IBAD journal
ULUSLARARASI BİLİMSEL ARAŞTIRMALAR DERGİSİ
JOURNAL OF THE INTERNATIONAL SCIENTIFIC RESEARCHES

Cilt-Volume: 3 | Sayı-Issue: 2 | Sayfa-Page: 653-663 | Güz-Fall | Yıl-Year: 2018

IBAD, 2018; 3(2):653-663 Geliş tarihi/First received: 20.04.2018 Kabul tarihi/Accepted: 03.07.2018

IMPACT OF AN INTERVENTIONAL TRAINING ON MENSTRUAL HYGIENE OF ADOLESCENT SCHOOLGIRLS

Serap Selver KİPAY[1]
Hülya BAYBEKI[2]
Ruhi Selçuk TABAK[3]

Abstract

Menstrual hygiene, a very important risk factor for reproductive tract infections, is a vital aspect of health education for adolescent girls. Therefore, educational interventions to increase both awareness and behaviour quality are crucial during adolescence. Main aim of this study is to evaluate the effectiveness of a theory based training on puberty, menstrual physiology and menstrual hygiene for the schoolgirls in Fethiye, Turkey. This quasi-experimental study covered 87 schoolgirls. A training intervention was conducted as 4 sessions of 60 minutes. Data were collected by using a questionnaire including 31 questions. Almost one third of the study group students (30.0%) have experienced the menstruation; the mean menarche age was 12.42±1.027; the majority of students (60.0%) were 12-13 years old; the great majority of their parents had only primary school education (83.9%). It was estimated that the training on adolescence, menstruation and menstrual hygiene was effective in increasing the knowledge as well as in behavioural intention ($p<0.05$). While 62.1% of girls have become able to ask question with ease, 54.1% of them asked for similar trainings. Theory based specific health trainings including menarche and menstrual subjects during adolescence should be implemented by trained health professionals, especially school nurses, in primary schools.

Key Words: Menstruation, Menstrual hygiene, Adolescent health, interventional training, adolescent schoolgirls.

MENSTRÜEL HİJYEN KONUSUNDA GİRİŞİMSEL EĞİTİMİN ERGEN KIZ ÖĞRENCİLERE ETKİSİ

Özet

Adolesan dönemdeki kızlar için verilen menstrüel hijyen eğitimi önemli bir risk faktörü olan genital yol enfeksiyonlarını önlemede hayati bir rol oynar. Bu nedenle, ergenlik döneminde hem farkındalığı hem de davranış kalitesini artırmaya yönelik eğitim müdahaleleri çok önemlidir. Bu çalışmanın temel amacı, Fethiye'de yaşayan kız öğrenciler için ergenlik, adet dönemi fizyolojisi ve menstruasyon hijyeni üzerine teori temelli bir eğitimin etkinliğini değerlendirmektir. Bu yarı deneysel çalışma kapsamına ilk okulda okuyan 87 kız dâhil edilmiştir. Yapılan eğitim 60 dakikalık 4 seans olarak gerçekleştirilmiştir. Veriler 31 soru içeren bir anket kullanılarak toplanmıştır. Çalışma grubunun yaklaşık üçte biri (% 30.0) menstrasyonu deneyimlemiş; ortalama menarş yaşı olarak 12.42 ± 1.027 saptanmış; öğrencilerin çoğunluğunun (% 60.0) 12-13 yaşında olduğu ve ebeveynlerinin büyük çoğunluğunun sadece ilkokul eğitimine sahip olduğu (% 83.9) belirlenmiştir. Adolesanlara verilen ergenlik, menstruasyon ve menstruasyon hijyeni eğitiminin sonuçları değerlendirildiğinde, bilginin ve davranışsal niyetin artırılmasında etkili olduğu görülmüştür ($p <0.05$). Eğitim esnasında öğrencilerin % 62,1'i kolaylıkla soru sorabilmişler, % 54,1'i ise benzer eğitimler istemişlerdir. Sonuç olarak ergenlik döneminde menarş ve menstruel konular dâhil olmak üzere teoriye dayalı özel sağlık eğitimleri ilkokullarda sağlık çalışanları ve özellikle okul hemşireleri tarafından verilmelidir.

Anahtar Kelimeler: Menstruasyon, Menstrual hijyen, Adolesan sağlığı, girişimsel eğitim, ergen kız öğrenciler.

