

The Relationship between Spousal Support and Health Behaviors of Pregnant Women in Turkey

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ABSTRACT

Background & aim: Gaining health behaviors suitable for women during pregnancy is important for the pregnant woman to complete it in a healthy way. This study was carried out to examine the relationship between spousal support and health behaviors of women during pregnancy.

Methods: This cross-sectional study was carried out on 230 pregnant women who attended a hospital in Adiyaman province, Turkey for routine care between 2019 and 2020 and were selected by random sampling method. A demographic questionnaire, Spousal Support Scale (SSS), and Health Practices in Pregnancy Questionnaire-II (HPQ-II) were used as data collection tools, which were completed through structured interviews. The Mann-Whitney U test, Kruskal-Wallis, Pearson Correlation, and Logistic Regression analysis were used to analyze the data.

Results: In terms of scale overall scores, pregnant women took 73.84 ± 11.22 and 121.42 ± 13.37 from SSS and HPQ-II, respectively, besides, a moderately significant positive correlation was found between the overall scores of the two scales ($r=0.577$, $p < 0.001$). As a result of Logistic Regression Analysis, pregnant woman's age (OR:0.050), years of education (OR:0.102), spouse's years of education (OR:0.081), marriage duration, number of pregnancies (OR:0.116), previous live births (OR:0.157), and prior miscarriage (OR:0.025) were found to be important risk factors for health behavior.

Conclusion: Spousal support during pregnancy is related to health behaviors and women with more spousal support exhibit high-quality health behaviors. Therefore, it is recommended that women during pregnancy be questioned about their spousal support and to be counseled in this regard to experience a safe pregnancy.

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Introduction

Pregnancy, which can affect the life of the mother and her baby, is a sensitive period that causes physical, psychological, and social changes in a woman's life. During this period, pregnant women display behaviors that can affect both their own and their baby's health (1-3). These behaviors are divided into two groups as healthful behaviors (dental care, balanced diet, making a regular exercise, getting education about pregnancy and birth, regular health checks) and harmful behaviors (smoking, using alcohol-illegal substances, risky sexual behaviors, etc.) (1,4). Gaining these health

behaviors suitable for women during pregnancy during prenatal care is important for the pregnant woman and her baby to complete this process in a healthy way.

There are many factors that can affect the health behaviors of women during pregnancy. In addition to the education of pregnant woman, her health and nutritional status, the socio-economic standard of living, the quality of healthcare services she received, also spousal support is associated with the health behaviors of pregnant women (5). Spousal support is defined as the support of partners to each other

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as may be required (5). Spousal support during pregnancy, which brings many changes, will increase the positive emotions of pregnant women and cause them to display positive health behaviors (6-10). Health professionals to be aware of the factors that may affect health behavior during pregnancy and to examine the women they serve from this perspective is important for mother and baby health. This study was carried out to examine the relationship between spousal support and health behaviors of women during pregnancy.

Materials and Methods

This cross-sectional study consisted of pregnant women who attended a hospital located in Adiyaman province of Turkey for routine care between 2019 and 2020. The sample size was determined as 230 women with a 5% margin of error, a bi-directional level of significance level, 95% confidence interval, 0.89 representation power. The random sampling method was used to select sample. The inclusion criteria were as follows: being aged between 20-40 years, not having any health problems for herself or for her baby, being literate at the least, and not having any communication problem. The exclusion criteria were determined as having any obstetrics or medical complications in the mother and her fetus. A demographic questionnaire, Spousal Support Scale (SSS), and Health Practices in Pregnancy Questionnaire-II (HPQ-II) were used as data collection tools.

Demographic questionnaire consisted of 15 questions related to the following information about pregnant women: age, years of education, marriage duration, profession, spouse's years of education, spouse's profession, place of residence, family type, the status of living with the spouse, income level, the status of smoking and alcohol use, the number of pregnancies, the number of live births, prior miscarriage, gestational age, and the sex of fetus.

Spousal Support Scale (SSS) which was developed by Yildirim (2004) is used to measure the social support that married individuals get from their spouses (11). The scale includes 27 questions consisting of four dimensions: emotional support, financial support and information support, appreciation support, and social interest support. The score that can be obtained from this 3-point Likert-

type scale (agree, partially agree, disagree) varies between 27 and 81. High scores indicate that individuals get more support from their spouses, while low scores indicate less support. Yildirim (2004) found the Cronbach's Alpha coefficient as 0.95 and the test-retest reliability coefficient as 0.89 within the scope of the reliability of the scale. In this study, on the other hand, the Cronbach's Alpha internal consistency coefficient of the scale was determined as 0.90.

