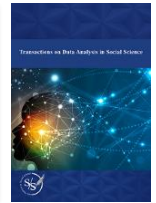




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Predicting Marital Satisfaction Based on Gratitude, Sleep Quality, and Self-Compassion in Female Nurses

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ARTICLE INFO	ABSTRACT
<p>Article History: Received 2 March 2020 Received in revised form 5 June 2020 Accepted 28 August 2020 Available online 4 September 2020</p> <p>Keywords: Marital Satisfaction, Gratitude, Sleep Quality, Self-Compassion, Nurses, Women.</p>	<p>Marital satisfaction is an essential aspect of nurses' lives that significantly influences their professional situation. Gratitude, sleep quality, and self-compassion are among the factors that can impact marital satisfaction. Therefore, this study aimed to determine the relationship between gratitude, sleep quality, and self-compassion with marital satisfaction in female nurses in Tehran. The statistical population of this research included all female nurses working in Ibn Sina, Payambaran, Atieh, Laleh, Asia, Arya, Pars, Rasoul Akram, and Bahman hospitals in Tehran in the second half of 2019. Among these nurses, 200 were selected as the sample using the available and voluntary sampling method. The research tools included questionnaires on gratitude, sleep quality, and self-compassion. Pearson correlation coefficient and stepwise regression analysis were employed for data analysis. The findings indicated a significant positive relationship between marital satisfaction and gratitude, sleep quality, and self-compassion. Stepwise regression analysis results demonstrated that self-compassion, sleep quality, and gratitude, respectively, could predict 0.67% of the variance in marital satisfaction in female nurses. Therefore, it is recommended that counselors, therapists, and healthcare planners provide necessary training on marital satisfaction for female nurses.</p>

1. INTRODUCTION

Nurses play a vital role in providing healthcare services and managing patient care [1]. Consequently, long working shifts and prolonged contact with patients make them more irritable and vulnerable to psychological stress [2]. These occupational pressures have been associated with sexual problems and marital dissatisfaction among nurses [2–5]. Marital satisfaction is an essential factor for family life success and personal growth [5], defined as the extent to which one perceives their needs and desires to be fulfilled by their spouse [6]. Abdul Aziz's study [5] revealed that more than half of married nurses reported only moderate levels of marital satisfaction. On the other hand, marital satisfaction is considered one of the most significant determinants of healthy family functioning among nurses [7]. As an outcome of a successful marriage, marital satisfaction is particularly important for nurses who work in one of the most stressful professions, and it plays a moderating role in reducing work-related psychological

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pressures [8]. Since the overlap of family and occupational roles can cause both physical and psychological stress [9], investigating the factors influencing marital satisfaction in nurses holds particular importance. In this regard, marital virtues, with an emphasis on positive constructs such as gratitude, may be associated with marital satisfaction [10]. Gratitude plays a significant role in human social life and marital satisfaction [11]. It is understood as an effective response to what others have done and as appreciation for the positive aspects or events one experiences in life [12]. Gratitude fosters a more optimistic outlook when evaluating life experiences and social interactions [13]. Studies indicate that gratitude can predict marital satisfaction in couples, including nurses [13–16].

At the same time, individuals' sexual functioning and satisfaction may vary depending on their work environment. For instance, nurses work continuously in rotating shifts, providing care to patients around the clock. Long working hours and sleep deprivation expose them to various health issues [17]. Bogatas and colleagues found that the quality of sleep among night-shift nurses was lower than that of day-shift nurses, and their overall quality of life was also reduced [18]. Similarly, Soleimani and colleagues, in a study on employed nurses in teaching hospitals affiliated with Iran University of Medical Sciences, found that 44% of them experienced poor sleep quality [19]. Another study by Salehi et al. on nurses at Imam Khomeini Hospital in Tehran revealed that 62.5% reported poor sleep quality, 33.3% relatively poor, and only 4.2% reported good sleep quality [20]. Poor sleep quality, and consequently sleep disorders, contribute to reduced sexual quality of life in nurses [21]. Reports suggest that sexual dysfunction affects up to 50% of nurses, a prevalence higher than that among women in the general population. This discrepancy is also observed across subscales of sexual function; among nurses, lack of sexual desire is more common, while community-based studies report orgasmic dysfunction more frequently [22]. Findings by Arshadi and colleagues further indicate that sleep quality, self-efficacy, and work–family conflict play moderating roles in the relationship between work–family conflict and overall health, cognitive deficits in the workplace, and marital satisfaction [23]. Similarly, Rahimi Pordanjani and Mohammadzadeh Ebrahimi demonstrated that sleep quality, as a key variable, can mediate the relationship between workload and both physical and mental health in nurses [24].

