

ATTITUDES OF STUDENTS OF MEDICINE, UNIVERSITY OF MOSTAR ACCORDING TO INDUCED ABORTION

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SUMMARY

Background: Aim of this study was to establish attitudes of medical students on induced abortion and connection of those attitudes with religiousness, length of their studies, sex and various circumstances of pregnancy.

Subjects and methods: In total, 148 students of the first, second, fifth and sixth year of medical faculty participated in the research. The study was conducted at the Medical Faculty of the University in Mostar. While collecting the data, we used a survey taken over from literature. The data were tested with adequate statistical methods afterwards.

Results: 81.1% of students would perform an abortion under certain circumstances ($\chi^2=57.189$; $P<0.001$). Most students answered that they would perform an abortion in case that a fetus had malformations ($\chi^2=3.892$; $P=0.49$) or if the mother's life were endangered ($\chi^2=47.676$; $P<0.001$). By comparison of students' readiness to perform an abortion under various circumstances of pregnancy depending on length of medical education, statistically significant difference was proved in the following circumstances: rape ($\chi^2=6.097$; $P=0.014$) and if the pregnancy would endanger mother's mental health ($\chi^2=4.488$; $P=0.034$). Students with shorter medical education expressed more liberal attitudes in the above stated circumstances. By comparison of students' readiness to perform an abortion under various circumstances of pregnancy depending on religiousness statistically significant difference was proved in the following circumstances: in case of 'abortion on demand', no matter the reason ($\chi^2=11.908$; $P=0.012$), teenage pregnancy ($\chi^2=33.308$; $P<0.001$) and if the pregnancy would interfere with mother's career ($\chi^2=35.897$; $P<0.001$). Unreligious students expressed more liberal attitudes.

Conclusion: Influence of length of medical education and sex on attitudes on abortion was not proved statistically. Impact of religiousness on that attitude cannot be commented due to very small share of unreligious students in the sample.

Key words: abortion – attitudes - medical students

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INTRODUCTION

Abortion is spontaneous or induced termination of pregnancy, with egg ejection but before embryo viability. According to the duration of pregnancy abortions are divided into early and late. Early abortion is before the 16th week of pregnancy, and the late is between 16th to the 28th week of pregnancy. According to the occurrence of abortions, they are divided into spontaneous and induced (an artificial). Induced abortion may be permitted (legal) and illicit (illegal). Induced abortion shall be carried out only in a hospital setting with the predefined indication, medical or social. Illegal abortion is performed without an indication of professional or incompetent person and there are the consequences for the mother more often and more difficult.

Pregnancy can be deliberately interrupted in many ways. The selected method of abortion depends mainly on the gestational age of the embryo or fetus, but also about the legality, regional availability and preferences of doctors and patients under a special procedure. Social acceptability of abortions varies from period and of the areas throughout history. The history of induced

abortion was monitored by the ancient times, when the pregnancy was interrupted using the abortifacient herbs. In the Greco-Roman world, abortion was a method of limiting family members, but with the appearance of Christianity abortion was st. By the early 20th century, abortion was illegal in most of the world with the same rules in Africa, Asia and Latin America as well as in Europe and North America. In the 20th century the Soviet Union (1919), Iceland (1935), Sweden (1938) were among the first countries to legalize some or all forms of abortions. It was not until the 1970s, under the influence of feminism, abortion began in most of the world to legalize under certain conditions. In Bosnia and Herzegovina on the basis of the Law on Abortion of 1963 and 1973, abortion can be performed until the tenth week of pregnancy. A woman has the right to decide whether to carry out an abortion or not. After the tenth week, abortion can be done if there is risk for the life and health of the mother or the fetus, but need special approval of the expert committee. According to the Criminal Code of Bosnia and Herzegovina, the person who performs illegal abortion, with or without the consent of the pregnant woman should be punished