The Health Practices in Pregnancy Questionnaire-II (HPQ-II) was developed by Kelly Lindgren to evaluate health behaviors related to pregnancy outcomes during pregnancy (12). The Turkish validity and reliability of this questionnaire was performed by Er & Şirin (2006) (13). Er & Şirin (2006) found the Cronbach's Alpha coefficient of the scale as 0.74, while the Cronbach's Alpha internal consistency coefficient of the scale was found as 0.747 in this study (13). This 33-item scale measures the adequacy of health practices in six areas: balance of rest and exercise, safety measures, nutrition, avoiding the use of harmful substances, obtaining health care, and obtaining information. The items between 1-16 are rated on a 5-point Likert-type scale ranging from 1 (never) to 5 (always) as follows: Never (a) = 1 point, seldom (b)= 2 points, sometimes (c)= 3 points, Very Often (d)= 4 points and Always (e)= 5 points. Appropriate options were given for the questions from the 17th to the 33rd item, and these 5 options were scored between 1 and 5 points. Reverse coding was made for items 6, 7, 8, 22, 23, 24, 25, 26, 27 and 33. These item scores were reverse coded from 5 to 1. An overall score is obtained from the sum of all items. The lowest score to be obtained from the scale is 33 and the highest score is 165. A high score refers to high-quality health behaviors that have significant outcomes to pregnancy.

The pregnant women participating in the study were informed about the research and their permission was obtained. The data were collected by the researcher in the NST room of the hospital in Adiyaman province of Turkey where the research was conducted. A demographic questionnaire, Spousal Support Scale (SSS), and Health Practices in Pregnancy Questionnaire-II (HPQ-II) were completed using face-to-face structured interviews, during five

days of the week. The average time to fill in the data collection form was 15-20 minutes.

SPSS for Windows (Statistical Package for Social science for Windows, Version 15.0) package program was used for the analysis of the data obtained from the research. The Kolmogorov-Smirnov test was used to analyze the distribution of continuous variables. Variables that take continuous values in the study were given with their percentage, average, and standard deviation values. The Mann-Whitney U test, the Kruskal-Wallis test, the Pearson Correlation, and the Logistic Regression

analysis tests were used to analyze the data. Statistical significance was accepted as $p < 0.05$.

Ethics committee approval for this study was obtained from the Non-Interventional Clinical Research Ethics Committee of a university with the decision number 2019/6-15 on 17.09.2019. In addition, written permission was obtained from the hospital where the study was conducted. The research was conducted in accordance with the Helsinki Declaration Principles.

Results

Table 1. The Socio-Demographic Characteristics of Pregnant Women and Distribution of HPQ Overall Scores (N: 230)

Socio-Demographic Characteristics	Number (%)	HPQ-II Overall Score	Statistical test
Age			
20-24	60(26.1)	126.30±13.70	KW*=11.390 p=0.003
25-29	76(33)	120.68±13.52	
30-35	94(40.9)	118.89±12.30	
Employment status			
Employed	22(9.6)	126.00±23.40	$Z^{\alpha}=-1.260$ $p=0.208$
Unemployed	208(90.4)	120.85±12.33	
Employment status of spouse			
Employed	218(94.3)	124.85±13.06	Z=-2.033 p=0.042
Unemployed	12(5.7)	118.17±10.13	
Years of Education (years)			
≤ 4	78(33.9)	116.21±11.63	KW=26.89 p<0.001
5-8	46(20.0)	120.57±11.20	
≥ 9	106(46.0)	141.40±19.20	
Years of education of spouse (years)			
≤ 4	78(33.9)	117.26±12.18	KW=22.778 p <0.001
5-8	30(13.0)	115.80±15.26	
≥ 9	122(53.1)	125.22±11.80	
Monthly income			
Good	34(14.8)	126.53±12.31	$KW=5.514$ $p=0.063$
Middle	170(73.9)	120.31±13.71	
Low	26(11.3)	122.00±10.89	
Family type			
Nuclear	196(85.2)	121.52±13.19	$Z=-0.123$ $p=0.902$
Extended	34(14.8)	120.82±14.52	
Place of residence			
Province	176(76.5)	121.58±13.44	$KW=3.179$ $p=0.365$
District	30(13.0)	122.33±13.50	
Village	24(10.4)	117.75±13.75	
Living with spouse			
Yes	228(99.1)	--	--
No	2(0.9)	--	--
Marriage duration (years)			
0-5	128(55.7)	125.70±12.81	KW=33.289 p <0.001
6-10	64(27.8)	117.34±12.65	
11-20	38(16.5)	113.84±10.89	
Status of smoking/using alcohol			
Yes	12(5.2)	113.54±4.89	----
No	218(94.8)	121.83±13.32	----

*KW: The Kruskal-Wallis Test. α The Mann-Whitney U Test.

