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Research Article

CHANGES IN ATTITUDES AND KNOWLEDGE OF THE FEMALE STUDENTS OF THE UNIVERSITY OF SARAJEVO RELATING TO SEXUAL BEHAVIOR HABITS THROUGH EDUCATION PROGRAMS

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ABSTRACT

One of the most sensitive fundamental areas of development is the adoption of sexual identity and responsible sexual behavior. Incautious sexual behavior among young people can have immediate and long-term consequences. Sexuality of young women is not only a sensitive area, but also a subject of increasing attention of the community, and cannot be seen only through health risks but also complex factors affecting risky sexual behaviors. Respondents are female students who regularly attend the four faculties of the University of Sarajevo from the first to the final year. An original questionnaire was created, which is the compilation of the internationally recommended questionnaires used for population surveys in assessing the frequency of behavioral risk factors (WHO MONICA, European Health Risk Control Project - EHRM, European Health Interview Survey - EHIS).The average score of sexual knowledge and behavior of female students involved in this study at the beginning of the study amounted to 56.65 ± 22.42%, while at the end of the study that score was not significantly higher and amounted to 55.51 ± 22.68%.Only a statistically significant increase in the score of female students at the Faculty of Political Science (**p = 0.001**) has occurred. The knowledge of sexual behavior has been improved through the use of educational program for female students who do not receive any information on this issue in the plan and the program within their study.

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INTRODUCTION

Preamble

One of the most sensitive fundamental areas of development is the adoption of sexual identity and responsible sexual behavior. Incautious sexual behavior among young people can have immediate and long-term consequences. Of the immediate consequences are the most significant unwanted pregnancies and sexually transmitted infections, and long-term effects on reproductive health and life expectancy include chronic inflammatory diseases, problems getting pregnant, and malignant and life-threatening diseases. Risk factors that can contribute to the development of the consequences and complications are early onset of sexual life, greater number of partners and avoidance of condom use (1).Sexuality of young women is not only a sensitive area, but also a subject of increasing attention of the community, and cannot be seen only through health risks but also complex factors affecting risky sexual behaviors. Although public health approach is often limited to only preventing and suppressing immediate consequences of unwanted pregnancy and/or sexually transmitted infections, one should not lose sight of the impact of sexual behavior on population-relevant guidelines as undisturbed fertility and contribution to total disease burden (2).UNSCO states in its guidelines that sexual education encourages young people to take responsibility for their own behavior as well as for relationship with others with respect, acceptance, tolerance, and sympathy, regardless of their health status or sexual orientation.

RESPONDENTS AND METHODS

Respondents are female students who regularly attend the four faculties of the University of Sarajevo from the first to the final year, as follows: Faculty of Health Sciences, Faculty of Pharmacy, Faculty of Political Science and Faculty of Transport and Communications. An original questionnaire was

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created, which is the compilation of the internationally recommended questionnaires used for population surveys in assessing the frequency of behavioral risk factors (WHO MONICA, European Health Risk Control Project - EHRM, European Health Interview Survey - EHIS).Modular education was conducted once a week (two school hours) for a period of 6 months, a total of 24 weeks, or 4 weeks according to the studied behavioral risk factors (the level of knowledge about sexually transmitted diseases, the sexual behaviors). The analysis of categorical variables was done using a Pearson's χ^2-test or Fisher's exact test of probability. Pearson's and Spearman's rank correlation coefficients were used to investigate the linear relationship between the ratio and the ordinal characteristics. For qualitative variables, a Chi-squared test (X^2-test) was used.

RESEARCH RESULTS

A score relating to sexual knowledge and behaviors calculated using 9 questions (100%). At the beginning of the study on a sample of 400 female students (four faculties),the average score of sexual knowledge and behavior was 52,65 ± 22,42%, and in the population of these students this risk score ranges from 74,45 to 54,85%. Statistically, this score was significantly changed at the end of the study on a sample of 330 female students of allfaculties p=0,042.Thus at the end of the research it is 55.51,42 ± 22.68%, while in the female student population this risk ranges from 53,45 to 58,36%.

The coherence degree of responses to the 9 questions in this area at the beginning of the research was 0,709, at the end of research 0,760.

