


An Investigation on Health Literacy and Its Impact on Health-Promoting Behaviors among the Residents of Mashhad

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Abstract:

This research aims to assess the ability to acquire, analyze, and comprehend health-related information to make informed choices on activities that promote good health. Theoretical agency, focusing on opportunity and choice, has been suggested to investigate variables and explain results. The research approach used in this study is both descriptive and correlational. The statistical population under investigation consists of urban residents in Mashhad who are over 18 years old. The sample size of 650 individuals was picked using a multi-stage and simple random cluster method, considering each area's size. The data-gathering tool is a questionnaire that follows a set of established guidelines. The content validity and reliability coefficient of health literacy (0.822) and health-promoting behaviors (0.800) have been calculated. The findings of this study indicate that the overall condition of the dependent variable in urban regions could have been more beneficial. The contextual variables did not exhibit significant associations with the primary variables of the study. The main and sub-hypotheses exhibited a moderate to high degree of correlation and significance, with a p-value of less than 0.05. The beta regression findings indicate that the functional, relational, critical, and fundamental components significantly influence the dependent variable, with a percentage correlation value of 69% respectively. Furthermore, the prediction equation's findings indicate that 49% of the variability in the dependent variable can be accounted for. Additionally, the variable Health literacy directly affects health-promoting behaviors, with an effect size of around 0.865 units.

Key Concepts: Health-Promoting Behaviors, Health Literacy, Residents, Urban Regions, Mashhad

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Introduction

Today, the Health-Oriented Approach in the health system has taken on a severe meaning to improve services and reduce costs. People are increasingly facing the challenge of choosing a healthy lifestyle through the healthcare system (*Jurgen & Franklin, 2011: 143*).

Various societal health concerns frequently result in transformations to individuals' healthy lifestyles. According to data from the World Health Organization, 53% of the primary causes of mortality may be attributed to lifestyle and health behaviors, 21% to environmental factors, 11% to inherited factors, and 11% to the health care service delivery system (*Bahador & Abbasi, 2012: 51*).

Based on this approach, the contemporary healthcare system has introduced novel responsibilities and demands for individuals, urging them to prioritize their health, avoid diseases, and enhance their overall quality of life by actively seeking information. Regarding this approach, individual performance is associated with the extent of health-promoting behaviors or health-oriented lifestyles. This style encompasses several behaviors and acts about health, such as dietary diet, alcohol use, smoking, physical exercise, stress management, personal hygiene, and other health-related actions. While some lifestyles promote good health, it is important to note that individuals, organizations, and socioeconomic classes have unique consumption patterns that reflect their respective lives (*Chaney, 2002:75*). A health-oriented lifestyle is a crucial element that encompasses a superior quality of life and a significant improvement in overall well-being. A healthy individual also possesses high health indicators (*Blanco & Diaz, 2007:63*). This approach reflects the process of becoming strong and empowered and having a good life (*Curtis, 2002: 22*). This approach conceptualizes health as a constructive notion. It seeks to discern the frameworks and methodologies that foster human well-being and contentment using human skills and capacities (*Jowkar, 2008: 4*).

As a constituent of this approach, health literacy aims to enhance individuals' demands, knowledge, and abilities in health and healthcare settings. Experts often regard the amount of health literacy in a culture as a crucial indicator for promoting health. Health

literacy is considered a crucial indicator for promoting health since it increases the feeling of societal responsibility.

So, from the World Health Organization's perspective, health literacy in the form of skill, cognitive, and social determines the motivation and ability of people to acquire, comprehend, and apply information in the field of health and thus leads to maintaining and promoting health (Mellor & et. al., 2008: 9).

The importance of health literacy and its impact on the extent of health-promoting behaviors have been examined throughout the preceding decade. A sufficient level of health literacy can be suitable for acquiring, interpreting, and comprehending basic information and health services for decision-making. Health literacy may promote healthy behaviors, enhance community engagement, reorient healthcare services, and develop public health policies (Mohammadi Zeidi & et. al., 2011: 104). Therefore, health literacy is one of the types of literacy that has a vital role in human life in today's society, where the scope and number of scientific resources related to health and the options available to people to maintain and promote health are increasing every day. According to the US National Library of Medicine, health literacy is the ability of an individual to acquire, interpret, and comprehend basic information and health services essential for making knowledgeable decisions in the realm of health (Nielsen-Bohlman & et. al., 2004: 131).

Insufficient health literacy has profound implications for individuals' behavior and may result in detrimental results. Studies conducted in our society have shown that those with inadequate health literacy have a worse overall health status. The frequency of referrals to the emergency department for individuals in this particular group is elevated, with a reported hospitalization rate of 29-52% greater than others. Additionally, their mortality rate surpasses that of other individuals. These patients are less likely to take preventative healthcare measures and often do not get the same advantages from healthcare services as the general population (Reisi & et. al., 2020: 95-96). Based on these findings, inadequate health literacy poses a significant barrier and hazard in healthcare and general health. It makes people need help understanding the recommendations, skills, and training provided and ultimately

adopting healthy and self-care behaviors. Hence, the behavior mentioned earlier is regarded as a key factor in assessing individuals' health status and may be examined and elucidated in connection with health literacy. The objective is to empower individuals to manage their health, optimize their health capacity, and sustain a healthy lifestyle (*Donnell'O & Spencer, 2005*).

According to the issues raised and the necessity of the relationship between the discussed variables, we must point out that Mashhad, as the second metropolis of Iran, has had a remarkable economic, cultural, social, political, and religious position in recent years, little research has been done in connection with The relationship between citizens' health literacy has been done at the level of urban areas. One of the recent results conducted in this city among graduate students of Ferdowsi University shows that about 25% of students need more health literacy, and about 31.38% are at an average level. Moreover, 36.69 % of these students had sufficient health literacy (*Mahmoudi & Taheri, 2015:31*). Another research among women aged 45 to 56 in Mashhad showed that the level of health literacy of the target group was insufficient, So the average of the mentioned variable was found to be 20.69 ± 54.06 , which shows the equivalent of the average level of health literacy among this social group (women). In addition, in this research, 203 people (47.8%) had an insufficient level of health literacy, 73 people (17.2%) had an average level of health literacy, and only 149 people (35%) had an adequate level of health literacy (*Abdolmaleki et al., 2019, p. 114*). The problem is that Mashhad, as a metropolis, has had an increasing population growth in recent years. At the same time, there is no accurate information about the state of health literacy and health-promoting behaviors of the citizens. In such population density and indiscriminate migration to this city, paying attention to the case of health promotion and public health services, especially the relationship between health literacy and healthy lifestyle, as indicators of social determinants of health and providing welfare, it has been analyzed and explained less in the last decade. With this credit, the goal is that the current research results can provide solid findings to officials and planners to improve health literacy and health-promoting behaviors. Therefore, awareness and understanding

of health and wellness literacy concerning the healthy lifestyle of citizens can provide an excellent opportunity to improve citizens' quality of life. Therefore, in this research, an attempt has been made to measure and analyze the health-oriented quality of life approach of the citizens of city areas by using valid standard tools in health literacy and its relationship with health-promoting behaviors. Based on this, the current research seeks to answer the following questions.

- What is the benefit to citizens from the level of health literacy and health-promoting behaviors and their components? Is there a significant relationship between these variables to improve the quality of life based on health?

Research Literature

According to the empirical sources and literature in the field of the purpose of this study, the following table briefly describes the published research findings to enrich the scientific knowledge of the subject under discussion.

