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The relationship between perceived spousal support and stress coping levels in pregnant women

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Abstract

Background Spousal support can help women adapt to the challenges of pregnancy, cope with stress, and improve their well-being. The current study aimed to examine the relationship between perceived spousal support and stress coping levels in pregnant women.

Methods This descriptive study was conducted with 150 normal and 150 high-risk pregnant women hospitalized in the Perinatology Department of a training and research hospital in Türkiye between October and March 2024. Data were collected using the "Ministry of Health Pregnancy Risk Assessment Form," "Descriptive Information Form," "Perception of Spousal Support in Pregnancy Scale (PSSPS)," and "Stress Coping Styles Scale (SCSS)." Data were analyzed with descriptive statistics, an independent sample t-test, and Pearson's correlation analysis.

Results All sub-dimension score averages of the PSSPS were higher in risky pregnant women than in normal pregnant women. Risky pregnant women tended to adopt more helpless and submissive approaches in coping with stress.

Conclusion The present study found that the perceived spousal support of risky pregnant women was not directly related to their ways of coping with stress. Normal pregnant women adopted a more optimistic approach as a coping style with increased spousal support.

Keywords Midwife, Perceived spousal support, Pregnant, Risky pregnant, Coping with stress

Background

Pregnancy is a critical period in women's lives since pregnant women undergo various mental, physical, and social changes [1]. Although pregnancy is a physiological phenomenon, some conditions can endanger maternal or fetal health and, thus, make pregnancy risky [2].

Risky pregnancies are considered an important public health problem, and the Sustainable Development Goals (SDGs) of the World Health Organization (WHO) address health service needs in places where risky pregnancies occur [3]. The literature defines a risky pregnancy as "any unexpected or unpredictable medical or obstetric condition associated with pregnancy that poses a real or potential danger to the maternal or fetal health or well-being" [4]. About 15% of all women experience a risky pregnancy, which can be described as any condition detrimental to the maternal or fetal health and well-being. Risky conditions during pregnancy may occur due to a pre-existing medical condition (e.g., obesity or

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diabetes) or a medical condition first manifested during pregnancy [5]. Preventing pregnancy-related maternal health problems is a public health priority [5]. Risky pregnancies account for more than half of maternal and neonatal deaths and prenatal disabilities. In addition to the negative health impact of a risky pregnancy that the mother and fetus are potentially exposed to, it also has a substantial economic impact and burden on the health system [6].

Pregnancy is a stressful period for a woman and her family, even under the best conditions. Maternal stress and anxiety increase when pregnancy is associated with a preexisting medical condition or complication [4]. Stress is defined as demands straining or exceeding an individual's resources [7]. In accordance with the World Health Organization's conceptual framework of social factors influencing health, psychosocial conditions such as stressors, stressful life conditions, anxiety, depression, and social support impact health [8]. Stress, anxiety, and depression are associated with numerous diseases, including cardiovascular, autoimmune, and skin diseases [9]. Stress during pregnancy increases adverse birth outcomes, including low birth weight, preterm birth, and unplanned cesarean Sect. [10]. Additionally, prenatal stress has various adverse effects in infancy, childhood, and adulthood via immune, neuroendocrine, metabolic, cardiovascular, and behavioral pathways [11]. Moreover, increasingly strong evidence indicates numerous negative outcomes of stress during pregnancy [12]. Women with high stress levels are less likely to maintain optimal health behaviors during pregnancy and are more likely to smoke and have a sedentary lifestyle [11]. Since pregnancy anxiety and stress are related to adverse birth outcomes, it is crucial to understand how women cope with stress during pregnancy, particularly pregnancy-specific concerns such as impending birth, postpartum infant health, and parenting. This may provide an understanding of pregnancy, birth, and later infant and maternal outcomes [7].

Due to its nature, pregnancy is included within a broader interpersonal context, and hence understanding the impact of an expectant mother's close personal relationships on coping effectiveness is particularly important [7]. Tanner Stapleton et al. [13] investigated the relationship of pregnant women with their husbands in detail and revealed that spousal support in pregnancy, as well as the quality of their relationships, predicted maternal prenatal and postpartum distress. Dyadic coping models developed in other populations suggest that one spouse's coping strategies affect the other spouse's coping strategies and coping effectiveness [14, 15].

Coping is the term that describes cognitive and behavioral efforts to manage psychological stress with the objective of achieving psychological and physiological well-being [5]. The mentioned efforts aim to manage or change the source of stress (problem-focused) or regulate stressful emotions (emotion-focused) [16]. Stress-coping styles are broadly classified as problem-focused styles, including active coping, planning, suppression of competing activities, restraint coping, and instrumental social support seeking, and emotion-focused styles, such as emotional social support seeking, positive reinterpretation, acceptance, denial, and religious coping [5].

