Research Paper:
Relationship Between Social Capital and Health-promoting Lifestyle in Nursing Students

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ABSTRACT

Background: Health-promoting lifestyle as an important factor in psychological and physical well-being improves the quality of life. A health-centered approach to life can be facilitated through several social components, such as social and cultural capital. This study aimed to determine the relationship between social capital and the health-promoting lifestyle of nursing students.

Methods: It was a descriptive correlational study. A total number of 200 undergraduate nursing students of Iran University of Medical Sciences were recruited using stratified proportional to size sampling. Also, data were collected by the Walker health-promotion lifestyle profile-II and the Onyx and Bullen social capital questionnaire and analyzed using descriptive statistics, the t test, the analysis of variance, and the Pearson correlation coefficient, in SPSS V. 20.

Results: The mean scores of social capital and health-promoting lifestyle was 2.44 and 2.47, respectively. Social capital was significantly associated with the health-promoting lifestyle (P<0.001). Moreover, economic status was significantly correlated with social capital (P=0.004). Also, a significant relationship was observed between employment status and health-promoting lifestyle (P=0.002).

Conclusion: As a step toward having healthy nursing students, the officials, educational policymakers, and faculty members are suggested to take appropriate interventions to promote their social capital.

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Highlights

● Lifestyle is an important factor that affects health.

● Health is determined not only by behavioral, biological, and genetic factors but also by a range of economic, environmental, and social factors.

● According to World Health Organization, social capital is the missing link in social inequality and health.

● Low social capital is associated with disease and reduced health and plays an important role in improving access to social care.

● Studies conducted in Iran and other countries have shown that a small number of students have a healthy and desirable lifestyle.

● The results showed a significant relationship between social capital and a health-promoting lifestyle.

Plain Language Summary

In developing countries, unhealthy lifestyles cause a high percentage of deaths. During adolescence, many adverse health factors can be controlled if detected and corrected early. This study discussed the relationship between social capital and health-promoting lifestyle in the nursing students of Iran University of Medical Sciences, Tehran, Iran. According to the results, social capital is significantly related to a health-promoting lifestyle; as social capital increases, the health-promoting lifestyle increases. The score of the social capital of students with good economic status was higher than that of those with poor economic position. Besides, the employment status of the students was associated with their health-promoting lifestyle, so that the health-promoting lifestyle score of employed students was higher than that of the other students.

1. Introduction

Young people are more prone to high-risk behaviors, such as substance abuse, unprotected sexual behaviors, inactivity, and unhealthy eating habits. These behaviors greatly impact the health status and diseases of middle-aged and old people. During adolescence, many adverse health factors can be controlled if detected and corrected early. Studies on the health-promoting lifestyle of students in Iran show that they are not in a good condition. On the other hand, studies in other countries have shown that a small number of students have a healthy and desirable lifestyle (Rezaei et al., 2016). Health is determined not only by behavioral, biological, and genetic factors but also by a range of economic, environmental, and social issues (Hezar Jaribi & Mehri 2013). Among the factors affecting health, the share of the health delivery system (hospitals, clinics, and pharmacies); genetic and biological factors; physical, environmental, and behavioral factors; and the share of social factors account for 25%, 15%, 10%, and 50% of individuals' health, respectively (Khajedadi et al., 2008).

Lifestyle is one of the most important factors affecting health; this feature has become more pronounced with the epidemiological change of diseases and the seriousness of the issue of noncommunicable diseases. In a statement of the World Health Organization (WHO) at the First World Conference on Healthy Living in Moscow, unhealthy lifestyles have led to 60% of global deaths and 80% of deaths in developing countries, and this probability will reach 75% of global mortality by 2030. This issue is so important that one of the goals set by WHO is to promote a healthy lifestyle by 2020 (Sepah Mansour & Bagheri 2017). The combination of these behaviors in addition to maintaining and strengthening the level of health and well-being leads to a feeling of satisfaction and self-fulfillment (Tol et al., 2013). Iran has considered a healthy lifestyle as one of the health priorities to the extent that the health care programs are based on self-care and improving people's lifestyles. According to the Statistics Center of Iran, in 2012, out of 380 000 deaths, at least 180 000 were related to the seven main sources of death (smoking and hookah use, unhealthy diet, sedentary lifestyle, obesity, hypertension, hyperglycemia, and high cholesterol); with the

continuation of this trend until 2026, about 70% of the diseases in the country will be attributed to noncommunicable diseases and the rest to accidents and infectious diseases, such as AIDS (Rastegar et al., 2015).

