

A Comprehensive Health Plan: The Lifestyle Affecting Factors in Iranian Youth

Ahdieh Chinekesh^{1,2},
Seyed Ali Hoseini¹,
Farahnaz Mohammadi
Shahbolaghi¹,
Mohammad Esmael
Motlagh^{3,4}, Monir
Baradaran Eftekhari²,
Gelayol Ardalan³,
Shirin Djalalinia^{5,2}

¹Social Determinant of Health Research Center, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran, ²Deputy of Research and Technology, Ministry of Health and Medical Education, Tehran, Iran, ³Department of Adolescents, Youth, and School Health, Bureau of Population, Family, and School Health, Ministry of Health and Medical Education, Tehran, Iran, ⁴Department of Pediatrics, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran, ⁵Non-communicable Diseases Research Center, EMRI, Tehran University of Medical Sciences, Tehran, Iran

Abstract

Background: Factors affecting lifestyle become one of the most priorities of the research field, especially in adolescents and youth. Using a qualitative approach, this study aimed to understand what factors are affecting young people's healthy lifestyle. **Methods:** Using the conventional content analysis, and used the semi-structured in-depth interviews, we conducted a qualitative study to elicit the youth opinion considering their lifestyle affecting factors. Initially, purposeful sampling method was considered for data collection. Participants were selected from volunteered youths 18–30 years whom were selected from the Tehran city. Inclusion criteria for the participants were; (a) willingness to participate in the study, and (b) ability to express experiences. **Results:** According to findings, although the majority of participants agreed on the important role of lifestyle related behaviors in their healthy life, the lack of essential motivation and the pressure of educational assignments remove it from their daily program priorities. The most important barrier to observing the healthy lifestyle was expressed as; the acceptance of the concept by the individual and the social and economic potential of the individual. It was also suggested that practical interventions should focus on improving more participator engagement of all of the related stakeholders. **Conclusions:** We proposed the participatory strategies for youth healthy lifestyle promotion. Through which based on a specific needs the assessment of different target groups, designing, development, and implementation of health programs led to more effective interventions.

Keywords: Iran, lifestyle, qualitative study, youth

Introduction

Lifestyle theory is underscored by the fact that many daily lifestyle practices involve considerations of health outcomes.^[1] Lifestyle is a multifaceted phenomenon covering all aspects of daily life.^[2] The risk of diseases such as cancer and cardiovascular diseases, directly or indirectly, associated with main components of lifestyle.^[3]

Following the primary forming of lifestyle, in the 1st year of life, young peoples are affected from the society and new experiences of peer groups.^[4,5] Identity formation develops at a young age, cognitive abilities and social development from the simple situation reaches to the superior quality, and he is more responsible for his social, cultural, and economic role.^[6]

The results of studies show that identifying the influential factors on healthy lifestyle has an important role in planning for promoting lifestyle of target groups.^[7]

A study in the UK confirmed the association of some epidemiological characteristic such as sex, ethnicity, and age with health behaviors in the domain of smoking, nutritional patterns, physical activity, and even sleeping.^[8] Another conducted a study on the associations between multiple health risk behaviors and mental health among Chinese college students shown the significantly increased risks for depression and anxiety found among students with frequent alcohol use, sleep disturbance, poor dietary behavior, and Internet addiction disorder.^[9]

In Iran, considering our young population and due to the epidemiological transition which has surrounded the various aspects of social life and health domains, youth health becomes one on of the most priority of national health convenience.^[10,11]

A related study in Iran illustrates the relationship between lifestyle and academic achievement in students. These results emphasized that to improve the academic achievement of students, in addition to the

Address for correspondence:

Dr.Farahnaz Mohammadi
Shahbolaghi,
Velenjac St, Kudakyar St,
University of Social Welfare and
Rehabilitation Sciences, Tehran,
Iran.
E-mail: MohammadiFarahnaz
@gmail.com

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cognitive abilities-perception; their lifestyle should also be considered.^[12]

Other study conducted provided that the characteristics of living environments could consider as determinants of quality of life (QoL). The researchers discussed that how characteristics of the physical and social living environments play a significant role in shaping well-being status and lifestyle behaviors among Iranian female youth.^[13]

Several projects have been carried out to examine the impact of different factors on healthy lifestyle, but the innovation in this study is to identify different dimensions without any prejudice and effort to utilize the mentality of young people. There are qualitative studies that discuss the views of young participants. However, few qualitative studies have looked at the needs of young people based on their own experiences.

