

Original Article

Measurement of Social Factors Affecting Self-Declaration Health (Case study, 6 and 16 districts of Tehran)

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ABSTRACT

Health has other dimensions in addition to its physical dimension. Health is a result of socioeconomic and cultural life conditions and qualities and has a close relation with economic stability, environment, neighborhood situation, health care, social and cultural context, education level and knowledge. In this study, we examined the possible effect of social factors on diverse health levels. The aim is to investigate the relationship between health and independent variables such as lifestyle, health literacy and socioeconomic status. Data were gathered with a survey method and 256 sample sizes of 3 and 16 municipal districts of Tehran using structured and semi-structured questionnaires. Validity was examined by content validity and reliability was examined by Cronbach's alpha. Data were analyzed with SPSS software. In this study, verbal informed consent of participants was obtained, followed by an explanation about the purpose of the study, anonymity and confidentiality of patients' information. Results indicate that the general condition of health has a significant relation with all independent variables (lifestyle, health literacy and socioeconomic status). In examining the relation of two dimensions of physical and mental health with independent variables, physical health has a significant relationship with gender, healthy lifestyle, health literacy, social support and socioeconomic status; and mental health has a significant relationship with a healthy lifestyle, health literacy and social capital. Analysis of stepwise regression shows that independent variables explain 9 percent of health variation, so that health literacy has more effect and with adding demographical variables increases to 17 percent.

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Introduction

If disease and health are all rooted in the biological nature of the human species, then one should consider statistically the same

significant trends in disease events among human groups living in a specific geographic district, while it did not (1). So what are the differences observed in diseases among different people in

society? Why are some individuals and groups within the community healthier than others? Also, why has the life expectancy in most of the world's societies increased over the years after World War II or even before? For example, why has the life expectancy in a country like Afghanistan been 60 in 2011 and increased by 5 and 11 years, compared to 2000 and 1990? Or why in Iran, a country next door to Afghanistan, life expectancy in 2011, 2000 and 1990 was 73, 70 and 60 years (2). On the other hand, why is there such a difference in the age of life expectancy between rich and poor countries? Also, why is the same index different for men and women within the same countries? In recent decades, the concept of health as a "biomedical intervention model" has been challenged and criticized gradually by some health policymakers, international organizations, sociologists and Doctors. A common point of criticism was that the "biomedical model of health" ignores the role of social and environmental variables on patterns of health and disease, since the general achievements of public health in the past century cannot cover the fact that Health and disease are not uniformly distributed throughout the population. Research has shown that certain groups of people are much healthier than others and that these health inequalities are related to economic and social macro patterns (3).

Social factors play an important role in health and disease. Social conditions play a major role not only in disease and disability but also in the prevention and maintenance of health. Today, the biggest threats to one's health and well-being are unhealthy lifestyles and risky behaviors. This is especially true for diseases such as heart disease, cancer, AIDS and the like. Social factors also influence the way that communities mobilize their resources to promote health, as well as how health care is allocated to a large part of their population. Individuals and communities, for example, tend to respond to health issues in a manner consistent with their culture, norms and values. This is reminiscent of Donald Light's idea that "health care and medical services are a function of the political philosophy of each country". In addition to approaches that emphasize the role of social factors in health and disease, there is another approach to explaining disease. This approach focuses on