Table 1 Score of sexual knowledge and behavior, at the beginning and end of the study

	N	X	S.D.	SEM	95% CI		t-test	Cronbach's	Br.pitanja
					DG	GG	p	Alpha	
beginning of research%	400	52,65	22,42	1,12	50,45	54,85	0,042	,709	9
end of research%	330	55,91	22,68	1,25	53,45	58,36		,760	9

Sexual education presented by the score at the beginning of the study at the Faculty of Health Sciences is 54,80±24,84, while in the population of these female students it ranges from 49,87 to 59,83%. At the end of the study, statistically the score has not significantly changed p=0,725, and is 53,56±23,67, i.e. in the population at the interval of 48,60-58,51 %. The coherence degree of responses to the questions asked at the beginning of the study was α = 0,807 and at the end α = 0,823.

Sexual education presented by the score at the beginning of the study at the Faculty of Pharmacy is 56,0±21,23, while in the population of these female students it ranges from 51,79 to 60,21 %. At the end of the study, statistically the score has not significantly changed p=0,229, and is 52,31±21,03%, i.e. in the population at the interval of 47,93-56,99 %.The coherence degree of responses to the questions asked at the beginning of the study was α = 0,630 and at the end α = 0,563.

Sexual education presented by the score at the beginning of the study at the Faculty of Political Scienceis 45,10±19,36, while in the population of these female students it ranges from 41,26 to 48,94%. At the end of the study, statistically the score has not significantly changed p=0,001, and is 58,7±22,42%, i.e. in the population at the interval of 53,31-64,08%. The coherence degree of responses to the questions asked at the beginning of the study was α = 0,667 and at the end α = 0,719.

Sexual education presented by the score at the beginning of the study at the Faculty of Transport and Communicationsis 54,7±22,49, while in the population of these female students it ranges from 50,24 to 59,16%. At the end of the study, statistically the score has not significantly changed p=0,105, and is 60,25±22,95%, i.e. in the population at the interval of 55,14-65,36 %. The coherence degree of responses to the questions asked at the beginning of the study was α = 0,712 and at the end α = 0,829.

Table 2 Score of sexual knowledge and behavior

Which college do you attend?		N	Ar.Sr.	S.D.	SEM	95% CI		t- test	Cronbach's Alpha	Nr. Of question
						DG	GG	p		
FZS	beginning of research%	100	54,80	24,84	2,48	49,87	59,73	0,725	,807	9
	end of research%	90	53,56	23,67	2,49	48,60	58,51		,823	9
FF	beginning of research%	100	56,00	21,23	2,12	51,79	60,21	0,229	,630	9
	end of research%	91	52,31	21,03	2,20	47,93	56,69		,563	9
FPN	beginning of research%	100	45,10	19,36	1,94	41,26	48,94	0,001	,667	9
	end of research%	69	58,70	22,42	2,70	53,31	64,08		,719	9
FSK	beginning of research%	100	54,70	22,49	2,25	50,24	59,16	0,105	,712	9
	end of research%	80	60,25	22,95	2,57	55,14	65,36		,829	9

Prior to education, 37,5% of female students had a *knowledge about sexual protection through the use of the pill,*or32-42,2% in the interval, and after the education this percentage increased but without statistical significance χ^2=1,615 p=0,204, and amounts to 42,12% or 36,79-47,45% in the interval.

Prior to education, 35,5% of female students had *a knowledge about sexual protection through the use of intrauterine device*, or 30,81-40,19% in the interval, and after the education this percentage increased but without statistical significance χ^2=2,771 p=0,096, and amounts to 42,51% or 36,20-46,83% in the interval.

Prior to education, 35,75% of female students had *a knowledge about sexual protection through the use of condoms,* or 31,05-40,45% in the interval, and after the education this percentage increased but without statistical significance χ^2=2,812 p=0,094, and amounts to 41,82% or 36,5-47,14% in the interval.

Prior to education, 37,5% of female students had a *knowledge about sexual protection through the use of local chemicals*, or 32,76-42,24% in the interval, and after the education this percentage increased but without statistical significance χ^2=0,054 p=0,817, and amounts to 36,67% or 31,47-41,87% in the interval.

Prior to education, 36,25% of female students had a *knowledge about sexual protection through the use of a diaphragm*, or 31,54-40,96% in the interval, and after the education this percentage increased but without statistical significance χ^2=2,662 p=0,105, and amounts to 42,12% or 36,79-47,45% in the interval.

Prior to education, 78,75 % of female students *used infertile days as sexual protection* or 74,74-82,76% in the interval, and after the education this percentage increased but without statistical significance χ^2=1,069 p=0,301, and amounts to 81,82% or 77,66-85,98% in the interval.

Prior to education, 72,25 % of female students used*the rejected sexual intercourse as sexual protection* or 67,86-76-64% in the interval, and after the education this percentage increased but without statistical significance χ^2=2,403 p=0,121, and amounts to 77,27% or 72,75-81,79% in the interval.