Table 1: Empirical literature and Research Literature of Domestic and Foreign Sources

<i>Researchers</i>	<i>Research Subject</i>	<i>Research Type</i>	<i>Results</i>
Reisi & et. al. (2020)	Health literacy and status of health-promoting behaviors in Shahrekord adults	Descriptive and correlational	The present study's findings showed that the average health literacy score (functional: 19.15 ± 49.54 , communicative: 15.89 ± 53.45 , and critical: 17.88 ± 50.86) and health-promoting behaviors of adults are low. The highest score obtained by the target group regarding health-promoting behaviors was related to the dimension of spiritual growth and self-actualization (14.86 ± 46.50), and the lowest score was related to

<i>Researchers</i>	<i>Research Subject</i>	<i>Research Type</i>	<i>Results</i>
			physical activity (16.49±24.26). Functional, communicative, and critical health literacy were related to health-promoting behaviors ($p < 0.05$). In general, the results of the present study showed a statistically significant relationship between the level of health literacy and health-enhancing behaviors, which indicates the key and important role of health literacy in improving people's health.
Javadzadeh & et. al (2019)	Examining the relationship between health literacy and health-promoting behaviors in adults in Bushehr city	Descriptive and correlational	Results: Functional, communicative, and critical health literacy were related to health-promoting behaviors. All domains of health literacy predicted the domain of health responsibility, and none of them predicted interpersonal relationships. Conclusion: Health literacy plays an important role in following health-promoting behaviors and adopting a healthy lifestyle, but its effect differs for different health-promoting behaviors. These findings can be used in planning and implementing educational interventions to improve healthy lifestyles.
Karimi & et. al. (2019)	The role of health literacy and contextual variables in	Descriptive and correlational	The results of multivariate regression analysis showed health literacy ($\beta = 0.39$ and $p < 0.001$), interest in

<i>Researchers</i>	<i>Research Subject</i>	<i>Research Type</i>	<i>Results</i>
	determining health-promoting behaviors in high school girls in Tehran		<p>health topics ($\beta = 1.35$ and $p < 0.001$), and reading magazines and newspapers ($\beta = 0.76$ and $p < 0.001$).</p> <p>Father's education ($p=0.002$), body mass index ($p=0.022$), the field of study ($p<0.001$), the first source of health information ($p<0.001$), and place of residence ($p=0.023$) had a direct and significant relationship with health-promoting behaviors. Between age ($\beta=-1.69$ and $p<0.001$) and health status assessment ($\beta=-1.67$ and $p<0.01$) with behaviors, The health promoter had an inverse and significant relationship.</p> <p>Considering that the average score of health literacy in the "not very sufficient" classification and the score of health-promoting behaviors of female students was at the average level, it is necessary to develop educational programs to increase health literacy in designing and implementing interventions to improve this category of behaviors related to Students' health should be taken into consideration.</p>
Arabi and Suleiman pour Imran (2018)	The relationship between health literacy and health-	Descriptive and correlational	The findings showed a positive and significant relationship between health literacy, health-promoting

<i>Researchers</i>	<i>Research Subject</i>	<i>Research Type</i>	<i>Results</i>
	promoting lifestyle and environmental behavior		lifestyle, and environmental behavior. Health literacy plays an effective role in improving the health of employees, and by improving the level of health literacy in society, we can take steps to strengthen health-promoting behaviors and environmental behavior. According to the above results, health literacy affects health-promoting behaviors, including self-care, stress management, exercise, nutrition, etc.
Jahani Eftekhari & et. al. (2018)	Investigating the relationship between health literacy and healthy lifestyle in health volunteers of Neishabur City: a cross-sectional study	Descriptive and correlational	The average age of the research subjects was 9.7+32.9 years. 61.5% had primary and secondary education levels. Health literacy of 44.6 percent of the respondents was insufficient, 32.2 percent was borderline, and 23.1 percent was adequate. The average healthy lifestyle score in the investigated subjects was 13.08+23. In this study, a statistically significant relationship was observed between age, education level, and health literacy level, so insufficient health literacy was more common in older people with less education. A positive and significant correlation was observed between the level of health literacy with nutrition,

<i>Researchers</i>	<i>Research Subject</i>	<i>Research Type</i>	<i>Results</i>
			spirituality, responsibility for health, physical activity, interpersonal relationships, and stress management ($p < 0.001$).
Nowrozi & et. al. (2017)	The mediating effect of health-oriented lifestyle in the relationship between health literacy and health-related quality of life of rural women in Islamabad West	Descriptive and correlational	The research results showed that health literacy had a positive and significant effect on rural women's health-related quality of life (p -value = 0.001, $\beta = 0.518$) and explained about 27% of its variance. Also, the results of the research indicated that the total indirect impact of health literacy on health-related quality of life through a health-oriented lifestyle was significant (p -value=0.001, $\beta=0.175$), and the variable of health-oriented lifestyle in The relationship between health literacy and health-related quality of life had a partial mediating effect.
Aghamelai & et. al. (2016)	The relationship between health literacy and health-promoting behaviors of students	Descriptive and correlational	The average scores of health-promoting behaviors and health literacy were 64.5 and 68.9 in boys, and 57.6 and 67.9 in girls, and this difference in health-promoting behaviors between boys and girls was significant ($p < 0.001$) correlation test Pearson showed that there is a significant relationship between the components of health literacy and the components of health-

<i>Researchers</i>	<i>Research Subject</i>	<i>Research Type</i>	<i>Results</i>
			<p>promoting behaviors ($p < 0.001$). Also, based on the regression analysis results, 23% of changes in nutritional behaviors, 14% of changes in social support, 37% of changes in Health literacy explain 35% of health valuing changes, 13% of physical activity changes, and 41% of stress management changes.</p> <p>Based on the results of the regression analysis with the dependent variable of health-promoting behaviors and health literacy predictor variables, 49% of the changes in health-promoting behaviors are explained by the percentage of health literacy, including access, reading power, understanding, evaluation, and decision-making and the use of health information. The regression analysis results showed that two components of health literacy, including access and decision-making and the use of health information, play a more important role in predicting health-promoting behaviors.</p>
Khodabakhs Hi-Kolaee (2016)	The comparison of health literacy and lifestyle among retired and homemaker	Descriptive and correlational	The diseases during old age have an enormous impact on women, the elderly, and their families. The previous study indicated that health literacy and lifestyle play a

<i>Researchers</i>	<i>Research Subject</i>	<i>Research Type</i>	<i>Results</i>
	older adult women		<p>crucial role in preventing diseases in the elderly. Therefore, the current study compares the health literacy and lifestyle among retired and homemaker older adult women. The results showed that there is a significant difference between lifestyle ($t=-6.46$, $df=158$, $p=0.001$) and health literacy ($t=-6.59$, $df=158$, $p=0.001$) and the subscales of these variables among retired women and housewives ($p<0.001$). These findings indicated that homemakers' health literacy and lifestyle levels are lower than those of retired older adult women. Hence, it should be considered an educational program to enhance and improve the health literacy and lifestyle of homemaker women's elderly adults.</p>
Chang (2020)	Health literacy, self-reported status and health-promoting behaviors for adolescents in Taiwan	Descriptive and analytical	<p>Adolescents with low health literacy were less likely to perceive good health status [adjusted odd ratio, (AOR) =0.59, 95% CI =0.41–0.86] and less likely to exhibit health-promoting behaviors (AOR=0.58, 95% CI=0.39–0.86) than those with high health literacy were, especially in nutrition (AOR=0.62, 95% CI=0.43–0.89) and interpersonal relations (AOR=0.61, 95% CI=0.43–</p>

<i>Researchers</i>	<i>Research Subject</i>	<i>Research Type</i>	<i>Results</i>
			<p>0-87) subscales. Adolescents with high and low health literacy did not significantly differ in health-promoting behaviors: exercise, stress management, health responsibility, and self-actualization. Health literacy promotes adolescent health, especially in nutrition and interpersonal relations. Health professionals should conduct health literacy assessments for adolescents before designing health education programs for those with low health literacy to develop health literacy skills and perform health-promoting behaviors.</p>
Chahardah-Cherik & et. al. (2018)	The Relationship between Health Literacy and Health Promoting Behaviors in Patients with Type 2 Diabetes	Descriptive and correlational	<p>Health-promoting behaviors are a key factor in managing type 2 diabetes and improving the quality of life in diabetic patients. However, little is known about the factors influencing these behaviors in diabetic patients. This study aimed to find the relationship between health literacy and health-promoting behaviors in patients with type II diabetes. The mean scores for health-promoting behaviors and health literacy were determined to be 100.45 ± 19.82 and</p>

