



# The relationship between postpartum mothers' dyadic coping and adjustment and psychological well-being

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## Abstract

This study determines the relationship between postpartum mothers' dyadic coping and adjustment strategies and their psychological well-being. The study design was descriptive and correlational; it was conducted in the pediatric outpatient clinic of a maternity hospital in Northern Türkiye. A total of 327 1–12 month postpartum mothers participated in the study. Data were collected using a personal information form, the Dyadic Coping Inventory (DCI), the Revised Dyadic Adjustment Scale (RDAS), and the Psychological Well-Being Scale. Mothers' behavior as an individual and as a couple in dyadic coping, their perception of their partner's behavior, and weak dyadic harmony between partners was significantly associated with risk factors affecting mothers' psychological well-being ( $p < 0.05$ ). A weak relationship was found between the dimensions of mothers' psychological well-being and their perception of their own behavior in dyadic coping; a positive moderate relationship was found between mothers' perception of their partner's behavior in dyadic coping and behaviors exhibited as a couple in dyadic coping, and the former had a weak positive relationship with the dimensions of dyadic harmony and its subdimensions ( $p < 0.05$ ). Self-perceived coping behavior, perception of the partner's behavior, and joint coping behavior in dyadic coping, and weak dyadic harmony between partners were significant risk factors affecting mothers' psychological well-being. Awareness of these factors by health professionals and individuals will increase the effectiveness of postpartum care and help couples adapt to the transition in the postpartum period, improve mother-father-infant interaction and strengthen dyadic harmony.

**Keywords** Dyadic adjustment · Dyadic coping inventory · Psychological well-being · Postpartum period · Mother

## Introduction

Postpartum, which can also be referred to as the fourth trimester, is a transition period when the family and undergoes emotional, physical, and social adaptation and integrates with the baby (Yiğitbaş & Ada, 2019). During this period, mothers not only have to cope with their own needs and problems and continue their daily lives but also meet the needs of the baby and adapt to this new situation (Florsheim, & Burrow-Sanchez, 2021). Not all women are able to successfully cope with this change, which can increase

their stress. Therefore, this period represents a potentially stressful transition that can negatively affect the individual and relational well-being of both partners (Molgora et al., 2022). This period is marked by high levels of stress and is often accompanied by declines in couples' quality of life and relationship satisfaction (Ngai & Lam, 2021). Studies show that couples' mental health and marital relationships are affected, especially during pregnancy and the early postpartum period (Ngai & Lam, 2021; Qobadi et al., 2016). Although for some parents, motherhood and fatherhood are significant milestones of self-actualization, for others, being a mother and father symbolizes the restriction of their freedom, sleepless nights, and impaired social life (Hagger & Hamilton, 2019). During this transition to parenthood, both partners need to cope not only with their own stress but also with the needs of their partner and the shared stress of the couple. Decades of research has consistently shown that stress poses a risk not only for individual functioning but also for couples' relationships (Falconier et al., 2015b). It is

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believed that the well-being and satisfaction of one partner highly depends on the well-being and satisfaction of their spouse. Therefore, both partners should be motivated to help each other cope with stress (Breitenstein et al., 2018; Kurt & Akbaş, 2019). Mothers who do not receive the love, communication, and support they expect from their partners feel isolated and lonely. Particularly, this negatively affects the psychological well-being of mothers during the postpartum period (Falconier et al., 2015b; Lévesque et al., 2020).

In the postpartum period, partners may experience mental health problems in cognitive, affective, and behavioral dimensions (Hagger & Hamilton, 2019). Psychological well-being, which has cognitive, affective, and behavioral dimensions, is based on a holistic understanding of the state of mental well-being. The psychological well-being of the mother is an issue that should be carefully addressed considering the quality of their first interactions with the newborn and its impact on infant development and the overall functioning of the family (Molgora & Accordini, 2020). Indeed, because raising physically and mentally healthy future generations is highly dependent on mothers' well-being, the psychological well-being of mothers is very important not only in terms of their individual health but also public health. In the literature, no study examines dyadic coping, dyadic adjustment, and Psychological Well-Being variables simultaneously for mothers in the postpartum period. On the other hand, while it is accepted that there is a relationship between these concepts, the direction and level of the relationship are not clearly stated. Therefore, this study examines the relationship between dyadic coping and adjustment strategies and the psychological well-being of postpartum mothers. In this way, the study results can help fill the gaps in the literature on this subject. At the same time, health professionals can improve the care they provide to spouses by increasing their awareness of these factors that may affect the psychological well-being of individuals in the postpartum period. Also, it can contribute to the development of programs that include the joint participation of spouses in postnatal care and follow-up.

## Research questions

1. Is there a relationship between the own, partner's, and joint coping behavior of postpartum mothers and their psychological well-being?
2. Is there a relationship between the dyadic adjustment of postpartum mothers and their psychological well-being?
3. Do mothers' dyadic coping and adjustment strategies affect their psychological well-being?