Prior to education, 45% of female students showed *knowledge about the issue of reducing the chances of getting HIV virus*having only one partner, i.e. 40,12-49,68% in the interval, and after the education this percentage was statistically significantly increased χ^2=6,180 p=0,013, and amounts to 54,24%, or 48,87-59,62% in the interval.Prior to education, 48% of female students showed *knowledge about the probability of getting virus that cause AIDS using condoms*, i.e. within the range of 43,10-52,9%, and after education, that percentage decreased without statistical significanceχ^2=2,026 p=0,155, and amounts to 42, 73% or 37,39-48,06% in the interval.

and the introduction into the world of prostitution and crime. An investigation in India where the first case of AIDS was discovered in 1986, and today represents one of the leading countries with AIDS, the KABP study has shown that it is possible to expect changes in the attitude and behaviors of young people in every environment where health education programs about sexually transmitted diseases (STDs) are implemented (6).Prior to education, 45% of female students showed knowledge about the issue of reducing the chances of getting HIV virushaving only one partner, i.e. 40,12-49,68% in the interval, and after the education this percentage was statistically significantly increased χ^2=6,180 p=0,013, and amounts to 54,24%, or 48,87-59,62% in the interval. Prior to education, 48% of female students showed knowledge about the probability of getting virus that cause AIDS using condoms, i.e. within the range of 43,10-52,9%, and after education, that percentage decreased without statistical significanceχ^2=2,026 p=0,155, and amounts to 42, 73% or 37,39-48,06% in the interval.

Table 3 Share of the score of sexual knowledge and behavior toward particular issues

	Sexual protection	beginning of research			end of research				
			95% CI			95% CI		Test	
	Questions od 1-9	Skor%	DG%	GG%	Skor%	DG%	GG%	χ^2	p
	Do you and your partner use contraceptives such as ...?								
1.	Pils	37,5	32,76	42,24	42,12	36,79	47,45	1,615	0,204
2.	IUD	35,5	30,81	40,19	41,52	36,2	46,83	2,771	0,096
3.	Local chemicals	35,75	31,05	40,45	41,82	36,5	47,14	2,812	0,094
4.	Condom	37,5	32,76	42,24	36,67	31,47	41,87	0,054	0,817
5.	Diaphragm	36,25	31,54	40,96	42,12	36,79	47,45	2,622	0,105
6.	Infertile days	78,75	74,74	82,76	81,82	77,66	85,98	1,069	0,301
7.	Interrupted relationship	72,25	67,86	76,64	77,27	72,75	81,79	2,403	0,121
8.	Can it be possible to reduce the possibility of HIV infection by having only one permanent partner?	45	40,12	49,88	54,24	48,87	59,62	6,18	0,013
9.	Can people get a virus that causes AIDS by using a condom every time they have sex?	48	43,1	52,9	42,73	37,39	48,06	2,026	0,155

Score % - percentage calculated on the sample; 95% CI- confidence interval for the student population (hereinafter referred to as interval); LL-lower limit of the confidence interval,UL-upper limit of the confidence interval; χ^2 – Chi-squared test; p-probability.

DISCUSSION

The World Health Organization warns that every day more than a million people are infected with sexually transmitted diseases , and about 60% of them are young people under the age of 25 (3).Among girls, the leading infections spreading through sexual intercourses are chlamydia (10-25%), gonorrhea (3-18%), syphilis (0-3%), trichomonasvaginalis (8-16%) and herpes simplex virus (2-12%), while among adolescent men the infections with chlamydia (9-11%) and gonorrhea (2-3%) occur most frequently.

There is an ever lower average age of first sexual intercourse, which is simultaneously associated with a greater number of sexual partners during active sex life, and thus with an increased risk of getting sexually transmitted diseases. It is estimated that each year more than 400 million adults are affected with sexually transmitted diseases. Of these, about 60% of sexually transmitted diseases and infections occur in persons under the age of 25(4,5). The need of young people for sexual exploration, trying out different forms of sexual relationships, fragmentary knowledge, illusion of inviolability with simultaneous lack of communication skills, strong peer pressure and peer norms, and hedonism as an important part of life adolescent identity represent the dimensions of adolescent sexuality that encourage sexual behavior. Early sexual intercourse initiation, along with other forms of risk behavior such as a sexual intercourse under the influence of alcohol or other addictive substances, contributes to sexual intercourse with multiple partners, as well as the dangers of sexual abuse

