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Research Article

THE EFFECT OF COUNSELING ON KNOWLEDGE, ATTITUDE AND PRACTICE OF PUBERTY HEALTH AMONG ADOLESCENT GIRLS LIVING IN WELFARE BOARDING CENTERS**Fahimeh Ezzati Arasteh¹, Fatemeh Shobeiri^{*2}, Parisa Parsa³, Younes Mohamadi⁴**¹M.Sc. Student in Midwifery Counseling, Faculty of Nursing and Midwifery, Hamadan University of Medical Sciences, Hamadan, Iran.²Mother and Child Care Research Center, Hamadan University of Medical Sciences, Hamadan, Iran³chronic diseases (home care) Research Center, Nursing and midwifery, Hamadan University of Medical Sciences, Hamadan, Iran.⁴Modeling of Non communicable Diseases Research Center, School of Public Health, Hamadan University of Medical Sciences, Hamadan, Iran**Abstract:**

The purpose of this study was to improve level of knowledge, attitude and practice of puberty health among adolescent girls living in welfare boarding centers, Hamadan, Iran. This research was applied in terms of its nature and purpose. This quasi-experimental interventional study recruited all eligible 12-19-year-old girls residents (n=30) of the boarding centers affiliated to the Welfare Organization, Hamadan city, Iran. The data collection tool was questionnaires that three times (before, immediately and one month after Intervention) were used. Data using descriptive and inferential statistical methods using SPSS-20 software was analyzed. P-value was considered significant if it was less than 0.05.

The results showed that knowledge, attitude and practice in immediately and a month after the intervention at over time compared to before the intervention significantly increased (P<0.001).The present study concluded that adolescents lacked appropriate knowledge, attitude and practices about puberty in the pre-program phase. After implementation of the program considerable improvements were noticed in adolescent girls' knowledge, attitude and practice. Therefore the educational program was successful in attaining its aims of positively changing the knowledge, attitude and practice of puberty health. Development of Teaching program for health care providers who take care of adolescent girls at girls living in welfare boarding centers about issues related to puberty and reproductive health.

Keywords: *Counseling, puberty health, Adolescent girls***Corresponding author:****Fatemeh Shobeiri,***Mother and Child Care Research Center,
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INTRODUCTION:

Adolescence is an important stage in the human life span marked by the onset of puberty(1). Today, adolescents represent an independent entity in world health care systems (2, 3). WHO identifies adolescence as the period in human growth and development that occurs after childhood and before adulthood, from ages 10 to 19 years(4). Among adolescents, girls are especially vulnerable and more susceptible(4).

Adolescent girls often lack knowledge regarding reproductive health including puberty which can be due to socio-cultural barriers in which they grow up(5-7). In Iran, according to the 2011 census, of the 16.34 percent populations, about 12 million people are 10-19 years old and girls comprise 50 percent of it (8). Many girls in our country lack appropriate and sufficient information regarding puberty and menstrual health(9).

Puberty can be a challenging time that is often associated with early sexual activity, dropping out of school, substance abuse, unsuccessful marriage, unwanted pregnancy, sexually transmitted diseases (STDs) and psychosomatic and social problems (10, 11). According to the above mentioned specific circumstances and spiritual crises of pubertal health training for adolescents seems necessary to reduce the fear of these conditions and prevent false information given by incompetent people in the age of puberty (12).

A study in Oman showed that only half of 1,675 guidance school girls were aware of bodily and sexual changes they undergo at puberty (4, 13). These changes may be a potential source of confusion and pressure for adolescents (4).

Today, more than eight million children around the world live in welfare boarding centers(14). The family environment is the most suitable place for the formation and establishment of health behaviors, while girls living welfare boarding centers do not have such conditions.

Counseling is an effective method for the success of reproductive health and puberty health programs and promotion of health(15).

Some studies have reported that Iranian adolescents have insufficient knowledge about puberty. A research conducted in Tabriz, Uremia, and Ardebil on 2700 students reported that only 40% of adolescents have sufficient knowledge about puberty(16). The studies on menstrual health behaviors of girls covered by welfare boarding centers with girls covered by

family showed that there were significant differences between two groups regarding menstrual health behaviors, so that the score of girls covered by welfare boarding centers was less than the other group(17).

