



## Study of the Relationship between Awareness of Reproductive Health and Self-Esteem Level in the Students of Shahroud University of Medical Sciences

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Received: 19 May 2019

Accepted: 6 October 2019

### Abstract

**Background:** Adolescents are poorly aware of reproductive health issues. Regarding the high importance of reproductive health and self-esteem level, this study aims to determine the relationship between the awareness of reproductive health and self-esteem.

**Methods:** The population of this cross-sectional study consisted of the first-semester students who were admitted at the Shahroud university of medical sciences in January 2017. The demographic information, Cooper Smith scale for self-esteem, and reproductive health researcher-made scale, were completed by the students. SPSS16 software and T-test and Chi-square statistical tests were applied for data analysis.

**Results:** A total of 105 students participated in the study. The average age of students was  $20.2 \pm 1.8$ . The average score of reproductive health scale was  $51.48 \pm 16.24$ , and the average score for self-esteem questions was  $32.91 \pm 13.0$ . There was no statistical difference between the male and female groups. There was a significant relationship between the awareness of reproductive health and self-esteem level ( $r=0.25$  and  $Pvalue=0.001$ ).

**Conclusions:** In the current research, there was a significant relationship between the awareness of reproductive health and self-esteem level. It is suggested that the youth receive more education on reproductive health since this can lead to both mental and physical health.

**Keywords:** Adolescent, Self-concept, Reproductive health.

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Please cite this paper as: Mohamadi S, Rabiee N, Motaghi Z. Study of the relationship between awareness of reproductive health and self-esteem level in the students of Shahroud university of medical sciences. Int J Health Stud 2019;5(1): 15-19.

## Introduction

Adolescence is one of the most important and valuable periods in every person's life. It spans from the final stage of childhood to the youth world at the end of the spectrum.<sup>1</sup> The world health organization (WHO) defines adolescence as the ages from 10 to 19.<sup>2</sup> The turning point of adolescence is puberty and achieving the fertility capability along which there is a wide range of physical, mental-cognitive, and social changes.<sup>1</sup>

According to united nations children's fund data, adolescents constituted more than 1.2 billion of the world's population in 2011, with 85% of them living in developing countries.<sup>3</sup> According to Iranian 2011 census, more than 20% of the population in the country has 10 to 19 years of age.<sup>4</sup> This highlights the importance of caring for this group as adolescents have wider needs than adults which should be identified and fulfilled accordingly.<sup>3</sup>

Many studies have been done in Iran to examine the rate of adolescents' and the youth's awareness of reproductive health. Most studies suggest that the adolescents' awareness rate is poor.<sup>5-8</sup> The lack of awareness and adequate information leads to inappropriate feelings such as aggression, anxiety, and fear in most adolescents.<sup>9,10</sup>

According to the different studies, most adolescents in our society are deprived of correct information about reproductive health.<sup>11</sup> It seems that the youth use deficient resources for their information. Studies show that mothers are considered as the most important information resource for their daughters. Then, the adolescents appeal to the teachers, sisters, peers and health-care providers to achieve information.<sup>5,12</sup>

In their adolescence, humans face different needs including the need for self-esteem whose satisfaction has a positive effect on their other needs.<sup>11</sup> Self-esteem is trust in one's abilities in facing and coping with struggles, the feeling of valuableness, having the right to express the needs and requests, and benefiting from the results of one's own attempts.<sup>11,13</sup>

In general, self-esteem grows until adolescence, but it often decreases in these ages. Many of the physical, cognitive and social changes that occur in the adolescence create a negative effect on the person about him-/herself. One of the important reasons why researchers pay attention to the concept of self-esteem is its potential effect on health. Ignoring the mental health of adolescents is one of the biggest mistakes of the healthcare system, and it seems that without considering the mental welfare of the society, any health program will fail.<sup>11</sup>

