

# Difference in knowledge and attitude of students towards medical ethics in preclinical and clinical phases of medical course in Gandaki Medical College, Pokhara

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## Abstract

**Background:** Medical ethics is a core component in the standardization of medical practice of any nation. Due to this reason, knowledge related to this subject should be imparted to the medical students. Only then, the aim of providing a strong base in the medical field and making of an ideal doctor will be possible.

**Objectives:** The study was conducted to compare the status of knowledge and attitude of medical ethics before and after the medical ethics theory class among medical students of Gandaki Medical College, Pokhara.

**Methodology:** This was a cross sectional study conducted in Gandaki Medical College, Pokhara from 1<sup>st</sup> to 31<sup>st</sup> August, 2018. A total number of 232 medical students were divided into two groups depending on whether they had attended medical ethics classes or not. Five point Likert scale was used in the responses of the participants and analyzed.

**Results:** The study found that there was significant difference between two groups regarding the importance of consent for all minor operations ( $p=0.010$ ), general physical examination ( $<0.001$ ), genital examination of males ( $p<0.001$ ) and females ( $p<0.001$ ), treatment of children and adults in emergency and non-emergency without their consent. Similarly, students after medical ethics class compared to the ones not having attended any class strongly disagreed that euthanasia is legalized in Nepal ( $p\text{-value}<0.001$ ).

**Conclusion:** Students after medical ethics theory class had a better understanding of medical ethics compared to the students who did not. Furthermore, active teaching methods like group discussions, role play and pedagogy can be incorporated to have a more effective impact on the students.

**Key words:** Medical ethics; Medical students; Nepal.

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## INTRODUCTION

Medical ethics is the branch of ethics dealing with moral issues in medical practice. Medical students become able to recognize difficult situations and deal with them in a more rational and principled manner after acquiring knowledge related to medical ethics. Ethical principles such as respect for patient's autonomy, informed consent and confidentiality are basic to the physician-patient relationship.<sup>1</sup> Various ethical issues may arise in the career of medical professionals due to absent or inadequate knowledge related to medical ethics. For example, consent in the adult and juvenile age group, ethical issues related to doctor's fee and treating violent patient/patient parties, maintaining patient's confidentiality, certain clinical dilemmas when a patient refuses treatment due to religious beliefs, patient refusing life supporting treatment or doctor's assistance in terminally ill patient, etc. These topics are covered in

the third year of Bachelor of Medicine Bachelor of Surgery (MBBS) course according to Tribhuvan University (TU) curriculum by Forensic medicine department.<sup>2</sup> Students are theoretically oriented to different medical ethics terms and topics in this undergraduate period.

## METHODOLOGY

This was a cross sectional study conducted in Gandaki Medical College (GMC), Pokhara over a duration of one month in August 2018. Total number of participants involved in the study was 232 medical students. Depending on whether the student had attended medical ethics lecture or not, the study participants were divided into two groups Group I (1<sup>st</sup> and 2<sup>nd</sup> year MBBS students) consisting of 122 students and Group II (3<sup>rd</sup> year and above MBBS students) consisting of 110 students. Ethical approval was obtained from the Institutional Ethics and Research Committee of Gandaki Medical College, Pokhara, Nepal. Data was collected using modified questionnaire used by Nepal S et al<sup>6</sup> in their study among the medical students of Manipal College of Medical Sciences (MCOMS), Pokhara, Nepal and Unnikrishnan et al<sup>7</sup> in their study among Indian medical practitioners. The questionnaire starts with the information related to socio-demographic profile of the participants, their source of knowledge and information regarding health care ethics followed by 25 point situational questions related to health care ethics. Five point Likert scale was used in the responses of the participants ((1-strongly agree, 2-agree, 3-not sure, 4-disagree and 5-strongly disagree). The responses with scores one and two were taken as an agreement, four and five were taken as disagreement and score three taken as unsure response.

The data entry and analysis was done using SPSS version 23. Descriptive statistical tools like frequency, percentage, mean, standard deviation and graphs were used to express the results. Independent 't' test was used to compare the mean difference of awareness of medical ethics among medical students.

## RESULTS

A total of 232 participants agreed to participate in this study with the response rate of 100 percent. The study showed that the students were aware of the terms like consent, confidentiality, patient's wish adherence and patient informing of any wrong happenings. The students had mixed responses in specific situations related to consent involving children. Only 49.6 % (115 out of 232) agreed that children can be treated without the consent of parents/local guardians in emergency. The response was of mixed type in situations related to refusal of treating patient due to his/her beliefs as 38.8% i.e. 90 out of 232 students disagreed to instruct patient to find another doctor and 49.1% i.e. 114 out of 232 disagreed to continue with the treatment by the same doctor. Majority (90.9%) i.e. 211 out of 232 had the opinion that patient has the right to refuse treatment and 44.4% i.e. 103 out of 232 opted that the patient has right to refuse life supporting treatment. In situation related to physician assisted suicide, 45.7% i.e. 106 out of 232 agreed to do so. Majority, 60.8% i.e. 141 out of 232 of the students were aware that euthanasia is not legalized in Nepal. There was a significant difference in 13 out of 25 responses with P-value<0.05. Group II strongly disagreed that euthanasia is legalized in Nepal (p-value<0.001)

