

Investigation of the Relationship between Spousal Support and Perceived Stress in the Early Postpartum Period and Breastfeeding Attitude Using Path Analysis

Ebru CİRBAN EKREM*¹, Melike KAHVECİ²

¹Bartın University, Faculty of Health Sciences, Nursing Department, Bartın, Türkiye

² Izmir S.B.U. Tepecik Training and Research Hospital, Izmir, Türkiye

Ebru Cirban Ekrem, ORCID No: 0000-0003-4442-0675, Melike Kahveci, ORCID No: 0000-0002-4459-4272

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* Corresponding

Author

cirban.ebru@gmail.com

ABSTRACT

The aim of the study was to determine the relationship between perceived spousal support and stress in the early postpartum period and breastfeeding attitudes through path analysis. The universe of the descriptive and correlation-seeking study consisted of puerperal women living in Türkiye. A power analysis was conducted to determine the number of puerperal women to be included in the sample and it was calculated that 107 puerperal women should be reached. The study was completed with 233 puerperal women. The Introductory Information Form, Scale for Perceived Spousal Support of Women in the Early Postpartum Period, Perceived Stress Scale and Breastfeeding Attitude Assessment Scale were used to collect the research data. The mean age of the puerperal women was 29.67 ± 7.11 . According to the path model, it was determined that perceived spousal support in the early postpartum period had a positive effect on breastfeeding attitudes ($p < 0.001$, $\beta = 0.60$), and perceived stress had a positive effect on perceived spousal support ($p = 0.004$, $\beta = 0.21$). In addition, it was observed that perceived spousal support played a mediating role in the relationship between perceived stress and breastfeeding attitude ($p = 0.002$, $\beta = 0.12$). It was determined that spousal support affected breastfeeding attitude in the postpartum period, and perceived stress level affected spousal support. It was observed that spousal support played a mediating role on breastfeeding attitude.

Erken Postpartum Dönemde Eş Desteği ve Algılanan Stresin Emzirme Tutumu ile İlişkisinin Path Analizi ile İncelenmesi

MAKALE BİLGİSİ

Bu araştırma 21-23 Aralık 2023 tarihinde Ankara'da düzenlenen 2. Uluslararası 3. Ulusal Kadın Sağlığı Hemşireliği Kongresi'nde sözel bildiri olarak sunulmuştur.

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Anahtar Kelimeler

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ÖZ

Araştırmada erken postpartum dönemde algılanan eş desteği ve stresin emzirme tutumu ile ilişkisini path analizi ile belirlemek amaçlanmıştır. Tanımlayıcı ve ilişki arayıcı tipteki araştırmanın evrenini Türkiye'de yaşayan lohusalar oluşturmuştur. Örneklemde yer alacak lohusa sayısını belirlemek üzere güç analizi yapılmış ve 107 lohusaya ulaşılması gerektiği hesaplanmıştır. Araştırma 233 lohusa ile tamamlanmıştır. Araştırma verilerinin toplanmasında Tanıtıcı Bilgi Formu, Erken Lohusalık Sürecinde Kadınların Algıladıkları Eş Desteği Ölçeği, Algılanan Stres Ölçeği ve Emzirme Tutumunu Değerlendirme Ölçeği kullanılmıştır. Lohusaların yaş ortalaması 29.67 ± 7.11 'dir. Path modeline göre erken postpartum dönemde algılanan eş desteğinin emzirme tutumu üzerinde pozitif etkisi ($p < 0,001$, $\beta = 0,60$), algılanan stresin ise algılanan eş desteği üzerinde pozitif etkisinin ($p = 0,004$, $\beta = 0,21$) olduğu belirlenmiştir. Ayrıca algılanan eş desteğinin algılanan stres ile emzirme tutumu arasındaki ilişkide aracı rol oynadığı görülmüştür ($p = 0,002$, $\beta = 0,12$). Postpartum dönemde emzirme tutumunu eş desteğinin, eş desteğini ise algılanan stres düzeyinin etkilediği belirlenmiştir. Emzirme tutumu üzerinde eş desteğinin aracı bir rol üstlendiği görülmüştür.

