Original Article

The Relationship between Sexual Health Behaviors and Healthy Lifestyle **Behaviors of Female Students in Turkey**

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Abstract

Background: Healthy lifestyle behaviors (HLB) is described as the acquisition of knowledge, attitudes, behaviors and skills that aim to promote health and is the beliefs, perceptions and practices of the individuals to stay healthy and to protect themselves from diseases. It is an important responsibility to reach university students, who can easily adopt health lifestyle behaviors. It is believed that raising awareness on HLB and sexual health within the scope of informative and instructional programs will promote the community health.

Aim: This cross sectional study has been conducted to determine the relationship between sexual health behaviors and HLBs of female students.

Methodology: 802 voluntary female students were included in the research. The research data was collected via face-to-face interview method by means of "Personal Information" and "Healthy Lifestyle Behavior Scale" forms.

Results: It has been determined that the mean age of the students 20.71 ± 1.68. A statistically significant difference (p < 0.05) was found between students who did and did not perform a vulvar self examination (VSE), breast self examination (BSE) and all the sub-dimensions when the total scores of HLB scale of the students were analyzed. Between the total scores of students in HLB scale and undergoing gynecological examinations, health responsibility, physical exercise, nutrition and stress management there is a significant difference (p <0.05). A statistically significant difference (p = 0.046 < 0.05) was found between the infection status of the students and the HLB scale total mean score. It was determined that 99.7 % of the students had no experience of sexual intercourse and 0.1 % of the students had experienced their first sexual intercourse at the age of 17.

Conclusion: Raising awareness about sexual health behaviors and HLB in university students, may contribute to the health promotion.

Keywords: University Female Students; Healthy Life Style Behaviors; Sexual Health Behaviors.

Introduction

Being healthy is one of the fundamental rights of mankind. HLB is described as the acquisition of knowledge, attitudes, behaviors and skills that aim to promote health and is the beliefs, perceptions and practices of the individuals to stay healthy and to protect themselves from diseases. Today, health is considered as a concept related to the whole scope of life including emotional, social, cultural, spiritual and physical wellbeing of individuals. HLB includes self actualization, adequate and regular physical exercise, adequate and balanced nutrition,

interpersonal relationships such as health responsibility (smoking, hygienic measures), stress management, etc. (Aslan et al., 2014; Aciksoz et al., 2013; Cihangiroglu, Z & Deveci., 2011).

The World Health Organization supports countries in the areas of improving HLB, reducing preventable health problems, and developing positive health behaviors (WHO.,2015). Positive health behavior consists of conscious efforts of individuals on effectively protecting their health and then the health of others. University life is a period of substantial

alterations with regards to individual and society. Besides vocational education, university education influences personality development at a significant level (Tugut & Bekar, 2008). This change is important in terms of health-related habits and knowledge and attitudes towards the protection of sexual health (Tugut & Bekar, 2008; İlhan et al., 2010).

Reasons like rapid socio-cultural variations, insufficient sexual health education, etc. make youth vulnerable. It is the group that needs particular attention as they experience the sexual health problems more frequently and can benefit less from the sexual health services. University students may be expected to take their own health responsibilities, show healthy behavior and take role models. As in all life stages, HLB awareness and sexual health behaviors play an important role in youth. For this reason, professionals bear tremendous responsibility on helping university students to develop positive health behaviors (Tugut & Bekar, 2008; Karabulutlu & Kilic, 2011; Eroglu & Koc, 2014). It is an important responsibility to reach university students, who constitute a significant proportion of society and who can easily adopt health lifestyle behaviors. It is believed that raising awareness on HLB and sexual health within the scope of informative and instructional programs will promote the community health.

Materials and Methods

The population of the study included 2938 female students living in Cumhuriyet University Higher Education Student Loan and Housing Board Dormitory in the 2014-2015 school years.