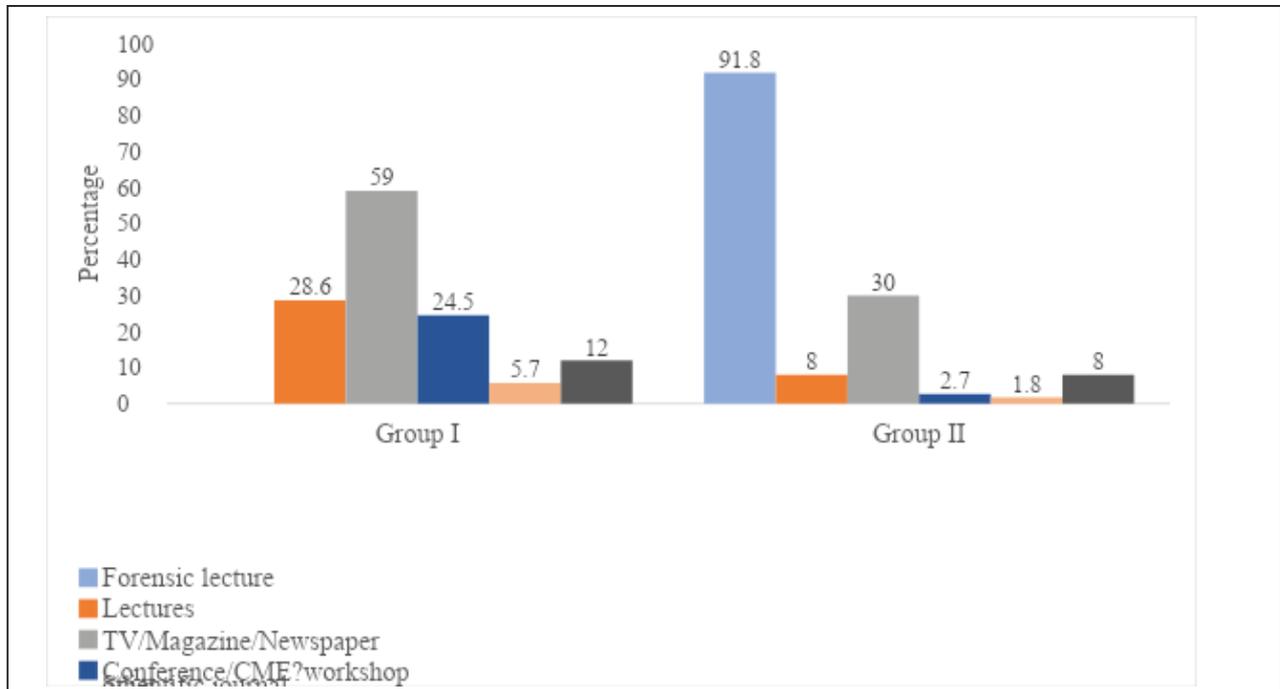
**Table 1: Sociodemographic characteristics of the participants (n=232)**

Characteristics		Group I (n-122)	Group II (n-110)
<b>Age</b>		19.73±1.06	21.51±1.10
Gender	Male	62(50.8%)	60(49.2%)
	Female	60(54.5%)	50(45.5%)
Male: Female		62:60	60:50
Religion	Hindu	112(91.8%)	106(96%)
	Buddhist	7(5.7%)	2(1.8%)
	Christian	0	1(0.9%)
	Muslim	3(2.4%)	0
	Others	0	1(0.9%)

**Table 2: Items in the questionnaire with the responses of the participants (n=232) and the observed difference in mean score of each item in the two groups**

