

The Relationship between Perceived Spousal Support in Pregnancy and Prenatal Attachment, in Turkey

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ARTICLE INFO	ABSTRACT
<p><i>Xed Article type:</i> Original article</p>	<p>Background & aim: Pregnancy is a special period that brings various changes to mothers and fathers, who make an effort to adapt to pregnancy. Spousal support encourages sharing emotions during pregnancy and strengthening parental roles. This study aimed to evaluate the relationship between perceived spousal support in pregnancy and prenatal attachment.</p> <p>Methods: This correlational study was conducted with 323 pregnant women who applied to Osmaniye Public Hospital, Department of Gynecology and Obstetrics between October 2021 and February 2022. The Demographic Information form, the Perception of Spousal Support in Pregnancy Scale (PSSPS), and the Prenatal Attachment Inventory (PAI) were used to collect data. Data were analyzed using SPSS software (version 25) applying the Kruskal-Wallis test, Mann-Whitney U test, Spearman's correlation analysis, and descriptive statistics.</p> <p>Results: Based on the results, pregnant women who received the most support from their spouses during pregnancy had a substantially higher median PSSPS total score than those who received support from other individuals (mother, sister, and spouse's mother) ($P < 0.05$). The level of prenatal attachment increased as spousal support increased ($r = 0.424$, $P < 0.001$).</p> <p>Conclusion: Perceived spousal support of pregnant women is associated with prenatal attachment. As a result, nurses and midwives must assess the support perceived by pregnant women's spouses in the antenatal period, as well as the level of maternal-fetal attachment in healthy pregnancy, childbirth, and the postpartum period.</p>
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Introduction

Pregnancy is an important event that causes physiological, psychological, and social changes in women's life (1). Introducing a new member to the family is an important change that affects not only the mother but also her spouse and the entire family. This process, which is often happy and exciting, may also bring anxiety and fear (2). It is important to provide support to the mother in order to cope with the process of adopting a healthy point of view and to help prevent or reduce pregnancy complications and adverse birth outcomes. It is emphasized that social support improves individuals' positive

interactions, which can help reduce stress and anxiety as well as the risk of adverse pregnancy and birth outcomes (3).

Although there are studies in the literature that examine social support in pregnancy, those specifically evaluating spousal support are limited. A study that examined the effect of spousal support and prenatal stress on cortisol levels in infants indicated that spousal support can reduce cortisol levels and promote infant health and development (4). It was noted that women who reported that they received a high level of spousal support had better pregnancy

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outcomes than those with low spousal support (5). In another study conducted with pregnant women, more than three-quarters stated that the support they received from their partners/spouses facilitated pregnancy and childbirth (6). In a study that investigated parenting stress in mothers, a positive relationship was found between prenatal attachment and harmony between couples (7).

Prenatal attachment is defined as a unique relationship that develops between the parent and the unborn child (8). Bonding between the mother and infant plays an important role in the physical-emotional development of the infant, and the mother's attachment style determines how the infant relates to the world around him/her. Mothers who bond well during pregnancy interact better with their babies, which has a significant impact on their emotional, cognitive, and social development (9). It is known that in the prenatal period, parents develop a strong emotional bond with the fetus, and the development of such an emotional bond is effective for both mothers and fathers to successfully adapt to pregnancy (10). A supportive partner relationship during pregnancy can contribute to improve maternal and infant well-being after birth (11). In a study examining the factors affecting prenatal distress in pregnant women, it has been stated that spousal support is a factor that reduces prenatal distress (2). In the literature, studies that examine mother-infant bonding are generally focused on the postpartum process, (12) however, it is stated that attachment begins from the prenatal period and a healthy bond established during this period will affect their entire life (1).

The purpose of this study was to assess the relationship between the perception of spousal support and prenatal attachment in pregnant women.

