthily. Physical activity and exercise are effective methods for better adaptation to the changes that occur during pregnancy and reducing complications (3). Hence, pregnant women should be supported to begin or continue safe

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physical activities/exercises. It is recommended in the guidelines suggested by Ministry of Health that sedentary pregnant women do exercises (walking, swimming, yoga, clinical pilates) of moderate intensity for at least 150 minutes per week and 20-30 minutes per day, provided that they do not have any pregnancy complications or medical complications (3). Physical activities and regular exercising during pregnancy have several positive health-promoting effects such as benefiting physical, psychological, mental, social and emotional health (4). Doing physical activities during pregnancy is also associated with many other benefits such as maintaining physical fitness, managing weight gain, reducing the risks of gestational diabetes, preeclampsia, gestational hypertension, prenatal depression and macrosomia, and improving psychological well-being (5). Additionally, there are studies reporting that women who are physically active during pregnancy experience chronic musculoskeletal problems and symptoms, such as urinary incontinence, caesarean delivery risks, dizziness and vomiting, less than other pregnant women (6). However, despite the reported benefits of doing regular physical activities, frequency of physical activities was observed to be lower in women during pregnancy compared to before pregnancy, and the physical activities, sports, exercises and occupational activities they do in leisure time were found to be reduced, as well (7). Only less than 15% of women achieve the 150 minutes/week regular physical activity of moderate intensity, which is the level recommended by worldwide guidelines for pregnant women without complications (8). In addition to the women, who would like to continue exercising during pregnancy due to its benefits, there are also other women, who avoid exercising, thinking that exercising during pregnancy would harm the baby (9). The type, intensity and duration of the physical activity should be consciously arranged in order to prevent the potential dangers of exercising during pregnancy to both the expectant mother and the unborn baby. In this context, gestational week emerges a criterion in selecting the physical activity and adjusting the dose of exercise (10).

It is recommended to ensure the continuity of the exercise in order for exercising to be effective. Some pregnant women do actively participate in exercising at first, but quit exercising after a certain period of time, due to reasons such as problems in timing, diseases in the family, indifference to exercising, difficulty in accessing the exercise center, and loss of interest (11). At this point, it is thought that social support may be important in ensuring the continuity of exercise to be done during pregnancy.

Numerous studies have revealed that the social support system is a powerful resource for the resolution, prevention and treatment of the sociological and psychological problems of the individual and enabling him/her to cope with difficult situations (12,13,14). In addition, it has been suggested that social support is effective in ensuring the individual to do exercise (15).

However, we have not found many studies during our literature review, in which the effects of perceived social support on exercise during pregnancy were investigated.

Based on all these, this study aimed to investigate the relationship between perceived social support and exercising during pregnancy and the factors affecting this relationship.

Methods

Sample selection was not made in the study, and all the 164 pregnant women, who applied to the Obstetrics And Gynaecology Polyclinics of Tunceli State Hospital between February 20th, 2018 and February 20th, 2020, and who were aged 18 and over, agreed to participate in the study, had a healthy fetus, did not have communication difficulties, did not have a mental disability, have not received an infertility treatment to become pregnant, and did not have a chronic disease or risky pregnancy (gestational diabetes, eclampsia and complaint of preeclampsia, threat of premature birth, premature rupture of membrane), were included in the study.

Research tools used in the study

In the collection of the research data, a

questionnaire form that consist of 30 questions on the socio-demographic, obstetric and exercising characteristics of individuals, Multidimensional Scale of Perceived Social Support, and Women's Physical Activity Self-Worth Inventory were used.

Questionnaire form

The questionnaire form consists of questions about sociodemographic (age, education, employment status, etc.), and obstetric characteristics as well as identifying characteristics in relation to exercising (16-18).

Multidimensional Scale Of Perceived Social Support

The Multidimensional Scale of Perceived Social Support (MSPSS) was developed by Zimet et al. (1988). Eker and Arkar have conducted the validity and reliability study of the scale for Turkey and assessed its construct validity (1995). Eker and Arkar also assessed "The Factor Structure, Validity and Reliability of the Revised Form of the Multidimensional Scale of Perceived Social Support" in 2001, and found the internal consistency of the scores obtained from the MSPSS and its subscales at an acceptable level (Cronbach alpha coefficients = 0.80-0.95) (Eker et al. 2001). The scale was categorized into the 3 subscales based on the source of received support with each subscale consisting of 4 items. Consisting of 12 items in total, MSPSS subjectively assesses the adequacy of social support received from three different sources. The subscales and the items included in each subscale are; family (3rd, 4th, 8th, and 11th items), friend (6th, 7th, 9th, and 12th items), and significant other (1st, 2nd, 5th, and 10th items). The scale is in the form of a 7-point Likert scale offering participants the following choices to choose from: 'totally agree' (7 points), 'mostly agree' (6 points), 'agree' (5 points), 'neither agree or disagree' (4 points), 'disagree' (3 points), 'mostly disagree' (2 points), and 'totally disagree' (1 point). The total score of the scale is calculated by adding up all subscale scores, which are calculated by summing the scores obtained from the each four items in each subscale. The lowest and highest total scores that can be obtained from a subscale is 4 and 28, respectively, whereas the

