Original

Influence of Cognitive Distortions and Fear of Negative Assessment on Marital Relationship in Iranian Women

Influencia de distorsiones cognitivas y miedo a la evaluación negativa sobre la relación matrimonial en mujeres iraníes

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Abstract

Introduction: Different psychological factors such as cognitive distortions and fear can affect quality of marital relationships

Objective: Determine the moderating role of cognitive distortions on the negative assessment and marital relationship quality in married women referred to health care centers in Iran, in 2023.

Method: This cross-sectional study was conducted on 330 women who attended the Women's Health Care Clinic in Iran from January to April,2023. Cognitive Distortion Questionnaire (CD-Quest), Brief Fear of Negative Evaluation Scale (BFNE-S) and the Marital Relationship Quality scale (MRQ) were used. Data were analyzed by SPSS 24 and using Pearson correlation, independent t, multiple regression and descriptive statistics. P-value less than 0.05 was considered statistically significant.

Results: Women's mean age was 23.45+ 5.77 years. There was a significant correlation of cognitive distortions and fear of negative assessment in married women (P<0.001). Cognitive distortions on the association between fear of negative assessment were able to explain 71% of the changes in marital relationship quality in married women.

Conclusions: It is necessary to consider the role of psychological factors such as cognitive distortions an fear of negative assessment for improving the quality of marital relationships. Therefore, health planners should adopt strategies to increase quality of marital relationships and reduction of cognitive distortions and fear of negative assessment in married women.

Keywords: cognitive distortion; fear of negative assessment; marital relationship quality**.**

Resumen

Introducción: Diferentes factores psicológicos tales como las distorsiones cognitivas y el miedo a la evaluación negativa pueden afectar la calidad de las relaciones matrimoniales.

Objetivo: determinar el papel moderador de las distorsiones cognitivas en la evaluación negativa y la calidad de la relación marital en mujeres casadas derivadas a centros de salud en Irán en 2023.

Método: se realizó un estudio transversal en 330 mujeres que asistieron a la Clínica de Salud de la Mujer en Irán de enero a abril de 2023. Los cuestionarios fueron el cuestionario de distorsiones cognitivas (CD-Quest), la escala breve de miedo a la evaluación negativa (BFNE-S) y la escala de calidad de la relación marital (MRQ). Los datos se analizaron con SPSS 24 y se utilizaron correlación de Pearson, t independiente, regresión múltiple y estadística descriptiva. Un valor de p inferior a 0,05 se consideró estadísticamente significativo.

Resultados: la edad media de las mujeres fue de 23,45 ± 5,77 años. Hubo una correlación significativa entre las distorsiones cognitivas y el miedo a la evaluación negativa en las mujeres casadas (p < 0,01, r = 0,71). Una regresión múltiple mostró una relación estadísticamente significativa entre las distorsiones cognitivas y el miedo a la evaluación negativa y la calidad de las relaciones maritales (p < 0,001). Las distorsiones cognitivas asociadas al miedo a la evaluación negativa pudieron explicar el 71 % de los cambios en la calidad de la relación marital en mujeres casadas.

Conclusiones: para mejorar la calidad de las relaciones maritales, es necesario considerar el papel de los factores psicológicos, como las distorsiones cognitivas y el miedo a la evaluación negativa.

Por lo tanto, los planificadores de salud deben adoptar estrategias para aumentar la calidad de las relaciones maritales y reducir las distorsiones cognitivas y el miedo a la evaluación negativa en mujeres casadas.

Palabras clave: distorsión cognitiva, miedo a la evaluación negativa, calidad de la relación marital

Introduction

One of the issues that researchers and experts in the field of behavioral and family sciences is the fear of negative evaluation.[1] Fear of negative evaluation refers to "individuals' concern about others' evaluations, excessive distress regarding negative assessment, avoidance of evaluative situations, and anticipation of negative evaluations from others". Fear of negative evaluation contributes to the development and maintenance of irrational and severe anxiety related to social situations.[2]

Cognitive distortions, or flawed beliefs, can negatively impact marital relationships. They arise from incorrect information processing in individuals' minds. When these distortions happen frequently, they can cause discomfort or psychological issues.[3,4] Beck suggests that couples in troubled marriages display cognitive distortions, including emotional reasoning, selective abstraction, magnifying negative behaviors, minimizing positive actions, labeling, and personalization.[5]

Cognitive errors such as dichotomous thinking can negatively affect marital quality. Studies show a strong negative connection between these errors and relationship health. These distortions can lead to discomfort and psychological issues. Individuals should recognize and address these errors, and cognitive-behavioral therapy can help.[6-9]

The study aimed to determine the role of cognitive distortions on fear of negative assessment and marital relationship quality in women.