## Methods

### Study design

A descriptive and correlational study was employed.

### Study setting

The study was conducted in the pediatric outpatient clinic of a maternity hospital in Northern Türkiye. We chose this hospital because women from various socioeconomic levels in the Black Sea Region are frequently admitted from neighboring provinces and an average of 7,000 outpatients per month are treated there.

### Participants

Mothers who visited the pediatric outpatient clinics of the hospital for follow-ups (for vaccination or breastfeeding support) and met the study criteria were included in the study. The inclusion criteria for the study were being 18 years of age or older, having a spouse/partner, being heterosexual, having given a timely birth (after the 37th week), having a healthy baby weighing 2,500 g or more, the latest birth having been a singleton birth, having a baby between 1 and 12 months old, being able to speak and write Turkish, having no communication problems, and volunteering to participate in the study. The exclusion criteria were perinatal death (e.g., congenital abnormality) or stillbirth, postpartum complications (hemorrhage, puerperal infection, mastitis, thromboembolic disease), psychiatric disorders, and psychiatric medication use.

### Study population, sample size, and sampling strategy

The mothers who applied to the pediatric outpatient clinic of the hospital between November 25, 2022, and May 30, 2023, constituted the population of the study. As there was no average for the psychological well-being of the participants, the study sample was calculated with power analysis performed using G.Power-3.1.9.2 software (Faul et al., 2007). The power analysis found 95% power, 5% Type I error level, and 0.2 effect size, and it was determined that 327 mothers should be included in the sample. Mothers who met the inclusion criteria were included in the study using convenience sampling. Post-hoc power analysis was based on the correlation between the Revised Dyadic Adjustment Scale (RDAS) and Psychological Well-Being scales. The post-hoc effect size of the study was calculated as 0.65, and the post-hoc power was calculated as 100%.

## Data collection

The data were collected between November 25, 2022, and May 30, 2023, via face-to-face interviews. The interviews with the participants were conducted in a private room in the pediatric outpatient clinic. Before data collection, each participant was informed about the purpose and method of the study. They were informed that the data obtained would only be used within the scope of the study, that their names would not be disclosed, and that they were free to decide to participate in the study. No incentive payments were made to mothers to encourage their participation in the study. Each form took approximately 10–15 min to complete. Data were collected through a personal information form, the Dyadic Coping Inventory (DCI), the Revised Dyadic Adjustment Scale (RDAS), and the Psychological Well-Being Scale.

## Personal information form

This form, prepared by the researchers in line with the literature (Breitenstein et al., 2018; Florsheim & Burrow-Sanchez, 2021; Hagger & Hamilton, 2019; Kurt & Akbaş, 2019), comprised 21 questions and aimed to determine the sociodemographic characteristics (age, education level, employment status, etc.) of the participants, their dyadic coping strategies, and the factors that could potentially affect their dyadic adjustment postpartum.

## Dyadic coping inventory (DCI)

The inventory was developed by Bodenmann (2008) as a self-report instrument designed to measure dyadic coping between partners and the partners' behaviors under stress. The inventory employs a 5-point Likert-type scale and consists of 37 items. Items are rated on a from 1 ("never") to 5 ("always"). The inventory has 12 subscales. The subscales related to self-perception are (1) Stress communicated by oneself, (2) Emotion-focused supporting by oneself, (3) Problem-focused support by oneself, (4) Delegated dyadic coping by oneself, and (5) Negative dyadic coping by oneself; the subscales related to the perception of the partner are (6) Stress communication with the partner, (7) Emotion-focused supporting with the partner, (8) Problem-focused supporting with the partner, (9) Delegated dyadic coping by the partner, and (10) Negative dyadic coping by the partner; and the subscales related to joint coping behavior are (11) Emotion-focused partner coping and (12) Problem-focused partner coping. The inventory is scored in the form of total points from the three dimensions of dyadic coping, namely, the individual's perception of their own behavior, their perception of their partner's behavior, and joint coping behavior; moreover, the subscales are scored separately. The

validity and reliability of the Turkish version of the scale were verified by Kurt and Akbaş (2019). In the internal consistency analysis performed to determine the reliability of the inventory, the Cronbach's Alpha was 0.68 for the individual's perception of their own behavior, 0.78 for their perception of their partner's behavior, and 0.84 for joint coping behavior. In this study, the Cronbach's Alpha was 0.74 for the individual's perception of their own behavior, 0.70 for their perception of their partner's behavior, and 0.85 for joint coping behavior.