Özgün Araştırma / Original Article

[1]Sorumlu yazar/Correponding Author, Assist. Prof. PhD, Mugla Sıtkı Kocman University, Turkey serapselver@yahoo.com, ORCID ID: 0000-0002-4023-5619.
[2] Assist. Prof. MD, Mugla Sıtkı Kocman University, Turkey, serapselver@yahoo.com, ORCID ID: 0000-0002-4023-5619
[3] Professor, PhD, Lefke European University, TRNC&Turkey rtabak@eul.edu.tr, ORCID ID: 0000-0002-4023-5619

ISSN: 2536-4642

Doi Number :http://dx.doi.org/10.21733/ibad.417307

Introduction and Purpose

Menstruation is known as a bleeding that starts with menarche over a reproductive period together with hormonal changes which continues till menopause, and ejected by shedding of the endometrium periodically (Taşkın 2016). Almost half of a woman's life time is gone through menstruation process and some problems accompanied by physical, behavioural and emotional changes (Şahintürk and Acaroğlu 2001). Therefore hygiene-related practices of women during menstruation are of considerable importance, as it has a health impact in terms of increased vulnerability to reproductive tract infections (RTI) (Shanbhag and et al. 2012). Menstruation and menstrual practices are clouded by taboos and socio-cultural restrictions even today resulting in adolescent girls remaining ignorant of the scientific facts and hygienic health practices necessary for maintaining positive reproductive health (Patrimath and et al. 2017), (Mandal 2008), (Fırat and et al. 2009). Furthermore, girls in puberty are especially at risk with genitourinary infections due to some reasons such as their anatomical characteristics, beginning of their menstruation and deficiency of knowledge on this topic (Dasgupta and Sarkar 2012). In addition, incorrect and insufficient applications of menstrual and perineal hygiene encourage the development of these infections (Güler and et al. 2005). In one of their studies in Turkey, Demirel and Terzioglu 2003 stated that schoolgirls do not see themselves as having adequate information about menstruation.

Adolescence, which is defined by World Health Organization (WHO) as the life period between 10-19 years of age, is a significant and a critical period in a woman's life for being not only a transition phase from girlhood to womanhood but also a development process of proper behavioural patterns which will affect particularly their reproductive health (Turkish Ministry of Health 2001). Adolescent girls constitute a vulnerable group due to their huge need for factual information on the issues in this period (Taşkın 2016), (Şahintürk and Acaroğlu 2001), (Shanbhag and et al. 2012), (Um and et al. 2010).

Although adolescence is a healthy period of life, many adolescents are often less informed, less experienced, and less comfortable accessing reproductive health information and services than adults. In many parts of the developing countries, a culture of silence or taboo surrounds the topic of menstruation and related issues; as a result many young girls lack appropriate and sufficient information regarding menstrual hygiene. This may result in incorrect and unhealthy behaviour during their menstrual period. Also, many mothers lack correct information and skills to communicate about menstrual hygiene which they pass on to their children, leading to false attitudes, beliefs and practices in this regard (Um and et al. 2010), (El-Gilany et al 2005).

Menstrual hygiene includes some hygienic rules which need to be given attention, as well as some measures which need to be taken in order to be healthy physiologically and psychologically. If these measures are not taken an adolescent may encounter some serious health problems (Pillitteri 2011), (Güler and et al. 2005). In order to overcome these problems, it is important for them to gain accurate information and healthy practices for menstruation, to develop desirable behaviours to maintain and support their health, plus health training for correcting mistakes. Particularly, a real achievement can be obtained by turning information about menstrual hygiene into a skill and maturing those skills into practices for young girls (Sadeque 2008). Otherwise, inadequate and incorrect information will bring about wrong habits and behaviours, which they develop themselves, and will lead to wrong transfer to new generations (Juyal and et al 2012), (Başer 2000).

Even though menstrual period is a term requiring special care and hygiene, in some studies in Turkey, Yorulmaz (2000) reported that 26% of women don't take a bath or have a fear of bathing during a menstrual period, and Şahintürk (1999) indicated this proportion is 40.5% among young girls (Mandal 2008), (Yorulmaz 2000). Arıkan et al (2004) and Şahintürk and Acaroğlu (2001) noted that the proportion of female students taking bath is 68.8 %, taking shower is 47.3 %, using extra underwear is 28.5%, using hygienic pads is 91.4%, changing menstrual material in 2-3 hours is 29.6%, throwing out menstrual material after wrapping it in its special pack is 71%, washing hands both before touching menstrual material and after touching it in case of changing it is 68.3%, using deodorant is 78.0 % and cleaning genital organ from front to back is 28.5% in menstrual period.

In general, schoolgirls from low-middle-income families often struggle to manage their monthly periods. They are constrained by practical, social, economic and cultural factors. The main problems faced are:

- the expense of commercial sanitary pads;
- the lack of water for bathing and washing of menstrual materials;

ISSN: 2536-4642

- dirty latrines – the hygiene hazards and unpleasantness;
- the lack of hygienic anal cleansing materials;
- unsuitable places to dry menstrual materials;
- the lack of access to pain relief (analgesic) drugs;
- inadequate waste disposal facilities;
- the lack of privacy for changing menstrual materials;
- 'leakage' from poor-quality protection materials;
- the lack of resources for washing such as soap and basins;
- limited education about the facts of menstruation;
- limited access to counselling and guidance;
- fear caused by cultural myths;
- embarrassment and low self-esteem; and
- the unsupportive attitudes of some men (Sadeque 2008), (WEDC 2011), (Hotun and Coşkun 2001).