Table 1 shows the socio-demographic characteristics of pregnant women and the distribution of HPQ overall scores. Accordingly, the following findings were obtained: Of the pregnant women, 33% were between 25-29 age

ranges; 90.4% were unemployed; for 94.3%, their spouses were employed; 46% received education for 9 years and over; 14.8% had a good monthly income level; 85.2% had a nuclear family; and 94.8% did not smoke or use alcohol.

Table 2. Obstetric Characteristics of Pregnant Women and Distribution of HPQ-II Overall Scores (N: 230)

Obstetric Characteristics	Number (%)	HPQ-II Overall score	Statistical Test
Number of pregnancies			
Primipara ≤1	78(33.9)	128.26±11.47	Z^α= -5.747
Multipara ≥2	152(66.1)	117.91±12.94	p <0.001
Number of live births			
≤1	146(63.5)	125.62±11.74	Z= -6.231
≥2	84(36.5)	114.12±12.94	p <0.001
Gestational age			
First Trimester	12(5.2)	111.50±8.26	KW*=8.965 p=0.011
Second Trimester	20(5.8)	123.70±10.81	
Third Trimester	198(86.1)	121.79±13.64	
Prior Miscarriage			
Yes	60(26.1)	117.57±11.86	Z= -3.017 p=0.003
No	170(73.9)	122.78±13.63	
Gender of infant			
Girl	118(51.3)	120.41±14.37	Z=-1.279 p=0.201
Boy	112(48.7)	122.44±12.31	

*KW: The Kruskal-Wallis Test. ^αThe Mann-Whitney U Test.

When the socio-demographic characteristics of the participants and HPQ-II overall scores were compared, it was found that the overall HPQ-II score of pregnant women aged between 20-25 years was 126.30±13.70, while the overall score for those aged between 25-29 years was 120.68±13.52, and those aged between with 30-35 years were 118.89±12.30 (p<0.05). It was determined that the overall score of the women whose spouses were employed was 124.85 ± 13.06, and whose spouses were unemployed, it was 118.17±10.13 (p<0.05). Those who had 4 years and below years of education obtained 116.21±11.63 overall score from HPQ-II, while those who had 8-year education obtained 120.57±11.20, and those who had a 9-year and over education obtained 141.40±19.20 overall score (p<0.05). In terms of spouse's years of education, the HPQ-II overall scores were 117.26±12.18, 115.80±15.26, and 125.22±11.80 for those whose spouses had 4-year and below, 8-year, and 9-year and over education, respectively (p<0.05). The HPQ-II overall scores for those whose marriage duration was between 0-5 years, 6-10 years, and 11-20 years were 125.70±12.81, 117.34±12.65, and 113.84±10.89, respectively (p<0.05).

In the study, no statistically significant relationship was found between the pregnant women's employment status, monthly income, family type, place of residence, and the mean HPQ overall score (p>0.05).

Table 2 shows the obstetric characteristics of pregnant women and distribution of HPQ-II overall scores. Accordingly; of the pregnant women, 66.1% were multipara, 36.5% had 2 and more live births, 86.1% were in third trimester, 26.1% had prior miscarriage, and 51.3% had a baby girl.

The HPQ-II overall scores of primipara and multipara pregnant women were 128.26±11.47 and 117.91±12.94, respectively (p<0.05). The HPQ-II overall scores of pregnant women with 1 and below and 2 and more live births were 125.62±11.74 and 114.12±12.94, respectively, while the difference between the groups was found statistically significant (p<0.05). The HPQ-II overall scores of the pregnant women in the first, second, and third trimester were 111.50±8.26, 123.70±10.81, and 121.79±13.64, respectively (p<0.05). The HPQ-II overall scores of the pregnant women with a prior miscarriage and without a prior miscarriage were 117.57±11.86 and 122.78±13.63, respectively.

In the study, no statistically significant relationship was found between the gender of the babies of pregnant women and the mean HPQ-II overall scores ($p>0.05$).

In the study, the relationship between the overall scores of SSS and the HPQ-II was

evaluated using the Pearson Correlation analysis. A moderately significant positive correlation was found between the overall scores of SSS and the HPQ-II ($r=0.577$, $p<0.001$). (Table 3).

Table 3. Distribution of the relationship between the pregnant women’s SSS and HPQ-II (N: 230)

	$\pm SS \bar{X}$	Statistical test
SSS overall mean score	73.84±11.22	$r=0.577$
HPQ-II overall mean score	121.42±13.37	$p<0.001$

*r: The Pearson Correlation analysis

Table 4 shows the results on age, employment status of spouse, years of education, years of education of spouse, marriage duration, number of pregnancy, number of live births, gestational week, prior miscarriage, which were found to be associated with the behaviors of pregnant women, and the result of the logistic regression analysis. As a

result of analysis, the pregnant woman’s age (OR:0.050), years of education (OR:0.102), her spouse’s years of education (OR:0.081), marriage duration-number of pregnancies (OR:0.116), number of live births (OR:0.157), and prior miscarriage (OR:0.025) were found to be important risk factors for health behavior (Table 4).