## Revised dyadic adjustment scale (RDAS)

RDAS was developed by Spanier (1976) to assess the relationship satisfaction of couples that are married or cohabiting. Busby et al. (1995) reorganized the couple adjustment scale consisting of 32 items and reduced it to 14 items. The validity and reliability of the Turkish version of the scale were verified by Gündođdu (2007). The psychometric values of the scale were then calculated and revised by Bayraktarođlu and akıcı (2017). At the end of their study, the items on the scale remained the same; however, there were changes in the items collected in the subscales. The scale comprises 14 items rated on a 5-point Likert-type scale ranging from 1 ("never") to 5 ("always"). Items 7, 8, 9, and 10 are reverse scored. Scale scores vary between 14 (minimum) and 70 (maximum). A high score indicates high relationship satisfaction. The Cronbach's Alpha of the RDAS, consisting of three subscales, is 0.87 for the entire scale and 0.80 for Satisfaction, 0.80 for Consensus, and 0.74 for Conflict. In this study, the Cronbach's Alpha was 0.84 for the entire scale and 0.70 for Satisfaction, 0.80 for Consensus, and 0.70 for Conflict.

## Psychological well-being scale

This eight-item scale was developed to assess the level of psychological well-being of an individual (Diener et al., 2009). The scale was adapted into Turkish and its Cronbach's Alpha was 0.87 (Telef, 2013). The scale consists of eight items, which are scored on a 7-point Likert-type scale from 1 (strongly disagree) to 7 (strongly agree). All items are positively worded. The scale scores vary between 8 (minimum) and 56 (maximum). A high score indicates that the person has many psychological resources and strengths. In this study, the Cronbach's Alpha of the scale was 0.88.

## Data evaluation

The obtained data were analyzed using SPSS 25.0 (IBM SPSS Statistics for Windows, Version 25.0) after the researchers conducted error checks. As the skewness and

kurtosis values of all the scales varied between  $-1.50$  and  $+1.50$  in the normality analysis, independent sample t-tests were performed. Numbers, percentages, arithmetic mean, and standard deviation (SD) were used for descriptive statistics. Mean differences were calculated using one-way analysis of variance (ANOVA) to test the significance of the difference between the three means, and by independent sample t-test to test the significance of the difference between the two means. Analysis of variance (ANOVA) (further analysis by Tukey HSD) was used to evaluate the education status, which was a significant multiple group according to the independent variables. Pearson correlation analysis was performed to evaluate the relationship between two continuous variables: age, infant's age (in months), years of marriage, own CDI, spouse CDI, joint CDI, RDAS total score, and its sub-dimensions satisfaction, consensus, and conflict. Multiple linear regression analysis was performed to evaluate the factors affecting psychological well-being. Significant Self CDI, Spouse CDI, Joint CDI, and RDAS (total score) were included in the regression analysis. As there was a very high correlation between the subdimensions of the RDAS, only the mean total score was included in the regression model. In the statistical evaluation, the significance level was considered as  $p < 0.05$ .

### Ethical principles of research

The study was conducted in accordance with the principles and ethical standards set forth in the 1964 Declaration of Helsinki and its subsequent amendments. Ethical approval for the study was sought and obtained from the ethics committee of the university (Date: November 25, 2022, No: 2022–933) and institutional approval was obtained from the relevant hospital (Institution approval #: blinded for review). Data collection was initiated after obtaining the approval of the ethics committee and the institution. Written and verbal consent to participate in the study was obtained from all participants.

### Results

Table 1 presents the comparison of the personal characteristics of the mothers and their psychological well-being. The mothers who participated in our study had a mean age of 28.5 years (SD: 5.59) and their infants were 5.3 (SD: 3.4) months old on average. All participants were married for an average of 6.6 (SD: 5.2) years. All participants gave birth at term and had a healthy newborn. It was found that mothers with university degrees had better psychological well-being than mothers with primary and high school degrees ( $p < 0.05$ , Table 1). The psychological well-being of mothers

who experienced marital and psychological problems during pregnancy and the postpartum period was lower than those who had not experienced these problems ( $p < 0.05$ , Table 1). The participants' mean Psychological Well-Being Scale score was 45.8 (SD: 7.9) and the mean score from the total DCI was 55.1 (SD: 7.7). The mean scores for mothers' DCI was 49.8 (SD: 6.4), the mean score of their partner's DCI was 48.7 (SD: 9), and their joint DCI scores was 30.1 (SD: 6.5).

Table 2 presents the participants' level of psychological well-being and their age, their child's age (in months), duration of marriage, number of pregnancies, and the correlation coefficients of the subscales of the DCI and RDAS. A weak relationship was found between the psychological well-being of the participants and their own DCI scores, and a moderate and positive relationship was found between their partner's and their joint DCI scores ( $p < 0.001$ , Table 2). In addition, a weak and positive relationship was found between the psychological well-being of the participants and their scores from the Dyadic Adjustment Scale and its subdimensions ( $p < 0.001$ , Table 2).