Materials and Methods

This research is a correlational study. The participants consisted of pregnant women who applied to Osmaniye Public Hospital to receive prenatal care between October 2021 and February 2022. The research sample consisted of pregnant women who were admitted to the hospital for prenatal check-ups within the research dates, had no communication barriers,

and met the inclusion criteria. According to the power analysis performed based on another study with a similar sample (13), the correlation coefficient between spousal support and prenatal attachment in pregnant women was estimated to be at least 0,300, and the minimum number of samples of the study was determined as 138 with 5% error and 95% test power. Pregnant women who met the inclusion criteria were included in the study using an improbable random sampling method, and a total of 323 pregnant women were reached.

The inclusion criteria included being aged 19 and over, not having a high risk pregnancy, being in the third trimester, carrying a single fetus, and having agreed to participate in the study. The exclusion criteria included pregnant women who did not cohabit with their spouses or were divorced.

Before data collection, written permission was obtained from the institution where the research was conducted. Participants were informed about the study on the first page of the survey, which was prepared by the researchers based on the literature review. Verbal consents were obtained from the participants who were informed about the research and agreed to participate in the study. Pregnant women who applied to the hospital to receive prenatal care and agreed to participate in the study were invited to a separate room in the polyclinics and research questions were applied. The survey took approximately 10-15 minutes for each participant using the face-to-face interview technique.

To collect data, sociodemographic and obstetric characteristics of women, demographic information forms containing descriptive questions about the current pregnancy, the Perception of Spousal Support in Pregnancy Scale (PSSPS), and the Prenatal Attachment Inventory (PAI) were used.

Demographic information form: The 16-question form prepared based on literature review includes participants' sociodemographic characteristics such as age, education level, employment and income status, family type, spouse's education and employment status, age of first pregnancy, number of births, number of living children, planned pregnancy status, Discomfort experienced during pregnancy and

affecting daily life, gender determined by the doctor, person who provides the most support during pregnancy and the person mothers need the most support (1,10-11,14-15).

The Perception of Spousal Support in Pregnancy Scale (PSSPS): The scale, which was developed by Yurdakul et al. (15) in 2020 to determine perceived spousal support in pregnancy, consists of three subscales of cognitive support, emotional support, and financial support. There are a total of 16 items on the scale. The scores that participants obtain from the scale range between 16 and 80. Higher scores indicate a higher level of perceived spousal support. The cognitive support subscale includes items 1, 4, 6, 10, 11 and 15. This subscale measures the level of support of expectant fathers in providing information that will facilitate the daily life of expectant mothers and help them solve problems. The emotional support subscale includes items 2, 3, 5, 8 and 13. This subscale measures the level of support that expectant fathers provide to their spouses during pregnancy in meeting basic needs such as love, attention, trust, valuing, and belonging. The financial support subscale includes items 7, 9, 12, 14 and 16.

The alpha reliability of the original scale is 0.893, and it is a valid and reliable tool(15). It was found 0.886 in the current study.

The Prenatal Attachment Inventory: The scale, which was developed by Mary Muller in 1993, was adapted to Turkish by Yilmaz and Beji in 2009 (16). It was found to be applied by the 20th week of the pregnancy in both the original scale and Turkish adaptation. The scale was developed in order to explain the thoughts, feelings, and situations experienced by women during pregnancy, and to determine the level of attachment to the infant in the prenatal period. The total number of items included in the scale is 21 and the scores to be obtained range between 21 and 84. Higher scores obtained from the scale indicate a higher level of prenatal attachment. The Cronbach's alpha coefficient of the original scale is 0.84 and it is a valid and reliable tool (16), which was found 0.911 in the current study.

The data were analyzed using the SPSS 25 package program. The normality of numerical variables was tested using Skewness and

Kurtosis (± 1) distribution test. The data did not show a normal distribution. The data were evaluated using descriptive statistics (number, percentage, mean, standard deviation, median, Q1, Q3) in addition to the Kruskal Wallis test, Mann-Whitney U test, and Spearman's correlation analysis. The results were evaluated at a 95% confidence interval and significance level of $P < 0.05$. The data did not show a normal distribution.

