

## Bioethical Knowledge and Attitudes Among Dental and Medical Students in the Medical Faculty, University of Prishtina

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### Abstract

The importance of bioethics as a formal subject has been recognized globally. The purpose of this study was to analyze undergraduate medical and dental students' knowledge, practice and attitudes regarding bioethical questions through a questionnaire. This cross-sectional study was conducted among students from the Medical Faculty who were in their first or fourth year of education. There were no differences in bioethics awareness between direction (general medicine [GM] or dentistry) or years of study among 301 GM and dental students. In this research, GM and dental students, in general, indicated a positive attitude and knowledge of bioethics. (**International Journal of Biomedicine. 2022;12(4):648-653.**)

**Keywords:** bioethics • dentistry • general medicine • students

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### Introduction

Being a professional in our field of dentistry requires the application of bioethics. The code's introduction begins with the notion that trust is unique and vital to dentistry's role in society. More than 2,000 years ago, Hippocrates acknowledged the significance of ethics as an essential component of the medical profession — therefore, by extension, it is an also essential component of the dental profession because dentistry is central to general health.<sup>(1)</sup> The earliest code of bioethics was written in 1866.<sup>(2)</sup> The principles of ethics emphasize the dentistry profession's aspirational objectives, which are similar to those of other healthcare professions.<sup>(3)</sup> Bioethics is a branch of ethics associated with the systematic investigation of the aspects of

human behavior in health sciences and healthcare that are based on moral principles and human values.<sup>(4)</sup>

Teaching professional ethics in dentistry is crucial, and appropriate goals for teaching the subject have been developed to educate student dentists on the ethical aspects of professional life and practice, enhance ethical analytical abilities among student dentists, and develop student dentists' respect and understanding for disagreement and indefiniteness. Additionally, it helps student dentists better comprehend the moral responsibility that comes with being a member of the dental profession, to encourage student dentists to continue their education in the area of professional ethics.<sup>(5,6)</sup>

Bioethics<sup>(7)</sup> should be a discipline that follows scientific progress while maintaining professional ethics and attributes. However, because of its complexity, bioethics education provides a dilemma for many teachers and scientists.

The aim of this study was to assess the knowledge and awareness of medical ethics, as well as attitudes toward the subject, among Bachelor of dentistry and general medicine

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(GM) students in the first and fourth years of study in the Medical Faculty of the University of Prishtina.

## Methods

We conducted a cross-sectional study among dentistry and medical undergraduate students who were attending the clinical years (first and fourth) in the Medical Faculty at the University of Prishtina between April and June 2022. A questionnaire was used to assess the extent of dental and medical students' understanding of patients' rights and dentists' legal obligations. Participants were informed about the purpose of the study and submitted written informed consent. The study was approved by the Joint Ethics Committee of the University Dentistry Clinical Center of Kosovo.

The questionnaire consisted of 34 questions divided into 6 parts. The first part comprised 5 descriptive questions about the awareness and importance of medical bioethics in GM and dental students. The second part comprised questions related to the awareness and importance of medical bioethics in GM and dental students by years of study. The third part comprised questions regarding the perspectives of GM and dental students on the main principles for a doctor's instructions. The fourth part comprised questions related to the perspectives of GM and dental students on the main principles for a doctor's instructions according to the year of studies. The fifth and sixth parts comprised questions regarding students' attitudes about dentists' duties toward patients, by direction (GM or dentistry) and year of study.

Statistical analysis was performed using statistical software package SPSS version 22.0 (SPSS Inc, Armonk, NY: IBM Corp.). Categorical variables were analyzed using the Chisquare test with the Yates' correction or, alternatively, Fisher's exact test when expected cell counts were less than 5. A probability value of  $P < 0.05$  was considered statistically significant.

## Results and Discussion

The research included 301 students studying GM or dentistry, of whom 145(48.2%) were first-year and 156(51.8%) were fourth-year students. One hundred (33.2%) were male (Table 1).