Attitudes and behaviours concerned with the menstruation process are affected by cultural structure of society positively or negatively (Başer 2000). All attitudes and behaviours related to menstruation begin to take shape in the early stage of a woman's life. Consequently, preadolescence period is the most convenient time zone in order that young girls have guidance and information on this topic and acquire some healthy and hygienic habits (Turkish Ministry of Health 2001). A woman can obtain a more physiological and psychological health by reducing these difficulties peculiar to menstrual period with good personal hygienic habits that should be started at an early age (Güler and et al. 2005).

It has usually been stated that training on sexuality and reproductive health has to be started in the family, and maintained by teachers and nurses at schools. In particular, efficiency and effectiveness of the training that would be provided at schools becomes important due to the fact that parents are thought to be insufficient for this topic (Demirel and Terzioglu 2003). However, this topic is not undertaken at schools satisfactorily as is the case in traditional family structure (Hotun and Coşkun 2001), (Kaya 2001), (WEDC 2011). Young girls need their parents' support to have factual information for their sexuality and reproductive health; and also they need guidance to develop their own ideas, behaviours and practices. Nurses in the health team have a particular role on this subject in particular (Gökyıldız 2002).

Modifying or changing health behaviours, especially hygiene behaviours, requires proper educational interventions due to the fact that a change generally refers to a replacement of health-compromising behaviours by health-enhancing behaviours. To describe, predict, and explain such processes, theories or models are being developed. Health behavioural change theories are designed to examine a set of psychological constructs that jointly aim at explaining what motivates people to change and how they take preventive action (Read 1997), (Conner and Norman 2005), (Sniehotta 2009). Therefore, understanding the adolescent profile in health education on menstrual hygiene appears to be crucial for success. The theory-based approaches to health behaviour modification, already successfully applied in other fields of medicine, might also be a good alternative to conventional reproductive health promotion in adolescents (Brukiene and Stomatologija 2010). Because, interventions to improve health behaviour can be best designed with an understanding of relevant theories of behaviour change and the ability to use them skilfully. A growing body of evidence suggests that interventions developed with an explicit theoretical foundation or foundations are more effective than those lacking a theoretical base and that some strategies that combine multiple theories and concepts have larger effects (Glanz and Bishop 2010), (Baban and Cracuin 2007).

One of the distinct models in health education, The Health Belief Model (HBM), originally devised by Rosenstock (1974) and later further developed by Janz and Becker (1984), was selected as the theoretical base four study since it focuses on health behaviours and individual's choices, founded on the person's beliefs and attitudes. This includes the individual's unwillingness to believe that they are susceptible to various infections and the choices that people make, based on this perceived susceptibility (Taylor et al. 2006), (Watkins and Cousins 2010).

Nurses have major liabilities in determining deficiency of information on time about menstruation, its hygiene and also unhealthy practices in adolescents, and in reducing or preventing probable complications through primary hygienic behaviors (Güler and et al. 2005). In this context, this

ISSN: 2536-4642

study was planned and implemented to provide the young girls with specific health information about puberty, and to encourage them to develop and employ menstrual hygienic behaviours.

Method

This quasi-experimental study was conducted to define the effect of planned health training on students' knowledge and behaviours about puberty, menstrual physiology, and menstrual hygiene.

Our study was carried out in the Primary School of Çamköy Village in Fethiye town of Muğla province, Turkey. The school had total 475 students in 16 classrooms. The sample group of this study covered 96 schoolgirls in 5^{th}, 6^{th}, 7^{th}, and 8^{th} grades. However, 87 schoolgirls who volunteered to participate constituted the study group.

The official and personal permissions for implementation of the study were obtained from the relevant institutions before the application of the questionnaire and the training.

As the data collection tool, a questionnaire developed by researchers was used. The questionnaire consisted of 31 items of which 4 are to define socio-demographic characteristics of students, 23 are to asses their knowledge about puberty period, menstrual physiology and menstrual hygiene, and 4 to define their opinions for the training. The test to measure the knowledge levels of students consists of three parts. The part with the title 'puberty period' contains 6 items with multiple choices for 13 correct answers. The second part, menstrual physiology, has 9 items with only one correct answer for each. The third part, menstrual hygiene, covers 8 items also with only one correct answer for each. The questionnaire including the knowledge-test was applied as pre-test and pos-test.