On the other hand, there are social, political and cultural limitations in Iran that need to be used; to overcome this gap in the literature, this study examines the perception of factors affecting a healthy lifestyle using a qualitative approach. In this research, social factors affecting the lifestyle of young people aged 18–30 years in Tehran have been studied.

Methods

This paper as a part of a more comprehensive study entitled “needs assessment of Iranian youth health,” developed based on the findings of a qualitative content analysis. The project was conducted in 2017.

We used conventional content analysis method. Conventional content analysis, obtaining information directly and openly, without incurring a concept or theory is predetermined.^[14] This approach is mostly used when researchers face with the insufficient low levels of evidence that are fined about the specific phenomenon and focusing on the description of the phenomenon, lead to directly extraction of the code categories from the interview transcripts.^[15]

Accordingly, to examine the factors affecting the healthy lifestyle of young people, they were asked to express the needs of a healthy lifestyle based on their own experiences.

Study participants

Participants of the study were youths 18–30 years whom were selected from the Tehran city. Inclusion criteria for the participants were; (a) willingness to participate in the study, and (b) ability to express experiences. Using a purposive sampling method (appropriate for qualitative studies) that continued until the point of data saturation, eligible participants enrolled in the study. As the appropriate adequate sample size is one of the essential requirement, sampling continued until no new categories,

themes, or explanations emerged (data saturation). Primary participants were selected from the youth at the university.

Interview guide

The interview guide was designed by scientific committee in accordance with the related literature and goals of the study. In the pilot study, reliability and validity of instruments were conceptualized as trustworthiness and rigor in qualitative research.

Subsequently, through the pilot study, using semi-structured face-to-face interviews, with the participation of 5 young people, met inclusion criteria, the interview guide questioning were more developed, and the main interview guide was compiled containing 10 semi-open questions.

Interviews

Data were collected by deep, semi-structured, face-to-face interviews. At the beginning of the interviews, research goals and method were explained to the participants. Each of session lasted for 45–100 min (with a mean duration of 65 min). All interviews were conducted in a peaceful environment and with prior agreement of the participants.

The interview began with general questions as well as open-ended ones based on the study objectives. For example “What are your needs for a healthy lifestyle?” or “Can you tell about their experiences of a healthy lifestyle?” and “What obstacles have you had to have a healthy lifestyle?”

The interview then continued with exploratory questions to clarify the concept and get more in-depth information. All of the conversation was audio-recorded with the permission of the participants.

Data analysis

Data extracted from 21 in-depth, semi-structured interviews with 21 participants, was analyzed through conventional content analysis method. Based on the Graneheim and Lundman model, the following steps were conducted: (1) Writing the interview conducted immediately after it was done, (2) reading the entire text to understand its general content, (3) determining the units of meaning and initial codes, and (4) classifying the initial codes in more comprehensive categories. In this approach, codes classification was directly extracted from the interviews.^[16]

In the present study, categories were extracted irrespective of preconceived categories of data. After each of interview, the researcher listened the interviews’ times immediately after that the text was transcribed and word-for-word typed in Microsoft Word.

At the next step, units were determined from the participant statements. The complementary data were obtained from observations field notes and labeled gathered as codes. With the cooperation and agreement of the research team, the sub-categories and categories were formed

based on the similarities and differences. Subcategories were formed with similar events and outcomes, and the primary categories were then set. This subjective procedure continued until the themes were extracted.

The researcher used Dedoose, version 7.6.6 to facilitate data analysis, categorization, constant comparisons, and quotation retrieval.

