International Journal of Women's Health

Dovepress
Taylor & Francis Group

Open Access Full Text Article

ORIGINAL RESEARCH

Perceived Social Support, Stress, and Coping After Miscarriage Among Women in Saudi Arabia: A Cross-Sectional Study

Hanan Abdullah Badr[1], Lena Abdullah Alshehri[1], Noor Adel Badahman[1], Rahaf Abdullah Alyahya[1], Wafaa Abdelhamid Rashad Faheem[1], Mohammed Ali Saghir[2–4]

[1]Maternity and Child Health Department, Faculty of Nursing, King Abdulaziz University, Jeddah, Saudi Arabia; [2]Faculty of Medicine and Health Sciences, University of Saba Region, Marib, Yemen; [3]Epidemiology and Public Health, Graduate Collage, University of Bahri, Khartoum, Sudan; [4]Orthopedic and trauma Department, Kasr Alainy Faculty of Medicine, Cairo University, Cairo, Egypt

Correspondence: Mohammed Ali Saghir, Faculty of Medicine and Health Sciences, University of Saba Region, Marib, Yemen, Tel +967775133235, Email moh.saghir2019@gmail.com

International Journal of Women's Health downloaded from https://www.dovepress.com/
For personal use only.

Background: Miscarriage is a tragic experience that many women experience. A lack of social support, high stress, and inadequate coping mechanisms can affect their psychological well-being after a miscarriage.

Aim: The aim of this study is to examine the correlation between social support, stress, and coping among women who had a miscarriage in Saudi Arabia, 2024.

Methods: This study was an online descriptive cross-sectional, convenience sampling involving Saudi women without a history of psychiatric disorders and who experienced miscarriages within the last two years. We used social media for recruitment and Google Forms for data collection. The data were collected by 3 scales: Multidimensional Scale of Perceived Social Support (MSPSS), Perceived Stress Scale (PSS), and the Brief-COPE, an abbreviated version of the Coping Orientation to Problems Experienced inventory. Data were analyzed using Pearson correlations, multiple linear regression, and mediation modeling via Hayes' PROCESS macro.

Results: This study included 270 women. Correlation analysis revealed that social support significantly fostered problem-focused ($r = 0.237$) and emotion-focused ($r = 0.268$) strategies but had no significant relationship with avoidant coping. Regression analysis identified avoidant coping as the strongest predictor of perceived stress ($\beta = 0.19$, $p = 0.002$). Furthermore, mediation modelling indicated that the relationship between social support and stress was fully mediated through adaptive coping strategies, with no significant direct effect between support and stress found in the final model.

Conclusion: Social support serves as a critical resource that protects women following a miscarriage by promoting adaptive coping mechanisms rather than directly reducing stress. So, interventions should focus on strengthening support networks and encouraging active, problem-solving-oriented strategies to improve psychological recovery and long-term well-being.

Keywords: miscarriage, pregnancy loss, social support, perceived stress, coping, Saudi Arabia

Introduction

Background

Miscarriage is the spontaneous loss of a fetus before the 20th week of pregnancy.[1] It is a distressing experience that affects millions of women globally. Many etiological variables, including immunologic, genetic, and anatomic abnormalities, endocrine diseases, infectious, heritable, or acquired thrombophilia, and environmental factors, can lead to recurrent miscarriages. In addition, various factors raise the risk of miscarriage, including age, history of recurrent miscarriages, uterine or cervical problems, genetic conditions, smoking, alcohol, and illegal drugs.[1] Coping with the challenging emotional and psychological aftermath of a miscarriage requires the use of cognitive and behavioral strategies.[2]

https://doi.org/10.2147/IJWH.S558465
Received: 4 September 2025
Accepted: 2 April 2026
Published: 9 April 2026

© 2026 Badr et al. This work is published and licensed by Dove Medical Press Limited. The full terms of this license are available at https://www.dovepress.com/terms.php and incorporate the Creative Commons Attribution – Non Commercial (unported, v4.0) License (http://creativecommons.org/licenses/by-nc/4.0/). By accessing the work you hereby accept the Terms. Non-commercial uses of the work are permitted without any further permission from Dove Medical Press Limited, provided the work is properly attributed. For permission for commercial use of this work, please see paragraphs 4.2 and 5 of our Terms (https://www.dovepress.com/terms.php).

Rouzi et al conducted a cross-sectional study of women attending obstetrics and gynecology clinics in Saudi Arabia. They had a convenience sample of 296 women aged 18 to 57 years. The results represented that women who had a miscarriage history, reported feeling guilt, shame, and loneliness.[3]

On other hand stress is a state of worry or tension brought on by stressful circumstances.[4] In times of need, a social support network of neighbors, family, friends, and community members plays an important role in offering emotional and practical assistance.[5] Psychological stress is one of the common conditions among women who have experienced a miscarriage.[6] Women with high levels of negative emotions will be at greater risk of miscarriage, functional disability, and lower levels of well-being compared to women without recurrent miscarriage.[7] Providing the necessary skills to deal with stressful situations will reduce or eliminate psychological stress and negative emotions.[6]

Studies have also shown that some sociodemographic factors affecting the stress level and coping mechanism for women experiencing recurrent abortion. Baransel, and Uçar found that women with a higher level of education and financial income experience lower levels of stress.[8] Also, unemployment and experiencing pregnancy loss during the early gestational period (weeks 22–29) and late gestational period (weeks 38 and beyond) are among the factors that influence posttraumatic stress disorder in women.[8]

Providing support for women after miscarriage appears important for psychosocial well-being.[9] Social networks play an important role in supporting women following a miscarriage, and researchers have associated a positive support experience with lowering the level of sadness[10] because most women's social networks were understanding and empathic. Although most women reported high levels of support, others reported being disappointed with the level of empathy, acknowledgment, and support they received from their social networks following a miscarriage.[10] Also, the researchers found that women often felt that their family and friends did not understand their experience because there was a lack of recognition of their loss.

