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Marital Quality and Health Related Quality of Life

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The aim of this study was to clarify the influences of marital quality and its dimensions on the health related quality of life. Marriage is one of the most significant social relationships in which individuals engage. Therefore, the most important contextual factor influencing the health related quality of life is marital quality. The research population consisted of all married people of Isfahan city in 2014, which had children in elementary-school and at least had secondary school education. The participants were 338 people, who were randomly selected from the parents of elementary school pupils in Isfahan using cluster sampling. The instruments used in this study were the revised dyadic adjustment scale (RDAS), the marital happiness scale (MHS), and the Persian version of the WHOQOL-BREF. The adjusted coefficient of determination (ΔR^2) between components of marital quality and physical health, psychological health, and social relations was obtained as equal to .57, .30, and .22, respectively, all of which were significant. This coefficient of relationship between components of marital quality and environmental health was obtained as equal to .001, which is not significant. Also, the results showed that gender played a moderator role in the effects of marital quality on physical and psychological health. The findings showed that marital quality is an important factor to estimate the health related quality of life.

Keywords: marital quality, health related quality of life, physical health, psychological health, social relations, environmental health.

Marital relationship is one of the most significant social relationships in which individuals engage. In recent times, researchers have argued that the purported health benefits of marriage are only obtainable in marriages of high quality. This argument is supported by empirical evidence that low-quality marriages can be detrimental to individual-level health and well-being, and in some cases, it is more so if an individual were to exit the marriage (Hawkins & Booth, 2005; Strohschein & Ram, 2016). Of the social factors linked to mental and physical health, marital quality is among the most important (Myers, 2000). Marital quality is an important aspect of family life that shapes people's health and well-being. Greater marital quality is associated with less depression (Williams et al., 1992), better self-rated health (Umberson et al., 2006), less physical illness (Wickrama et al., 1997), and other positive outcomes (Boyer et al., 2017; Harju et al., 2016). Based on these findings, it is clear that marital quality plays an important role in the maintenance and promotion of health and well-being, perhaps more so than marital status alone.

In recent years, the role of marital quality in physical health has attracted much attention from researchers (Bookwala, 2005; Goldsen et al., 2017; Miller et al., 2013). Generally, these studies have clearly shown that positive marital processes (e.g., marital satisfaction, marital happiness) are beneficial to physical health, whereas negative marital processes (e.g., marital conflict) can have a detrimental impact on physical health (Bookwala, 2005; Kiecolt-Glaser et al., 2010; Zhang et al.,

2016). There is substantial empirical evidence that marital distress is a significant risk factor for physical health problems. Research using large, national representative data sets has consistently found a negative relationship between marital distress and global measures of self-reported health (Bookwala, 2005; Hawkins and Booth, 2005; Robles and Kiecolt-Glaser, 2003; Umberson et al., 2006; Whisman and Baucom, 2012). The vast majority of studies which examined the role of marriage in physical health have focused on marital status (rather than marital quality) as the predictor variable. To be sure, these studies have repeatedly documented that being married makes significant positive contributions to health. In their study, Kiecolt-Glaser et al. (2010) showed that it is simplistic to assume that the presence of a spouse in and of itself can protect the physical health of individuals. After all, a close marital relationship can be viewed as a significant interpersonal resource across the adult life span, representing potentially the most intimate type of emotional support throughout the adulthood years (Prigerson et al., 2000; Wang et al., 2017).

Thus, the nature of the marital relationship over and above marital status is expected to contribute significantly to physical health. Evidence already exists indicating that marital happiness is especially important to mental health (e.g., Bookwala & Jacobs, 2004; Bookwala, 2005).

