

Information Levels of Female Students of a Secondary School on Menstruation and Menstrual Hygiene

İlknur BİLGİN¹, Nurdan KAYA², Funda EVCİLİ³, Mine BEKAR⁴,
Gülbahtiyar DEMİREL⁵

¹(Midwifery Department / Cumhuriyet University Faculty of Health Sciences, Teaching Assistant Msc. Turkey)

²(Midwifery Department / Cumhuriyet University Faculty of Health Sciences, Research Assistant Msc. Turkey)

³(Midwifery Department / Cumhuriyet University Faculty of Health Sciences, Research Assistant PhD. Turkey)

^{4,5}(Midwifery Department / Cumhuriyet University Faculty of Health Sciences, Assist. Prof., PhD. Turkey)

Abstract:

Aim: The aim of study has determined menstruation and menstrual hygiene information levels of female students at secondary school.

Method: The descriptive study included 125 students attending Toki Şehit Uzman Çavuş Bahaddin Erturhan Secondary School located at the centre of the Province of Sivas between 1-15/12/2015. The data were collected through "Menstruation Period and Hygiene Information Form". The data analysis was performed through number and percentage distribution and Pearson's chi-square test. The statistical significance level was established at $p < 0.05$.

Findings: 36% of students were menstruating and 56.8% have sufficient menstruation information. Related to menstruation period, 44.8% of students could have physical complaints in premenstrual period; 72% that disposable pads should be used during menstruation; 3.2% that menstrual bleeding came from uterus; 2.4% that menstrual bleeding is discharged through vagina; 32% that menstruation repeated once every 21-25 days. Related to menstrual hygiene, 32.8% of students could have bath during menstruation; 51.2% that they must sit on a stool during baths; 27.2% that pads should be replaced once every 3-4 hours; 57.6% that they needed to wash their hands before and after changing pads; 53.6% that used pads should be wrapped before being thrown out; 6.4% that toilet cleansing should be done by single motion from front to rear; 24.8% that underwear should be changed every day; and 24.0% that their underwear should be white colour. The difference between menstrual status and sufficiency of information on menstruation and menstrual hygiene was found to be statistically significant ($p < 0.05$). Information on menstruation and menstrual hygiene was identified to be sufficient among menstruating students (88.9%) and insufficient among non-menstruating students (61.2%).

Results and Suggestions: It is suggested that due training should be given to students before onset of menstruation due to insufficient related to menstruation and menstrual hygiene information level of students.

Keywords: Hygiene, menstruation, female student.

I. Introduction

Adolescence holds great importance among the development stages of humans. Adolescence period can be defined as transition from childhood to adulthood, in which physical growth, sexual development and psychosocial maturation take place (Akçan et al. 2012). Adolescence period generally starts at earlier ages for girls (10-12yrs), than boys (11-14yrs) (Yıldırımkaaya, 2008). Menstruation is one of the important biological incidents for girls undergoing the adolescence period. Menstrual bleeding, also referred to as menorrhoea, starts with the first bleeding (menarche) that provides women with the ability to reproduce, and periodically continues until menopause in the form of periodic exfoliation and excretion of endometrium layer (Taşkın, 2016). Determination of the hygiene behavior of women during their menstrual cycle holds critical importance in terms of their reproductive health (Arıkan et al 2004; Güler et al 2005; Timur, 2010; Koyun et al 2013). Therefore, the aim of this study was to determine the menstrual knowledge and awareness level of girls in secondary school age, which involves the first years of menstruation.

II. Method

The research was conducted at Toki Şehit Uzman Çavuş Bahaddin Erturhan Secondary School, located in the provincial center of Sivas. Research population consists of 144 school girls receiving education in this secondary school. Sample selection was not applied, and 125 students that consented to participate in the study constituted the research sample. Data collection was carried out via Personal Information Form, Menstrual Period Information Form, and Menstrual Hygiene Information Form. Personal Information Form comprised 13 questions for evaluation of some of the socio-demographic properties of students, Menstrual Period Information

form comprised 17 questions for evaluation of menstrual knowledge of students, and Menstrual Hygiene Information Form comprised 10 questions for evaluation of the hygiene knowledge and tendencies of students undergoing menstrual period. Aforementioned forms were completed by all students included in the sampling, and then collected by the researchers for further evaluation. Research data was evaluated using SPSS 22.0 software package for Windows. Numerical, percentage distribution and Pearson chi-square tests were used during the evaluation, and statistical significance level was established as $p < 0.05$.