The researchers concluded that miscarriage lacks social recognition compared to the loss of a newborn or a family member.[10] They also reported that communicating with women who have previously miscarried was the most helpful support for them and provided a deeper understanding of their shared experience.[10]

While the importance of social support is well-established in reproductive health, its nature varies significantly across different outcomes. In the traditional postpartum period following a live birth, social support is often operationalized through emotional, informational, and instrumental dimensions—the latter frequently focusing on practical assistance with infant care and maternal adjustment. Conversely, social support following a miscarriage is uniquely complicated by disenfranchised grief and societal stigma.[11]

Women commonly felt alone and isolated in their feelings of sadness and loss because many of their friends and family were unaware they were even pregnant, or they did not know how to show them the support they needed at the time of their miscarriage.[10] In addition, researchers have shown that the combination of professional medical interventions, a better understanding of care, and providing adequate social support are effective elements in supporting the woman's psychophysical health.[9]

In another study, researchers found that social support can provide reassurance, clarification, discussion, and stability during stressful events, and even social support may vary depending on the country and culture.[12]

Affected women can use coping strategies to cope with and manage challenging circumstances. Research has indicated that women with higher levels of spirituality are able to manage their stressors.[13] Additionally, women with lower levels of education felt less capable in coping with the loss of their pregnancy.[13] Women used to talk and avoiding as coping strategies. Talking emphasizes conversation with their social circle for comfort and reciprocal support; avoiding emphasizes no contact with others and looking for distractions.[14] The most common excuse they gave for not talking about their loss was that they thought other people would react negatively and not be sympathetic. After losing a pregnancy, women would benefit from speaking openly and honestly without others forcing them to pretend or to divert attention away from their tragic experience.[14]

Social support and coping are the most important factors influencing stress levels. Social support tends to lower stress levels and elevate coping levels compared to those who feel isolated and lonely.[9] It also helps women process their feelings, reduce guilt, and deal more effectively with the miscarriage experience.[9]

Problem Statement

Lack of social support and excess stress during and after a miscarriage can have a serious negative impact on psychological and mental health. With miscarriages being a common experience, there remains inconsistency in the social support and

coping received after pregnancy loss. Also, without adequate social support women may feel isolated, alone, overwhelmed, stressed, sad and depressed, and with the absence of coping mechanism navigating through the process will be challenging and difficult. However, there is no research that brings together the three factors: stress, social support and coping. Also, some research was applied to a small sample size of society and specific areas, this study is significant since it's the first study to be conducted in Saudi Arabia, and studying the three factors; social support, stress, and coping.

Theoretical Study Framework

This study is grounded in the Transactional Model of Stress and Coping (Lazarus & Folkman, 1984), which conceptualizes stress as a dynamic interaction between the individual and their environment. In this framework, the experience of a miscarriage serves as the stressor. Through primary appraisal (measured by the PSS), the individual evaluates the extent of the loss. Secondary appraisal involves assessing available resources, where perceived social support (measured by the MSPSS) serves as a critical external resource that can buffer the psychological impact of the loss. The subsequent coping strategies (measured by the Brief-COPE) represent the transactional efforts to manage this imbalance. This model explains the observed correlations, suggesting that social support not only reduces perceived stress but also facilitates the mobilization of coping mechanisms necessary for psychological recovery.[15]

Study Objectives

The purpose of this study is to examine associations among perceived social support, stress, and coping strategies in Saudi women following miscarriage.

Our research objectives include the following:

1. The relationship between social support and coping among women who had a miscarriage
2. The relationship between stress and coping among women who had a miscarriage
3. The relationship between social support, stress, and coping among women who had a miscarriage

Study Question

What is the relationship between perceived social support, perceived stress, and the utilization of coping strategies among women in Saudi Arabia?

Study Hypothesis

Hypothesis (H1): Higher levels of perceived social support are significantly associated with lower levels of perceived stress.

Alternative hypothesis (H0): There is no significant relationship between perceived social support and perceived stress.

Materials and Methods

Research Design

We used a quantitative descriptive cross-sectional design with an online survey questionnaire from February 2024 to April 2024, which our target population used to answer the proposed research questions. We used the design to assess the correlation between social support, stress, and coping among women who had a miscarriage in Saudi Arabia. Additionally, in this study we explain the miscarriage experience of different individuals among Saudi women.

Sampling and Sample Size

We used convenience sampling for our data collection. Our target population was approximately 558,203 women in Saudi Arabia. According to Calculator.net, the sample size was 385 women, the confidence level was 95%, and the margin of error 5%. Response rate was 63.68% so the final included sample size was 270 women.