Table 3 presents the linear regression analysis of the risk factors that may affect mothers' psychological well-being. Linear regression was performed to evaluate the effect of seven independent variables that were determined to be related in the correlation analysis on the psychological well-being of the mothers. As there was a very high autocorrelation between the total RDAS score and its subdimension scores, only the mean total RDAS score was included in the regression model. The regression model for risk factors that may affect mothers' psychological well-being was significant ( $F = 33.873$ ,  $p < 0.001$ ) and explained 28% of the variance (Table 3). In light of the findings of the regression analysis, participants' own behavior in dyadic coping, perception of their partner's behavior in dyadic coping, joint dyadic coping behavior, and weak dyadic harmony were found to be significant risk factors affecting mothers' psychological well-being ( $p < 0.05$ , Table 3).

### Discussion

This study is the first in the literature to investigate the relationship between dyadic coping strategies and adjustment with the psychological well-being of postpartum mothers. Therefore, we believe that this study makes important contributions to the postpartum literature.

The Psychological Well-Being Scale scores of the participants were found to be 45.8 (SD 7.9). So far, there are no studies in the literature evaluating postpartum mothers' psychological well-being using the same scale. In the study conducted by Çankaya and Ataş (2023) to determine

**Table 1** Comparison of Mothers' Personal Characteristics and Psychological Well-being

Characteristics	Psychological Well-Being			
	n (%)	Mean (SD)	t/ F	p-value
Education status				
Primary school <sup>a</sup>	94 (28.7)	44.7 (8.3)	$F = 4.183$ $c > a, b$	<b>0.016</b>
High School <sup>b</sup>	135 (41.3)	45.3 (9)		
University <sup>c*</sup>	98 (30)	47.7 (5.4)		
Employment status				
Employed	73 (22.3)	47 (7.6)	$t = -1.461$	0.147
Unemployed (housewife)	254 (77.7)	45.5 (8)		
Partner's employment status				
Employed	299 (91.4)	46.1 (7.8)	$t = 1.493$	0.146
Unemployed	28 (8.6)	43.3 (9.5)		
Perception of socioeconomic level				
Good	76 (23.2)	46.2 (7.7)	$F = 1.037$	0.356
Bad	226 (69.1)	45.9 (8)		
Middle	25 (7.6)	43.7 (8.1)		
Family type				
Nuclear	262 (80.1)	46.2 (7.8)	$t = 1.607$	0.111
Extended	65 (19.9)	44.4 (8.2)		
Form of marriage				
Arranged marriage	58 (17.7)	44 (10.2)	$t = -1.569$	0.121
Love marriage	269 (82.3)	46.2 (7.3)		
Existence of marital problems				
Yes	23 (7)	40.5 (10.3)	$t = -2.626$	<b>0.015</b>
No	304 (93)	46.2 (7.6)		
Desirability of pregnancy				
Yes	271 (82.9)	46.1 (8.2)	$t = 1.654$	0.101
No	56 (17.1)	44.4 (6.6)		
Number of pregnancies				
1	129 (39.4)	46.3 (7.7)	$t = 0.809$	0.419
2 and above	198 (60.6)	45.6 (8.1)		
Status of attending regular pregnancy check-ups				
Yes	309 (94.5)	45.7 (8)	$t = -1.833$	0.081
No	18 (5.5)	48.5 (6.2)		
Chronic disease status during pregnancy (such as diabetes or hypertension)				
Yes	88 (26.9)	45.3 (8)	$t = -0.764$	0.446
No	239 (73.1)	46 (7.9)		
Psychological problems during pregnancy				
Yes	132 (40.4)	44.6 (8.2)	$t = -2.201$	<b>0.029</b>
No	195 (59.6)	46.6 (7.7)		
Delivery method				
Vaginal delivery	106 (32.4)	45.1 (9.1)	$t = -1.030$	0.304
Cesarean section	221 (67.6)	46.2 (7.3)		
Having psychological problems after childbirth				
Yes	122 (37.3)	44.6 (8.4)	$t = -2.134$	<b>0.034</b>
No	205 (62.7)	46.6 (7.6)		
Receiving support from partner or family on issues such as breastfeeding, infant care, and housework during the postpartum period				
Yes	249 (76.1)	46 (7.1)	$t = 0.547$	0.586
No	78 (23.9)	45.3 (10.1)		
Whether the partner wanted to have a child				
He did	281 (85.9)	46.1 (7.8)	$F = 0.710$	0.546
He did but later	28 (8.6)	44.3 (8.4)		

**Table 1** (continued)

Characteristics	Psychological Well-Being			
	n (%)	Mean (SD)	t/ F	p-value
He did not neither now nor in the future	7 (2.1)	43.1 (12.2)		
He did not but accepted after birth	11 (3.4)	45.4 (6.8)		

Note: t: independent sample t-test; SD: standard deviation; F: one-way analysis of variance

\* analysis of variance (advanced analysis Tukey HSD)

In bold:  $p < 0.05$  is statistically significant.