The stress and impact of a high-risk pregnancy diagnosis, along with the treatment regimens associated with the said condition, can increase pressure, reduce the ability to adapt, and lead to more problems in a woman's ability to cope with stress, well-being, and depression, and anxiety [12, 17]. Hospitalization during a high-risk pregnancy is a particular risk factor for higher anxiety and stress; therefore, friends, family, and clinicians should provide extra support and reassurance, considering that a high-risk pregnancy is a source of significant uncertainty and vulnerability [18, 19]. Support groups for women with risky pregnancies run by midwives, obstetricians, or physicians can provide reassurance and effectively manage women's concerns [20].

In the context of pregnancy, coping efforts may impact birth outcomes by minimizing or preventing negative behavioral, emotional, physiological, and cognitive responses to stress factors. Therefore, the ability to choose and implement an appropriate coping response may serve as a source of resilience, protecting expectant mothers and their children from the potentially detrimental impacts of prenatal stress exposure [7]. Research has demonstrated that effective coping with stress is associated with enhanced well-being and reduced symptoms of depression and anxiety, as well as better psychological and physical outcomes for pregnant women and their infants [21–24]. Hence it is essential to understand how coping with stress and spousal support are interconnected to provide a more positive pregnancy experience. To date, the literature has mainly concentrated on coping with stress during a healthy or normal pregnancy and has not researched these variables separately for spousal support in risky pregnancies. Examining spouses' and pregnant women's stress-coping methods can contribute significantly to an understanding of stress and coping during pregnancy. This research group can identify the most appropriate ways for women to avoid the adverse impact of stressful experiences by understanding how coping differs between women with and without negative outcomes [7].

Method

Research type

This comparative and correlational study was conducted to examine the relationship between perceived spousal

support and stress-coping levels in normal and risky pregnancies.

Place and time of the study

The study data were collected at the Obstetrics and Gynecology Outpatient Clinic of Van Regional Training and Research Hospital, Pregnancy and Perinatology Ward, between October 2023 and March 2024.

Study sample

The study's population comprised women with risky pregnancies who were hospitalized at the Pregnancy and Perinatology Ward of Van Regional Training and Research Hospital and women with normal pregnancies who presented to the Obstetrics and Gynecology Outpatient Clinic between October 2023 and March 2024. Data on women with normal pregnancies were collected at the obstetrics and gynecology outpatient clinic, whereas data on risky pregnancies were collected at the perinatology ward.

A power analysis was carried out at a significance level of 0.05 and a 95% confidence interval to determine the sample size. The research by Dağlar and Nur (2019) [25] determined the effect size for the intergroup difference in the attitude of coping with stress to be 0.460. To exceed a 95% value when determining the study's power, 206 individuals should be reached in groups at a 5% level and a 0.460 effect size (df = 204; t = 1.652).

Concerning the other study variable, the research by Yüksekal and Yurdakul [26] was taken as a reference, and the effect size for the intergroup difference in spousal support was found to be 0.669. To exceed a 95% value when determining the study's power, 100 individuals should be reached in groups at a 5% significance level and a 0.669 effect size (df = 98; t = 1.661). The highest number of individuals determined according to the power analysis was considered for the two basic variables of the study.

The sample selection formula was employed to calculate the minimum sample size that should be considered in cases with a known number of elements in the population [27]. According to the sample size with a known population size, it was aimed to conduct research with a total of 206 individuals and more, including risky and non-risky pregnancies. According to the formula, a total of 250 individuals were determined to represent the population, comprising at least 125 women with normal pregnancies and 125 women with risky pregnancies. Therefore, 300 individuals were reached to prevent possible data loss.

Inclusion and exclusion criteria

Criteria for including in the normal pregnancy group

Being able to read, write, and speak Turkish

Being at week 20 or higher of gestation

The absence of a diagnosed mental disorder in the pregnant woman

Being willing to take part in the research

Presenting to the obstetrics and gynecology outpatient clinic and not having a risk factor for the normal pregnancy group according to the Ministry of Health Risk Assessment Form

Criteria for including in the risky pregnancy group

Being able to read, write, and speak Turkish

Being at week 20 or higher of gestation

The absence of a diagnosed mental disorder in the pregnant woman,

Being willing to take part in the research

Having a risky pregnancy and receiving inpatient treatment in the Perinatology Ward

Exclusion criteria

Not having a living husband

Not living with the husband

Data collection tools

The "Descriptive Information Form," the "Ministry of Health Pregnancy Risk Assessment Form (MHPRAF)," the "Perception of Spousal Support in Pregnancy Scale (PSSPS)," and the "Stress Coping Styles Scale" (SCSS) were utilized as the data collection tools.