Inclusion and Exclusion Criteria

The inclusion criteria were women aged 18 years and older who had experienced a miscarriage once or recurrently within the last 2 years, and who could understand and read the Arabic language. The exclusion criteria were women with a history of psychiatric disorders and who had received anti-stress and depression medications.

Instrumentation and Data Collection Method

We used a self-administered online questionnaire comprising 4 parts. The first part contained sociodemographic data related to the participants' age, marital status, family size, and educational level. The second part contained the obstetric history related to gravidity (number of pregnancies), trimester (gestational age), prior pregnancy complications, and current pregnancy complications. The third part contained the medical history related to menstrual, reproductive, and family history as well as general health history including serious illnesses. The fourth part contained information on the scales we used.

Social Support

We gathered social support data using the Multidimensional Scale of Perceived Social Support (MSPSS). The MSPSS is a widely used questionnaire with 12 questions rated on a 7-point Likert-type scale. MSPSS utilizes a structured scoring system to evaluate support from three primary domains: Significant Others (items 1, 2, 5, and 10), Family (items 3, 4, 8, and 11), and Friends (items 6, 7, 9, and 12). While subscale scores are derived by averaging their respective items, the total perceived support is calculated by summing all 12 responses, resulting in a range from 12 to 84. Respondents are categorized into groups based on these total scores to define their level of perceived social support. A total score between 12 and 35 indicates low perceived support, while scores ranging from 36 to 60 represent medium perceived support. Individuals scoring between 61 and 84 are classified as having high perceived support.[16]

Perceived Stress

The Perceived Stress Scale (PSS) is a widely used questionnaire It consists of 10 items with 5 responses: never (0 points), almost never (1 point), sometimes (2 points), fairly often (3 points) and very often (4 points). A score of 0–13 would be considered low perceived stress, 14–26 moderate perceived stress, and 27–40 high perceived stress.[17]

Coping

The Brief-COPE scale It comprises 28 questions, with 4 responses: I have not been doing this at all (1 point), a little bit (2 points), a medium amount (3 points), and I have been doing this a lot (4 points). The scale can determine a respondent's coping style with scores on 3 subscales: Problem-Focused Coping (Items 2, 7, 10, 12, 14, 17, 23, 25), Emotion-Focused Coping (Items 5, 9, 13, 15, 18, 20, 21, 22, 24, 26, 27, 28), and Avoidant Coping (Items 1, 3, 4, 6, 8, 11, 16, 19).[18]

Tool Validity and Reliability

The study tool translated to Arabic then back translation into English was carried and compared it with the original version. Specialists in the King Abdulaziz University of Saudi Arabia's Faculty of Nursing modified the data collection tool to assess the content elements' validity and clarity. We conducted a pilot study among 30 participants to ensure the scales' reliability. We computed Cronbach's alpha coefficient for each scale and all items. The coefficient values for the MSPSS, PSS, and Brief-COPE scales were 0.84, 0.74, and 0.78, respectively. The results reported a high level of internal consistency between items included in each scale and between all items included in the data collection tool.

Data Collection Procedure

We translated the scales to ensure they were clear and understandable to the sample group, with no errors or obstacles. We then distributed them online to the target population with one response per user/IP address to prevent duplicates. We excluded those women who had experienced a miscarriage beyond the 2-year limitation and those with previous or current psychological illnesses. We also excluded those who were younger than 18 years old. We chose the online survey to ensure that responses were quick and as wide as possible. We distributed the questionnaire on social media such as WhatsApp, Telegram, and Twitter (X).

Ethical Considerations

We obtained ethical approval from the ethical committee of the Faculty of Nursing at King Abdulaziz University, Saudi Arabia on 13–12-2023 under reference number: 2B.57. Participation in our study was voluntary and anonymous. The study complies with the Declaration of Helsinki. Participants had the right to withdraw at any time, with their confidentiality and privacy of information maintained. We obtained their informed consent electronically before they commenced the survey. We undertook to protect the anonymous data and not to use it for any purposes other than those of this study.

Data Analysis

We conducted data analysis using IBM SPSS Statistics version 27 and visualization using Microsoft Excel 365. We presented quantitative data through mean (M) and standard deviation (SD). We calculated Cronbach's alpha coefficient to measure the survey's reliability. The Pearson correlation coefficient (r) was utilized to explore the bidirectional relationships between the quantitative variables: perceived social support, perceived stress, and the three coping domains (problem-focused, emotion-focused, and avoidant). PROCESS for SPSS Version 4.2 by Andrew F. Hayes (PROCESS is a regression-based modeling tool) were used to analyze the data to understand the direct effect of social support on stress and the indirect effect as mediated through adaptive and maladaptive coping strategies. A Multiple Linear Regression analysis was conducted to determine the extent to which perceived social support and specific coping styles (problem-focused and avoidant coping) could significantly predict levels of perceived stress. To ensure the validity of the regression results, Collinearity Statistics, including the Variance Inflation Factor (VIF), were assessed to confirm the absence of multicollinearity (with a threshold of $VIF < 5$). We assigned statistical significance to values below 0.05 and considered values below 0.01 as highly statistically significant.