III. Findings

Participating students have the age average of 11.89 ± 1.25 . 33.62% are in fifth grade, and 64.8% live in the provincial center. Among the parents (mothers, fathers) of the students, respectively 7.2%, 1.6% are illiterate, and 13.6%, 87.2% are employed. 79.2% of the students live in a nuclear family, and the average number of siblings is 3.04 ± 1.30 . 36% of the students menstruate, 56.8% think they have adequate menstrual knowledge.

Table 1: Knowledge Level of the Students Regarding Menstrual Period.

Menstrual Period Knowledge Level	Number of students	%
Physical complaints are experienced in premenstrual period.	56	44
Disposable pads must be used in menstrual period.	90	72
Menstrual bleeding occurs in uterus.	4	3.2
Menstrual bleeding is excreted from vagina.	3	2.4
Menstrual cycle repeats in 21-35 days.	40	32

44% of the students stated that physical complaints can be experienced in premenstrual period; 72% stated that disposable pads must be used in menstrual period; 3.2% stated that menstrual bleeding occurs in uterus; 2.4% stated that menstrual bleeding is excreted from vagina; and 32% stated that menstrual cycle repeats in 21-35 days (Table 1).

Table 2: Knowledge Level of the Students Regarding Menstrual Hygiene

Menstrual Hygiene Knowledge Level	Number of students	%
Bathing is necessary in menstruation period	41	32.8
Bath should be taken while sitting on a bathroom stool	21	51.2
Pad should be changed once in 3-4 hours	34	27.2
Hands should be washed before and after the pad-change	72	57.6
The used pad should be wrapped and disposed	67	53.6
Cleansing (in toilet) should be backwards with single movement	8	6.4
Underwear should be changed daily.	31	24.8
White cotton underwear should be used	30	24.0

32.8% of the students stated that bathing is necessary in menstrual period; 51.2% stated that bath should be taken while sitting on a stool; 27.2% stated that pad should be changed once in 3-4 hours; 57.6% stated that hand-washing is necessary before and after the pad-change; 53.6% stated that pad should be wrapped prior to disposing; 6.4% stated that cleansing in the toilet should be backwards and with a single movement; 24.8% stated that daily changing of underwear is necessary; and 24.0% stated that white cotton underwear should be used during menstrual period (Table 2).

Table 3: Distribution of Students As To Whether They Feel Adequate About Menstruation And Menstrual Hygiene Knowledge

Menstrual condition	Adequacy condition				Total		X ² /p
	Feel Adequate		Do Not Feel Adequate		n	%	
	n	%	n	%			
Menstruating	40	88,9	5	11,1	45	100,0	30,516/0,001
Non-menstruating	31	38,8	49	61,2	80	100,0	
Total	71	56,8	54	43,2	125	100,0	

The difference among students as to feeling adequate about menstrual and menstrual-hygiene knowledge, was found to be statistically significant ($p < 0.05$). Menstruating students (88.9%) stated that they deem themselves adequate about menstruation and menstrual-hygiene knowledge, and non-menstruating students (61.2%) stated that they feel inadequate about menstruation and menstrual-hygiene knowledge (Table 3).

IV. Discussion

Being informed about menstruation holds great importance in terms of reproductive health (Arıkan et al 2004; et al 2005; Timur, 2010; Koyun et al 2013). Menstrual knowledge is also necessary to decide on the type of the pad to be used during menstrual period. Due to hygiene related issues, there is an increased use of disposable pads in recent years (Demirtaş, 2006). In previously conducted researches, 91.4% (Arıkan et al. 2004), 83.5% (Güler et al. 2005), 100% (Timur 2010), 96.9% (Tartaç and Özkan 2011), 95% (Koyun et al. 2013) and 30.9% (Kale Kalpana et al. 2014) of participants were reported to be using hygienic pad during their menstrual period. Similarly, in the present study, hygienic pad usage rate was found as 72%. Menstruating females experience some physical and mental complaints prior to their menstrual period due to the changes in hormones. Having information as to which kinds of complaints can be experienced, is essential in overwhelming the anxieties likely to occur in this period (Doğan et al. 2012). %62.4 of the participants were reported to be suffering from physical complaints in the study carried out by Kale Kalpana et al. (2014). Selçuk et al. (2014) reported that 50.2% of the students undergo physical and mental alterations during the menstrual period. Similarly, in the present study %44 of the students stated that they were likely to undergo physical complaints during their premenstrual period.

