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Relationship between Social Capital and Life Quality of Female Patients with High Blood Pressure in Health Centers of Khalkhal in Iran

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Abstract

Background and Objective: High blood pressure has become a major problem in developing countries. A method of controlling blood pressure is to improve the life quality of patients. Studies have emphasized the importance of examining the role of social capital in patients' quality of life. The present study aimed to investigate the relationship between social capital and life quality of female patients with high blood pressure.

Materials and Methods: The present correlative study was carried out using the survey method. The statistical population included all women referring to the health centers of Khalkhal in Iran with care reports within January 2018 to December 2019. The current study was carried out on a total of 3,684 individuals. The sample size consisted of 357 female patients with high blood pressure who were determined using Cochran's formula and random sampling technique. In addition, to compare high blood pressure patients with other individuals, 357 subjects were selected from other referrals as the study subjects. The data collection tool was a researcher-designed questionnaire for social capital and 36-Item Short Form Survey (SF-36) for life quality. Moreover, the data were analyzed using Pearson's correlation coefficient and t-test by SPSS software (version 22).

Results: The obtained results of the current study showed that there was a significant relationship between social capital dimensions (i.e., social trust, social support, strong relationship, and associative membership) and life quality of patients with hypertension (P<0.05). It was also indicated that the average social capital of healthy individuals was higher than that reported for those with high blood pressure (P<0.05).

Conclusion: By increasing social capital in patients with hypertension, their quality of life will improve.

Keywords: Blood pressure, Life quality, Social capital

Background

High blood pressure has become a major problem in developing countries due to the wide spread and its association with cardiovascular diseases [1]. Almost half of the patients with high blood pressure are aware of their condition and keep their blood pressure at a reasonable level [2]. The prevalence rate of high blood pressure is about 23% in case of no appropriate treatment, and it is reported as 10-15% in the presence of kidney failure of up to 33%. In addition, the prevalence rate of high blood pressure increases by up to 50% due to brain stroke. These patients may die under the influence of cardiovascular diseases.

High blood pressure is associated with congressional heart failure, peripheral vascular diseases, brain stroke, and coronary veins diseases; accordingly, about 74%, 60%, 96%, and 74% of patients with congressional heart failure, peripheral vascular diseases, heart stroke, and brain stroke suffer from high blood pressure, respectively [3]. All of these conditions lead to the reduction of patients' quality of life in different dimensions in addition to different kinds of treatment, remarkable costs of treatment, repeated referrals to physicians, and hospitalization [4]. Absolutely, numerous events related to high blood pressure can decrease if blood pressure is controlled. Therefore, one way to control blood pressure is to improve the life quality of patients. Life quality is a complex and multidimensional structure. The World Health Organization has defined life quality as "the perception of the condition in which individuals live and the value system and cultural status in which they are; this perception is based on their standards, interests, goals, and expectations".

Regarding nontreatment and increasing the development of some illnesses, a branch has been recently separated from life quality, related to

health, receiving high attention of health scientists and experts [5]. Life quality is a subjective and dynamic structure comparing the life status of the past and recent events at all positive and negative levels. [6]. However, the encouragement of patients to participate in related activities, enhancement of social relationships, and formation of social groups can improve their social performance and enhance their life quality leading to help with controlling their blood pressure [7]. Therefore, it can be claimed that the development of social links and communication networks results in an increase in the access of individuals and groups to economic and social resources [8].

According to the definition given by Bourdieu, social capital is the outcome of all potential and actual resources resulting from the ownership of a persistent network of an institutionalized network in relationships among individuals [9]. Consequently, social capital is considered a tool for easy access to cultural and economic resources through social links [10]. Mutual understanding and support promoting certain group interactions are the products of intragroup social capital, originating from familial connections, friendships, and neighborhood [11].

According to the literature, Putnam believes that there is a strong and negative relationship between social capital and mortality rate. There was also a very clear and positive correlation between the variables of health and social capital. He concludes that individuals enjoying higher degrees of social capital live longer with lower degrees of physical and mental diseases. Pointing to the correlation between social capital and all social conditions, such as high level of wealth, low level of crimes, feeling of prosperity and satisfaction with life, and high level of health, Putnam considers social capital as highly influential in forming or not forming those components [12]. He continues emphasizing that the role played by social correlation in health and life quality is the most important across all realms of social capital in diverse societies [13].

Nan Lin is also among the first scholars who proposed the theory of social capital and its impact on health, feeling of prosperity, and satisfaction with life. By the development of the theory of social resources, he suggested that "access to social resources can lead to better social and economic conditions". As a result, during recent years, he introduced the concept of social capital as the hidden resources within a social structure which are accessible with the help of aimed actions [14]. Nan Lin emphasizes three types of social capital, namely outgroup, intragroup, and institutional [15]. Nan Lin combines his social capital of the macrolevel with those of the microlevel and obtains a middle-size pattern [14].