explaining disease and health based on social conditions, which are particularly the result of differences in lifestyle (consumption patterns, etc.) of different social groups. In other words, this approach focuses on those social conditions that cause inequalities in health and are experienced by different social classes (4). Studies aimed at explaining the relationship between social factors and health have been increasing in recent decades and researchers and international organizations are turning to social structures that can lead to differences in health status. This research interest stemmed from the withdrawal of the biomedical model in favor of the bio-psychosocial model of health, which has led to the development of multifactorial explanations to explain the inequalities in the distribution of health between individuals and communities. Social factors have played a significant role in health studies and each researcher has used some of the social factors in explaining the health status of individuals, depending on their research interests or the topic they have chosen as the purpose of their study. Kaplan identifies the social structures that researchers seek to examine concerning the health and illness of individuals, namely social identities (positions and status), social relations and the socio-cultural system that individuals possess (5). Many researchers have identified social identities such as age, race, gender, marital status; occupational status and socioeconomic status directly related to individuals' health status and numerous field studies also confirm these theoretical claims (6). Gender as a component of identity and at the same time as a social construct is a source of significant inequalities in the health of individuals in society, so that Life expectancy at birth in women is more than in men in most countries. For example, in Iran in 2013, life expectancy has been declared for women at 75 years and men at 72 years (2). as equity in health and elimination of inequalities in health are vital to overall well-being in society, at the same time health is not a simple one-dimensional concept, but it's a normative social concept, a mental and psychological phenomenon and at the same time a physical reality (7). Being sick and healthy is not an absolute concept for everyone and people are likely to have many compliments on their health status, mostly due to cultural norms, environmental

conditions and perceptions of their body condition (8). Identifying and examining the social, cultural and environmental factors affecting health inequality can help guide the right approaches and important policies in society. Given the current and future state of health, it is necessary to consider carefully the factors affecting health inequality to plan properly. It helped keep the community healthy and bring justice to the nation's health. Therefore, research on the causes of various and sometimes complex health inequalities can play an important role in this direction.

The present study considers health as an inequality social product. One of the characteristics of human societies is based on inequalities. Therefore, by social default and influenced by the socioeconomic base of health, its distribution is unequal and social factors influence its distribution. Studies in this area also confirm this (6, 9-10). The purpose of this study was to investigate the social factors affecting different levels of health in Tehran. The social factors selected in this study are demographic factors, socioeconomic status, health-centered lifestyle and health literacy.

1. Concepts and Theoretical Framework

Health and disease are not only in the biological field but equally in the social field. The importance of cultural and social divisions for health-related outcomes was discussed by Emile Durkheim (1897) in Sociology, who considers suicide as a social reality that is dependent on the cultural and social environment and requires sociological explanation within and between countries. Social stratification is a fundamental concept in sociology that draws attention to the divisions that result from people's position in social structures based on community health. The evidence gathered confirms that people's status in the hierarchies of continuous and robust socioeconomic structures determines their health.

On the other hand, the distribution of health and disease in different domains has many causes; that is, the factors contributing to health are very numerous. Genetic and biological factors play a role, but they are not much considered in sociological analysis. Age and sex are both biologically and socially constructed. Key social determinants of health exert their influence at

various causal intervals. Elemental factors are the closest and include lifestyle and behaviors such as smoking, eating and exercising. Moderate factors include family and social relationships and social support provided by them. Distance factors are usually very distant and include living and working conditions as well as social constructions and social stratification (11). All of these factors are important for health analyses and health inequalities.

In the current study, considering a combination of existing approaches, health is considered as a category that is located within a broad causal network of diverse and abundant variables. In other words, health, along with its biological dimension, is a socio-economic product and a fluid phenomenon and the presence and absence of health, as well as its inequality among individuals, depend on a wide range of factors. Given the wide range of factors affecting health in this study, deviating from the biological and single-cause model of health, we examine the socio-economic factors of a health-based lifestyle (4, 12-14), health literacy (15-16). The socioeconomic base (11, 17-18).

Individuals with different social backgrounds differ substantially in their health behavior and habits. For example, people from the lower social classes smoke more than others and are less likely to engage in heavy exercise and feel less able to improve their health (8). In other words, SES influences Life or well-being. In addition, a healthy lifestyle reflects a set of health behaviors that, in a two-way relationship, are influenced by both individual choice and structural statuses. Structural statuses include age, gender, class status, education and more. Considering structural statuses means trying to identify the factors that shape the patterns of lifestyle, the context in which patterns change and the barriers to changing patterns of behavior (22). The concept of lifestyle firstly means to study the coherence of one's health behaviors and to relate them to one another. Secondly, it means that health is not a natural phenomenon, but one chooses to be healthy according to the type of choice. This choice is made within one's structural constraints. A healthy lifestyle is a set of choices that a person makes according to his or her life situation (23).