* Sorumlu Yazar

cirban.ebru@gmail.com

INTRODUCTION

The postpartum period is a 6-week period after childbirth, during which the mother's body and mind go through a process of returning to their pre-pregnancy state. The early postpartum period encompasses the first week after childbirth and is characterized by the highest incidence of postpartum complications (1,2). While childbirth is a joyful event, it brings about an increase in the roles and responsibilities of women, requiring adaptation to a new role, baby care, changes in social and marital relationships, which can lead to stress during the postpartum period (3). Therefore, the early postpartum period is when women experience higher stress levels and seek the most support (2,4). Spousal support during the postpartum period is one of the essential forms of support, providing emotional support to the mother, enhancing her ability to cope with stress, and facilitating postpartum adaptation and transition to parenthood (3,5,6). Therefore, the importance of spousal support during the postpartum period cannot be ignored (3,5,7). Furthermore, women with high stress levels during the postpartum period may lack confidence in breastfeeding (2). Increased stress in the mother may negatively impact the newborn's growth and development due to potential breastfeeding problems (8). Breastfeeding problems also affect the mother's breastfeeding attitude (9).

Breastfeeding attitude is a multidimensional concept that varies from one society to another (9). Breastfeeding success is influenced by the mother's breastfeeding attitude (10). It is emphasized that breast milk intake levels need to be improved, including in Türkiye (11). Spousal support in the postpartum period may affect breastfeeding attitudes and success (3). Moreover, studies examining the areas affected by spousal support in the postpartum period are limited, and it is stated that its relationship with different factors should be examined (3,4,5,7). In the literature, no study has been found that examines the relationship between spousal support, breastfeeding attitude, and perceived stress in women during the postpartum period. By knowing the relationship between these variables, the spousal support that should be provided to women in the postpartum period can increase, the stress perceived by women can decrease, and breastfeeding attitudes can be positively affected. Maternal and neonatal health levels can be improved by improving breastfeeding attitudes. This situation contributes to Sustainable Development Goal 3: Healthy and Quality Life among the Sustainable Development Goals. In this direction, this study aimed to explore the relationship between spousal support and perceived stress on breastfeeding attitude during the early postpartum period using path analysis.

MATERIALS AND METHODS

Study Design

The study is a descriptive and correlational study.

Participants

The research population consisted of postpartum women living in Türkiye. A power analysis was conducted to determine the number of puerperal women to be included in the study sample. The power of the test was calculated using the G*Power 3.1 program. The effect size was taken as 0.15 at a medium level according to the multiple regression analysis determined by Cohen (1988). In order to exceed the 95% value in determining the power of the study; it was calculated that 107 puerperal women should be reached at a significance level of 5% and an effect size of 0.15 ($df=2$; $F=3.086$). The study was completed with 233 puerperal women who met the inclusion

criteria. The inclusion criteria for the study were as follows: (1) being in the postpartum period between May 2022 and June 2023, (2) having the ability to read and understand Turkish, (3) not having any pregnancy complications, (4) not having a history of psychiatric illness, and (5) voluntarily agreeing to participate in the research. Fifty participants were excluded from the study because they left any section of the data collection form incomplete.

Instruments

The data were collected using the Demographic Information Form, Perceived Spousal Support Among Women in Early Postpartum Period Scale, Perceived Stress Scale, and Breastfeeding Attitude Evaluation Scale.

Demographic Information Form

The researchers developed a form consisting of 13 questions to obtain socio-demographic and descriptive information about the postpartum women in the study, including age, education level, employment status, number of pregnancies and births, and other relevant factors (12,13).