The interventional training was performed in 4 sessions of 60 minutes each with groups of a maximum 25 students after the application of the questionnaire including the test, which was used also for educational needs assessment of the study group. After each session, students were given extra time for free questions. One of the researches stayed at school for three days to provide private consultation opportunities for the students As soon as the training activities were completed the questionnaire was answered by the students as the post-test.

The main objective of the health training was to donate the students with factual knowledge to develop healthy behaviours of menstrual hygiene and to increase their knowledge level about puberty. The content of the training was designed on the Health Belief Model. This model considers the belief for the perceived susceptibility, perceived severity, perceived barriers and particularly perceived benefit of the health behaviour, which is well-defined by health information (knowledge). Furthermore, this model (theory) takes the correct knowledge as the essential of the health behaviour as it is in the cognitive consistency (Read 1997), (Taylor et al. 2006), (Watkins and Cousins 2010). In order to achieve the above defined main objective of the study, researchers gave information to the students about adolescence and its physiology, bathing techniques during a menstrual period, selecting and cleaning of menstrual material, changing frequency of materials, the way of consuming and preparing menstrual material for reusing and hand cleaning, cleaning procedures of genital organs, choosing and changing underwear, and how to cope with smell.

A convenient training environment was established for students in which they could speak freely about their own thoughts, practices and behaviour. During this study, the students' privacy was respected, and they were not judged for their thoughts and any incorrect applications they did before the training. Researchers informed them about the objectives of the training, the process that would be followed and the prospective results, and thus provide their voluntary participations.

For the statistical analysis of data, frequency calculations and the paired t-test were used.

Results

The majority of the students (60.9 %) were between 12 and 13 years old. Almost one thirds of the students (29.9 %, 26 students of 87) stated that they had already experienced the menstruation. Hence, the mean menarche age was estimated as 12.42 ±1.027 years. The lowest participation to our study (17.2%) was in the 8^{th} class. In terms of the educational background of the students' mothers, majority of them (77.0 %) had only primary school education, and worse a considerable proportion (12.6 %) of them were illiterate. Also, the majority of their fathers (69.0 %) had only primary school education and 4.6% of them were illiterate (Table 1).

ISSN: 2536-4642

Table 1: Socio-demographic characteristics of the study group students (n=87)

Characteristics	n	%
Age		
10	1	1.1
11	20	23.0
12	26	29.9
13	27	31.0
14	12	13.8
15	1	1.1
Class		
5	18	20.7
6	29	33.3
7	25	28.7
8	15	17.2
Mothers' Educational Background		
Illiterate	11	12.6
Literate (can read and write)	1	1.1
Primary School Graduate	67	77.0
Secondary School Graduate	4	4.6
High School Graduate	1	1.1
University Graduate	3	3.4
Fathers' Educational Background		
Illiterate	4	4.6
Literate (can read and write)	1	1.1
Primary School Graduate	60	69.0
Secondary School Graduate	16	18.4
High School Graduate	2	2.3
University Graduate	3	3.4

The big majority (83.9 %) of the students stated that they were informed about the puberty (Table 2). Only 16.1% of them expressed their ignorance in terms of this subject. The students pointed out their mothers as their main information source (63.0 %). Mothers are followed by teachers (24.7 %). Fathers are not seen as an information source for girls.

Table 2: Informational background of the students on puberty

	n	%
Information (n=87)		
Informed	73	83.9
Uninformed	14	16.1
Information Source (n=73)		
Mother	46	63.0
Teacher	18	24.7
Elder Sister	6	8.2
Friends	2	2.7
Relatives	1	1.4

ISSN: 2536-4642

Before the interventional health training, the knowledge levels of students were found to be very low by all three subjects handled in this study (Table 3). Even though the final mean scores of the post test are not as high as expected to be, the rates of positive changes are meaningful for students' improvement in terms of knowledge. While the total improvement rate is 190.0 %, the highest improvement rate is seen in the topic of *Menstrual Period* (378.0 %). It is followed by *Menstrual Hygiene* (183.5 %), and lastly by *Adolescence* (140.3 %). The mean differences of all topics and in total were found to be statistically significant stating that the intervention was effective ($p<0.05$).

The minimum and maximum knowledge scores given in the questionnaire for all items are between 0.00 – 30.00. However, the students could have the mean only 20.70±2.318 that reaches to 71,4 % of the expected maximum score (30.00). This rate rises to 75.9 % in the topic of *Adolescence (*9.86±3,424 of 13.00), while it decreases to 66.8 % in *Menstrual Hygiene* (5.35±1.396 of 8.00) and to 61.0 % in *Menstrual Period (*5.49±2.134 of 9.00). Furthermore, none of the students could give all of the correct answers to the questions under the topic of *Menstrual Hygiene* (7.00 out of 8.00). These results indicate that the students' knowledge levels increased noticeably, almost three times higher than the initial levels, after the interventional health training activities.