But gender has also been incorporated into the research model as an influential and very important contextual variable. Empirical evidence has suggested that women tend to have fewer social bonds than men due to their limited enclosure and lack of effective presence in the social arena and thus have less support from friends or groups than men. Which is why women are more at risk for mental trauma as well as for physical problems? On the other hand, gender is a social construct and it is also an important source of social stratification, especially in less developed societies, where people are given different roles, facilities, powers and duties by being male or female. Women have multiple roles, such as housekeeping, Childbirth and occupational responsibilities, which put more stress than men.

The cultural system in any society, following the values and norms in society, is practically organized to discriminate against women and, given the barriers that women face to enter society, prevents them from participating in many situations in society and makes women move to less important and marginalized areas of society and reduces their communication activities in society. When men and women get into interfaith networks they also receive different resources and support, so their social capital is different (19). In general, in addition to the social and cultural factors that underpin the process of socialization, from family to school, peers, the job system, etc., that reinforce and highlight the gender differences between men and women and the resulting discrimination pushed men and women to different social domains; important life events such as marriage, childbirth, housekeeping, employment, etc. have created gender social capital and differentiated the characteristics of the men's and women's networks and the type and source of support they receive. It differentiates men's and women's networks.

The research method is a survey in which the questionnaire technique was used for data collection. The sample size of 256 is considered appropriate (20). In this study, due to the limitations of the research, the available sampling method was used. The sample size is divided equally into two districts and the share of each district in the 6 districts is completed by a surveyor

of pedestrian residents in the district. Descriptive and inferential statistics (mean difference test, Pearson correlation and multiple regression) were used to analyze the collected data using SPSS software. Cronbach's alpha was used to measure reliability. The alpha was obtained for each variable (Table 1).

Table 1: Cronbach's Alpha of Variables

Variable	Cronbach's Alpha
health Condition	0.894
Healthy Lifestyle	0.809
Health Literacy	0.727

In this study, the Health Survey Questionnaire (SF36) was used to measure health. The questionnaire is a 36-item questionnaire examining the health status of the respondents. The questions in this questionnaire measure eight main constructs related to individual health, which measure four physical health constructs and four mental health constructs.

To define the health-based lifestyle, we use Walker's health-based lifestyle definition: "A multidimensional pattern of perceptions and actions initiated by one's own motivation to continue and improve the level of health and self-development" (21). To operationalize this variable, we measured the four dimensions of responsibility for health, physical activity, healthy nutrition and mental and spiritual growth (adapted from the Walker Questionnaire, 1990). According to the World Health Organization's definition of health literacy, it consists of a set of reading, listening, analyzing, decision-making and the ability to apply these skills to health situations and to measure this variable in three dimensions Reading, understanding, access, decision making and evaluation are considered. Finally, for the variables of socioeconomic status of the respondents, three variables of household income, education and occupation were used. For all three variables, income, education and type of job, open-ended questions were used, which we then classified into equal categories.

Among the respondents, aged 31-40 years, with the highest frequency of 36.3 and 60 years and above, with 3.1%, had the lowest frequency. Also, 19.9% are 30 to 30 years old, 16.8% are 41 to 50 years old, 23.8% are 51 to 60 years old. 46.5% of the respondents are female (n=119) and 52.7% are male (n=135). Married respondents (62.9%) had the highest frequency and 36.3% of the respondents are single. 26.6% of the respondents have a bachelor's degree (n=68), 25% postgraduate (n=64), 21.5% diploma (n=55), 12.9% postgraduate degree and higher (n=33), 6.3% below High school diploma (n=16) and 7.8% illiterate (n=20). 37.5% of the respondents were self-employed, 18.4% housewives, 10.9% private, 10.5% students, 6.6% government employees, 2% physicians, 2.3% unemployed.

