GYNECOLOGICAL HEALTHCARE SERVICE UTILIZATION IN RESPECT TO HABITS AND LIFESTYLES OF THE FEMALE UNIVERSITY STUDENTS IN SERBIA

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The aim of the paper was to determine the frequency of gynecological examinations among the female university students in Serbia as well as a potential association with certain habits and lifestyles.

The research was conducted at the three Serbian state universities in the period January-June in the academic year 2008/09 and included 1.164 female university students using a method of random sampling.

In total, 18% of female university students said that they had never visited the gynecologist. The least concerned about their health when making the choice of food they eat and the least physically active were the females who had never visited the gynecologist. The females who had visited the gynecologist less than two times estimated themselves as healthier (p<0.05) as well as the girls who had the first gynecological examination before the age of 20. The girls who visited the gynecologist for the first time before they reached 20 years of age used condoms more consistently.

Planning and organization of a broad spectrum of activities arranged at the faculties should focus the students' attention on the gynecological healthcare and adequately solve them. *Acta Medica Medianae 2011;50(4):17-22.*

Key words: *gynecological healthcare, female university students, habits, lifestyles*

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Introduction

Modern lifestyles, which very often involve health-threatening habits, are largely present among the student population. On the other hand, gynecological healthcare as well as the awareness of the necessity to have regular gynecological examination are of great importance for the healthcare of the female university students. Nowadays, girls frequently refer to the Internet or magazines specialized in female reproductive health to inform on gynecological issues. However, the fact is that counsels given by gynecologist are the most reliable, and gynecological exami-nation the most efficient way to prevent the urogenital tract diseases.These facts are gaining in importance if we know that women in the modern world are exposed to great psychophysical efforts, unhealthy influence of diets and lifestyles. In that sense, preventive examination is one of the most important preconditions for preserving health and future family planning (1).

The regularity of gynecological examinations has been frequently emphasized as a very important factor for general female health, especially for younger and student populations. Gynecologists advise that all women in their reproductive period should have regular gynecological examinations and check-ups every six months, or at least one annual examination. Thease are some of the standard measures, and if necessary, the services of gynecological healthcare should be utilized more frequently (2).

By reviewing the available literature, it can be concluded that particularly the countries of the EU and USA pay great attention to gynecological healthcare of the student population and their education in related topics (1,3). Bearing this in mind, we wanted to obtain a new insight into the association between our female university students' behavior and their attituteds to their own health, with the emphasis on regular gynecological examinations. By analyzing the relationship between lifestyles and habits of the female university students in respect to the necessity of having regular gynecological examinations, a broader view of gynecological healthcare services utilized by the student population can be obtained, providing thus the preconditions for more efficient and regular planning of healthcare.

Aim

The aim of the study was to determine the frequency of gynecological examinations among the female university students in Serbia as well as a potential association with certain habits and lifestyles.

Examinees and methods

The research was conducted at the three Serbian state universities in the period January-June in the academic year 2008/09 and included 1.164 female university students using a method of random sampling.

The mean age of the female student population was 22,39±1.98 years, while arithmetic mean of the year of the study was 3.10±1.69.

In this cross-sectional study, the female university students filled in the questionnaire consisting of 28 questions related to demographic and socioeconomic features, attitudes, habits and lifestyles, health assessment and utilization of gynecological healthcare services.

Survey was performed by students and teaching assistants of the Universities of Niš, Belgrade and Novi Sad at lectures, in dormitories, reading rooms and student clubs.

The polling was intended to last a maximum of ten minutes, including the time necessary for interviewer instructions.

The data were collected by several teams consisting of two people using Excel 2003, on the occasion of which cross-checking was done for every given survey.

Statistical analysis was done using SPSS 17.0 (SPSS Inc, Chicago Il, USA) in Windows XP environment.

