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## Study of the Knowledge of Girl Students Aged 12- 15 about Puberty Health and Factors Which Influence that by the Educational Year 1392-93, In Qom.

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### ABSTRACT

Puberty as a part of adulthood is a period of transforming from childhood to adulthood stage and is the time to gain the fertility power. This period is one of the most important and most valuable periods of everyone's life, because it is the starting stage of physical, mental and social changes and developments. The current research is aimed to study the awareness of female students in Qom about the puberty health and factors affecting that. This research is done by the educational year of 1392-93. The current study is a cross sectional one. About 634 female students of Qom secondary schools, participating in this research. They were selected randomly from different educational regions of Qom. Tools for gathering information includes a questionnaire in two part of demographic indexes and special questions about puberty health. Students were asked to complete this questionnaire. Data gathered were analyzed using SPSS software applying central and distribution indexes and also diagrams and statistical tables to discuss the aimed society and in the part of data analysis the research applied parameters such as t-test for two independent sample, Pearson correlation coefficient, Lanest, Tokay test and the one way variance coefficient. The average age of the participants was 68.13 year and the average for starting age at menarche was 12. Awareness level for the participating units was 61.9. Different resources of gaining information about the subject were not effective for participants, but their awareness was statistically different based on different regions they live. Also there was a difference among their mothers for their awareness of puberty health based on difference of their educational level but it was not scientifically meaningful. The student's ethnicity was not effective on their awareness of puberty health and at the end 7.75percent of the students emphasized on the necessity of teaching health problems for puberty in schools.

**Keywords:** awareness, female students, secondary school, puberty health

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## INTRODUCTION

Adolescence included 3 different period of time with their special characteristics: 1) before the puberty till 1 or 2 years after that, 2) mid time period from age 14 to 15, time in which they against their parents and looking for matching others in their age, 3) is a period of time that adolescent looking their own identity or better to say they are searching answer for this question that "Who am I?" (1). Puberty is part of the adolescence, a period of time to passing through childhood to adulthood and gaining the power of becoming fertile (2). This time is the most important and valuable period of life for everyone, because is the starting stage of physical, mental and social changes and developments (2). And in girls puberty will be detected by factors such genetics, body weight, and family and season pattern. In the previous century we have seen a progressing decrease in developing world (3). The importance of this subject is that based on the census of 1390, about 16% of the country's population belongs to the adolescents which is about 12278478 person of which about half belongs to the female adolescents a population of 6042654. This age group has important role in implementation of health goals and strategies, for they are very vulnerable because of the recent changes in social conditions (4). One of these goals is the puberty health which is included the basics and cares for improving the emotional and mental health of the person in this period and is needed for learning more than anything (5). Puberty and fertility is a special and sensitive time of life for adolescents and one of the main necessities for that is to improve the level of their knowledge and awareness in a cultural and ideological framework (4). The training must contain the field of physical, mental and social issues of puberty in three cores of the family school and public education. Nic Vaion wrote that schools are the best place to improve health and prevent illness, although the family as the first social unit has the main and most important role in training health issues to their members (2). Unfortunately our female adolescents like some other societies for the reason of cultural boundaries (6), are forced to use unaware or invalid resources for gaining information about their life (7). From one hand a good training will end to happiness and health and also hope to become independent and reaching the social growth and also make them safe from physical and mental illnesses (6). Hedayatipur in his research (1383) discussed the awareness of female school students of Qom. Hedayatipur found that in the secondary school which is the most sensitive time for puberty, the student's awareness was in a very low level and increased by training to a significant level (8). In our society not for the religious or ideological reason but for the cultural reason, most of the adolescents, especially females do not have the proper information about the physical changes of the puberty time and even it is possible that for gaining such information from invalid resources they confront with problems. Adolescent's awareness of physical, mental and social puberty issues in a proper age and learning it through a valid resource will end to their happiness, independence and social growth, and will protect the adolescents from congenital illness and its consequences for the present and future and also prepares a healthy and happy life full of the responsibility senses, for both man and woman (9). The present time has more adolescents than other times, and the age of adolescence will be the vital time for the rest of the life. Adolescence is the time to gain fertility, gain the emotional characteristics of the adulthood, and a time to reach the individual and social identity and etc.... Physical, mental and emotional puberty will be continued by adolescence. Most of the physical, mental and social problems and unhealthy behaviors have their stem in adolescence. Most of the failed marriages, unsafe pregnancies, mortality, unhealthy habits and behaviors arise from this time. Researches have shown that most of the people who smoke cigarette, the first one was in their puberty age. So we can prevent such behaviors by training the adolescents (10). The aims of the current study is to recognizing health situation of female students in the society, and recognizing factors which affecting puberty and fertility health of girls and young women, recognizing social, economic, political, and cultural factors and their range of effects on girls and young women, presenting systems and programs to improve their health status, and improving the female students health status in secondary schools of Qom city by the educational year of 1392-1393.