**Table 2** The Relationship between the Participants' Psychological Well-being and Age, the Baby's Age, Duration of Marriage, and the Subscales of the Dyadic Coping Scale and Revised Dyadic Adjustment Scale

Variable	Psychological Well-Being	
	Pearson r	p
Age	-0.002	0.972
Age of the child (in months)	0.072	0.193
Duration of marriage	-0.079	0.155
Number of pregnancies	0.044	0.423
Own DCI score	0.225	<b>&lt; 0.001</b>
Partner's DCI score	0.486	<b>&lt; 0.001</b>
Joint DCI score	0.441	<b>&lt; 0.001</b>
RDAS	0.428	<b>&lt; 0.001</b>
Satisfaction*	0.347	<b>&lt; 0.001</b>
Consensus*	0.381	<b>&lt; 0.001</b>
Conflict*	0.302	<b>&lt; 0.001</b>

Notes: DCI, Dyadic Coping Inventory; RDAS, Revised Dyadic Adjustment Scale

r: Pearson correlation coefficient,  $n = 327$

\* Subdimensions of RDAS.

In bold:  $p < 0.05$  is statistically significant.

the relationship between postpartum mothers' psychological well-being and cognitive emotion regulation and breastfeeding self-efficacy, the psychological well-being of the mothers was at a good level (Çankaya & Ataş, 2023). Similarly, in another study conducted with 358 postpartum mothers, the participants' psychological well-being was at a good level and no difference was observed due to the demographic characteristics of the participants (Abdollahpour & Keramat, 2016). Different studies examining the

relationship between demographic characteristics and psychological well-being explained that psychological well-being increased as the level of education increased (Boylan et al., 2022; Yanik & Budak, 2023). This is thought to be because individuals with higher levels of education are more empowered and can more easily access the resources they need to achieve high psychological well-being. In addition, a high level of education increases satisfaction with life and has other positive psychological effects (Özmete, 2016). Similarly, our study found that mothers with university degrees had better psychological well-being than mothers with primary and high school degrees.

Psychological well-being, defined as the state of being mentally well, can be affected by the conditions in which the individual exists. Indeed, the postpartum period, which is a dramatic transition in the lives of people, affects all members of the family. Throughout this period, mutual communication, consensus, and satisfaction are reflected in the mental states of mothers. In this study, mothers with high postpartum dyadic adjustment tended to have high psychological well-being. Similarly, in a study conducted with postpartum mothers, dyadic harmony and mutual communication positively affected the psychological well-being of postpartum mothers (Aksakallı et al., 2012). It has been reported that dyadic harmony in marriage positively contributes to psychological well-being (Ansari Ardali et al., 2019; Ibrahim et al., 2022). Families with strong dyadic harmony have high psychological well-being (Özmete, 2016; Walton & Takeuchi, 2010). There is also evidence that supportive relationships protect individuals' mental health and

**Table 3** Linear Regression Analysis Examining the Factors Affecting the Psychological Well-being of Mothers

Variables	Psychological Well-Being						
	B	SE	$\beta$	t	p	95% CI	
						Low Value	High Value
Constant	21.784	3.557	-	6.124	<b>&lt; 0.001</b>	14.786	28.783
Own DCI score	-0.157	0.073	-0.127	-2.139	<b>0.033</b>	-0.301	-0.013
Partner's DCI score	0.313	0.058	0.356	5.372	<b>&lt; 0.001</b>	0.198	0.427
Joint DCI score	0.190	0.089	0.156	2.125	<b>0.034</b>	0.014	0.365
RDAS (total scores)	0.199	0.062	0.194	3.185	<b>0.002</b>	0.76	0.321

Notes: DCI: Dyadic Coping Inventory; RDAS: Revised Dyadic Adjustment Scale

\* Subdimensions of RDAS.

In bold:  $p < 0.05$  is statistically significant.

$n = 327$ ;  $R = 0.544$ , Adjusted  $R^2 = 0.287$ ,  $F = 33.873$ ,  $p < 0.001$ , Durbin Watson = 2.165.

reduce the negative psychological effects of stress (Barbato & D'Avanzo, 2020; Barton et al., 2018).

In this stressful process of transition to parenthood, mothers' stress-coping behaviors have a determining effect on their psychological well-being (Razurel et al., 2013). In a longitudinal study, Alves et al. (2020) found that parents' quality of life was higher when both partners actively participated in coping with the stress of being parents. In a meta-analysis on dyadic coping, partners' level of dyadic coping was a stronger predictor of dyadic adjustment than individual coping behavior (Falconier et al., 2015a). Similarly, in other studies, partners' dyadic coping was found to be associated with marital adjustment, psychological distress, quality of life, and psychological well-being. Dyadic coping reinforces positive communication, improves the quality of the time partners spend with each other and their sense of well-being, and strengthens their relationships (Brandão et al., 2020; Molgora et al., 2022; Rottmann et al., 2015); Gameiro et al. (2011) found a significant positive relationship between the coping strategies of postpartum mothers and their psychological well-being. Indeed, during the transition to parenthood, sparing time for each other, addressing each other's concerns, and seeking solutions as a couple increases dyadic adjustment and psychological well-being (Brandão et al., 2020; Molgora et al., 2022).