Results

In the study, it was determined that 237(73.4%) of pregnant women were aged between 19 and 29, 132(40.9%) received university-level education, 232(71.8%) not working in an income-generating job, 175(54.2%) had income equivalent to their expenses, 300(92.9%) lived in a nuclear family, and spouses of 150(46.4%) received a university-level education.

The study revealed a statistically significant difference in the overall score median obtained from the PSSPS among participants based on their educational status ($P = 0.043$). However, no significant differences were observed in relation to age, employment status, income status, family type, and employment status of the spouse ($P > 0.05$). The investigation undertaken to ascertain disparities among groups in relation to educational attainment revealed that those who had earned a university-level education or higher had higher average scores for perceived spousal support. The overall score median that the participants obtained from the PAI was not found to show a significant difference with age, educational status, the status of having an income-generating job, income status, family type, employment status, educational status, and employment status of the spouse ($P > 0.05$) (Table 1).

Comparison of the scores obtained from the Prenatal Attachment Inventory and perceived spousal support according to obstetrics characteristics of the participants were given in Table 2.

It was determined that 135(41.8%) of pregnant women had 3 or more pregnancies, 194(60.1%) had one or two living children, 196(60.7%) were married aged between 22 and 30, pregnancies of 265(82.0%) were planned, 246(76.2%) experienced physical discomfort

during pregnancy, 255(78.9%) received support from their spouse during pregnancy.

Table1. Comparison of the Perception of Spousal Support Scale in Pregnancy and Prenatal Attachment Inventory Scores according to the sociodemographic characteristics

Variable	N (%)	PSSPS		PAI	
		Median (Q1-Q3)	Test and significance	Median (Q1-Q3)	Test and significance
Age					
19-29	237 (73.4)	71 (63 - 76)	U=9056.500	71 (61.5 - 77)	U=9846.500
30-40	86 (26.6)	68 (61 - 74)	P=0.126	69 (60 - 76)	P=0.642
Educational Status					
Literate	15 (4.6)	69 (58 - 75)		73 (58 - 75)	
Primary School	37 (11.5)	69 (56.5 - 73)		73 (64 - 77.5)	
Secondary School	52 (16.1)	65 (59.7 - 72.7)		66.5 (58 - 75.7)	
High School	87 (26.9)	72 (64 - 77)	KW=9.856	68 (63 - 76)	KW=2.526
University and higher	132 (40.9)	71 (64 - 75.7)	P=0.043	69.5 (61 - 77)	P=0.640
Employment Status					
Employed	91 (28.2)	71 (64 - 77)	U=9420.500	73 (63 - 78)	U=9082.000
Unemployed	232 (71.8)	69 (62 - 75)	P=0.132	69 (61 - 75)	P=0.051
Income Status					
Income less than expenses	10 (3.1)	68 (57.5 - 75.5)		73.5 (55.7 - 78.7)	
Equal income and expenses	175 (54.2)	69 (62 - 75)	KW=1.317	71 (61 - 76)	KW=0.095
Income more than expenses	138 (42.7)	71 (63 - 76)	P=0.518	68 (61 - 77)	P=0.953
Family Type					
Nuclear Family	300 (92.9)	70 (63 - 76)	U=2879.000	70 (61 - 76)	U=2889.000
Extended Family	23 (7.1)	69 (60 - 72)	P=0.185	74 (59 - 83)	P=0.193
Educational Status of The Spouse					
Literate	10 (3.1)	71.5 (63.2 - 74.2)		73 (58.7 - 77.7)	
Primary School	24 (7.4)	68.5 (62.5 - 72)		73.5 (63 - 83.5)	
Secondary School	50 (15.5)	66 (58 - 75)		69.5 (61.5 - 76.2)	
High School	89 (27.6)	68 (62 - 73)	KW=9.015	66 (57 - 75)	KW=9.251
University and higher	150 (46.4)	71 (64 - 77.2)	P=0.061	71 (62.7 - 77)	P=0.053
Employment Status of The Spouse					
Employed	308 (95.4)	70 (63 - 76)	U=2071.000	70 (61 - 76.7)	U=2066.000
Unemployed	15 (4.6)	72 (58 - 75)	P=0.498	74 (62 - 77)	P=0.489