The sample of the study included 802 female students. The data was collected via Personal Information Form, HLB scale and Knowledge Assessment Form on Gynecological Cancer Prevention. Personal Information Form: The questionnaire was prepared by investigating the relevant literature (Tugut & Bekar, 2008; Acikgoz et al., 2011; Nazlican et al., 2010; Pinar et al., 2009; Smith, 2012; Sahin, 2009). The questionnaire consists of 24 questions to determine the socio demographic characteristics (8 items) and the knowledge of students on gynecological cancers and risk factors of gynecological cancer (16 items). Healthy Lifestyle Behavior Scale: The scale was developed by Walker, Sechrist and Pender in 1987 (Esin, 1999). It measures health-promoting

behaviors associated with the healthy lifestyle of individual. The scale is adapted to Turkish society by Nihal Esin in 1997. The Cronbach's alpha coefficients were 0.91 for the scale and 0.57-0.77 for the subscales (Aciksoz et al., 2013). The scale has a total of 48 items and has six subscales. Subscales are self actualization, health responsibility, physical exercise, nutrition, interpersonal support and stress management. Each subgroup may be used independently. The total score of the scale gives scores of healthy lifestyle behaviors.

In order for the research to be conducted, written permission has been obtained from Higher Education Student Loan and Housing Board.

The study was conducted in the dormitory between the dates 20/01/2015 - 30/06/2015. The students were informed about the study and written consent was collected from all the voluntarily participating students. During the process of filling out the forms, the researcher was accompanying the participants. Filling of the forms lasted about 15-20 minutes and was collected by the researcher after the filling process was completed. The data was analyzed with SPSS 15.0 package program in computer environment. Descriptive statistics such as mean, standard deviation and percentile distribution were calculated. In addition Chi-square (Chisquare) test, t test and F test (ANOVA) were performed. The correlation coefficient between the HLB scale and gynecological cancer prevention variables was found. Significance level was taken as 0.05 in statistical tests.

Ethical considerations: All procedures involving human performed in studies participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Prior to the approval application, was obtained Cumhuriyet University Medical Faculty Clinical Research Ethics Committee (dated 15.01.2015, No: 11/41) and written permission was obtained from the Higher Education Student Loan and Housing Board (dated 13.03.2015, numbered 74817733-605-01 / 591).

Informed consent The aim of the research was explained to the female students via the "Informed Consent Questionnaire" and informed consent was obtained from all individual participants included in the study.

Results

It has been determined that 20.9 % of the students were in the departments related to Health Sciences, 29.3 % were in the Faculty of Arts and Sciences, 33.2 % were in the first grade and 27.4 % were in the second grade and the mean age was 20.71 \pm 1.68. According to the BMI, 77.1% of the students were in normal weight and 1.4 % were obese. 78.4 % stated that they had health insurance, and 80.9 % had moderate economic condition. 7.1 % of the students declared that they had gynecological infection and 55.4 % of the infected students had fungal infection while 1.8 % had HPV infection. It has been determined that 18 % of the students had a gynecological examination among whom 56.7 % underwent 1-3 times a year and 28 % had whenever necessary. 89.3 % of the not examined students stated that they were not in need. 30.7 % of the students declared that they are performing VSE and among those who are performing 34.9 % performed 1-2 times a month; 52.2 % did not know how to do the examination, 46.4 % were not in need to be examined. 99.7% of the students stated that they had no experience of sexual intercourse. Among the ones who had sexual intercourse, 0.1 % had their first experience at age of 17. It has been observed that 99.8 % of the students did not have sexually transmitted

infection. 0.1 % of the STI students declared that they had Hepatitis B, 0.1 % had HIV infection. 98.5 % of them did not undergo pap smear, 1.5 % of them had it. 41.7 % of the students who underwent Pap smear test whenever necessary and 41.7 % of them had it once or twice a year. 74.9 % of the students stated that they were unaware of the test. 56.1 % of the students declared that they are performing BSE of whom 54 % stated that they perform it 1-2 times in a month. 66.8 % of the students mention that they did not perform BSE because they did not know about it.

