

# The relationship of perceived social support with self-care and marital satisfaction in mothers of children with epilepsy

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A – Study Design, B – Data Collection, C – Statistical Analysis, D – Data Interpretation, E – Manuscript Preparation, F – Literature Search, G – Funds Collection

**Summary Background.** Mothers caring for children with epilepsy are commonly exposed to feelings such as guilt, failure, sadness, isolation and lack of interest in interaction with others.

**Objectives.** The present study aims to examine the relationship between perceived social support and self-care and marital satisfaction in mothers of children with epilepsy in one hospital in Shiraz, Iran.

**Material and methods.** In this descriptive correlational study, the sample included 98 mothers caring for children with epilepsy admitted to Namazi Hospital. For data collection, four questionnaires were used including demographics, perceived social support, self-care and marital satisfaction. After completion of the questionnaires, the data was analysed using SPSS Statistics 21.0. A significance level of 0.05 was considered in the study.

**Results.** The mothers had an average perceived social support score of  $30.48 \pm 7.04$ . The average self-care score of the mothers of epileptic children was  $87.45 \pm 14.41$ . Concerning marital satisfaction, the mothers had an average score of  $118.93 \pm 19.6$ . The research findings indicated a positive and significant correlation between perceived social support and self-care in the mothers. In other words, the self-care scores were increased with an increase in the perceived social support score ( $r = 0.332$ ;  $p = 0.001$ ). Furthermore, a positive and significant correlation was also found between perceived social support and marital satisfaction, i.e. with an increase in the perceived social support score, the marital satisfaction scores of the mothers also increased ( $r = 0.201$ ;  $p = 0.047$ ).

**Conclusions.** The results of the current study indicated that perceived social support has a positive relationship with self-care and marital satisfaction in mothers. Therefore, the provision of social support by the family, friends and society will result in better self-care and higher marital satisfaction in mothers caring for children with epilepsy, which in turn can improve the quality of the care provided to these children by their mothers.

**Key words:** mothers, child, epilepsy, social support, self care.

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## Background

The occurrence of chronic diseases in children can widely affect the lifestyle of families and cause feelings of anxiety, guilt, frustration and helplessness in parents [1]. In the meantime, epilepsy is the most common neurological disorder during childhood, which has a relatively high prevalence among children and, in many cases, leads to hospitalisation [2, 3]. Due to the recurrent, chronic and multifaceted nature of this disease, the care given to children with epilepsy is of great importance. Parents play a crucial role in controlling epilepsy in their children and can help the child understand and fight against the disease better [4, 5]. However, studies reveal that parents caring for children with epilepsy have a lower quality of life and suffer from a higher level of anxiety and depression. Meanwhile, reduced quality of life and emotional problems in the parents can have a large negative impact on a child's quality of life [6]. The families of children with epilepsy are more susceptible to stress, reduced parent-child relationship quality, lower self-confidence in parents and increased problems in familial functions

[7]. In the majority of cases, mothers are the main caregivers to epileptic children and are hence susceptible to psychological disorders [8–10]. Factors such as the hospitalisation of a child are often considered stressful experiences for parents [11]. In addition, the child's disease will have a great impact on marital satisfaction, perceived social support and self-care in the parents [7, 12]. Individuals with a proper social support system are more optimistic toward life and more successful in overcoming depression, adapting to the damages caused by physical disability, maintaining their self-esteem and overcoming loneliness. Such individuals are less susceptible to diseases and have lower stress levels [13]. Among the parents of this group of children, higher levels of perceived social support result in lower levels of depression, stress and anxiety [8, 14]. Additionally, high levels of social support can improve resilience in individuals [15]. In these situations, one of the most important factors affected by children with a chronic disease is the marital relationship [16]. Marital satisfaction is defined as the attitude of an individual toward his or her marital relationship, which provides a general evaluation of the individual's current romantic relationship and can be a reflection of how happy or satisfied he or she is with



the relationship [6]. Perceived social support also has a positive relationship with quality of life, feelings of well-being and general health [17].

## Objectives

The current research aims to investigate the relationship between perceived social support and self-care and marital satisfaction in mothers of children with epilepsy admitted to the hospital.

## Material and methods

### Study design

The present study is of a descriptive correlational design.