The rigor of the data was determined using Lincoln and Guba's evaluative criteria, including credibility, dependability, transferability, and conformability.^[17] To provide rigor and reliable data concerning credibility, the researcher had a long and close acquaintance with the participants and spent a long time in the field searching for data and enough time to gather and analyze the data. Furthermore, triangulation in data collection, peer check, and constant comparison were used. dependability was established using the experts' comments, and revision was done by the participants and co-workers. Transferability was obtained by a description of data-rich.^[18]

Ethical considerations

The study was approved by the ethics committee of University of social welfare and rehabilitation sciences in Iran. Participation in the study was voluntary, and participants were ensured that they could withdraw from the study whenever they wanted. The written informed consent was obtained from all of the participants.

At the beginning of the interviews, research goals and method were explained to the participants, and they were assured of the confidentiality of information. Ethical considerations were respected during all the processes of the study, including data collection (recording and transcribing the interviews), data analysis, and dissemination of results. All information was collected anonymously, and the outcomes were used for research purposes.

Results

The participants consisted of 21 young, who met the study inclusion criteria, of whom 12 participants were male. Their age ranged from 18 to 30 years, and their education varied from primary school to master's degree. All of the participants resided in Tehran. Demographic characteristics of participants are shown in Table 1.

Using content analysis, data analysis was performed under 4 main axial categories including; (1) The need to have healthy habits in daily life, (2) Nutrition, (3) Mobility and exercise and (4) Need to have management and planning for physical health. The codes for this theme are listed in the Table 2.

According to the goals of the study, from 185 meaning unit, 13 code were extracted. Findings of youth in-depth interviews have been concluded under the following major domains. The needs to have healthy habits in daily life, and

Table 1: Demographic characteristics of participants

Demographic characteristics	Frequency, n (%)
Sex	
Girl	9 (43)
Boy	12 (57)
Grade	
Diploma	7 (33)
Bachelor	8 (38)
MA	6 (29)
Occupation	
Unemployed	3 (14)
Worker	4 (19)
Employee	6 (29)
Student	8 (38)
Total	21 (100)

Table 2: The extracted codes for the healthy life style theme

Themes	Sub-themes	Code
Healthy life style	The need to have healthy habits in daily life	Having a 30-minute daily walk
		Enough sleep
		Book reading
	Nutrition	Taking a cold shower
		Use of fruits and vegetables
		Eating plenty of water and drinking healthy
		Use of homemade food
		Reducing the amount of food and increasing the frequency of eating
	Mobility and exercise	Having a positive and joyful spirit
		Exercise for pleasure and pleasure
		Punctuality
	Need to have management and planning for physical health	Planning and managing time and space
Planning for the weekend		

the important role of physical activity in healthy life were the first and the most emphasized topics, nearly noted by all of the participants.

Having healthy daily routines can have a great impact on health. Participating youths pointed to different issues in this regard including the habit of drinking plenty of fluids and using fresh vegetables and fruits daily. It was one of the things that the youth was interested in doing a daily walk or joining a morning sports team.

Many interviewees believed that daily living habits play an important role in promoting the healthy lifestyles. They explained these habits in many different terms. For example, F2 says: "A healthy lifestyle is a habit of having a healthy body that can be eaten by healthy foods." M 5 "A healthy lifestyle means having a relaxed environment,

eating tasty foods and exercising.” Another interviewee also defines a healthy lifestyle as “having habits such as passing, laughing, family relationships, positive attitudes, compliance with problems, patience, good diet, balance in eating and drinking, and controlling your health.”

Of the other important issues, having enough sleep was emphasized. Young people consider sleep deprivation to be causes of fatigue and burnout and relaxing and rejuvenating provide them more energy and more productive in daily tasks. The participants expressed healthy lifestyle as a valuable resource to reduce the incidence and impact of health problems, to address the stressors of life, and to improve the QoL and the conditions of the living environment expressed the most important determinant of lifestyle.

The most important barrier to observing the healthy lifestyle was expresses as; the acceptance of the concept by the individual and the social and economic potential of the individual.

Regarding the effect undeniable of physical activity on the health of young people, nearly all of the female and male participants believed “The habit of regular physical activity is effective for healthy lifestyle.” Moreover, “inactivity habits lead to an unhealthy lifestyle.” One of the female youth emphasized that: “Having healthy habits in life is the foundation of a healthy body.” On the other hand, most of the participants in both female and male groups declared that curricular and Educational activities in their lives have been the priority. One of the male participants said “We all know that mobility and exercise are important for having a healthy lifestyle, but having an educational assignment and a fear of a professional future, you can do nothing.”