by imprisonment of three months to three years, or one to eight years. Despite that doctors are not obliged to participate in the act of abortions. According to the Law on Medical Practice of the Republic of Croatia, the doctor, because of its ethical, religious or moral beliefs, may call for a conscientious objector and refuse to perform abortions. Such a law in Bosnia and Herzegovina is still not legally regulated. The position of religious communities according to induced abortion was completely different from the existing law. The issue of abortions opens a new phase of interreligious and ecumenical (from the Greek. Oikumene- movement for bringing all Christian churches) 5 cooperation in which the majority of religious communities, including the Catholic and the Orthodox Church and the Islamic Community, agree that human life must be respected and protected without restrictions from the moment of conception. There is still little information on the attitudes of medical students toward induced abortion. We did not find any similar research in Bosnia and Herzegovina, and we believe that the insight into the dynamics of such attitudes could be valuable in predicting future trends. According to many studies on the views of experts, doctors and students are greatly influenced by medical training they acquire. Doctors or students with previous clinical experience with abortion and longer medical training are more liberal (from the Latin. Liber-freedom) views and more willing to participate in abortion.

Aim of this study was to establish attitudes of medical students at the University of Mostar, as a future doctor, according to induced abortion, or their readiness to work in their future become the abortionist.

SUBJECTS AND METHODS

The study was conducted at the School of Medicine of the University of Mostar, Bosnia and Herzegovina. 148 students of the School of Medicine of the University of Mostar participated in the research, thereof: 51 students of the first, 38 of the second, 26 of the fifth and 33 of the sixth year of studies. The respondents were divided in two groups, the first group composed of the first and second year students and the second group of the fifth and sixth year students. All of the students gave informed consent and student's anonymity was preserved. A 10-question questionnaire taken over from literature was used in the research. The questionnaire was translated from English original to Croatian.

Statistical analyses

As all variables were categorical, Chi-square test and Fisher exact test were applied. SPSS for Windows (v. 13.0, SPSS Inc, Chicago, Illinois, USA) and Microsoft Excel (v. 11. Microsoft Corporation, Redmond, WA, USA) were used for statistical analysis.

RESULTS

In our study participants were significantly more female respondents (χ^2 test=25.973; $p<0.001$) and statistically significant difference was determined between students of different years of medical studies with larger participation of students with shorter medical education (χ^2 test=6.081; $P=0.014$). Significant difference was also proved between religious and nonreligious students with a larger share of religious students (χ^2 test=103.892; $P<0.001$). By comparison of students on the basis of their readiness to perform an abortion it was proved statistically significant difference with a bigger representation of those students willing to perform an abortion (χ^2 test=57.189; $P<0.001$), but there were not statistically significant difference by comparison of students on the basis of gender (χ^2 test=0.04; $P=0.950$). Statistically significant difference was proved in readiness of the students to perform an abortion in all circumstances of pregnancy with the exception of rape (χ^2 test=1.730; $P=0.188$) and mother's health risk (χ^2 test=0.243; $P=0.622$). Most students answered that they would perform an abortion in case of fetal malformations (χ^2 test=3.892; $P=0.49$) or if the mother's life is at risk (χ^2 test=47.676; $P<0.001$). Majority of respondents would not perform an abortion in case of teenage pregnancy (χ^2 test=94.081; $P<0.001$), if the pregnancy would interfere with mother's career (χ^2 test=128.676; $P<0.001$), if the parents were declared unfit for parenthood by the court (χ^2 test=100.568; $P<0.001$) and in case of abortion on demand, regardless of the reason (χ^2 test=121.324; $P<0.001$) (Figure 1). Statistically significant difference was proved in readiness of the students to refer the patient to an abortion in the following circumstances of pregnancy: in case of mother's health risk (χ^2 test=9.757; $P=0.002$), if the parents were declared unfit for parenthood by the court (χ^2 test=7.811; $P=0.005$), if the pregnancy would interfere with mother's career (χ^2 test=21.189; $P<0.001$), teenage pregnancy (χ^2 test=8.757; $P=0.03$). By comparison of students' readiness to perform an abortion under various circumstances of pregnancy depending on religiousness, statistically significant difference was proved in the following circumstances: abortion on demand, regardless of the reason (χ^2 test=11.908; $P=0.012$), rape (χ^2 test=7.932; $P=0.005$), teenage pregnancy (χ^2 test=33.308; $P<0.001$) and if the pregnancy would interfere with mother's career (χ^2 test=35.897; $P<0.001$) (Table 2). By comparison of students' readiness to perform an abortion under various circumstances of pregnancy depending on the length of medical education, statistically significant difference was proved in the following circumstances: rape (χ^2 test=6.097; $P=0.014$) and if the pregnancy would endanger mother's mental health (χ^2 test=4.488; $P=0.034$) (Table 3).

