



# A Study of Social, Economic, and Cultural Factors Affecting Marital Satisfaction of the Couples of Reproductive Age Using Generalized Estimating Equations

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## Abstract

**Background and Objective:** Marital satisfaction of couples causes family strength and cohesion. This study aimed to determine the factors affecting marital satisfaction of couples at the reproductive age.

**Methods:** In this cross-sectional study, 382 couples of reproductive age selected through cluster sampling in Tehran completed ENRICH Marital Satisfaction Scale and Neo Personality Inventory as well as a researcher-made questionnaire on social, economic, and cultural factors. Considering the significant correlation ( $r = 0.701$ ) that existed between marital satisfaction of the women and their husbands, the factors affecting marital satisfaction were examined using generalized estimating equations and the R software (version 3.6.2).

**Results:** The mean ages of the women and their husbands were 34 and 38 years, respectively. The results showed that in the final model of generalized estimating equations, there was a significant relationship between marital satisfaction of the couples and the four components of personality (neuroticism, conscientiousness, extraversion, and agreeableness), housing status, marriage duration, and the way of choosing a spouse. According to the findings, the mean marital satisfaction score of the couples who owned a house was 5.702 points higher than the tenants, and the marital satisfaction score of the couples who had chosen their spouses traditionally was 4.581 points greater than the others. Furthermore, each year of increase in the marriage duration increased the marital satisfaction score by 0.321.

**Conclusion:** Considering the results of this study, which showed that personality traits as well as social, economic, and cultural factors were associated to the couples' marital satisfaction levels, pre- and post-marital counseling could be effective in improving marital satisfaction.

**Key Words:** Marital Satisfaction, Personality, Economic, Social, Cultural.

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## Introduction

**Background and Objective:** The effects of close marital relationships on personal growth and development have been extensively studied in social psychology. As a marriage consequence, marital satisfaction is a stable state of happiness

achieved through socioeconomic and cultural interactions as well as agreement on various issues, sexual satisfaction, and providing appropriate conditions [1].

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Marital satisfaction is a psychological variable and is considered as an individual characteristic for couples. People who are more satisfied with their long-term marital relationships are happier and healthier and have a longer life expectancy [2]. Marital satisfaction depends on several factors examined in various studies. Similarities in economic and social status, age, race, religion, attitude, levels of education, and intelligence can predict marital satisfaction [3]. Personality traits are among of the most important factors affecting marital satisfaction. Many studies have suggested that there is a relationship between marital satisfaction and personality traits [4-7], and increased marital satisfaction may increase mental health and stability and decrease the degree of instability [8, 9].

According to several searches conducted in validated databases, there was no study carried out to estimate marital satisfaction of couples and considered the correlation of this variable simultaneously. Thus, the present study aimed to consider the correlation between marital satisfaction of women and their husbands using generalized estimating equations to achieve more accurate results [10, 11].

## Methodology

**Sampling:** In this cross-sectional study conducted in 2016, the scores of marital satisfaction, personality and its components, and socioeconomic and cultural factors of 382 couples of reproductive age living in Tehran who were selected through cluster sampling were examined. The research setting comprised districts 6, 5, 7, 19, and 10 of Tehran, which were classified based on sociological standards. District 6 included Fatemi selected neighborhoods (Fatemi Square, Golha, and Parvin Etesami), Amirabad selected neighborhoods (North Kargar Street, Valiasr Street, and Africa Boulevard), and West Keshavarz neighborhood (Jamalzadeh, Sindakht, and Parvin streets). District 10 included Navab neighborhood (Beryanak, Azerbaijan, and Jomhuri), Komeil neighborhood (Eftekari, Ranjbar, and Khanabadi streets), and Qazvin neighborhood (Farhang and Hosseini Doust). District 7 included Dabestan neighborhood (Movahed Kashani, Sayad Shirazi, and North Sohrevardi streets), Namjoo neighborhood (Namjoo, Gorgan, and Sheikh Safi streets), and Sabalan neighborhood (Damavand, Pamanar, and Imam Hossein streets). District 5 included Punak neighborhood (Ashrafi Isfahani