Table 3: Scores about Effectiveness of the training by topics (n= 87)

Topics	Means and Standard Deviations	Rate of Mean Change	Rate of Accomplishment	Performed Min./Ma.	Statistical Analysis
Adolescence					
Pre Test	4.10±3.606	140.3 %	75.9 %	0.00 – 11.,00	Paired t=-13,934 P< 0.05
Post Test	9.86±3.424			0.00 – 13.00	
Menstrual Period					
Pre Test	1.,15±1.308	378.0 %	61.0 %	0.00 – 6.00	Paired t=-17,342 P< 0.05
Post Test	5.49±2.134			0.00 – 9.00	
Menstrual Hygiene					
Pre Test	1.89±1.667	183.5 %	66.8 %	0.00 – 6.,00	Paired t=-16,144, P< 0.05
Post Test	5.35±1.396			0.00 – 7.00	
Total					
Pre Test	7.14±2.194	190.0 %	71.4 %	0.00-23.00	Paired t=-14,234 P< 0.05
Post Test	20.70±.318			0.00-29.00	

Almost two thirds of the students (61%) stated that they had found the time allocation of training as adequate as they expected. However, 10.3 % of the students did not share this opinion. It was identified that 67.8 % of students expressed that they improved their questioning skill and became more efficient to ask questions freely, but 6.9 % of them had still some problems for asking a question during training period. It was also found that 62.1% of students assessed the level of the training as quite appropriate for them. While 54.1% of the students wanted to have further similar trainings, 8% of them did not want it again (Table 4).

Table 4: Students' opinions about the training activity (n=87)

Opinions	n	%
Time allocation		
Inadequate	9	10.3
Partly Adequate	10	11.5

ISSN: 2536-4642

Adequate	53	61.0
No Idea	10	11.5
No Answer	5	5.7
Students' questioning skill		
Highly improved	59	67.8
Slightly improved	10	11.5
No change	6	6.9
No answer	12	13.8
Level of the training		
Quite appropriate	54	62.1
Moderate	21	24.1
Poor	-	-
No Answer	12	13.8
Demand for further similar trainings		
Yes, I want	47	54.1
No idea	26	29.9
I don't want any more	7	8.0
No answer	7	8.0

Discussion

The menarche is always important due to its considerable cultural aspects in addition to its physiological aspect for young girls. Their reactions to menarche are affected by the perception of sexuality of the society in which they live as well. In this study, which was conducted in a group of female students (87) studying in a semi-rural primary school, 26 of the students (29.9 %) had already experienced the menstruation, and the mean menarche age was found as 12.42±1.027. In some studies, It has been reported that mean menarche age varies between 12 and 13.7 years both in Turkey and in other countries (Taşkın 2016), (Gökyıldız 2002), (Read 1997), (Cameron and Nagdee 1996), (El-Gilany and Badawı 2005), (Demir et all 2000). The menarche age estimated in this study was assessed as compatible with the information in the current literature.

In our study, almost two thirds of the students pointed to their mothers (63.0 %) as their preliminary information sources for puberty. On the other hand, majority of the mothers have lower education levels such as 77.0 % of them are primary school graduates and 12.5 % of them are illiterate. Therefore, the reliability of the shared information and experience is always problem in terms of both quality and quantity. The results about students' knowledge levels provide a good evidence for this reality. Our pretest results indicate that the students could give 23 0f 30 correct answers with only a mean of 7.14±2.194. Çam et al (2004) informs that the education of students' parents living rural areas is mostly on primary school level. In State Institute of Statistics data in 2003, it was also reported that illiterate rate was 30.8% for women and 9.0% for men in rural areas (Turkish State Institute of Statistics 2003). Şahintürk and Acaroğlu (1999) noted that 81.7% of the schoolgirl's encountered menarche was informed about it, and they preferred their mothers as a source of information in the ratio of 49.87% and their sisters secondly (Read 1991). However, Bukoviç et al (2000) reported that the majority of adolescents talk about sexuality with their friends. Abioye-Kuteyi (2000) declared that girls' menstrual knowledge was positively associated with parental education. Furthermore, our study has shown the effect of a theory based health training that contained current factual information. Hence, the need for supplementary educational interventions should be considered in schools.