In addition to gratitude and sleep quality, self-compassion may also be related to marital satisfaction among nurses. Psychologists have long been interested in how individuals' thoughts and feelings about themselves affect their interpersonal relationships. Viewing oneself as competent and worthy plays a critical role in sustaining satisfaction within romantic relationships [25]. Conversely, self-critical individuals often experience mistrust, dissatisfaction, and difficulty establishing intimacy with their partners [26]. Neff (2003) conceptualized self-compassion as a three-dimensional construct: self-kindness versus self-judgment, common humanity versus isolation, and mindfulness versus over-identification [27]. Self-kindness involves understanding and supporting oneself rather than self-condemnation, while common humanity reflects the acknowledgment that all people are imperfect, make mistakes, and engage in unhealthy behaviors [28]. Mindfulness, as opposed to over-identification, allows for a balanced awareness of present experiences, ensuring that painful aspects are neither ignored nor become overly dominant in one's mind [29]. Multiple studies, including those by Varaei, Moameni, and Moradi [30–33], Varaei and colleagues [34], and Varaei, Pourdard, and Mirshamsi [35], demonstrated that individuals with higher levels of self-compassion report better psychological well-being. For these individuals, inevitable pain and failure are less likely to persist due to harsh self-criticism [36], feelings of isolation [37], or excessive identification with negative thoughts and emotions [38]. This supportive attitude toward oneself is associated with numerous positive psychological outcomes, such as stronger motivation for resolving personal conflicts, constructive problem-solving, and marital well-being [39]. Self-compassion not only protects against negative mental states but also enhances positive emotions. For example, it has been linked to social connectedness and life satisfaction [28] and helps satisfy basic psychological needs for autonomy, competence, and relatedness [40]. Studies have shown that self-judgment, isolation, and rumination stemming from a lack of self-compassion directly contribute to reduced marital satisfaction and marital instability [41]. Qazlsafloou and colleagues further demonstrated that self-kindness, common humanity, and mindfulness (positive components of self-compassion) were positively associated with marital commitment, while self-judgment, isolation, and over-identification (negative components) were negatively associated with it [42]. Similarly, Crocker and colleagues found that individuals high in self-compassion adopt kinder and more compassionate goals in their relationships, fostering social support and interpersonal trust with their spouses [43]. Moreover, Mousavi's research revealed a significant positive relationship between mindfulness and marital satisfaction [44].

Given the highlighted importance of gratitude and self-compassion, and considering the high prevalence of poor sleep quality and sexual dysfunction among female nurses, there has been limited research on marital satisfaction and its predictors in this occupational group. Therefore, the present study aims to investigate whether gratitude, sleep quality, and self-compassion can predict marital satisfaction among female nurses.

Research Hypothesis: Gratitude, sleep quality, and self-compassion are predictors of marital satisfaction in female nurses.

2. RESEARCH METHOD

This study employed a descriptive-correlational design. The statistical population consisted of all female nurses working in Ibn Sina, Payambaran, Atieh, Laleh, Asia, Aria, Pars, Rasoul Akram, and Bahman hospitals in Tehran during the second half of 2019. From this population, 200 participants were selected using convenience and voluntary sampling. The researcher attended the selected hospitals in person, screened nurses based on the inclusion criteria, and, upon their willingness to participate, provided them with a face-to-face oral explanation of the study's aims and procedures. Subsequently, the relevant questionnaires were distributed for completion.