lowest and highest total scores that can be obtained from the entire scale is 12 and 84, respectively. High scores indicate that the perceived social support is high (19).

Women's Physical Activity Self-Worth Inventory

Women's Physical Activity Self-Worth Inventory (WPASWI) is a 37-item multidimensional scale developed by Huberty J. et al. in 2013. The validity and reliability study of the Turkish version of the scale was conducted by Yurt. WPASWI is a 4-point Likert-type scale that assesses the non-physical aspects of self-worth associated with physical activity in women, offering participants the following choices to choose from: 'strongly disagree' (1 point), 'disagree' (2 points), 'agree' (3 points), and 'strongly agree' (4 points). Cronbach alpha values of the Knowledge, Emotional, and Social subscales of the original scale are 0.90, 0.87, and 0.72, respectively. The total score that can be obtained from the scale ranges between 37 and 148. High scores indicate higher sense of self-worth (20).

Implementation of the study and data collection

The questionnaire form, Multidimensional Scale of Perceived Social Support and Women's Physical Activity Self-Worth Inventory were administered by the authors to the pregnant women, who applied to the obstetrics and gynaecology outpatient clinics of the hospital, after they were explained the purpose of the study and provided the necessary information about the study, in a suitable environment (in an empty polyclinic room).

Ethical aspect of the study

This study was carried out in accordance with the principles of the Declaration of Helsinki. The ethics committee approval of the study was obtained from Munzur University Non-Interventional Ethics Committee (Decision No: 1, Issue: 10, dated 14.02.2018), and the institutional permission for the study was obtained from the hospital where the study was conducted. Additionally, written consents were obtained from the pregnant women, who agreed to participate in the study.

Evaluation of data

The data were evaluated using the SPSS (Statistical Package For Social Science) 24 packaged software. In addition to descriptive statistics, numbers and percentages were used to denote variables determined by calculations, whereas mean \pm standard deviation was used to denote variables determined by measurement. Student-t test, one-way analysis of variance (ANOVA), Kruskal Wallis test, Mann Whitney U test, Pearson's Correlation Coefficient, and regression analysis were used to evaluate the data. The results were evaluated within 95% confidence interval and the significance level was accepted $p < 0.05$.

Results

61.5% of the pregnant women participating in the study were between the ages of 20-29, 51.3% of them were university graduates, 71.2% of them were housewives, 88.5% of them had a health insurance via Social Security Institution (SSI), 63.5% of them had income that is equal to their expenses, 94.9% of them did not smoke, and the nutritional status of 55.8% of them was good. It was determined that 95.5% of the pregnant women had a total number of pregnancies between 1-3, 76.3% of them did not have an abortion, 91.7% of them did not give a stillbirth, that the last birth of 68% of them was through vaginal delivery. 74.7% of them stated that they do exercise during pregnancy. 20.5% of the pregnant women, who stated to have been exercising, stated that they experienced pain while exercising, whereas 60.9% of them stated that they experienced fatigue while exercising. 32.8% of the pregnant women stated that they started exercising in the first trimester, 36.5% of them stated that they exercise regularly, 57.1% of them stated that they also exercise during their usual life (other than during pregnancy), 42.9% of them stated that they get their information about exercising from their social environment, 43.6% of them stated that their appetite increased while exercising, 78.2% of them stated that they were satisfied with their pre-pregnancy weights, and 75.6% of them stated that they are satisfied with their current (pregnancy) weights. (Table 1,2,3).

The distribution of mean scores obtained from the WPASWI, MSPSS and their subscales by sociodemographic characteristics of the pregnant women determined via the questionnaire form was shown in Table 1. A statistically significant relationship was found between age, and mean scores obtained from the WPASWI social subscale, MSPSS and its subscales, as well as between the educational status and the mean scores obtained from WPASWI subscales (with the exception of mean total WPASWI score), MSPSS and its subscales. Additionally, there was a statistically significant relationship between having health insurance and the mean scores obtained from WPASWI, MSPSS (with the exception of the significant other subscale) and their subscales, as well as between smoking status and the mean score obtained from the WPASWI social subscale. A statistically significant relationship was also found between monthly income status and the mean scores obtained from MSPSS, WPASWI and their subscales, as well as between the nutritional status, and mean score obtained from the knowledge subscale of WPASWI, mean total MSPSS score, and mean score obtained from the significant other subscale of MSPSS (Table 1).