The scores of the students on the HLB indicated that the highest mean score was obtained in self actualization with 36.29 ± 6.42 and the lowest mean score was obtained in physical exercise with 9.38 ± 3.25 which then is followed by health responsibility with 21.40 ± 6.05 , interpersonal support with 19.73 ± 3.60 , stress management with 17.25 ± 3.64 and nutrition with $14.84 \pm$ 3.40. The mean score of the HLB Scale was 118.90 ± 20.54 . There was a statistically significant difference (p < 0.05) between the VSE status of the students and HLB and subdimensions (p = 0.000 < 0.05). There was not a statistically significant difference between the undergoing Pap Smear test status of the students and the total mean scores and the scores on subscales (p > 0.05).

Table 1 The Distribution of HLB Scale Scores and the Subscales Mean Scores of the Female Students According to Their Status of Performing $VSE\ (n=802)$

Subscales	Performed	Did not Perform		
			Test	
	n=246	n=556		
	$X \pm SD$	$X \pm SD$	t	p
Self Actualization	37.75 ± 6.65	35.64 ± 6.22	4.345	0.000
Health Responsibility	24.30 ± 6.25	20.12 ± 5.50	9.033	0.000
Physical Exercise	10.43 ± 3.37	8.91±3.09	6.024	0.000
Nutrition	15.38 ± 3.57	14.61±3.30	2.972	0.003
Interpersonal Support	20.52 ± 3.68	19.39±3.51	4.150	0.000
Stress Management	18.27 ± 3.90	16.79±3.43	5.386	0.000
HLB Scale	126.65 ± 21.90	115.46±18.95	6.947	0.000

Table 2 The Distribution of HLB Scale Scores and the Subscales Mean Scores of the Female Students According to Their Status of Undergoing Pap Smear Test (n = 802)

Subscales	Do n=12 X ± SD	Do Not n=790 X ± SD	Test	
			t	p
Self Actualization	37.75 ± 6.70	36.26 ± 6.42	0.795	0.427
Health Responsibility	24.42 ± 8.32	21.36 ± 6.01	1.739	0.082
Physical Exercise	9.50 ± 2.97	9.38 ± 3.26	0.126	0.900
Nutrition	14.67 ± 2.87	14.85 ± 3.41	-0.180	0.857
Interpersonal Support	20.75 ± 4.53	19.72 ± 3.58	0.984	0.326
Stress Management	18.42 ± 3.84	17.23 ± 3.64	1.119	0.263
HLB Scale	125.50 ± 21.18	118.79 ± 20.53	1.122	0.262
Gynecological cancer prevention information scores	10.92 ± 3.52	9.13 ± 3.82	1.608	0.108

Table 3 The Distribution of the HLB Scale and the Scale Averages of the Sub Scales According to the Status of Performing BSE (n = 802).

Subscales	Performed	Did not Perform	Test	
	n=450	n=352]	
	$X \pm SD$	$X \pm SD$	t	p
Self Actualization	37.06 ± 6.46	35.30 ± 6.24	3.891	0.000
Health	23.02 ± 6.22	19.34 ± 5.16	9.137	0.000
Responsibility				
Physical Exercise	9.92 ± 3.30	8.70 ± 3.07	5.444	0.000
Nutrition	15.26 ± 3.50	14.31 ± 3.20	3.976	0.000
Interpersonal	20.04 ± 3.60	19.35 ± 3.57	2.707	0.007
Support				
Stress Management	17.85 ± 3.70	16.47 ± 3.43	5.415	0.000
HLB Scale	123.15 ± 21.25	113.46 ± 18.24	6.937	0.000

It has been found that there is a statistically significant difference between BSE status of the students and total and subscale mean scores of the HLB scale (p <0.05). There was no statistically significant difference between sexual intercourse experience of the students and the total mean score of HLB scale (p = 0.140 > 0.05). There was a significant difference between

sexual relationship status and responsibility (p = 0.003 < 0.05) but there was no significant difference with the other subdimensions (p > 0.05).

A statistically significant difference was found between the gynecologic infections of the students and the HLB scale total mean scores (p = 0.046 < 0.05).