Método

This research was conducted as a cross-sectional study. The focus of the study was on a sample of 330 married women who are of reproductive age, all of whom attended various health centers in Iran during the year 2023 for their healthcare needs.

Inclusion criteria were married women of 15-49 years, who had a tendency to participate in the study and were Iranian. Exclusion criteria were an incomplete questionnaire, having severe mental and physical disorders, or severe depression.

The study was approved by the Research Ethics Committee in Iram (IR.IAU.TJ. REC.1402.044). Before the enrolment, informed consent was obtained from all of the participants.

The sample size was calculated based on the study on perceived social support for women of reproductive age[10]. According to the formula, the sample size was 300, and by adding 10 % for drop-outs, the sample size was increased to 330.

$$n = \frac{(Z1 - \frac{\alpha}{2})^2 (\sigma)^2}{(d)^2}$$

The appropriate number of samples was calculated as a fraction of the total sample size according to the center's demographics (number of married female clients of the center between 15 and 49 years old). The researcher contacted participants using their phone numbers to explain the study's purpose and methods. During the call, individuals were assessed for eligibility. Those qualified were invited to a health center on a set date to complete questionnaires. They received information about the study's significance and confidentiality before signing a consent form. Data were collected through interviews with socio-demographic questions related to age, marriage duration, education, employment, income, residence, marital commitment, and number of children.

The questionnaires were the Cognitive Distortions Questionnaire,[11] The Brief Fear of Negative Evaluation Scale,[12] and the marital relationship quality scale.[13]

The Cognitive Distortions questionnaire contains 20 phrases, which assess the cognitive distortion of Albert Allis and each irrational thought has two specific phrases that scored through the Likert scale, and its Cronbach's alpha is 0.80. The Brief Fear of Negative Evaluation Scale (BFNE-S) is an abbreviated version of the original BFNE (Leary, 1983) used to measure fears of negative evaluation. The scale consists of eight items that are straightforwardly worded, such as "When I am talking to someone, I worry about what they may be thinking about me." Participants rate each item on a 5-point Likert scale, ranging from 0 (not at all characteristic of me) to 5 (extremely characteristic of me). The BFNE-S is a widely used and validated measure of social anxiety and fear of negative evaluation in both clinical and research settings.

The MRQ (Marital Relationship Quality) measures included in the FHWS (Family Health and Well-being Study) comprised four validated Western scales, each measuring different relationship quality dimensions: trust, communication, commitment, and satisfaction. Each scale consisted of a series of 5 to 8 statements, to which spouses responded separately. The MRQ measures are widely used in research to assess the different components of marital quality and identify areas that may need improvement in couples' therapy.

Data collected by questionnaires were entered into SPSS ver. 22. Quantitative and qualitative variables were reported using mean (SD: standard deviation), and frequency (percentage) indices, respectively. The normality of the data was measured using kurtosis and skewness. All the data were normally distributed. Pearson correlation test was used for the univariate analysis of the relationships between cognitive distortions and fear of negative assessment with Quality of marital relations in married women referred to healthcare centers in Iran. A P-value less than 0.05 was considered statistically significant.

The FHWS (Family Health and Well-being Study) used four validated scales to assess relationship quality. The Commitment Scale, derived from the Sternberg Triangular Love Scale, has five items about long-term commitment. The Trust Scale, by Larzelere and Huston (1980), assesses agreement with eight statements on a one-to-seven scale. The Satisfaction Scale, part of Spanier's 1976 Dyadic Adjustment Scale, includes nine items rated on a six-point Likert scale. The Communication Scale evaluates constructive communication during conflict with seven items. Negatively worded items in Satisfaction and Communication were reverse coded. Higher scores indicate better-perceived relationship quality in commitment, trust, satisfaction, and communication.