In any research domain, some studies have been conducted with semantic proximity to the present study. Baghi et al. carried out a study under the title of "Anticipation of life quality of patients with high blood pressure according to tolerance and social support". In the aforementioned descriptive study, 120 patients with high blood pressure were selected through instant sampling. In order to collect data, 12-Item Short Form Health Survey (SF-12) life quality questionnaire and Social Quality and Tolerance of cardiac patients' questionnaire were used. The findings of the aforementioned study indicated that 120 patients with high blood pressure (47 men and 73 women) participated in the study with a mean age of 51.6 ± 14.11 years. The results showed that there is a significant correlation between life quality with reasonable rehabilitation, self-regulation, and observance of treatment.

Step by step regression results of the above-mentioned study showed that reasonable rehabilitation, self-regulation, and observance of treatment could express 33.5% of changes in the life quality of those patients. The results of the study proved that reasonable rehabilitation, self-regulation, and observance of treatment (i.e., three dimensions of tolerance) are the predictors of life quality of patients with high blood pressure. Generally speaking, according to the findings of this study, the life quality of those patients can be improved through training and promoting their tolerance level [16].

In addition, Afshani and Mohammadi conducted a study under the title of "The relationship between social capital and social support among patients with diabetes in Yazd, Iran". The findings of the aforementioned study showed that social support among patients with diabetes in Yazd was above the average level; however, the social capital index average was medium. The Pearson's correlation coefficient of social support degree and dimensions of social capital were reported as 0.218 (social trust), 0.277 (social network), and 0.184 (social norm), all of which were statistically significant. The results indicated that there was a significant and direct relationship between the level of social support and social capital; accordingly, an increase in social capital led to an increase in social support [17]. Therefore, regarding the above-mentioned issues, the present study investigated the relationship between social capital and life quality of patients with high blood pressure in the health centers of Khalkhal, Iran.

Objectives
The present study aimed to investigate the relationship

between social capital and life quality of female patients with high blood pressure.

Materials and Methods

The present correlative study was conducted using the survey method. The statistical population included all women referring to the health centers of Khalkhal in Iran within January 2018 to December 2019, with care reports. Out of 24,098 individuals, 3,684 cases were patients with high blood pressure; however, 20,414 patients were not reported with high blood pressure. The sample size of this study consisted of 357 women with high blood pressure selected using Cochran's formula through simple random sampling. Moreover, in order to compare high blood pressure patients and other individuals referring to the health centers, 357 additional individuals were chosen as the study subjects.

The inclusion criterion of this study was hypertension, and the exclusion criterion was no physical disease. In this study, the data collection tool was a researcher-designed questionnaire, and face validity was used in order to promote the validity of used items. For the evaluation of the reliability, Cronbach's alpha was utilized for the questionnaire. The quality of life questionnaire (i.e., 36-Item Short Form Survey) was employed to assess the patients' quality of life. The reliability of this questionnaire has been reported in Iranian society within the range of 70-85%, and good validity has been reported for various studies [18]. The data were analyzed using Pearson's correlation coefficient and t-test by SPSS software (version 22).

Results
Descriptive findings

According to the obtained results, the lowest and highest ages were 39 and 70 years, respectively. Most of the respondents were within the age range of 50-59 years. In addition, 91.6% of the study subjects were married with the highest frequency. In this study, 8.4% of the respondents were single with the lowest frequency. Furthermore, 137 (19.2%), 118 (16.5%), 147 (20.6%), 195 (27.3%), and 117 (16.4%) participants were reported with the educational levels of under diploma, diploma, associate of arts degree, bachelor's degree, and master's degree or higher, respectively. The highest frequency regarding the educational level belonged to the associate of arts degree.

Moreover, 293 (41%), 196 (27.5%), and 97 (13.6%) study participants were housewives, employees, and market workers, respectively. In this study, 50.4% and 49.6% of the respondents lived in the city and villages with the highest and lowest frequencies, respectively. The lowest level of income was less than 1,000 tomans per day with a frequency of 27.2%; however, the highest level of income was above 4 million tomans per month with a frequency of 13.4%. In addition, 50.0% of the study subjects were patients with high blood pressure, and 50.5% of them were healthy individuals.

Inferential findings

Cronbach's alpha was studied for all the dimensions of life quality and social capital, the results of which are shown in Table 1.

According to Table 2, there are relationships between social trust and level of life quality, life quality and level of social support, and social connection and life quality of patients with high blood pressure.

In Table 2, the significance level of the test is 0.000 that is less than 0.05 (P<0.05); therefore, it can be concluded that there are significant relationships between the variables. Regarding the positivity of the correlation coefficient, any increase in one of the variables will contribute to an increase in the other variable.

According to Table 3, t degree is 2.39 with a significance level of 0.017 which is less than 0.05 (P<0.05). Therefore, the results indicated that the variance is not equal in the two groups, and the groups are different with regard to their levels of life quality. Considering that the average of the first group (i.e., individuals with membership in institutions) was higher than that reported for the second group (i.e., individuals without membership in institutions), it can be claimed that the first group had a higher quality of life.

Based on Table 3, t degree is 2.55 with 0.000 level of significance which is less than 0.05 (P<0.05); consequently, the variances of both groups were not equal, and they differ in their levels of social capital. Since the average of the first group (i.e., healthy individuals) was higher than that that reported for the second group (i.e., patients with high blood pressure), it can be said that the social capital average of the first group was higher than that of the second group.