### Study population and setting

The sample of the study included 98 mothers of children with epilepsy admitted to one hospital in Shiraz, Iran.

### Sample size estimation

In this research, the sample size was determined as 98 individuals based on the findings of Decker et al. [18] and with the help of Med Calc software using the following formula while considering a power of 90% and  $\alpha = 0.05$ :

$$n = \left[ \frac{z_{1-\alpha/2} + z_{\beta}}{c} \right]^2 + 3$$

$$c = \frac{1}{2} \ln \frac{1+r}{1-r}$$

$$r = 0.32$$

### Sampling technique and selection criteria

The selection of mothers was carried out through convenience sampling by daily visits to the population of mothers with epileptic children admitted to the Paediatric Neurology Department. In this regard, mothers who were willing to participate in the study and met the inclusion criteria were selected as subjects. In these daily visits to the hospital, the assistant researcher would talk to mothers with hospitalised epileptic children regarding the research objectives and, after evaluating the mothers in terms of the inclusion criteria and obtaining informed consent, included them in the sample.

### Inclusion and exclusion criteria

Inclusion criteria consisted of the child having epilepsy based on the diagnosis of a paediatric neurologist, an age of 1–12 years for the child and 18–45 years for the mother, the mother is considered the main caregiver of the epileptic child, as well as the level of literacy of the mother.

### Materials

For each mother, the demographics, perceived social support, self-care and marital satisfaction questionnaires were completed by the assistant researcher. The data was then entered into SPSS Statistics 21.0 and statistically analysed.

The demographics questionnaire included questions pertaining to the child's age, mother's age, mother's education, mother's occupational status, father's age and father's occupation. The face validity of the questionnaire was verified by a number of paediatric nursing experts.

As the second instrument used in this research, the Multidimensional Scale of Perceived Social Support was used, developed by Zimet et al. in 1988. This scale consists of 12 items covering the 3 dimensions of perceived support from family (4 items), perceived support from a significant other (4 items) and perceived support from friends (4 items). The scores of this scale may vary from 12–60, with higher scores indicating a high level of perceived social support and lower scores indicating a low level of perceived social support. The developers of the scale verified the internal consistency of the scale with Cronbach's alphas of 0.91, 0.89 and 0.91 for the "family", "significant other" and "friends" dimensions, respectively [19]. In Iran, this scale was first translated into Farsi by Masoudnia (2011) [20]. The overall internal stability of the scale has been calculated as 0.89, and for the subscales of perceived support from friends, family and significant other, the internal stability has been calculated as 0.78, 0.81 and 0.87, respectively.

The next instrument was a standard general self-care scale that was used to measure the level of self-care in mothers of children with epilepsy. This scale included 4 subscales covering the dimensions of general health, self-care knowledge, self-care interest and self-care methods. The scale consisted of 55 items including items pertaining to knowledge (6 items), attitude (14 items), performance (25 items), barriers (1 item with 15 options), facilitators (1 item with 15 options) and additional questions (8 items). The items in this questionnaire were either yes/no questions or scored based on a variety of scales, the main ones being 3- to 8-point Likert scales. To ensure the reliability of the questionnaire, its internal consistency was verified with a Cronbach's alpha of 0.79 [21].

To evaluate the marital satisfaction of the mothers, the ENRICH Marital Satisfaction Scale developed by Fowers and Olson was used, which consists of 47 items in 12 subscales. This questionnaire has a Cronbach's alpha of 0.92 [22]. The scale has been standardised in Iran by Firouzabadi, who reduced the number of items to 47. A Cronbach's alpha of 0.95 was reported for this shortened version of the questionnaire [23].

### Data analysis

For data analysis, SPSS software version 21 was used, and in accordance with the type of variables under study, descriptive statistics including frequency, percentage, mean and standard deviation were utilised, and with regard to inferential statistics, the Kolmogorov-Smirnov test was used to examine the normality of data distribution. Pearson's correlation coefficient, *t*-Test and ANOVA were also used. The significance level of the test was considered  $p < 0.05$ .

### Ethical consideration

This study was registered and approved by the ethics committee of Shiraz University of Medical Sciences under ethics code IR.SUMS.REC.1398.092. Written informed consent was obtained from the participants.