Table 1. Personal attitude of respondent to induced abortion

Statement	Respondents (%)		χ^2 test	P
	Agree	Do not agree		
„Abortion is murder“	130 (87.8)	18 (12.2)	87.757	P<0.001
„Abortion is a personal choice. It is acceptable for others, but not acceptable for me.“	93 (62.8)	55 (37.2)	87.757	P<0.001
„Abortion is a personal choice. It is acceptable for me.“	19 (12.8)	129 (87.2)	87.757	P<0.001

Table 2. Attitude of respondents to abortion in various circumstances of pregnancy depending on their religiousness

Statement	Respondents (%)				χ^2 test; P
	Religious		Nonreligious		
	YES	NO	YES	NO	
Perform an abortion on demand, regardless of the reason	4 (2.90)	132 (97.10)	3 (25.00)	9 (75.00)	11.908; 0.012*
Perform an abortion if the mother was a victim of rape	56 (41.20)	80 (58.80)	10 (83.30)	2 (16.70)	7.932; 0.005
Perform an abortion in case of fetal malformations	76 (55.90)	60 (44.10)	10 (83.30)	2 (16.70)	3.414; 0.065
Perform an abortion if the mother's life is at risk	104 (76.50)	32 (23.50)	12 (100.00)	0 (0)	3.602; 0.07*
Perform an abortion if the pregnancy would endanger mother's mental health	62 (45.60)	74 (54.4)	9 (75.00)	3 (25.00)	3.822; 0.051
Perform an abortion if the parents were declared unfit for parenthood by the court	11 (8.10)	125 (91.90)	2 (16.70)	10 (83.3)	1.013; 0.284*
Perform an abortion if the pregnancy would interfere with mother's career	1 (0.70)	135 (99.30)	4 (33.30)	8 (66.70)	35.897; <0.001*
Perform an abortion in case of teenager pregnancy	8 (5.90)	128 (94.10)	7 (58.30)	5 (41.70)	33.308; <0.001*

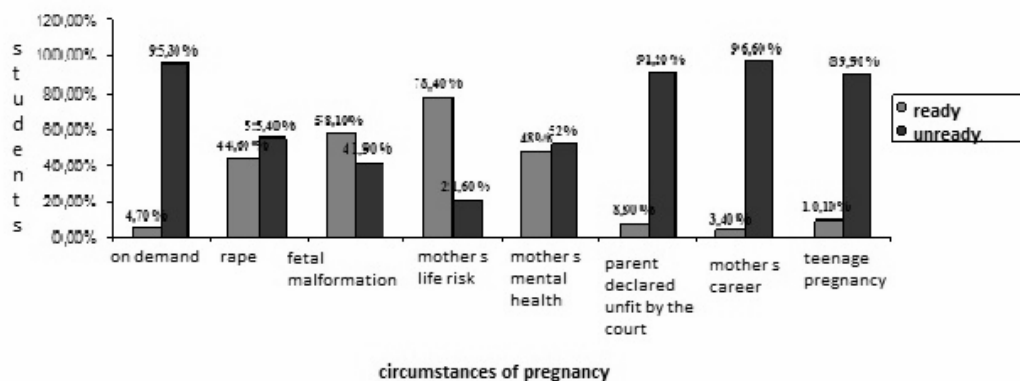


Figure 1. Distribution of respondents by readiness to perform an abortion depending on various circumstances of pregnancy