KW: Kruskal Wallis test. U: Mann-Whitney U test

There was no significant difference between the number of pregnancies, number of children, status of pregnancy being planned, status of experiencing physical discomfort during pregnancy, gender revealed by the doctor, the person from whom required the most support, and the overall score median obtained from the PSSPSs ($P>0.05$). The pregnant women who received support from their spouses the most

obtained a statistically significantly higher overall average median from the PSSPS compared to those who were supported by their mother, mother-in-law, and sister ($P<0.001$). When the overall score median obtained from the PAI were examined, it was determined that there was a statistically significant difference in terms of

experiencing physical discomfort during the pregnancy.

Table 2. Comparison of the Perception of Spousal Support in Pregnancy Scale and Prenatal Attachment Inventory Scores according to obstetrics characteristics (N=323).

Variable	N (%)	PSSPS		PAI	
		Median (Q1-Q3)	Test and significance	Median(Q1-Q3)	Test and significance
Number of Pregnancies					
One	68 (21.1)	71.5 (65 - 76)		66 (58.2 - 77)	
Two	120 (37.2)	70 (63 - 76)	KW=4.750	71 (63 - 76)	KW=2.066
Three and more	135 (41.8)	69 (60 - 73)	P=0.093	71 (61 - 77)	P=0.356
Number of Children					
None	73 (22.6)	72 (65 - 76)		66 (59 - 76.5)	
One or Two	194 (60.1)	69.5 (62 - 76)	KW=5.244	71 (63 - 77)	KW=3.983
3 and more	56 (17.3)	68.5 (57.2 - 72.7)	P=0.073	69 (55.2 - 76)	P=0.136
Age of Marriage					
13-21 years old	127 (39.3)	69 (62 - 75)	U=11334.000	71 (61 - 77)	U=12326.500
22-30 years old	196 (60.7)	70 (63.2 - 76)	P=0.174	69 (61 - 76)	P=0.884
Having a Planned Pregnancy					
Yes	265 (82)	70 (63 - 76)	U=6725.000	71 (61.5 - 77)	U=6666.000
No	58 (18)	66 (59.7 - 73)	P=0.136	67 (54 - 74.2)	P=0.113
Experiencing Physical Discomfort During Pregnancy					
Yes	246 (76.2)	69 (62 - 75)	U=8135.000	68 (61 - 75)	U=7718.500
No	77 (23.8)	72 (65 - 76)	P=0.061	74 (63 - 79.5)	P=0.014
Gender revealed by the doctor					
Female	184 (57)	69 (62 - 76)	U=12360.500	69.5 (60.2 - 76)	U=12245.500
Male	139 (43)	71 (64 - 75)	P=0.606	71 (62 - 77)	P=0.514
The person who provided the most support during pregnancy					
Spouse	255 (78.9)	72 (64 - 76)		71 (62 - 77)	
Mother	38 (11.8)	63.5 (55.7 - 70)		67.5 (57 - 75.2)	
Mother-in-law	11 (3.4)	62 (57 - 64)	1>2.1>3.1>4	57 (51 - 73)	
Sister	15 (4.6)	64 (59 - 69)	KW=39.313	62 (53 - 75)	KW=7.811
Friend/Other	4 (1.2)	69.5 (58.7 - 78)	P<0.001	78 (53 - 82.7)	P=0.099
The person from whom support was requested the most					
Spouse	264 (81.7)	70 (63 - 76)		71 (62 - 77)	
Mother	35 (10.8)	68 (59 - 75)		68 (60 - 75)	
Mother-in-law	12 (3.7)	70.5 (64.2 - 77)		63.5 (58 - 71.2)	
Sister	7 (2.2)	70 (62 - 75)	KW=1.364	77 (71 - 80)	KW=5.962
Friend/Other	5 (1.5)	68 (64.5 - 79)	P=0.850	64 (53.5 - 77.5)	P=0.202