Ministry of health pregnancy risk assessment form

The form created by the Ministry of Health includes the "medical history," "obstetric history," and "evaluation of current pregnancy" headings. Pregnant women were evaluated for risks in pregnancy with 20 criteria evaluating medical history, 20 criteria evaluating obstetric history, and 32 criteria evaluating current pregnancy. If a pregnant woman complies with any of the criteria above, it means that she has a risk factor in pregnancy [28].

Descriptive information form

The form above includes 25 questions prepared by the researchers to evaluate pregnant women's socioeconomic, demographic, and obstetric histories.

Perception of Spousal Support in Pregnancy Scale

The scale in question was developed by Yurdakul et al. (2020) [29] and comprises 16 items and three subscales: cognitive support subscale (items 1, 4, 6, 10, 11, and 15), emotional support subscale (items 2, 3, 5, 8, and 13), and material support subscale (items 7, 9, 12, 14, and 16). The maximum score on the cognitive support subscale is 30, and the minimum is 6. Cronbach's alpha value is 0.63. The highest score on the emotional support subscale is 25, and the lowest is 5. Cronbach's alpha value is 0.58.

The highest score on the material support subscale is 25, and the lowest is 5. Cronbach's alpha value is 0.68 [29].

The scale is scored as 1- never, 2- rarely, 3- sometimes, 4- often, and 5- always. The lowest score on the total scale is 16, and the highest is 80. Whereas high scores show high perceived spousal support during pregnancy, low scores refer to low perceived spousal support. The scale's total Cronbach's alpha value was determined to be 0.89 [29]. Table 4.3. contains Cronbach's alpha coefficients for the subscales and the overall scale in the current research.

Stress Coping Styles Scale

The study employed the SCSS to determine the styles used by individuals to cope with stress. Folkman and Lazarus developed the scale in 1980 as the Ways of Coping Inventory. Hisli-Şahin and Durak adapted the scale to Turkish in 1995 [30].

The scale comprises 30 items and five factors: self-confident approach, helpless approach, submissive approach, optimistic approach, and social support-seeking approach. Items 8, 10,14, 16, 20, 23, and 26 evaluate the self-confident approach; items 2, 4, 6, 12, and 18 evaluate the optimistic approach; items 3, 7, 11, 19, 22, 25, 27, and 28 assess the helpless approach; items 5, 13, 15, 17, 21, and 24 evaluate the submissive approach; items 1 (reverse), 9 (reverse), 29, and 30 assess the social support-seeking approach. With an increase in the scores from the self-confident, optimistic, and social support-seeking approaches, a person utilizes effective, i.e., active coping strategies. On the contrary, with the increased scores of the self-blaming and submissive approach, the person uses ineffective, i.e., passive coping strategies [30].

In the SCSS instruction, individuals are asked to answer the items according to the degree of their suitability by considering events that cause stress or distress for them. On this 4-point Likert scale, the items are scored between 0 and 3 (0 = not suitable at all, 1 = somewhat suitable, 2 = very suitable, and 3 = completely suitable). The subscale scores are obtained by dividing the scores on each subscale by the number of items in the relevant subscale. It is not calculated with a total score. In this case, the lowest and highest scores on the subscales vary between 0 and 3. High scores on the subscales are interpreted as the fact that the person uses the relevant coping style more [30].

The subscales have the following Cronbach's alpha values: the self-confident approach subscale 0.80, the optimistic approach subscale 0.68, the helpless approach subscale 0.73, the submissive approach subscale 0.70, and the social support-seeking subscale 0.47 [30]. Table 4.3 lists Cronbach's alpha coefficients for the subscales and the overall scale in the present research.

Data collection

The researcher collected data through face-to-face interviews with pregnant women who met the inclusion and exclusion criteria between October 2023 and March 2024. Prior to data collection, the study's purpose was explained to pregnant women, and they were invited to participate. Those who volunteered were then identified. The 'Ministry of Health Pregnancy Risk Assessment Form' was used to determine normal pregnancies in the study. According to the form, pregnant women without risk factors were included in the normal pregnancy group. It took 10–15 min to complete the forms.

Data evaluation

The SPSS for Windows 22 (Statistical Package for Social Science) program was used to analyze the research data. In the data analysis, frequency, percentage, mean, and standard deviation values were calculated using descriptive statistics. Furthermore, the independent samples t-test identified differences between the normal and risky pregnancy groups, while Pearson's correlation analysis assessed the relationships between the variables. The scales' internal consistency was evaluated using Cronbach's alpha coefficient, and high reliability values were obtained. The Kolmogorov-Smirnov and Shapiro-Wilk tests were used to test the normal distribution assumption, and parametric tests were applied to normally distributed variables. The level of significance was considered to be $p < 0.05$. The study calculated the mean scores of the Perception of Spousal Support in Pregnancy Scale (PSSPS) and the Stress Coping Styles Scale (SCSS), examined intergroup differences, and analyzed the relationships between the variables. The findings were presented in tables, and the statistical results were interpreted and evaluated.