Lifestyle variations in contemporary societies are influenced by determinants, each of which explains a part of this multifaceted phenomenon. The resources available to any individual, referred to in sociological discourse as "capital", are among the factors influencing people's beliefs, attitudes, and even behavior. As one of the social determinants of social and cultural capital, health plays an effective role in how people live. The changes of health-oriented lifestyle can be facilitated through some social components, such as social and cultural capital. The WHO identifies social capital as the missing link in social inequality and health (Tavakkol & Maghsoodi 2011). Low social capital is associated with disease (Giordano & Lindstrom 2010) and reduced health, and plays an important role in improving access to social care (Seyyedan & Abdolsamadi 2011). Besides, it can be identified as one of the most important factors affecting the status of health-oriented physical activity (Ueshima et al., 2010).

Students are forced to experience a new lifestyle as soon as they enter university. Forced coexistence, the reduction of individual freedom, interference between the private and public spheres, the lack of hygiene, noise in the environment and especially in residence environments, the formation of new relationships and identities, different lifestyles, stress caused by various factors, worrying about the use of narcotics and sedatives, and changes in nutrition are all experiences that the student faces in this environment. In this regard, the status of the health-promoting behaviors of nursing students as a young and effective group in society and the group that will play a key role in providing health care services in the future is of special importance. Nurses play a key role in promoting public health and direct communication with the patients and clients of medical centers and as one of the most important occupations are influenced by the social capital approach. Also, nursing students' lifestyles are important in providing better services to patients. Accordingly, this study was conducted to determine the relationship between social capital and the health-promoting lifestyle of the nursing students of Iran University of Medical Sciences, in 2019.

2. Materials and Methods

It was a descriptive correlational study. A total number of 200 undergraduate nursing students of Iran University of Medical Sciences were recruited with stratified sampling proportional to size.

The data were collected by a demographic information form, the Health-Promoting Lifestyle Profile-II (HPLP-II), and the Onyx and Bullen social capital questionnaire. The demographic information form included age, gender, marital status, economic status, employment status, residence status, and semester. The HPLP-II was developed by Walker et al. in 1990; this questionnaire measures the health-promoting lifestyle with 52 items in six dimensions of nutrition (9 items), physical activity (8 items), health responsibility (9 items), spiritual growth (9 items), interpersonal communication (9 items), and stress management (8 items) and contains 52 questions scored on a 4-point Likert scale (1= never, 2= sometimes, 3= often, 4= most of the time). The overall score of HPLP-II is calculated as the mean of responses to all 52 items. Also, six subscale scores are obtained by calculating the mean of the responses to the subscale items. The minimum and maximum obtainable scores of HPLP-II are 52 and 208, respectively. The content validity and reliability of this questionnaire were first evaluated by Walker et al. in 1987 and then by Ritchey and Kerr (Walker, Sechrist & Pender1987; Walker et al., 1990). The HPLP-II reliability has been confirmed by test-retest with a correlation coefficient of above 0.75. In Iran, the validity of this questionnaire was examined by Zeidi et al., using exploratory factor analysis. Also, its reliability was determined by the ICC coefficient with the Cronbach alpha of 0.82 for the whole scale and 0.75 to 0.91 for the dimensions of the questionnaire (Mohammadi Zeidi, Pakpour Hajiagha & Mohammadi Zeidi 2011).