street, Adl boulevard, and Sardar Jangal street), Ekbatan neighborhood (Shahid Nafisi street, Apadana street, Basij square), and Shahr-e Ziba neighborhood (Ayatollah Kashani and Shahid Mehrabi streets). Finally, district 19 included Abdol Abad neighborhood (Shok0ofeh and Abdol Abad streets), Bustan Velayat neighborhood (Bustan Velayat, Tondgooyan, and Shahid Latifi streets), and Nematabad neighborhood (Beheshti, Taleghani, and Felestin streets) in Tehran megacity.

**Instruments:** the data in this research included demographic characteristics, socio-cultural features, personality factors, and marital satisfaction of the couples. The required data were collected using three questionnaires, the first of which was a researcher-made questionnaire containing demographic questions as well as the items related to socio-cultural factors. The questionnaire contained 30 questions on demographic and cultural characteristics of the research samples including the following variables: the couple's age, marriage duration, way of selecting a spouse, number of children, education levels, employment and economic status, housing status, history of addiction, the couple's family relationship, their religion, the religious fit between the couple, the couple's or their parents' divorce history, and the history of residency abroad.

In the second part of the study, the 47-question ENRICH Marital Satisfaction Scale was used. The scale contains a 115-item and a 125-item questionnaire that is used to assess potentially problematic areas or to identify the strengths and productivity of the marital relationship [12]. The ENRICH Couple Scales is a general measure of marital relationships including ideal distortion, marital satisfaction, personality issues, communication, conflict resolution, financial management, leisure activities, sexual relations, children and parenting, family and friends, egalitarian roles of women and men, religious orientation, marital solidarity, and marital changes. In Iran, a short 47-question form of the scale is used and the answers range from 1 to 5 (5= Totally Agree, 4= Agree, 3= Neither Agree nor Disagree, 2= Disagree, and 1= Totally Disagree). Each question is given a score of 1 to five and finally, the scores are added up.

In the third part of the questionnaire, the 60-question NEO-FFI personality inventory was used. The 5-factor NEO-FFI is a 60-item questionnaire designed to briefly and rapidly assess the five main factors including neuroticism,



extraversion, openness to experience, agreement, and conscientiousness). The test consists of five 12-sentence sets related to each of the indicators. The five-factor theory of personality, also known as the Big Five, was proposed by two psychologists, Costa and McCrea, in the late 1980s and was re-evaluated in the early 1990s [13].

The five main personality traits are Neuroticism (N), which is also called nervousness, neuroticism, or emotional instability; Extraversion (E); Openness to experience (O); Agreeableness (A); and Conscientiousness (C). Many studies have reviewed and confirmed the validity and reliability of the ENRICH Marital Satisfaction Scale and Neo Personality Inventory [14, 15].

**Data analysis method:** The data were entered into the SPSS software (version 22) and refined, and the normality of quantitative data was examined using the Kolmogorov-Smirnov test. Independent t-test, paired t-test, and analysis of variance were also applied for mean comparisons, and Pearson correlation coefficient was used for paired examination of the quantitative variables. Furthermore, the chi-square test was used to examine the relationships between the qualitative variables. Considering the correlation between marital satisfaction scores of the women and their husbands calculated by Pearson correlation coefficient ( $r = 0.701$ ), the Generalized Estimating Equations (GEE) with three correlation structures

of Exchangeable, First-order Auto-regression, and Unstructured were used to fit the data. Then, based on the model selection criterion, the Quasi-likelihood Akaike Information Criterion (QIC), a model with the lowest QIC value was selected as the final model.

**Results:** Tables 1 and 2 indicate the demographic, social, economic, and cultural information as well as the personality traits of the women and their husbands.

Of the 382 couples studies, 144 (37.7%) had rental housing. Besides, 51 couples (13.4%) had low economic status while 254 (66.5%) and 77 (20.2%) others had moderate and good economic status, respectively.