Table 2 presents the results of the health status survey of sex groups. Statistical analysis showed that men and women, with a mean of 90.63 and 87.30, respectively, had significant differences ($s=0.02$). Therefore, it can be concluded that gender and level of health have a significant relationship and men have higher mean health. (Gender affects health). The mean difference test for physical health also showed a significant difference between the mean health of men and women ($s=0.031$). The average physical health of men (46.55) was higher than that of women (44.61). But regarding mental health, the results ($s=0/246$) indicate that there is no significant difference between the average mental health of men and women.

Table 2: T-test

		Total Health		Physical Health		Mental Health	
		Man	Female	Man	Female	Man	Female
Average	District 16	91.46	88.19	46.9	44.96	45.77	44.33
	District 3	89.72	86.49	46.17	44.29	44.89	43.62
	Total	90.63	87.30	46.55	44.61	45.35	43.96
Standard Deviation	District 16	9.475	12.334	5.364	7.776	5.755	6.823
	District 3	14.38	11.39	7.73	7.79	7.20	5.34
	Total	12.058	11.39	6.588	7.761	6.479	6.077
Standard Error	District 16	1.124	1.634	0.637	1.03	0.683	0.904
	District 3	1.78	1.43	0.959	0.982	0.894	0.674
	Total	1.034	1.080	0.565	0.702	0.556	0.555
Statistical Test	District 16	t = 1/697		t = 1/663		t = 1/663	
		S= 0/092		S= 0/099		S= 0/099	
	District 3	t = 1/406		t = 1/406		t = 1/406	
		S= 0/162		S= 0/162		S= 0/162	
	Total	t = 2/226		t = 2/226		t = 2/226	
		S= 0/027		S= 0/027		S= 0/027	

Table 3 provides the Pearson correlation coefficient test that was used to investigate the

relationship between a health-oriented lifestyle and its dimensions, health literacy and social class

(independent variables) and self-reported health (dependent variable).

Table 3: Pearson's Significance Test for Health and Health-Based Lifestyle

		District 3		District 16		Total	
		Pearson Correlation	Significance Level	Pearson Correlation	Significance Level	Pearson Correlation	Significance Level
Health-Based Lifestyle (Total)	Health (Total)	0.227	0.01	0.185	0.036	0.189	0.02
	Physical Health	0.159	0.073	0.120	0.178	0.126	0.043
	Mental Health	0.242	0.006	0.186	0.036	0.198	0.001
Physical Activity	Health (Total)	0.238	0.007	0.165	0.063	0.198	0.001
	Physical Health	0.670	0.000	0.634	0.000	0.208	0.001
	Mental Health	0.670	0.000	0.634	0.000	0.136	0.030
Health Responsibility	Health (Total)	0.041	0.650	0.125	0.158	0.024	0.7
	Physical Health	0.547	0.000	0.685	0.000	0.047	0.455
	Mental Health	0.547	0.000	0.685	0.000	0.014	0.828
Mental Development	Health (Total)	0.160	0.072	0.088	0.324	0.106	0.090
	Physical Health	0.571	0.000	0.752	0.000	0.031	0.616
	Mental Health	.571	0.000	0.752	0.000	0.149	0.017
Healthy Diet	Health (Total)	0.211	0.017	0.165	0.072	0.176	0.005
	Physical Health	0.822	0.000	0.833	0.000	0.073	0.455
	Mental Health	0.822	0.000	0.833	0.000	0.235	0.000

Table 3 presents the results of the study of the relationship between health-based lifestyle and health using Pearson correlation. Based on the results, there was a significant relationship between

health and lifestyle (sig=0.02). The correlation is 0.189, which indicates a direct and weak relationship. In other words, the higher the quality of life, the better the health of people. There is a

direct and meaningful relationship between lifestyle and all aspects of health. Regarding lifestyle dimensions, physical activity was also significantly correlated with two dimensions of physical and mental health, mental growth and healthy nutrition.