Perceived Spousal Support Among Women in Early Postpartum Period Scale (PSSAWEPPS)

The scale developed by Hotun Şahin et al. (2014) comprises 16 items under three factors: emotional support (7 items), social support (6 items), and physical support (3 items). The scale consists of ten positively and six negatively worded items. The items are rated on a five-point Likert-type scale, ranging from "1-Strongly Disagree" to "5-Strongly Agree." The lowest possible score on the scale is 16, and the highest is 80. An increase in the score indicates a higher perceived level of spousal support during the early postpartum period. The Cronbach's alpha of the original scale was found to be 0.87 (1). In this study, the Cronbach's alpha was calculated as 0.88.

Perceived Stress Scale (PSS)

The scale was developed by Cohen et al. (2004). The Turkish validity and reliability study of the scale was conducted by Erci (2006). The scale consists of a total of 10 items, with four items positively and six items negatively coded. Using a five-point Likert scale, the responses are rated from "1-Never" to "5-Very Often." The lowest possible score on the scale is 10, while the highest is 50. A score of 30 or above indicates the presence of stress in an individual. An increase in the score suggests a higher level of stress. The Cronbach's alpha for the Turkish version of the scale was calculated as 0.70 (14). In this study, the Cronbach's alpha was also calculated as 0.70.

Breastfeeding Attitude Evaluation Scale (BAES)

The scale was developed by Arslan Özkan (2015) and consists of 46 items. Of these items, 22 are positively coded, while 24 are negatively coded. The scale uses a five-point Likert-type format, ranging from "0-Strongly Disagree" to "4-Strongly Agree" for scoring. The total score on the scale is 184, with positive item scores totaling 88 and negative item scores totaling 96. An increase in the score indicates a more positive breastfeeding attitude (15). The Cronbach's alpha of the scale was calculated as 0.62 in this study. According to Tavşancıl (2006), a Cronbach's alpha value of $0.60 \leq \alpha \leq 0.80$ indicates a fairly reliable level of internal consistency (16).

Data Collection

The data were collected online from postpartum women who met the inclusion criteria between May 2022 and June 2023 through self-reporting and using the snowball sampling method. An online data collection form was created using the "Survey" program. The link to the data collection form was regularly shared twice a week by the researchers through their WhatsApp, Facebook, Instagram accounts. Postpartum women were allowed to fill out the data collection form only once. The completion of the data collection form took approximately 20 minutes.

Data Analysis

The data was analyzed using the IBM SPSS Statistics 23 and IBM SPSS AMOS 23 programs. The analysis of the study included frequency distribution (number, percentage) for categorical variables and descriptive statistics (mean, standard deviation, minimum, maximum) for numerical variables. The reliability of the scales used in the study was assessed calculating the Cronbach's alpha value. In addition, path analysis was employed for model testing. A significance level of $p < 0.05$ was considered statistically significant.

Ethical Considerations

The ethical approval for the research was obtained from the Social and Human Sciences Ethics Committee of the institution to which one of the researchers is affiliated (Date: 2022-SBB-0160, Approval Number: 12.05.2022). At the beginning of the data collection form, the puerperal women were given written information about the research and a box was added for them to confirm their participation in the study.

RESULTS AND DISCUSSION

Table 1 presents the descriptive information of the postpartum women. The mean age of the participants is 29.67 ± 7.11 , with 27.9% having completed middle school and 48.9% currently employed. Among the employed participants, 56.1% work in the private sector. Furthermore, 32.6% of the women's spouses have a high school education, and 49.8% of them are employed in the private sector. The majority (77.3%) of the participants have a nuclear family, and 49.8% reported having an income lower than their expenses. All the postpartum women are married, with an average marriage duration of 5.79 ± 5.18 years. The average number of pregnancies is 2.43 ± 1.49 , the average number of living children is 2.00 ± 1.39 , and the average gestational week is 36.67 ± 2.97 . In addition, 57.1% of the women had breastfed their previous child/children, with an average duration of 11.24 ± 7.77 months of breastfeeding (Table 1).