KW: Kruskal Wallistest. U: Mann-Whitney U test

Those who never experienced physical discomfort during the pregnancy were found to obtain higher overall score median from the PAI (P=0.014). There was no significant difference between the number of pregnancies, number of children, status of pregnancy being planned, status of experiencing physical discomfort during pregnancy, gender revealed by the doctor, the person from whom required the most support, and the overall score median obtained from the PAI (P>0.05).

In this study, the overall score average that participants obtained from the PSSPSS was 68.56 ± 8.21 , while the overall average score of the PAI was 68.53 ± 10.23 (Table 3).

It was found that there was a moderate, positive, and significant relationship between the overall and average subscale scores obtained from both scales. A higher level of spousal support was associated with a higher level of prenatal attachment (Table 4).

Table 3. Distribution of averages Perceived Spousal Support in Pregnancy and Prenatal Attachment scale scores of the participants (N=323)

Scales	Mean±ss	Median (Q1-Q3)	Cronbach's alpha
The Perception of Spousal Support in Pregnancy	68.56 ± 8.21	70 (63 - 75)	0.886
Cognitive Support	25.17 ± 4.2	26 (23 - 29)	
Emotional Support	21.43 ± 2.75	21 (20 - 24)	
Financial Support	21.96 ± 2.8	22 (20 - 24)	
Prenatal Attachment Inventory	68.53 ± 10.23	70 (61 - 77)	0.911

Table 4. The relationship between average Perceived Spousal Support in Pregnancy and Prenatal Attachment scale scores

Variable	Prenatal Attachment Inventory
The Perception of Spousal Support in Pregnancy	r*=0.424 P<0.001
Cognitive Support	r*=0.343 P<0.001
Emotional Support	r*=0.396 P<0.001
Financial Support	r*=0.355 P<0.001

*Spearman's Correlation

Discussion

The purpose of this study was to assess the relationship between the perception of spousal support and prenatal attachment in pregnant women. In the current study, it was determined that the spousal support perceived by pregnant women who received university-level and higher education was higher, and the physical symptoms experienced due to pregnancy adversely affected prenatal attachment; however, the level of prenatal attachment increased with a higher level of spousal support.

The overall average score that participants obtained from the PSSPS was 68.56 ± 8.21. In a similar study conducted by Yüksek et al. the overall average score was found 68.99 ± 10.8 (15). Considering that the highest possible score to be obtained from the PSSPS is 81, it may be concluded that the level of perceived spousal support was high in the current study.

Factors such as women's age, educational status, family type, age of the spouse, number of living children, and voluntary pregnancy affect the perceived spousal support (15). In our study, perceived spousal support was found to be higher in those who received university-level or higher education. When the results of the similar studies are examined, it is also seen that

those with higher educational levels have higher levels of perceived spousal support, and there is a positive relationship between the variables (5,17-18). The current results are consistent with the literature.

In some societies, pregnant women are treated more carefully by their spouses and close circle during the gestation period, their physical needs are taken into account and they receive a high level of social support. While social support relaxes pregnant women emotionally and cognitively, it also helps them make more use of social resources, cope with stressors and anxiety more easily, and facilitate the transition to the maternal role. As this support increases, women's acceptance of pregnancy and the role of motherhood is positively affected, and their adaptation to the life change brought about by pregnancy increases (19).