The research results are shown in tables and graphs. Statistical data processing included the use of descriptive tests (percent prevalence, mean, median, mode) and analythic non-parametric tests (Kruskal-wallis H test and Median test). Statistical significance was taken at $p<0.05$.

Results

The study involved 1.164 female university students from various faculties of the three state universities in Serbia – 402 students from the University of Niš, 470 students from the University of Belgrade and 292 students from the University of Novi Sad.

In total, 209 (18%) female university students said that, up to the moment of being polled, they had never visited the gynecologist.

Seven hundred sixty-six female students (65.8%) stated they had a gynecological examination in the year prior to the study. Of that number, 282 students (36.8%) had visited the gynecologist once, 247 students (32.1%) had visited the gynecologist twice, 106 students (13.8%) three times and 131 students (17.1%) four times or more.

Median and mode for the answer to the question at what age they had a first visit to the gynecologist were 19 years.

As the most frequent reason for visiting the gynecologist (out of 955 students who already had the gynecological examination) 728 students (76.2%) mentioned the systematic health examination or control examination; 184 students (19.3%) mentioned certain complaints and physiological states; 43 students (4.5%) reported the contraception.

Students also answered the questions concerning some of their habits as well as the average grade during the studies and the amount of their pocket money.

The Kruskall-Wallis H test demonstrated that students were the least concerned about their health when making a choice of food they ate, and that the least physiscally active were the females who had never visited the gynecologist (p<0.001) (Table 1).

Table 1. Visits to gynecologist and some variables

| | Visits to gynecologist | | | | | | df=2 | |
	Yes, this year		More than a year ago		Never		χ^2	p
Independent variables:	N	Mean Rank	N	Mean Rank	N	Mean Rank		
[a]Average grade	766	591,28	189	553,53	209	576,52	2,353	0,308
[б]Weekly pocket money	766	571,15	189	608,03	209	601,00	2,944	0,230
[в]Freq. of changing underwear	766	583,70	189	581,35	209	579,15	1,278	0,528
[г]Diet	766	601,85	189	609,78	209	**486,93**	27,588	**0,000**
[д]Physical activity	766	555,28	189	596,00	209	**670,05**	21,361	**0,000**
[ђ]Hours of sleep	766	580,14	189	592,54	209	582,08	0,442	0,802
[e]When they sleep	766	584,61	189	544,39	209	609,23	4,944	0,084

a1 =„< 8", 2 =„≥ 8 and <9" and 3 =„≥ 9"; 61 =„No pocket money", 2 =„Up to 500 RSD", 3 =„From 501 to 1000 RSD", 4 =„From 1001 to 3000 RSD" and 5 =„Over 3000 RSD"; в1 ="Once a week", 2 ="Every 3-4 days" and 3 =„Every other day"; r1 =„Never think about health when making the choice of food", 2 =„Sometimes" and 3 =„Often"; д1 =„4-6 times a week", 2 =„2-3 times a week", 3 =„2-4 times a month", 4 =„Several times a year" and 5 =„Do not have physical exercise because of illness"; ђ1 = „Up to 5 hours", 2 =„From 6 to 8 hours" and 3 =„9 hours or more"; e1 =„From 10 p.m", 2 =„ From midnight" and 3 =„From 2 a.m. and later"

Table 2. Health assessment and visits to gynecologist

		Health assessment				df=2	
		Bad	Average	Good	Med	χ^2	p
Number of visits to gynecologist	> Median	16	225	246	1	7,707	0,021
	≤ Median	11	277	389*			
Age at the first visit to gynecologist	> Median	14	126	144	19	12,186	0,002
	≤ Median	13	376	491**			