Mothers' mental health may be negatively affected in the postpartum period, and they may experience problems such as stress, sadness, and depression (Jones et al., 2023). It is argued that individuals' negative mental health may negatively affect their psychological well-being (Ryff et al., 1999). In this study, we found that mothers who experienced psychological problems such as stress, sadness, and depression during pregnancy and the postpartum period had lower psychological well-being. Authoritative institutions such as the US Preventive Services Task Force recommend screening for mental health protection in the general adult population and including pregnant and postpartum mothers in screening programs (U.S. Preventive Services Task Force, 2016). The international guideline by NICE on prenatal and postpartum mental health published recommends that the mental health problems of pregnant and postpartum women must be evaluated to protect their mental health and psychological well-being (NICE, 2020).

### Strengths and limitations

The participants were recruited from only one hospital, which limits generalizability. As the hospital is one of the largest hospitals in the region and the pediatric clinic accepts many patients from surrounding provinces and districts, our results can be generalized to the province; however, they cannot be generalized to the country due to regional

and cultural differences. This study is limited to data collected through surveys, which may restrict the coverage of all aspects of the postpartum period. Therefore, there is a possibility of overlooking other significant factors (data collection moment, etc.) and effects during this period. It is important to minimize these limitations in future studies by employing more comprehensive research methods.

### Conclusion

Self-perceived coping behavior, perception of the partner's behavior, and joint coping behavior in dyadic coping, and weak dyadic harmony between partners were significant risk factors affecting mothers' psychological well-being. Moreover, a weak relationship was found between the dimensions of mothers' psychological well-being and their perception of their own coping behavior in dyadic coping; a positive moderate relationship was found between the dimensions of perception of the partner's behavior and joint coping behavior in dyadic coping, and the former was found to have a weak positive relationship with dyadic harmony and its subdimensions. Mothers with poor dyadic coping behaviors and adjustment, which may negatively affect their psychological well-being during the postpartum period, should be identified by midwives at an early stage and directed to motivational interviewing and marriage and psychological counseling services. We believe that this will help mothers adapt to the transition they experience during the postpartum period, improving mother–infant interaction and strengthening dyadic adjustment.

Based on our findings, we believe that postpartum moms' dyadic coping and adjustment strategies are important in Psychological Well-Being. Healthcare professionals should analyze partner relationships as part of a well-being assessment during home visits or family health centers. Knowing the partner relationship features of spouses and giving required support/intervention programs will assist in promoting psychological well-being, and therefore, healthy development of mother–father–infant connection can be attained. At the same time, healthcare professionals should encourage partners to share their parenting ideas by giving the entire family postpartum rehabilitation and parenting knowledge as soon as feasible after birth. The provision of postpartum care with spouse participation in the postpartum process and the evaluation of psychological well-being is a necessity of holistic care. Therefore, it is recommended that future research should include both postnatal mothers and spouses in the sample selection.

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**Data availability** The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

## Declarations

**Conflict of interest** The authors declare that they have no conflict of interest to disclose.

**Financial interests** The authors declare they have no financial interests.

**Compliance with ethical standards** The study was conducted in accordance with the principles and ethical standards set forth in the 1964 Declaration of Helsinki and its subsequent amendments. Ethical approval for the study was sought and obtained from the ethics committee of the Ondokuz Mayıs University (Date: November 25, 2022, No: 2022–933) and institutional approval was obtained from the relevant hospital. Data collection was initiated after obtaining the approval of the ethics committee and the institution.