The most convincing reason to study marital quality is its potential effects on the psychological and physical health of individuals. Marital quality is associated with a number of psychological outcomes including happiness (Hawkins and Booth, 2005), self-worth (Hawkins and Booth, 2005; Voss et al., 1999), life satisfaction (Wang et al., 2017), self-esteem

(Hawkins and Booth, 2005), negative effect (Karney et al., 1994), psychological distress (Hawkins and Booth, 2005) and depressive symptoms (Fincham et al., 1997), as well as negative health behaviors such as alcohol use (Pala et al., 2004). Studies on the relationship between marital quality and physical health suggest that marital quality influences the number of physical health conditions a person experiences (Wickrama et al., 1997), recurrence of myocardial infarction (Orth-Gomér et al., 2000), metabolic syndrome (Troxel et al., 2005), and mortality (Eaker et al., 2007). Thus, the scope of evidence is overwhelming for the influence of marital quality on mental and physical health and underscores the importance for further research on the topic.

Several different theories have been proposed, but one common theme across all these theories is Post-traumatic Stress Disorder (PTSD). Specifically, researchers are most concerned with three areas of research on stress and its impact on health and well-being: 1) vulnerability, 2) exposure, and 3) consequences. Among the three areas of stress research, a study on an individual's vulnerability to low marital quality is the most limited. The most influential research on this topic comes from two fields, genetics and psychology. Studies on marital quality amongst married female twins in the Swedish Twin Registry revealed that genetic effects account for a significant proportion of the variance in well-being and depression (Spotts et al., 2006); however, unshared environmental effects accounted for the majority of the variation. Another source of vulnerability can be found in studies on personality characteristics. Specifically, neuroticism has been linked to low marital quality in a number of different studies (Karney et al., 1994; Kiecolt-Glaser et al., 2010).

In their analyses, it is now common for researchers who conduct studies on marital quality and health to include the number and timing of stressful life events or difficulties an individual has been exposed to in the course of his/her life. According to the life course perspective, each individual experiences a unique set of events or difficulties across their life course, which may vary in terms of number, severity, duration, and timing (Wheaton and Clarke, 2003).

Few studies have linked marital quality to health. The harmonious marriages of mature adults were linked with lower health care costs as compared to marriages characterized by discord (Prigerson et al., 2000). In an earlier study by Prigerson et al. (1999), it was found that married women who expressed satisfaction in their marriages reported better sleep and paid fewer visits to the physician compared to women in less satisfactory marriages. Roth-Roemer and Kurpius (1996) found that happily married women who were diagnosed with rheumatoid arthritis reported better health than women who were unhappily married. Bookwala and Jacobs (2004) found that negative marital processes (e.g., level of disagreement) were associated with more depressed effects while positive marital processes (e.g., marital happiness) were associated with less depressed effects in both young and old married individuals. Additionally, in a literature review linking marital quality and symptoms of depression, Whisman & Baucom (2012) reported that marital dissatisfaction was significantly associated with both clinical depression and milder symptoms of depression.

Burman and Margolin (1992) proposed a stress social support hypothesis to explain the relationship between marital distress and health problems. A satisfactory relationship provides

substantial social support to spouses, but a distressed relationship is a significant source of stress, which makes a person susceptible to health problems (Burman and Margolin, 1992; Slatcher, 2010). Kiecolt-Glaser and Newton (2001) expanded on this model, by suggesting that there are three primary pathways that link marital dynamics with health outcomes. First, because people in distressed relationships are more likely to experience stress (Holt-Lunstad et al., 2008), they are more prone to suffer from psychological distress (Brock and Lawrence, 2011), which is a significant risk factor for poor health (Sandberg et al., 2009). For example, a number of studies have shown that spouses in low quality marriages are more likely to experience the general symptoms of depression and anxiety (Wang et al., 2017; Whisman and Baucom, 2012). Specifically, adults in distressed relationships are more likely to be diagnosed with generalized anxiety disorder, social phobia, post-traumatic stress disorder, major depression, and bipolar disorder (Whisman & Baucom, 2012).

