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Health need assessment in female adolescents, in Qom: A cross sectional study

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Abstract:

BACKGROUND AND OBJECTIVE: Due to the young population of Iran, a significant number of teenagers in our country and the importance of the health of adolescents, especially teenage girls who are the mothers and the future-makers of the society, we designed this study to determine the health needs of adolescent girls living in the city of Qom.

METHODOLOGY: In this descriptive cross-sectional study, the research population included 853 student girls in the middle and high secondary grades in the city of Qom selected and participated in the study through a randomized multistage cluster sampling method. Data were collected by completing the demographic information questionnaire, and the adolescent girls' health needs questionnaire. Data gathered were analyzed using SPSS software version 19 using the descriptive and inferential statistics.

RESULTS: The study results showed that the scores of the adolescent girls' needs in health-related areas are as follows: health: 65.33 ± 22.08 , nutrition: 52.81 ± 25.40 , exercise and physical activity: 50.10 ± 30.55 , social justice: 53.95 ± 23.82 , counseling: 49.55 ± 34.97 , school status: 52.69 ± 28.01 , relationship with parents: 55.10 ± 27.44 , social support: 50.64 ± 30.52 , education: 51.88 ± 29.61 , religious beliefs, and spirituality: 66.88 ± 20.87 .

CONCLUSION: Based on the results of this study, the adolescent girls have a lot of perceived needs in various areas of health, including psychological-emotional, social, physical, educational, and beliefs areas, which have not been met. Therefore, it is recommended to plan and carry out the necessary measures to meet the needs of adolescents with their participation and relevant authorities.

Keywords:

Adolescent girls, health needs, need assessment

Introduction

Adolescents who, according to the WHO, are individuals between 10 and 19 years of age, account for over 1.2 billion of the world's population.^[1] According to the results of the population and housing census of the Islamic Republic of Iran, the population of the country in 2016 was estimated to be 79,926,270 people are, of which approximately 14% are in the age group of 10–19 years old.^[2]

Focusing on the health of adolescents, especially the girls, appears to be among the Millennium Development Goals and one of the missions of the member countries of the WHO.^[3] The first step in promoting health is to measure the needs of the target groups in the context of society. Health need assessment is a method to identify the needs in the health area, which results in suggesting proposals for taking measures that can meet these needs.^[4] Furthermore, different communities are expected to prioritize the services based on existing needs assessments.^[5]

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Benefitting from a huge capital of teenagers, our country, Iran, requires accurate planning and attention to the health needs of this group. In the meantime, the health of adolescent girls is particularly important since the health of adolescent girls, directly and indirectly, affects the nation's health indices including the rates of maternal mortality, perinatal mortality, and the neonatal mortality. The challenges of puberty, fertility, and reproduction are all factors influencing the health of girls at present and in the future.^[6] Considering the importance of the issue, various studies have been conducted to measure the needs of girls in the field of health. For example, in a study, Mirzaii Najmabadi *et al.* explained the challenges faced by Iranian teenage girls in access to sexual and reproductive health information and services. The results of their study showed that the challenges ahead of Iranian teenage girls in access to reproductive and sexual health information and services can be explained in four categories of political challenges such as the failure to adopt a specific strategy by the government, cultural, and social challenges such as taboos, structural, and executive challenges such as the inappropriate structure of the health system, and the failure to use the potential religious potential.^[7] The results of Shahhosseini's study revealed that the main educational needs of adolescent girls include the training on sexual health, common diseases, life skills, and training on the proper use of the media (mobile, Internet, etc.).^[6] In a study conducted in nine cities of Iran, Osareh & Nasri. reported that the most important need of teenage girls and boys had been the need for education on the health principles of puberty and related physical, sexual, and psychological changes.^[8] Given the cultural diversity of Iran and due to different needs of adolescents in different regions influenced by the culture and the economic and social conditions of those regions, the present study was designed to determine the needs of adolescent girls in Qom metropolis.

Methodology

The present research was a cross-sectional study of descriptive-analytical type. The research environment covered the secondary schools and high schools in the city of Qom and the research community included all teenage girls educating in secondary schools and high schools who lived in Qom.