According to the results, the marriage ages and current ages of the couples were different so that in both, on average, women were about 5 years younger than their husbands. There was no significant difference between marital fidelity and education of the women and their husbands.

The mean scores of marital satisfaction and personality of each woman was on average 3 points lower than her husband. The four components of personality including extraversion, openness, agreeableness, and conscientiousness were not significantly different among the women and their husbands, but the mean score of neuroticism was about 1.5 points higher in women than in men.

**Table 1.** Comparison of demographic, social, economic and cultural variables in women and their husbands

Variable	Men		Women		Test statistics t	Probability	
	Mean	SD	Mean	SD			
Age	33.68	8.098	38.34	9.270	19.510	<0.001	
Age at marriage	23.07	4.692	27.49	4.818	18.974	<0.001	
Variable	Number	Percent	Number	Percent	$\chi^2$	Probability	
	up to elementary	23	6.0	24	6.3	0.318	0.989
Educational Status	Secondary school and diploma	114	29.8	113	29.6		
	Academic	241	63.1	240	62.8		
	low	39	10.2	54	14.1	2.557	0.257
Adherence to religion	medium	187	49.0	183	47.9		
	Much	144	37.7	138	36.1		

**Table 2.** Comparison of the scores of personality and its components and the levels of marital satisfaction in women and their husbands

Variable	Women		Men		Test statistics t	Probability
	Mean	SD	Mean	SD		
Neuroticism	23.82	0.361	22.39	0.351	3.384	<0.001
Extraversion	26.87	0.303	26.33	0.295	1.533	0.126
Openness	24.30	0.220	24.02	0.223	0.996	0.320
Agreeableness	27.98	0.301	27.52	0.301	1.245	0.214
Conscientiousness	30.97	0.375	30.51	0.375	1.130	0.259
Total personality score	135.84	1.071	132.73	1.269	2.374	0.019
Marital Satisfaction	158.44	24.513	155.15	20.891	7.073	<0.001



**Table 3.** Relationship matrix of marital satisfaction and personality traits of women and men studied

Gender	Components	Marital Satisfaction	Neuroticism	Extraversion	Openness	Agreeableness	Conscientiousness
Female	Marital Satisfaction	1					
	Neuroticism	-0.488**	1				
	Extraversion	0.379**	-0.491**	1			
	Openness	-0.025	0.041	0.024	1		
	Agreeableness	0.357**	-0.338**	0.429**	-0.082**	1	
	Conscientiousness	0.298**	-0.311	0.531**	0.124*	0.501**	1
Male	Marital Satisfaction	1					
	Neuroticism	-0.327**	1				
	Extraversion	0.368**	-0.465**	1			
	Openness	-0.039	-0.016	0.035	1		
	Agreeableness	0.354**	-0.336**	0.556**	0.090	1	
	Conscientiousness	0.344**	-0.381**	0.546**	0.158**	0.586**	1

\*The correlation coefficient was significant at the error level of 0.05.

\*\* The correlation coefficient was significant at the error level of 0.001.

Like the results obtained for the women, the correlation table indicates that at the error level of 0.001<, neuroticism, extraversion, agreeableness, and conscientiousness had a significant correlation with marital satisfaction but openness did not. In addition, neuroticism had an inverse relationship with marital satisfaction, but the other three factors (extraversion, agreeableness, and conscientiousness) were directly related to marital satisfaction. In other word, an increase in the scores of extraversion, agreeableness, and

conscientiousness in men would increase their marital satisfaction.

Since there was a relationship between marital satisfaction in a woman and her husband, the conventional regression method could not be used to examine the factors affecting marital satisfaction of the couples. Thus, generalized linear models in which the clusters were the couples including wives and husbands were applied to determine the factors affecting marital satisfaction in the couples. The results can be seen in Tables 4 and 5.

