

Factors Related to Puberty Health in Male Students in the First Year of Undergraduate Second Grade in the City of Marivan Using health Belief Model: A Cross-sectional Study

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ABSTRACT

Introduction: The period of adolescence is the time of emotional, cognitive, social and physical changes. Knowledge and understanding of the principles of health in adolescent and changes in this period will lead to health promotion and prevention of some risky behaviors.

Purpose: The purpose of this study is to determine the factors related to puberty health using belief health model in male students in the first year of undergraduate second grade in the city of Marivan.

Materials and Methods: This study was a cross-sectional, descriptive-analytic that carried out on 278 male students. In this study, subjects were selected by multistage cluster sampling procedure among 6 high schools. The data collection instrument was a questionnaire developed by the researchers based on the health belief model. The validity and reliability of questionnaire was confirmed. Statistical analysis was performed using SPSS version 17, Chi-square, descriptive statistics, and Pearson correlation test at a significance level of $P < 0.05$.

Results: The mean of age in students was 14.5 years. The mean score of knowledge about the health of boys in adolescence was 21.19 ± 5.84 . The mean scores of health belief model's structures, perceived susceptibility 22.17 ± 4.83 , severity 18.53 ± 4.18 , barriers 16.79 ± 5.24 , benefits 18.02 ± 4.049 , and cues to action in students 8.77 ± 2.65 were reported. Students presented the main cues to action in friends and peers.

Conclusion: It is expected to see the main effect in improving health in puberty period of boys in schools by education-based interventions through peers based on health belief model.

Key words: Belief health model, Male students, Puberty health

INTRODUCTION

The period of adolescence is one of the main periods of human.¹ According to the WHO, the period of adolescence is the ages of 19-10 years.² This is considered as a period of transition from childhood to adolescence, and puberty health is consist of some principals and surveillances leading to maintain

and promotion of physical and spiritual health in this period.^{3,4} According to the 1390 census, 16/5% of all population are consist of adolescents in the age group of 19-10 years old that approximately 52% of those are boys.² Our country with such a huge investment requires accurate planning and attention to the growth health of adolescents.⁵ Although health and

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physical problems of puberty in boys are less than girls, this transition is accompanied with issues and multiple physical, spiritual and social - behavioral problems.² Unhealthy behaviors such as communicating with bad friends and criminal groups, smoking and drug abuse, friendship with the opposite sex, unsafe behavior, lack of control of physical health and weight, improper use of the internet, satellite, and academic times are frequent problems in adolescence period that is prevalent in boys.⁶ Maturation and reproductive health needs of children, promotion of knowledge level and awareness of sexual and physical changes, emotional changes, changes in behavior and mood, physical health care, proper nutrition, exercise and healthy recreation are maturity and reproductive health needs in boys.^{7,8} The lack of satisfaction and satiation of the adolescent can be a base for aggression, disruption, and mental difficulties or in reverse isolation and depression.⁹ A lack of awareness of adolescent to health issues, not only affect individual health, but also family and community health.¹⁰ It is clear that healthy transition to a stage of maturity for boys, depends largely on the extent of the information, type attitudes and behaviors acquired during adolescence, so for teenage boys in maturity changes need to be aware and have a lot of support.¹¹ The results of the study of Boroumand *et al.* showed that more than half of the boys about maturity signs, sexual and physical health and psychological changes during this period, are unaware or have a little information.¹² Adolescents by acquirement of recognition and awareness about the maturity health and the threatening risks of its can prevent many problems and irritations.^{13,14} During a study was identified that 47.9% of the boys had not training and information on issues of puberty and 39.9% of them in the early stages of puberty had a feeling of confusion and turmoil then hatred this stage.¹⁵

Health belief model is one of the most practical models of health behavior to predict the actions of preventive health, which was used as a good forecast for this research is. The probability of getting health behavior depends on 2 subjects: One is the individual's perceptions of the extent of the danger that threatens him and the next person's assessment of the extent of perceived barriers and benefits of its behavior.^{16,17} In addition to the cases mentioned, the possibility of doing a proper health behavior are influenced with several intermediate factors such as characteristics of demographic (age, gender, race), psycho-social factors (individual characteristics, social class, peers), and structural factors (awareness about issues of puberty).¹⁷

Considering that no study of maturity in boys has been done using this model, this study aimed to determine the factors related to adolescent health behaviors based on health belief model in male students in the first year of undergraduate second grade the city of Marivan in 1394.