Limitations and generalizability of the study

The findings from the research are limited to the pregnant women from whom data were collected. Since the research data were collected from pregnant women who were receiving inpatient treatment in the Pregnancy and Perinatology clinic and who presented to the Obstetrics and Gynecology outpatient clinic, the study results can only be generalized to women with normal and risky pregnancies who took part in the research. The limitation of the current study is the inclusion of women who were at week 20 or higher of gestation. All participants in the study were high school graduates and had similar socioeconomic characteristics, which may limit generalizability.

Results

The current section presents results on the relationship between perceived spousal support and stress-coping levels in normal and risky pregnancies.

All of the pregnant women included in the study were high school graduates. Of the pregnant women in the risky pregnancy (RP) group, 85.3% had a middle income level, 73.3% resided in the province, 79.3% had a nuclear family, 78.7% did not have kinship with their husbands, the husbands of 38% were high school graduates, the husbands of 40.7% were self-employed, 71.3% found the relationship with their husbands as very good, the previous pregnancy ended with a normal birth in 48.6%, 71.3% had planned pregnancy, the infants of 38.% were male, and 46% wanted to have infant boys, 96.7% had received prenatal care (PNC), and 88.7% had received prenatal (PN) education. Furthermore, the mean age of the pregnant women in the risky pregnancy (RP) group was 27.89 ± 5.28, their husband's age was 31.00 ± 5.40, the mean duration of marriage was 55.30 ± 43.01 months, the number of pregnancies was 2.52 ± 1.41, the number of miscarriages was 1.16 ± 0.37, the number of stillbirths was 1.00 ± 0.00, the number of living children was 1.80 ± 1.01, the interpregnancy interval was 2.32 ± 0.91, and the mean week of gestation was 28.26 ± 7.08.

Of the pregnant women in the normal pregnancy (NP) group, 88% had a middle income level, 82% resided in the province, 78% had a nuclear family, 82.7% did not have kinship with their husbands, the husbands of 36% were secondary school graduates, the husbands of 36% were self-employed, 80.7% found the relationship with their husbands as very good, the previous pregnancy ended with a cesarean section in 47.5%, 72% had planned pregnancy, the infants of 40% were male, and 48% wanted to have infant boys, 98% had received PNC, and 85.3% had received PN education. Additionally, the mean age of the pregnant women in the normal pregnancy (NP) group was 27.66 ± 3.96, their husband's age was 31.25 ± 5.10, the mean duration of marriage was 58.27 ± 39.44 months, the number of pregnancies was 2.59 ± 1.20, the number of miscarriages was 1.28 ± 0.68, the number of stillbirths was 1.82 ± 1.83, the number of living children was 2.38 ± 0.85, the interpregnancy interval was 2.38 ± 0.85, and the mean week of gestation was 30.41 ± 6.39.

The comparison of the groups' descriptive characteristics revealed that, except for gestational week, the differences in other descriptive characteristics were statistically insignificant, indicating that the groups shared similar characteristics in terms of homogeneously distributed variables ($p > 0.05$) (Table 1).

Considering the distribution of the total mean scores of pregnant women with normal and risky pregnancies on the PSSPS and SCSS, they scored 25.10 ± 3.36 on the cognitive support subscale, 20.54 ± 2.77 on the emotional support subscale, 20.93 ± 3.22 on the material support subscale, and 66.57 ± 8.15 points in total.

Within the scope of the Stress Coping Styles Scale, the participating women scored 1.76 ± 0.51 on the self-confident approach subscale, 1.63 ± 0.45 on the optimistic approach subscale, 1.58 ± 0.47 on the helpless approach subscale, 1.60 ± 0.51 on the submissive approach subscale, and 1.73 ± 0.41 on the social support-seeking approach subscale. Cronbach's alpha coefficients calculated to determine the scales' internal consistency were 0.840 for the Perception of Spousal Support in Pregnancy Scale and 0.849 for the Stress Coping Styles Scale. The values above indicate that both scales have high reliability (Table 2).

The comparison of the subscale and total mean scores of pregnant women in the normal and risky pregnancy groups on the Perception of Spousal Support in Pregnancy Scale determined the difference between the groups in terms of cognitive support ($p = 0.013$), emotional support ($p = 0.000$), material support ($p = 0.004$), and total perception of spousal support ($p = 0.001$) to be statistically significant. Women with normal pregnancies received lower mean scores on all subscales and the overall scale.