The distribution of mean scores obtained from WPASWI, MSPSS and their subscales by the obstetric characteristics of the pregnant women determined via the questionnaire form is shown in Table 2. A statistically significant difference was found between the total number of pregnancies, and mean score obtained from the knowledge subscale of WPASWI and mean total WPASWI score; mean total WPASWI score of those who gave birth to 1 to 3 children was found to be higher than the respective scores of other pregnant women. A statistically significant difference was also found between the status of having an abortion, and the mean total MSPSS score, and the mean score obtained from the significant other subscale of MSPSS; mean total MSPSS score and mean score obtained from the significant other subscale of MSPSS, of those who had an abortion were found to be higher than the respective scores of the pregnant women that did not have an abortion. There was a statistically significant

Table 1. Distribution of Mean Scores Obtained from the WPASWI, MSPSS and Their Subscales by Sociodemographic Characteristics of the Pregnant Women, Tunceli 2018-2020

Variables	n	%	Knowledge	Emotional	Social	Total WPASWI	Family	Friend	Significant Other	Total MSPSS
Age groups										
20-29	96	61.5	50.39±9.04	43.07±6.67	16.80±4.33	110.27±16.64	6.19±3.32	7.65±4.86	8.34±5.94	22.69±12.09
30-39	54	34.6	47.48±10.74	38.62±8.79	16.01±3.87	102.12±20.96	7.59±3.78	9.66±3.99	11.29±5.65	28.55±10.82
40-49	6	3.8	50.33±2.73	39.83±2.40	15.50±2.73	105.66±7.73	12.00±0.0	12.5±0.54	15.0±1.09	39.5±1.64
<i>p</i>			0.263	0.016	0.469	0.159	0.000	0.000	0.000	0.000
Educational Status										
Primary education	11	7.1	47.09±1.44	37.54±2.16	14.63±4.98	99.27±6.14	10.90±2.34	13.0±2.64	17.0±7.52	40.90±7.17
Secondary education	65	41.7	48.18±10.17	41.69±7.63	17.69±4.44	107.56±18.62	5.80±2.91	7.80±5.16	9.06±6.13	22.66±11.98
University	80	51.3	50.67±9.61	41.71±8.03	15.75±3.48	108.13±19.12	7.25±3.86	8.52±4.05	9.66±4.83	25.43±11.08
<i>p</i>			0.017	0.029	0.002	0.102	0.001	0.000	0.001	0.000
Occupational Status										
Housewife	111	71.2	49.48±10.54	41.85±8.05	17.06±4.26	108.40±19.92	6.98±3.58	8.63±4.75	9.98±6.10	25.59±9.64
Laborer	11	7.1	49.63±4.41	40.00±3.54	14.54±5.90	104.18±8.82	6.90±3.01	9.81±5.45	10.18±3.25	26.90±9.64
Civil servant	27	17.3	49.11±3.95	40.96±4.36	15.11±2.47	105.18±9.06	7.00±4.40	7.70±4.10	9.37±6.36	24.07±13.65
Self-employed	7	4.5	48.42±15.25	38.28±14.02	15.57±0.53	102.28±29.18	5.28±1.60	8.28±3.54	10.85±5.01	24.42±9.91
<i>p</i>			0.843	0.469	0.017	0.347	0.741	0.846	0.647	0.874
Health Insurance Status										
None	7	4.5	33.54±16.44	26.14±12.37	13.85±3.02	73.57±31.5	13.0±4.0	10.0±2.82	11.71±4.53	34.71±10.32
Green health card	11	7.1	44.36±12.25	39.81±3.84	20.45±3.04	104.63±17.36	9.09±4.03	12.18±6.41	11.63±6.31	32.9±16.3
SSI insured	138	88.5	50.58±8.05	42.31±6.73	16.29±4.07	109.19±15.92	6.42±3.24	5.17±4.43	9.70±5.94	24.29±11.41
<i>p</i>			0.002	0.000	0.001	0.003	0.000	0.048	0.248	0.015
Monthly Income Status										
Not enough	37	23.7	48.40±10.0	42.02±7.31	18.32±2.51	108.75±16.82	7.75±3.42	10.97±5.54	13.02±6.61	31.75±11.52
Just enough	99	63.5	48.75±10.03	40.40±8.05	15.78±4.24	104.94±19.71	7.10±3.82	8.17±4.02	9.41±5.24	24.68±11.57
More than enough	20	12.8	54.30±3.31	45.25±4.39	16.5±5.01	116.05±9.75	4.35±1.08	5.85±3.68	6.75±5.47	16.95±9.33
<i>p</i>			0.001	0.006	0.001	0.003	0.001	0.001	0.000	0.000
Smoking Status										
Yes	8	5.1	48.62±7.65	39.87±1.35	20.87±0.99	109.37±8.94	5.12±0.83	8.87±6.72	8.62±5.44	22.62±12.78
No	148	94.9	49.42±9.69	41.49±7.83	16.24±4.10	107.16±18.74	7.0±3.69	8.52±4.52	10.0±5.95	25.52±12.04
<i>p</i>			0.361	0.583	0.000	0.641	0.802	0.734	0.586	0.761
Nutritional Status										
Very good	16	10.3	43.81±10.8	40.56±8.62	16.00±3.34	100.37±19.36	6.06±3.29	6.50±3.68	6.25±3.25	18.81±10.06
Good	87	55.8	51.55±5.85	42.25±5.73	16.42±4.80	110.22±13.60	6.58±3.27	8.55±4.36	10.36±6.54	25.50±11.63
Moderate	52	33.3	47.50±12.86	40.30±9.87	16.65±3.04	104.46±23.74	7.75±4.18	9.23±5.19	10.44±5.06	27.42±12.76
Bad	1	0.6	48.0±0.0	39.0±0.0	20.0±0.0	107.0±0.0	4.0±0.0	4.0±0.0	4.00±0.0	12.00±0.0
<i>p</i>			0.003	0.850	0.727	0.290	0.264	0.165	0.018	0.019