Table 3. Attitude of respondents to abortion in various circumstances of pregnancy depending on the length of medical education

Statement	Respondents (%)				χ^2 test, P
	1 st and 2 nd year of studies		5 th and 6 th year of studies		
	YES	NO	YES	NO	
Perform an abortion on demand, regardless of the reason	4 (4.50)	85 (95.50)	3 (5.10)	56 (94.90)	0.27; 1.000*
Perform an abortion if the mother was a victim of rape	47 (52.80)	42 (47.20)	19 (32.20)	40 (67.80)	6.097; 0.014
Perform an abortion in case of fetal malformations	65 (61.80)	34 (38.20)	31 (52.20)	28 (47.50)	1.249; 0.264
Perform an abortion if the mother's life is at risk	69 (77.50)	20 (22.50)	47 (79.70)	12 (20.30)	0.095; 0.758
Perform an abortion if the pregnancy would endanger mother's mental health	49 (55.10)	40 (44.90)	22 (37.30)	37 (62.70)	4.488; 0.034
Perform an abortion if the parents were declared unfit for parenthood by the court	10 (11.20)	79 (88.80)	3 (5.10)	56 (94.40)	1.676; 0.245
Perform an abortion if the pregnancy would interfere with mother's career	4 (4.50)	85 (95.50)	1 (1.70)	58 (98.30)	0.852; 0.648*
Perform an abortion in case of teenager pregnancy	12 (13.50)	77 (86.50)	3 (5.10)	56 (94.9)	2.748; 0.970

DISCUSSION

This research was the first analysis of attitudes of medical students at the University of Mostar to induced abortion. 87.8% of respondents agree that abortion is murder. However, the majority of respondents (81.1 %) would perform an abortion under certain circumstances, 40% of them would consent only to a therapeutic abortion. Totalled with readiness to perform an abortion in case the mother was a victim of rape, it makes a percentage of even 71.6%. As was expected, students expressed themselves more prepared to perform a therapeutic abortion, particularly in case the mother's life was endangered or fetus had malformations. These results are not very much different from results of similar studies from the past. However, when other variables are compared, results happen to significantly differ from results of earlier studies. Only 4.7% of respondents of this study would perform an abortion on demand, whereas 18.9% of respondents would never agree to perform an abortion. Results of similar studies conducted at Schools of Medicine in the Great Britain, South Africa and the USA show that a much higher number of students would perform an abortion on demand: 36% in the Great Britain and 39% in the USA. Consequently, compared to attitudes of the British and American medical students, attitudes of our students are conservative. According to results of some previously conducted similar researches, attitude of students to induced abortion was very much dependant on their medical education, meaning that liberalism of students and their readiness to perform an abortion grew with the length of their medical education and clinical experience.

Therefore, our hypothesis made on the basis of such attitudes was: „Students of higher years of medical studies will be more liberal when it comes to induced abortion“. However, the results of our research did not show in majority of variables a large discrepancy in opinion between students with shorter and those with longer medical education. What is more, students with shorter medical education showed themselves more willing to perform an abortion in case of rape or endangered mental health of the mother. An obvious shift in attitude could be analysed over time only if a research was conducted on the same group of students at the beginning of their medical studies and then repeated at the end. Such a research could show accurately whether and to what extent students' attitude grows more liberal towards the end of their medical education. This is a limiting factor, as we did not conduct such a research. However, even then, a shift in attitude could be explained by some other changes in living circumstances, such as moving from the parents' home, exposure to a wider spectre of ideas and richer sexual life. There are three possible explanations to the fact that results of our research did not establish any