*p <0,05;** p <0,01

Table 3. Sexual activity and visits to gynecologist

		Presence of sexual activity			df=1	
		No	Yes	Med	χ^2	P
Number of visits to gynecologist	> Median	72	415	1	86,509^y	0,000
	≤ Median	272**	405			
Age at the first visit to gynecologist	> Median	64	220	19	8,447^y	0,004
	≤ Median	280	600*			

y Yates' continuity correction; *p <0,01;** p <0,001

Number of visits and age at the first visit to gynecologist
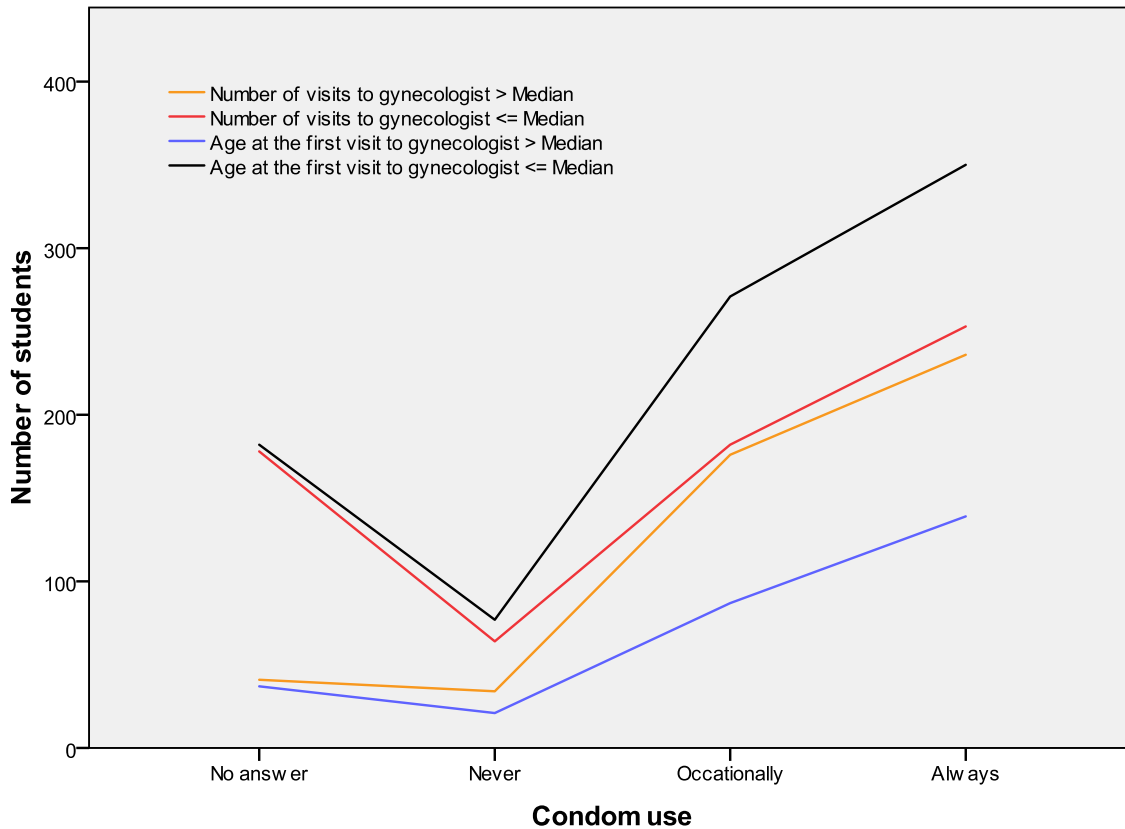
Graph 1. Condom use and visits to gynecologist

Also, in the questionnaire, the students assessed their own health, rating it as poor, average or good.

The median test showed that girls who had visited the gynecologist less than two times estimated themselves as healthier (p<0.05) as well as the girls who had the fist gynecological examination before the age of 20 (p<0.01) (Table 2).

Of the total number of the examinees, 270 females (23.2%) stated that they had never had a sexual experience, while positive answer was obtained in 894 (70.4%) female university students. However, 820 (70.4%) students reported to be sexually active in the year prior to the polling.