**Consent** Written and verbal consent to participate in the study was obtained from all participants.

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## References

- Abdollahpour, S., & Keramat, A. (2016). The impact of perceived social support from family and empowerment on maternal wellbeing in the postpartum period. *Journal of Midwifery and Reproductive Health*, 4(4), 779–787. <https://doi.org/10.22038/jmrh.2016.7612>.
- Aksakallı, M., Çapık, A., Ejder Apay, S., Pasinlioğlu, T., & Bayram, S. (2012). Determination of support needs and support levels among Postpartum Women. *Journal of Psychiatric Nursing*, 3(3), 129–135. <https://doi.org/10.5505/phd.2012.57441>.
- Alves, S., Fonseca, A., Canavarro, M. C., & Pereira, M. (2020). Does dyadic coping predict couples' postpartum psychosocial adjustment? A dyadic longitudinal study. *Frontiers in Psychology*, 11, 561091. <https://doi.org/10.3389/fpsyg.2020.561091>.
- Ansari Ardali, L., Makvandi, B., Asgari, P., & Heidari, A. (2019). The relationship between spiritual intelligence and marital satisfaction with psychological well-being in mothers with special-needs children. *Caspian Journal of Pediatrics*, 5(2), 364–369. <https://doi.org/10.22088/CJP.BUMS.5.2.364>.
- Barbato, A., & D'Avanzo, B. (2020). The findings of a Cochrane meta-analysis of couple therapy in adult depression: Implications for research and clinical practice. *Family Process*, 59(2), 361–375. <https://doi.org/10.1111/famp.12540>.
- Barton, A. W., Beach, S. R. H., Bryant, C. M., Lavner, J. A., & Brody, G. H. (2018). Stress spillover, African americans' couple and health outcomes, and the stress-buffering effect of family-centered prevention. *Journal of Family Psychology*, 32(2), 186–196. <https://doi.org/10.1037/fam0000376>.
- Bayraktaroğlu, H. T., & Çakıcı, E. T. (2017). Psychometric properties of revised form Dyadic Adjustment Scale in a sample from North Cyprus. *International Journal of Educational Science*, 19(2,3), 113–119.
- Bodenmann, G. (2008). Dyadic coping and the significance of this concept for prevention and therapy. *Zeitschrift für Gesundheitspsychologie*, 16(3), 108–111.
- Boylan, J. M., Tompkins, J. L., & Krueger, P. M. (2022). Psychological well-being, education, and mortality. *Health Psychology*, 41(3), 225. <https://doi.org/10.1037/hea0001159>.
- Brandão, T., Brites, R., Hipólito, J., Pires, M., & Nunes, O. (2020). Dyadic coping, marital adjustment and quality of life in couples during pregnancy: An actor-partner approach. *Journal of Reproductive and Infant Psychology*, 38(1), 49–59. <https://doi.org/10.1080/02646838.2019.1578950>.
- Breitenstein, C. J., Milek, A., Nussbeck, F. W., Davila, J., & Bodenmann, G. (2018). Stress, dyadic coping, and relationship satisfaction in late adolescent couples. *Journal of Social and Personal Relationships*, 35(5), 770–790.
- Busby, D. M., Christensen, C., Crane, D. R., & Larson, J. H. (1995). A revision of the Dyadic Adjustment Scale for use with distressed and nondistressed couples: Construct hierarchy and multidimensional scales. *Journal of Marital and Family Therapy*, 21(3), 289–308.
- Çankaya, S., & Ataş, A. (2023). The relationship of psychological well-being and cognitive emotions with breastfeeding self-efficacy in mothers in the postpartum period. *Developmental Psychobiology*, 65(3), e22371.
- Diener, E., Wirtz, D., Biswas-Diener, R., Tov, W., Kim-Prieto, C., Choi, D. (2009). New measures of Well-Being. In E. Diener (Ed.), *Assessing well-being* (Vol. 39, pp. 247–266). Springer. Social Indicators Research Series [https://doi.org/10.1007/978-90-481-2354-4\\_12](https://doi.org/10.1007/978-90-481-2354-4_12).
- Falconier, M. K., Jackson, J. B., Hilpert, P., & Bodenmann, G. (2015a). Dyadic coping and relationship satisfaction: A meta-analysis. *Clinical Psychology Review*, 42, 28–46. <https://doi.org/10.1016/j.cpr.2015.07.002>.
- Falconier, M. K., Nussbeck, F., Bodenmann, G., Schneider, H., & Bradbury, T. (2015b). Stress from daily hassles in couples: Its effects on intradyadic stress, relationship satisfaction, and physical and psychological well-being. *Journal of Marital and Family Therapy*, 41(2), 221–235.
- Florsheim, P., & Burrow-Sanchez, J. (2021). The Role of Prenatal Communication in Young Couples' Depression and Relationship Security Across the Transition to Parenthood. In Prenatal