Different studies have shown that self-esteem is closely related to general health and sexual health levels.<sup>11,14</sup> Therefore, enhancing reproductive health is of high importance, at least for preventing sexually transmitted diseases in adolescents. Recent studies have assessed the relationship between the self-esteem and risky sexual behaviors, based on which self-esteem can be used as a preventive factor against sexual diseases, violence, aggression, and social criminality.<sup>11,15</sup> In other studies, a relationship was reported between reduction in self-esteem level and eating disorders, thinking about suicide, drug abuse, and early sexual activities.<sup>11</sup> Many researchers consider low self-esteem as one of the factors of drug abuse, risky sexual behaviors, and pregnancy of unmarried girls.<sup>13,15</sup>

Despite the role played by the reproductive health in the society and family health, evaluating fertility health has usually remained neglected.<sup>16</sup> Since adolescents are future-makers, taking care of their health is a kind of investment. Low self-

esteem can be accompanied by emergence of risky behaviors, and the low level of information about fertility health paves the way for different risks such as sexually transmitted diseases. Therefore, this study aims to determine the relationship between the information about reproductive health and self-esteem.

**Materials and Methods**

This is a cross-sectional study. The sampling process of this research began after receiving the required permissions from the research council under the IR.SHMU.REC.1395.167 code of ethics committee of Shahroud university of medical sciences. The target population of the study consisted of all of the first-semester students who were admitted at Shahroud university of medical sciences in January 2017. The fields of study of these students included nursing, midwifery, surgical technology, anesthetics, oral health, and medical emergencies. After coordination with the department head of the related fields, the forms were given to the representatives of the classes. The demographic information form including age, sex, menarche age, place of residence before entering the university, education level of parents, and marital status was completed by the students. The self-esteem questionnaire used in this study was the standard, valid and reliable Cooper Smith inventory for self-esteem assessment. This questionnaire has 58 yes-no items which receive 0 and one scores. The total score of self-esteem ranges from 0 to 50.<sup>11,17</sup> If the score obtained by the researched units is below 50, they are considered as undesirable. If the score is 50-75, it is average, and if the score is 75-100, it is considered as desirable.

The reproductive health questionnaire was provided according to the WHO questionnaire<sup>18</sup> and Olfati questionnaire,<sup>19</sup> and with some modifications being made for the Iranian culture. This questionnaire includes 142 items designed in seven domains. To assess the validity of this questionnaire, 10 expert teachers were evaluated and their opinions were considered. After testing the qualitative validity, the reliability was checked using the information of 50 students who fulfilled the conditions of the study units and completed the questionnaires twice in a 10-day interval, using the test-retest method. Pearson's correlation coefficient was 0.83, indicating appropriate reliability. Alpha Cronbach's for this questionnaire was 0.84.

The inclusion criteria for the study was students' willingness to complete the questionnaires. The exclusion criteria included any diagnosed mental diseases and metabolic diseases such as diabetes.

Initially, the information resources were asked by the students. Then, the reproductive health items began. The puberty and its physical and mental changes with 13 items, the pregnancy and natural delivery with 17 items, the abortion, symptoms and treatment with 13 items, infertility and treatment with 16 items, HIV disease, its transmission, prevention and treatment routes with 15 items, other sexually transmitted diseases and their symptoms with 11 items, health and infections of male and female genital systems with 17 items were designed. The questions were designed as 'yes, no, and I

do not know answers'. In the questions for assessing the information level, the correct answers received 1, incorrect ones 0 and "I do not know" answers received no scores. Then, for better analyzing the data, the scores were divided into three groups of weak, average, and adequate information based on the first median quartile and the third quartile. After completing the forms, the researcher collected the questionnaires. SPSS16 software and T-test and Chi-square tests were used for data analysis. Significance level was set at 0.05.

**Results**

In this study, all of the first-semester students who were admitted at nursing, midwifery and paramedical faculty of Shahroud university of medical sciences in January 2017 were studied. One hundred five students were included in the study. Specifically, 34 (32.4%) of the participants were male, and 71 (67.6%) of them were female. Their average age was 20.2±1.8. The average sexual puberty age of boys and girls was 14.06±1.51 and 13.45±1.2, respectively. Table 1 shows the demographic information of the students. There was no significant relationship between the father's educational level, mother's educational level, place of residence of the adolescents, and awareness rate of reproductive health.