Inclusion criteria were: being between 30 and 45 years of age, having at least four years of work experience, no history of psychiatric or psychoactive medication use, abstinence from sedatives, alcohol, and narcotics, and no history of divorce. The **exclusion criterion** was unwillingness to participate in the study. To ensure ethical considerations, participants were assured of confidentiality, anonymity of the questionnaires, and the right to withdraw from the study at any time without consequence.

The following instruments were used for data collection:

2.1. Marital Satisfaction Scale (Short Form by Rajabi):

Marital satisfaction was assessed using Rajabi's short form, consisting of 13 items rated on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). Items 3, 4, 6, 8, and 11 are reverse-scored. The possible score range is 13 to 65, with higher scores indicating greater marital satisfaction [45]. Cronbach's alpha coefficient for this scale has been reported as 0.90 for all employees, 0.89 for men, and 0.91 for women, with concurrent validity of 0.83 compared to the 47-item Enrich Marital Satisfaction Questionnaire [45]. Rajabi et al. further reported a reliability of 0.89 and a correlation of 0.29 with the 9-item Life Satisfaction Scale [46]. In the present study, Cronbach's alpha was 0.76.

2.2. Gratitude Questionnaire (GQ-6)

Developed by McCullough et al., this six-item self-report scale measures individual differences in the tendency to experience gratitude. Items are rated on a 6-point Likert scale (from "strongly disagree" to "strongly agree"), with scores ranging from 6 to 36. Items 3 and 6 are reverse-scored. Each item reflects the intensity and frequency of gratitude experienced by the respondent. This unidimensional tool has been validated for use in adolescents and adults (ages 11–75) [47]. Test-retest reliability, internal consistency, and convergent validity have been confirmed [48]. In the current study, Cronbach's alpha was 0.72.

2.3. Pittsburgh Sleep Quality Index (PSQI)

This instrument consists of seven subscales: subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances (night awakenings), use of sleeping medication, and daytime dysfunction. Each subscale is scored from 0 to 3 (0 = no problem, 3 = severe problem). The global score ranges from 0 to 21, with lower scores reflecting better sleep quality. A global score of less than 5 indicates good sleep quality, while scores ≥ 6 indicate poor sleep quality. The PSQI has demonstrated good reliability, with Cronbach's alpha reported at 0.83 [49], and evaluates sleep quality over the past four weeks [50]. In the present study, Cronbach's alpha was 0.76.

2.4. Self-Compassion Scale–Short Form (SCS-SF)

To measure self-compassion, the short form developed by Raes et al. was used. This 12-item self-report scale assesses three bipolar components across six factors: self-kindness vs. self-judgment, mindfulness vs. over-identification, and common humanity vs. isolation. Responses are rated on a 5-point Likert scale ranging from 1 (almost never) to 5 (almost always). Raes et al. reported a Cronbach's alpha of 0.86 and confirmed acceptable

construct validity with a six-factor model [51]. In an Iranian study by Sabze-Aray Langroudi, Sarafraz, and Ghorbani (2014), Cronbach’s alpha was 0.68 [52]. In the present study, Cronbach’s alpha was 0.79, indicating satisfactory reliability.

2.5. Data Analysis

Data were analyzed using SPSS version 23. Pearson correlation coefficients and stepwise multiple regression analysis were employed.

3. FINDINGS

Descriptive indices of the research variables (including mean, standard deviation, minimum, and maximum score) are presented in Table 1.

Table 1: Mean, Standard Deviation, and Research Variables

The higher the score	The lowest score	Standard deviation	average	Variable
39	24	40/4	31/62	marital satisfaction
25	16	2/43	21/25	Gratitude
8	4	1/39	5/72	Quality of sleep
35	27	2/57	31/04	Self-compassion

To examine the research hypothesis namely, the relationship and predictive power of marital satisfaction based on gratitude, sleep quality, and self-compassion among female nurses Pearson’s product-moment correlation coefficient and stepwise multiple regression analysis were employed. Multiple regression analysis requires several assumptions to be met:

Independence of errors: This assumption was evaluated using the Durbin–Watson test. According to authoritative sources, if the value of this statistic falls between 1.5 and 2.0, the independence of observations can be assumed, allowing the analysis to proceed [53]. In the present study, the Durbin–Watson statistic was 1.598, confirming the independence of observations.