The sample size was calculated as 360 individuals according to Shahhosseini *et al.* study^[9] using the following formula at a 95% confidence level, the accuracy of 0.05, and $P = 0.39$. Due to the drop in the number of samples, the sample size was increased to 400 people. Since the size of the sample is required to be doubled in the cluster sampling method, the sample size was finally estimated to be 800.

$$n = \frac{\left(Z_{1-\frac{\alpha}{2}} \right)^2 p(1-p)}{d^2}$$

The schools were selected randomly by a multistage cluster sampling method, and the samples were chosen randomly. Hence, the samples were initially divided into two sections of middle school students and high school students. Then, considering the four education districts of the city of Qom, the samples in each grade were divided into four sections. In the next step, a number of educational centers in each area and classrooms in different grades were selected by a randomized methodology using the drawing technique as the chosen classes. Finally, the students were also selected through a draw from the students of the selected classes meeting the inclusion criteria (Iranian nationality, no history of physical and mental illnesses, and ages 12–19 years). Failure to respond to more than 20% of the questionnaire's questions was considered to be an exclusion criterion.

The data collection tool included two demographic characteristics and assessment of health needs of adolescent girls questionnaires. The questionnaire for measuring the health needs of adolescent girls developed by Zohreh Shah Hosseini has 65 questions and five main themes of psychological-emotional, social, educational, physical and belief health needs, and 10 areas. The questions assess the areas as follows: health area (questions 1–5), nutrition (questions 6–11), exercise and physical activity (questions 12–14), social justice (questions 15–19), counseling (questions 20–24), school conditions (questions 25–30), relationships with parents (questions 31–40), social support (questions 41–44), training (questions 45–60), religious beliefs, and spirituality (questions 61–65). The participants were asked to answer to each of the statements of the questionnaire in two current and optimal situations in a 5-option Likert spectrum, from completely disagree (5) to totally agree (1) to assess the optimal situation and from never (1) to always (5) to assess the status quo. The scores of each question were expressed as mean (1–5) and the standard deviation after calculation. The basis for determining the need in this study was established based on the definition of need, which refers to the distance between the desired situation and the status quo. Thus, the teenagers described their desired status and the current status by answering 65 questions. In the next step, the need rate for each statement was calculated by differentiating the desired status score from the existing status score. After calculating the mean and standard deviation, the need rate for each question was expressed in percentage.

The validity of this questionnaire was confirmed by content validity, formal validity, construct validity,

and criterion validity. In the validity section, the mean value of the content validity of the tool was calculated as 0.92. In the reliability section, the Cronbach's alpha coefficient for the whole tool was 0.9, and the retest reliability coefficient was obtained as 0.93.^[9] Data were collected through completing the mentioned tools as self-reporting.

After approving the research project and obtaining a code of ethics and permits for sampling from Qom University of Medical Sciences, the sampling letter of recommendation was provided to the education department of the city of Qom to obtain the sampling permit at the level of the schools. The researcher then visited the selected schools and delivered the sampling permit to the schools' managers. After gaining their approval, the researcher attended the selected classes and provided the students with the questionnaire. The students were asked to complete the questionnaire at intervals between classes and return them to the researcher. The SPSS software version 19 (Chicago: SPSS Inc.) (produced by SPSS Inc.) and descriptive statistics (frequency, mean, and standard deviation) and analytical statistics such as Kolmogorov–Smirnov and Wilcoxon tests were used to analyze the data. The statistical significance level of all tests was considered to be 0.05.

The ethical considerations study was observed by explaining the goals and methodology of the study for the participants and obtaining their informed consent tacitly as well as maintaining the anonymity and confidentiality of the information. The participants were assured that their participating in the study is voluntarily and they can quit at any time.