**Table 4.** Results of Univariate Generalized Linear Model Used to Determine the Factors Affecting Marital Satisfaction in Couples

Variables		β	S.D	Wald	P-Value
personality traits	Neuroticism	-1.231	0.128	92.427	<0.001
	Extraversion	1.385	0.154	78.503	<0.001
	Openness	-0.149	0.203	.541	0.462
	Agreeable	1.322	0.156	71.520	<0.001
	conscientiousness	0.964	0.139	48.039	<0.001
housing status	Rental	-7.841	1.977	15.724	<0.001
	Personal (Basic)	-			
How to select a spouse	Familial (traditional)	3.801	2.483	2.343	0.126
	Other	-			
Education	up to elementary	-7.344	3.471	4.447	0.034
	Elementary to diploma	-5.289	1.918	7.607	0.006
	Academic	-			
Number of children		-2.042	0.847	5.807	0.016
marriage Duration		-0.241	0.109	4.923	0.027



Among the study variables that were separately included in the model, four personality traits as well as housing status, how to choose a spouse, education, number of children, and marriage duration were significant at a significance level of

0.2 to enter the multiple model. The third personality trait (openness, with a probability value of 0.462) was not significant for entering the multiple GEE model.

**Table 5.** Results of the multiple linear generalized model used to determine the factors affecting marital satisfaction

Variables		$\beta$	S.D	Wald	P-Value
personality traits	Neuroticism	-0.758	0.123	37.575	<0.001
	Extraversion	0.446	0.171	6.837	0.009
	Agreeable	0.554	0.155	12.775	<0.001
	conscientiousness	0.259	0.140	3.444	0.063
housing status	Rental	-5.702	1.743	10.707	0.001
	Personal (Basic)	-			
How to select a spouse	Familial (traditional)	4.581	1.990	5.297	0.021
	Other	-			
marriage Duration		0.321	0.102	9.976	0.002

According to the results of the multiple GEE model to examine the effective socioeconomic and cultural factors, it was found out that four NEO personality traits as well as housing status, how to select a spouse, and marriage duration affected marital satisfaction. The relationship between neuroticism and marital satisfaction of the couples was inverse so that any one-unit increase in that component would decrease the score of marital satisfaction by 0.758 points, i.e. the couples whose score was 10 points lower than the score of neuroticism had a marital satisfaction score of approximately 8 points higher. Other personality traits including extroversion, agreeableness, and conscientiousness showed a direct relationship with marital satisfaction. In addition, owning a house increased marital satisfaction in couples. Traditional ways of choosing a spouse, i.e. proposal by family or acquaintances, also increased marital satisfaction, so that such people’s marital satisfaction score was approximately 5 points higher than others. Duration of marriage also had a direct impact on marital satisfaction, and increased marriage duration led to increased marital satisfaction as well.

**Discussion and Conclusion**

Personality traits can affect various dimensions of couples' lives including their health and relationships, and these factors may eventually affect marital satisfaction directly or indirectly. The main objective of the present article was to investigate the relationship between marital satisfaction and socioeconomic and cultural factors

as well as personality traits. In general, the results of this study showed that as a negative personality trait, neuroticism could affect marital satisfaction, so that increased neuroticism led to decreased marital satisfaction. This is consistent with the results of the studies by Kent, Botwin, Markment, King, Caughlin, and Ahadi [16-22].

Economic factors such as income and housing status affect marital satisfaction and can play a major role in family cohesion. This study showed that housing status could be effective on marital satisfaction so that the couples who had personal housing had a higher satisfaction score, and this is consistent with the results of the studies by Darooneh, Zare, and Zaheri [23-25]. In their study, Zare et al. addressed the effect of marriage duration as well. The present study also showed that marital satisfaction increased with an increase in the duration of marriage. In other words, as the time passed after marriage and the couples got familiar with each other's habits and behaviors, they could affect each other's marital satisfaction. In this study, the type of spousal selection also had a significant relationship with marital satisfaction and was included in the final GEE model, suggesting that marital satisfaction was higher among the couples who had traditionally chosen their spouses. According to the final GEE model in which personality traits such as neuroticism, extraversion, agreeableness, and conscientiousness as well as the economic factor of housing status, the cultural factor of spouse selection, and the duration of marriage were significant, pre-and post-marital





counseling sessions could guide couples to strengthen their marital lives.

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