Table 1. Introductory Information of Postpartum Women

Variables	$\bar{X} \pm SD$ (min-max)		
Age	29.67±7.11 (17-47)		
	n	%	
Educational status	Primary school	26	11.2
	Middle school	65	27.9
	High school	53	22.7
	Associate degree	27	11.6
	Bachelor and above	62	26.6
Status of working in an income generating job	Yes	114	48.9
	No	119	51.1
Working sector	Officers	20	17.5
	Private sector	64	56.1
	Self-employment	30	26.3
	Primary school	15	6.4
Spouse's educational status	Middle school	52	22.3
	High school	76	32.6
	Associate degree	30	12.9
	Bachelor and above	60	25.8
	Unemployed	12	5.2
Spouse's occupation	Officers	53	22.7
	Private sector	116	49.8
	Self-employment	52	22.3
Family type	Nuclear family	180	77.3
	Extended family	39	16.7
	Broken family	14	6.0
Monthly income status	Income less than expenses	116	49.8
	Income equals expense	117	50.3
Breastfeeding status of previous child(s)	Yes	133	57.1
	No	100	42.9
	$\bar{X} \pm SD$ (min-max)		
Marriage time	5.79±5.18 (1-43)		
Number of pregnancies	2.43±1.49 (1-9)		
Number of living children	2.00±1.39 (0-7)		
Week of birth	36.67±2.97 (23-41)		
Time to breastfeed your previous child/children	11.24±7.77 (1-24)		

Table 2 presents the descriptive statistics for the PSSAWEPPS, PSS, and BAES scores, along with their sub-dimensions. The total score average of PSSAWEPPS is 58.80 ± 10.68 , and it can be said that spousal support is at a good level. PSSAWEPPS emotional support subscale mean score of 26.24 ± 5.99 , the social support sub-dimension having a mean score of 21.87 ± 4.44 , and the physical support sub-dimension having a mean score of 10.70 ± 2.39 . In the research, the average score of PSS is 32.69 ± 5.29 , and it can be said that the perceived stress level is high. The mean score of BAES is 103.88 ± 14.07 , and it can be said that the breastfeeding attitude is positive but needs to be improved (Table 2).

Table 2. Descriptive Statistics of PSSAWEPPS, PSS and BAES and Its Sub-Dimensions

Variables	\bar{X}	SD	min	max
PSSAWEPPS	58.80	10.68	32	80
PSSAWEPPS-Emotional support sub-dimension	26.24	5.99	10	35
PSSAWEPPS-Social support sub-dimension	21.87	4.44	12	30
PSSAWEPPS-Physical support sub-dimension	10.70	2.39	5	15
PSS	32.69	5.29	15	46
BAES	103.88	14.07	70	134

Table 3 illustrates the relationships between PSSAWEPPS, PSS, and BAES. There is a statistically significant positive correlation among the scale scores ($p < 0.05$) (Table 3).

Table 3. Relationship between PSSAWEPPS, PSS and BAES

Scales		PSSAWEPPS	PSS	BAES
PSSAWEPPS	r	1	0.133	0.478
	p		0.042*	0.000*
	N	233	233	233
PSS	r		1	0.148
	p			0.024*
	N		233	233
BAES	r			1
	p			
	N			233

r: Pearson correlation coefficient, * $p < 0.05$

Path Analysis

The Path analysis was conducted using the IBM SPSS AMOS 23 program. In the first step, a path model (Figure 1) was constructed with one latent variable (PSSAWEPPS) and PSS and BAES as indicator variables. Since latent variables are not metric, to estimate the parameter values, one of the paths drawn from the latent variables to the observed (indicator) variables is assigned a value of 1 (equalizing the factor loading to 1) or a value is assigned to the variance of the latent variable (usually 1).

In the second step, when estimating the model, the maximum likelihood method, which is commonly used in structural equation modeling and provides reliable results even when data are not normally distributed, was employed. The aim was to estimate the parameters, including the

errors of observed variables, the variances of latent variables, and the regression coefficients for the paths from latent variables to observed variables.

In the final step, the fit indices for the path model were examined. The findings indicate that the path model generally fits well. According to the path model, there is a positive effect of perceived spousal support during the early postpartum period on breastfeeding attitudes ($p < 0.001$, $\beta = 0.60$). Additionally, there is a positive effect of perceived stress on the perceived spousal support during the early postpartum period ($p = 0.004$, $\beta = 0.21$). Furthermore, it was found that perceived spousal support plays a mediating role ($p = 0.002$, $\beta = 0.12$) in the effect of perceived stress on breastfeeding attitudes (Figure 1).