## METHOD

In this paper which is a cross sectional study, the population of research were selected from secondary school students from Qom. Related data were gathered by the educational year 1392-1393. A population of 634 person was considered for the sample group and cluster sampling were used, this means that some students of grade two and three of secondary school were selected randomly from different schools of different regions of Qom. Sampling requirements for entering research units were having all puberty signs and being able to answering the defined questions. All cases with any illness or genetic issues or not representing the puberty signs were removed from the sample. Data gathering tool was a questionnaire have been used for similar studies in the country (12). The questionnaire contained 19 questions each correct

answer gained 1 score and for the wrong answers the score 0 was predicted. Ultimately the total score for each person was 0 to 19. The lowest score for the students were 0 and the highest were 18.

To assess the validity of the questionnaire Questions designed for students' awareness of puberty health has been studied by several obstetricians. To assess the reliability, initially a pilot sample (at least 30 person) of the students were selected, and after gathering data using Cronbach's alpha test, the reliability was 89%. Multi-part questionnaire was used for data collection, which were included personal information and general knowledge, attitude and practice (13 items). The questionnaire included questions about the characteristics of girls menstrual, how bathing, grooming, and exercise, resting and feeding.... The questionnaires were distributed among all students in the class, and were collected after completion of the session and all the students of each class were participated for 100%. Collected data analyzed using spss -16 to discuss the target population. in the part of data analysis the research applied parameters such as t-test for two independent sample, Pearson correlation coefficient, Lanes test, Tokay test and the one way variance coefficient.

## RESULTS

Among 634 respondents from four educational region in Qom who were selected randomly, 19.9 percent were from region one, 25.7 percent were from the second region, 27.8 from region three and 26.7 from region four. The average for the student's age was 13.61 with the standard deviation of 0.84. 53 percent of the students were the first daughter of the family.

About 80% of student's mothers had low literate school education, 7.2% of student's mothers in medical sciences, 3.0% in the fields of nutrition and 0.8 percent were educated in the field of sport and physical education. 91.6 percent of mothers had no education in these three fields. 93% of fathers did not attend any of the three fields and only 7.5 percent of them educated in the field of medical science, 7.0 percent in the field of nutrition and 7.0 percent in the field of sport and physical education. Between ethnic groups 7/70 percent were Farsi natives, 12.5 percent Turks, 8.1 percent Kurds, 1.6 percent Lori, 4/1 percent Gilaki and 8/0 percent were Arabs. 9.9% of respondents were Afghans.

Finally about the awareness of puberty health, in the range of zero to 19, the lowest score was zero and the maximum score was 18 and an average knowledge of puberty health was 61.9. Between knowledge of puberty health in children with no health educator and student with health educator there was not statistically different. Also, the awareness of adolescent health with various sources of information, ethnicity, maternal education, parent education, birth order, there was no statistically significant difference. But awareness of puberty health in children living in different areas was statistically different and there was a relation between the awareness of puberty health with age of female students in Qom.

Only 4.4% of students reported that they have health educator in their school and 93.1 percent had no health educator. 8/34 percent of respondents aged 12 and 3/31% their first menstruation took place when they were 13 years. It means that the most common age at menarche among respondents was 13-12 and most studies in Iran and other countries have also confirmed this subject.

5/48% of the respondents tended to gain information about puberty and menstruation through their mother and sister, in this regard 3/57 percent of respondents were familiar with the issues of puberty and menstruation for the first time through their mother and sister. With these statistics in mind and the average score of 61.9 for awareness of puberty health, which relatively is a low score, suggests an urgent need to educate mothers about the adolescent health. Finally 5/75 percent of students, believed that adolescent health education in schools needs urgently to be started and this is when only 4.4 percent of the students have health educators in their school.

5/65% of the students addressed to the correct definition of maturity but given that one of the signs of puberty is breast development in girls, only 24.9 percent of the students addressed to the correct definition. Consequently, less than a quarter of students on one of the signs of pubertal growth breasts had correct information. The main contributing factors to the onset of puberty is inheritance, However, only a small percentage of respondents that contains 7/1%, know such important factor, while awareness of such a simple matter may reduce many concern of parents and visits to the doctor and unreasonable treatment is

unjustified. In connection with the exercise in adulthood which safely exercise can end to fitness and health, the proper response belongs to 9/68 percent. Moderate consumption of sugar, fat and protein is essential for the maturation time and 9/53 percent of the students answered the question correctly. These results indicate that less than half of the students still do not have correct information about nutrition during puberty. Since the peak of maximizing bone mass is during adolescence, 3/60 percent of the students have the correct answer to this question and still 40% of people do not realize that their future osteoporosis is closely related to their maturation. In the absence of menstrual hygiene the main problem is infection, fortunately 1/78 percent of the students have pointed it correctly.