Table 1. Cronbach's alpha coefficients of dependent and independent variables

Variable	Cronbach's alpha coefficient
Social capital	0.824
Social support	0.736
Social trust	0.727
Membership in gatherings	0.769
Strong relationship	0.713
Life quality	0.793

Table 2. Results of Pearson's correlation coefficient

Variable 1	Variable 2	r	Sig
Social trust	Life quality	0.549	0.000
Social support	Life quality	0.376	0.000
Social connection	Life quality	0.386	0.000

Table 3. Results of t-test for life quality of patients with high blood pressure based on membership level

Variable	Standard deviation	t	Sig
Present	11.25961	2.39	0.017
Absent	12.66719		
Healthy	12.16435	2.55	0.000
Sick	13.66161		

Discussion

The obtained results of this study showed that there was a significant relationship between social trust and life quality of patients with high blood pressure. Regarding the positivity of the correlation coefficient, any increase in one variable will lead to an increase in the other variable. Fukuyama considerers social capital as the product of the phenomena, such as mutual trust, social interaction, social groups, feeling of collective identity, feeling of a common picture of the future, and group collaboration within a social system, and expresses all of them in the framework of trust radius. All social groups have a certain level of trust radius indicating the spread level of collaboration and mutual trust circle of group members. Voluntary protective institutions and other groups enjoy this trust radius according to the level of their activities [19, 20].

The findings of the current study demonstrated that there was a significant relationship between the degree of social support and life quality in patients with high blood pressure. Regarding the positivity of the correlation coefficient, any increase in one variable will lead to an increase in the other variable. According to Fukuyama, the family institution is one of the main resources of forming social capital. He believes that the family prepares the ground for the development of personal and social identities and health in individuals. This capital in the family provides the members with a protective network that can be effective in decreasing abnormalities and violations within the family. Conversely, if distrust dominates social relationships, collective identities that have been created in the society move toward ethnic tendencies and religious and racial intolerance, leading to antisocial behaviors, and as Fukuyama says "some type of negative social capital spread" [20, 21].

In another part of his work, Fukuyama pointed to social capital and its impact on the preparation of protective networks, informational supports, intragroup and intergroup networks, and their difference from the market network. From the viewpoint of Fukuyama, the perspective of social capital prepares the ground for more clearly defined networks. From this perspective, a network is not defined as a type of formal organization; rather, it is defined as a moral relationship based on trust. A network is a group of individual factors with common norms or values higher than values and norms that are necessary for conventional transactions in the market. In this definition, two aspects are remarkable. Firstly, a network is different from a market, because networks have been defined as a group of individual factors with common norms and values. Secondly, a network is different from hierarch-based organizations, because a network is based on informal norms and not relationships based on formal authority.

The results of the current study indicated that the life quality level of patients with blood pressure was different according to their group membership showing that the variance was not equal in the two groups, and the groups were different in terms of life quality level. Considering that the average of the first group (i.e., individuals with institutional membership) was higher than that reported for the second group (i.e., individuals without institutional membership), it can be concluded that the first group enjoyed a higher level of life quality.

According to Colman, social capital is formed through changes in relationships among individuals facilitating actions. He believes that physical capital is completely tangible and is observed in a material form. On the other hand, human capital is less tangible and can be noticed in the form of skills and knowledge attained by individuals; however, social capital is much more intangible, because it is represented through relationships among people. Physical and human capitals facilitate the activities of their producers; likewise, social capital facilitates the activities of their developers. For example, a group with loyalty and trust can perform greater tasks in comparison to a group lacking loyalty and trust [10].

The finding of the present study showed that there was a significant relationship between having strong relationships with the members of social and personal networks and life quality level of patients with high blood pressure. Regarding the positivity of the correlation coefficient, any increase in one variable can lead to an increase in the other variable. Fukuyama considers the cooperative network as

another resource of social capital providing all kinds of informational, financial, service, and cooperative supports. He believes that the members of such a network have common values and norms.

Information can be easily exchanged in protective networks. Protective networks can be problematic for organizations because their structure is not clear to individuals who are outside them, and they often disrupt formal powerful relationships. Common ethnicity can facilitate trust and exchange among the members of an ethnic group; nevertheless, it prevents from exchanging among the members of different groups [21].

One of the limitations of the current study was the lack of a standardized test for measuring the social capital level and lack of consideration of psychological variables affecting social capital and quality of life. In addition, the results of this study can be generalized only to patients with hypertension in Khalkhal. Therefore, it is suggested to carry out future studies to investigate the relationship of other variables with social capital and life quality. Moreover, despite a sufficient and reasonable theoretical basis to support the findings of the present study, it is recommended to perform further studies to use other measurement instruments. Furthermore, it is suggested to conduct studies to examine the relationship between social capital and life quality with psychological variables. It is also recommended to study the aforementioned variables in other populations.

Conclusions

By increasing social capital in patients with hypertension, their quality of life will improve. Considering that the life quality average was at a medium level in the present study, factors affecting the level of life quality should be identified. However, the life quality level of patients with high blood pressure should also be monitored every year.

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