<i>Researchers</i>	<i>Research Subject</i>	<i>Research Type</i>	<i>Results</i>
			<p>76.14±15.26, respectively. The highest and lowest scores in health-promoting behaviors were nutrition (26.11±6.85) and physical activity (6.70±2.75). There was a significant relationship between all dimensions of health-promoting behaviors and health literacy (P<0.05). Since health literacy has a positive relationship with health-promoting behaviors in diabetic patients, healthcare providers need to concentrate on increasing their patients' health literacy rather than solely concentrating on increasing their knowledge, thereby facilitating the development of health-promoting behaviors in patients.</p>
Von Wagner & et. al. (2017)	Functional health literacy and health-promoting behavior in a national sample of British adults	Descriptive and correlational	<p>To measure the prevalence of limited functional health literacy in the UK and examine associations with health behaviors and self-rated health. We found that 11.4% of participants had either marginal or inadequate health literacy. Multivariable logistic regression analysis indicated that the risk of having limitations in health literacy increased with age (adjusted odds ratio 1.04; 95% confidence interval 1.02 to 1.06), being male</p>

<i>Researchers</i>	<i>Research Subject</i>	<i>Research Type</i>	<i>Results</i>
			(odds ratio=2.04; 95% confidence interval 1.16 to 3.55), low educational attainment (odds ratio=7.46; 95% confidence interval 3.35 to 16.58) and low income (odds ratio=5.94; 95% confidence interval 1.87 to 18.89). In a second multivariable logistic regression analysis, every point higher on the health literacy scale increased the likelihood of eating at least five portions of fruit and vegetables a day (odds ratio=1.02; 95% confidence interval 1.003 to 1.03), being a non-smoker (odds ratio=1.02; 95% confidence interval 1.0003 to 1.03) and having good self-rated health (odds ratio=1.02; 95% confidence interval 1.01 to 1.04), independently of age, education, gender, ethnicity and income. The results encourage efforts to monitor health literacy in the British population and examine associations with engagement with preventative health behaviors.
Reisi & et. al. (2014)	The relationship between functional health literacy and health-	Descriptive and analytical	Health literacy measures an individual's ability to read, comprehend, and act on medical instructions. Older adults are among the most

<i>Researchers</i>	<i>Research Subject</i>	<i>Research Type</i>	<i>Results</i>
	promoting behaviors among older adults		<p>important at-risk groups affected by inadequate health literacy. Health-promoting behaviors in older adults impact their health and quality of life and reduce the costs incurred in health care.</p> <p>Given the paucity of information on health literacy and health-promoting behavior, this study aimed to examine health literacy levels in older adults and the relationship between health literacy and health-promoting behaviors. The sample group averaged 67 ± 6.97 years of age.</p> <p>Approximately 79.6% of adults were found to have inadequate health literacy. They tended to be older, have fewer years of schooling, have lower household income, and are female. Individuals with inadequate health literacy were more likely to report limitations in activity and lower consumption of fruit and vegetables ($P < 0.001$).</p> <p>No significant association was found between health literacy and smoking status.</p> <p>They are considering the high prevalence of inadequate health literacy among older adults and its inverse relationship with some health-promoting</p>

<i>Researchers</i>	<i>Research Subject</i>	<i>Research Type</i>	<i>Results</i>
			behaviors. Simple educational materials and effective interventions for people with low health literacy can improve health promotion in society and mitigate the adverse health effects of low health literacy.

According to the research literature, it should be acknowledged that the research findings indicate that the status of health literacy and health-promoting behaviors variables among the studied samples was insufficient and low, and a significant relationship between the mentioned variables is found in all research. Until now, most of the research has been done from the perspective of medical knowledge (both in domestic and foreign sources) around the subject of this research, and the written theoretical framework from the point of view of sociology, psychology of health and well-being and planning for the variables with an analytical and explanatory view has not been presented.

Also, the relationship of the discussed variables with contextual variables among different social groups, including women, the elderly, and youths, has been further investigated and measured, and the results show that the discussed variables have been examined from the perspective of the descriptive approach of quality of life. Their central problem relies on measuring the quality of life based on contextual variables (*Abdi & Guderzi, 1999, Quoted By Hazajaribi & Safari Shali, 2012: 269*). Also, concerning the variables related to health-promoting behaviors and health literacy, variables such as self-care, perceived support, etc., can be mentioned, which can be measured and evaluated as part of the research.

In this paper, based on explanatory approaches influenced by the field of quality and health-oriented lifestyle, relying on the judgment of citizens regarding their health status from the mental, agency, individualism dimensions, etc., it is possible to evaluate the current status of the discussed variables; According to the current situation of

the studied population, it can be offered some suggestions and solutions to live better.

Theoretical Framework

Health behaviors include those behaviors that people perform to maintain or promote health. In a broader definition, health behavior is the actions of individuals, groups, and organizations, as well as their determining factors, relationships, and outcomes, including social change, development and implementation of policies, improving coping skills, and increasing life quality (Masoudnia, 2010: 244). Another concept that is used as an equivalent to health behavior is lifestyle. According to Weber's thought in medical sociology, lifestyle components include life chances (lebenschancen) and life management (lebensfuhrung). Life management refers to people's choices to achieve their desired lifestyle. However, the realization of these choices is influenced by life chances. In other words, lifestyles are ways of living that promote health and high life expectancy (Cockerham, 2017: 219). Lifestyles include contacting healthcare suppliers for medical examinations, seeking medical advice, and many activities and actions performed outside the healthcare center and medical offices. These activities include procedures and practices related to proper diet and eating habits, exercise, weight control, rest, avoiding stress, smoking and alcohol, etc. (Masoudnia, 2010: 251). In this regard, Cockerham believes that a health-oriented lifestyle is a set of choices that a person chooses based on his/her social status. In other words, a person's life chances are determined by social status and the characteristics of special status groups (Cockerham, 2000:1409). Cockerham considered a healthy lifestyle effective on health-related behaviors due to the situation in life (Cockerham & et. al., 2006:1803). Therefore, in a health-oriented lifestyle, behavioral patterns related to health are based on people's choices that come from the options and chances in their lives (Cockerham, 2007). According to this approach, by increasing the health level of individuals and communities, it is possible to promote the empowerment of individuals and society in the field of health and benefit from the active participation of citizens in this promotion. To reduce injustice and eliminate discrimination in

the health field, the government should commit to solving healthcare and health problems. This competency model approach considers health behavior a unique motivational source for each individual who can use compound motivations (*Asadzandi & et. al., 2015:69*).

Based on this approach, health-promoting behaviors are considered one of the main criteria for determining health-promoting style. Health-promoting behaviors are one of the best methods by which people can maintain and control their health. Therefore, health promotion is the science and art of changing lifestyles to achieve optimal perfection. In the health promotion model, cognitive-perceptual factors (such as perceived benefits and barriers and self-efficacy) affect the probability of engaging in health-promoting behaviors and moderating factors (such as demographic factors, interpersonal influencers, and behavioral factors) are causal interacting factors that influence the cognitive-perceptual process. Therefore, they indirectly explain health-related behaviors (*Parsamehr & Rasoulinezhad, 2015:43*). In this regard, one of the health promotion models is the Pender health model, which emphasizes empowering people to achieve health and disease prevention in order to increase well-being and promotes health behaviors (*Mock & et. al., 2004*). According to Pender's statement, health promotion behaviors, especially when adapted to a healthy lifestyle that has permeated all aspects of life, lead to the expansion of health, the addition of structural abilities and better life quality and health promotion (*Pender & et. al., 2006*).