Having the basic knowledge regarding the physiological process in menstrual period is essential in terms of maintenance of reproductive health (Taşkın, 2016). In the study conducted by Demirel and Terzioğlu (2003), 16.6% of the students stated that menstrual bleeding occurs in uterus, and 26.3% stated that menstrual cycling repeats in 21-35 days. Liu et al (2012) reported that 4.2% of girls had correct knowledge about the menstrual period. In the present study, 3.2% of the students stated that menstrual bleeding occurs in uterus, and 32% stated that menstruation occurs once in 21-35 days. As in previous studies, students were found to have insufficient basic menstrual knowledge in this study as well. Bathing in menstrual period is an important hygiene behavior to prevent the development of genital infections. In this period, bathing in standing position is another important point (Demirtaş, 2006). In previously conducted studies, statistics of students bathing in menstrual period were 68.8% (Arıkan et al. 2004), 84.9% (Güler et al 2005), 76.8% (Timur, 2010), 83.1% (Tartaç and Özkan 2011), 72.5% (Koyun et al. 2013) and 82.1% (Topuz et al. 2015). In terms of bathing position; 52.7% (Arıkan et al. 2004), 43.2% (Güler et al. 2005), 37% (Tartaç and Özkan 2011) and 35% (Koyun et al 2013) stated that they were taking bath in sitting position. In this study, 32.8% of the students stated that bathing is necessary in menstrual period, and 51.2% stated that bath should be taken while sitting on a stool. These results indicate that the students are either misinformed or they have inadequate knowledge and awareness about menstrual hygiene.

Hygienic pads should be changed in every 3-4 hours to prevent genital infections. Washing the hands before and after pad-changes is another important hygiene habit. (Demirtaş, 2006). In previous studies, 30.1% of students stated that they change the pad in every 4-6 hours, 68.3% stated that they wash their hands before and after pad-changing (Arıkan et al., 2004); 59.7% (Güler et al., 2005) 65.6% (Timur, 2010), 65% (Koyun ve ark., 2013) and 52.8% (Topuz ve ark. 2015) stated that they change the pad 3-4 times in a day; 2.8% stated that they change the pad 4 times in a day, 39.4% stated that they wash their hands before and after pad-changing (Tartaç and Özkan, 2011); and 82.1% stated that they change the pad at least once in a day (Kale Kalpana et al. 2014). In the present study, 27.2% of the students stated that pads should be changed in every 3-4 hours, and 57.6% stated that hands should be washed before and after changing the pad. As reported in previous studies, the samples of the present study were also found to have insufficient knowledge regarding menstrual period and hygiene. A higher percentage of women suffer from urinary system infections than men, since urethra is closer to the female genital organ. Implementation of toilet cleansing with a single backward movement is not only necessary in menstrual period, but it is essential for reproductive health of women throughout their lifetime (Demirtaş, 2006). In previously conducted studies, respectively 28.5%, 69.1%, 54.4%, 54.5%, 7.5% (Arıkan et al., 2004; Güler et al. 2005; Timur, 2010; Tartaç and Özkan. 2011; Koyun et al. 2013) students stated that toilet cleansing should be made with a single backward movement. In the present study 6.4% of the students were found to have correct knowledge about toilet cleansing. These results indicate that, students do not have adequate knowledge and awareness about correct toilet cleansing, and they are under the risk of urinary system infections. The type of underwear used by women, and how often they change it in a day, are both important in terms of menstrual hygiene and reproductive health of women (Demirtaş, 2006). In the study carried out by Arıkan et al. (2004) 28.5% of students stated that they use cotton underwear. The frequency of cotton underwear usage was reported as 93.5%, and daily underwear changing frequency was reported as 12.9% by Güler et al (2005). In Timur's study (2010) cotton underwear usage frequency was reported as 42% and daily underwear changing frequency was reported as %19.6. Tartaç and Özkan'nın (2011) reported a cotton underwear usage frequency of 46.3%, and daily underwear changing frequency of 31.4%. In the study carried out by Koyun et al. (2013), 82.5% of students stated that they use cotton underwear and 15% stated that they change their underwear daily. In the present study, 24% of the students stated that they use white cotton underwear, and 24.8% stated that they change their underwear at least once a day. Along with the previous studies, results of the

conducted study indicate that an insufficient percentage of students use cotton white underwear with an inadequate daily changing frequency. This result is an indication of reproductive health risk for girls in secondary school age.