**Table 1.**

**General characteristics of the students involved in the research.**

	General Medicine		Dentistry		Total	
	n	%	n	%	n	%
Total	170	100	131	100	301	100
Year of study						
First	82	48.2	63	48.1	145	48.2
Fourth	88	51.8	68	51.9	156	51.8
Gender						
Male	58	34.1	42	32.1	100	33.2
Female	112	65.9	89	67.9	201	66.8

Regarding the awareness of medical bioethics, and its importance, among GM and dental students, without a significant difference according to the directions (general medicine or dentistry) ( $P=0.73$ ) or the year of study, 97.7% of the surveyed students believed that knowledge and implementation of bioethics are very important (Table 2). Most students reported that their medical bioethics knowledge was gained through lectures and seminars, with no significant differences based on the orientation or year of study in both directions. Knowledge of bioethics in dentistry was obtained by 81.4% of respondents in the faculty with no significant difference according to the directions or year of study, but the knowledge was reported as "sufficient" by only 50.1% of the students surveyed in the research (Tables 2 and 3).

**Table 2.**

**Questions related to the awareness and importance of medical bioethics in GM and dental students.**

Awareness and importance of medical bioethics in GM and dental students		General Medicine		Dentistry		Total		P-value
		n	%	n	%	n	%	
Total		170	100	131	100	301	100	
How important is bioethical knowledge and application?	It is essential to know and regularly implement it.	167	98.2	127	96.9	294	97.7	0.73
Sources of medical bioethics knowledg.	Lectures / seminars / clinical discussions	128	75.3	106	80.9	234	77.7	0.31
	Online resources (websites, online literature, etc.)	45	26.5	27	20.6	72	23.9	0.30
	Media	7	4.1	5	3.8	12	4.0	0.87
	Medical journals	10	5.9	14	10.7	24	8.0	0.19
You learned about bioethics in dental school.		133	78.2	112	85.5	245	81.4	0.15
Information about bioethics in dentistry that you received during your studies is sufficient.		96	56.5	55	42.0	151	50.2	0.02
You know the basic professional ethical principles in dentistry.		148	87.1	125	95.4	273	90.7	0.02

**Table 3.**

**Questions related to the awareness and importance of medical bioethics in GM and dental students by year of study.**

Awareness and importance of medical bioethics in GM and dental students		General Medicine				P-value	Dentistry				P-value
		First year		Fourth year			First year		Fourth year		
Total		n	%	n	%	P-value	n	%	n	%	P-value
		82	100	88	100		63	100	68	100	
How important is bioethical knowledge and application?	It is essential to know and regularly implement it.	79	96.3	88	100	0.22	60	95.2	67	98.5	0.56
Sources of medical bioethics knowledge.	Lectures / seminars / clinical discussions	57	69.5	71	80.7	0.05	51	81.0	55	80.9	0.29
	Online resources	24	29.3	21	23.9		13	20.6	14	20.6	
	Media	2	2.4	5	5.7		1	1.6	4	5.9	
	Medical journals	1	1.2	9	10.2		3	4.8	11	16.2	
You learned about bioethics in dental school.		63	76.8	70	79.5	0.81	50	79.4	62	91.2	0.10
Information about bioethics in dentistry that you received during your studies is sufficient.		42	51.2	54	61.4	0.24	29	46.0	26	38.2	0.47
You know the basic professional ethical principles in dentistry.		69	84.1	79	89.8	0.39	57	90.5	68	100	0.03

We measured a high degree of compliance, over 90%, in questions related to the perspectives of dental students on the main principles for a doctor’s instructions, with the exception of the question asking whether a dentist should avoid criticizing another dentist in the presence of patients or other health personnel, with which 87.4% of the respondents agreed, and the question of whether a dentist should report the

damage caused by another dentist, with which 56.1% agreed, without significant differences (Table 4).

Relating the years of study with attitudes regarding dentists being required to report an injury caused by another dentist, agreement (Strongly agree or agree) was reported by 65.9% of first-year GM students and 43.2% of fourth-year GM students ( $P=0.005$ ). First-year dental students agreed

**Table 4.**

**Questions regarding the perspectives of GM and dental students regarding the main principles for the doctor's instructions.**