difference between number of stillbirths, and the mean total MSPSS score, and mean score obtained from the friend subscale of MSPSS; mean total MSPSS score and mean score obtained from the friend subscale of MSPSS, of those who gave a stillbirth were found to be higher than the respective scores of the pregnant women that did not give a stillbirth. Additionally, a statistically significant difference was found between the mode of delivery (vaginal delivery and caesarean section), and mean scores obtained from the knowledge and emotional subscales of WPASWI, and mean total WPASWI score; mean total WPASWI score and mean scores obtained from the knowledge and emotional subscales of WPASWI, of those who had a vaginal delivery were found to be higher than the respective scores of the pregnant women that delivered via other means (Table 2).

The distribution of mean scores obtained from WPASWI, MSPSS and their subscales by the identifying characteristics of the pregnant women in relation to exercising is shown in Table 3. A statistically significant difference was found between the status of doing exercising, and the mean scores obtained from the knowledge and emotional subscales of WPASWI, mean total WPASWI score, mean scores obtained from the friend and significant other subscales of MSPSS, and the mean total MSPSS score. A statistically significant difference was also found between the status of experiencing pain while exercising, and the mean scores obtained from the knowledge and emotional subscales of WPASWI, mean total WPASWI score; mean scores obtained from the knowledge and emotional subscales of WPASWI, and mean total WPASWI score, of the pregnant women, who stated to have been exercising and experiencing pain while exercising, were found to be lower than the respective scores obtained by the pregnant women, who stated to have been exercising but not to have been experiencing pain, while exercising. There was a statistically significant difference between the status of experiencing fatigue while exercising, and the mean total MSPSS score and the mean scores obtained from all of its subscales; mean total

Table 2. Distribution of Mean Scores Obtained from WPASWI, MSPSS and Their Subscales by the Obstetric Characteristics of the Pregnant Women, Tunceli 2018-2020