MATERIALS AND METHODS

This study is a cross-sectional, descriptive-analytic study. A total of 278 male students in the first year of undergraduate second grade in the city of Marivan in 2015 with a random sampling-multi-stage cluster of six high schools were selected as sample work. Inclusion criteria included high school students in the first year of undergraduate second grade and consent to participate in the study and exclusion criteria are improperly complete of questionnaire. The data collection instrument was a questionnaire developed by the researchers based on the

health belief model designed in four parts. The first part of the questionnaire is included 15 questions about demographic data. The second part, 20 questions about awareness (correct response and incorrect response were given a score of one and zero, respectively), the third part 25 questions related to the health belief model, is specified with the 5-choice Likert scale from strongly agree to totally disagree including 6 questions, perceived susceptibility (with a minimum score of 6 and a maximum score of 30), 5 questions about perceived severity (with a minimum of 5 and a maximum score of 25), 5 questions about perceived benefits (with a minimum of 5 and a maximum score 25), with 6 questions about perceived barriers (with a minimum score of 6 and a maximum score of 30), and 3 questions about cues to action with low to high range (with a minimum score of 3 and maximum of 6). The fourth part of the questionnaire, 10 questions about performance with the 5-choice Likert scale (1) Always, (2) often, (3) sometimes, (4) rarely, (5) never and how to scoring the questions about performance was marked with a minimum of 10 and maximum of 50.

After applying weight of each question by adding the score of the structures, the value of each structure was identified. To classification of structures, the range of each change is divided into 3 approximately equal sections (low, moderate, and good). Questions for cues to action were calculated as frequency.

To assess the content validity of the questionnaire, the viewpoint of 4 health education specialists was considered that were working at Kurdistan and Gonabad University of medical sciences in 2015 and their corrective feedback was applied on the questionnaire. To determine the reliability of the questionnaire after collecting the relevant information of the 48 students with internal consistency and consistency of Cronbach's alpha for awareness questions 75%, perceived sensitivity 81%, perceived severity 78%, perceived barriers 77%, perceived benefits 79%, and cues to action 80% was calculated.

For the implementation of the work, in beginning with a visit to the selected classes during multistage cluster sampling of Marivan city among high school boys, the questionnaire was available to all students in the class and was completed. How to do sampling was that among 12 high school boys, 6 high schools (cluster) considering the proportion of students were selected. Before the completion of the questionnaire, the aim of this research described for students and got the satisfaction in writing. It also was informed that the participation of these people in the study was voluntary and completely anonymous questionnaire to ensure that the information will be collected and protected confidential.

After collecting the questionnaires, the data for analysis were entered into SPSS version 17. To describe the status of participants, descriptive statistics such as mean, percentage, and standard deviation was used. Pearson correlation test at the significant level of $P < 0.05$ was used for the relationship between structural and demographic variables.

Ethical Consideration

The permission to conduct the study was obtained from the Ethics Committee of our Institution.

RESULTS

A total of 278 students in the first year of undergraduate second grade in the city of Marivan had participated in thus study that

the mean age of them was 14.5 years. In terms of parent's education, 85.2% of fathers had non collegiate education and 16.4% had collegiate education. 69.42% of mothers had elementary education and only 6.5% of mothers had collegiate education. 41.72% of father's occupation was unemployment and labor and 15.82% of mother's occupation was housewife. 91.72% of students were with parents. Also in terms of order of birth, 43% of samples were first child and 14.4% of them were forth and more. In terms of residence, 95.32% of them were in urban area and the rest were in the rural area. 72.3% of students reported the family income in the adequate limit and totally 88.5% of students were satisfied with their family relationships. In terms of disease, 10.9% of them had disease and 89.56% of them had not reported disease (Table 1).

Students about this question that if it is supposed to be taught about puberty who would you suggest? They replied in order from highest to lowest, 23.74% friends, 14.38% teachers, 11.5% school health teachers, 10.79% brother, 10.07% school counselor, 8.99% Internet, 7.19% father, 5.75 book and 4.31% mother, and 3.59% sister as a source of information related to puberty (Table 2).