The social capital questionnaire contains 36 questions in eight dimensions, including social participation (7 items), the feeling of trust (5 items), neighborhood relations (6 items), family relationships (3 items), the value of living (2 items), being active in the community (8 items), acceptance differences (2 items), and labor relations (3 items). The questions are scored on a 4-point Likert scale ranging from "never" (=1) to "always" (=4). The total score is obtained from the sum of responses to all the 36 items. The highest and lowest scores for the whole questionnaire are 144 and 36, respectively, with the higher scores representing better social capital (Onyx & Bullen, 2000). Eftekharian et al. obtained an alpha coefficient of higher than 0.7 for each of the domains, also, with the alpha coefficient of 0.96, the total

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social capital showed the highest reliability. Therefore, the Persian questionnaire had a high reliability (Eftekharin et al., 2016). In the present study, the validity of this questionnaire was confirmed through face validity using the opinions of three faculty members and two doctoral students in epidemiology and sociology.

After obtaining the required permissions, the researcher referred to the School of Nursing and Midwifery of Iran University of Medical Sciences, and received the number of students in different semesters. Then, in coordination with the educational planning office, the researcher received the students' program in each semester. After attending the class, the researcher explained the objectives of the research to the students and assured them that their information would be kept confidential. Then, written consent was obtained from all the students. Each questionnaire took a maximum of 20 minutes to complete, and the data collection process took about a month. The collected data were analyzed with descriptive statistics (frequency, frequency percentage, mean, and standard deviation) and inferential statistics (t test, the analysis of variance, and the Pearson correlation coefficient), using SPSS V. 20.

3. Results

The highest frequency of age range was 18 to 25 years (93.5%). Most nursing students were female (52.5%), single or divorced (91.0%), unemployed (85%), and lived in dormitories (50.5%). Also, the economic status of most students (66.0%) was average, and most of them were studying in the seventh semester (15.5%).

The Mean±SD score of social capital was 2.44±0.47 (range, 1.30 to 4). The lowest mean was related to the dimension of social participation (2.17±0.75) and the highest was related to the other dimensions (2.75±0.61) (Table 1). Furthermore, the Mean±SD of health-promoting lifestyle was 2.47±0.40 (range, 1.33 to 4). The lowest and highest mean scores were related to the physical activity (2.29±0.59) and the spiritual growth dimension (2.68±0.53), respectively (Table 2). The results of the correlation test showed a direct and significant relationship between health-promoting lifestyle and social capital (r=0.51, P<0.001). This means that social capital increases by the increase of the score of the health-promoting lifestyle and vice versa (Table 3).

Social capital was significantly and directly associated with all the aspects of health-promoting lifestyle (P<0.001). The highest correlation was related to the dimensions of physical activity and spiritual growth (r=0.44)

and the lowest was associated with the dimensions of nutrition and interpersonal relationships (r=0.35) (Table 3).

Health-promoting lifestyle was significantly and directly related to all dimensions of social capital (P<0.001); the highest and the lowest relationships were related to the dimensions of labor relations (r=0.60) and social participation (r=0.23), respectively. Then, the assessment of the relationship between the dimensions of the two variables showed that the highest relationship was between the spiritual growth and work relationships dimension (r=0.59, P=0.001) and the lowest relationship was between nutrition and social participation (r=0.16, P=0.023), which was at a very poor correlation level (r<0.30). No significant relationship was observed between any of the demographic variables except social status and social capital (P=0.004). Besides, the results of the Scheffe test showed the difference between the social capital of students in good and poor economic status (P=0.012). So that, the social capital of students with good economic status (2.58±0.48) was significantly higher than that of those with weak levels (2.09±0.51). There was no significant relationship between any of the demographic variables except employment status and health-promoting lifestyle (P=0.002). The health-promoting lifestyle of employed students (2.69±0.40) was significantly higher than that of the unemployed students (2.40±0.39) (Table 3).