It is more advisable to give information about menstruation before menarche. Belated information may bring about some wrong ideas and negative behaviours of young girls. Doing consultancy for the girls being equipped with right information is easier than correcting the wrong things in their behaviours. The training which started in the family should continue in schools with a planned manner (Öncel and et al 2003). Therefore, low education levels of the families, and even illiterate parents in this study were considered as a negative factor. In all studies, being in front rank of receiving

ISSN: 2536-4642

information from mothers and sisters indicates that menstruation matter is still talked mostly with them in family and this fact is still a taboo in our society. On the other hand, family's being premier information source among others is an important data to show that family relations are positive. However, the students' self-expressions about their improvement of attitude toward asking questions to trainers, namely nurses, freely (67.8 %) can be considered important evidence in ensuring a controlled openness in the frame of menarche. That is to say, correct information for correct practices is needed and sought by students as stated in Health Belief Model. Not having information from reliable sources about sexuality may have given rise to some wrong beliefs among young people (WHO 2001). Wrong beliefs and poor knowledge level prevent young people to be aware of risks caused by sexual behaviours and health practices. In this study, it was determined that there was statistically considerable difference ($p < 0.05$) between mean knowledge scores of pre-test and post-test concerning menstruation period, menstrual hygiene and adolescence (puberty). These results show the students' strong belief towards both factual information and professional trainers. Their satisfaction of the realized activity and further demand for the similar trainings support evidently not only their need to be donated with real information for their behaviours related to this topic, and their trust on trainer nurses.

Conclusion

When the definition of World Health Organization (WHO) for the adolescence as a period of young people in between 10-19 years old, it is expected that the trainings received by young girls before the age of 10 about adolescent period, menstruation and menstrual hygiene will contribute the development of positive behaviours and attitudes concerning these periods; and also will prevent some probable negative emotional actions. It is also well known that young girls living in rural areas especially experience the menarche without knowing what it is and they assess this occasion on their own, and also they encounter negative emotional reactions. Our semi-experimental study has underlined the value of training activities on puberty and menarche for not only the students but also their families with the possible implications give below:

- Health training programs including menarche and menstrual hygiene can be planned and implemented at the beginning of the fourth year of primary schools.
- The individuals who take place in health training programs in schools (i.e. teaches, nurses, physicians) should receive on-the-job training both on the subject and training methods appropriate for adolescence.
- Midwives and nurses working in primary health care should effectively inform families about their children's growth and developmental stages, and continuous training programs should be planned for both children and families to enhance positive behaviours and attitudes.
- It is similarly important to make families conscious of this subject. A nurse, who is a professional member of health team, may play an active role in early detecting of unhealthy conditions, in supporting of diagnosis and therapeutic attempts as a trainer, a consultant, an implementing person and a researcher. Therefore, it is advised that there must be a nurse in every school to give information for health training by collaborating with families (Özdemir and Durgun 2000), (The Sexual and Reproductive Health Summary Report 2006). School nurses, by training both young girls reaching puberty and their mothers on menstruation period, may contribute to make up for the deficiencies on this case. The absence of nurse in the school, in which this study was fulfilled, was also considered as a negative condition.

Acknowledgments / Bilgilendirme: Authors are grateful to students, teachers and managers of Çamköy Primary School in Fethiye, Turkey for their support and valuable suggestions to carry out the present study.

REFERENCES

ABIOYE-KUTEYI, E.A. (2000). MENSTRUAL KNOWLEDGE AND PRACTICES AMONGST SECONDARY SCHOOL GIRLS IN ILE IFE, NIGERIA, Journal R. Social Health, Mar; 120 (1): 23-6.

ISSN: 2536-4642

ARIKAN, D. TORTUMLUOGLU, G. OZYAZICIOGLU, G. (2004). EFFECT OF PLANNED TRAINING ON MENSTRUAL HYGIENE BEHAVIORS OF STUDENTS, International Journal of Human Sciences, ISSN: 1303, 12 th of November.

BABAN, A. CRACUIN, C. (2007). CHANGING HEALTH-RISK BEHAVIORS: A REVIEW OF THEORY AND EVIDENCE-BASED INTERVENTIONS IN HEALTH PSYCHOLOGY. Journal of Cognitive and Behavioral Psychotherapies, Vol VII, No. 1, 45-67.

BAŞER, M. (2000). ADOLESCENT SEXUALITY AND PREGNANCY, C.U. Journal of Nursing School, 4 (1): 50-54.

BRUKIENE, V. STOMATOLOGIJA, J.A. (2010). THEORY-BASED ORAL HEALTH EDUCATION IN ADOLESCENTS, Baltic Dental and Maxillofacial Journal, 12:3-9.

BUKOVIC, D. LAKUSIC, N. KOPJAR, M. ET AL. (2000). ATTITUDES, BEHAVIOUR AND KNOWLEDGE ON SEXUALITY AMONG FEMALE ADOLESCENTS IN ZAGREB, CROATIA, Coll Antropology. 2000 Jun;24(1):53-60. PMID: 10895532.

CAMERON, N. NAGDEE, I. (1996). MENARCHEAL AGE IN TWO GENERATIONS OF SOUTH AFRICAN INDIANS. Annual Human Biology, Mar-Apr 23 (2): 113-9.

