

## Investigation of relationship between social capital and quality of life in female headed families

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### Abstract

**Background:** Although most studies on female-headed families focus on women's access to social support, the associations between social capital and quality of life in these families are unclear in many societies (such as Iran). This study aimed to determine the associations between social capital and quality of life in Iranian female headed families.

**Methods:** This cross-sectional study was performed on 152 female-headed households supported by Tehran Municipality, district 9 from April 2011 to July 2012. Convenience sampling was employed. Data were collected using demographic questionnaire, the Iranian version of World Health Organization Quality of Life, and the Word Bank Social Capital. Descriptive and multiple regression methods were used to analyze the data.

**Results:** The mean±SD age of participants was 50.8±13.8 years. Findings revealed that in quality of life, the domains of environment health and social relation received the lowest ( $9.87 \pm 2.41$ ) and the highest ( $12.61 \pm 3.43$ ) scores respectively; and with respect to social capital, membership in groups and social trust had the least ( $19.61 \pm 17.11$ ) and the most ( $51.04 \pm 17.37$ ) scores, respectively. The multiple regression model revealed a significant positive association between total score of the quality of life and the total score for the social capital ( $p < 0.001$ ).

**Conclusion:** Findings suggest that quality of life of female-headed families and social capital domains are strongly related. This means that by improving the social capital, women's life can also be improved.

**Keywords:** Social Capital, Quality of life, Female-Headed Families (FHF).

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### Introduction

The World Health Organization (WHO) defines quality of life as “individuals’ perceptions of their position in life in the context of culture and value systems in which they live, and in relation to their goals, expectations, standards, and concerns” (1). In

other words, quality of life is a “broad-ranging concept affected in a complex way by the person’ physical health, psychological state, level of independence, social relationships and their relationship to salient features of the environment” (2). Thus, the true meaning of quality of life does not

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contain only the living/biological standard level and accessible to the least level of welfare and facilities, but also it includes all interpersonal and social relations (3). No question that identifies the factors affecting people's quality of life is seminal. As one of the social determinants of health, social capital affects one's quality of life (4,5). While social capital may be defined in a number of different ways, social capital definitions generally rely on a similar set of basic elements including networks, relationships, participation, norms, social trust, cohesion, collective efficacy and reciprocity among members of a social group (6). It seems that people living in a rich network of support, trust, information and norms have resources that may have a positive effect on their overall health quality. Social capital can influence the behaviors related to health through increasing dissemination of information related to health and institutionalizing the correct health behaviors (7). Therefore, special attention should be paid to the social capital in the realm of health. Studies in psychology and medicine have reported direct associations between social capital and quality of life (5, 8-11). However, in order to measure social capital in a society in a large scale, various indexes should be considered. One of these indexes is a social support of minority groups such as female headed families (FHF). Households headed by women have become an important phenomenon worldwide in the last half of the twentieth century (12). FHF are dramatically increasing because of the changes in the family structure due to war, immigration, divorce, addiction and so on (13-17). Findings indicated a growing trend in the number and rate of FHF in the recent decades (15). Women solely manage almost 37.5% of families around the world (18). Today, Iran is experiencing a steady increase in FHF particularly in large urban areas. According to statistics of the Iranian Rehabilitation Organization during the last 10 years (1996-2006), there was an annual FHF increase of about 60,300 (19). Tehran province accounts for the most FHF mainly

due to the accessibility of job opportunities, and prevalence of nuclear families (20). Regardless of wide social networks, complex social interactions and norms related to strong friendships in Iranian contexts, it seems FHF are deprived from the social capital indicators in Iranian culture. This disadvantage occurs because FHF are highly stigmatized if their marriages are ruined due to divorce. These women sometimes cannot join social networks because of the load and variety of their responsibilities (21). This makes them vulnerable; furthermore, they experience different problems including committing crimes to run their lives, deviation and disorders in their children, increasing problematic families, mental and emotional disorders in family members, and financial and cultural poverty (22). A number of studies have investigated quality of life among Iranian women (23,24). In this study, we proposed two hypotheses: 1) Various dimensions of social capital increase the level of communication as well as level of access to resources, which leads to statistically significant changes in quality of life. These changes include: physical, mental, social health, and environmental health. 2) Demographic variables (such as age, years of education, monthly income) affect the quality of life of female-headed households. Therefore, the purpose of this study was to investigate the associations between social capital and quality of life in female headed families in Tehran.