Perspectives of GM and dental students on important principles for practice guidelines		General Medicine		Dentistry		Total		P-value
		n	%	n	%	n	%	
Total		170	100	131	100	301	100	
The dentist should provide the greatest possible treatment for the patient’s health.	Strongly Agree/ Agree	168	98.8	129	98.5	297	98.7	0.81
The dentist should practice in accordance with current medical knowledge, constantly improve skills and seek help whenever necessary.	Strongly Agree/ Agree	160	94.1	130	99.2	290	96.3	0.04
The dentist should not recommend or administer any harmful material and should provide assistance regardless of the patient’s financial means, ethnic origin, or religious belief.	Strongly Agree/ Agree	165	97.1	130	99.2	295	98.0	0.36
The dentist should protect the patient’s confidentiality and should not distribute the data without authorization.	Strongly Agree/ Agree	163	95.9	129	98.5	292	97.0	0.33
The dentist should not criticize another doctor in the presence of patients or other health personnel.	Strongly Agree/ Agree	145	85.3	118	90.1	263	87.4	0.29
The dentist should report any damage caused by another dentist.	Strongly Agree/ Agree	92	54.1	77	58.8	169	56.1	0.49

in 82.5% of cases, as compared with 36.8% of fourth-year students ( $P < 0.001$ ). In response to the statement that “The dentist should practice in accordance with current medical knowledge, constantly improve skills and seek help whenever necessary” (Strongly agree or agree), there was a significant difference only in GM students by years ( $P = 0.02$ ), whereas in other cases, we did not find a statistically significant difference according to the year of study (Table 5).

The following results describe students’ attitudes about dentists’ duties toward patients, according to the directions (general medicine or dentistry) or years of study (Tables 6 and 7). In response to “Patient care [being] your primary concern,” 98.0% of students agreed (Strongly agree or agree), without significant differences between GM and dental students ( $P = 0.93$ ) (Table 6) and by years of study for GM ( $P = 0.22$ ) and dental students ( $P = 0.95$ ) (Table 7).

**Table 5.**

**Questions related to the perspectives of GM and dental students regarding the main principles for the doctor's instructions according to the bioethical directions and year of study.**

Perspectives of GM and dental students on important principles for practice guidelines		General Medicine					Dentistry				
		First year		Fourth year		P-value	First year		Fourth year		P-value
		n	%	n	%		n	%	n	%	
	Total	82	100	88	100		63	100	68	100	
The dentist should provide the greatest possible treatment for the patient’s health.	Strongly Agree/ Agree	80	97.6	88	100	0.45	62	98.4	67	98.5	0.51
The dentist should practice in accordance with current medical knowledge, constantly improve skills and seek help whenever necessary.	Strongly Agree/ Agree	73	89.0	87	98.9	0.02	62	98.4	68	100	0.97
The dentist should not recommend or administer any harmful material and should provide assistance regardless of the patient’s financial means, ethnic origin or religious belief.	Strongly Agree/ Agree	78	95.1	87	98.9	0.32	63	100	67	98.5	0.97
Dentist should protect the patient’s confidentiality and should not distribute the data without authorization.	Strongly Agree/ Agree	76	92.7	87	98.9	0.10	63	100	66	97.1	0.51
The dentist should not criticize another doctor in the presence of patients or other health personnel.	Strongly Agree/ Agree	69	84.1	76	86.4	0.85	59	93.7	59	86.8	0.31
The dentist should report any damage caused by another dentist.	Strongly Agree/ Agree	54	65.9	38	43.2	0.005	52	82.5	25	36.8	<0.001

**Table 6.**

**Questions regarding students’ attitudes about dentists’ duties towards patients by directions.**

Students’ attitudes about dentists’ duties toward patients		General Medicine		Dentistry		Total		P-value
		n	%	n	%	n	%	
	Total	170	100	131	100	301	100	
Patient care [being] your primary concern.	Strongly Agree/ Agree	167	98.2	128	97.7	295	98.0	0.93
Treat[ing] each patient with courtesy and care.	Strongly Agree/ Agree	168	98.8	130	99.2	298	99.0	0.82
It is not important to disclose all information to the patient about their treatment.	Strongly Agree/ Agree	78	45.9	56	42.7	134	44.5	0.67
The dentist[s] must respect the dignity and privacy of the patient.	Strongly Agree/ Agree	160	94.1	126	96.2	286	95.0	0.58
Respecting the patient’s requirements does not play an important role in the tasks of the dentist.	Strongly Agree/ Agree	24	14.1	20	15.3	44	14.6	0.91
The dentist cannot be responsible for the therapy prescribed for the patient.	Strongly Agree/ Agree	9	5.3	9	6.9	18	6.0	0.74
It is not necessary to involve the patient in the decision-making for the patient’s treatment.	Strongly Agree/ Agree	11	6.5	18	13.7	29	9.6	0.06

Table 7.