4. Discussion

The Mean±SD score of social capital was 2.44±0.47 in the study sample. Also, the lowest and the highest mean scores were related to the dimensions of social participation and labor relation, respectively; these results differ from the results of some other studies (Ghaffari & Khani 2013; Baji, Bigdeli & Memar 2017; Rahimi & Aghababaei 2018). However, consistent with the present findings, previous studies in Iran obtained the lowest average score in the social participation dimension (Moradian Sorkhkalaee et al., 2012; Eftekharin et al., 2016; Rezaei et al., 2016). Students' activities in social organizations could significantly improve their social participation. Thus, the low score of social participation can be justified, because most students have little participation in student social organizations.

The Mean±SD score of health-promoting lifestyle was 2.47±0.40. The lowest mean was related to physical activity and the highest was associated with the spiritual growth dimension. In this regard, the nursing students of Tehran University have shown a health-promoting lifestyle score of 3.2, also, consistent with the present study,

Table 1. Numerical indicators of social capital and its dimensions in nursing students

Indicators / Dimensions	Mean±SD	Min.	Max.
The level of social participation	2.17±0.75	1	4
Feeling of trust and social security	2.39±0.56	1	4
Neighborhood relations	2.25±0.61	1	4
Relationships with family and friends	2.61±0.75	1	4
The value of being alive	2.37±0.75	1	4
Being active in the community	2.52±0.54	1.33	4
Accept differences	2.44±0.76	1	4
Labor relations	2.71±0.64	1	4
Other	2.75±0.61	1	4
Social capital	2.44±0.47	1.3	4

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the students' scores in the physical activity dimension was lower than in the other dimensions (Maheri, Bahrami & Sadeghi 2013). A study on the medical students in Isfahan City revealed the highest mean score belonged to the responsibility dimension; this result is not consistent with the present study (Tol et al., 2013). Again, a study on the students of the University of Social Welfare and Rehabilitation Sciences in Iran has shown that the highest mean score is related to the students' health responsibility dimension (Kaldi et al., 2014). Consistent with the present results, a study on Thai nursing students showed that spiritual growth with an average of 3.3 and interpersonal relationships with the mean of 3.6 had the highest score, and physical activity with a mean of 2.94 had the lowest score (Wittayapun et al., 2010). Besides,

Hong showed that the average score of nursing students' health-promoting lifestyle was 2.99 and interpersonal relationships and spiritual growth had the highest score (Hong 2007). Another study found that the nursing students' scores are high in interpersonal relationships and spiritual growth and low in physical activity (Hosseini et al., 2013). These findings are consistent with the results of the present study. Regarding the very nature of the nursing profession, the possibility of burnout due to workload is high, also, it seems that the low score of physical activity dimension in nursing students will emerge more after graduation and affect the health of nurses (Ghanbary Sartang et al., 2016).

Table 2. Numerical indicators of health-promoting lifestyle and its dimensions in nursing students

Indicators / Dimensions	Mean±SD	Min.	Max.
Responsibility	2.49±0.48	1.3	4
Physical activity	2.29±0.59	1	4
Nutrition	2.4±0.46	1.33	4
Interpersonal relationships	2.66±0.52	1.38	4
Stress management	2.34±0.44	1.38	4
Spiritual growth	2.68±0.53	1.22	4
Health-promoting lifestyle	2.47±0.4	1.33	4

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Table 3. Relationships among the total scores and dimensions of social capital and health-promoting lifestyle of nursing students