The results of table show that the mean score of awareness scores in boys was 21.19 ± 5.58 and only 10.43% of students had desirable awareness, 76.97% of them had moderate awareness and 12.23% had weak awareness about puberty health. The mean score of perceived susceptibility was 22.17 ± 4.83 that 94.59% of them had good and moderate perceived susceptibility (partially desirable) and 5.39% had weak perceived susceptibility about puberty health. The mean score of perceived severity was 18.53 ± 4.18 that 94.6% of them had partially desirable perceived severity. The mean score of perceived barriers was 16.79 ± 5.24 that 54.31% of them had moderate perceived barriers and 31.56% had weak perceived barriers about puberty health. The mean score of perceived benefits was 18.02 ± 4.49 that 92.08% of them had partially desirable perceived benefits and 7.91% had weak perceived benefits about puberty health (Table 3).

According to the result of table, Pearson test shows that there was significant relationship among satisfaction of life and perceived susceptibility, mother's occupation and cues to action, having a disease and perceived susceptibility and also between father's education and perceived benefits ($P < 0.05$). There was no significant relationship between other variables with structures of belief health model ($P > 0.05$) (Table 4).

DISCUSSION

The patterns and theories are a guide for the activities of health education and health promotion.¹⁸ Health belief model analyses the nature of preventive healthy behavior or diagnosis

Table 1: Frequency distribution of demographic variables in students

Demographic variables	n (%)
Father's education	
Without elementary literacy	116 (4.42)
Cycle-diploma	117 (8.42)
Collegiate	45 (4.16)

(Contd...)

Table 1: (Continued)

Demographic variables	n (%)
Mother's education	
Without basic literacy	193 (42.69)
Cycle- diploma	67 (2.24)
Collegiate	18 (5.6)
Unemployed and labor	116 (72.41)
Father's occupation	
Employee	54 (4.2)
Self-employment	82 (4.3)
Other	26 (7)
Mother's occupation	
Housewife	44 (82.15)
Employee	20 (19.7)
Self-employment	24 (63.8)
Other	190 (34.68)
Living with parent	
Parent	255 (72.91)
Father	3 (1.1)
Mother	10 (6.3)
Other relatives	10 (6.3)
Place of residence	
Urban	265 (32.95)
Rural	13 (1.5)
Status of residence	
Personal	225 (93.8)
Rent	39 (1.14)
Organizational and other	14 (1.5)
Income rate	
Less than enough	64 (8.23)
Adequate	201 (30.72)
More than enough	13 (9.4)
Having disease	
Yes	29 (9.1)
No	249 (56.89)
To be alive parent	
Mother and father	253 (91)
Father	3 (3.1)
Mother	10 (9.3)
None	12 (9.4)
Order of birth	
First	117 (43)
Second	76 (33.27)
Third	46 (9.16)
Forth and more	39 (4.14)
Satisfaction of family relationship	
Completely satisfied	160 (55.57)
Satisfied	85 (5.3)
Partially satisfied	21 (6.7)
Dissatisfied	5 (8.1)
Completely dissatisfied	7 (5.2)

of disease in the asymptomatic phase. Considering that no study of puberty in boys has been done using this model, this study aimed to determine factors related to adolescent health behaviors based on health belief model in male students in the first year of undergraduate second grade the city of Marivan in 2015. The findings of this study indicate that the students express friends and peers (23.74%), and then the teacher (14.38%) and his brother (10.79%) as a maximum resource of information about puberty health. The results of the study of Shirzadi *et al.* showed that the highest percentage for achieved information source in the field of girl's puberty health was in order of priority, school health, books and people who meet.¹⁹ In other studies, moms and families were reported as an important source of information.²⁰⁻²² Another study that was done in Egypt, media is introduced in 92.2% of girls as a source of information about health puberty.²³ The results of the study of Maleki *et al.*⁹

and Moazzam *et al.*²⁴ shows that, unfortunately, there were no educational courses to the male adolescents in all sections and according to our culture, parents do not teach boys in this field and adolescents may be taught by wrong means (friends and uninformed people) for access to information that is consistent to current study.