Variables	n	%	Knowledge	Emotional	Social	Total WPASWI	Family	Friend	Significant Other	Total MSPSS
Total Number of Pregnancies										
1-3	149	95.5	49.74±9.48	41.77±7.41	16.61±4.12	108.13±17.90	6.83±3.61	8.52±4.65	10.00±5.98	25.36±12.08
4-6	6	3.8	45.0±2.19	37.00±2.19	14.00±3.28	96.00±7.66	8.00±4.38	8.00±4.38	8.00±4.38	24.00±13.14
7-9	1	0.6	22.00±0.0	14.00±0.0	11.00±0.0	47.0±0.0	10.0±0.0	14.0±0.0	10.0±0.0	34.00±0.0
<i>p</i>			0.006	0.18	0.110	0.034	0.639	0.346	0.784	0.725
Total Number of Abortions										
0	119	76.3	49.22±10.46	41.56±8.13	16.14±3.84	106.93±19.33	6.58±3.44	8.13±4.44	9.19±5.56	23.91±11.87
1-3	37	23.7	49.89±6.03	40.91±5.87	17.56±4.83	108.37±14.97	7.91±4.06	9.83±5.04	12.29±6.45	30.05±11.60
<i>p</i>			-0.714	0.656	-0.067	-0.677	-0.51	-0.051	-0.005	-0.006
Total Number of Stillbirths										
0	143	91.7	49.95±8.59	41.97±6.75	16.46±4.16	108.39±16.18	6.73±3.49	8.25±4.58	9.81±6.15	24.81±12.28
1-3	13	8.3	43.07±16.30	35.23±13.03	16.69±3.88	95.00±32.79	8.76±4.65	11.61±4.25	11.15±1.40	31.53±6.91
<i>p</i>			0.214	0.255	0.752	0.594	0.154	0.011	0.092	0.037
Mode of Delivery										
Vaginal	51	68	49.50±11.43	40.45±9.65	17.17±4.71	107.13±23.46	7.82±3.80	10.19±4.18	12.92±6.29	30.94±10.25
Caesarean Section	24	32	43.95±8.14	39.41±5.02	17.79±3.25	101.16±12.89	7.20±3.58	10.37±6.47	10.62±6.50	28.20±14.97
<i>p</i>			0.000	0.034	0.302	0.015	0.795	0.664	0.187	0.327

Table 3. Distribution of Mean Scores Obtained from WPASWI, MSPSS and their Subscales by the Identifying Characteristics of the Pregnant Women in Relation to Exercising, Tunceli 2018-2020

Variables	n	%	Knowledge	Emotional	Social	Total WPASWI	Family	Friend	Significant Other	Total MSPSS
Exercising during pregnancy										
Yes	116	74.4	51.00±7.86	42.116±6.38	16.32±4.35	109.49±15.46	6.63±3.53	7.87±4.02	8.84±4.65	23.35±10.89
No	40	25.6	44.70±12.34	39.22±10.26	16.92±3.40	100.85±24.03	7.67±3.83	10.47±5.70	13.07±7.85	31.22±13.45
<i>p</i>			0.000	0.036	-0.432	0.010	-0.120	-0.002	-0.000	-0.000
Experiencing pain while exercising										
Yes	32	20.5	45.71±13.26	38.37±11.05	16.50±4.69	100.59±26.83	7.90±3.99	9.65±5.22	11.53±6.13	29.09±12.23
No	124	79.5	50.33±8.18	42.19±6.31	16.47±3.99	109.00±15.11	6.64±3.50	8.25±4.45	9.51±5.81	24.41±11.87
<i>p</i>			-0.015	-0.011	0.977	-0.020	0.080	0.127	0.086	0.050
Experiencing fatigue while exercising										
Yes	95	60.9	48.81±9.03	40.52±7.87	16.12±4.18	105.46±18.32	7.64±3.83	9.37±4.59	10.83±5.75	27.85±11.74
No	61	39.1	50.27±10.38	42.78±7.11	17.03±4.02	110.09±18.19	5.75±2.97	7.22±4.42	8.52±5.94	21.50±11.61
<i>p</i>			-0.352	-0.071	-0.182	-0.124	0.001	0.004	0.017	0.001
The trimester during which exercising was started										
First	38	32.8	50.47±8.86	42.28±6.17	17.71±4.09	110.47±16.26	5.78±3.10	7.07±3.87	8.18±5.38	21.05±11.31
Second	34	29.3	52.17±8.97	42.61±7.71	16.14±3.15	110.94±16.56	7.76±3.81	10.76±4.33	10.88±5.13	29.41±11.12
Third	44	37.9	49.56±7.58	40.90±6.74	15.27±4.69	105.75±16.18	6.59±3.57	6.65±3.02	8.43±4.17	21.68±9.67
<i>p</i>			0.399	0.498	0.029	0.287	0.061	0.000	0.039	0.002
Exercising regularly during pregnancy										
Yes	57	36.5	52.89±6.87	43.29±5.99	15.92±3.44	112.12±13.16	6.87±3.43	8.26±3.87	9.14±4.57	24.28±10.75
No	99	63.5	47.36±10.34	40.32±8.28	16.79±4.46	104.48±20.30	6.91±3.75	8.69±5.03	10.38±6.54	26.00±12.76
<i>p</i>			0.000	0.019	-0.011	0.012	-0.945	-0.575	-0.207	-0.393
Exercising during usual life										
Yes	89	57.1	51.23±8.80	42.21±8.11	16.48±4.51	109.93±18.79	6.74±3.73	8.52±4.57	9.85±5.75	25.12±11.52
No	67	42.9	46.92±10.07	40.34±6.88	16.47±3.59	103.74±17.26	7.11±3.50	8.55±4.75	10.02±6.17	25.70±12.82
<i>p</i>			0.005	0.131	0.993	0.037	-0.522	-0.974	-0.855	-0.768
Source of Exercising Information										
Healthcare Institution	41	26.3	53.70±7.25	44.51±6.22	16.21±2.99	114.43±13.49	6.14±2.91	8.80±3.87	9.07±3.50	24.02±8.78
Social Environment	67	42.9	48.11±9.45	41.11±7.36	17.80±3.98	107.04±17.94	6.46±3.50	8.71±5.61	10.94±7.82	26.11±14.44
Communication channels	48	30.8	47.45±10.49	39.16±8.35	14.85±4.59	101.47±20.61	8.16±4.07	8.06±3.66	9.25±4.07	25.47±10.89
<i>p</i>			0.003	0.004	0.001	0.004	0.013	0.694	0.179	0.682
Appetite										
Increased	68	43.6	49.55±9.77	41.83±7.83	17.20±3.90	108.60±17.62	6.91±3.56	8.89±4.85	11.70±7.34	27.51±13.27
Decreased	88	56.4	49.25±9.48	41.07±7.52	15.92±4.24	106.25±18.94	6.89±3.70	8.26±4.46	8.55±4.05	23.71±10.81
<i>p</i>			0.843	0.540	0.054	0.429	0.981	0.398	0.001	0.051