In respect to the number of females who already had sexual experience before conducting

this study, 42 (4.7%) females had sex with an unknown partner, and only 22 (2.5%) females said to have or have had sex with two or more partners.

The meadian test showed that sexually active females had the first gynecological examination before the age of 20 (p<0.01) and that sexually inactive examinees had never visited the gynecologist or did for once (p<0.001) (Table 3).

Out of the total number of examinees, 839 (72.1%) examinees said that they strictly required or would require their partners to use condom during the first sexual intercourse with them.

In the group of females who, by the beginning of this study, already had the first sexual experience, 452 (50.6%) females always used condom, 348 (38.9%) reported to use it occasionally and 94 (10.5%) said never.

The median test demonstrated that females who visited the gynecologist before the age of 20 used condom more consistently (p<0.01) (Graph 1).

Only 17 (1.5%) females of all the examinees said to have had induced abortion (one or more).

Out of the total number of examinees (irrespective of sexual activity), 50 (4.3%) female university students had been tested for HIV.

Discussion

By reviewing the literature and related researches, it has been noticed that researchers take great interest in gynecological healthcare utilized by adolescents and university students. A large number of researches has been conducted aiming to determine the influence of habits and lifestyles on general health status of university students. However, it has been observed that the number of studies analyzing and comparing the habits and lifestyles of university students in respect to utilization of gynecological healthcare services is still small. Considering the fact that our research involved the three largest universities in Serbia, it can be viewed as a small contribution to better understanding of the circumstances in our country.

By comparing the results obtained in this study with the results of similar researches conducted in other countries, it can be noted that there are similarities in behavior and lifestyles among our students and the students from abroad; however, we perceived some relevant differences that we would like to pinpoint. As for the condom use among university students, the results are the following: almost over 50% of American students have never used condom and only 17% use condom consistently (4). In Canada, only 25% of male adolescents and 16% of female adolescents always use condom during sexual activities (5). The researches conducted in Turkey yield similar results (6).

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This research has demonstrated that our university students use condom more consistently compared to their colleagues from other countries. On the other hand, it is interesting that females who visited the gynecologist for the first time before the age of 20 use condom more consistently. That means that the number of visists to the gynecologist as well as the visits before the age of 20 can significantly influence the attitudes but also the behavior later in life. In addition, the same habits related to visits to the gynecologist certainly contribute to assessing oneself as a healthy individual. Here, a direct positive influence of gynecological healthcare service on assuming attitudes can be seen, which further reflects in life.

On the other hand, if we analyze the habits of Spanish, American, Ukrainian and other students, it can be concluded that the degree of sexual activity is the same or very similar to the activities of our female university students, without significant differences (4,7-13). Our research points to interesting facts that sexually active female university students had the first gynecological examination before the age of 20 and that sexually inactive students had never visited the gynecologist or have for once. It is apparent that increased sexual activity requires more frequent visits to the gynecologist. The reasons for this may be various and can serve as the basis for further studies. It is certain that the number of partners and frequency of changing partners can influence the consistency of condom use, but also the more frequent visits to the gynecologist. As opposed to them, longtime coulples rarely change partners and therefore rarely use condoms, which results in a smaller number of visists to the gynecologist.

The influence of the lifestyle on general health status of an individual has been emphasized many times in the literature and confirmed in a number of studies (14). A significant difference in general health status has been found in individuals living a healthy lifestyle compared to those having harmful habits. It has been also found that the change in lifestyle directly influences general health status (15). Among the factors prioritized are certainly physical activity and diet. Namely, in the literature, the recommendations about minimal daily physical activity as a precondition for preserving health can be frequently found (16). In addition, a strong influence of diet on general health status either alone or associated with other factors has been commonly illustrated, especially when speaking of young women in their reproductive period (17,18).