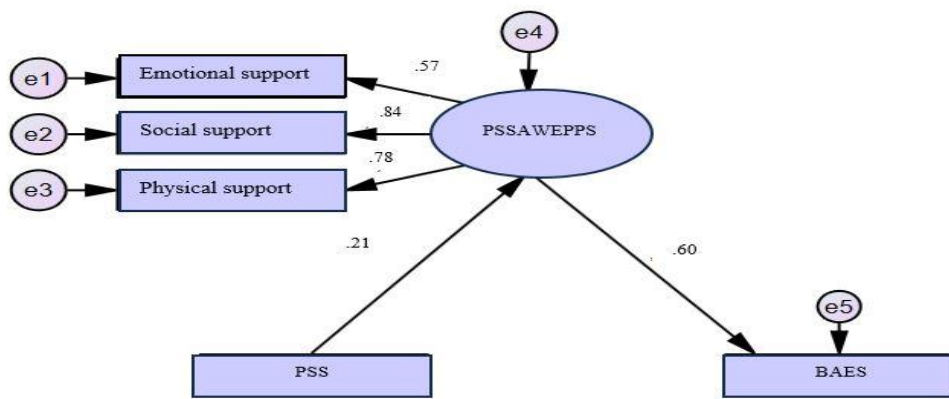


Figure 1. Path Model

When the fit indices are examined, it can be observed that the χ^2/df , AGFI, GFI, TLI, IFI, CFI, RMSEA, and SRMR values are good (17,18). Overall, based on the fit indices, the path model is considered acceptable (Table 4).

Table 4. Goodness of Fit Indexes and Acceptable Value Ranges Used in the Study

Indexes	Good fit	Acceptable Fit	Results
χ^2/df	$0 \leq \chi^2/df \leq 3$	$3 \leq \chi^2/df \leq 4$	1.117
AGFI	$0.95 \leq AGFI \leq 1$	$0.90 \leq AGFI \leq 0.95$	0.972
GFI	$0.95 \leq GFI \leq 1$	$0.90 \leq GFI \leq 0.95$	0.991
TLI	$0.95 \leq TLI \leq 1$	$0.90 \leq TLI \leq 0.95$	0.996
IFI	$0.95 \leq IFI \leq 1$	$0.90 \leq IFI \leq 0.95$	0.998
CFI	$0.95 \leq CFI \leq 1$	$0.90 \leq CFI \leq 0.95$	0.998
RMSEA	$0 \leq RMSEA \leq 0.05$	$0.05 \leq RMSEA \leq 0.08$	0.022
SRMR	$0 \leq SRMR \leq 0.08$	$0.05 \leq SRMR \leq 0.10$	0.028

The postpartum period is an adaptation period for women. During the postpartum period, perceiving adequate spousal support by the mother reduces the stress level, strengthens the mother-baby bond, and facilitates spousal adjustment (5). This study aimed to determine the relationship between spousal support and perceived stress in the early postpartum period and breastfeeding attitudes through path analysis. In the study, it was determined that the spousal support of

postpartum women was good, their perceived stress level was high, and their breastfeeding attitude was positive but needed to be improved.

In the postpartum period, women expect support from their husbands in physical and emotional matters such as baby care and housework. In the research, it was determined that the spousal support perceived by postpartum women was at a good level (3,19). The finding is compatible with the literature (3,5,6,19). In addition, in Kızılırmak et al.'s (2020) study, it was determined that the emotional support that postpartum women perceived from their spouses was more and the physical support was less (6). Spouse support in the postpartum period facilitates the mother's adaptation ability and strengthens her coping ability. For this reason, it is essential that spousal support, which is undeniably important, be provided to all postpartum women (3).