Results

Sociodemographic Data

We had 270 participants' who completed the survey. For the sociodemographic characteristics in the study. Less than half of the participants n = 120 (44.4%)—were young adults aged 18–28 years, with the next largest age group being 29–39 years—n = 106 (39.3%). Only n = 44 (16.3%) of participants were over the age of 40. In terms of marital status, the majority n = 256 (94.8%) of participants were married, with small proportions being widowed n = 3 (1.1%) or divorced n = 11 (4.1%). The family size distribution shows that nearly half of participants n = 126 (46.7%) had families of 2 members, followed by 3-member families n = 57 (21.1%), 4-member families n = 38 (14.1%), 5-member families n = 28 (10.4%), and larger families of more than 6-members n = 21 (7.8%). Regarding educational level, over two-thirds of participants n = 182 (67.4%) had a graduate degree, n = 56 (20.7%) had a secondary education, and smaller proportions had postgraduate n = 22 (8.1%), medium n = 7 (2.6%), or primary n = 3 (1.1%) education levels. Table 1 presents additional information on these data.

Obstetric and Medical History

Regarding gravidity (number of previous pregnancies), nearly half of the participants n = 134 (49.6%) had experienced 3 or more previous pregnancies, whereas n = 71 (26.3%) were in their first and n = 65 (24.1%) in their second pregnancies. Regarding prior pregnancy complications, over half of participants n = 141 (52.2%) reported no previous complications. Among those who did experience complications, the most common were preterm birth n = 41 (15.2%), followed by other unspecified complications n = 54 (20.0%), hypertension n = 22 (8.1%), and gestational diabetes n = 12 (4.4%). The participants' family medical history shows that n = 127 (47.0%) reported no history of hypertension, diabetes, or heart disease. However, n = 74 (27.4%) had a family history of diabetes, n = 60 (22.2%) had a family history of hypertension, and n = 9 (3.3%) had a family history of heart disease. Table 1 presents additional information on these data.

Perceived Social Support

Table 2 presents the overall MSPSS scale and the 3 subscales measuring perceived social support from family, friends, and other sources. The total MSPSS scale had M = 5.36 and SD = 1.05 out of a possible 7, corresponding to a high overall perceived social support level. Examining the subscales, participants reported the highest level of support from

Table 1 Sociodemographic Characteristics, Obstetric and Medical History of the Participants in the Study

Variables		N	%
Age in years	18-28	120	44.4%
	29-39	106	39.3%
	40 years and more	44	16.3%
Marital status	Widow	3	1.1%
	Married	256	94.8%
	Divorced	11	4.1%
Family size	2	126	46.7%
	3	57	21.1%
	4	38	14.1%
	5	28	10.4%
	More than 6	21	7.8%
Educational level	Primary	3	1.1%
	Medium	7	2.6%
	Secondary	56	20.7%
	Graduate	182	67.4%
	Post-graduate	22	8.1%
Gravidity	First pregnancy	71	26.3%
	Second pregnancy	65	24.1%
	Third or more pregnancies	134	49.6%
Prior pregnancy complications	No complication	141	52.2%
	HTN	22	8.1%
	DM (gestational diabetes)	12	4.4%
	Preterm birth	41	15.2%
	Others	54	20.0%
Family history	HTN	60	22.2%
	DM	74	27.4%
	Heart disease	9	3.3%
	No history	127	47.0%

"other" sources, with M = 5.92, SD = 1.17 (84.5% relative weight), indicating high perceived support from sources outside of family and friends. The family support subscale had M = 5.49, SD = 1.20 (78.4% relative weight), reflecting a high social support level. In contrast, the friend support subscale had M = 4.66, SD = 1.55 (66.6% relative weight), indicating a moderate level of perceived social support from friends.

Support level scores: low < 3.0, moderate 3–5, high > 0.5. The majority (64.4%) had high supportive levels, whereas 33% had moderate levels of support. Only 2.6% had low supportive levels.

Table 2 MSPSS Scale and Subscale Statistics in the Study

Items	Mean	SD	Relative Weight	Support Level
Total MSPSS scale	5.36	1.05	76.5%	High
MSPSS scales:				
Family	5.49	1.20	78.4%	High
Friend	4.66	1.55	66.6%	Moderate
Other	5.92	1.17	84.5%	High

Perceived Stress Scale (PSS)

Table 3 shows the stress levels that the study participants experienced by as measured by the PSS. The results show that most participants n = 188 (69.6%) reported moderate stress levels. Smaller and equal proportions n = 41 (15.2% each) reported either low or high perceived stress. The total PSS score across all participants was M = 19.97, SD = 6.26. This mean score falls within the range typically associated with moderate stress levels, corroborating the findings that most of the participants experienced moderate stress.

Brief-COPE Scale

We assessed the different coping strategies with the Brief-COPE scale, categorized into 3 main domains: problem-focused coping, emotion-focused coping, and avoidant coping. For problem-focused coping, the participants showed the highest mean scores on planning (M = 3.0, SD = 0.83, 75.0% relative weight), active coping (M = 2.95, SD = 0.75, 73.7% relative weight), and positive reframing (M = 2.93, SD = 0.84, 73.1% relative weight). Use of informational support had a slightly lower mean (M = 2.81, SD = 0.88, 70.3% relative weight). The problem-focused coping strategies had M = 2.92, SD = 0.63, 73.0% relative weight, indicating a relatively strong tendency toward problem-solving and active approaches to managing stress.