Results

A total of 853 adolescent girls with a mean age of 14.26 ± 1.60 years participated in this study all of whom were studying in the middle schools (55.8%) and high schools (44.2%). Economically, most of the teens evaluated their families good (43.8%) and ordinary (30.4%) and described their relationship with their parents very well. Of all, 91.3% of adolescents said they live with their parents. Of families, 25.8% had three children with the highest frequency. Table 1 summarizes the demographic characteristics of the study participants. Since the variable of adolescents' needs had an abnormal distribution according to the Kolmogorov–Smirnov test, the Wilcoxon test was used to compare the status quo and the optimal situation. Table 2 represents the findings of the study in this regard. In the case of the optimal situation, a lower score indicates a higher need, while in the status quo, the higher score indicates a better status. As seen in Table 2, the female students have perceived

Table 1: Demographic characteristics of teenage girls

Characteristics	n (%)
Age	
Mean±SD	14.26±1.60
Range	19-11
Grade	
Middle school	448 (55.8)
High school	371 (44.2)
Living with parents	
Yes	744 (91.3)
No	71 (8.7)
Financial condition	
Excellent	138 (16.2)
Good	379 (43.8)
Average	259 (30.4)
Weak	19 (2.2)
The smokers in the family	
Father	105 (12.3)
Mother	25 (2.9)
Brother	13 (1.5)
Occurrence of menstruation	
Yes	668 (78.3)
No	132 (15.5)
Talking about menstruation with mom	
Yes	634 (79.3)
No	147 (17.2)

SD=Standard deviation

a significant need in all areas related to the health as the perceived needs of the girls in different areas are as follows: health area: 65.33 ± 22.08 , nutrition area: 52.81 ± 25.48 , exercise and physical activity: 50.10 ± 30.55 , social justice: 53.95 ± 23.82 , counseling: 49.55 ± 34.97 , school's condition: 52.69 ± 28.01 , relationship with parents: 55.10 ± 27.47 , social support: 50.64 ± 30.52 , education: 51.81 ± 29.61 , religious beliefs, and spirituality: 66.88 ± 20.87 .

The needs of students have been significant in all areas (health, nutrition, exercise, and physical activity, social justice, counseling, school status, relationship with parents, social support, education, religious beliefs, and spirituality) ($P = 0.00$).

Discussion

The findings of this study suggested that the adolescent girls have perceived a significant need in all areas including health, nutrition, exercise, and physical activity, social justice, counseling, school, relationship with parents, social support, education, and religious beliefs and spirituality. In their opinions, there was a significant difference between the existing situation and the optimal situation in different dimensions.

In this study, the adolescents perceived a significant need in case of health needs, including bathing, oral

Table 2: Health needs of adolescent girls living in the city of Qom

Need area	Mean±SD of the optimal status	Mean±SD of the current status	The need rate in percentage	P
Health	1.0±26.59	4.0±53.72	33.08±65.22	<0.001
Nutrition	1.0±50.80	4.0±30.84	52.25±81.40	<0.001
Exercise and physical activity	1.0±40.73	3.1±91.33	50.30±10.55	<0.001
Social justice	1.0±33.64	4.0±24.85	53.23±95.82	<0.001
Counseling	1.0±41.81	4.1±12.30	49.34±55.97	<0.001
School status	1.0±31.65	3.1±94.17	52.28±96.01	<0.001
Relationship with parents	1.0±35.54	4.1±10.07	55.27±10.47	<0.001
Social support	1.0±38.71	3.1±52.21	50.30±64.52	<0.001
Education	1.0±43.77	4.1±00.04	51.29±81.61	<0.001
Religious beliefs and spirituality	1.0±22.54	4.0±56.72	66.20±88.87	<0.001

SD=Standard deviation

hygiene, adequate sleep, clean environment, and access to healthy water as well as healthy nutrition, which implied a significant distance between the status quo and the optimal situation. Consistent with the results of this study, other studies have also reported a poor health performance of adolescent girls in the puberty period.^[10,11] For example, regarding oral hygiene, Asgari and Asgarani have described poor teeth hygiene and inadequate brushing as the main causes of the high prevalence of dental caries in Iranian teens.^[12] Furthermore, Vafae-Najar *et al.* found that many teenagers have improper nutritional habits.^[13] Summarizing the findings of this study and similar studies indicate the need for planning aimed at promoting health knowledge and providing relevant requirements for the adolescents.