When evaluated in terms of the SCSS, the difference between the groups on the helpless approach ($p = 0.001$) and submissive approach ($p = 0.022$) subscales was found to be statistically significant, indicating that women with risky pregnancies exhibited a more helpless and submissive approach when coping with stress. No significant difference was determined on the social support-seeking approach subscale ($p = 0.362$). Therefore, the groups' social support-seeking levels were similar. No statistically significant difference was revealed on the self-confident approach ($p = 0.061$) and optimistic approach ($p = 0.382$) subscales.

The results demonstrate that women with normal pregnancies perceive spousal support in pregnancy less than women with risky pregnancies. This also shows that women with risky pregnancies tend to use more helpless and submissive strategies in coping with stress (Table 3).

Table 4 revealed no statistically significant relationship between the Perception of Spousal Support in Pregnancy Scale and the Stress Coping Styles Scale subscales in women with risky pregnancies ($p > 0.05$). The correlation coefficients between cognitive, emotional, and material support and stress coping styles were low and not statistically significant for women with risky pregnancies. A negative but insignificant correlation was determined between the helpless approach ($r = -0.148$; $p = 0.071$) and the submissive approach ($r = -0.139$; $p = 0.089$) and the total score for spousal support in pregnancy. This

Table 1 Distribution and comparison of the descriptive characteristics of women with normal and risky pregnancies

Characteristics	Woman with Risky Pregnancy		Woman with Normal Pregnancy		Test and *p*-value
	n	%	*n*	%	
Perceived income status					
High	4	2.7	4	2.7	$X^2=0.56$
Medium	128	85.3	132	88.0	$p=0.75$
Low	18	12.0	14	9.3	
Place of residence					
Province	110	73.3	123	82.0	$X^2=3.24$
District	40	26.7	27	18.0	$p=0.07$
Family type					
Nuclear	119	79.3	117	78.0	$X^2=0.07$
Extended	31	20.7	33	22.0	$p=0.77$
Kinship with the husband					
Yes	32	21.3	26		$X^2=0.76$
No	118	78.7	124	82.7	$p=0.38$
Husband's education					
Literate	9	6.0	5	3.3	$X^2=4.22$
Primary school	13	8.7	10	6.7	$p=0.37$
Secondary school	41	27.3	54	36.0	
High school	57	38.0	48	32.0	
University	30	20.0	33	22.0	
Husband's occupation					
Worker	20	13.3	28	18.7	$X^2=3.04$
Civil servant	47	31.3	40	26.6	$p=0.38$
Self-employed	61	40.7	54	36.0	
Other (….)	22	17.7	28	18.7	
Perceived relationship with the husband					
Very good	107	71.3	121	80.7	$X^2=3.58$
Good	43	28.7	29	19.3	$p=0.05$
The way the previous pregnancy ended					
Normal birth	53	48.6	49	40.2	$X^2=3.87$
Cesarean section	38	34.9	58	47.5	$p=0.14$
Miscarriage	18	16.5	15	12.3	
The status of planning the pregnancy					
Planned	107	71.3	108	72.0	$X^2=0.01$
Unplanned	43	28.7	42	28.0	$p=0.89$
Infant's sex					
Female	52	34.7	56	37.3	$X^2=0.66$
Male	58	38.7	60	40.0	$p=0.71$
I don't know	40	26.6	34	22.7	
What sex would you like your infant to be?					
Female	60	40.0	64	42.7	$X^2=1.59$
Male	69	46.0	72	48.0	$p=0.45$
vI didn't think about it	21	14.0	14	9.3	
Status of receiving prenatal care					
Received	145	96.7	147	98.0	$X^2=0.51$
Did not receive	5	3.3	3	2.0	$p=0.47$
Status of receiving prenatal education					
Received	133	88.7	128	85.3	$X^2=0.73$
Did not receive	17	11.3	22	14.7	$p=0.39$

Table 1 (continued)

	$\overline{X}$ ± SD	$\overline{X}$ ± SD	
Age	27.89 ± 5.28	27.66 ± 3.96	t = 0.43 *p* = 0.66
Husband's age	31.00 ± 5.40	31.25 ± 5.10	t = –0.40 *p* = 0.68
Duration of marriage (months)	55.30 ± 43.01	58.27 ± 39.44	t = –0.62 *p* = 0.53
Number of pregnancies	2.52 ± 1.41	2.59 ± 1.20	t = –0.44 *p* = 0.66
Number of miscarriages	1.16 ± 0.37	1.28 ± 0.68	t = –0.86 *p* = 0.39
Number of stillbirths	1.00 ± 0.00	1.82 ± 1.83	t = –0.87 *p* = 0.39
Number of living children	1.80 ± 1.01	1.79 ± 0.87	t = 0.05 *p* = 0.95
Interpregnancy interval	2.32 ± 0.91	2.38 ± 0.85	t = –0.50 *p* = 0.61
Week of gestation	28.26 ± 7.08	30.41 ± 6.39	t = –2.76 *p* = 0.006