Considering the current status of the lifestyle of young people; the majority of young people believed that they would love to be beautiful in the eyes of others. However girls and boys were different in this regard; they argued that because girls wanted to maintain their body shape, they would try to have a diet and the boys have been bodybuilding for having beautiful bodies.

All participants agreed on the role of exercise and mobility in a healthy lifestyle. However, almost all female participants believed that there were many differences in the physical possibilities for boys and girls. They point out that there are social barriers to doing solitary or group sports for girls. They said: “Boys have more facilities and most of the environment is safe for them because they are more active and therefore less likely to become obese.” Most participants of the study, especially girls, referred to the lack of a social reception for sports such as cycling on the streets. In addition, they emphasized on the high cost of professional sports venues. Given these differences, most young people, especially girls, believed that girls needed more social attention.

In both groups, lack of sufficient time and stress Quiz the main barriers to physical activity and exercise. Furthermore, having a positive and jolly spirit, as well as exercising for pleasure and recreation, other concepts developed in this field was by a number of participants in both groups of women and men. One male participant said: “The main reason for moving away from healthy lifestyle is lack of planning and laziness.” It also referred to the role of the family and the observance of habits in childhood. Participants believed that having a healthy lifestyle would create a habit in childhood. A group of participants also referred to a tendency toward mechanical life and changes made in the form of daily life. They believed that change in people’s attitude for to enjoying daily activities and exercise is very important.

Limitations and suggestions for exercise in public places for female were noted. They showed that there is a gradual need for a positive attitude in society for women’s sports. In this regard, they refer to some successful actions in the past, such as “Specific Parks for women.” However, these are not enough. The few parks and the lack of accessibility of these parks are one of the obstacles to using these sites.

Based on the general opinion of participants; “Nutrition is considered as one of the criteria for healthy lifestyle and plays an important role in the health of different age groups, especially young people.” Most of the girls said that they do not pay enough attention to their diet and nutritional behaviors. On the other hand, the use of fast foods in boys was more than girls.

Another key concept in the field of a healthy lifestyle was the need for management and planning for physical health. All participants, both boys and girls, referred to it. According to the results, punctuality, having time management and proper use of leisure and weekends were among the issues mentioned. Young people said about the importance of management and planning: “Lifestyle is actually a way of life and we must to have a program for life.” “There are things we are interested in or the skills we need to get. Time management is very important, and we plan for our own purposes.”

Discussion

Although lifestyle and health beliefs are established in the early years of life, lifestyle behaviors that are experienced during community visits can have a great impact on the health of young people.^[3] To design more effective interventions, we need to understand more about the factors that influence youth attitudes and behaviors.^[19]

According to the results, it is clear that most young people agree with healthy daily habits to promote health behaviors. On the other hand, the lack of motivation and the existence of problems and barriers in society eliminate the priority of the daily agenda. Similarly, the results of the studies show that the lifestyle of most young people is in a moderate situation.^[20]

Evidence confirm that food habits, smoking, alcohol, and physical inactivity are among the most important factors in the lifestyle of individuals who increase the risk of noncommunicable diseases such as cancer and cardiovascular disease.^[6,21,22] In the study of Mansorian *et al.*, There was a significant relationship between lifestyle and sex, income level, father's education and mother's occupation, native-language, university education and smoking.^[23] Other related studies discussed on discipline Education, employment status, education, and mother's job, physical activity and nutritional habits as affecting factors.^[24-26]

Some youth-related studies have highlighted the importance of health-related behaviors, but are often overlooked due to their problems and barriers.^[27]

The existence of social and economic barriers to having a healthy lifestyle was one of the obstacles noted by girls participating in the research. In the study of Peykari *et al.*, The lack of a safe environment for girls' physical activity and the high cost of professional sports were two of the barriers mentioned in this regard. In addition, lack of proper day-to-day planning and laziness were other points that were mentioned in this regard,^[19] which is consistent with the results of the present study.