Being satisfied with current weight																		
Yes	118	75.6	48.68±9.71	41.08±7.73	16.15±3.67	105.92±18.00	7.22±3.77	8.46±4.42	10.29±6.26	25.99±12.26								
No	38	24.4	51.55±8.94	42.42±7.35	17.50±5.22	111.47±19.04	5.89±2.94	8.76±5.30	8.78±4.58	23.44±11.36								
<i>p</i>			-0.109	-0.350	-0.080	-0.105	0.049	-0.732	-0.173	0.259								

Table 4. Relationship Between the Mean Total MSPSS and WPASWI Scores and Between the Mean Scores Obtained From Their Subscales, Tunceli 2018-2020

Subscales	Min	Max	X±SD	Alpha	Knowledge	Emotional	Social	Total WPASWI	Family	Significant Other	Friend
Knowledge	16	65	49.38±9.58	0.94	1						
Emotional	13	53	41.41±7.64	0.944	.853**	1					
Social	7	28	16.48±4.13	0.76	.279**	.357**	1				
Total WPASWI	40	144	107.27±18.35	0.954	.940**	.942**	.519**	1			
Family	4	15	6.9±3.63	0.882	-.281**	-.329**	-.132	-.314**	1		
Significant Other	4	28	9.92±5.91	0.912	-.163*	-.103	.033	-.121	.494**	1	
Friend	4	20	8.53±4.63	0.913	-.241**	-.263**	-.007	-.237**	.612**	.618**	1
Total MSPSS	12	52	25.37±12.06	0.924	-.258**	-.250**	-.026	-.245**	.779**	.877**	.872**

p* < 0.05 *p* < 0.001

Table 5. Prediction of MSPSS as the Influencing Factor for WPASWI, Tunceli 2018-2020

Variable	B	Std. Error	Beta	t	p
(Constant)	118.421	3.332		35.543	.000
Family	-1.453	.499	-.287	-2.913	.004
Significant Other	.295	.308	.095	.958	.340
Friend	-.473	.432	-.120	-1.095	.275
	R=0.327		R2 0.107	AD 0.089	P 0.001