X^2 = The chi-square test, $\bar{x}$ average, *SD* Standard deviation *t* Independent samples t-test

Table 2 Distribution of the total mean scores of women with normal and risky pregnancies on the perception of spousal support in pregnancy scale and the stress coping styles scale

		Number of Items	Cronbach's Alpha	Distribution Range	Mean ± SD
Perception of Spousal Support in Pregnancy Scale	Cognitive Support	6	0.836	9–30	25.10 ± 3.36
	Emotional Support	5	0.831	9–25	20.54 ± 2.77
	Material Support	5	0.824	9–25	20.93 ± 3.22
	Spousal Support in Pregnancy Total	16	0.840	27–80	66.57 ± 8.15
Stress Coping Styles Scale	Self-Confident Approach	7	0.833	0–3	1.76 ± 0.51
	Optimistic Approach	5	0.841	0–3	1.63 ± 0.45
	Helpless Approach	8	0.829	0–3	1.58 ± 0.47
	Submissive Approach	6	0.838	0–3	1.60 ± 0.51
	Social Support-Seeking Approach	4	0.832	0–3	1.73 ± 0.41
	Overall Scale	30	0.849	-	-

$\bar{x}$ average, *SD* Standard deviation

indicates that the perception of spousal support of women with risky pregnancies cannot be directly associated with their stress coping styles.

In women with normal pregnancies, a positive and statistically significant correlation was identified between the optimistic approach and emotional support ($r = 0.172$; $p = 0.036$), material support ($r = 0.162$; $p = 0.047$), and the total score for spousal support in pregnancy ($r = 0.165$; $p = 0.043$) ($p < 0.05$). This finding demonstrates that women with normal pregnancies adopt a more optimistic coping style with increased spousal support. No significant correlation was determined for women with normal pregnancies in terms of the other subscales ($p > 0.05$).

Discussion

The findings of the research conducted to assess the relationship between perceived spousal support and stress-coping levels in normal and risky pregnancies were discussed in the context of the relevant literature.

Women with risky pregnancies were found to have higher levels of perceived spousal support than women with normal pregnancies. The minimum score on the PSSPS is 16, and the maximum is 80. A high score refers to high perceived spousal support in pregnancy. The study carried out by Lee et al. (2020) [31] with pregnant women found that pregnant women's perception of spousal support was high (81.55 ± 11.87). Özbek and Beydağ (2021) [32] determined the mean scores of women with risky pregnancies for the perception of spousal support to be 57.69 ± 9.21. Therefore, this study agrees with the literature, indicating that pregnant women receive high spousal support.

To have mental and psychological balance, pregnant women need social support from their friends, healthcare professionals, and family members, and especially their husbands [33]. In Turkish society, pregnancy is met with joy and excitement by family members since a new member joins the family, and the pregnancy period is valued

Table 3 Comparison of the mean scores of women with normal and risky pregnancies on the Perception of Spousal Support in Pregnancy Scale and the Stress Coping Styles Scale

Groups		Woman with Risky Pregnancy ($n=150$)	Woman with Normal Pregnancy ($n=150$)	Test Statistics	p
		Mean ± SD	Mean ± SD	t	
Perception of Spousal Support in Pregnancy Scale	Cognitive Support	25.58 ± 3.37	24.62 ± 3.29	2.494	0.013
	Emotional Support	21.15 ± 2.65	19.94 ± 2.76	3.863	0.000
	Material Support	21.46 ± 3.07	20.40 ± 3.29	2.884	0.004
	Spousal Support in Pregnancy Total	68.19 ± 7.98	64.96 ± 8.02	3.494	0.001
Stress Coping Styles Scale	Self-Confident Approach	1.81 ± 0.50	1.70 ± 0.53	1.884	0.061
	Optimistic Approach	1.65 ± 0.41	1.60 ± 0.48	0.876	0.382
	Helpless Approach	1.67 ± 0.47	1.49 ± 0.45	3.393	0.001
	Submissive Approach	1.67 ± 0.52	1.53 ± 0.50	2.297	0.022
	Social Support-Seeking Approach	1.75 ± 0.42	1.71 ± 0.40	0.914	0.362

$\bar{x}$ average, *SD* Standard deviation, t Independent samples t-test

Table 4 Distribution of the relationship between the mean scores of women with risky and normal pregnancies on the perception of spousal support in pregnancy scale and the stress coping styles scale