The knowledge about protection against STDs infections after educational seminars significantly increased, leading to a decrease in the number of young people suffering from STDs (7).The World Health Organization warns that every day more than a million people are infected with sexually transmitted diseases, and about 60% of them are young people under the age of 25(3).Among girls, the leading infections spreading through sexual intercourses are chlamydia (10-25%), gonorrhea (3-18%), syphilis (0-3%), trichomonasvaginalis (8-16%) and herpes simplex virus (2-12%), while among adolescent men the infections with chlamydia (9-11%) and gonorrhea (2-3%) occur most frequently. The Centers for Disease Control and Prevention in Atlanta indicates a wide spread of sexually transmitted diseases. It is believed that more than half of sexually transmitted diseases in the United States accounts for the age of 15-25 years (8). In order to reduce the prevalence of chlamydia infection, today's most frequent infection among the young people, the National Educational Center is open in the USA, encompassing young people in over 100 cities aged 16 to 24.Targeted and planned work on health education reduced the prevalence of chlamydia infection from 13,1% (ranging from 4,9% to 20,00%) to 7,9% (ranging from 0,0% to 7,1%) (9).At the beginning of the study on a sample of 400 female students (four faculties) the average score of sexual knowledge and behavior was 52,65 ± 22,42%, and in the population of these students this risk score ranges from 74,45 to 54,85%.Statistically, this score was significantly changed at the end of the study on a sample of 330 female students of allfaculties p=0,042. The National Educational Program in the

United States has covered more than 20,000 young people and all the research results so far indicate that health education programs may reduce the prevalence of chlamydia infection amongyoung women, as well as among men (10, 11).The international community has also been involved in research and intervention to prevent sexually transmitted diseases in Bosnia and Herzegovina, with special emphasis on UNAIDS, UNICEF activities, Soros Foundation and World Bank projects funding activities for the prevention of these diseases (11, 12, 13).

CONCLUSION

The average score of sexual knowledge and behavior of female students involved in this study at the beginning of the study amounted to 56.65 ± 22.42%, while at the end of the study that score was not significantly higher and amounted to 55.51 ± 22.68%.Only a statistically significant increase in the score of female students at the Faculty of Political Science ($p = 0.001$) has occurred. The knowledge of sexual behavior has been improved through the use of educational program for female students who do not receive any information on this issue in the plan and the program within their study.

Literatura

1. Bloom E, Canning D. "Contraception and the CelticTiger." Economic and Social Review; 2012; 34 (3): 229–247
2. DFID/IBHI, 'Labour and Social Policy in BiH: The development of policies and measures for social mitigation. Employment and labour market status and the potential for policy develelopment in BiH,' October 2002.
3. Lossik J, DelLisle S, Fine D, Mosure J. Regional program for widespread screening for Chlamydia tracomatis in family. MMWR. 2004; 22: 12-21.
4. Goel K, Sigh G, Kaur P. An explorative KABP study on AIDS. *Ind J Prev Soc Med* 2008; 30: 79-83.
5. John T, Babu G. Prevalence of HIV infection in risk groups in Tamil Nadu. Lancet. 2005; 1: 6-12.
6. Weinstock H, Berman S, Cates W. Sexually transmitted diseases among zouth, incidence and prevalence estmates 2000. Pespect Sex Reprod Health. 2004; 36: 6-10.
7. CDC. Recommendations for the prevention and management of Chlamydia trachomatis infections. MMWR. 2003; 42: 2-12.
8. Joesoef R, Mosure J. Prevalenca of chlamydia in young men in United States from newly implemented Universal screening in National Job Training program. Sex Transm Dis. 2006; 91: 636-639.
9. Josoef R, Mosure J. Prevalence of chlamidia in young women entering the National Job Training program 1998-2004; Sex Transm Dis. 2006; 33: 571-576.
10. UNICEF. Pregledraširenosti HIV/AIDS-e u jugoistočnojEuropi. Unicef. 2002; 1: 1-72.
11. UNAIDS. Guide to the strategic planning proces for a national response to STD. UNAIDS, 2006;12: 21-29
12. Cilovic-Lagarija S, Musa S, Brankovic S, Selimovic-DragasM. Knowledge about Spread of HIV Infection Among Dentists Employed in Private and State Practice, Mater Sociomed. 2014 Apr; 26(2): 96–99.
13. Brankovic S, Pilav A, Cilović-Lagarija S, Pašalić A. Lifestyles of university students in Bosnia and Herzegovina. *Journal of Health Sciences*, 2017

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