## Methods

### *Study Population and Sampling*

This cross-sectional study was conducted on 152 women heads of households covered by the Tehran Municipality, Region 9 (198 women) within 14 months from April 2011 to July 2012. The response rate was 76.7%. During the study, 46 women withdrew due to their cancellation of the municipality aids and coverage by other governmental organizations such as Tehran's Imam Khomeini Relief Committee (IKRC) and the Welfare Organization. Those wom-

en with old age (Not referring to the municipality) and those unwilling to participate in the study were excluded.

IKRC provides the female-headed families and single mothers with different forms of support, such as job seeking skills training and financial support in particular. These women are characterized as: divorced, widowed or separated. According to the definition by Tehran Municipality, women whose husbands had died, divorced women or those who had left their husbands for any reason were considered to be a female head of the household. All women heads of households supported by the organization, received the basket of goods and services, including loans with low interest. In this study, after receiving permission from the municipality 9, verbal and written informed consent was obtained from all women who were in the region. Trained interviewers collected the data during working hours (8 am to 2 pm).

### *Instruments*

Data collection tools were as follows:

1) A demographic questionnaire inquiring about the following information was used: Age, marital status (single, married, widow, and divorced), level of education (illiterate, primary, high school, and university), successful educational years, occupational status (employed, unemployed), ethnicity, living place area, constructed area per capita (approximate index of economic status), the number of family members, family income average, home facilities, the number of rooms, duration of residence, having any kind of insurance (yes, no), having a chronic or current disease (yes, no).

2) The Iranian version of World Health Organization Questionnaire about the quality of life (WHOQOL) consisted of the 4 domains of physical health, mental health, social relation, and environment health. Each of these domains contained 7,6,3,8 questions on the Likert scale, respectively. Person's mean score from the questions within each domain was used to calculate the domain score. Then, mean scores ob-

tained from each domain were multiplied by 4, and each domain was received scores from 4 to 20. The higher the score, the better the quality of life (25). The questionnaire validation was approved by Nedjat and colleagues in 2005 and was confirmed by professional social workers, sociologists and medical doctors; and the reliability was confirmed for the dimensions of physical, psychological, and environmental relationships with a Cronbach's alpha of 0.85, 0.81, 0.75 and 0.74, respectively (25).

3) The World Bank Social Capital Questionnaire (SC-IQ) was designed to examine social capital among families in developing countries. This questionnaire included 27 main questions and 6 domains as follows: 1) Membership in associations and groups; 2) The social trust rate; 3) Contribution in team works and public activities; 4) Information and communication; 5) Social cohesion; and 6) The political empowerment and activity. Each domain had 3, 11, 3, 2, 10, 5 questions, respectively in the form of Likert, multiple choice or yes/no. To assess social capital components of participants in this study, we calculated each person's score in each domain. The attainable score was 0–100 in all domains. The questionnaire reliability was confirmed by Nedjat and colleagues in 2012, and the 114 respondents were interviewed twice at a 10–14 day interval. The Intra Class Correlation Coefficient (ICC) was higher than 0.7 in all the dimensions (ICC range: 0.75–0.89). Values of Cronbach's alpha were 0.86, 0.82, and 0.69 for the 'trust', 'empowerment and political actions', and 'social cohesion' dimensions, respectively and 0.67 for the 'cooperation' dimension, which might be a result of the paucity of questions in this dimension (three questions) (26).

### *Statistical Analysis*

Data analysis was performed by SPSS 17, and descriptive statistics such as frequency tables, mean, and standard deviation were reported. In order to evaluate the correlation between the independent variables with the overall quality of life and its each

domain (dependent variable), as well as overall quality of life and its each domain (dependent variable) with the total social capital (independent variable), Pearson correlation coefficient, t-test, and one way ANOVA were used. Finally, to determine the factors affecting the domains of quality of life for women heads of households participating in the study, (after removing the confounding effect of other variables), a multiple linear regression, backward, was used. The significant level was set at 0.05.