In the present study, most contributors point to inappropriate nutritional behaviors. These results are consistent with findings of other studies reported the poor nutritional status of students.^[20,24,28]

The majority of young people in their statements have considered the impact of the behavior of peers and friends, as well as the social norms existing in Iranian society, for having healthy habits and lifestyles. Having the right body shape, having enjoyable physical activity, and having social interactions with peers are one of the issues that young people referred to in this study. These results are consistent with Whitehead and Allender.^[29,30]

Similar to the strategies presented in other research, the study also suggests that future interventions should promote health behaviors in the community and provide curriculum for healthy lifestyles. Available results emphasize that there is a progressive need for providing the adolescence health programs, based on their own real specific needs and preference.^[31]

Based on the findings, lifestyle-based variables including physical activity and food habits of youth is in poor condition. Considering the factors associated with improving lifestyle in young people, it seems necessary to Improving and promoting the youth' lifestyle, especially in the aspect of physical activity and dietary habits. The development of health education activities based on regular physical activity is recommended for to raise positive changes in of dietary modifications and dietary habits of this age group.

As the main strength point, this study benefits from a well-developed methodology through which saturated data extracted from the in-depth interviews session and exact analyzed based on defined protocol. During the study, we faced with some limitations including the lack of cooperation of some invited participants, variation of participant's perception, and limitation in the generalization of the results.

Considering above, designing and evaluation of participatory interventions for healthy lifestyle promotion may be suggested for further studies. According to the strategy outlined, more researches on determinants of healthy lifestyle among youth in different populations are recommended.

Conclusions

As the main point of present research; most of the young people emphasize on the association of healthy daily habits and promotion of health behaviors. Meanwhile, the lack of motivation and complexity of recent life lead to the elimination of its priority from daily agenda. Considering these findings and other studies suggestions, we proposed the participatory strategies for healthy lifestyle promotion in young people. In such condition, target groups, especially youth and their families through the interactive process during the designing, development, and implementation of health programs meet the researchers, health policymakers, and other stakeholders' evidentiary gaps.

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Conflicts of interest

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References

1. Cockerham WC. Health lifestyle theory and the convergence of agency and structure. *J Health Soc Behav* 2005;46:51-67.
2. Najem GR, Passannante MR, Foster JD. Health risk factors and health promoting behavior of medical, dental and nursing students. *J Clin Epidemiol* 1995;48:841-9.
3. Nola IA, Jelinić JD, Matanić D, Pucarín-Cvetković J, Bergman Marković B, Senta A, *et al.* Differences in eating and