Questions related to students' attitudes about dentists' duties towards patients by directions and year of study.

Students' attitudes about dentists' duties toward patients		General Medicine					Dentistry				
		First year		Fourth year		P-value	First year		Fourth year		P-value
		n	%	n	%		n	%	n	%	
	Total	82	100	88	100		63	100	68	100	
Patient care [being] your primary concern	Strongly Agree/Agree	79	96.3	88	100	0.22	62	98.4	66	97.1	0.95
Treat[ing] each patient with courtesy and care	Strongly Agree/Agree	37	45.1	41	46.6	0.97	24	38.1	32	47.1	0.39
It is not important to disclose all information to the patient about their treatment.	Strongly Agree/Agree	75	91.5	85	96.6	0.27	63	100	63	92.6	0.08
The dentist[s] must respect the dignity and privacy of the patient	Strongly Agree/Agree	13	15.9	11	12.5	0.68	7	11.1	13	19.1	0.30
Respecting the patient's requirements does not play an important role in the tasks of the dentist	Strongly Agree/Agree	6	7.3	3	3.4	0.43	5	7.9	4	5.9	0.91
It is not necessary to involve the patient in the decision-making for the patient's treatment	Strongly Agree/Agree	11	13.4	-	-	0.001	5	7.9	13	19.1	0.11

Regarding "Treat[ing] each patient with courtesy and care," agreement (Strongly agree or agree) was indicated by 99.0% of students, without significant differences between GM and dental students ( $P=0.82$ ) (Table 6) and by years of study of GM ( $P=0.45$ ) and dental students ( $P=0.97$ ) (Table 7). When presented with the statement "It is not important to disclose all information to the patient about their treatment," 44.5% of the students agreed (Strongly agree or agree), without significant difference between GM and dental students ( $P=0.67$ ) (Table 6) and by years of study among GM ( $P=0.97$ ) and dental students ( $P=0.39$ ) (Table 7).

The "dentist[s] must respect the dignity and privacy of the patient" statement evoked agreement by 95% of the students without significant difference between GM and dental students ( $P=0.58$ ) (Table 6) and by years of study of GM ( $P=0.68$ ) and dental students ( $P=0.30$ ) (Table 7).

Agreement (Strongly agree or agree) with the statement that "Respecting the patient's requirements does not play an important role in the tasks of the dentist" was reported by 14.6% of the students without significant differences between GM and dental students ( $P=0.91$ ) (Table 6) and by years of study of GM ( $P=0.43$ ) and dental students ( $P=0.91$ ) (Table 7).

Regarding the statement that "The dentist cannot be responsible for the therapy prescribed for the patient," the rate of agreement (Strongly agree or agree) was 6.0% for the students involved in this research; there were no significant differences between GM and dental students ( $P=0.74$ ) (Table 6).

Regarding the students' attitude that patients should be involved in "decision-making for the treatment," 9.6% of the students agreed, without significant differences between GM and dental students ( $P=0.06$ ) (Table 6) and by years of study of the dental students ( $P=0.11$ ), whereas there was a significant difference between GM students by years of study ( $P=0.001$ ).

The role of bioethics education in the dentistry undergraduate curriculum is essential,<sup>(8)</sup> and the value of

incorporating ethics into the curriculum in Medicine has been shown previously.<sup>(9,10)</sup> Medical and dental students at the University of Prishtina study medical ethics in the first semester of the first year of study. The results of our study show that over 97% of the students surveyed believe that knowledge and implementation of bioethics are essential, with no significant differences in either direction or year, which is similar to the findings of other studies.<sup>(11)</sup> When asked about their sources of medical bioethics knowledge, it was clear that the majority of students gained it through lectures, seminars and clinical discussions, a finding that is consistent with previous studies.<sup>(12,13)</sup> Our results are comparable with those of an earlier study,<sup>(14)</sup> in which it was reported that medical students had at least a basic understanding of bioethics principles. In this study, medical and dental students showed positive attitudes regarding dentists' and doctors' duties toward patients, with no difference between the type of student or years of the study.<sup>(15)</sup>

## Conclusion

By integrating bioethics into the undergraduate curriculum, future generations of dentists and doctors will be able to achieve a high level of professionalism and ethical standards.

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## Competing Interests

The authors declare that they have no competing interests.

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