- Family Dynamics (pp. 269–291). Springer, Cham [https://doi.org/10.1007/978-3-030-51988-9\\_13](https://doi.org/10.1007/978-3-030-51988-9_13).
- Gameiro, S., Nazaré, B., Fonseca, A., Moura-Ramos, M., & Canavarro, M. C. (2011). Changes in marital congruence and quality of life across the transition to parenthood in couples who conceived spontaneously or with assisted reproductive technologies. *Fertility and Sterility*, *96*(6), 1457–1462.
- Gündođdu, A. (2007). *Relationships between self-constructs and marital quality* (Doctoral dissertation, Master Thesis, Unpublished. Ankara: Middle East Technical University, Graduate School of Social Sciences).
- Hagger, M. S., & Hamilton, K. (2019). Health Behavior, Health Promotion, and the transition to parenthood: Insights from Research in Health psychology and Behavior Change. In O. Taubman-Ben-Ari (Ed.), *Pathways and barriers to parenthood* (pp. 251–269). Springer. [https://doi.org/10.1007/978-3-030-24864-2\\_15](https://doi.org/10.1007/978-3-030-24864-2_15).
- Ibrahim, N., Razak, T. M. T. A., Che Husain, F., Amin, A. Z. M., & Roslan, M. N. H. (2022). Emotional Intelligence can improve the Psychological Well-Being of Counseling Clients: Spiritual Intelligence and Happiness as a Mediator. *International Journal of Early Childhood Special Education*, *14*(3), 3058–3071.
- Jones, K. A., Freijah, I., Brennan, S. E., McKenzie, J. E., Bright, T. M., Fiolet, R., & Chamberlain, C. (2023). Interventions from pregnancy to two years after birth for parents experiencing complex post-traumatic stress disorder and/or with childhood experience of maltreatment. *Cochrane Database of Systematic Reviews*, (5). <https://doi.org/10.1002/14651858.CD014874.pub2>.
- Kurt, I. E., & Akbař, T. (2019). Adaptation of Dyadic Coping Inventory into Turkish. *OPUS International Journal of Society Researches*, *13*(19), 636–655. <https://doi.org/10.26466/opus.547217>.
- Lévesque, S., Bisson, V., Charton, L., & Fernet, M. (2020). Parenting and relational well-being during the transition to parenthood: Challenges for first-time parents. *Journal of Child and Family Studies*, *29*, 1938–1956.
- Molgora, S., & Accordini, M. (2020). Motherhood in the time of coronavirus: The impact of the pandemic emergency on expectant and postpartum women's psychological well-being. *Frontiers in Psychology*, *11*, 567155.
- Molgora, S., Acquati, C., & Saita, E. (2022). The role of Dyadic coping for the individual and relational well-being of couples during the transition to parenthood. *Journal of Family Issues*, *43*(5), 1364–1385. <https://doi.org/10.1177/0192513X211022394>.
- Ngai, F. W., & Lam, W. (2021). Stress, marital relationship and quality of life of couples across the perinatal period. *Maternal and Child Health Journal*, *25*, 1884–1892.
- NICE- National Institute For Health And Clinical Excellence (2020). Antenatal and postnatal mental health: clinical management and service guidance. Retrieved May 10, 2023, from <https://www.nice.org.uk/guidance/cg192>.
- Özmete, E. (2016). A study of the adaptation of the Psychological Well-Being Scale for Married women and men to Turkish. *Bilig*, *78*, 361–391.
- Qobadi, M., Collier, C., & Zhang, L. (2016). The effect of stressful life events on postpartum depression: Findings from the 2009–2011 Mississippi pregnancy risk assessment monitoring system. *Maternal and Child Health Journal*, *20*(1), 164–172. <https://doi.org/10.1007/s10995-016-2028-7>.
- Razurel, C., Kaiser, B., Sellenet, C., & Epiney, M. (2013). Relation between perceived stress, Social Support, and coping strategies and maternal Well-Being: A review of the literature. *Women & Health*, *53*(1), 74–99. <https://doi.org/10.1080/03630242.2012.732681>.
- Rottmann, N., Hansen, D. G., Larsen, P. V., Nicolaisen, A., Flyger, H., & Johansen, C. (2015). Dyadic coping within couples dealing with breast cancer: A longitudinal, population-based study. *Health Psychol*, *34*, 486–495. <https://doi.org/10.1037/hea0000218>.
- Ryff, C. D., Magee, W. J., Kling, K. C., & Wing, E. H. (1999). Forging macro-micro linkages in the study of psychological well-being. *The self and Society in Aging Processes*, 247–278.
- Spanier, G. B. (1976). Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. *Journal of Marriage and the Family*, *38*(1), 15–28.
- Telef, B. B. (2013). The adaptation of Psychological Well-being into Turkish: A validity and reliability study. *H U Journal of Education*, *28*(28–3), 374–384.
- U.S. Preventive Services Task Force. (2016). Screening for depression in adults: Recommendation statement. *Am Fam Physician*, *94*(4), 340A–340D.
- Walton, E., & Takeuchi, D. T. (2010). Family structure, family processes, and well-being among Asian americans: Considering gender and nativity. *Journal of Family Issues*, *31*(3), 301–332. <https://doi.org/10.1177/0192513X09350873>.
- Yanik, D., & Budak, K. F. (2023). The effect of positive psychotherapy-based training on psychological well-being and hope level in women receiving infertility: Experimental study. *Journal of Reproductive and Infant Psychology*, 1–14. <https://doi.org/10.1080/02646838.2023.2206853>.
- Yiđitbař, Ç., & Ada, G. (2019). Mother Baby Bonding Regarding Self-Efficiency Level on the Fourth Trimester. *ESTUDAM Public Health Journal*, *4*(3), 343–353. <https://doi.org/10.35232/estudamhsd.553499>.

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