In the area of physical activity, in the present study, the teenagers' access to sports facilities gained a low score, suggesting a significant difference between the existing situation of teens' access to sports facilities and the optimal conditions. The results of studies in Isfahan also indicate that about 50% of students in Isfahan, Najaf Abad, do exercise regularly for just 2 h a week.^[14] Considering the findings of numerous studies on inadequate adolescents' access to sports and exercise facilities, it seems that the officials, as well as families, have to pay more attention to provide sports facilities and facilitate the access of adolescents to such facilities.

The results of this study showed that from the viewpoint of adolescents, the present status of social justice (attention and kindness of loved ones, peace of mind, concerns about future career, and justice in enforcing the law) is significantly different compared to the optimal situation and is less than expected. Shahhosseini *et al.* also reported a meaningful difference between the optimal status and the status quo in the area of social justice.^[9] For example, from the perspective of adolescent girls, the psychological-emotional needs are in the first place, while parents are more concerned with

the physical needs of the adolescents.^[15] Based on the results of this study, the girl teens are concerned about their future success in connection with choosing a proper job and benefitting from an acceptable economic status, which is consistent with the results of other studies.^[16] As seen, the adolescents emphasize the weakness of social justice in different studies. As a result, policymaking to address the concerns of adolescents in relation to social justice seems to be necessary.

Regarding the area of counseling, the adolescent girls emphasized on their need for the counseling confidentiality, not being ridiculed and blamed, not being improperly judged by, and not being counseled in the group so that the difference between the status quo and the desired situation was significant. What drew the attention in this study is to assign lower scores to the questions in this area in relation to the status quo compared to other areas. The findings in the study of Shahhosseini *et al.* also suggested the perceived need for adolescent girls in the area of counseling.^[9] Given the emphasis of existing studies on the perceived need of adolescent in the area of counseling, it is recommended to inform the counselors about the needs of adolescents, increase the knowledge and skills of counselors, and provide the availability of consulting services. In the area of school-related needs, the adolescents' needs were significant in categories such as the gentle tone of the director or teacher when reminding or warning about something, discrimination between students, examination-induced anxiety, and the volume of courses, implementing recreational programs at school, and providing educational programs in the community. In this regard, the implementation of recreational programs at the school and the provision of training programs in the community obtained lower scores compared to other questions, which suggest the current situation is more undesirable. Shahhosseini *et al.* also reported the anxiety of the examinations as the most perceived need.^[9] It may be due to the fact the teenagers are continually told that the academic achievement is their mere goal of his life for future supply. In addition to the examinations, the

teacher and the classroom also make the students anxious and affects their everyday lives.^[17,18] Ilmaz emphasizes that when the students participate more in school and classroom and consider the school officials and teachers more unprejudiced and fair, the relations between the school staff and the students become closer, and as a result, the ground will be provided for personal growth and self-esteem strengthening of the students.^[19] As seen, the findings of this study are consistent with similar studies. Accordingly, the needs and demands of adolescents have to be communicated to the education officials, especially the teachers and the proper strategies need to be designed to address the needs of adolescents in this area.

In the area of relationship with parents, the needs of students were significant in the categories of cordial behavior of the family, spending time with family, relationship with the parents, discrimination among children, giving advice with rational reasons, freedom under parental control, counseling with parents, choosing the proper name, and getting spending money. The students gave a lower score to the existing status of discrimination between children and the parents' confidentiality. The results of the Nasiri and Tefagh study also indicated that the adolescents are dissatisfied with behaviors such as disrespect for the adolescent's independence, nonprincipled supervision with anger, lack of dialogue on issues of puberty, not answering to the adolescents' private questions, not letting the adolescents' to express their opinions, and the parents' insistence on paying attention to the advice without any objection.^[20] Given the lack of response to the needs of adolescents in the family environment, it seems necessary to increase the parents' knowledge and skills in the area of adolescent parenting and how to behave and communicate with them.