Normal distribution of errors with a mean of zero: This assumption was also met in the present study, as the errors displayed an approximately normal distribution, with a mean value very close to zero and a standard deviation close to one.

Absence of multicollinearity among independent variables: To test this assumption, the tolerance and variance inflation factor (VIF) statistics were examined. As shown in Table 4, the tolerance values were close to one, and the VIF values were below two, which are considered acceptable thresholds. Therefore, no multicollinearity was detected among the independent variables.

Given that all assumptions were satisfied, multiple regression analysis could be appropriately applied to test the research hypotheses.

Table 2: Correlation of Research Variables

4	3	2	1	variables
			-	Marital satisfaction
		-	**0/61	gratitude
	-	**0/46	**0/62	Sleep quality
-	**0/53	**0/61	**0/76	Self-compassion

Table 2 illustrates the correlation coefficients among the research variables. Examination of these coefficients indicates a significant and positive relationship between marital satisfaction and gratitude, sleep quality, and self-compassion.

Table 3: Summary of Stepwise Regression Analysis for Marital Satisfaction through Gratitude, Sleep Quality, and Self-Compassion

N - Watson camera	The collinearity assumption		Sig.	B	β	R	R ²	F	t	Variable	step
	tolerance	swelling Variance									
			0.001			0.76	0.58	282/99			1
	1	1	0.001	1/31	0.76				16/82	Self-compassion	
			0.001			0.80	0.65	186/11			2
	1/401 1/401	0.714 0.714	0.001 0.001	1/03 / 0 956	0.60 0.30				12/18 6/10	self-compassion Quality of sleep	
598/1			0.001			0.82	0/67	134/87			3
	1/831 1/463 1/664	0/546 0/684 0/601	0/001 0/001 0/001	0/878 0/847 0/328	0/51 0/26 0/18				9/28 5/43 3/44	Self-compassion Sleep quality gratitude	

Table 3 provides a summary of the stepwise regression analysis for marital satisfaction through gratitude, sleep quality, and self-compassion. In this table, statistical values such as t and F statistics, correlation coefficient (R), and determination coefficient (R²) for the significance of the regression models are presented. Additionally, the table includes the values of unstandardized regression coefficients (B) and standardized regression coefficients (β) for each variable in the presented model.

According to this table, the F statistic values for the first, second, and third steps are 282.99, 186.11, and 134.87, respectively, all of which are significant. In other words, the overall regression model is significant in all three steps. Furthermore, the determination coefficient values are 0.58 in the first step, 0.65 in the second step, and 0.67 in the third step. It is evident from the table that in the first step, self-compassion enters the equation based on its highest correlation with marital satisfaction, showing a significant and positive coefficient. In the second step, sleep quality is added to the first variable, and a significant effect is obtained, and in the third step, gratitude is added to the variables from the previous steps, all of which have a meaningful impact.

4. DISCUSSION AND CONCLUSION

The aim of the present study was to examine the relationship of gratitude, sleep quality, and self-compassion with marital satisfaction among female nurses. The findings indicated that marital satisfaction was positively and significantly associated with gratitude, sleep quality, and self-compassion. Moreover, self-compassion, sleep quality, and gratitude, in order of importance, were found to be significant predictors of marital satisfaction among female nurses. Therefore, the study hypothesis was supported. These results are consistent with the findings of Denforte et al. [41], Ghazalsafrou et al. [42], Crocker et al. [43], and Mousavi [44] regarding the predictive role of self-compassion in marital satisfaction; with the studies of Bogatas et al. [18], Mirrezaei et al. [21], Ershadi et al. [23], and Rahimi Pardaniyani & Mohammadzadeh Ebrahimi [24] on the positive role of sleep quality in marital satisfaction; and with the works of Mousavi [10], Ferrer [11], Gordon et al. [13], Algoe et al. [14], Chang et al. [15], and Abbasi & Montazer [16], who demonstrated the positive association between gratitude and marital satisfaction.