For emotion-focused coping, the highest mean scores were for religion (M = 3.52, SD = 0.74, 87.9% relative weight) and acceptance (M = 3.15, SD = 0.85, 78.7% relative weight), suggesting participants frequently used these emotion-regulating strategies. Emotional support (M = 2.91, SD = 0.84, 72.9% relative weight) was also commonly utilized, whereas venting (M = 2.43, SD = 0.89, 60.7% relative weight) and self-blame (M = 2.17, SD = 1.00, 54.4% relative weight) were used to a lesser degree. The overall mean for emotion-focused coping was M = 2.63, SD = 0.49, 65.7% relative weight.

For avoidant coping, the participants reported the lowest mean scores, with an overall M = 1.99, SD = 0.49, 49.8% relative weight. Self-distraction had the highest mean (M = 2.75, SD = 0.88, 68.8% relative weight) among the avoidant strategies, whereas substance use had the lowest mean (M = 1.09, SD = 0.43, 27.3% relative weight), indicating infrequent use of this maladaptive coping mechanism. The total coping score scale was M = 2.51, SD = 0.24, with a relative weight of 50.2% MSPSS. Table 4 presents additional information on these data.

Table 3 Distributions of the Stress Levels Among the Participants in the Study

Stress Levels	N	%
Low stress	41	15.2%
Moderate stress	188	69.6%
High stress	41	15.2%
Total PSS scale (mean ± SD)	19.97 ± 6.26	

Notes: Stress level scores: low < 13, moderate 14–26, high > 27.

Table 4 Statistics of the Brief-COPE Subscales in the Study

Items	Mean	SD	Relative Weight
Problem-Focused Coping	2.92	0.630	73.0%
Active coping	2.95	0.752	73.7%
Use of informational support	2.81	0.879	70.3%
Positive reframing	2.93	0.835	73.1%
Planning	3.00	0.829	75.0%
Emotion-Focused Coping	2.63	0.492	65.7%
Emotional support	2.91	0.835	72.9%
Venting	2.43	0.897	60.7%
Humor	1.59	0.756	39.8%
Acceptance	3.15	0.852	78.7%
Religion	3.52	0.741	87.9%
Self-blame	2.17	1.004	54.4%
Avoidant Coping	1.99	0.495	49.8%
Self. Distraction	2.75	0.877	68.8%
Denial	2.08	0.911	51.9%
Substance use	1.09	0.425	27.3%
Behavioral disengagement	2.04	0.831	50.9%

Correlation Between Study Variables

Table 5 shows that the perceived stress demonstrated significant positive correlations with all coping styles—most notably Total Coping (r =0.280) and avoidant coping (r =0.242). Conversely, perceived social support appears to operate through a selective "adaptive pathway." While it significantly fosters problem-focused (r =0.237) and emotion-focused (r =0.268)

Table 5 Descriptive Statistics and Correlations Among Study Variables

Variables	Mean	SD	1	2	3	4	5	6	7	8	9
1. Family support	21.96	4.79	–								
2. Friends support	18.64	6.19	0.445**	–							
3. Others support	23.67	4.67	0.558**	0.407**	–						
4. Total MSPSS	64.27	12.57	0.808**	0.813**	0.785**	–					
5. Perceived Stress	22.39	5.27	0.044	−0.030	−0.022	−0.006	–				
6. Problem Focused Coping	23.37	5.04	0.203**	0.203**	0.159**	0.237**	0.208**	–			
7. Emotion Focused Coping	31.55	5.90	0.240**	0.138*	0.293**	0.268**	0.244**	0.670**	–		
8. Avoidant coping	15.92	3.96	0.086	0.093	0.083	0.110	0.242**	0.361**	0.448**	–	
9. Total coping	70.84	12.29	0.226**	0.179**	0.233**	0.261**	0.280**	0.848**	0.899**	0.685**	–

Notes: **Correlation is significant at the 0.01 level (2-tailed). *Correlation is significant at the 0.05 level (2-tailed).

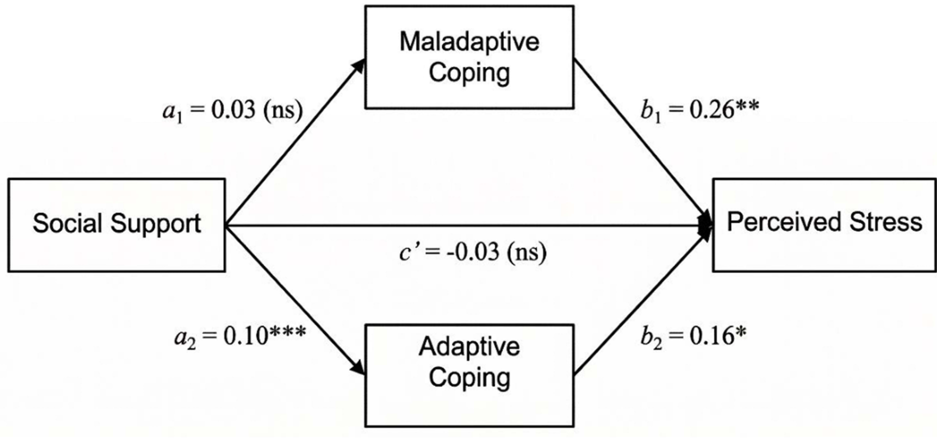

Figure 1 Relationship between social support and perceived stress with adaptive coping and maladaptive coping as mediator. The paths α1: the effect of social support on maladaptive coping, α2: the effect of social support on adaptive coping, b1: the effects of maladaptive coping on perceived stress, b2: the effect of adaptive coping on perceived stress and c′: the direct effect of social support on perceived stress after controlling for the mediators. Statistical significance for the path coefficients is denoted by asterisks: *p <0.05, **p <0.01, and ***p <0.001. Path coefficients that did not reach statistical significance (p >0.05) are labelled as (ns).

strategies, it bears no significant relationship with avoidant coping. Furthermore, the lack of a direct correlation between social support and stress (r = −0.006).