Based on this model, the main activities of the health team are to encourage healthy behaviors among the community members; social, psychological and environmental factors influence these behaviors. This model considers the three constructs of self-efficacy, barriers and perceived benefits related to behavior as important in changing and promoting behavior (*Sadeghmoghadam & et. al., 2018:98*). In Pender's health model, lifestyle behavior should be considered a pattern of voluntary daily life activities that impact a person's health status and originate from demographic, environmental and social factors (*Bahmanpour & et. al., 2011: 96*). In this model, he considers the style of health-promoting behaviors as a multi-dimensional pattern of spontaneous behaviors and perceptions used to maintain

and promote health, self-improvement and individual perfection (*Mohamadian & et. al., 2011:2*). Since 1996, this model has been considered a framework for explaining health-promoting lifestyle behaviors. This model guides discovering the complex social, environmental and psychological processes that motivate people to promote their health behavior. It explains how people make decisions about health-promoting behaviors.

Finally, in Pender's health promotion model, according to the health-oriented lifestyle and the promotion of healthy behaviors in a person's life, part of the scales is related to the extent to which people perform health-promoting behaviors. These scales are called health-promoting behaviors, and the feeling of health subscale includes personal health, physical activity, and eating habits. Another part of the subscales is related to the field of psycho-social health, which leads to spiritual growth, interpersonal communication and stress management (*Chamberlain, 2007*).

About health literacy, in line with the concept of agency in connection with a healthy lifestyle and health-promoting behaviors, it should be stated that any act of agency that the actor has been able to create a specific situation, including health and being healthy in life, through having skills or producing skills is a kind of choice for which action (to be healthy) is necessary.

From the perspective of agency, health literacy is a skill, social and cognitive process in which a person becomes a healthy, active agent who has an active and participatory presence in the process of his/her healthy life. In addition, he/she tries to change his/her life toward health by doing selected healthy behaviors.

In fact, according to Giddens's concept of agency, health literacy is associated with practical awareness. According to him, scientific knowledge is comprehending and cognitive that cannot be expressed. Norms and beliefs are embedded in daily life's practical activities (practical awareness) (*Moghaddas & Ghodrati, 2004: 20*). The norms and beliefs are the action procedures and health behavior methods deposited in the practical awareness of people's lives. Practical awareness includes those types of awareness that are always accompanied, and without the person even thinking about them or calculating them, he/she decides based on that awareness. In many

cases, practical awareness (and not in all cases) is the driving force of a person, and because it has a tight relationship with the general norms and beliefs of society, sometimes it causes a collective and general movement.

Usually, the norms and beliefs are general for society, and most people have accepted them, institutionalized them inside of themselves, and shaped their behavior based on these norms and beliefs (*Craib, 2015: 136*).

In other words, people's healthy lifestyles are created according to practical awareness and activism. Based on this, the lifestyle is a set of all behaviors and activities of a certain person in the course of daily life, which requires a set of habits and orientations and, therefore, has a kind of unity (*Giddens, 2009: 112*). In this direction, humans are considered agents who have the power of rethinking; thus, on the one hand, they review themselves and their activities in society and change their characteristics, and on the other hand, by doing this, they gain the ability to influence to change social conditions (*Baygani & et. al., 2013:70*). Based on this definition, health literacy in today's life is a product of rethinking the world of modernity. Therefore, a healthy lifestyle through the skill of health literacy requires that people choose from among different choices and choose with practical knowledge and awareness, create their desired identity and expose it to others, and fulfill their life needs. Therefore, agency primarily means their ability to perform these actions. This is why agency implies power. According to Giddens, the agency is related to events a person causes. In this sense, a person can act differently at each stage of the course of action (*Kassal, 2004:134*).

Finally, health literacy in the discussion of agency deals with the facts of the individual's health. Health literacy is a set of personal, cognitive, and social skills that a person, as an actor and a factor in daily life, deals with a set of habits and orientations toward his/her health and creates a kind of unity in this field. Based on the chances in life, these skills can be recognized and acquired or promote the ability and empowerment to access, comprehend, and use health information. These changes and life choices can develop basic reading and writing skills, oral literacy, and computational ability to

act in healthy situations and use technology to find health-related information. Such changes and life skills help people maintain their health and effectively make treatment decisions. Finally, it should be mentioned that the components of "acquiring and accessing," "comprehending," "behavioral decision making," and "evaluation and judgment" form the main structure of health literacy.

Nevertheless, it should be noted that health literacy and health-promoting behaviors depend not only on a society's social and economic base but also on the citizens' position in that society's social fabric. Researchers have designed the following conceptual model according to the presented theoretical framework.

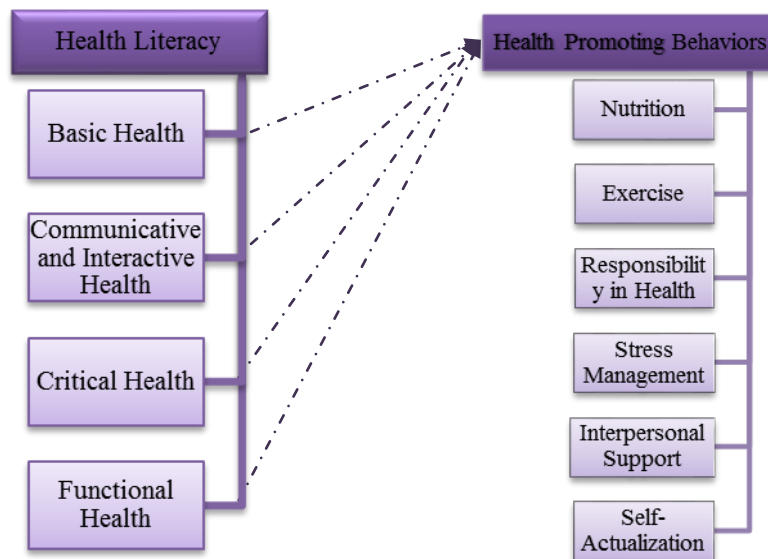


Figure 1: *Conceptual Model of the Relationship between Health Literacy and Health-Promoting Behaviors*

According to what was stated in the previous sections and the theoretical discussions and conceptual model development, the hypotheses of this research are expressed as follows.

Main Hypothesis

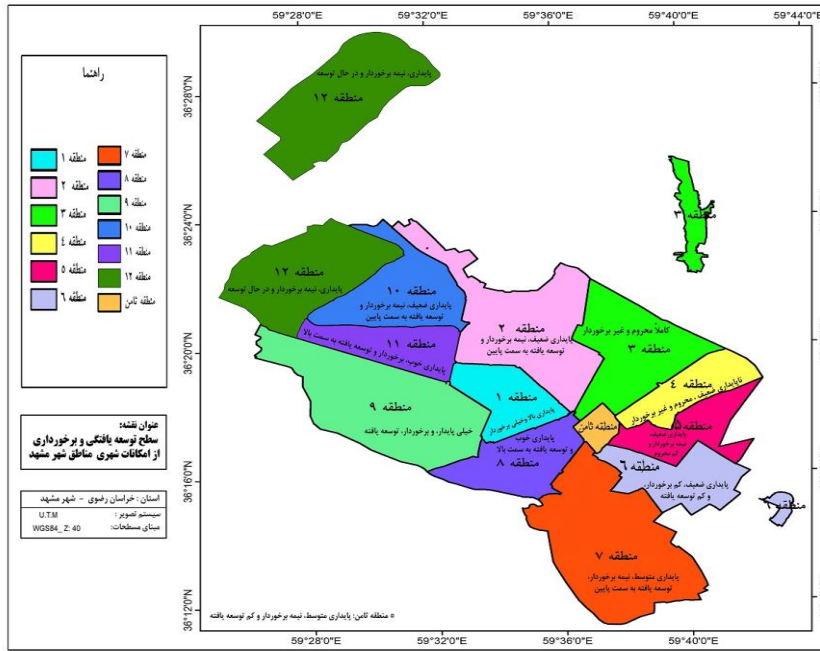
- There is a relationship between the level of health literacy and the health-promoting behaviours of citizens.