**Table 1. The demographic information of the students**

Variable (n=105)	Frequency (percent)
Life place before entering into university	
-City	91 (86.7)
-Village	14 (13.3)
Marriages	
-Yes	9 (8.6)
-No	96 (91.4)
Father's education	
-Illiterate and elementary	17 (16.2)
-Junior and high school	16 (15.2)
-Diploma and associate degree	41 (39.1)
-B.A and above	31 (29.6)
Mother's education	
-Illiterate and elementary	25 (23.8)
-Junior and high school	14 (13.3)
-Diploma and associate degree	45 (42.8)
-B.A and above	21 (20.0)

The first information resource for male students about reproductive health was teachers and educators (35.3%), while it was mothers (47.8%) for female students. The boys usually preferred to receive information from books and magazines (32.4%), while girls preferred to gain information from their mothers (35.2%) (table 2).

**Table 2. Adolescents' information resources**

The first information resource	Boys (n=34)	Girls (n=71)
	N (%)	N (%)
-Family	8 (23.4)	34 (47.8)
-Teacher	12 (35.3)	8 (11.3)
-Friends	5 (14.7)	11 (15.5)
-Book/magazines/internet	9 (26.4)	15 (21.2)
-Health-care services providers	0 (0.0)	3 (4.2)
Which information resource is preferred?		
-Family	3 (8.8)	25 (35.2)
-Teacher	3 (8.8)	3 (4.2)
-Friends	2 (5.9)	3 (4.2)
-Book/magazines/internet	21 (61.8)	24 (33.8)
-Health-care services providers	5 (14.7)	16 (22.5)

The average correct answers of the 104 questions on reproductive health by the students were  $51.48 \pm 16.24$ , and the average score of the students' self-esteem was  $32.91 \pm 13.0$ . There was no significant difference between boys' and girls' groups. Based on table 3, the girls had higher scores than boys only in the area of questions about sexually transmitted diseases (Pvalue=0.03) (table 3).

General examination of the sample students regardless of their gender showed that 24.8% had low awareness, 52.4% average awareness, and 22.9% adequate awareness. There was a significant relationship between the scores of fertility health areas in the groups of high and average self-esteem and low self-esteem (table 4). Also, according to the Pearson correlation coefficient, there was a direct and significant relationship between awareness of reproductive health and self-esteem levels ( $r=0.25$  and Pvalue=0.001).

### Discussion

Many studies conducted in Iran have examined the individual awareness of, attitude to, and performance of the reproductive health, while the current study aimed at examining the relationship between the awareness of fertility health and self-esteem level.

The first goal of this study was to determine the score of awareness of reproductive health among the students. General

examination of the sample students regardless of their gender showed that 24.8% had low awareness, 52.4% average awareness, and 22.9% adequate awareness. In a similar study in Iran, 45% of the studied subjects had low awareness, and only 10% had adequate awareness.<sup>20</sup> Mohammadzadeh et al. stated that 22% of the adolescents had low awareness about fertility health.<sup>21</sup> Also, in other studies in Iran, the awareness rate of most Iranian adolescents and the youth about reproductive health was average or low.<sup>12,22-26</sup> Such a low rate of awareness may be a result of lack of sufficient reliable information resources or negative attitudes toward reproductive health. Further, teachers and parents neglecting the necessity of informing adolescents is one of the reasons for this issue.<sup>27</sup> However, in a similar study in Iran conducted on pregnant women, 70.8 of the women had desirable awareness.<sup>28</sup> It seems that the reason for the lower rate of awareness in students compared to pregnant women is the students' marital status. Also, it may be as a result of the lack of proper educational content and programs for the adolescents.