			Cognitive Support	Emotional Support	Material Support	Spousal Support in Pregnancy Total
Women with Risky Pregnancies ($n=150$)	Self-Confident Approach	r	−0.047	−0.056	0.003	−0.037
		p	0.567	0.496	0.969	0.650
	Optimistic Approach	r	−0.053	−0.125	0.027	−0.054
		p	0.518	0.128	0.742	0.515
	Helpless Approach	r	−0.153	−0.123	−0.109	−0.148
		p	0.061	0.134	0.184	0.071
	Submissive Approach	r	−0.151	−0.147	−0.069	−0.139
		p	0.065	0.072	0.405	0.089
	Social Support-Seeking Approach	r	−0.069	−0.102	−0.115	−0.108
		p	0.398	0.214	0.160	0.190
Women with Normal Pregnancies ($n=150$)	Self-Confident Approach	r	0.089	0.088	0.083	0.101
		p	0.276	0.286	0.310	0.218
	Optimistic Approach	r	0.097	0.172*	0.162*	0.165*
		p	0.238	0.036	0.047	0.043
	Helpless Approach	r	−0.080	−0.142	−0.027	−0.092
		p	0.333	0.083	0.744	0.260
	Submissive Approach	r	0.027	−0.061	0.057	0.013
		p	0.747	0.457	0.489	0.873
	Social Support-Seeking Approach	r	0.028	−0.046	−0.059	−0.028
		p	0.738	0.578	0.477	0.730

*$p < 0.05$, r Pearson's Correlation Analysis

due to the importance attached to the continuation of the generation. In this regard, spousal and family support may be high during pregnancy [34]. In high-risk pregnancies, the stress experienced due to maternal or fetal issues is greater than in normal pregnancies. High-risk pregnancies bring about numerous stressors, including the diagnosis of a high-risk pregnancy, vaginal bleeding, pain, fear of losing the infant, and hospitalization. This increases pregnant women's need for social and spousal support [35]. The higher perceived spousal support of women with risky pregnancies than that of women with normal pregnancies in this study may have originated from meeting the increased spousal support expectations of women with risky pregnancies.

Risky conditions during pregnancy may be due to a pre-existing medical condition (e.g., obesity or diabetes) or a medical condition that first emerges during pregnancy [17]. Stress-coping strategies are important to achieve results [36]. Coping styles reflect an individual's use of specific and planned techniques expressed in cognitive

or behavioral forms. Women with negative coping styles may avoid thinking about or confronting a stressful situation through rumination, self-blaming, detachment, or social isolation. Such coping styles relieve stress less effectively and tend to result in poor overall well-being [37]. The present study revealed that women with risky pregnancies tended to adopt helpless and submissive approaches, which are ineffective in coping with stress. The helpless approach refers to an individual losing faith in their ability to manage a stressful situation, regarding themselves as the cause of the negative experiences, and being unable to solve the problem. In the submissive approach, the individual adopts a fatalistic attitude and accepts the stress-related negative consequences [30].

Thirteen articles investigated coping as a predictor of psychopathology outcomes. The said articles demonstrated that positive coping strategies such as the usage of social (supportive social networks) and informational (guidance or recommendations) support, optimism, preparation for motherhood, positive interpretation, and prayers reduced the impacts of stressors and were associated with lower psychopathology symptoms during pregnancy [17]. Yali and Lobel (1999) [38] determined that prayers and positive appraisal were associated with lower pregnancy distress, while ineffective coping strategies were associated with more pregnancy distress. Another study revealed that pregnant women's self-esteem levels influenced their stress levels and coping styles [39]. Given that individuals with high self-esteem levels tend to have higher self-confidence, it can be inferred that the pregnant women in the present study did not exhibit a self-confident approach to coping with stress. Furthermore, the said results stress that coping is a complex structure and how diverse coping styles can directly impact well-being and quality of life during pregnancy [17, 38].

Women with positive coping styles may try to cope with and change a stressful situation through planning, seeking social support, positive restructuring, or problem-solving, thus improving their overall well-being [37]. The current work revealed that women with normal pregnancies adopted a more optimistic coping style with increased spousal support. When adopting an optimistic approach, individuals maintain control over stressful situations and display an optimistic attitude by approaching events rationally [30]. Optimists have positive expectations for the future, regard positive outcomes as achievable, and continue to strive for them. Positive expectations for the future are especially important during pregnancy, when the goal is to give birth to a healthy infant [40]. A study determined that optimism during pregnancy has emotional benefits, which are only partially related to the way optimists perceive and cope with this stressful life event [38]. Various studies with healthy pregnant women identified a relationship between this healthy state and adopting an optimistic coping style as a way of coping with stress during the early and late periods of pregnancy [11, 38]. The literature states that spousal support (received during pregnancy, birth, and postpartum) prevents loneliness and introversion that may occur between spouses during stressful periods, a strong bond is formed between spouses with emotional closeness due to this support, calmness is achieved by avoiding situations that will create a conflict environment, and that increasing negative situations can be prevented [41–43]. Spousal support during pregnancy positively impacts the perception of motherhood. It reduces pregnant women's anxiety and stress, and the ability of pregnant women to cope with the problems they experience also increases with increased spousal support [41, 42, 44]. In light of the information above, it is a significant and pleasing result that the participating pregnant women utilized optimistic behaviors, a positive and effective style in coping with stress, with increased spousal support during pregnancy.