Sub-Hypotheses

- There is a relationship between the level of basic health literacy and the health-promoting behaviors of citizens.
- There is a relationship between the level of communicative and interactive health literacy and the health-promoting behaviors of citizens.
- There is a relationship between the level of critical health literacy and health-promoting behaviours of citizens.
- There is a relationship between the level of functional health literacy and the health-promoting behaviors of citizens.
- There is a relationship between the level of health literacy and the components of citizens' health-promoting behaviors.
- There seems to be a relationship between contextual variables (gender, age groups, marital status, educational groups, and urban areas) and the level of health literacy and health-promoting behaviors.

Research Methodology

This research used a quantitative method, survey strategy and standardized questionnaire tool to collect data. Survey research is based on generalizing information from a small part of the population (sample) to the entire statistical population. Also, regarding the purpose type, this research is applied, cross-sectional, descriptive and correlational. The geographical area of this research is Mashhad metropolis, the capital of Razavi Khorasan province. As the second largest metropolis in the country, this city has a religious pilgrimage function (*Badri & Tayyebi, 2012:153*). Mashhad was Iran's capital during the Afsharian dynasty's reign, and it is considered the second-largest city in Iran after Tehran (*Hayati, 2012:115*). Spatial formation, as well as social, cultural, economic, and political life in this city, has been completely influenced by religious factors. Currently, this city has 13 districts, 37 urban service districts and 171 neighborhoods (*Mashhad Municipality, 2018*).



Map 1: The political Situation and the Development Situation of the Urban Areas of Mashhad

The statistical population of this research is all citizens over 18 years of age who live in the metropolis of Mashhad and have a minimum education in reading and writing. The size of the statistical population of the last census (2016) was equal to 2957791. Cochran's sampling formula was used to estimate the sample size, and 384 samples were obtained. The calculations related to Cochran's formula are as follows.

$$N= 2,957,751 \quad t=1.96 \quad d=0.05 \quad s =0.25$$

$$n = \frac{Nt^2.S^2}{Nd^2 + t^2s^2} = \frac{2957751 \times 1.96^2 \times 0.25^2}{2957751 \times 0.05^2 + 1.96^2 \times 0.25^2} = 384$$

In order to increase the credibility of information and the accuracy of information collection in the urban areas of Mashhad, 650 people were finally selected as the sample size. The sample size

in this research was determined based on the multi-stage mixed cluster sampling method, which was selected by simple random (selection of 13 regions and allocation of sample size according to the population size of each region). The level of analysis of this research was done at the micro level, and the unit of analysis and observation in this research is the individual. To collect data, a standardized questionnaire tool was used, in which the health literacy of the Iranian urban population contained 47 items, and the Pender promoting behaviors questionnaire containing 54 items was used. The questions were based on the Likert scale based on the range (1 to 5). The analysis of the confirmatory factors of the dimension's model (basic health literacy, communicative and interactive, critical and functional) was used to examine the psychometric characteristics of the questions of the health literacy questionnaire (2014) and after collecting information from 336 randomly selected people from 13 districts of Mashhad. Construct validity (using exploratory factor analysis) and reliability (by calculating the internal correlation coefficient) were evaluated. The results of the exploratory factor analysis showed that the questionnaire has good construct validity with 47 items in 4 fields, which explained 53.2% of the observed changes. The amount of Cronbach's alpha of the items in related constructs was also acceptable (0.72 to 0.89); in this respect, the reliability of the questionnaire was also confirmed. The findings of Montazeri et al.'s study have shown the ability of the mentioned tool to measure the health literacy of Iran's urban population (*Montazeri & et. al., 2014: 589*). The results of the exploratory factor analysis of the standardized questionnaire of health-promoting behaviors in 6 fields (nutrition, exercise, responsibility in health, stress management, interpersonal support, self-actualization) have shown that the Cronbach's alpha coefficient for the whole instrument is 0.82 and for the following branches were from 0.64 to 0.91. The correlation coefficient between branches was equal to 0.91 for the profile in general, and its range was from 0.71 (spiritual growth) to 0.89 (nutrition), all of which had an acceptable overall correlation. The test-retest results showed the stability of the health-promoting lifestyle questionnaire and its sub-branches. Confirmatory factor analysis of the 6-factor model showed an acceptable fit (*Mohammadi*

Zeidi & et. al., 2011: 107). According to what was briefly stated in the previous parts, in line with the discussed variables, the conceptual and operational definitions of the components of the variables are stated in the following lines.

Health-Promoting Behaviors

- Conceptual definition: Health-promoting behaviors are measured by focusing on the individual's innovative actions and perceptions that work toward preserving or increasing the individual's health, self-fulfillment and satisfaction (*Ahmadi & et. al., 2015:146*). In other words, health-promoting behaviors are a hierarchy or a set of preferred behaviors of a person in the field of health, which reflects the tendencies and values of a person about his/her health. Health-oriented behaviors are habits, attitudes, tastes, moral standards, etc., which shape a person's lifestyle in the health field (*Hasanzadeh Yamchi & Alizadeh Aghdam, 2014: 89*).

- Operational definition: In the present study, health-promoting behaviors include nutrition, exercise and physical activity, responsibility for health, stress management, interpersonal support, and self-actualization.

Health Literacy

- Conceptual definition: Cognitive and social skills that determine the motivation and ability of people to obtain, understand and use information in a way that leads to maintaining and improving their health (*Delavar & et. al., 2018: 1*). People develop a wide range of skills and competencies to search, understand, evaluate and apply health information and concepts to make informed choices, reduce health risks and increase quality of life (*Khosravi & et. al., 2014: 56*).

- Operational definition: In the current research, health literacy includes basic, communicative, interactive, critical, and functional aspects of health literacy. In general, it is an advanced skill that a person must have in reading and writing instructions in basic health information to use information and meanings related to health through various communication channels. Also, a critical approach to analyzing health information in life for control and monitoring it in

daily life and use these skills operationally and practically in different life situations to maintain your health.

Data were analyzed using SPSS 22 software; Table 2 shows the research variables' reliability and validity and the components discussed.

Table 2: Reliability and Validity Coefficient of Independent and Dependent Variables

Variable/ Component	Number of Items	Reliability	Factor Analysis (Construct Validity)				Explained Variance
		Cronbach's Alpha	KMO	Bartlett's Test	Degrees of Freedom	Significance Level	
Basic Health	4	0.855	0.888	13016.008	1035	0.000	60.587
Communicative and Interactive Health	14	0.879					
Critical Health	10	0.695					
Functional Health	19	0.832					
Health Literacy	47	0.822					
Nutrition	8	0.732	0.884	11591.274	1431	0.000	57.916
Exercise and Physical Activity	13	0.705					
Health Responsibility	8	0.809					
Stress Management	6	0.541					
Interpersonal Support	8	0.523					
Self- Actualization	11	0.756					
Health Promoting Behaviors	54	0.800					

According to the results of Table 2, the value of Cronbach's alpha for health literacy is 0.822, and for health-promoting behaviors is 0.800. According to the results of the KMO test for the variable of health literacy, the value of which was equal to 0.888. At the error level of 0.05, the Bartlett test value of the mentioned variable is

13016.008. Finally, 11 out of 47 health literacy items explained about 60.587% of the variance related to the health literacy scale in this research. For the variable of health-promoting behaviors, the value of the KMO test is equal to 0.884, and at the error level of 0.05, the value of Bartlett's test is equal to 11591.274. Therefore, 13 items out of 54 health-promoting behaviors were able to explain about 57.916 per cent of the variance of 54 items related to health-promoting behaviors in this research. As a result, according to the values of KMO and Bartlett, the items and matrix of research variables are different and unique. According to these results, the data on health literacy and health-promoting behaviors are suitable for factor analysis. In other words, the values obtained from the variables are acceptable for analyzing and interpreting the findings.