However, it is also stated that there is a strong relationship between the discomfort experienced by women during pregnancy and spousal support. While spousal support reduces the stress of the mother, it also strengthens family relations while positively affecting parental attachment (20-21). In a study, it is stated that mothers who receive support from their spouse during the early puerperium feel better, easily cope with the events that cause

stress, and improve acceleration of transition to motherhood (22). In addition, spousal support also contributes to the development of family ties and the protection of maternal and child health (23-24). In the study, it was found that there was a positive, moderate, significant relationship between the overall score averages obtained from the Perception of Spousal Support in Pregnancy Scale and the Prenatal Attachment Inventory, and the level of prenatal attachment also increased as the spousal support increased. In a study, it is stated that the continuation of mutual good communication between the mother-to-be and her spouse throughout pregnancy, sharing her feelings experienced with her spouse, and making preparations for the baby together strengthen their parenting roles (25). In another study, it is stated that as perceived social support increases in pregnant women, adaptation to pregnancy and motherhood increases (19). It is noted that there is a positive relationship between perceived social support and maternal-fetal attachment (26). Pregnant women who do not live with their spouse and/or are not supported by the baby's father in the current pregnancy have low levels of maternal-fetal attachment (27). When other studies in the literature are examined, it is seen that there is a relationship between a lower level of maternal-fetal attachment and not living with a spouse and not receiving social support, which is consistent with the current results (28-30) In addition, the literature reports that the presence, assistance and support of a partner/spouse during the gestation period are important factors that may affect the development of the maternal role and, as a result, positively influence maternal-fetal attachment (31-33).

The limitation of the study is that the study was conducted in a single center. Attachment research has often focused on the postpartum period and social support in general. A strength of the study is that it explores the prenatal stage of attachment and specifically assesses the impact of partner support on this process. We can recommend comparative studies examining the attachment level of fathers to researchers working on this subject. As a result of this study, it is critical to assess pregnant women's attachment levels during the pregnancy period

and to ensure that the relevance of spousal support during pregnancy is known; consequently, spousal support should be incorporated at every stage of the pregnancy process.

Conclusion

According to the results of the study, a higher level of prenatal attachment is associated with a higher level of perceived spousal support. Meanwhile, the educational level of pregnant women affects the level of perceived spousal support. Therefore, it is important for nurses and midwives to evaluate the support perceived by the spouses of pregnant women in the antenatal period, and the level of maternal-fetal attachment during the healthy pregnancy, childbirth, and postpartum period. Application of standard measurement tools in health institutions for the evaluation of spousal support and attachment process will support the development and protection of maternal and child health. It is necessary to increase the awareness level of women to receive support from their husbands during pregnancy and to participate in antenatal follow-ups. In this regard, it could be recommended to carry out further studies including investigating of the opinions of spouses about pregnancy.

Declarations

Acknowledgments

We would like to thank all pregnant women who voluntarily participated in the study.

Conflicts of interest

The authors declared no conflicts of interest.

Ethical considerations

The participants were informed that the participation was voluntary and that they could withdraw from the study at any time. It was also explained that the data would be used for scientific purposes without using the names of the participants, and the Helsinki Declaration was followed. This study was presented as a summary oral presentation at the 4th International 5th National Postpartum Care Congress.

Ethical approval

Ethical approval was obtained from the

University Scientific Research and Publication Ethics Committee (Date: 22.06.2020, Decision No: 2020/23/2). Written institutional permission was obtained from the Turkish Republic Ministry of Health Provincial Health Directorate.

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Authors' contribution

DKŞ, EÜ submitted the idea or concept, designed the project, and supervised or gave consulting; DKŞ, EÜ collected and processed the data; EÜ provided analysis and/or interpretation. DKŞ, EÜ completed the literature review; DKŞ, EÜ wrote the paper; DKŞ, EÜ performed the critical review; DKŞ, EÜ managed resources and fundraising; and DKŞ, EÜ provided materials. ALL authors read and approved the final article and agreed to be accountable for all parts of the work, including investigating and resolving any accuracy or integrity issues.

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