Majority of adolescent girls usually have lack of scientific knowledge and hygienic practice during puberty, also Adolescent girls often are reluctant to speak this embracing topic with their care-providers. So, girls should be educated about puberty and healthy pubertal practices through expanded program of health education in welfare boarding centers. Data on their level of knowledge and practices are useful for planning program for improving their knowledge, attitude and practice level. The aim of this study was to improve level of knowledge, attitude and practice of puberty health among adolescent girls at welfare boarding.

MATERIALS AND METHOD:

This quasi-experimental research was performed for investigating the influence of group counseling on improving knowledge, attitude and practice of puberty health among adolescent girls living in welfare boarding center, Hamadan City in west of Iran. The recruitment took place between October 2015 and March 2016.

This study was carried out at two welfare boarding center in Hamadan City. The subjects consisted of all adolescent girls in the aforementioned living in welfare boarding center in Hamadan City. The total sample was 30 girls, aged 12-19 years. Due to limitations in the sample size, the study was done as a single group. Inclusion criteria: the occurrence of menarche; lack of physical or mental disability; satisfaction of people to participate in the study; no history of psychological illness and non-use of psychological drugs. Exclusion criteria: Unwillingness to continue cooperation; absence of more than one session; making important psychological and emotional changes.

An educational intervention program was developed in a simple Persian language. The intervention included four consultation sessions of 45-60 minutes. The training sessions were held every week in the form of 15 player groups. Every part comprised a mixture of lectures, group discussion, questions and answers displays. Furthermore, at the end of the last session, educational pamphlets were given to the participants. Participants were assessed before intervention (pre-test), immediately after counseling sessions and one month later of the intervention

(post-test) for examining the knowledge, attitude and practice of puberty health.

The first section of the questionnaire was associated with demographic questions such as age, Educational level, age of entry into welfare boarding centers, length of stay in the center, People who visit them, People who go to them when they leave, leave intervals, age of menarche, how to obtain information about menstruation health and

The second and third questionnaires of knowledge, attitude and practice were used. To measure the knowledge, the contained 14 questions were used with ($\alpha=0.87$), to measure the attitude, the contained 11 questions were used with ($\alpha=0.85$) and to measure the practice 20 questions were used with ($\alpha=0.83$).

Analysis of the data was performed by SPSS/20, Descriptive statistics were employed to summarize the demographic data, which was presented using frequency tables and expressed as percentages, mean and mean and standard deviation. The Spearman Colomograph test using to confirm the normalization of data and repeated measurement test. $P < 0.05$ was considered as significant.

The study was performed according to the Helsinki declaration protocol. The objectives of the study were explained to the girls, and informed consent was obtained from all participants. Girls could leave the

study at any time. The study was approved by the Ethical Committee of Hamadan University of Medical Sciences, Hamadan, Iran (approval number: IR.UMSHA.REC.1395.18). The trial was registered with the Iranian registry of clinical trials (IRCT201707016888N17).

RESULTS:

Thirty participants were enrolled in this research. Table 1 demonstrates demographic and medical characteristics of participants. The mean age of the participants was 16.0 ± 2.08 years, which 33.3% were in the age range of 16.0-17.9 years. 54.44% of the participants studied in the Three second periods of high school. Mean age of menarche was 12.8 ± 0.3 years. 83.3% of them experienced menarche at age 10-13 years. 43.3% participants had a feeling of fear and worry in their first menarche. 56.66% had previously received information on menstrual health. Most participants (80%) received their source information on menstrual health through friends and Classmates. The least of them (7.3 %) had received information from health staff (table 1).

The outcomes repeated measures indicated considerable difference between the score of knowledge, attitude and practice in the girls before intervention, immediately and one month after intervention ($p < 0.001$) (table 2).

Table 1: Baseline features and clinical information of the research population

Characteristics	Number (percent)
Age (year)	
12-13.9	4(13.4)
14-15.9	9(30.0)
16-17.9	10(33.3)
18 \geq	7(23.3)
Age of menarche(year)	
7-9	0(0)
10-13	25(83.3)
14-16	5(16.7)
17-19	0(0)
Education	
The first three years of high school	14(46.6)
The Second three years of high school	16(54.4)
Feeling in the first menstruation	
Fear and concern	13(43.3)
I did not feel any special	4(13.3)
Embarrassed	11(36.7)
Happiness and greatness	2(6.7)
Information about Puberty health	
Yes	24(80.0)
No	6(20.0)

Information Resources of Puberty health	
Friends and classmates	24(80.0)
Books and pamphlets	14(17.2)
School health teacher	21(70)
Boarding instructors	12(14.8)
Radio and TV	17(20.9)
Health and medical staff	3(3.7)
Other	4(4.9)