Research Findings

Table 3: Summary of Frequency Distribution of Contextual Variables of Citizens

<i>Contextual Variables</i>	<i>Frequency</i>
Gender	50.2 per cent of men, equal to 326 people, 49.8 per cent of women, equal to 324 people the total number of respondents is 650 people
Educational Status	Elementary (95 people) is equal to 14.6% Middle school (85 people) is equal to 13.1% High school (32 people) is equal to 4.8%, Diploma graduates 240 people is equal to 36.9% post-diploma and bachelor's degree (168 people) is equal to 8 25.0% Master's and higher degrees (30 people) equal 4.6%.
Marital Status	Single (142 people) equal to 21.8 percent, Married (508 people), equal to 78.2 percent
Age Category	Under 20 years equal to 52 people (8 percent) Between 20 to 40 years, equal to 314 people (48.3 percent) Between 40 to 60 years, equal to 234 people (36 percent) Between 60 to 80 years, equal to 50 people (7.7 percent)

According to the findings, male and female citizens in the studied population were almost equal in gender. According to the education level of the studied population and the expansion of citizens at the diploma level, they have been more than other educational groups. More than 3/4 of the respondents of this research were married, nearly 1/2 of the respondents were between the age

group of 20 and 40 years, the average age was 39.45 years, And the age range was 62 years.

Table 4: Frequency Distribution of Respondents According To Research Variables and Components

<i>Variables and Components</i>	<i>Values</i>	<i>It is Insufficient</i>	<i>It is Intermediate</i>	<i>It is Enough</i>	<i>Average</i>	<i>Standard Deviation</i>
Basic Health	Frequency	506	121	23	4.206	0.84884
	Valid percentage	77.8	18.6	3.5		
Communicative and Interactive Health	Frequency	324	278	48	4.0031	0.59526
	Valid percentage	49.8	42.8	7.4		
Critical Health	Frequency	253	306	91	3.8512	0.57606
	Valid percentage	38.9	47.1	14		
Functional Health	Frequency	365	251	34	4.0924	0.53743
	Valid percentage	56.2	38.6	5.2		
Health Literacy	Frequency	296	302	52	4.0227	0.48897
	Valid percentage	45.5	46.5	8		
Nutrition	Frequency	39	266	345	2.0880	0.60638
	Valid percentage	6	40.9	53.1		
Exercise and Physical Activity	Frequency	101	392	157	2.2551	0.52981
	Valid percentage	15.5	60.3	24.2		
Health Responsibility	Frequency	11	166	473	1.9515	0.66094
	Valid percentage	1.7	25.5	72.8		
Stress Management	Frequency	16	340	294	2.2971	0.59657
	Valid percentage	2.5	52.3	45.2		
Interpersonal Support	Frequency	49	405	196	2.3502	0.54411
	Valid percentage	7.5	62.3	30.2		
Self-Actualization	Frequency	22	419	209	2.5565	0.65188
	Valid percentage	3.4	64.5	32.2		
Health Promoting Behaviors	Frequency	28	402	220	2.2655	0.43971
	Valid percentage	4	62	34		

Table 4 shows the frequency distribution of respondents according to two main variables and their components. As it is evident, the citizens of the studied population had an intermediate level (46.5%) of the variable of health literacy. In the meantime, the highest average values among the aforementioned variable components of basic, functional, communicative, and critical health were obtained. For the variable of health-promoting behaviors, it should be mentioned that 62% of the citizens have observed these behaviours in their daily life on average, which among the values of the above-mentioned variable components are respectively the average components of self-actualization, interpersonal support, stress management, exercise and physical activities, nutrition and responsibility for health have been important. Based on the results of Table 4, the average health literacy status among the studied population has been better regarding the variable of health-promoting behaviors and its dimensions.

Finally, based on the results of the Kolmogorov and Smirnov test, which deals with the normality of the research variables, indicate that the value (Kolmogorov-Smirnov Z) of health literacy variables (1.550) and health-promoting behaviors (0.731) and significance level (sig) for health literacy variable (0.016) and health-promoting behaviors (0.660) respectively, which is higher than the significance level of 0.05. These values indicate that matching the sample distribution with the theoretical distribution was insignificant. Therefore, the distribution of the desired variables and their components was normal. In other words, the trait distribution among the sample is not normal with its distribution in the population, and there is a significant difference between the observed frequency and the expected frequency (*Habib Pour Gatabi & Safaris Hali, 2011:641*).

It should be noted that for the contextual variables of marital status and educational groups, the averages at the study population's level are accepted for health literacy and health-promoting behaviors.

In addition, there is no significant relationship between the contextual and studied variables. It should be noted that there is a significant relationship between the different urban areas of Mashhad with health literacy because the corresponding value of the obtained

results was higher than the significance level of 0.05, So the equality (no difference in the means)) urban areas with health literacy can be recognized, while based on the results of the obtained tests, the values of the significance level of the relationship between urban areas and promoting behaviors are less than 0.05, (0.006) which is equal to the level of test F (2/348). It shows the difference between the urban areas of Mashhad with behaviors that promote the level of health literacy.

Table 5: Pearson Correlation Coefficient between the Main and Secondary Research Variables

<i>Independent Variable</i>	<i>Dependent Variable</i>	<i>Relationship Intensity</i>	<i>Significance Level</i>	<i>Correlation Test Type</i>	<i>Test Result</i>	<i>Relationship Type</i>
Basic Health	Health Promoting Behaviors	0.681	0.000	Pearson	Confirmed	Positive
Communicative and Interactive Health		0.707	0.000	Pearson	Confirmed	Positive
Critical Health		0.502	0.000	Pearson	Confirmed	Positive
Functional Health		0.546	0.000	Pearson	Confirmed	Positive
Health Literacy		0.722	0.000	Pearson	Confirmed	Positive
Health Literacy	Self-Actualization	0.401	0.000	Pearson	Confirmed	Positive
	Exercise and Physical Activity	0.386	0.000	Pearson	Confirmed	Positive
	Health Responsibility	0.536	0.000	Pearson	Confirmed	Positive
	Stress Management	0.520	0.000	Pearson	Confirmed	Positive
	Interpersonal Support	0.443	0.000	Pearson	Confirmed	Positive
	Nutrition	0.536	0.000	Pearson	Confirmed	Positive

Table 5 shows the degree and intensity of the relationship between the components of health literacy and the variable of health-promoting behaviors, as well as the relationship and intensity

between the variable of health literacy and the components of the variable of health-promoting behaviors.

Table 5 shows the degree and intensity of the relationship between the components of health literacy and the variable of health-promoting behaviors, as well as the relationship and intensity between the variable of health literacy and the components of the health-promoting behaviors variable; in all cases, the assumed relationships have been confirmed.

According to Table 5, the correlation level between all variables has been obtained with a significance level of less than 0.05, which indicates that the main hypothesis of the research, which deals with the significant relationships of the research variables with the intensity of the relationship of 0.722, indicates that these group predictions can be did that the relationship is strong enough and acceptable.

According to the results of Table 5, the correlation range, the intensity of the relationship between the components of health literacy and the dependent variable with a significance level of less than 0.05 indicates that the relationship between the components of health literacy and the variable of health-promoting behaviors was moderate; and simple group predictions are possible.

Based on the results of Table 5, group predictions can be considered possible between the variable of health literacy and the components of health-promoting behaviors at a significance level of less than 0.05, with the intensity of the moderate correlation range between this variable and the components.

Table 6 shows the main results of multivariate linear regression based on the enter method. This test has been used to analyze the influence of the independent variable components on the dependent variable (health-promoting behaviors). In Table 6, the beta coefficient expresses the relative importance of the variables, and the greater beta coefficient indicates its importance and role in predicting the dependent variable.