In the current study, there were significant relationship between mother's occupation status and cues to action for puberty health of the students and also between the satisfaction of family relationships and history of disease in students with the perceived susceptibility, as well as between the parent educations with the perceived benefits of the students about the principles of puberty health. In the study of Mazloomi *et al.*, statistical correlation was shown between education level of parents with a mean score of awareness and structures of health belief model; there was a significant correlation. In this study, there was a significant relationship between perceived benefits and health behaviors dependent on principles of girls' puberty that in both the studies, the greatest perceived benefits were related to feeling of living in healthy.⁴ As well as the results of the study of Taymoori *et al.* indicate that there was significant relationship between perceived benefits and physical activity.²⁵ In this study, the students had moderate information about puberty health and physical changes and mental-psychological and social symptoms of puberty and only 10% of the students had good awareness that is consistent with the results of Olfati and Aligholi²⁶ and Ghahremani.¹ As well as the study of Zare *et al.*²⁷ indicated that girls' information was undesirable before students training about puberty health and was concomitant with the incorrect beliefs that are consistent with the current study. Therefore, training programs to enhance the level of

Table 2: Frequency distribution of students based on cues to action

Cues to action	n (%)
Father	20 (19.7)
Mother	12 (31.4)
Brother	30 (79.1)
Sister	10 (59.3)
Friends	66 (74.23)
Teacher	40 (38.14)
Health teacher	31 (15.11)
School counselor	28 (7.1)
Internet	25 (99.8)
Book	16 (75.5)

Table 3: Mean and standard deviation of awareness scores and structures of health belief model

Variables	Score range	Mean±SE	Frequency (%)		
			Weak	Moderate	Good
Awareness	0-40	19.21±84.5	34 (12.23)	214 (97.76)	29 (43.10)
Perceived susceptibility	6-30	17.22±83.4	15 (5.39)	106 (12.38)	157 (47.56)
Perceived severity	5-25	53.18±18.4	15 (5.39)	139 (50)	124 (44.60)
Perceived barriers	6-30	79.16±24.5	88 (31.65)	151 (31.54)	39 (14.02)
Perceived benefits	5-25	2.18±49.4	22.7.91	141 (71.50)	115 (36.41)

Table 4: Relationship between demographic variables with awareness and structures of health belief model based on Pearson correlation

Variables	Awareness		Susceptibility		Barriers		Benefits		Cues to action		Severity	
	R	P	R	P	R	P	R	P	R	P	R	P
Father's education	-070.0	286	257	57	-027.0	667	122	46	51	0.438	104	88
Mother's education	-087.0	182	2	971	-068.0	375	109	73	51	438	47	439
Father's occupation	-033.0	620	-072.0	242	-059.0	342	-015.0	807	-014.0	833	-052.0	401
Mother's occupation	80	225	-0.084	174	52	416	-003.0	963	-215.0	1	-094.0	128
Living with parent	14	835	-064.0	298	26	686	-116.0	55	-020.0	765	-081.0	181
Place of residence	-031.0	639	70	253	-055.0	382	13	829	81	221	129	35
Status of residence	79	221	8	896	-028.0	655	100	101	-012	861	-0.024	692
Income rate	71	276	96	117	-061.0	335	-054.0	381	5	944	-039.0	539
Having disease	-079.0	226	126	40	-025.0	690	33	591	96	146	32	598
To be alive parent	-058.0	380	-065.0	296	-026.0	687	-116.0	55	-020.0	765	-081.0	181
Order of birth	88	184	104	91	-077.0	271	-093.0	128	62	352	-082.0	180
Satisfaction of family relationships	-024.0	716	-130.0	32	66	66.288	-049.0	418	-078.0	234	-056.0	356

awareness of adolescent boys is necessary due to being the most important source of information about puberty health, in this study, friends and peers, it is appropriate method to upgrade their awareness through peers. The efficacy of training through peers approach is based on this theory that sensitive information convey more easily between people of equal years. There some benefits of this theory such as good cognition of peers in the social-cultural environment from the target group, improvement of social norms and protective values, positive attitudes and health behaviors and involving adolescents in the design related to benefit themselves. The results of the study of Alizadeh *et al.* showed that education based on health belief model through peers effects positive impact on the nutritional behaviors of students.²⁸