Studies have shown that adults in unsatisfactory marital relationships are more likely to engage in risky health behaviors. For example, lower marital quality is related to poorer adherence to the continuous positive airway pressure (CPAP) among adults with obstructive sleep apnea (Baron et al., 2009), poor eating habits (Wickrama et al., 1997) and inadequate sleep (Prigerson et al., 1999). There is also evidence that marital distress is predictive of smoking (Fleming et al., 2010) and the nonmedical use of prescription drugs (Homish et al., 2010). The results of Wang et al. (2017) showed that married adult epileptic patients have better quality of life than unmarried adult patients in young and middle-aged age groups while unmarried adult

patients are more anxious and depressed than married adult patients.

The third pathway is comprised of negative physiological changes in the functioning of cardiovascular, endocrine, and immune systems (Robles and Kiecolt-Glaser, 2003). For example, in a study, after participating in a marital problem-solving task, couples who engaged in hostile interactions had significantly heightened blood pressure when compared with couples whose interactions were neutral or positive (Black, 2006; Holt-Lunstad et al., 2008). In a study of newlywed couples, researchers found that after engaging in a 30 min conflict resolution exercise, couples who had higher levels of negative interaction experienced decreased immunity (Kiecolt-Glaser et al., 2010). In a more recent research, an association was found between marital distress and inflammation (Kiecolt-Glaser et al., 2010).

In their study, Miller et al. (2013) examined the relation between marital quality and health using a growth curve analysis. The results of this research showed that the initial values of marital happiness and marital problems were significantly associated with the initial value of physical health among both cohorts. In addition, the slope of marital happiness was significantly associated with the slope of physical health among the younger cohort while the slope of marital problems was significantly associated with the slope of physical health among the midlife cohort (Miller et al., 2013). The results of another study showed that satisfying marital duties does not only protect couples against psychological distress but also helps them with depression and anxiety (Trudel and Goldfarb, 2010).

Generally, it appears that the weaknesses of marital relationship may decrease the quality of life (Basharpoor and Sheykholeslami, 2015). These results provide evidence for the significant association between the positive and negative dimensions of marital quality and physical health over an individual's course of life.

Method

The research population is comprised of all married people of Isfahan city in 1393, which had children in elementary-school and at least had secondary school education. The participants were 400 people (200 couples) who were randomly selected from the parents of elementary school students in Isfahan by cluster sampling. A total of 375 questionnaires were returned, but only 338 (including 162 couples and 14 females whose husbands were not accessible) questionnaires were filled.

Descriptive statistics include mean, standard deviation, and frequency and percentage values applied to summarize the data. Multiple regression analysis was used to estimate the health related quality of life, based on the dimensions of marital quality.

The revised dyadic adjustment scale (R-DAS): Busby et al. (1995) developed a 14-item R-DAS from the original 32-item Spanier's DAS (Hollist & Miller, 2005). R-DAS was developed to serve as a measure of general satisfaction in a close relationship and consists of three scales: 1) Consensus, 2) Satisfaction, and 3) Cohesion. The psychometric properties of R-DAS (good fit indices in CFA and Cronbach's alpha from .80 to .90) were confirmed by previous research (Hollist and Miller, 2005). CFA results on the Farsi translation of R-DAS showed

satisfactory fit indices $\chi^2 = 28.59$, df: 74, GFI: .98, AGFI= .99, CFI: .99, RMSEA= .0001 (Isanezhad, 2012). In the current study, the Cronbach's Alpha in the preliminary sample (N= 35) was .79.

The Marital Happiness Scale (MHS): This scale was created to for the assessment of marital happiness (Azrin et al., 1973). The 10-item scale initially devised to test the observative mutual effects is a behavioral approach in marital counseling. It assesses the total rate of marital happiness in 9 different domains of marital relationship by generally using a one item index. Each item can be used as an independent index for marital happiness in a special domain of marital interaction. The total score of items is used to obtain marital happiness total index. It is a 10-item Likert scale scored from 1 to 10 by responders, depending on their happiness in each item. This scale showed acceptable reliability and validity in previous studies (Sanaii et al., 2009). In the current study, the Cronbach's alpha in the preliminary sample (n= 35) was .79.