Figure 1 shows the parallel mediation model showing the relationship between Social Support (MSPSS) and Perceived Stress (PSS). Social support significantly predicts Adaptive Coping (a_2) but not Maladaptive Coping (a_1). Both coping styles are associated with higher stress (b_1, b_2). Only the indirect effect via adaptive coping is significant.

Table 6 shows the multiple linear regression analysis was performed to predict perceived stress based on perceived social support (MSPSS), problem-focused coping, and avoidant coping. The results indicated that the model was a significant predictor of stress (F (3, 266) = 7.61, p <0.001, R^2 =0.08). Avoidant coping was the strongest positive predictor of perceived stress (β= 0.19, p =0.002), followed by problem-focused coping (β = 0.15, p =0.018. Perceived social support, however, was not a significant predictor of stress in this model (p =0.294). Collinearity statistics indicated no issues with multicollinearity, as all VIF values were well below 5.

Discussion

The objective of this study was to evaluate the intricate correlation between social support, stress, and coping mechanisms among women who have experienced a miscarriage in Saudi Arabia. Miscarriage is a critical life event that elicits complex psychosocial reactions. Our findings indicate that despite the emotional trauma associated with pregnancy loss, the participants generally perceived high levels of social support, with an overall mean score of 5.36 ± 1.05 on the Multidimensional Scale of Perceived Social Support (MSPSS). Interestingly, the highest level of support was attributed to "other" sources (84.5% relative weight, mean = 5.92), suggesting that in the Saudi context, broader social networks or formal support systems —such as community groups or professional help—play a vital role. This aligns with Wittenborn et al,[19] who noted that "other" subscales often score highest in specific populations. However, our findings regarding friend support (mean= 4.66),

Table 6 Multiple Regression Analysis Predicting Perceived Stress (PSS)

Predictor	B	SE	β	t	p	95% CI	VIF
Constant	16.26	02.09	—	7.78	<0.001	[12.14,20.37]	—
Social Support (MSPSS)	−0.03	0.03	−0.06	−1.05	0.294	[−0.08,0.02]	01.06
Problem-Focused Coping	0.16	0.07	0.15*	2.37	0.018	[0.03,0.29]	1.21
Avoidant Coping	0.26	0.08	0.19**	03.06	0.002	[0.09,0.42]	1.15

Notes: **Correlation is significant at the 0.01 level (2-tailed). *Correlation is significant at the 0.05 level (2-tailed.

https://doi.org/10.2147/IJWH.S558465

which scored the lowest, contrast with Maghade et al,[20] where friend support was the primary source in an Indian sample. This discrepancy likely reflects sociocultural differences; while India may emphasize immediate relational networks, Saudi Arabia's community-oriented culture may prioritize broader formal and family-based structures during stressful periods.

Regarding perceived stress, the majority of participants (69.6%) reported moderate stress levels, with a total mean Perceived Stress Scale (PSS) score of 19.97 ± 6.26. These results are consistent with Gao et al,[12] who reported that women with a history of recurrent miscarriage experience moderate stress. The distribution of stress in our study, where equal proportions (15.2%) experienced either low or high stress, suggests the need for tailored interventions. For those experiencing high stress, clinical management is paramount, while resilience-building programs may benefit those with lower stress levels to prevent future escalation.

The analysis of coping strategies through the Brief-COPE scale revealed a strong inclination toward adaptive mechanisms. The highest mean scores were observed for religion (3.52 ±0.74) and acceptance (3.15±0.85). This frequent use of emotion-regulating strategies is often documented in Middle Eastern and religious populations as a primary means of managing bereavement [22]. Problem-focused strategies, such as planning (mean = 3.0) and active coping (mean = 2.95), also demonstrated high relative weights (>73). In contrast, avoidant coping strategies received the lowest overall mean (1.99), with substance use being the least utilized mechanism (1.09). However, we detected a significant positive correlation between total stress and the avoidant coping subscale ($r = 0.25$, $p < 0.01$). This indicates that as stress levels increase, individuals may resort to less effective strategies like denial or self-distraction, which may offer temporary relief but are linked to poorer long-term psychological health.[21,22]

A significant contribution of this study is the clarification of the "adaptive pathway" between social support and stress. We found a significant positive correlation between total social support and both problem-focused ($r = 0.24$) and emotion-focused coping ($r = 0.27$). This suggests that individuals perceiving higher levels of support are more likely to employ active problem-solving and effective emotional regulation. This aligns with Chen et al,[23] who observed that adequate support facilitates more effective coping strategies. Furthermore, while there was a significant negative correlation between total social support and stress ($r = -0.19$, $p < 0.001$), our mediation analysis revealed that the effect of social support on stress was fully mediated through adaptive coping. Unlike the findings of Chen et al,[23] who noted a direct effect on depression, our results suggest that in the context of miscarriage, support primarily works by bolstering the individual's coping resources rather than directly easing the distress.