## Results

### *Demographic- Socioeconomic and Clinical Factors of the Participants*

In this study, the mean±SD age of participants was 50.8 ±13.80 years. About 51% (n= 78) of the participants were divorced, 40.1% (n= 61) had high school diploma and 71% (n= 108) were unemployed. The mean±SD of monthly family income was 78.4±70 \$, and constructed area per capita

was 26.7 ±0.1. Also, 61.2% (n= 93) of the participants stated a kind of chronic disease such as cardiovascular, musculoskeletal, and mental problems and hypertension (Table 1).

### *Quality of Life and Social Capital Domains*

Table 2 demonstrates that in quality of life, environment health and social relationship domains have received the least 9.87 ±2.41 and the most 12.61±3.43 scores, respectively. With respect to social capital, membership in groups and associations and social trust had the least 19.61±17.11 and the most 51.04±17.37 scores, respectively. Participants' mean scores on social capital were approximately 50 in domains of the social trust, contribution in team works and public activities, social cohesion and the political empowerment and activity. However, women's mean score was the least in the domain of membership in groups and associations.

Table 1. Demographic characteristic of study participants (n=152)

Variable	Frequency Distribution	
	N	%
Marital Status		
Married	1	0.7
Single	5	3.6
Divorced	54	39.4
Widow	77	56.2
Education level		
Illiterate	42	27.6
Primary	44	28.9
High school	61	40.1
University	5	3.3
Employment Status		
Employed	39	26.5
Non-employed	108	73.5
Current Disease		
Yes	90	59.2
No	62	40.8

Table 2. Scores related to quality of life and social capital domains in the study population (n = 152)

Quality of life domains	Mean (SD)	Range
Physical health	11.7 (2.33)	6-17.7
Mental health	11.0(3.11)	4-20
Social Relationships	12.6 (3.43)	4-20
Environmental Health	9.9(2.41)	4-18
The attainable score is 0-20 in all Dimensions		
Social capital domains	Mean (Standard deviation)	Highest – Lowest
Network	19.6 ( 17.11)	0- 69.4
Trust	51.0 (17.37)	14.3-85.7
Cooperation	49.5 (23.59)	0-91.7
Social cohesion	49.2(11.2)	22.7-73.4
Political action	50.2 (17.37)	5- 81.7
The attainable score is 0–100 in all Dimensions		

### Quality of Life in Association with Demographic- Socioeconomic- Clinical and Social Capital Variables

Table 3 demonstrates the association between demographic, socioeconomic, and clinical factors of participants, and social capital domains with domains of quality of life through bivariate analytics. Table 4 demonstrates the adjusted association between the variables in Table 3 and the domains of quality of life (as the dependent variable). In this study, Pearson correlation coefficient, two-sample t-test, and ANOVA tests indicated a significant association between the physical health domain of quality of life and demographic- clinical factors such as successful educational years, a chronic disease, a current disease and social

capital factors including membership in groups and associations and contribution in team works and public activities ( $p < 0.05$ ). There was a significant association between mental health domain of quality of life and demographic - clinical factors including duration of residence, a chronic disease, a current disease and social capital factors including membership in groups and associations and contribution in team works and public activities ( $p < 0.05$ ). Also, there was a statistically significant association between environmental health domain of quality of life with economic factors such as constructed area per capita and social capital factors including in groups and associations and contribution in team works and public activities ( $p < 0.05$ ) (Table 3).

Table 3. Respondents' characteristics and social capital in association with the mean scores of the quality of life domains through Pearson Correlation, Independent Sample test and ANOVA

Variable	Quality of life domains (P-value)			
	Physical Health	Mental Health	Social Relationships	Environmental Health
Age*	0.663	0.153	*0.041	0.149
Marital status***	0.982	0.694	0.562	0.148
Occupational status**	0.061	0.156	0.163	0.97
Successful educational years*	0.021*	0.985	0.182	0.852
Monthly family income*	0.462	0.925	0.621	0.991
Living place area***	0.111	0.185	0.723	0.053
Constructed area per capita	0.436	0.052	0.524	0.013*
The number of family members*	0.991	0.144	0.137	0.072
Duration of residence*	0.072	0.004*	0.003*	0.195
The number of rooms*	0.094	0.092	0.444	0.814
Language	0.347	0.125	0.378	0.387
A chronic disease**	0.001*	0.014*	0.954	0.743
A current disease**	0.002*	0.012*	0.638	0.232
Network*	* $< 0.001$	0.002*	* $< 0.001$	0.001*
Trust*	0.364	0.062	0.098	0.054
Cooperation**	* $< 0.001$	* $< 0.001$	* $< 0.001$	* $< 0.001$
Social cohesion*	0.091	0.312	0.014*	0.155
Political action*	0.664	0.237	0.537	0.564