Table 4 The Distribution of the HLB Scale and the Subscales Mean Scores of the students according to Gynecologic Infection Transition Status of Students (n = 802)

Subscales	Infected	Not	Test	
		Infected		
	n=57	n=745		
	$X \pm SD$	$X \pm SD$	t	p
Self Actualization	37.23 ± 5.25	36.21 ± 6.50	1.379	0.172
Health Responsibility	22.89 ± 6.22	21.29 ± 6.03	1.932	0.054
Physical Exercise	9.67 ± 3.43	9.36 ± 3.24	0.683	0.495
Nutrition	15.68 ± 3.36	14.78 ± 3.40	1.93	0.053
			7	
Interpersonal Support	20.63 ± 3.49	19.67 ± 3.60	1.95	0.051
			4	
Stress Management	18.02 ± 3.76	17.19 ± 3.63	1.65	0.098
			6	
HLB Scale	124.12 ± 19.55	118.50 ± 20.58	1.99	0.046
			6	

Table 5 The Distribution of the HLB Scale and the Subscales Mean Scores of the Students According to their Gynecological Examination Status (n=802)

Subscales	Underwent	Did not Undergo	Tes	Test	
	n=144	n=658			
	$X \pm SD$	$X \pm SD$	t	p	
Self Actualization	37.17 ± 6.19	36.09 ± 6.46	1.833	0.067	
Health Responsibility	23.30 ± 6.40	20.99 ± 5.90	4.188	0.000	
Physical Exercise	9.99 ± 3.27	9.25 ± 3.23	2.463	0.014	
Nutrition	15.56 ± 3.42	14.69 ± 3.38	2.782	0.006	
Interpersonal Support	20.13 ± 3.84	19.65 ± 3.54	1.389	0.166	
Stress Management	18.05 ± 3.63	17.07 ± 3.63	2.950	0.003	
HLB Scale	124.20 ± 20.80	117.73 ± 20.32	3.444	0.001	

There was a statistically significant difference (p = 0.001 < 0.05) between the gynecologic examination status of the students and the total mean score of the HLB scale. There was a statistically significant difference between gynecological examination status of the students and health responsibility (p = 0.000 < 0.05), physical exercise (p = 0.014 < 0.05), nutrition (p = 0.006 < 0.05) and stress management (p = 0.003 < 0.05).

Discussion

The research was conducted to determine the relationship between the sexual health and lifestyle behaviors of the female students living in the Cumhuriyet University Higher Education Student Loan and Housing Board Dormitory. It has been determined that 20.9 % of the students were in the departments related to Health Sciences (Midwifery, Nursing, Medicine, Veterinary Medicine, Pharmacy), 29.3 % were in

the Faculty of Arts and Sciences, 33.2 % were in the first grade and 27.4 % were in the second grade and the mean age was 20.71 According to the BMI, 77.1% of the students were in normal weight and 1.4 % were obese. 78.4 % stated that they had health insurance, and 80.9 % had moderate economic condition.

Factors such as cultural, intimacy, lack of information, fear are influencing the frequency of gynecologic examinations during the studies (Koluaçık et al., 2010). In the study, 18 % of the students stated that they had a gynecological examination. More than half of them (56.7 %) were examined 1-3 times in a year and 28 % had it whenever necessary. The majority (89.3 %) unexamined students stated that they did not have a gynecological examination because they did not need it. In the study by Gumus and Cam 43.6 % women underwent gynecologic examination, 57.6 % were examined in pursuit of the symptoms of a disease and 57.3 % of them were not examined due to the lack of symptoms (Gumus & Cam, 2011). The results of our study was similar to the ones conducted in the literature in that the students did not undergo medical check-up without having health problems. Guidance, counseling and training roles of health professionals are important for promoting health.

It has been observed that the difference between the HLB total scores of the students and the status of undergoing gynecological examination is statistically significant. Among the subscales, on the other hand, the difference is statistically significant between the health responsibility, physical exercise, nutrition and stress management for examined students (p <0.05) (Table 5). The majority of students (89.3 %) who did not have gynecological examinations may be inferred as risky 'n terms of gynecological health.