Finally, the multiple linear regression model identified avoidant coping as the strongest positive predictor of perceived stress ($\beta = 0.19$, $p = 0.002$), followed by problem-focused coping ($\beta = 0.15$, $p = 0.018$). This supports the "mobilization of resources" model, suggesting that high distress triggers a variety of coping efforts, both adaptive and maladaptive, to manage the emotional strain. The lack of a significant correlation between social support and avoidant coping ($p = 0.07$) further implies that avoidant mechanisms are likely influenced by individual personality traits or situational severity rather than the level of external support available. These findings underscore the importance of interventions that not only strengthen support networks but also actively encourage the development of adaptive coping skills to enhance long-term adjustment following pregnancy loss.[22,24]

Strengths and Limitations

Our study's strength lies in our trying to find out the extent to which the miscarriage experience relates to social support, stress, and coping among women in Saudi Arabia who had a miscarriage within the last 2 years. We used 3 scales to conduct our study: the MSPSS, PSS, and Brief-COPE.

Our study limitations include small sample size. 590 women entered the survey, but only 270 met our study criteria. Second, owing to time constraints, we used convenience sampling. Results from this sampling are not typical. The information we might get from a convenience sample does not represent the whole community.

Implications

Theoretical Implications

The study's findings provide significant empirical support for the Transactional Model of Stress and Coping within the specific cultural and regional context of Saudi Arabia. By demonstrating the significant correlations between perceived

stress, social support, and coping, the results reinforce the theoretical premise that social resources serve as critical tools during the secondary appraisal process, directly influencing how a stressor is managed. Furthermore, the study contributes to the literature by contextualizing these variables within a collectivist society, suggesting that the "buffer" against stress is deeply integrated into religious and family structures. This adds a necessary cultural nuance to existing psychological theories, specifically regarding how high religious coping and family support function together to facilitate recovery. Finally, the positive correlation identified between stress and coping suggests a theoretical mechanism where perceived stress acts as a catalyst for cognitive mobilization, prompting individuals to engage more actively with available coping resources to restore psychological equilibrium.

Practical Implications

The practical implications of these findings are extensive, influencing healthcare sectors, community structures, and educational systems. In terms of healthcare, integrating these findings into patient care protocols is essential; hospitals and clinics can enhance services by offering comprehensive support, including specialized counseling programs that emphasize external support networks alongside family and friends. Training healthcare providers to recognize signs of inadequate social support and high stress can facilitate timely referrals to mental health services, ensuring that psychological needs are addressed alongside physical recovery. Additionally, the establishment of professional counseling and formal support systems within hospitals—such as tailored therapy sessions—can significantly enhance the recovery environment.

On a community and policy level, centers should leverage the significance of broader social networks to establish dedicated support groups for those affected by miscarriage, providing a vital platform for sharing experiences and adaptive strategies. Educational initiatives also play a crucial role in raising awareness and reducing the stigma associated with pregnancy loss among both the public and professionals. Regarding policy, the findings support the implementation of comprehensive access to diverse support forms, including mental health services as a standard component of post-miscarriage care and the promotion of paternity or family leave to allow partners to provide essential support. In the workplace, employers can utilize this information to support employees by offering flexible working conditions and access to counseling, which aids in reducing stress and facilitating better coping during the recovery period. Finally, encouraging ongoing research remains vital to developing increasingly tailored interventions that address the specific demographic needs of women experiencing miscarriage.

Conclusion

This study examined the relationships between social support, stress, and coping among women following a miscarriage. Our findings indicate that social support does not directly reduce stress, but instead functions by fostering adaptive coping strategies. While higher stress levels were associated with increased overall coping efforts ($r = 0.28$), avoidant coping emerged as the strongest predictor of perceived stress ($\beta = 0.19$, $p = 0.002$). These results emphasize that support systems are most effective when they empower women to utilize active problem-solving rather than avoidant behaviors. Consequently, interventions should be tailored to move beyond general emotional support, focusing instead on building specific adaptive resources to improve long-term psychological well-being.

Data Sharing Statement

The data that support the findings of this study are available upon reasonable request from the corresponding author. The data are not publicly available due to privacy and ethical restrictions.

Ethics Approval and Informed Consent

Ethical approval was obtained. Consent for Publication Consent for publication was obtained from the relevant units.

Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

Funding

There is no funding to report.

Disclosure

The authors declare that they have no known competing financial interests or personal relationships that could have influenced the work reported in this paper.