CONNER, M. NORMAN, P. (EDS.). (2005). PREDICTING HEALTH BEHAVIOR: RESEARCH AND PRACTICE WITH SOCIAL COGNITION MODELS (2nd ed.). Buckingham, England: Open University Press.

ÇAM, G. TOPBAS, M. KAPUCU, M. (2004). PERSONAL HYGIENIC HABITS OF PRIMARY SCHOOL STUDENTS IN TWO DIFFERENT PLACES IN TRABZON, TSK Preventive Medicine Bulletin, 3(8): 170-176.

DASGUPTA, A. SARKAR, M. (2012). MENSTRUAL HYGIENE: HOW HYGIENIC IS THE ADOLESCENT GIRL? Indian Journal Community Medicine [serial online] 2008 [cited 2012 Sep 6];33:77-80.

DEMIR, S.C. KADAYIFÇI, T.O. VARDAR, M.A. ET ALL (2000). DYSFUNCTIONAL UTERINE BLEEDING AND MENSTRUAL PROBLEMS OF SECONDARY SCHOOL STUDENTS IN ADANA, TURKEY, J. Pediatr Adolesce Gynecol 13: 171-175.

DEMIREL, S. TERZIOGLU, F. (2003). DETERMINATION OF SCHOOLGIRLS' KNOWLEDGE ON MENSTRUAL PHYSIOLOGY EDUCATED IN 5TH AND 6TH CLASSES OF PRIMARY SCHOOLS IN ŞAHINBEY DISTRICT OF GAZIANTEP, Hemar-G, 5 (2): 47-60.

EL-GILANY, A. BADAWI, K. EL-FEDAWY, S. (2005). MENSTRUAL HYGIENE AMONG ADOLESCENT SCHOOLGIRLS IN MANSOURA, EGYPT, Reproductive Health Matters Vol. 13, No. 26, The Abortion Pill (Nov., 2005), pp. 147-152.

FIRAT, M.Z. KULAKAÇ, O. ÖNCEL, S. AKCAN, A. (2009). ENSTRUAL ATTITUDE QUESTIONNAIRE: CONFIRMATORY AND EXPLORATORY FACTOR ANALYSIS WITH TURKISH SAMPLES. Journal of Advanced Nursing 65(3), 652–662.

GLANZ, K. BISHOP, D.B. (2010). THE ROLE OF BEHAVIORAL SCIENCE THEORY IN DEVELOPMENT AND IMPLEMENTATION OF PUBLIC HEALTH INTERVENTIONS, Annual Review Public Health, 31:399–418.

GÖKYILDIZ, S. (2002). HOW TO PROVIDE THE EFFICIENCY OF NURSING IN DEVELOPING OF SEXUAL HEALTH, I.U.F.H.Y.O. Journal of Nursing, 12 (49): 91-98.

GÜLER, G. BEKAR, M. GÜLER, N. AND ET AL. (2005). MENSTRUAL PERIOD HYGIENE OF SCHOOLGIRLS IN PRIMARY SCHOOLS. Sted, 14 (6): 135-138.

HOTUN, N. COŞKUN, A. (2001). TRAINING MODEL OF REPRODUCTIVE HEALTH FOR THE STUDENTS OF NURSING SCHOOL, I. International and V. National Nursing Education Congress, Congress Book, Dedeman Cappadocia Hotel, Nevşehir/Cappadocia-Turkey, 19-22 September, 224-228.

ISSN: 2536-4642

JUYAL, R. KANDPAL, S.D, SEMWAL, J. ET AL (2012). PRACTICES OF MENSTRUAL HYGIENE AMONG ADOLESCENT GIRLS IN A DISTRICT OF UTTARAKHAND. Indian Journal of Community Health Vol 24, No 2 April – June.

KAYA, A. (2001). DETERMINATION OF PERSONAL HYGIENIC HABITS OF SCHOOLGIRLS EDUCATED IN 5TH CLASS OF ÜLKÜ BORA PRIMARY SCHOOL, Graduation Thesis, Marmara University, İstanbul.

MANDAL, K. (2008). ADOLESCENT SCHOOL GIRLS AND NEED FOR TEACHING ON MENSTRUAL HYGIENE, http://hdl.handle.net/10755/173989.

ÖNCEL, S. YILMAZ, M. AK, G. (2003). THE KNOWLEDGE AND BEHAVIORS OF SCHOOLGIRLS ON MENSTRUATION, Nursing Forum Magazine, 6(2): 24-31.

ÖZDEMIR, S. DURGUN, B. (2000). THE KNOWLEDGE CONDITION OF STUDENTS ON PUBERTY IN TURKISH PIRELLI PRIMARY SCHOOL, I. International and III National Nursing Congress and Summary Booklet, 29 October/ 2 November/2000, Antalya, Turkey.

READ, D.A. (1997). HEALTH EDUCATION, A COGNITIVE-BEHAVIOURAL APPROACH, Jones and Bartelet Publishers, London.