Social Capital Dimensions / Health-Promoting Lifestyle Indicators		Level of Social Participation	Feeling of Trust and Social Security	Neighborhood Relations	Relationships With Family and Friends	Value of Being Alive	Being Active in the Community	Accept Differences	Labor Relations	Other	Social Capital
Responsibility	r	0.13	0.29	0.19	0.33	0.43	0.46	0.21	0.47	0.36	0.42
	P	0.051	<0.001	0.005	<0.001	<0.001	<0.001	0.002	0.008	<0.001	<0.001
Physical activity	r	0.32	0.30	0.30	0.32	0.33	0.38	0.31	0.42	0.24	0.44
	P	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.019	<0.001	<0.001
Nutrition	r	0.16	0.17	0.18	0.29	0.27	0.43	0.23	0.41	0.28	0.35
	P	0.023	0.013	0.007	<0.001	<0.001	<0.001	0.001	0.021	<0.001	<0.001
Interpersonal relationships	r	0.04	0.17	0.11	0.35	0.32	0.44	0.20	0.55	0.34	0.35
	P	0.55	0.011	0.10	<0.001	<0.001	<0.001	0.004	0.002	<0.001	<0.001
Stress management	r	0.21	0.36	0.28	0.31	0.40	0.34	0.23	0.42	0.23	0.41
	P	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.018	0.001	<0.001
Spiritual growth	r	0.17	0.27	0.17	0.32	0.44	0.48	0.27	0.59	0.39	0.44
	P	0.016	<0.001	0.016	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001
Health-promoting lifestyle	r	0.23	0.32	0.26	0.40	0.44	0.53	0.31	0.60	0.38	0.51
	P	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

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There was a direct and significant relationship between health-promoting lifestyle and social capital. This means that the health-promoting lifestyle increases with the increase of social capital and vice versa. The results also showed that social capital was significantly and directly related to all aspects of health-promoting lifestyle; the highest relationship was obtained for the physical activity and spiritual growth and the lowest for nutrition and interpersonal relationships dimensions. Regarding the relationship between the dimensions of the two variables, the results showed that the highest relationship was between the spiritual growth and work relationships dimensions and the lowest was between the nutrition and the level of social participation dimensions. A study of 1000 people in southern Brazil found that poor social capital was associated with low physical activity, the low consumption of fruits and vegetables, and smoking, also, the social capital scores were inversely related to the number of inappropriate lifestyle behaviors (Loch et al., 2015). Another study found that people with higher social capital

scores had better health-related behaviors (Davison et al., 2012). Furthermore, a study in the US showed that health behaviors and self-expression are directly related to social capital. However, limited studies have been conducted in the student community to understand this relationship (Kawachi, Subramanian & Kim 2008). But a study on 810 medical students in Mashhad showed that students' social capital is associated with behaviors related to students' healthy lifestyles (Golmakani et al., 2013).

In terms of factors related to social capital in students, the findings showed no significant relationship between any of the variables other than economic status and social capital. Thus, the social capital of students with good economic status was significantly higher than that of students with weak economic level. It has been shown a significant relationship between social capital and education level, the field of study, marital status, the place of residence, and indigenous status (Rezaei et al., 2016). In another study, social capital was related to the gender, age, and

language (ethnicity) of students (Moradian Sorkhkalaee et al., 2012). Factors related to social capital vary, based on the sample size recruited in each study, the setting, and the style of measuring demographic characteristics. Thus, the difference in findings can be justified, because the present study differs from the abovementioned studies in these three perspectives. No significant relationship was observed between any of the variables other than employment status and health-promoting lifestyle; the health-promoting lifestyle of employed students was significantly higher than that of non-employed students. The school of study and socioeconomic status are significantly related to the lifestyle that promotes students' health (Karami et al., 2015). Also, significant relationships have been observed between health-promoting lifestyle and employment status, marital status, age, and average grade point among the medical students of Tehran; but the relationship between the average health-promoting lifestyle and gender has not been confirmed (Maheri, Hrami & Sadeghi 2013).

According to the study results, as a step toward having healthy nursing students, the officials, educational policymakers, and faculty members are suggested to take appropriate interventions to promote students' social capital.

Ethical Considerations

Compliance with ethical guidelines

This study was approved by the Ethics Committee of Iran University of Medical Sciences (Code: IR.IUMS. REC.1398.328). Also, all the subjects signed the informed consent.

Authors' contributions

Conceptualization: Maryam Hashemipour, Marhamat Farahaninia; Methodology: Maryam Hashemipour, Marhamat Farahaninia, Hamid Haghani; Investigation: Maryam Hashemipour; Writing the original draft and editing: Maryam Hashemipour, Marhamat Farahaninia, Zahra Kashaninia; and Supervision: Marhamat Farahaninia.

Conflict of interest

The authors declared no conflicts of interest.

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