Table 4 shows that there was a significant relationship between self-reported health and health literacy (sig=0.003), the relationship is 0.184, which indicates a direct and weak

relationship. In other words, the higher the health literacy, the higher the health. This holds for both aspects of health. It is noteworthy that the relationship between health literacy and health in district 3 is significant and direct, with health literacy having a significant and direct relationship with all aspects of health, but in district 16, health literacy has no relation. There was no significant relationship between health and general health dimensions.

Table 4: Pearson's Significance Test for Health and Health Literacy

		District 3		District 16		Total	
		Pearson Correlation	Significance Level	Pearson Correlation	Significance Level	Pearson Correlation	Significance Level
Health Literacy (Total)	Health (Total)	0.096	0.281	0.317	0.000	0.184	0.003
	physical health	0.084	0.344	0.226	0.010	0.138	0.027
	mental health	0.030	0.740	0.335	0.000	0.153	0.013
Reading Skills	Health (Total)	0.035	0.693	0.005	0.955	-0.012	0.844
	physical health	0.783	0.000	0.040	0.652	-0.008	0.892
	mental health	0.783	0.000	0.029	0.746	-0.035	0.576
Understand and Access	Health (Total)	0.129	0.147	0.217	0.002	0.180	0.004
	physical health	0.885	0.000	0.222	0.012	0.172	0.006
	mental health	0.885	0.000	0.252	0.000	0.112	0.072
Evaluation and Decision Making	Health (Total)	0.092	0.303	0.453	0.000	0.276	0.000
	physical health	0.814	0.000	0.320	0.000	0.3	0.000
	mental health	0.814	0.000	0.495	0.000	0.166	0.000

Regarding the last independent variable, socio-economic status, with a significant level of 0.008 and a correlation value of 0.168, has a significant and weak relationship with health status (Table 5). In other words, the higher the socio-economic status, the better the health. However, regarding the relationship between socioeconomic status and health dimensions, there was only a significant and

moderate relationship with the physical dimension of health, with a significant level of 0.00 and a correlation value of 0.270. A significance level of this variable with mental health (Sig = 0/927) indicates no significant relationship. In both districts, socio-economic status has a significant and direct relationship with physical health (Table 5).

Table 5: Pearson's Significance Test for Health and Socioeconomic Status

		District 3		District 16		Total	
		Pearson Correlation	Significance Level	Pearson Correlation	Significance Level	Pearson Correlation	Significance Level
Socio-Economic Status	Health (Total)	0.264	0.003	0.088	0.338	0.168	0.008
	Physical Health	0.371	0.000	0.205	0.024	0.270	0.000
	Mental Health	0.065	0.469	0.062	0.501	0.006	0.927

2. Regression Analysis of Factors Affecting Health

Table 6 shows the results of regression analysis, the multiple correlation coefficient (R) of health with a linear combination of independent and contextual variables is 0.42 and its multiple coefficients of determination (R²) is 0.178. This means that these variables can account for only 17% of health. The adjusted coefficient of determination (R² adjusted) in this study is approximately 16%. According to the data in Table 7, the lifestyle regression coefficient (b) is approximately 0.25 and the health literacy regression coefficient (b) is approximately 0.40. The regression coefficient for socioeconomic status is 0.91, marital status (0.25) and gender is

0.11. The results indicate that being a man and being single are factors in higher levels of health. Another point to note here is that of all the independent variables we entered into the regression model, lifestyle variables, health literacy, socioeconomic status, gender and marriage remained in the model and had a significant effect on health. The F test confirms the statistical significance of the obtained relationship (sig=0.000). Statistically, the F ratio indicates that the regression of the dependent variable on the independent variables is statistically significant.