About the proper way to relieve menstrual cramps, 64% of students answered the question correctly. In connection with a change of underwear during menstruation, that a proper procedure is daily replacement of underwear, unfortunately, only 28.4% of students have pointed to the correct answer. These low percentages indicate the need for training in the fields above body activities during the menstrual period must be like simple and light sports, that only 1/46 percent of respondents who were aware of how to properly exercise at this time but if we want to train correct style of life in the community, it promote further work in this area. Consumption of various food groups is important in this time and about 8/36 percent of students correctly answered this question. All this suggests there is a need for culture and education in the field of adolescent health and menstruation.

Finally, the average awareness of puberty health is 61/9 respectively. This figure is relatively low, suggesting the need for frequent trainings focuses on adolescent health.

Results showed that the average age for Menarche in 8.34% of the units was the age 12. Alavi (1385) the average age for Menarche was 12.6 which is constant with our results. but this finding is not constant by the study done by Dr. Kazeruni in which the average for menarche is 13.9 (16). Najafi and colleagues (1392) in Yazd with a sample of 934 thirty five year old women, suggested that the reason for not consistency of the results with dr. Kazeruni is for the phenomenon of the general trend or better to say that it means that the samples who have recently experienced menarche are more accurate than the previous samples. A research in Arab countries (17) shows the menarche age as 12.68 that is consistent with our data.

The study of Ezat Mobin and colleagues in 1392 girls know parents and relatives at home (5/75%) and health care workers the most important source of information, which is consistent with our results in terms of priorities. So those in this study, 57/3% by mother and sister, 3/11% for health educators tend to learn and train such issues. The results of this study are consistent with studies of Dr. Pvraslamy and Malik in Tehran and Khorramabad (9,13) Ezat Mobin in his study, told that girl prefer to talk with her mother and sister due to timidity instead of health workers. But for this age group to raise awareness and correction of erroneous beliefs and attitude to hygiene during the menstrual cycle it is a necessity. In a similar study done in the affection of Qazvin 73 percent of teens said they need to know more about puberty, and prefer their mother and teacher as the main source of information and in research of Alavi, family as a source of advice respondents (72/3%) and training (7/68 percent) preferred on adolescent health (Alavi 2008). Rudd and his colleagues suggested that 48% of reported mothers as source of information about the students. (Rudd, 1390, 52-45) Abdullahi found that, 62 percent of girls told about their first menstrual to their mothers, these results matches with the expected health supplier girls ( $p < 0.0001$ ). (Abdullahi, 1383, 63-56) Said Ali Tazyn said 98% research resource for information related to puberty are mothers. (Ali, 2010, 531-541) source of information in Pourhassan study were: 23% Book, 5/14% for television, 35/5% teachers and 5/26% family. (Pourhassan, 2012) In a study of adult females the most righteous way to learn was their parents (Ahmad and Malek Afzali, 1379, 38-27) and their mothers think about their own information as incomplete information (Niknami and Zeinali, 1381, 49 -41)

In this study, adolescent health education in schools has been questioned, 7/75 percent of students told that adolescent health education in schools are necessary and 24.3% the rest of the stuff taught that these are not necessary in schools. Pourhassan found, 98% of students stated that they needed more information on adolescent health. (Pourhassan, 2012) in the study of Alavi students wanted to increase knowledge, improve attitudes and training needed to improve performance (Alavi, 2008) Said Ali said that, 72% believed that they must the research before and during puberty receive information on adolescent health. (Ali, 2010, 531-541) Therefore, puberty health education should start at a lower age unfortunately, because knowledge of sexual and reproductive health of the change in maturity, will be gained after marriage, usually at the expense of an

unwanted pregnancy, venereal diseases and bad consequences resulting from failure to comply with hygiene solutions achieved.

### **CONCLUSION**

Training puberty health, before and during the puberty based on the levels necessities and training mothers about health and puberty for their main role in giving information to their girls, also considering the issues and cultural boundaries in making optimal health behaviors, and in order to presenting solutions to increasing the students awareness in this fields, we suggest to distributing training brushers or classes once a week in every school using health professionals.

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