Table 4. Analysis of risk factors associated with health behaviors of pregnant women*

HPQ-II risk factors	β	SE	df	p	OR
Age	-0.233	4.38	1	0.001	0.050
Employment status of spouse	-0.014	0.974	1	0.837	-0.004
Years of education	0.326	1.88	1	0.001	0.102
Years of education of spouse	0.292	0.686	1	0.000	0.081
Marriage duration	-0.327	0.163	1	0.000	0.116
Number of pregnancy	-0.346	0.521	1	0.000	0.116
Number of live births	-0.400	0.613	1	0.000	0.157
Gestational week	0.071	0.115	1	0.284	0.001
Prior miscarriage	0.171	1.983	1	0.009	0.025

* Logistic Regression Analysis, SE; Standard error; df: Degrees of freedom; OR: Odd’s ration

Discussion

In our study, we found that pregnant women had high-quality health behaviors according to their HPQ-II overall scores and that increased spousal support positively affected these behaviors. Yildirim & Korkut (2015) found that women displayed high-quality health behaviors with the increase of spousal support during pregnancy (14). Balkaya & Akbas (2014) found that pregnant women with good spousal support benefit more from prenatal care services (15). In order for women to adapt to many changes during pregnancy, spousal support is of vital importance. Thanks to good-level spousal support, on the other hand, women can demonstrate higher-quality behaviors during this period. Bilgen (2020) found that as

spousal support increases, the mood of pregnant women improves and this situation leads them to exhibit positive healthy behaviors (16). Chikalipo, Chirwa, & Muula, (2018) found that pregnant women with high spousal support were more relevant to the process they experience and their participation in prenatal trainings was higher during this period (17). Considering the results of the study, it is seen that our study is compatible with the literature and supports the idea that spousal support has an important place on the health behaviors of pregnant women.

High-quality health behaviors refer that pregnant woman apply healthful behaviors to improve both their own and their babies' health, while they stay away from harmful behaviors

(11). Spousal support is one of the factors that can make pregnant women avoid these harmful behaviors. Kingston et al. (2016) found that women with poor spousal support during pregnancy have a tendency to exhibit riskier behaviors, and that poor spousal support is more associated with alcohol consumption and smoking (18). Again Cheng et al. (2016) determined that spousal support during pregnancy was associated with smoking (19). In our study, on the other hand, we found that the pregnant women participating in the study had high spousal support and most of them did not engage in harmful health behaviors such as smoking/ using alcohol. This result shows that women with high-level spousal support do not engage in harmful behaviors during pregnancy.

In the study, it was found that there was a significant relationship between the groups in terms of the pregnant women's age, spouse's level of education, employment status of spouse, marriage duration, number of pregnancies, number of live births, gestational week, prior miscarriage and the HPQ-II overall scores; while no statistically significant relationship was found between the groups in terms of pregnant women's employment status, monthly income levels, family type, place of residence, gender of the infant, and the overall HPQ-II scores. In the literature, we found studies indicating a relationship between the health behaviors of pregnant women and pregnant women's age (20), years of education (21, 22), spouse's years of education (23), employment status (21), spouse's employment status (23), monthly income (22, 24), family type (25), place of residence (21), marriage duration (26), number of pregnancies (21), number of live births (21), and prior miscarriage (25); while there were studies suggesting no relationship between the HPQ-II overall scores and age (24, 27), years of education (28), employment status (20), place of residence (24), marriage duration (28), number of pregnancies (24) gestational week (24, 27), prior miscarriage (24) and gender of infant (25). When studies are examined, it is understood that there are many sociodemographic factors that affect the health behaviors of pregnant women. It is important for health professionals to be aware of these factors and to identify risky groups for maternal and infant health. In order

to support the findings of the study, it is recommended to study with women with different socio-demographic and obstetric characteristics at different times in larger sample groups.

This study can be a guide for health professionals serving during pregnancy. In order to support the findings of the study, it is recommended to study with women with different socio demographic and obstetric characteristics at different times in larger sample groups. In this study, the principle of trust has been observed in collecting information and the principles of scientific resources in writing the research.

Conclusion

In this study a moderately significant positive correlation was found between the overall SSS and the HPQ-II scores. Healthcare professionals need to question the health behaviors of women during pregnancy for the health of both mother and fetus. Spousal support is associated with high quality health behaviors. Therefore, early evaluation of risky groups by taking into account the socio-demographic and obstetric characteristics that may affect the health behaviors of women during pregnancy is important for both maternal and infant health.

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Conflicts of interest

Authors declared no conflicts of interest.

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