## Results

An evaluation of the demographic data showed that the mothers participating in this study had an average age of  $33.42 \pm 5.79$  years, and the majority of them were housewives (91.84%). A majority of the subjects had an education level under diploma, and having 2 children was the most prevalent scenario (43.9%). A majority of the husbands had public service jobs (60.2%), and most families (83.7%) had a monthly income of between 2–6 million Tomans. The children had an average age of  $6.72 \pm 3.79$  years. Among the children, there were 56 males (57.1%) and 42 females (42.9%) (Table 1).

**Table 1. Demographic characteristics of the epileptic children admitted to the hospital and their mothers**

Variable	Amount
Age of mother, mean ± SD	33.42 ± 5.79
Occupation of mother, No. (%)	
employed	8 (8.16)
housewife	90 (91.84)
Number of children, No. (%)	
one child	23 (23.5)
2 children	43 (43.9)
3 or more children	32 (32.7)
Education of mother, No. (%)	
under diploma	37 (37.8)
diploma	35 (35.7)
higher education	26 (26.5)
Occupation of spouse, No. (%)	
self-employed	30 (30.6)
public service	68 (60.2)
Monthly income (Tomans), No. (%)	
under 2 million	10 (10.2)
2–6 million	82 (83.7)
over 6 million	6 (6.1)
Age of child, mean ± SD	6.72 ± 3.79
Gender of child, No. (%)	
male	56 (57.1)
female	42 (42.9)

The mothers had an average perceived social support score of  $30.48 \pm 7.04$ . Since the average score of this variable in the sample under study was less than 50, it can be stated that the subjects did not have desirable perceived social support. The average self-care score of mothers of epileptic children was  $87.45 \pm 14.41$ . Given that a score of above 75 is considered to be an indicator of desirable awareness, knowledge and performance, it can be stated that the subjects were showing a desirable level of self-care.

With regard to marital satisfaction, the mothers had an average score of  $118.93 \pm 19.6$ . Considering that in the ENRICH scale, a score of above 47 indicates a good level of satisfaction, it can be stated that the subjects had a good level of marital satisfaction (Table 2).

**Table 2. Average scores of perceived social support, self-care and marital satisfaction in mothers of children with epilepsy**

Factor	Mean Score	Std. Deviation	Min	Max
Perceived social support	30.48	7.04	12	44
Self-care	87.45	14.41	39	111
Marital satisfaction	118.93	19.6	75	172

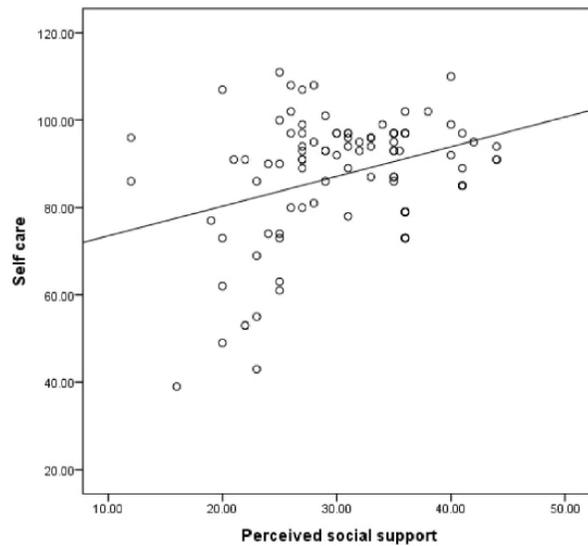
**Table 3. Correlation between perceived social support scores and the scores for self-care and marital satisfaction in mothers of children with epilepsy**

Variable	Self-care	Marital satisfaction
Perceived social support	$p = 0.001$	$p = 0.047$
	$r = 0.332$	$r = 0.201$

To examine the correlation between the perceived social support, self-care and marital satisfaction scores of the mothers, Pearson’s correlation coefficient was utilised. The test showed a positive and significant correlation between the perceived social support and self-care scores in the mothers ( $r =$