Table 6: Regression Analysis of Factors Affecting Health (Independent and Contextual Variables)

Method	stepwise
R	0/422
R ²	0/178
R ² adjusted	0/161
S.E.	10/966
Sig.	0 /000

Table 7: Coefficients of Regression Analysis Test on Health Factors

Independent Variables	b	Beta	S.E.	t	Sig
Constant	55.704	-	6.024	9.248	0.000
Life Style	0.255	0.166	0.094	2.838	0.005
Health Literacy	0.403	0.219	0.108	3.726	0.000
Socio-Economic Status	0.916	0.174	0.308	2.974	0.003
Marital Status	6.411	0.258	1.473	4.352	0.000
Gender	2.850	0.119	1.609	2.023	0.044

Conclusion

Given the involvement of various factors such as class and socioeconomic status, education and level of literacy, social conditions, protections, etc., in human health, it should be avoided in considering health as a completely biological and physiological phenomenon and must consider several factors. In particular, the rapid growth of preventive medicine and less emphasis on therapeutic medicine make the use of sociological research in the field of health more and more essential (25). There are various issues related to the health debate. These include lifestyle, quality of life, well-being and so on. Certainly, inequality in health levels can exacerbate and affect inequality in other levels and areas. Nowadays, in most countries, the issue of health has become one of the most important concerns of the government and the decision-making systems. Equality in health is particularly important in different areas. Therefore, attention has been paid to health literacy, social support, lifestyle, social capital, socioeconomic status, education level and many other socioeconomic factors in explaining the health status of individuals in society. The present study was an attempt to investigate the sociological aspects of health inequalities between individuals. The study was conducted among 256 residents of two districts of Tehran (16 and 3) and data were collected on demographic characteristics, socioeconomic status, health literacy, social support, lifestyle, social capital and perceptions of their health conditions using a questionnaire. 119 participants were female and 324 were male. The two groups were compared in terms of general health status and its dimensions, including mental

health and physical health, using a t-test. The level of women's health in general health and physical health was lower than that of men's and there was a significant difference between the two groups. However, overall life expectancy in women is higher than in men according to global statistics. This difference in health status, along with the age of life expectancy of the two groups, indicates that socioeconomic factors, lifestyle and some other variables influence mortality because men, despite higher general health status over life, are more likely to die. Due to work-related accidents and using more alcohol and tobacco, they have a lower life expectancy than women. The research hypotheses were tested to explore how variables such as health literacy, lifestyle and socioeconomic status influenced levels of health by both correlation and stepwise linear regression tests. The result of the Pearson correlation test on social variables affecting health levels showed a significant and relatively weak relationship among all the mentioned variables. Regarding the regression test, finally, three variables of health literacy, lifestyle and socioeconomic status were able to explain 9% of the changes in the level of citizens' health. Studies in different countries have also focused on the role of lifestyle in health-related quality of life. *The Black Report*, which is the result of a comprehensive study of the health status of Britain, emphasizes lifestyle alongside socioeconomic status as one of the influencing variables in explaining health inequalities. The results are consistent with those of Bani Fatima et al. (24), Kawachi (1999) and the results of many studies that have confirmed the impact of different dimensions of social factors on health levels.

Marmot and Wilkinson (4) based on a 2003 World Health Organization report have explained Social Determinants of Health, in which lifestyle, social support, work environment, type of employment, employment status, socioeconomic status and social capital Has considered the most effective variables in the health status of individuals in the community and has proposed policies to improve the health status of individuals as a result of providing fairer socio-economic conditions. The results of the present study are in line with the WHO report and therefore efforts to increase health literacy and awareness, educate and institutionalize health-oriented styles and more equitable distribution of socioeconomic opportunities should be incorporated into the country's health systems programs to promote public health and reduce existing inequalities.

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Conflict of Interest Statement

The author declares that they have no conflicts of interest.