There was no significant relationship between the menarche age and the score of the reproductive health awareness. It is in line with the studies done by Firouzan and Qahramani.<sup>12,1</sup> Also, there was no significant relationship between the father's education level, mother's education level, place of residence of the adolescents, and awareness rate of reproductive health. It was consistent with other studies.<sup>29</sup>

**Table 3. Mean scores of different areas of reproductive health**

	The average number of correct answers	Standard deviation	Statistic T	Pvalue
<b>Puberty scores 0-13</b>				
-Boy	8.09	2.16	0.40	0.84
-Girl	7.92	2.02		
<b>Pregnancy and delivery scores 0-17</b>				
-Boy	9.29	2.61	-1.52	0.44
-Girl	10.25	3.20		
<b>Abortion scores 0-15</b>				
-Boy	5.06	4.24	-1.29	0.75
-Girl	6.18	4.10		
<b>Infertility scores 0-16</b>				
-Boy	6.82	4.44	-0.89	0.61
-Girl	7.66	4.49		
<b>AIDS scores 0-11</b>				
-Boy	8.50	3.81	-0.73	0.66
-Girl	8.55	3.15		
<b>STDs scores 0-11</b>				
-Boy	3.65	2.28	-1.59	0.03
-Girl	4.59	3.07		
<b>Health and infections of genitalia scores 0 -17</b>				
-Boy	6.41	3.92	-1.94	0.71
-Girl	8.07	4.16		

**Table 4. Multivariable covariance test results for self-esteem levels regarding the sum of fertility health areas**

Variable	Average self-esteem	Average difference	Standard deviation	Pvalue
Low self-esteem	Average self-esteem	-9.12	3.80	0.02
	High self-esteem	-12.5	4.78	0.01
Average self-esteem	Low self-esteem	9.12	3.80	0.02
	High self-esteem	-3.38	4.07	0.40
High self-esteem	Low self-esteem	12.50	4.78	0.01
	Average self-esteem	3.38	4.07	0.04

The second goal of the study was to determine the average score of self-esteem in students. The average score of self-esteem was  $32.9 \pm 13.0$ , which was an average figure. Mokari et al. reported the average self-esteem of the adolescents as 30.12.<sup>11,17</sup> Babaei et al., reported that 49.1% of the adolescents had average self-esteem.<sup>30</sup> Similarly, Kheirkhah et al. reported that 63.5% of the adolescents had average self-esteem and there was a significant inverse correlation between self-esteem level and anxiety.<sup>17,1</sup> Examining the relationship between self-esteem and academic success, Alizadeh et al. found that the average score of self-esteem in the students was  $32.49 \pm 4.45$ .<sup>31</sup> Mirzaei et al. observed that the average score of the students' self-esteem was  $31.84 \pm 8.32$  which is consistent with the current research.<sup>32</sup> Sepahi et al. reported the average score of the students' self-esteem as  $35.90 \pm 6.78$ , which is higher than the current study value.<sup>33</sup> It seems that this large value is the result of the students' field of study, which is medicine, as there is a significant relationship between self-esteem and academic success.<sup>32,33</sup> In a study performed in Turkey, the students' self-esteem rate was average. Also, those who had higher self-esteem had more physical activities, easily communicated, and felt freedom and success in their life and education.<sup>11</sup>

The final goal was to determine the relationship between the score of awareness of reproductive health and the students' self-esteem level. In the current research, there was a direct and significant relationship between the awareness of reproductive health and the self-esteem level (Pvalue=0.001 and  $r=0.25$ ). In a study, the self-esteem in those with genital wart who had deficient information about it as well as its transmission and prevention ways was less than in informed patients.<sup>34</sup> Also, Rice et al. stated that those with a higher level of self-esteem experience significantly less risky sexual intercourse and alcohol abuse.<sup>15</sup> Serinkan et al. also reached a similar result.<sup>14</sup>

Regarding the significant and direct relationship between awareness rate of fertility health and self-esteem level, it is suggested that the youth receive more education on reproductive health as this can provide them with mental health, in addition to the physical health. It is suggested that reproductive health be taught in schools by midwives and healthcare providers and the midwives be present on schools at proper times so that adolescents can acquire valid information.

### Acknowledgement

This research was supported by the student research committee in the school of nursing and midwifery, Shahroud university of medical sciences, Shahroud, Iran with No. 95110 and the ethics committee code of IR.SHMU.REC.1395.167. Hereby, we highly appreciate Shahroud university of medical sciences, research vice-presidency of the university, reproductive studies and women's health research center and all of the students who took part in this study.

### Conflict of Interest

The authors declare that they have no conflict of interest.

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