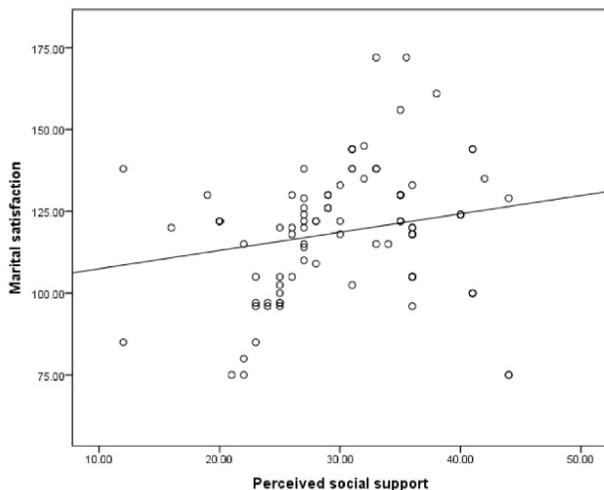
$0.332; p = 0.001$ ). In other words, with an increase in the perceived social support score, the self-care scores also increased. Moreover, a positive and significant correlation was also found between perceived social support and marital satisfaction ( $r = 0.201; p = 0.047$ ). In other words, the marital satisfaction scores of the mothers increased with an increase in their perceived social support score (Table 3).

As previously mentioned, a positive and significant correlation was observed between perceived social support and self-care in mothers of children with epilepsy, as their self-care scores were increased with an increase in their perceived social support score (Figure 1).



**Figure 1.** Diagram showing the relationship between perceived social support and self-care in mothers of children with epilepsy

Furthermore, there was also a positive and significant correlation between perceived social support and marital satisfaction in the mothers. In this regard, with an increase in perceived social support, marital satisfaction also increased (Figure 2).



**Figure 2.** Diagram showing the relationship between perceived social support and marital satisfaction in mothers of children with epilepsy

### Discussion

This research was aimed at investigating the relationship of perceived social support with self-care and marital satisfaction in mothers of children with epilepsy admitted to the hospital.

The research findings indicated a positive and significant correlation between perceived social support and self-care in the mothers under study. This finding is consistent with results from other studies. In this regard, Gao et al. carried out a cross-sectional study in 2013 aiming to determine the effects of self-care, self-efficacy and social support on glycaemic control in adults with type 2 diabetes. Their results revealed a positive and significant relationship between social support and self-care behaviours [24]. Moreover, the findings of Cao et al. in 2019 also portrayed social support to be a strong predictor of self-care in patients with chronic heart failure [25]. In another study by Mehvari Habibabadi et al., a relationship was shown between perceived social support and self-esteem in patients with epilepsy [26]. In a study by Lumbasi, the positive impact of social support on self-efficacy and self-management of children living with epilepsy was reported [27]. These studies produced results consistent with the present research; however, these studies were conducted among adults who were patients themselves, while in the current study, the sample consisted of mothers with sick children.

Meanwhile, the findings reported by Mansouriyeh et al. (2015) indicated a significant negative correlation between social support and self-care, which is inconsistent with the results of the present study. The different outcomes of the current research and the study by Mansouriyeh et al. could be explained by the difference in sample type, as the sample consisted of heart patients in the study by Mansouriyeh et al., while mothers of children with epilepsy were the subjects in the current study [28].

Our findings also indicated a positive and significant correlation between perceived social support and marital satisfaction in mothers of children with epilepsy. This result is consistent with the findings of other studies. In this regard, the results reported by Rafiee et al. (2016) suggested a significant positive correlation between social support and marital satisfaction in the elderly [29]. Kavehfarsani and Omidian also demonstrated a relationship between perceived social support and marital satisfaction [30].

The results from another study by Yazdani et al. (2016) showed a positive relationship and correlation between perceived social support and marital status. In other words, more desirable marital satisfaction scores were reported in men and women with higher social support scores [31]. The results of these studies were in line with the present study; however, the first study was focused on an elderly population, and the latter was conducted among infertile couples, while the participants in the current study were mothers of children with epilepsy. In addition, the results produced by Muslima and Herawati (2018) also indicated a positive and significant relationship between social support and marital quality [32], although the mentioned study investigated the relationship between social support and marital adjustment, while in the present study, the relationship between social support and marital satisfaction was the main point of focus.

## Conclusions

The results of the current study indicated that perceived social support has a positive relationship with self-care and marital satisfaction in mothers. Therefore, the provision of social support by the family, friends and society will result in better self-care and higher marital satisfaction in mothers caring for children with epilepsy, which in turn can improve the quality of the care provided to these children by their mothers.

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Tables: 3

Figures: 2

References: 32

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