Ethical approval

In this study, all procedures performed on human samples were conducted following the relevant guidelines and regulations of the Helsinki Declaration. The study protocol was approved by the Research Ethics Committee (IR.IAU.TJ.REC.1402.044) in Torbat jam Iran.

Results

Participants had an average age of 21.1 (SD = 10.7) and marriage duration of 7.3 years (SD = 9.5). More than half (50.7 %) were high school graduates; their husbands mainly held college (48.3 %) or high school (43.2 %) diplomas. About 48.3 % of husbands were self-employed, and 70.2 % reported adequate income. Nearly half (44.5 %) had two or more children, and 62.3 % were somewhat satisfied with their marriages. Cognitive distortions correlated significantly with age (p = 0.659) and marriage length (p = 0.830). Multi-regression indicated that education (p < 0.05), husband's job, income, and residence (p < 0.001) significantly affected cognitive distortions and marriage quality.

According to the results of table 1, cognitive distortions and fear of negative assessment have a significant relationship with marital relationship quality in married women. Also, cognitive distortions have a significant relationship with marital relationship quality in married women (p < 0.01).

Table1. Mean, standard deviation, and correlation coefficients of cognitive distortions and fear of negative assessment with marital relationship quality in married women

Variable	Mean	SD	1	2	3
Cognitive distortions	67.30	8.20	1		
Fear of negative assessment	78.48	9.30	0.71**	1	
Marital relationship quality	66.36	8.54	0.70**	0.73**	1

Examining the assumptions of multiple regression analysis indicates that the assumption of confirming normality based on the Kolmogorov-Smirnov test, the assumption of rejecting multiple collinearity based

on the value of the variance inflation factor, and the assumption of rejection tooth the correlation of the residuals was based on the Durbin-Watson value, so there are conditions for using multiple regression analysis.

The summary of multiple regression with step-by-step model for predicting marital relationship quality based on cognitive distortions and fear of negative assessment in married women was reported in (table 2 and table 3).

Table 2. Summary of multiple regression with stepwise model for predicting perceived social support based on the sense of cohesion and social health in married women

Model	Variables	R	R^2	Change of R^2	Change of F	P value
1	Cognitive distortions	0.71	0.62	0.26	32.29	0.001
2	Cognitive distortions and fear of negative assessment	0.89	0.71	0.20	9.18	0.001

Table 3. Conditional process analysis results for moderated cognitive distortions model

Source	b	se	t	p
Fear of negative assessment R:.749, R2:.562, F (7,171): 31.297, p<0.001	0.75	0.38	4.87	<0.001
Marital Relationship Quality R: .683, R2: .466, F (9,169): 16.412, p < .001	0.67	0.48	5.87	<0.001
Agreement	.481	0.054	0.389	0.01
Satisfaction	0.45	0.013	0.349	<0.01
Coherence	0.48	0.032	0.269	0.01

According to the results of table 2 in the first model, the cognitive distortions were first entered into the equation and the correlation coefficient of this variable with marital relationship quality is 0.71 and this variable was able to explain 62 % of the changes in marital relationship quality in married women. In the second model, after the cognitive distortions, the fear of negative assessment variable was entered into the equation, and the correlation coefficient of these two variables with marital relationship quality is 0.89, and these two variables were able to explain 71 % of the changes in marital relationship quality in married women.

Multivariate Analysis Results of Generalized Linear Models

In the multivariate model, all the variables with $p < 0.1$ were first entered, and their collinearity was then checked using the variance inflation factor (VIF), revealing that socioeconomic status and monthly income adequacy were highly collinear. Therefore, the variable of monthly income adequacy was removed from the multivariate model, and the socioeconomic status variable was included (table 4).