\* Pearson Correlation, \*\* Independent Sample test, \*\*\* ANOVA

Table 4. The association between Demographic, Clinical and the Domains of Social Capital variables with Quality of life Dimension Scores through Multiple linear Regression

Dimension	The remaining variables in the final model	Standardized Coefficients	p	R Square
Physical health	Constant	---	* $< 0.001$	34%
	Successful educational years	0.58	0.006*	
Mental health	Constant	---	0.004	64%
	Cooperation	0.61	0.041*	
	A chronic disease	-0.98	0.022*	
Social Relationships	Duration of residence	0.68	0.071	32%
	Constant	---	* $< 0.001$	
	Occupational status	-0.57	0.051*	
Environmental Health	Constant	---	0.001	54%
	The number of family members	0.88	0.007	
	Marital status	-0.68	0.032	

Table 4 demonstrates those variables that had a significant association with outcome, or those which were not removed according to likelihood ratio test (LRT) result. Multiple regression results revealed that the factor of successful educational years had an impact on physical health. Factors such as a contribution in team works and public activities, and no current disease affected mental health. Factors affecting social relationships and environment health in quality of life were occupational status, marital status, and the number of family members, respectively ( $p < 0.05$ ) (Table 4). A part of the variance of response change (the score related to quality of life domains), justified in the final regression model by studying variables ( $R$ ), was changing between 0.32 in the social relationships and 0.64 in the mental health.

### Discussion

The aim of this study was to determine the associations between social capital and FHF's quality of life in a group of FHF. Undoubtedly, accepting and playing the role of head of the family by women will affect their quality of life and workability of the social capital throughout their living contexts. The results of this study along with similar studies (5, 9-11, 27) showed a direct and positive relationship between quality of life and social capital.

The findings of this study revealed that quality of life and its domains are influenced by demographic variables such as education and age. Most of the FHF in this study were middle-aged, jobless with intermediate and senior high school (6–12) education level, and this finding is consistent with the studies done on FHF (13, 19, 28,29). Low level of education is one of the main reasons of being disqualified for applying for different jobs. Hence, it is regarded as the main barrier to being absorbed by the job market, leading to an economic and financial failure (30). The research performed on employment condition of FHF revealed a limited number of job opportunities for them due to low level

of education compared to the male-headed families (31). On the other hand, FHF often lacks support from both social networks and the state (32) and they even enjoy less governmental supports which are more in the form of providing services than providing empowerment (33); therefore, most of these women are hired for temporary jobs such as housekeeping.

In our study, the mean scores of quality of life for the participants were less than the study population in another study conducted in 22 municipal districts of Tehran on four domains of physical, mental, social and environmental health (34). Thus, it seems that more factors may influence their quality of life rather than ordinary ones that are linked to FHF. These women encounter with a vast variety of problems due to their multi-functional roles simultaneously, and lack of family and social support (33).

In this research, we found a positive and significant relation between age and overall quality of life and its different aspects and domains such as mental health, environment, and social relation. As the age increases, so does the quality of life in all domains, but its effectiveness index is very low (0.08), based on an observed regression index. In fact, it is expected that due to physiologic changes (36) and various problems arising in FHF's (29, 36) their quality of life decreases as they get older. Other studies found that the higher the age, the lower the quality of life (33, 37).

In this research, with respect to the physical health, there was only a significant relation between education variable and quality of life. It seems that in the physical health domain, women with high school education enjoy more suitable conditions compared to the illiterate and uneducated ones, and this was also consistent with other studies (19). The impact of education level on quality of life has been confirmed and some studies consider its effectiveness even more than the age factor (38). It seems as women's levels of education increases, so does their awareness and knowledge about their conditions, and they get more eager and inter-

ested in receiving medication.

The findings of this study also indicated a significant relation between environment health domain and marital status (divorced) which is consistent with another study (39). The researchers believe that marital status is a predicting factor in all aspects of quality of life and husband presence, as a supporter, is a preventive factor in reducing anxiety, consistent with the environment, decreasing death rate and disability (40).