As well as the results of this study showed that the majority of the students had the relatively high ratio of perceived susceptibility to health behaviors in puberty and were alarmed about the dangers of it. In a similar study of the Shirzadi *et al.* in Tehran about the impact of the training based on health belief model in puberty on health promotion in adolescent girls residing in the boarding Center for welfare in the 2011, the results showed that the perceived susceptibility after training was higher than the perceived susceptibility before training.¹⁹

Whatever the perceived susceptibility will be higher, the possibility of getting more preventive behavior will be higher, because perceived susceptibility is considered as one of the factors influencing the adoption of preventive behaviors and real and successful prevention depends on the actual information about the personal information and the risks associated with it.²⁹ A person's understanding of being a serious and severe disease and the outcome and its complications is one of the main components of the health belief model that have effective impact in adopting preventive behaviors.³⁰ In the current study, the status of understanding in the majority of students for perceived severity and perceived benefits was relatively desirable. Hence, it seems the perception of students for compliance of the principles of health in puberty causes health promotion and reduction of the risk of chronic diseases.

The most important component of the health belief model is perceived barriers in the recommended behavior.³¹ In this study, the status of the perceived barriers for non-compliance with health behaviors was in moderate level. The most important barriers that students understood and expressed: The friendship and participation in recreational unhealthy programs with unhealthy friends and fear of exclusion in the event of non-participation with them, lack of correct information, and the lack of the correct decision and being unstable the behavior of students, inaccurate information about sexual issues (masturbation). It is suggested to reduce perceived barriers, social skills training to overcome fear of being assessment in adolescents and the adoption of a correct decision using the method of group discussion and providing a pamphlet significant could have effective impact.

CONCLUSION

Considering that the health belief model can evaluate and identify the existing needs and design of interventional programs in the field of puberty health, and this fact that in the study the most important cues to action was group of peers, it is expected to

see main effect in improving health in puberty period of boys in schools by education-based interventions through peers based on health belief model.

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REFERENCES

- Ghahremani L, Heydarnia A, Babaie G, Nazary M. Effects of puberty health education on health behavior of secondary school girl students in Chabahar city. *Iran South Med J* 2008;11:61-8.
- Sajjadi M, Moshki M, Abasnezhad A, Bahri N. Educational needs of fathers about boys puberty period and its related factors. *Zahedan J Res Med Sci* 2012;14:66-70.
- Alavi M, Poushaneh K, Khosravi AA. Puberty health: Knowledge, attitude and practice of the adolescent girls in Tehran, Iran. *Payesh Health Monit* 2009;8:59-65.
- Mazloomi SS, Norouzi S, Norouzi A, Hajizadeh A, Zare A. Effect of health belief model in adopting prevention and control of health behaviors during puberty high school students in Ardakan city. *J Yazd Uni Med Sci* 2013;12:56-66.
- Muise A, Stein DG, Arbess G. Eating disorders in adolescent boys: A review of the adolescent and young adult literature. *J Adolesc Health* 2003;33:427-35.
- Ahmadi F, Anoosheh M, Vaismoradi M, Safdari M. The experience of puberty in adolescent boys: An Iranian perspective. *Int Nurs Rev* 2009;56:257-63.
- Dahl RE, Gunar MR. Heightened stress responsiveness and emotional reactivity during pubertal maturation: Implications for psychopathology. *Dev Psychopathol* 2009;21:1-6.
- Kaminski B, Palmert M. Human puberty: Physiology, progression, and genetic regulation of variation in onset. *Hormones, Brain, and Behavior*. 2nd ed., Vol. 9. San Diego: Elsevier Science; 2008. p. 19-26.
- Maleki A, Delkhosh M, Amini HZ, Ebadi A, Ahmadi KH, Ajali A. Effect of puberty health education through reliable sources on health behaviours of girls. *J Res Behav Sci* 2010;4:155-61.
- Havez H. In: Nezhad MS, editor. *Health Promotion in School*. 1st ed. Tehran: UNICEF; 2001. p. 38.
- Ozdemir F, Nazik E, Pasinlioglu T. Determination of the motherly reactions to adolescents' experience of menarche. *J Pediatr Adolesc Gynecol* 2010;23:153-7.
- Boroumand K, Abedi MR, Hasanzadeh A. Investigation of high school boys' educational needs concerning adolescence period, in Isfahan city, 2002. *Iran J Med Educ* 2002;2:15-9.
- Saibaba A, Mohan RM, Ramana RG. Nutritional status of adolescent girls of urban slums and the impact of ICE on their nutritional knowledge and practices. *J Community Med* 2002;27:151-6.
- Reardon LE, Leen-Feldner EW, Hayward C. A critical review of the empirical literature on the relation between anxiety and puberty. *Clin Psychol Rev* 2009;29:1-23.
- Lin GR. An investigation of adolescent health from China. *J Adolesc Health* 1997;20:306-8.
- Janz NK, Champion VL, Strecher VJ. The health belief model. In: Glanz K, Rimer BK, Lewis FM, editors. *Health Behavior and Health Education: Theory, Research, and Practice*. 3rd ed., Vol. 2. San Francisco, CA: Jossey-Bass; 2002. p. 45-66.
- Glanz K, Rimer BK, Viswanath K. *Health Behavior and Health Education: Theory, Research, and Practice*. 4th ed. San Francisco: Jossey-Bass; 2008.
- Chan SS, Yiu KW, Yuen PM, Sahota DS, Chung TK. Menstrual problems and health-seeking behavior in Hong Kong Chinese girls. *Hong Kong Med J* 2009;15:18-23.
- Shirzadi S, Shojaezadeh D, Taghdisi MH, Hoseini FA. Effect of education based on health belief model on promotion of physical puberty health among teen girls in welfare boarding centers in Tehran. *J Public Health Res* 2012;10:59-71.
- Rahnama M, Meshki AB, Dalir Z, Mazlom R. Health status of menstruation in girls high school in Zabul. *Dena J* 2006;1:11-7.