Table 4. Multivariate analysis results of generalized linear models (GLMs) for relationship between study variables

Variables		B (95% CI)	P-value
Age		0.057 (0.009,0.101)	0.093
Literacy	Below high school/university degree	0.057 (0.113,0.020)	0.168
	High school/university degree	0.067 (0.087,0.013)	0.122
Husband's literacy	Below high school/university degree	0.040 (0.116,0.026)	0.132
	High school/university degree	0.002 (0.049,0.055)	0.833
Job	Housewife/employee	0.043 (0.079,0.002)	0.063
Husband's occupation	Self-employed/employee	0.010 (0.024,0.054)	0.548
Socioeconomic status	Low/high	0.049 (0.146, -0.003)	0.033
	Moderate/high	0.031 (0.087,0.016)	0.126
Home ownership	Renting/Owing a house	0.001 (0.046,0.048)	0.764
History of childbirth	1/>2	0.018 (0.021,0.086)	0.226
	2/>2	0.018 (0.038,0.085)	0.130
Husband's age		0.005 (0.020,0.054)	0.634

B: regression coefficient, CI: confidence interval

In the multivariate model, simultaneously considering all the variables, only socioeconomic status was related to marital relationship quality, so the M±SD scores of the marital relationship quality in the women with a low socioeconomic status were significantly lower than those with a good socioeconomic status ($p = 0.043$). Although other variables were not significantly associated with marital relationship quality at the significance level of 0.05, the marital relationship quality M±SD scores of housewives were significantly lower than those of employees at the significance level of 0.1 ($p = 0.073$). Moreover, a significant relationship was observed between mother's age and marital relationship quality at the 10 % error level, so the marital relationship quality M±SD scores were higher at older ages ($p = 0.053$).

Discussion

This study aimed to determine the role of cognitive distortions on fear of negative assessment and marital relationship quality in women in 2023. The present study indicates that cognitive distortions are associated with an increase in marital relationship quality.

The current study revealed a significant negative correlation between the quality of marital relationships and cognitive distortions. This means that as cognitive distortions increase, the quality of marital relationships tends to decrease, and vice versa. It appears that cognitive distortions, along with the fear of negative evaluation, may affect the quality of marital relationships. For example, Bradley M. Rosenfield[14] reported that the ICD determined that approximately half of the variance in both the number and severity of psychological dysfunction, on both Axis I and Axis II, was accounted for by the frequency of cognitive distortions.

Neetu A. John's[13] findings suggest that in traditional societies such as Taiwan, even if a married woman in Taiwan believes in gender equality and expects an equal partnership with her spouse, the patriarchal norms and values of her family and society may still exert a powerful influence on her daily life and interactions with her spouse. This may lead to lower expectations for gender equality within the marriage, and may ultimately impact her overall marital quality. It is important to note that these findings are specific to traditional societies such as Taiwan, and may not necessarily apply to other cultures or contexts. Additionally, individual differences in gender beliefs and marital quality may still exist within these societies.

The present study is consistent with Orçun Muhammet, Sim¸sek study[15] that examined the impact of interpersonal cognitive distortions on satisfaction with life and the mediating role of loneliness. Orçun Muhammet, Sim¸sek study has proven the negative effects of loneliness on cognitive distortions and decreased life satisfaction within these conditions.[15]

Sadia Yasmin and et al.[16] in study showed Fear of negative evaluation (the fear of being judged or evaluated negatively by others) is positively related to loneliness, meaning that people who have a greater fear of negative evaluation tend to feel more lonely.

Badami and Zomorody's study[17] shows that cognitive behavioral therapy (CBT) is effective for emotional maturity and fear of negative evaluation in married women. This fear often leads to social anxiety disorder, causing intense anxiety and avoidance that affects emotional well-being. CBT helps people identify and change negative thoughts using techniques like cognitive restructuring, exposure therapy, and social skills training, improving anxiety management and coping strategies.

One of the limitations of the study is the generalizability of its results to people in different regions with different cultures because both study variables can be influenced by the culture of societies. Therefore, it is recommended that further studies should be conducted on a larger sample size in order to show the marital relationship quality of couples as the basis of family and society. On the other hand, the limitations of self-reporting and the influence of participants' mental states in completing the questionnaires should be considered. Therefore, the issue of generalizability should be treated with caution.

Conclusion

To improve the quality of marital relationships, it is necessary to consider the role of psychological factors such as cognitive distortions and fear of negative assessment. Therefore, health planners should adopt strategies to increase the quality of marital relationships and reduce cognitive distortions and fear of negative assessment in married women.

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Conflicts of interest
Authors declare no conflicts of interest

Authorship contribution
All co-authors contributed to subsequent revisions. All authors read and approved the final manuscript.