It was observed that the majority of the students (99.7 %) were not sexually active and 98.5% did not have pap smear test. 41.7 % of the students who answered the question 'Do you undergo Pap smear test' stated that they would do it if necessary. A statistically significant difference was found between the students not undergoing pap smear screening and the health responsibility subscale (p <0.05), while no statistically significant difference was found between the other subscales (p> 0.05) (Table 2). Only 28 % of students with experience of sexual intercourse were found to have a pap smear in the study performed by Bekar and Mavi (Mavi & Bekar,

2016). The study by Sonmez et al. has shown that women who undergo pap smear screening have gynecological examinations when it is irresistible (Sonmez et al., 2012). 77.5 % of participants did not have any reason for undergoing a pap smear screening test in the study performed by Bal (Bal, 2014). Likewise, in our study the students declare that they were not in need to undergo pap smear screening test and they would have it if necessary. This attitude could be attributed to lack of information about pap smear screening test. s a matter of fact, 74.9 % of the students who did not have the pap smear test stated that they did not know the pap smear test. In a study conducted by Ak, 46.8 % of women heard about pap smear test and 54.2 % have never heard of it (Ak et al., 2010). In Yurtsev's study, 72.5% of the students did not hear the pap smear test (Yurtsev, 2011). In the study conducted by Gumus and Cam, 58.2% of the women were not informed about the pap smear test (Gumus, 2011).

In the study by Sonmez et al. 89 % of the women had pap smear test and 72.5 % of the women had done it (Sonmez et al., 2012). In our study, It was determined that the majority of the students (74.8%) did not know the pap smear test (Table 1). This may suggest that students do not get information about gynecological health related to themselves due to socio-cultural beliefs and attitudes. This may affect the HLB gynecological health behaviors negatively.

There was a statistically significant difference (p = 0.006 < 0.05) between not undergoing pap smear test and the health responsibility subscale of the female students, but not in the other subscales (p > 0.05) (Table 2).

In different studies conducted in our country, it has been observed that the frequency of sexual intercourse in university students varies between 16 % to 24 % (Siyez & Siyez, 2009). In our study, it was determined that 99.7 % of the students had no experience of sexual intercourse and 0.1 % of students with sexual intercourse had experienced the first sexual intercourse at the age of 17. In the study by errorPınar et al. 17.2 % of students have experience of sexual intercourse (Pinar et al., 2009). The average age of sexual intercourse is 19.3 (min: 14, max: 22). In a study by Kaya et al. study, 4.2 % of the first grade female students in the Education Faculty were found to have sexual experience (Kaya et al., 2007). In our study, the sexual intercourse experience was lower than the other studies in the

literature. Despite the confidentiality of the research conducted on participants, because of socio-cultural values and beliefs they may hide their sexual activities. It is also thought that the reason for students not to adopt sexual health behaviors may be because they are not included in the content of traditional education methods.

Students perceive sexuality as a sexual relationship and view it as a private matter (Marangoz, 2014). Religious rules, prejudices, tabula, general customs considerably affects sexual behavior in the world and in our country and this prevents young people from having enough information about sexuality reproductive health (Ozcan et al., 2016). Of the students, 7.1 % had gynecologic infection, 55.4 % of the infected students had fungal infection, 23.2 % had UTI, 19.6 % had cysts and 1.8 % had HPV. Eroglu and Akalpler found that 56.5 % of the students were knowledgeable on STIs and 73.3 % were well-informed on AIDS. It was found that 23.4 % of the students were poorly informed on STIs, 40.1 % were moderately informed and 36.5 % were well-informed (Akalpler & Eroglu, 2016). In the study by Ozcan et al. the knowledge of the students on reproduction and sexual health were found to be inadequate (Ozcan et al., 2016). The study by Akıncı et al. indicated that 42.9 % of third- and fourth-grade nursing students were uncomfortable to talk about sexual problems and 39.1 % were embarrassed (Akinci et al., 2011). Arslan et al. found that (83.7 %) the university students did not receive sexual health/reproductive health services previously (Aslan et al., 2014). In a study by Siyez et al. it was determined that university students had moderate knowledge on STDs and the concepts they did not know about were more than their misconceptions (Siyez & Siyez, 2009). In the study of Mavi and Bekar, 8 % of the patients had a STD and 6.57 % had a gynecological infection (Mavi & Bekar, 2016). Our study is similar to the research conducted in the literature in the sense that the knowledge of the students on gynecological health should be improved. A statistically significant difference was found between the gynecologic infections of the students and the HLB scale total point averages (p = 0.046 < 0.05).