However, in the reseraches conducted so far, there has not been much attention paid to the interdependence between lifestyles and healthcare services' utilization. The results of this research justify the supposition about such relationship. Among the factors that we investigated, physical activity and diet dominate. According to our research, the students who are the least

concerned about their health when making a choice about the food they eat and the least physiscally active are the females who have never visited the gynecologist. It is obvious that the students who live healthy lifestyles have physical exercise and take care about their physical look are more concerned about their health, which explains why they visit the gynecologist more frequently. Once again, these facts underline the importance and timeliness of the healthcare education implementation, as early as adolescence, when forming of habits and and their modification are quite possible.

Nevertheless, it is important to stress that recent researches, besides the influence of environment, focus on potential influence of genetics on the forming of life habits (19,20).

Conclusion

• The least concerned about their health when making the choice of food they eat and the least physically inactive are the females who have never visited the gynecologist.

• The females who had visited the gynecologist less than two times estimated themselves as healthier (p<0.05) as well as the girls who had the first gynecological examination before the age of 20.

• The girls who visited the gynecologist for the first time before they reached 20 years of age use condom more consistently.

• Sexually active females mostly visited the gynecologist before turning 20, while sexually inactive girls have never visited the gynecologist or have for once.

Recommended measures

Having in mind the results of the research as well as the experience obtained in other countries, we would like to recommend the following measures with the aim to improve the gynecological healthcare received by the university student population, including preventive and educational activities which should change the health-threatening habits:

• Taking into consideration the fact that university students use modern ways of communication, we should design, develop and launch the internet portal which should provide the information and education of students on the issues of gynecological healthcare. In this way, students could obtain the timely, up-to-date and relevant information provided by professors and experts in this field. The portal should be interactive and dynamic (forum, blog, comments, etc), with online and direct communication with students, supported by corresponding social networks, where students of medicine could make an outstanding contribution.

• Planning and organisation of a broad spectrum of activities (a large number of workshops, seminars and lectures) arranged at the faculties, which should focus the students' attention on the problems that this paper deals with and adequately solve them. It would be desirable to carry out these activities in cooperation with the student organisations as to make this population broadly aware of the importance of these issues.

In author's opinion, the recommended activities could significantly influence the behavior of the university students, as similar experiences from abroad have already demonstrated.

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KORIŠĆENJE USLUGA GINEKOLOŠKE ZDRAVSTVENE ZAŠTITE U ODNOSU NA NAVIKE I STIL ŽIVOTA STUDENATA ŽENSKOG POLA UNIVERZITETA U SRBIJI

Vladica Veličković, Aleksandar Višnjić, Slađana Jović , Miodrag Stojanović, Olivera Radulović i Nataša Đinđić

U ovom radu se utvrđuje učestalost korišćenja usluga ginekološke zdravstvene zaštite kod studenata ženskog pola univerziteta u Srbiji kao i potencijalnu vezu za izvesnim navikama i stilovima života.

Istraživanje je rađeno na tri državna univerziteta u periodu januar-jun školske 2008/2009. godine i njime je obuhvaćeno 1164 studenta ženskog pola metodom slučajnog uzorka.

Ukupno 209 studentkinja (18%) izjavilo je da do vremena ispitivanja nikada nije posetilo ginekologa. Najmanje razmišljaju o zdravlju pri izboru načina ishrane i najmanje su fizički aktivne one devojke koje nisu nikad posetile ginekologa. Sebe su procenile kao zdravije (p<0,05) one devojke koje su manje od dva puta posetile ginekologa, kao i one koje su pre 20. godine prvi put bile kod ginekologa. Devojke koje su pre svoje 20. godine prvi put bile kod ginekologa znatno češće koriste kondome.

Cilj studije bio je osmišljavanje i organizovanje veće akcije na fakultetima, u okviru kojih bi studentima bila skrenuta pažnja na probleme na koje ukazuje ovo istraživanje i njihovo adekvatno rešavanje. *Acta Medica Medianae 2011;50(4):17-22.*

Ključne reči: ginekološka zdravstvena zaštita, studenti ženskog pola, navike, životni stilovi