We found a significant relation between length of stay in place, physical health, and social relation domains of quality of life in this research. According to the results of this study, the domain score of physical health and social relation of those who lived in the area for many years was more than the ones who have moved to this area just recently, about one year. It seems that social relation network among older residents is the variable with a positive impact on their quality of life.

In this study, there was a meaningful and reversed relation between the existences of present illness with physical, and mental health domain. Also, total score of quality of life and the impact of this variable in the mental health domain was higher than other domains (regression coefficient= -2.85). In another study, it was declared that 77% of the FHF's who received support from Tehran Rehabilitation center did not enjoy complete mental health and lost their mental peace while becoming the head of the family due to their multi-functional responsibilities (20). Psychologists also believe that FHF's face financial, mental, and emotional problems, and they experience more stress and anxiety; therefore, they are more likely to suffer from mental diseases than married women. No wonder, chronic and current diseases can worsen the case and have an undesirable impact on quality of life of this vulnerable group, particularly in the mental health domain.

The social capital mean score of FHF was 37.5 in this study while the highest mean score was recorded as 71.7. Thus, it can be concluded that women's social capital is

considerably low. Chant believes that the low social capital among FHF is mainly rooted in their limited social relation network and human communications because culturally, when they are divorced, they prefer to be alone. Furthermore, these people have no extra time to create any social relationship with others due to their multi-functional responsibilities (21). In our study, the lowest and highest mean scores of social capital go to membership in groups and social trust dimensions, respectively which is consistent with the findings of another study in Tehran (26).

The respondents achieved scores of almost 50 in the trust, cooperation, political action and social cohesion dimensions, but gained less than 20 in the attainable score in the groups and networks dimension. The lower score of network dimension compared to other social capital dimensions is in accordance with other studies conducted in Iran (41-43). A study among 1,759 individuals in Tehran in 2004 also revealed a very low participation in voluntary associations (25 % of the maximum attainable score) as 53.4 % of the study population had no kind of participation whatsoever (43). Another study conducted on 320 individuals in Iran demonstrated a significantly lower activity rate of networks and groups in women than in men (43). The most mean scores in the social trust dimension was relatively high which could be justified because of the average age of FHF (50.8 years). In another study conducted on 2500 people in Tehran (Iran capital), it was demonstrated that age groups older than 45 years had significantly higher trust scores than the 18-26 year age group (26). On the other hand, in Iran, multiple studies have shown higher trust in middle aged people who have experienced the revolution and the Iran-Iraq war (43-45).

Finally, regarding the relation between social relation and human communications of FHF, it is observed that quality of life has a positive and significant influence on social relations. The findings of various studies have emphasized the relation be-

tween social capital and quality of life (5, 9, 11, and 27).

### Conclusion

Strong associations between the social capital and quality of life of FHF in our study supports the fact that strengthening each domain of social capital will lead to another domain improvement, although we do not explore cause and effect relationships. In fact, through getting a thorough understanding of social capital and promoting its layers and following the required skills to set it up in different social environments, we can observe the deep and enormous impact of social capital on the Iranian women's quality of life and vice versa.

### Strengths of the Study

The results of this study helps the general knowledge in the field of social epidemiology, and specific knowledge about the area of quality of life of FHF, and it seems that this was the first study to measure social factors. After nearly two decades of research, no universal definition or measurement of social capital have been designed. Unlike other studies that have used only one or two items to measure cognitive - structural model of social capital, a set of six items with 39 questions was used for better measuring this multifaceted concept.

### Limitations of the Study

Few limitations were acknowledged in this study. Like other cross sectional studies, we could not claim causality. Given that single mothers and female headed families are highly stigmatized in the Iranian culture, our findings could not warrant direct and positive impact of implementing social capital promotion resulting in a better quality of life of women. Although this study investigated the relationship between quality of life and social capital, the exact nature of the biological mechanisms or causal relationship is not clear. Moreover, while we have assumed that greater quality of life promotes social capital, higher social

capital may increase a person's participation in the society, and it can lead to promoting quality of life. Thus, longitudinal or comprehensive cross-sectional studies with in-depth qualitative study may help clarify the direction of causality. However, since this study is based on self-report measures, it may have the potential for reporting bias due to the subjective nature of the measure. In addition, the respondents may have different perceptions of the concept of social capital, particularly cognitive domain (norms, values, attitudes) and may consequently come up with different answers.

### Ethical Considerations

Ethical issues (plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

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