The incidence of breast cancer among women in our country is 24.10 % (Avci et al., 2008). Half of the students in the survey stated that they had

done BSE (56.1%) and the frequency of performing it was 1-2 times (53.7%) per month. More than half of the participants (66.3%) stated that they did not perform BSE because they were not knowledgeable about it. Ipteker et al. determined that 52.1 % of the female students did not know how to perform BS, and 38.8 % of them were performing BSE (Alpteker et al., 2011). In the study conducted by Aydın, it has been found that 51.28 % of university students did not know how to perform BSE and 62.5 % of the students among the ones who did not perform BSE stated that did not do it because they did not know how (Aydin, 2004). In the study conducted by Beydag and Karaoglan, 58 % of the students were not instructed on BSE, 69.5% were performing BSE, 50 % of did not know how to perform BSE (Beydag & Karaoglan, 2007). Sevindik et al., have found that 58.3 % of nursing and midwifery students were knowledgeable about BSE, 55.5% of them were performing BSE (Sevindik et al., 2011). Bektas et al. stated that 54.8 % of the students did not do so because they did not know beforehand about the BSE, 26 % performed BSE and 62 % of the students who did not perform BSE stated that they did not do it because they did not know how (Aslan et al., 2014). Although our study resembles similar results with the other studies in the literature, it can be concluded that the students do not have sufficient knowledge about doing BSE. The differences between the status of students performing BSE and health responsibility, physical exercise and stress subscales were statistically significant (p < 0.05) (Table 3).

When the characteristics of the students related to gynecological health are taken into account, 30.7 % is performing VSE. 34.9 % of the students who were performing VSE stated that they performed 1-2 times in a month; % 52.2 stated that they did not know how to do the examination and 46.4 % did not feel the need for performing the examination. The study by Mavi and Bekar indicated that the percentage of individuals who had sexual intercourse (60 %) and the number of individuals who left the question unresponsive (27.50 %) was higher than the rate of VSE (Mavi & Bekar, 2016). It can be said that the studies about VSE in university students and the awareness of students about this subject are insufficient. It can be argued that the level of health responsibility in the work done is higher in the adult group and lower in the youth (Ertop et al., 2012; Koc et al., 2014; Karadag & Lafci,

2015). In our study, there was a statistically significant difference (p <0.05) gynecologic examination, VSE, BSE status of the students and health responsibility, physical exercise, nutrition and stress management (p <0.05) (Table 1, Table 3). Acquisition and awareness of health responsibility in students are very important for gynecological health. For this reason, it is necessary to raise awareness of the students on HLB and to stimulate health responsibility to improve their health. There was a statistically significant difference (p = 0.001<0.05) between the gynecologic examination status of the students and the total mean score of the HLB scale. When the sub-dimensions were analyzed, there was a significant difference between gynecological examinations for health (p = 0.000 < 0.05), physical exercise (p = 0.014 <0.05), nutrition (p = 0.006 <0.05) and stress management. A statistically significant difference was found between the gynecologic infections of the students and the HLB scale total mean scores (p = 0.046 < 0.05).

The health professionals have significant responsibilities to make the individual more sensitive to their own health and to raise the level of health responsibility. In this context, roles of health professionals such as trainers, counselors and guidance become important. Raising awareness on HLB among the students will contribute to the prevention of future diseases and the improvement of health (Ayaz et al., 2005; Tambag, 2011; Tambag & Turan, 2012; Duran& Sumer, 2014; Karadamar et al 2014).

Conclusion

Examining the health behaviors of university female students and supporting them on issues that are lacking is important in terms of community health and sexual health. The fact that our work is carried out among university students is that young people who are influencing the society at large scales can transfer positive health behaviors they have gained during university life as collective role models. It is thought that university students will be able to contribute to the improvement of community health in the future with their knowledge of sexual health by acquiring HLB with education and counseling given because they represent the society both in youth period and in future.

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