Table 6: Multivariate Linear Regression of Independent Variable Components with Dependent Variable

Independent Variable	Unweighted coefficients		Scaled coefficients	T Value	Significance Level	Tolerance Coefficient ^t	Variance Inflation Factor (VIF)
	β	Standard Error	β				
Constant Value	2.242	0.147	-	15.285	0.000	-	-
Basic Health	2.005	0.028	0.110	2.180	0.000	0.529	1.891
Communicative and Interactive Health	3.052	0.050	0.271	3.046	0.000	0.340	2.344
Critical Health	1.054	0.043	0.171	1.258	0.000	0.483	1.941
Functional Health	4.011	0.039	0.313	4.276	0.000	0.671	2.071
Multiple correlation coefficient	R-square	Adjusted R Squared	Std. Error of Estimate	F Value	Significance Level	Durbin Watson Test	
	0.692	0.494	0.25067	393.113	0.002	1.528	

The results of Table 6 indicate that the unstandardized regression coefficients, including the regression model estimation coefficients, are obtained as follows: $(2.005+3.052+1.054+4.011) = 10.122$ health promotion behaviors.

Now, this model, according to the standardized coefficients (Beta), shows the relative contribution of each independent component in explaining the changes of the dependent variable, which, respectively, based on the highest beta in this model, the components of functional health literacy, communicative and interactive health literacy, Critical literacy health and basic health literacy best explain the dependent variable. For an increase of one standard deviation in these components, the amount of health-promoting behaviours will increase by 0.313, 0.271, 0.171, and 0.110 standard deviations, respectively.

For an increase of one standard deviation in these components, the amount of health-promoting behaviours will increase by 0.313, 0.271, 0.171, and 0.110 standard deviations, respectively. Also, the component of critical health literacy with a beta value of 1.054 has a very small contribution to the explanation of the dependent variable. The T value shows the relative importance of the presence of each independent component in the model, considering that in this research, the T value for all components in the order of health literacy functional, communicative and interactive health, basic health literacy and critical health literacy are significant at the error level of 0.05. Therefore, the variables in question significantly impacted explaining the dependent variable.

Based on the findings of Table 6, tolerance statistics and variance inflation factor (VIF) have been used in the topic of linear regression in the direction of non-collinearity of independent variables. Considering that the tolerance coefficient fluctuates between (0) and (1) and shows how independent variables have a linear relationship with each other, the higher the tolerance value (closer to 1), the lower the linearity; and on the contrary, the smaller the tolerance value (closer to zero) indicates that the degree of collinearity is high and the standard error of the regression coefficients is highly inflated (Habib pour Gatabi & Safari shali, 2011, pp. 509-510). According to the results of the tolerance coefficients of the components of the independent variable, including functional health, basic health, communicative and interactive health, respectively, they are not very close to the value (1) and are linear, so the regression coefficients are inflated. In other words, these components were not very strong to explain the dependent variable (health-promoting behaviors) at the time of the research. Also, the value of the variance inflation factor indicates that the greater this value is from (2), the greater the level of co-linearity (Habib pour Gatabi & Safari shali, 2011, p. 510). According to health literacy results, the components of communicative and interactive health literacy and functional health literacy can have high linearity. Finally, these two components have sufficiently explained the dependent variable's variance. It should also be mentioned that the Durbin-Watson statistic is between 0 and 4. If there is no serial correlation between the residuals, the value of

this statistic should be close to 2. If it is close to zero, it indicates a positive correlation; if it is close to 4, it indicates a negative correlation. Generally, there is no need to worry if this statistic is between 1.5 and 2.5 (Habibi, 2018). Based on this, the value of the mentioned test in this research is equal to (1.528). Therefore, the concept of independence of the variable of this research has been proven, and it means that the observation results did not affect other observations.

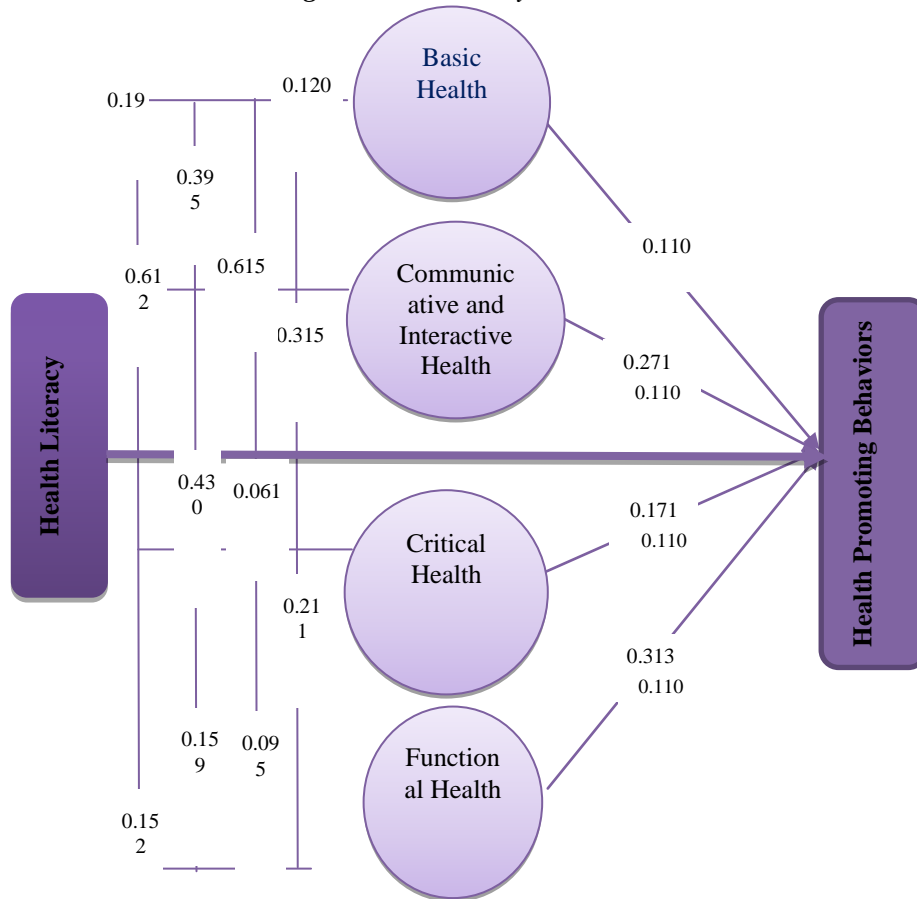
The value of the correlation coefficient (R) between the variables was 0.692, which shows a strong correlation between the set of components of the independent and dependent variables at the time of conducting the research. However, the value of the adjusted coefficient of determination is equal to 0.494, which indicates that nearly 49% of the total changes in health-promoting behaviors among citizens are affected by the components of health literacy in this equation. The value of the F statistic is 393.113, which is significant at an error level smaller than 0.01. It can be concluded that the regression model of the research is composed of the independent variable and dependent variable components (Health-promoting behaviours). It is a model that can explain the dependent variable greatly.

Table 7: The Total Impact of the Independent Variable and Its Components on the Dependent Variable

Independent Variable	Dependent Variable	Direct Impact	Indirect Impact	Total Impact
Basic Health	Health Promoting Behaviors	0.110	$0.615 \times 0.61 \times 0.095 = 0.035$	$0.035 + 0.110 = 0.145$
Communicative and Interactive Health		0.271	$0.430 \times 0.159 \times 0.359 = 0.024$	$0.024 + 0.271 = 0.295$
Critical Health		0.171	$0.152 \times 0.019 \times 0.612 = 0.0017$	$0.0017 + 0.171 = 0.172$
Functional Health		0.313	$0.120 \times 0.315 \times 0.211 = 0.0079$	$0.0079 + 0.313 = 0.320$

According to the results of Table 7, the direct and indirect impact of the components of the independent variable on the dependent variable can be shown in the figure below.