PATRIMATH, A. BIRADAR, S. THOMAS, G. PATIL, MISTRY A.K. (2017). MENSTRUAL HYGIENE AMONG THE ADOLESCENT GIRLS AT B.A.B.S SCHOOL, BARDOLI, GUJARAT. International Journal of Current Advanced Research, Volume 6; Issue 7; July; Page No. 4506-4509.

PILLITTERI, S. P. (2011). SCHOOL MENSTRUAL HYGIENE MANAGEMENT IN MALAWI: MORE THAN TOILETS [ONLINE]. Available from: http://www.shareresearch.org/ LocalResources/MenstrualHygieneManagement_Mala wi.pdf.

SADEQUE, M. (2008). MENSTRUAL HYGIENE PROMOTION: A NEGLECTED DOMAIN OF HYGIENE BEHAVIOUR, Presentation from the 2008 World Water Week in Stockholm; Bangladesh.

SEXUALL RELATIONS AMONG YOUNG PEOPLE IN DEVELOPING COUNTRIES: EVIDENCE FROM WHO CASE STUDIES (2001); Avaible at:www.who.int/child-adolescenthealth/news.htm

SHANBHAG, D. SHILPA, R. D'SOUZA. N, ET AL (2012). PERCEPTIONS REGARDING MENSTRUATION AND PRACTICES DURING MENSTRUAL CYCLES AMONG HIGH SCHOOL GOING ADOLESCENT GIRLS IN RESOURCE LIMITED SETTINGS AROUND BANGALORE CITY, KARNATAKA, INDIA. International Journal of Collaborative Research on Internal Medicine & Public Health Vol. 4 No. 7, 1353-1362.

SNIEHOTTA, F.F. (2009). TOWARDS A THEORY OF INTENTIONAL BEHAVIOUR CHANGE: PLANS, PLANNING, AND SELF-REGULATION. British Journal of Health Psychology, 14, 261–273.

ŞAHINTÜRK, H. ACAROĞLU, R. (2001). DETERMINATION OF SCHOOLGIRLS' KNOWLEDGE AND PRACTICES ON MENARCHE AND MENSTRUAL HYGIENE IN PRIMARY SCHOOL. I. International and V. National Nursing Education Congress, 19-22/September/ 2001, Nesehir Congress Book, 265-270.

TAŞKIN, L. (2016). NURSING OF BIRTH AND WOMEN HEALTH. Akademisyen Tıp Publishing House, Ankara, ISBN:975-94661-0-4.

TAYLOR, D. BURY, M. CAMPLING, N. ET AL. (2006). A REVIEW OF THE USE OF THE HEALTH BELIEF MODEL (HBM), THE THEORY OF REASONED ACTION (TRA), THE THEORY OF PLANNED BEHAVIOUR (TPB) AND THE TRANS-THEORETICAL MODEL (TTM) TO STUDY AND PREDICT HEALTH RELATED BEHAVIOR CHANGE. June, The Department of Practice and Policy The School of Pharmacy, University of London, London WC1N 1AX.

ISSN: 2536-4642

THE SEXUAL AND REPRODUCTIVE HEALTH OF STUDENTS IN UNIVERSITIES, Five Universities Study, Summary Report (2006), Yücel Offset Publishing House.

TURKISH STATE INSTITUTE OF STATISTICS. (2003). INVESTIGATION OF EDUCATION CONCERNING SEXUALITY, Turkey.

TURKISH MINISTRY OF HEALTH (2001). TARGETS AND STRATEGIES OF TURKEY FOR COMMON HEALTH, Ankara.

UM, L. YUSUF, N.W. MUSA, A.B. (2010). MENSTRUATION AND MENSTRUAL HYGIENE AMONGST ADOLESCENT SCHOOL GIRLS IN KANO, NORTHWESTERN NIGERIA. African Journal of Reproductive Health; 14[3]: 201-207.

YORULMAZ, A. (2000). DETERMINATION OF KNOWLEDGE LEVEL OF WOMEN HOSPITALIZED IN GYNECOLOGY SERVICE OF AHU HETMAN HOSPITAL IN MARMARIS, I. International and VIII. National Nursing Congress Booklet, 521-524.

WATKINS, D. COUSINS, J. (2010). PUBLIC HEALTH AND COMMUNITY NURSING, FRAMEWORKS FOR PRACTICE, Bailliere-Tindall, Elsevier, London.

WEDC DEVELOPING KNOWLEDGE AND CAPACITY IN KNOWLEDGE AND SANITATION, FACT SHEET 7 (2011). Menstruation hygiene management for schoolgirls in low-income countries Report, Water Aid, (2011), http://sanitationupdates.wordpress.com/category/iys-themes/sanitation-and-health.

ISSN: 2536-4642