Women diagnosed with high-risk pregnancies face additional challenges in managing and treating their conditions, which often adversely affect coping and well-being and increase the risk of psychopathology [38]. The present study found no significant relationship between stress coping and spousal support in high-risk pregnancies. Spirito et al. (1991) examined differences in emotional well-being, coping styles, and social support in a sample of women with gestational diabetes and healthy pregnancies and reported no significant difference between the groups [45]. Likewise, a study examining the relationship between self-efficacy, dyadic coping, and quality of life among high-risk pregnant women and their partners determined that dyadic coping partially mediated the relationship between self-efficacy and quality of life for both groups [46]. As pregnancy progresses, women undergo physiological, biochemical, and anatomical changes that cause anxiety, depression, and stress. Furthermore, motherhood requires women to adapt to intense changes during pregnancy that are beyond their control. The current study's findings may have originated from the relationship between pregnant women's physiological condition and pregnancy factors [47]. Even if a person receives adequate spousal support, the physiological damage caused by high-risk pregnancies cannot be eliminated.

Conclusion and recommendations

- The level of spousal support perceived by women with normal pregnancies is lower than that of women with risky pregnancies in all subscales and total scores.

- Women with risky pregnancies tend to adopt more helpless and submissive approaches in coping with stress.
- Women with normal pregnancies adopt a more optimistic coping style with increased spousal support.
- There is no statistically significant relationship between the Perception of Spousal Support in Pregnancy Scale and the Stress Coping Styles Scale subscales in women with risky pregnancies.
- The perception of spousal support of women with risky pregnancies cannot be directly associated with their stress coping styles.

In line with these results, the following recommendations can be made:

- Considering that women with normal pregnancies perceive less spousal support than women with risky pregnancies, support should be provided to increase the perception of spousal support and stress-coping levels of women with normal pregnancies, in particular, within the scope of prenatal care services.
- Considering that women with risky pregnancies tend to adopt helpless and submissive approaches in coping with stress, midwives, physicians, and healthcare providers should help women adapt to the difficulties of pregnancy by teaching active coping strategies to increase coping and well-being in women with risky pregnancies.
- The perception of spousal support by women with risky pregnancies should be increased by encouraging their participation in health services such as pregnancy classes and pregnancy schools.
- Examining the stress-coping skills of husbands as well as mothers in future research may contribute significantly to an understanding of stress and coping during pregnancy.
- Midwives should help women positively control the stress that may occur in pregnancy by minimizing the negative coping mechanisms that women with normal and risky pregnancies use to avoid problems and encouraging positive emotional coping styles, including active problem-solving and active participation in pregnancy and education about birth, active communication with family members.
- Midwives should provide special prenatal counseling interventions and spouse/partner education programs during the prenatal period.

Abbreviations

PSSPS	Perception of spousal support in pregnancy scale
SCSS	Stress coping styles scale

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Concept MK, ZRÖ; Design-MK, ZRÖ; Supervision-MK; Resources-MK, ZRÖ; Data Collection and/or Processing-ZRÖ; Analysis and/or Interpretation-all authors; Literature Search-ZRÖ; Writing Manuscript-MK, ZRÖ; Critical Review-ZRÖ.

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Data availability
These will be displayed upon request. The entire database is confidential, but will be accessible upon request from the relevant author and with the permission of Van Regional Training and Research Hospital.

Declarations

Ethics approval and consent to participate
Approval for the study was obtained from the Ethics Committee of Atatürk University, Faculty of Health Sciences (Date: 04.10.2023, number: 2023/10/32). Official written permission was received from the institution where the study would be carried out prior to data collection. Permission was also obtained from the scale authors. Before the data collection, women with normal and risky pregnancies were informed about the study, their questions were answered, and their verbal consent was obtained. Hence the "Informed Consent Principle" was met. Women who were unwilling to participate in the study were excluded. Names and other identifying information were not included in the study. Additionally, all the research and data collection process was conducted following the Declaration of Helsinki.

Consent for publication
This is not applicable.

Competing interests
The authors declare no competing interests.

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