Figure 3: Path Analysis Chart



According to the multivariate (simultaneous) regression test, it has been determined that the social health variable had an almost strong direct impact on health-promoting behavior; in the regression analysis using the enter method to draw the path analysis diagram, the effect of these components has been taken into account separately in addition to the variable itself. The results of the path analysis test revealed that health literacy affects health promotion behaviors directly and indirectly, with 0.932 units.

Discussion and Conclusion

Health is an important asset that people should always strive to maintain and promote throughout their lives, and it is the most important determinant of the quality and quantity of people's lives. For a long period of human life, health has been affected by many issues and epidemics. Today, these still play a fundamental role in determining human health. However, behaviors, especially health behaviors, are the main components determining a human's health status and longevity (Hazajaribi & Safari shali, 2012). This change and the importance of behaviors in determining health have increased the attention of social sciences to this issue.

At the same time as creating a social attitude towards health, a new concept, such as health literacy, has entered the humanities and social sciences literature. A review of previous research in recent years shows that health literacy is an important variable in explaining health-promoting behaviors or a health-oriented lifestyle in order to pay attention to healthy consumption and according to the role of agency resulting from the situation of choice and life opportunities, standards in the field of a healthy lifestyle can be achieved.

In line with the topic, a sample consisting of 650 citizens over 18 years of age in the urban areas of Mashhad was selected by the method of volume proportional to each area, where men and women were almost equal. The average age of the respondents was 39 years, and more than 3/4 of the respondents were married. In terms of health literacy, about 46.5% of the respondents had an average (intermediate) level of health literacy which is based on the research findings of Reisi et al. (2020), Chang (2020), Javadzade et al. (2019), Jahani Eftekhari et al. (2018), and Von Wagner et al. (2017) has been consistent. Among the components of this variable, basic health, functional health, communication health, and critical health have the highest values, respectively. About 62% of the respondents have performed health-promoting behaviors in their daily lives on average, which is in line with most of the results stated in the research literature of these results. Among the components of this variable, the self-actualization component has been more important for citizens than others.

In general, based on the results of the average components and variables of the research, the state of health literacy has been better concerning health-promoting behaviors as a whole and distinctly at the level of urban areas.

In line with the significant relationship between contextual variables, it should be noted that demographic variables did not have a significant relationship with independent and dependent variables, which was not in line with the literature research findings and most of the literature results; there was an assumption of difference and inequality between the contextual variables and the tested variables. In this research, at the time of data collection, this assumption was insignificant between the studied population's demographic variables and the independent and dependent variables.

The significant relationships of the main and sub-hypotheses between the studied variables have been obtained with a significance level of less than 0.05, which is in line with most of the literature research findings in this discussion. Moreover, there is a significant relationship between the investigated variables. In this regard, the strength of the main hypothesis relationship between health literacy and health-promoting behaviors has been acceptable enough for prediction in the studied sample size. In addition, the relationship between the components of health literacy with the dependent variable and health literacy with the variable components of health-promoting behaviors at a significance level of less than 0.05 with moderate intensity can be suitable for prediction in the studied population.

According to the regression beta results and the contribution of functional/applicative, communicative/interactive, critical and basic health literacy components, they can best explain and institutionalize health-promoting behaviors in people's daily healthy lifestyles. Based on the correlation coefficient between the components of the independent variable and the variable of health-promoting behaviors, a strong correlation has been formed that, in total, nearly 49% of the total changes in the amount of the dependent variable are affected by the components of health literacy in this research. The current regression model can strongly explain the dependent variable. According to the results mentioned in the previous lines, health

literacy, along with other social health issues, can play a significant role in developing the quality of life of communities and solving health problems. Health literacy and its effect on health-promoting behaviors can make an important contribution to the well-being of us humans in the health care of people to improve their lives. Therefore, the variables presented in this study, with components such as time and place and individual and social values, include different meanings for social groups that can be related to the discussion of the health-oriented quality of life. Even considering the livability capabilities in an area and region, the existence of health and better living, etc., it can be pointed out that health-promoting behaviors about the conditions of the population in a region and geographical scale rely on subjective (qualitative) indicators and objective (quantitative) indicators (*Hazajaribi & Safari shali, 2012*). In other words, the health-oriented quality of life includes a person's perception of life situations, which is related to the culture and values of life and is related to the expectations, goals, standards, and interests of people, which can be broadly related to different fields of health, different levels of the human life, personal beliefs and different environmental dependencies are connected.

According to such a necessity in line with the topic under discussion based on individual agency, from the perspective of the individualistic approach of health literacy in determining the improvement of health-oriented quality of life, it generally includes individual activities and achievements that can help a person to dominate the living environment and be empowered against health and wellness barriers should be considered effective. From this point of view, empowering individual capabilities better to explain living and well-being within the framework of freedoms, especially freedom of choice, can effectively contribute to health-promoting behaviors (*Ghaffari & Omidy, 2009:30*).

The agent-oriented approach in the field of health, based on methodological individualism, points out that the individual is at the center of the quality of health-promoting behaviors, and relying on individual mentalities, capabilities, and potentials, he/she should create health and wellness conditions for himself/herself, others and society. Considering this point, capability in the approach of a health-

oriented agency can include a set of different functions in the field of health that are valuable for a person, and a person can choose from among them. From this point of view, a person has a kind of freedom that includes the ability to choose her/his actions in the field of health, which is valuable for the person, and the person has a reason to enjoy them in life. Therefore, promoting health literacy is considered an opportunity which considers our ability to choose and pursue values, including a health-oriented lifestyle, for which we have reason to be important. These selected capabilities are the opportunity for freedom, which has a value-oriented aspect, making the quality of individual health-promoting behaviors which can be judged. Health literacy as a functional issue indicates that doing or achieving health is valuable for a person; in fact, health literacy in the lifestyle of health-promoting behaviors in the form of a functional issue related to being and doing them in Individual life depends. Health literacy as a functional issue indicates that doing or achieving health is valuable for a person; health literacy in the lifestyle of health-promoting behaviors in the form of a functional issue depends on being related to and performing these behaviors in individual life. Therefore, in the agency approach, the ability to be healthy through health literacy can be freedom by achieving different combinations of functions, which can include selected health promotion behaviors in the form of different lifestyles from an individual perspective.

Based on this, from the perspective of Giddens's agency approach, lifestyle choices in late modernity have made people more responsible for their health and their bodies in general (*Giddens, 2009:123*). In this regard, Cockerham defined the health lifestyle as the collective patterns related to health based on the choices of the options available to the people and matches life opportunities. This definition includes the dialectic relationship between life opportunities presented by Weber in her/his lifestyle concept. Therefore, life choices represent agency and life opportunities are a form of structure that shows the position of the social class, which also limits the choices. At the same time, health and other lifestyle choices are optional (*Cockerham, 2008:55*).

Research Suggestion

Based on the available results, it should be noted that

- The access of citizens and social groups at the level of urban areas to have sufficient information in the field of health should be established with the cooperation of the executive body, the custodians of the cultural and social organizations of the city.

- By benefiting from information tools in today's era, it is possible to provide citizens with the maximum number of reliable communication channels in health.

- The advantages and limitations of health-promoting behaviors should be communicated so that citizens can evaluate the issues and reach a correct and rational decision by considering their application.

- Different information literacy tools should cover health literacy and health-oriented lifestyles in skill training courses in different urban areas and neighborhoods, including completely deprived, semi-deprived and developed areas. This skill training should be implemented in the short term with inter-organizational cooperation in different conditions and periods.

- According to these results, in a suggested and practical summary for promoting health literacy and health-promoting behaviors, such as culture building, modern and continuous training, intra-organizational and extra-organizational cooperation, formulation of policies in the field of urban health with Economic, health and social approaches are very important.

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