The Brief Version of the WHO's QOL Scale (WHOQOL-BREF): The Persian version of the WHOQOL-BREF was used to assess the health related quality of life. This version of the WHOQOL-BREF questionnaire contains 26 standard items, that comprised 24 items to address each of the 24 facets defined in the WHOQOL-100 and 2 items regarding overall QOL and general health. The Cronbach's alpha coefficient in previous studies has been reported from .62 to .76 for each subscale and .89 for total scores (Nejat et al., 2007). In the current study, the Cronbach's alpha in the preliminary sample (N= 35) was .91 for total scores.

Results

In this study, there were more females (52.1%) than males (47.9%). The mean age of the study participants was 26.26 years (SD= 6.91) for females and 33.14 years (SD= 7.11) for males. About 18.22% of the participants had completed secondary school education, 45% had completed high school, and 36.78% were university graduates. The duration of marriage ranged from 9 to 20 years with a mean of 11.46 and standard deviation of 6.78 years.

Table 1
The Mean and Standard Deviation of Variables

Physical Health	Psychological Health	Social Relations	Environmental Health	Marital Consensus	Marital Cohesion	Marital Satisfaction	Marital Happiness
74.48	65.94	56.28	57.68	14.16	9.47	11.21	57.39
10.77	9.68	14.94	11.59	4.45	3.13	3.52	13.91

Table 2
Summary of Regression Model to Predict Quality of Life

Variables	Quality of life															
	Physical health				Psychological health				Social relations				Environment			
	B	SE	β	t	B	SE	β	t	B	SE	β	t	B	SE	β	t
Gender	.80	.20	.21	4.03**	.21	.09	.13	2.33*	-.19	.39	-.02	-.48	.948	.87	.03	1.09
Marital Consensus	.36	.03	.64	13.82**	.11	.02	.36	5.82**	.09	.03	.09	2.97**	.05	.05	.02	.93
Marital Cohesion	.09	.03	.09	2.57*	.03	.02	.06	1.25	.08	.02	.16	3.30**	.12	.18	.01	.68
Marital Satisfaction	.11	.02	.35	5.58**	.02	.011	.105	1.78	.03	.01	.179	3.11**	.04	.26	.05	1.62
Marital Happiness	.09	.02	.17	3.66**	.23	.05	.42	4.66**	.08	.02	.275	4.50**	.10	.06	.05	1.71
R				.76				.56				.48				.03
ΔR^2				.57				.30				.22				.001
F				70.20				66.32				44.07				.78

*p< .05, **p< .01

Discussion

The present study investigated the effect of marital quality on the health related quality of life. Multiple indicators of the health related quality of life (physical health, psychological health, social relations, and environmental health) were each regressed on four indicators of marital quality, age and gender. Specifically, the level of marital consensus, marital cohesion, marital satisfaction, and marital happiness were used as predictor variables. The overall hypothesis was that marital quality plays a significant role in the quality of life.

The results showed that gender differences have a significant influence on physical and psychological health, such that females have a higher level in the cited indicators. It seems that occupational and financial challenges in work and family responsibility may lead to a lower level of health in men. The mentioned pressures in the current study population and other traditional societies are more stressful on men as compared to women.

The results showed that marital quality indicators contributed significantly to the health related quality of life. Previous researches and literatures (Finkel et al., 2016; Joohn et al., 2016; Zhang et al., 2016) on the relationship between marital quality and physical health among couples found that marriages that are more harmonious or characterized by higher satisfaction can be related to better sleep patterns, fewer physician visits, and better physical health (Prigerson et al., 2000; Slatcher, 2010). The current study expands the existing knowledge based on the relationship between marital quality and physical health. The current findings are particularly valuable because the present study is based on a large probability-based sample of

individuals unlike most of the studies to date (Kiecolt-Glaser et al., 2010) that used small purposive samples of middle aged and older adults (e.g., those caring for an ill spouse). In conclusion, these findings are consistent with the results of earlier studies.