References

1. Mayo Clinic. Miscarriage. Symptoms and causes; 2023. Available from: https://www.mayoclinic.org/diseases-conditions/pregnancy-loss-miscarriage/symptoms-causes/syc-20354298. Accessed June 30, 2024.
2. American Psychological Association. Coping. APA Dictionary of Psychology; 2018. Available from: https://dictionary.apa.org/coping. Accessed June 30, 2024.
3. Rouzi AA, Alamoudi R, Turkistani J, et al. Miscarriage perceptions and experiences among Saudi women. *Clin Exp Obstet Gynecol*. 2020;47(2):208–214. doi:10.31083/j.ceog.2020.02.5088
4. World Health Organization. Stress; 2023. Available from: https://www.who.int/news-room/questions-and-answers/item/stress. Accessed June 30, 2024.
5. Ozbay F, Johnson DC, Dimoulas E, Morgan CA, Charney D, Southwick S. Social support and resilience to stress: from neurobiology to clinical practice. *Psychiatry.* 2007;4(5):35–40.
6. Li G, Jiang Z, Han X, et al. A moderated mediation model of perceived stress, negative emotions and mindfulness on fertility quality of life in women with recurrent pregnancy loss. *Qual Life Res*. 2020;29(7):1775–1787. doi:10.1007/s11136-020-02460-2
7. Tavoli Z, Mohammadi M, Tavoli A, et al. Quality of life and psychological distress in women with recurrent miscarriage: a comparative study. *Health Qual Life Outcomes*. 2018;16(1):150. doi:10.1186/s12955-018-0982-z
8. Baransel ES, Uçar T. Posttraumatic stress and affecting factors in couples after perinatal loss: a Turkish sample. *Perspect Psychiatr Care*. 2020;56(1):112–120. doi:10.1111/ppc.12390
9. Iwanowicz-Palus G, Mróz M, Bień A. Quality of life, social support and self-efficacy in women after a miscarriage. *Health Qual Life Outcomes*. 2021;19(1):16. doi:10.1186/s12955-020-01662-z
10. Bellhouse C, Temple-Smith MJ, Bilardi JE. "It's just one of those things people don't seem to talk about…" women's experiences of social support following miscarriage: a qualitative study. *BMC Womens Health*. 2018;18:176. doi:10.1186/2Fs12905-018-0672-3
11. Lochmannová A, Martin CR. Exploring the role of social support in postpartum well-being with a psychometric approach. *Bratisl Med J*. 2025;126:569–579. doi:10.1007/s44411-025-00060-5
12. Gao L, Qu J, Wang AY. Anxiety, depression and social support in pregnant women with a history of recurrent miscarriage: a cross-sectional study. *J Reprod Infant Psychol*. 2020;38(5):497–508. doi:10.1080/02646838.2019.1652730
13. Moafi F, Momeni M, Tayeba M, Rahimi S, Hajnasiri H. Spiritual intelligence and post-abortion depression: a coping strategy. *J Relig Health*. 2021;60(1):326–334. doi:10.1007/s10943-018-0705-0
14. Fernández-Basanta S, Van P, Coronado C, Torres M, Movilla-Fernández MJ. Coping after involuntary pregnancy loss: perspectives of Spanish European women. *Omega*. 2021;83(2):310–324. doi:10.1177/0030222819852849
15. Lazarus RS, Folkman S. Transactional theory and research on emotions and coping. *Eur J Personal*. 1987;1(3):141–169. doi:10.1002/per.241001
16. Zimet GD, Dahlem NW, Zimet SG, Farley GK. The multidimensional scale of perceived social support. *J Pers Assess*. 1988;52(1):30–41. doi:10.1207/s15327752jpa5201_2
17. Cohen S, Kamarck T, Mermelstein R. A global measure of perceived stress. *J Health Soc Behav.* 1983;24(4):385–396. doi:10.2307/2136404
18. Carver CS. Coping orientation to problems experienced inventory (Brief-COPE). NovoPsych; 2023. Available from: https://novopsych.com.au/assessments/formulation/brief-cope/. Accessed June 30, 2024.
19. Wittenborn AK, Natamba BK, Rainey M, Zlotnick C, Johnson J. Suitability of the multidimensional scale of perceived social support as a measure of functional social support among incarcerated adults with major depressive disorder. *J Community Psychol*. 2020;48(3):960–976. doi:10.1002/jcop.22315
20. Maghade MA, Singh DA, Faye AD, et al. A study of depressive features and perceived social support in patients with miscarriage. *Indian J Ment Health*. 2018;5(4):412. doi:10.30877/IJMH.5.4.2018.412-418
21. Noda Y, Asano K, Shimizu E, Hirano Y. Assessing the association between probable posttraumatic stress disorder symptoms and quality of life among emergency service workers using path analysis. *Work*. 2024;77(2):573–587. doi:10.3233/wor-220551
22. Bialek K, Sadowski M, Adamczyk-Gruszka O, Mlodawski J, Swiercz G. Basic hope, level of stress and strategies used to cope with stress after miscarriage during hospitalization and 3 months after its completion. *Ginekol Pol*. 2023;95(1):22–31. doi:10.5603/gpl.96215
23. Chen Z, Li Y, Chen J, Guo X. The mediating role of coping styles in the relationship between perceived social support and antenatal depression among pregnant women: a cross-sectional study. *BMC Pregnancy Childbirth*. 2022;22:188. doi:10.1186/s12884-022-04377-9
24. Quenby S, Gallos ID, Dhillon-Smith RK, et al. Miscarriage matters: the epidemiological, physical, psychological, and economic costs of early pregnancy loss. *Lancet*. 2021;397(10285):1658–1667. doi:10.1016/s0140-6736(21)00682-6

International Journal of Women's Health

Dovepress
Taylor & Francis Group

Publish your work in this journal

The International Journal of Women's Health is an international, peer-reviewed open-access journal publishing original research, reports, editorials, reviews and commentaries on all aspects of women's healthcare including gynecology, obstetrics, and breast cancer. The manuscript management system is completely online and includes a very quick and fair peer-review system, which is all easy to use. Visit http://www.dovepress.com/testimonials.php to read real quotes from published authors.

Submit your manuscript here: https://www.dovepress.com/international-journal-of-womens-health-journal