*Multiple Linear Regresyon Analysis

MSPSS score and the mean scores obtained from all of its subscales, of the pregnant women, who stated to have been exercising and experiencing fatigue while exercising, were found to be higher than the respective scores obtained by the pregnant women, who stated to have been exercising but not to have been experiencing fatigue, while exercising. There was a statistically significant difference between the trimester, in which the pregnant women started exercising, and the mean score obtained from the social subscale of WPASWI, friend and significant other subscales of MSPSS, and the mean total MSPSS score; mean scores obtained from the social subscale of WPASWI, friend and significant other subscales of MSPSS, and the mean total MSPSS score, of the pregnant women who started exercising in the second trimester were found to be higher than the respective scores obtained by the pregnant women who started exercising in the other trimesters. There was a statistically significant difference between the status of exercising regularly, and the mean total WPASWI score and the mean scores obtained from all of its subscales; mean total WPASWI score and the mean scores obtained from all of its subscales, of the pregnant women, who stated to have exercised regularly were found to be higher than the respective scores obtained by the pregnant women, who stated that they have not been exercising regularly. There was a statistically significant difference between the status of having been exercising during usual life (other than during pregnancy), and the mean total WPASWI score and the mean score obtained from WPASWI knowledge subscale. There was also a statistically significant difference between where the pregnant women got their information about exercising (social environment, healthcare institutions, etc.), and the mean total WPASWI score and the mean scores obtained from all of its subscales, and the mean score obtained from the family subscale of MSPSS; mean total WPASWI score and the mean scores obtained from all of its subscales, and the mean score obtained from the family subscale of MSPSS, of the pregnant women, who stated to have obtained their information about exercising from healthcare institutions were found to be higher than the respective scores obtained by the

pregnant women, who stated that they got their information about exercising from other sources. Additionally, a statistically significant difference was found between the status of being satisfied with their weight during pregnancy as, and the mean score obtained from the family subscale of MSPSS; mean score obtained from the family subscale of MSPSS, of the pregnant women, who stated that they are satisfied with their current (pregnancy) weights were found to be higher than the respective scores obtained by the pregnant women, who stated that they weren't satisfied with their current (pregnancy) weights (Table 3).

The relationship between the mean total MSPSS and WPASWI scores and between the mean scores obtained from their subscales is shown in Table 4. The mean total MSPSS score of the pregnant women was found to be 25.37 ± 12.06 and it was determined that the social support they received was low. The mean total WPASWI score of the pregnant women was found to be 107.27 ± 18.35 and it was determined that their physical activity levels were good. A statistically significant correlation was found between MSPSS and WPASWI in the negative direction ($p < 0.001$) (Table 4).

Prediction of MSPSS as the influencing factor for WPASWI is shown in Table 5. As a result of the multiple linear regression analysis, it was determined that family support affects pregnant women in terms of doing physical activity, and that the effect of social supports on pregnant women in respect of encouraging them to start exercising is 10% ($p = 0.004$) (Table 5).

Discussion

Receiving support from the social environment while going through a process of change in life emerges as an important need for individuals. Health is one of the important issues that prompts the individual to seek for support from his/her environment. The concept of health includes the physical, mental and spiritual well-being of the individual. Similarly, social relationships can be evaluated within the context of health, as well. There is also a link between physical and mental health and social relationships (21). Pregnancy

is a process that affects the women both psychologically and physically, and the exercise they will do with the social support provided by her family members, friends and external institutions in this process both positively affects her physical health and helps her feel better (22). Hence, this study was conducted to investigate the relationship between perceived social support and exercising during pregnancy and the factors affecting this relationship.

Experiences gained with age affect the level of social support perceived by pregnant women (17,18). There are studies in the literature indicating that there is a relationship between age and MSPSS, and that social support decreases as age increases (17, 18).

In parallel with the results reported in the literature, it was also found as a result this study that the level of social support perceived by pregnant women increases with age.

It is known that as the level of education increases, individuals lead a healthier life physically, mentally and behaviorally. In addition, as the level of education increases, it is expected that individuals will be able to express themselves, use social support systems, that their social sharing will increase, and that education they received will improve their socialization skills (23). In this study, it was determined that there is a statistically significant difference between the educational status and the mean scores obtained from the subscales of both WPASWI (except the mean total WPASWI score) and MSPSS. Similar to our study, Nascimento et al. also found that the education level has an effect on exercising during pregnancy and that the pregnant women with higher education levels exercise more (24). There are also studies, in which it has been demonstrated that the level of education is related to perceived social support and that the higher the education level, the more meaningful the social support (17,18).

One of the important determinants of health and health promotion is the socioeconomic status of the individual. In addition, socioeconomic status

is defined as an important factor in shaping the social environment of the individual, as well. In this study, a statistically significant difference was found between the monthly income and the mean WPASWI and MSPSS scores as well as between having health insurance and the mean WPASWI and MSPSS scores, with the exception of the mean score obtained from significant other subscale of MSPSS (Table 1). There are studies in the literature, in which monthly income was reported to have an effect on exercising during pregnancy (24,25) as well as other studies, in which no relationship was found between monthly income and perceived social support (17,18). The differences in these results suggest that the differences in the sociocultural structures make a difference in the perceived social support levels of pregnant women.