relation between the length of medical education and attitudes to abortion, the first and the simplest one being that it is not the medical education but some other factors which affect students' attitude to abortion. However, on the other hand, some other researches, the result of which show a strong dependence between the medical education and clinical experience on one and students attitude to abortion on the other hand, may certainly not be disregarded. Result of our research may be explained by the fact that the majority of examined students did not have any clinical experience with abortion, the medical education was incomplete and as such could not exert any influence on liberalisation of attitudes of young students. Many modern researches indicate to inadequate education and insufficient clinical experience of students and physicians with abortion. The last and the most logical explanation is that the share of religious students in the sample was too high (91.9%). Their attitude was modelled under the influence of their religion and was not subject to changes or liberalisation during the medical education. Such an attitude was even further strengthened during the medical education. Religious ethics was far more important for personal development of those students than the medical education. Previous studies on this matter showed a connection between attitude to abortion and religiousness. Religious persons generally have more conservative attitudes. In our research nonreligious students declared themselves more ready to perform an abortion in all variables and expressed more liberal attitude than their religious colleagues. However, statistically significant difference between religious and nonreligious students was proved only in case of rape, teenage pregnancy, cases if the pregnancy would interfere with mother's career and abortion on demand, the reason for that being a too small participation of nonreligious students in the sample (12 of the total of 148 respondents). The following results were obtained by analysing 12 questionnaires completed by nonreligious respondents: only 25.00% of them agreed that abortion was murder, all of them (100.00%) would perform an abortion under certain circumstances and 25.00% would agree to perform an abortion on demand. A significant difference is noticeable when these results are compared with those related to all respondents regardless of their religiosity. It was not statistically proved that readiness of students to perform an abortion depended on gender. Other researches of this matter are unconvincing – in some of them, female respondents were more liberal when it came to abortion, in some other those were male respondents, whereas in some researches no statistical difference was proved on the basis of gender. This study is a good indicator of future trends. Even though not outlined in an official document, the position of the University Clinical Hospital of Mostar is to refuse abortions on demand. Results of this research indicate that this position should

be kept for considerable time in future. Right to conscientious objection shall be guaranteed to physicians who may refuse to perform an abortion on demand, so that female patients will have to execute their reproductive rights in other clinics. After the completed research and determined weaknesses and limiting factors, a couple of recommendations were identified for future researches. Interdependence between the medical education and attitude to abortion may be accurately defined only if the same sample of respondents is subjected to a research first at the beginning and then at the end of education about abortion. Besides, for the most credible results, a larger sample is required, in which case attitudes of medical students might be put in correlation with the attitude of the general population or other target groups such as law students, lawyers or physicians. The majority of the students from the research sample was not adequately informed either about the legislative provisions applicable in the Federation of Bosnia and Herzegovina or with the postulates of their religion and their attitudes to abortion were significantly affected by this. Possibly, students have expressed conservative opinion in many variables only because they thought the offered statement referred to illegal action or similarly, religious students have possibly agreed with therapeutic abortion only because they believed it was acceptable by the rules of their religion. This should be certainly taken into account in the next research and students should be properly educated about relevant legislation and religious customs.

CONCLUSIONS

Influence of length of medical education and sex on attitudes on abortion was not proved statistically.

Impact of religiousness on that attitude cannot be commented due to very small share of unreligious students in the sample.

Contribution of individual authors:

Zoran Trninić was responsible for the integrity of the work as a whole, he designed research topic, conception and design of the study;

Marija Bender credited with statistical analysis, interpretation of data, provision of funding, technical support, overall supervision of the project.

Nikica Šutalo and Davorin Kozomara. were responsible for data collection, statistical analysis and writing the first version of the project.

Valentina Lasić was responsible for administrative and technical support and making the work design and writing the final version of the script.

Danijel Bevanda participated in writing the final version of the script.

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