V. Conclusions and Recommendations

After the conducted research, menstruating and non-menstruating students were found to have inadequate basic knowledge about menstrual period and menstrual hygiene. Therefore, providing the school girls with extensive menstrual education, involving their pre-menarche period and continuing after menarche, is recommended.

References

- [1]. Akçan Parlaz E., Tekgül N., Karademirci E., Öngel K. (2012) Adolescence Period: Physical Growth, Psychological And Social Development Process, Turkish Family Physician, 3(4):10-16.
- [2]. Ankan D., Tortumluoğlu G., Özyazıcıoğlu N. (2004) The Impact of Planned Education Given To The Students to The Menstruation Hygiene Behaviors, International Journal of Human Sciences, 1(1):1-15.
- [3]. Demirel S. ve Terzioğlu F. (2003), Assesment Of Level Of Knowledge On Menstruation Physiology Of 5th And 6th Grade Girls Enrolled At Primary Schools In Şahinbey District Gaziantep Province, Journal of Research and Development In Nursing,2:47-60.
- [4]. Demirtaş B. 2006, Assesment of the Knowledge of Vulva Health of the Nursing Students, Journal of Hacettepe University Faculty of Nursing (2006) 14–25.
- [5]. Doğan S., Doğan N., Can H. and Alaşehirlioğlu HV. 2012, Approach to premenstrual syndrome in primary health care, Smyrna Medical Journal, 90-93.
- [6]. Güler G., Bekar M., Güler N., Kocataş S. (2005) Menstruation Hygiene in Female Primary School Students, Sted, 14(6):135-139.
- [7]. Kale Kalpana M., Aswar Nandkeshav R., Wahane Aparna R. and Bhatkule Prakash R.2014, Menstrual Hygiene amongst the School Going Adolescent Girls in Rural Area, Sch. J. App. Med. Sci., 2(6C):2095-2099.
- [8]. Koyun A., Özpulat F., Bahar Özvarış Ş. (2013) Training Program Development And Evaluation Process: Secondary Education For Girl Students "Genital Hygiene" Education Program, Gümüşhane University Journal of Health Sciences, 2(4):443-459.
- [9]. Liu HL., Chen KH. and Peng NH. 2012, Cultural Practices Relating to Menarche and Menstruation among Adolescent Girls in Taiwan Qualitative Investigation, J Pediatr Adolesc Gynecol 25 (2012) 43-47.
- [10]. TARI SELÇUK K., AVCI D. and ALP YILMAZ F. 2014, The Prevalence of Premenstrual Syndrome Among Nursing Students and Affecting Factors, Journal of Psychiatric Nursing;5(2):98-103.
- [11]. Tartaç Y. and Özkan S. (2011) Knowledge of and Attitude to Menstrual Hygiene of Students in a Vocational School and Evaluation of the Effectiveness of the Training, Gazi Med J; 22: 27-32.
- [12]. Taşkın, L. 2016, Birth and Women's Health Nursing, Expanded 13th Edition, Academician Medicine Bookstore, Ankara.
- [13]. Timur S. (2010) Genital Hygiene Behaviors Of The Female Students Who Stay At A University Student Hostel, e-Journal of New World Sciences Academy Medical Sciences, 5(4):39-48.
- [14]. Topuz Ş., Duman BN. and Güneş A. 2015, Genital Hygiene Practices of Female Students at First Class in the Faculty of Health Sciences, Turkish Journal of Clinics and Laboratory; 6(3); 85-90.
- [15]. Yıldırımkaya G. (2008) The Need for Information on Unmet Sexual Health in Turkey Reflecting on Adolescent Health and UNFPA, İ.Ü. Cerrahpaşa Medical Faculty Continuing Medical Education Activities ADOLESCENT HEALTH II Symposium Series No: 63, pp: 47-50.