- lifestyle habits between first- and sixth-year medical students from Zagreb. *Coll Antropol* 2010;34:1289-94.
4. Foy CG, Lewis CE, Hairston KG, Miller GD, Lang W, Jakicic JM, *et al.* Intensive lifestyle intervention improves physical function among obese adults with knee pain: Findings from the look AHEAD trial. *Obesity (Silver Spring)* 2011;19:83-93.
 5. Holmbäck I, Ericson U, Gullberg B, Wirfält E. Five meal patterns are differently associated with nutrient intakes, lifestyle factors and energy misreporting in a sub-sample of the Malmö Diet and Cancer cohort. *Food Nutr Res* 2009;1:49-54.
 6. Khanna DP, Kaushik R, Kaur G. Changing dietary pattern and lifestyle on diseases. *Asian J Multidimens Res* 2012;1:49-54.
 7. Taghdisi MH, Doshmangir P, Dehdari T, Doshmangir L. Influencing factors on healthy lifestyle from viewpoint of elderly people: Qualitative study. *Salmand Iran J Ageing* 2013;7:47-58.
 8. Davies N. Promoting healthy ageing: The importance of lifestyle. *Nurs Stand* 2011;25:43-9.
 9. Ye YL, Wang PG, Qu GC, Yuan S, Phongsavan P, He QQ, *et al.* Associations between multiple health risk behaviors and mental health among Chinese college students. *Psychol Health Med* 2016;21:377-85.
 10. Waterman AS. Identity development from adolescence to adulthood: An extension of theory and a review of research. *Dev Psychol* 1982;18:341.
 11. Khosravi A, Chaman R. Epidemiological transition and health change. Iranian congress of epidemiology. *J Knowl Health* 2010;5:18.
 12. Karimi Sani P, Seyedi M. Investigating the relationship between lifestyle and creativity with academic motivation among female high school students in Khoy city in the academic year of 92-93. *Sci Res J Azad Univ* 2014;7:161-80.
 13. Solhi M, Shabani MH, Salehi M. Determinants of quality of life in Female-headed households based on educational and ecological cognition stage of precede-proceed model, *Razi J Med Sci* 2016;23:109-18.
 14. Mayring P. Qualitative Content Analysis: Theoretical Background and Procedures. Available from: https://link.springer.com/chapter/10.1007%2F978-94-017-9181-6_13/. [Last accessed on 2017 Nov 2].
 15. Hsieh HF, Shannon SE. Three approaches to qualitative content analysis. *Qual Health Res* 2005;15:1277-88.
 16. Graneheim UH, Lundman B. Qualitative content analysis in nursing research: Concepts, procedures and measures to achieve trustworthiness. *Nurse Educ Today* 2004;24:105-12.
 17. Cohen D, Crabtree B. Lincoln and Guba's evaluative criteria. Qualitative Research Guideline Project. July 2006. Available from: <http://www.qualres.org/HomeLinc-3684.html/>. [Last accessed on 2017 Nov 2].
 18. Elo S, Kaariainen M, Kanste O, Polkki T, Utriainen K, Kyngäs H. Qualitative content analysis a focus on trustworthiness. Available from: <http://journals.sagepub.com/doi/abs/10.1177/2158244014522633/>. [Last accessed on 2017 Nov 2].
 19. Peykari N, Eftekhari MB, Tehrani FR, Afzali HM, Hejazi F, Atoofi MK, *et al.* Promoting physical activity participation among adolescents: The barriers and the suggestions. *Int J Prev Med* 2015;6:12.
 20. Babanejad M, Khesht Zarin H, Sayehmiri K, Delpisheh A. Lifestyle investigation and its associated factors in students of Ilam University of Medical Sciences. *Pejouhandeh* 2012;17:252-7.
 21. Anand P, Kunnumakkara AB, Sundaram C, Harikumar KB, Tharakan ST, Lai OS, *et al.* Cancer is a preventable disease that requires major lifestyle changes. *Pharm Res* 2008;25:2097-116.
 22. von Bothmer MI, Fridlund B. Gender differences in health habits and in motivation for a healthy lifestyle among Swedish University Students. *Nurs Health Sci* 2005;7:107-18.
 23. Mansorian M, Qorbani M, Solaimani MA, Maoodi R, Rahimi E, Asayesh H. A survey of lifestyle and its influential Factors among the University Student in Gorgan. *J Jahrom Univ Med Sci* 2009;7:62-71.
 24. Motlagh Z, Mazloomi-Mahmoodabad SS, Momayyezi M. Study of Health-promotion behaviors among university of medical science students. *Zahedan J Res Med Sci* 2011;13:29-34.
 25. Peker K, Bermek G. Predictors of health-promoting behaviors among freshman dental students at Istanbul University. *J Dent Educ* 2011;75:413-20.
 26. Sallis JF, Glanz K. Physical activity and food environments: Solutions to the obesity epidemic. *Milbank Q* 2009;87:123-54.
 27. Puhl RM, Heuer CA. Obesity stigma: Important considerations for public health. *Am J Public Health* 2010;100:1019-28.
 28. Mahmood Abad SM, Mehri A, Morovati Sharif Abad MA. Association of self-confidence and self-efficacy with health behaviors in Shahid Sadooghi University of Medical Sciences. *J Med Educ Dev Stud Cent* 2007;3:111-7.
 29. Whitehead S, Biddle S. Adolescent girl's perceptions of physical activity: A focus group study. *Eur Phys Educ Rev* 2008;14:243-62.
 30. Allender S, Cowburn G, Foster C. Understanding participation in sport and physical activity among children and adults: A review of qualitative studies. *Health Educ Res* 2006;21:826-35.
 31. Kelishadi R, Ardalan G, Gheiratmand R, Gouya MM, Razaghi EM, Delavari A, *et al.* Association of physical activity and dietary behaviours in relation to the body mass index in a national sample of Iranian children and adolescents: CASPIAN study. *Bull World Health Organ* 2007;85:19-26.

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