Table 2: Mean scores of knowledge, attitude and performance puberty health before intervention, immediately and one month later

Variable	Pre-Test	Post-Test	1 Months Later	P- Value
Knowledge	7.06±2.37	12.800±1.18	10.63±1.86	F= 67.97 Df=1.74 P<0.001
Attitude	42.00±6.57	52.66±1.49	52.26±1.55	F= 68.89 Df=1.01 P<0.001
Performance	28.86±3.53	29.1±3.02	34.1±3.41	F= 44.26 Df=1.14 P<0.001

DISCUSSION:

The aim of the present was to improve level of improving knowledge, attitude and practice of puberty health among adolescent girls living in welfare boarding in Hamadan.

The onset of puberty is influenced by a number of factors like nutritional status, general health, geographic location and psychological state. Menarche, an important event during adolescence, causes physical and behavioral health issues and frequently needs assessment and intervention (4).

The age of menarche is determined by general health, genetic factors, socioeconomic and nutritional status. In the present study Mean age of menarche was 12.8 ± 0.3.

Findings showed that most (83.3%) of girl's mean age of menarche was 10-13 years. Findings are correlated with the findings of Kheirollahi *et al* the mean age of menarche in this group was girls attained menarche at the age of 12.38 ± 0.99 years(7) and Mohammadzadeh the age of menarche was 12.5±1 years for the studied subjects(18).

Menarche in the majority of girls was unexpected and worrisome, which depicts girls' paucity of knowledge in this area. About 43.3% of our subjects felt some

fear and concern towards menarche. Findings are correlated with the findings of Mohammadzadeh *et al* About 88% of our subjects felt some concern towards menarche (18). In a Chinese study (19), 52.2% of girls felt puzzled and disgusted with the onset of puberty.

As regards the main source of information, the girls reported friends and Classmates identified they were the source of information and whom they discussed puberty issues with. Findings illustrated that most (53.8%) of mothers were found to be main source of information for school going girls about the occurrence of menarche (20). Unfortunately, girls living in welfare boarding are deprived of maternal favors

Thus, the research findings showed that teaching puberty issues to adolescent girls living in welfare boarding centers can increase the knowledge of adolescent girls about puberty and menstruation. The results of this study were consistent with previous studies, conducted by Marvan, and El-Lassy, Kheirollahi(7, 21, 22).

The results of resent study ,girls showed that before intervention, the girls' knowledge of puberty hygiene was low and associated with false beliefs; however

after the intervention, false beliefs about personal health were modified and replaced with true belief. The results of this study were consistent with previous studies, conducted by Haque (23), El-Mowafy's et al (24) and Moodi's et al (25).

In our study of adolescent health behavior increased after the intervention. In similar study by Premila et al. which was conducted in one of the cities in India, it was revealed the educational intervention had a positive effect on the improvement of adolescent girls' behavior (26).

Similar to previous studies, this study showed that adolescent girls often do not receive accurate information about puberty and menstrual health because of culturally specific practices that lead to incorrect and unhealthy behaviors. However, educational interventions, such as the health promotion project in this study, can be quite effective in promoting puberty health (27, 28).

Recommendation: -It is important to educate in adolescent girls living in welfare boarding centers about issues related to puberty, so that they can safeguard themselves against various infections and diseases. -Development of in-service training programs for health care providers who take care of adolescent girls at orphanage home about issues related to puberty and reproductive health.

CONCLUSION:

Due to the effectiveness of group counseling on increasing awareness, attitude and practice of puberty health in adolescent girls living in welfare boarding centers, this method can be used to increase the level of awareness, attitude and practice of puberty health in these adolescents. Consequently many of the problems caused by ignorance for adolescents were prevented and we could lead the next generation to progress in the right direction. Because these teenagers are deprived of family, their coaches can use group counseling to promote awareness and practices of these teenagers and to grow them.

LIMITATION

- 1- Due to the sensitivity of puberty health in Iran, Some examples did not have active participation in the group counseling process.
- 2- The sample size was limited at Hamadan welfare boarding centers.

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COMPETING INTERESTS:

The authors declare that they have no competing interests.

AUTHOR CONTRIBUTION:

FE, FS designed the study. FE and PP processed the data. FE and YM performed the statistical analysis. FE, FS and YM interpreted the results. FE, FS, YM and PP wrote the first draft. FE, FS and YM revised the final draft. All authors read and approved the final manuscript.

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