The postpartum period may confront women with daily life stresses they have not experienced before, such as caring for a newborn baby, sleep disorders, and balancing work and life responsibilities. This may increase the perceived stress levels of postpartum mothers (20). However, the level of stress perceived by postpartum mothers may differ across the postpartum period (7). In this study, it can be said that the stress level perceived by postpartum women is at high levels. There are different findings in the literature regarding the stress level perceived by postpartum women. While in some studies, the stress level perceived by postpartum mothers was low (2,21,22), in others it was found to be high (7). It is necessary for women to improve their skills in coping with stress during the postpartum period. Support should be provided to improve women's coping skills during the prenatal and postnatal period. The participation of the spouse and family in these support meetings should also be encouraged (22).

In the postpartum period, the mother's positive attitude towards breastfeeding plays a key role in the breastfeeding process (23). The study determined that postpartum women's attitudes towards breastfeeding were positive, but needed to be improved. There are differences in the literature with this finding. Consistent with the finding, studies conducted in Jordan and Nigeria found that mothers' breastfeeding attitudes were positive (10,24). In a study conducted in China, mothers' attitudes towards breastfeeding were neither positive nor negative (23). In another study, it was determined that Chinese women had more negative breastfeeding attitudes than Spanish women (9). In a meta-analysis study conducted in Ethiopia, while postpartum mothers' attitudes towards breastfeeding were positive, their attitudes towards exclusive breastfeeding were not sufficient (25). It is known that breastfeeding attitudes are affected by psychosocial and cultural factors (9). It is thought that differences in breastfeeding attitudes may arise from the cultural characteristics of women.

A statistically significant positive relationship was found between the PSSAWEPPS, PSS, and BAES. According to the path model, perceived spousal support had a positive effect on their breastfeeding attitudes of the postpartum women. Durmazoğlu et al. (2021) reported that perceived positive spousal support in the postpartum period was influential only in higher rates of exclusive breastfeeding (4). Other studies have also reported that spousal support positively influences breastfeeding intentions, duration, and attitudes (26,28). Furthermore, studies have shown that spousal support positively affects infant feeding methods, maternal breastfeeding preferences, breastfeeding duration, and exclusive breastfeeding rates (29,30). The results of these studies are

consistent with our findings, indicating a positive impact of spousal support on breastfeeding and breastfeeding attitudes.

The study found that women's perceived spousal support during early postpartum period reduced their perceived stress level. The finding is compatible with the literature. Another study reported that an increase in emotional support was effective in reducing maternal stress (31). Additionally, Razurel et al. (2017) noted that women who received spousal support had lower postpartum stress and anxiety levels (32). In this regard, it can be said that spousal support during the postpartum period has a positive effect on perceived stress.

Our study revealed that spousal support and perceived stress during the postpartum period had an impact on breastfeeding attitudes. Spousal support played a mediating role in breastfeeding attitudes. Studies have shown that women who receive the necessary support from their partners during the postpartum period have better adaptation, cope better with stress, and achieve higher breastfeeding rates (28,33,34). Isiguzo et al. (2020) found that women with higher stress levels but high levels of social support had higher breastfeeding rates compared to those who perceived no social support (35). The results of these studies are consistent with our findings, suggesting that breastfeeding attitudes are influenced by perceived stress and spousal support.

CONCLUSION AND SUGGESTIONS

The postpartum period is a period when women experience major physical, psychological and social changes. Nurses and midwives, who play a key role in adaptation to the postpartum process, have very important roles and responsibilities. In postpartum care, nurses and midwives should approach women in this period holistically, provide positive coping behaviors in the postpartum period, and increase spousal support and social support systems. Considering the positive effect of spousal support on breastfeeding and stress experienced during this period, spouses should be included in every stage of the process. In fact, in order to better support women in the postpartum period, it should be emphasized that spousal support is important from the preconceptional and pre-pregnancy period onwards, and responsibilities should be given to spouses. In order to illuminate all points of the factors that will increase the quality of life of women in the postpartum period, it is recommended that studies are conducted to reveal the relationships between different variables.

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