21. Zabihi A. Effect of training on knowledge and performance of students in relation to puberty health. *J Babol Univ Med Sci* 2002;14:58-62.
22. Alavi M, Pshneh K, Khosravi A. Knowledge, attitude and performance of girl students of the third stage guidance about puberty health. *J Health Sci Res Univ Jihad* 2008;8:59-65.
23. El-Gilany AH, Badawi K, El-Fedawy S. Menstrual hygiene among adolescent schoolgirls in Mansoura, Egypt. *Reprod Health Matters* 2005;13:147-52.
24. Moazzam A, Mohammad-Ayaz B, Hiroshi U. Reproductive health needs of adolescent males in rural Pakistan: An exploratory study. *Tohoku J Exp Med* 2004;204:17-25.
25. Taymoori P, Lubans D, Berry TR. Evaluation of the health promotion model to predict physical activity in Iranian adolescent boys. *J Health Educ Behav* 2010;37:84-96.
26. Olfati F, Aligholi S. A study on educational needs of teenager girls regarding the reproductive health and determination of proper strategies in achieving the target goals in Qazvin. *J Qazvin Univ Med Sci* 2008;12:76-82.
27. Zare M, Afzali HM, Jandaghi J, Alammeh MR, Kolahdoz M, Asadi O. Effect of training regarding puberty on knowledge, attitude and practice of 12-14 year old girls. *J Med Iran Univ Med Sci* 2005;5:1418-26.
28. Siuki HA, Jadgal KM, Shamaeian Razavi N, Zareban I, Heshmati H, Saghi N. Nutrition behaviors of primary school students in Torbat e Heydariyeh city in 2012. *J Health* 2014;5:289-99.
29. Hazavehei SM, Shadzi S, Asgari T, Porabdyan S, Hassanzadeh A. The effect of safety education based on health belief model (HBM) on the workers practice of Borujen industrial town in using the personal protection respiratory equipments. *J Iran Health* 2008;5:21-30.
30. Tavasoli E, Hasan-Zadeh A, Ghyasvand R, Tol A, Shojaeizadeh D. The impact of education on the health belief model to promote preventive nutritional habits of heart disease - Disease of the housewives. *J Sch Health Inst Health Res* 2010;8:11-23.
31. Ashtari Mahini M. The effects of education on sexual daisies prevention on health belief model in couple refer to health centers of Tehran University of medical sciences. Tehran: Tehran University of Medical Sciences; 2005.

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