The results showed that indicators of marital quality play a significant role in predicting psychological health and among them; marital happiness has a higher regression coefficient. In this regard, the emotional dimension of dyadic relation has a higher influence on psychological health. These findings are in agreement with previous studies on marital quality and well-being (Finkel et al., 2016; Zhang et al., 2016). In fact, it is reasonable to expect that having more positive feelings, a higher self-esteem or a higher perception of life as meaningful, will contribute to the overall well-being and psychological adjustment, which in turn, is likely to contribute to a better marital relationship and therefore, to a higher perception of marital quality.

Looking at another aspect of the results, the indicators of marital quality play a significant role in predicting social relations. Marital relationships and family context are important areas of social relation that can be viewed as significant interpersonal resources across the adult life span, representing potentially the most intimate type of emotional support throughout the adulthood years (Bookwala and Jacobs, 2004; John et al., 2016).

The results of the regression analysis showed that the indicators of marital quality have a significant influence on the environmental dimension of the health related quality of life. With respect to the assessments of environmental health components, including environmental health items which deal

with issues related to security, physical environment, financial support, accessibility of information, leisure activity, home environment and transportation, it seems reasonable that there is no significant relationship between marital quality and environmental health.

As previously stated, earlier studies have generally shown that positive marital processes (e.g., marital satisfaction, marital happiness) are beneficial to physical health, whereas negative marital processes (e.g., marital conflict) can have a detrimental impact on physical health (Kiecolt-Glaser and Newton, 2001). Generally, marital quality is likely to be an important resource for the physical health of adults, even among those who are not experiencing a chronic stressor, such as providing care to an ailing spouse. Marital satisfaction is positively associated with the life satisfaction of wives as well as with the global happiness reports of wives and husbands (Goldsen et al., 2017). Longitudinal studies showed that marital dissatisfaction predicts increases in depressive symptoms overtime, covaries with changes in depressive symptoms, and increases risk for a major depressive episode within a year (Iveniuk et al., 2014; Miller et al., 2013). Marital strengths (e.g., positive marital processes, marital adjustment, spouse support, etc.) have been proposed to influence health through its positive impact on psychological states. In turn, positive psychological states have been proposed to be beneficial for physical health because people are more motivated to take better physical care of themselves and this promotes immune functions (Slatcher, 2010).

The current study expands the existing knowledge based on the relationship between marital quality and physical health. When both positive and negative characteristics of marriage are

considered, negative spousal behaviors repeatedly emerge as correlates of poorer physical health as indexed by multiple dimensions, including physical disability, chronic illnesses, physical symptoms, and self-rated health.

Despite the significance of the present findings, it is important to bear in mind that the use of cross-sectional data precludes any definitive causal conclusions about the relationship of marital quality to the health related quality of life. It is just as reasonable to assume that the impaired quality of life contributes to poorer marital quality. However, it should be mentioned that longitudinal data analyses are necessary to establish the validity of the causal relationship between marital quality and quality of life. Another limitation of the present study was that the health related quality of life variables in this study were self-reports, and it remains to be seen if these findings can be replicated with objective indices of quality of life. Consequently, marriage as a specific source of social support may increase an individual's ability to cope either because of coping assistance or because marriage enhances the coping capacity of individuals and it appears that the weaknesses of marital relationship may decrease the quality of life. Another limitation of the present study was that the variables included in this study were self-reported rather than observational measures and it remains to be seen if these findings can be replicated with objective indices. In general, the present findings showed that marital quality is an important factor for estimation of the health related quality of life. Consequently, therapists and researchers can use these results to predict the health related quality of life.

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