In explaining the relationship between self-compassion and marital satisfaction, it can be argued that self-compassion is associated with self-worth, happiness, and authenticity in relationships. Self-compassionate

individuals are able to express their opinions in romantic relationships. The degree of kindness that individuals show toward themselves is related to how kind they are toward their partners. To the extent that a person possesses self-compassion, they are significantly described by their spouses as caring (e.g., kind, warm, and considerate). Self-compassionate individuals maintain a high level of connectedness with their partners, and openness to self-compassion is linked to intimacy with others. Furthermore, individuals with self-compassion exhibit greater acceptance of their spouses and allow them more autonomy and independence. Because self-compassionate individuals view themselves as imperfect beings aware of and accepting their flaws they are also capable of accepting their partner's limitations. On the other hand, individuals whose spouses are self-compassionate report higher marital satisfaction [54]. Conversely, individuals with low self-compassion are often described as emotionally detached in their relationships. Self-judgment, self-criticism, isolation, and rumination on negative emotions can lead to self-absorption, which hinders intimacy and connection in marital relationships. Moreover, those lacking self-compassion often behave in controlling or authoritarian ways toward their partners, showing lower acceptance and granting less autonomy. This pattern suggests that individuals who are harsh on themselves are likely to treat their spouses in a similarly harsh manner [55]. Such individuals also display more verbal aggression toward their partners, as they tend to fixate on negative emotions and overreact during conflict or anger episodes [56].

With respect to sleep quality, stressful work-related events in nursing frequently deplete energy resources [57]. Energy expenditure also leaves nurses feeling fatigued at the end of a workday [58]. Therefore, high-quality sleep can restore at least part of the energy lost during work and family routines, thereby mitigating the effects of work–family conflict. Moreover, adequate sleep enhances cognitive recovery, information processing, and concentration. High-quality sleep, through its restorative effects on fatigue and psychological distress caused by conflict, increases the cognitive resources required to cope with challenges in both work and family domains [59]. Consequently, individuals with better sleep quality are less prone to cognitive impairments. Satisfactory sleep quality reduces stress from conflicts and prevents the spillover of negative emotions between work and family settings. In addition, sufficient sleep alleviates emotional exhaustion and physical and psychological fatigue from the workplace, reducing irritability. Thus, desirable sleep quality may attenuate the negative impact of work–family conflict on marital satisfaction and contribute to higher marital satisfaction among female nurses.

Regarding the relationship between gratitude and marital satisfaction, it can be explained that, according to the positive psychology framework, gratitude acts as a reinforcer by enhancing factors such as happiness, intimacy, and spousal support. A grateful person not only expresses positive emotions but also conveys acknowledgment and appreciation. Essentially, by recognizing the benefits their spouse brings to their life, individuals are encouraged to continue offering support and effective investment in their marriage [13]. Furthermore, gratitude motivates reciprocal exchanges, so living with a grateful partner increases resources and satisfaction. Thus, gratitude functions as a problem-solving strategy and serves as a buffer against negative emotions and adverse life events [60]. Gratitude also facilitates autonomy, environmental mastery, and personal growth [61], and it enhances resilience and psychological flexibility [62]. Accordingly, gratitude is incompatible with negative emotions and psychopathological states, acting as a protective factor against mental disorders [63]. Therefore, recognizing and practicing gratitude within marital life can strengthen self-esteem, improve personal efficacy, and, in turn, promote marital satisfaction [15].

In summary, the findings of the present study revealed that self-compassion and adequate sleep quality, within the context of a gratitude-based relationship, contribute to higher marital satisfaction among female nurses. One of the study's limitations was the exclusively female sample; thus, it is recommended that future research compare men and women. Additionally, marital satisfaction among nurses appears to be influenced by numerous mediating and moderating factors, including occupational variables. Hence, future studies are encouraged to examine these variables through structural equation modeling.

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Transparency Statement

The data supporting this study are available upon reasonable request to the corresponding author, subject to ethical and confidentiality considerations.

Declaration of Interest

The authors declare that they have no competing interests.

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