Regarding social support, the needs of adolescents were meaningful in categories such as acceptance by peers, the use of specialists to solve the adolescents' problems, the existence of places to support teenagers, and the availability of the teenage services center. All the questions in this section, except the ones related to the peers' acceptance and availability of costs payment, scored lower compared to other questions in the questionnaire, indicating that the status quo was unfavorable. Other studies also reported the levels of social support and peer support low from the viewpoint of the adolescents.^[21,22] In relation to the center for providing services to adolescents, in line with the findings of this study, Ramezanzadeh *et al.* reported that the number and status of existing centers for providing services to teenagers and young people in Iran are at moderate and weak levels regarding meeting the physical quantities of special centers for adolescent and young people.^[23] Other studies also mentioned

the challenges faced by teenage girls as inappropriate structure of the health system, the lack of staffing and technical preparedness of the health centers, the lack of proper information on the reproductive health area, the lack of coherent and correct planning in the field of fertility and sexual health of adolescent, and the unavailability of suitable services for teenage girls.^[24] As can be seen, the findings of this study and similar studies indicate the unmet needs of adolescents in the social support area. Therefore, we recommend the required planning for the development of social services and support specifically for the adolescents.

In the area of educational needs, the needs of teenage girls were significant in the categories of knowledge of centers for providing services to adolescents, preventing the false information transmission, trainings of health, individual hygiene, puberty health, life skills, common diseases, proper nutrition, sexual health, the correct use of media, friendship with the opposite sex, addiction, the existence of continuing educational programs, receiving training from radio and television, and using the experiences of others. The scores of training questions about preventing the transmission of inaccurate information, common illnesses, sexual health, and addiction were lower than other questions, suggesting that the current situation is unfavorable. In line with the findings of this study, the most important educational needs of teenage girls are mentioned in Mirzaii Najmabadi *et al.* study in Qazvin as growth impairment, low mobility, nutrition disorders, anemia, oral hygiene, and low appetite. The girls said that they need to receive information about menstrual health, sexually transmitted diseases, sexual issues, and life skills.^[25] In a study conducted by Olfati and Aligholi, the mean score of girls' knowledge in the areas of nutrition, exercise, and contraceptive methods was poor, and their knowledge about sexually transmitted infections and AIDS was at a moderate level.^[26] The results of existing studies indicate that the educational needs of adolescents in different areas are not addressed; thus, it seems necessary to plan for educational courses and workshops and also to use the media in this regard.

In the context of spiritual needs, the students' need was meaningful in the category of relationship with God and trusting him, achieving peace through with worship, depicting a beautiful representation of religion, and expressing religious issues with reason. The results of a study by Shahhosseini *et al.* also showed that the spiritual needs of adolescent girls are classified in four groups of deepening the religious attitude (belief and trust in God), promotion of religious practice (performing religious duties and resorting to infallible Imams), religious esthetics (nonpromotion of personal interpretations of religion and avoidance of violent expression of religion), and religious rationality (reasoning in religion

and reforming superstitious beliefs).^[27] The results of Ahmadi study also revealed that religious beliefs among Iranian adolescents are lower compared to other cultural and social vulnerabilities.^[28] Regarding the effect of spirituality and spiritual health on individual and social health and the perceived need of adolescents in this area, it is suggested to include the spiritual health promotion at the top of the schools' curriculum.

The limitations of this study were its cross-sectional nature, noninclusion of adolescent girls living in the villages, and the adolescent boys. Thus, we recommend covering these factors in future studies. One strength of the present study is performing such a study for the first time in the city of Qom. Since the cultural and social context of the community undoubtedly affects the perceived needs of adolescents, conduct similar studies in different social contexts seems to be essential.

Conclusion

Based on the results of this study, the adolescent girls have many perceived needs in different areas, including health, nutrition, exercise, support, school educational programs, relationship with parents, consultative services, and spirituality, which are not met. It seems that we all have to comprehensively pay attention to the different dimensions of adolescents' health needs to consider and meet their perceived needs meanwhile avoiding the neglect in the provision of essential needs of the adolescents. Accordingly, necessary planning has to be made to meet such needs.

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Conflicts of interest

There are no conflicts of interest.

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