References

1. Kingdon C. *Sociology for Midwives*. Andover (UK): Quay Books/MA Healthcare Ltd; 2014.
2. World Health Organization. *Social determinants of health. Key concepts* 2013. Available at: http://www.WHO.int/social_determinants/thecommission/finalreport/key_concepts/en/index.html.
3. Giddens A. *Sociology*. Translated by Chavoshian H. Tehran: Ney Publications; 2007. [Persian]
4. Marmout M, Wilkinson R. *Social Components of Health*. Translated by Montazeri A. 2nd ed. Tehran: Academic Jihad Publications; 2014. [Persian]
5. Kaplan GA, Salonen JT, Cohen RD, Brand RJ, Leonard Syme S, Puska P. Social connections and mortality from all causes and from cardiovascular disease: prospective evidence from eastern Finland. *American Journal of Epidemiology*. 1988; 128(2): 370-380.
6. Gashtasbi A, Mantazeri A. Self-reported health and socioeconomic status: Results from a population-based study in Tehran, Iran. *Payesh*. 2003; 2(3): 187-193. [Persian]
7. Adam P, Herzlich C, Singly DE. *Sociology of disease and medicine*. Translated by Katebi A. Tehran: Ney Publications; 2006. [Persian]
8. Masoudnia E. *Medical sociology*. Tehran: Tehran University Press; 2010. [Persian]
9. Shahrokhi A. General health status of female workers in Qazvin factories. *Journal of Inflammatory Diseases*. 2003; 7(4): 32-35. [Persian]
10. Narimani A, Akbarzadeh M, Mohammad H. A Study of the General Status of Students of Army Medical Sciences University in 2009. *Journal of Army University of Medical Sciences of Iran*. 2010; 8(1): 49-55. [Persian]
11. Cockerham WC. *The social causes of health and disease*. Hoboken, NJ: John Wiley & Sons; 2021.
12. Abel T. Cultural capital and social inequality in health. *Journal of Epidemiology & Community Health*. 2008; 62(7): e13.
13. Phelan JC, Link BG, Tehranifar P. Social conditions as fundamental causes of health inequalities: Theory, evidence and policy implications. *Journal of health and social behavior*. 2010; 51(1-suppl): S28-40.
14. Chaney D. *Lifestyles*. London: Routledge; 2012.
15. Williams MV, Parker RM, Baker DW, Coates W, Nurss J. The impact of inadequate functional health literacy on patients' understanding of diagnosis, prescribed medications and compliance. *Acad Emerg Med*. 1995; 2(5): 386-391.
16. Kutner M, Greenberg E, Jin Y, Paulsen C. *The Health Literacy of America's Adults: Results from the*

- 2003 National Assessment of Adult Literacy. Washington (DC): National Center for Education Statistics; 2006.
17. Hudson CG. Socioeconomic status and mental illness: Tests of the social causation and selection hypotheses. *American Journal of Orthopsychiatry*. 2005; 75(1): 3-18.
18. Lantz PM, House JS, Lepkowski JM, Williams DR, Mero RP, Chen J. Socioeconomic factors, health behaviors and mortality: Results from a nationally representative prospective study of US adults. *JAMA*. 1998; 279(21): 1703-1708.
19. Bastani S, Salehi Hikooei M. The social capital of networks and gender: Review of structural, interactive and functional features of social network of women and men in Tehran. *Letter of Social Sciences*. 2007; 1(30): 64-95. [Persian]
20. De Vaus DI. *Surveying Social Research*. Translated by Naibi H. Tehran: Ney Publications; 2011. [Persian]
21. Walker SN, Kerr MJ, Pender NJ, Sechrist KR. A Spanish language version of the Health-Promoting Lifestyle Profile. *Nursing Research*. 1990; 39(5): 268-273.
22. Pilatan F, Ghanei F. A Sociology Study of Effective Factors in Public Health. *Journal of Sociological Studies of Youth Journal*. 2012; 2(5): 73-94. [Persian]
23. Calnan M, Katsouyiannopoulos V, Ovcharov VK, Prokhorskas R, Ramic H, Willims S. Major determinants of consumer satisfaction with primary care in different health systems. *Family Practice*. 1994; 11(4): 468-478.
24. Banifateme H, Shahamfar J, Bagher Alizade Aghdam M, Abdi B. Health status, education and gender: Effects on people's awareness, life style and health related quality of life. *Payesh*. 2015; 14(1): 85-92. [Persian]
25. Mohseni M. *Medical Sociology and Health*. Tehran: Tahouri Publications; 2009. [Persian]