Pregnancy, which is defined as a period of developmental crisis for women, is an important process in women's life that requires physiological, psychological and social adaptation. This process is different for each pregnancy of a woman (2). In this study, a statistically significant difference was found between the total number of pregnancies, and mean score obtained from the knowledge subscale of WPASWI and mean total WPASWI score. The mean total WPASWI score of those who gave birth to 1 to 3 children was found to be higher than the respective scores of other pregnant women (Table 2). In the literature, it has been reported that primiparous women do more exercise (24), and that there is a significant relationship between the number of pregnancies and abortion history and exercising (25). It is thought that women gain experience with an increase in the number of pregnancies, and exercise more to have a healthier pregnancy.

It has been reported in the literature that women need more social support after abortion or stillbirth and feel better with the social support they receive (26, 27). In parallel with the results reported in the literature, a statistically significant difference was found between the status of having an abortion and/or a stillbirth, and the mean total MSPSS score, and the perceived social support was found to be higher in those, who had an

abortion and/or a stillbirth. We haven't found any study in the literature, in which perceived social support after having an abortion and/or a stillbirth was investigated. Both abortion and stillbirth are incidents that negatively affect women's life both physiologically and psychologically, and thus women that had an abortion or a stillbirth need support to cope with such incidents. Therefore, it must be ensured that the midwives and nurses question women's social support systems, and that they make sure that such women do get support.

Exercising during pregnancy has many positive effects on the birth and postpartum period, such as increasing endurance and strength, supporting the muscle activity required for birth, reducing possible problems during delivery, developing the potential to shorten the duration of the delivery, and accelerating the postpartum recovery (24,27). In this study, the mean total WPASWI score of those, who had a vaginal delivery, was found to be high (Table 2). Similar to the results of our study, Barakat et al. reported that the caesarean section rates were less in women, who exercised during pregnancy (28). These findings indicate that exercising has a positive effect on the mode of delivery.

It is reported that some women do not exercise during pregnancy, due to reasons, such as experiencing pain during exercising, fear of harming the baby, and not having time to spare for exercising (29). In our study, the mean total WPASWI score of those, who stated to have been exercising and experiencing pain while exercising, was found to be lower than the mean total WPASWI score of those, who stated to have been exercising but not to have been experiencing pain while exercising. On the other hand, the mean total MSPSS score of those, who stated to have been exercising and experiencing fatigue while exercising, was found to be higher than the mean total MSPSS score of those, who stated to have been exercising but not to have been experiencing fatigue, while exercising. It must be ensured that the pregnant women benefit from prenatal care services, and that they are informed about the benefits of exercising during pregnancy, exercises that can be done during pregnancy, and

the situations, in which exercising should not be done.

As the gestation progresses, pregnant woman's physical appearance changes, she may experience sleeping problems, her movements become restricted, she gets tired more quickly, she has concerns about the birth, and as a result of all these, she needs social support (2,22). In our study, the mean total MSPSS score of those who started exercising in the second trimester were found to be higher than the mean total MSPSS score of those who started exercising in the other trimesters. Similar results were also reported in the literature indicating that as the week of gestation progresses, the social support scores perceived by pregnant women increase (22,30). These findings can be explained with the fact that the pregnant woman needs and demands support due to the changes occur during pregnancy.

The prerequisite for meeting the individual and social needs of a pregnant woman through exercising is to ensure that she starts exercising. Sometimes channels such as advertising and social media motivate the pregnant women to start physical activities, other times they expect to receive advice to that effect and be encouraged. It is thus important for the pregnant women to be encouraged and supported by the effective dynamics of the society, in order to be included in these activities. The support of the spouse, family and friends, with whom the pregnant woman interacts the most, would be more effective in ensuring the participation of pregnant women in physical activities. In this study, it was determined that there is a statistically significant correlation between MSPSS and WPASWI in the negative direction, that family support affects pregnant women in terms of doing physical activity, and that the effect of social supports on pregnant women in respect of encouraging them to start exercising is 10% (Table 4 and 5). Similar to the results of our study, it was reported in the study conducted by Bilgin and Yılmaz Esencan that social support is related to exercising during pregnancy (31). Considering that pregnant women spend most of their time at home and with family members, family members should be the foremost

supporters of pregnant women in encouraging them to do physical activities.

Limitations of the study

Despite the fact that the data of the study were collected in a period of two years, the study was conducted with a small sample group, due to the low number of births and the low number of pregnant women, who wanted to participate in the study, in the province where the study was conducted.

Conclusion

The social support perceived by the pregnant woman during pregnancy, in which many physical, psychological and social changes are experienced, is very important in ensuring that the pregnant women start and continue exercising, which is a factor that enables a healthier pregnancy process. As a result of this study, it was determined that perceived social support affects exercising during pregnancy.

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