Items	Agree N (%)	Not sure N (%)	Disagree N (%)	Group I	Group II	p value
<b>Consent should be taken for</b>						
All major operation	226(97.4%)	5 (2.2%)	1(0.4%)	1.18±0.48	1.07±0.35	0.051
All minor operation	219(94.4%)	7(3.0%)	6(2.6%)	1.63±0.73	1.40±0.59	0.010*
Routine investigation	173 (74.6%)	42(18.1%)	17(7.3%)	2.09±0.89	2.90±0.84	0.995
Treatment with adverse reaction	207(89.2%)	12(5.2%)	13(5.6%)	1.63±0.87	1.57±0.84	0.555
General physical examination	198(85.3%)	15(6.5%)	19(8.2%)	2.07±0.99	1.50±0.61	<0.001*
Genital examination of male	223(96.1%)	5(2.2%)	4(1.7%)	1.50±0.73	1.20±0.40	<0.001*
Genital examination of female	225(97.0%)	6(2.6%)	1(0.4%)	1.41±0.62	1.11±0.32	<0.001*
<b>In emergency</b>						
Children can be treated without parents'/ guardians' consent	115(49.6%)	24(10.3%)	93(40.1%)	1.41±0.62	1.11±0.32	<0.001*
Adult can be treated without their consent	136(58.6%)	36(15.5%)	60(25.9%)	2.74±1.20	2.38±1.18	0.021*
Patients' wish must be adhere	79(34.1%)	62(26.7%)	91(39.2%)	2.87±1.09	3.15±1.11	0.057
Doctors can refuse treatment if patient is unable to bear fees	13(5.6%)	19(8.2%)	200(86.2%)	4.33±0.87	4.27±0.87	0.583
Doctors can refuse treatment of violent patient/ patients' relatives	40(17.2%)	38(16.4%)	159(66.4%)	3.80±1.03	3.56±1.21	0.106
<b>In non- emergency</b>						
Children can be treated without parents'/ guardians' consent	24(10.3%)	25(10.8%)	183(78.9%)	3.90±1.03	4.24±0.84	0.006*
Adult can be treated without their consent	31(13.45%)	22(9.5%)	179(77.2%)	3.72±1.06	4.20±0.90	<0.001*
Patients' wish must be adhere	139(59.9%)	63(27.2%)	30(12.9%)	2.62±0.88	2.18±0.90	<0.001*
Doctors can refuse treatment if patient is unable to bear fees	87(37.5%)	47(20.3%)	98(42.2%)	3.49±1.07	2.71±1.12	<0.001*
Doctors can refuse treatment of violent patient/ patients' relatives	136(58.6%)	32(13.6%)	64(27.6%)	2.95±1.14	2.22±0.99	<0.001*
Confidentiality is the important ethical issue in medical practice	215(92.7%)	12(5.2%)	5(2.2%)	1.42±0.73	1.32±0.70	0.299
Patients should be informed of wrong	188(81.0%)	17(7.3%)	27(11.6%)	1.95±1.21	1.88±1.01	0.641
<b>If patient refuses certain treatment due to his/ her beliefs</b>						
Instruct to find another doctor	89(38.4%)	53(22.8%)	90(38.8%)	3.20±1.11	2.72±1.11	0.001*
Continue with the treatment	52(22.4%)	66(28.4%)	114(49.1%)	3.24±1.02	3.50±1.05	0.064
<b>Patient has a right to refuse</b>						
Treatment	211(90.9%)	9(3.9%)	12(5.2%)	1.86±0.76	1.69±0.76	0.092
Life supporting treatment	103(44.4%)	49(21.1%)	80(34.5%)	2.81±1.19	2.95±1.24	0.400
If a terminally ill patient wishes to die, he/she should be assisted to do so ethically	106(45.7%)	55(23.7%)	71(30.6%)	3.10±1.25	2.58±1.10	<0.001*
Euthanasia is legalized in Nepal	34(14.7%)	57(24.6%)	141(60.8%)	3.32±1.08	4.31±1.0	<0.001*

\*significant at p-value &lt;0.05



**Figure 1: Source of knowledge and information about the health care ethics among the study participants**

\*Participants were allowed to indicate more than one option, if required

## DISCUSSION

Group I students were more confused with consent, patient's wish adherence compared to group II students. The understanding of importance of consent is essential as mentioned in one of the basic principle of medical ethics (i.e. Principle of respect for autonomy).<sup>3,4</sup> The study did not show major difference in two groups in relation to consent taken for major operations/procedures, routine investigations, treatment with adverse reactions whereas there was difference with P value of 0.010 in consent taken for minor operations/procedures. Group II was more aware of the consent required for general physical examination and genital examination in both sexes. This study had findings similar to Nepal S et al<sup>6</sup>, Unnikrishnan B et al<sup>7</sup> in situations related to consent taken for major/minor operations, routine investigations, treatment with adverse reactions and examination of male and female patients. Agreement related to consent required for children to be treated without parents'/guardians' consent in emergency was 49.6% (115 out of 232) similar to Unnikrishnan B et al 51.9% i.e. 54 out of 104<sup>7</sup> whereas dissimilar from Nepal S et al (70.3% i.e.; 142 out of 202).<sup>6</sup> This dissimilarity could be due to inadequate knowledge of consent in emergency situation where 'Doctrine of Emergency' can be applied aimed in the good interest of the patient. Group I showed more generous attitude by disagreeing with refusal of patient's treatment if unable

to bear fees and refusing treatment if violent patient/patient relatives even in non-emergency situations (p-value<0.001). There was disparity in the situation where 22.4% i.e. 52 out of 232 medical students of GMC and 21.8% i.e. 44 out of 202 students of MCOMS agreed to continue with the treatment if patient refuses certain treatment due to his/her beliefs compared to 74% i.e. 77 out of 104 participants agreed in study conducted by Unnikrishnan et al.<sup>7</sup> The difference could be due to change in the paternalistic attitude of medical practitioners in these recent years and participants in that study done Unnikrishnan et al had more than a year of clinical experience.<sup>7</sup> Group II were more welcoming to physician assisted suicide in a terminally ill patient who wishes to die compared to the counterpart. As expected, group II students were more aware of the legal status of euthanasia in Nepal with P-value <0.001. Majority (60.8% i.e. 141 out of 232) of GMC students were aware of the legal status of euthanasia compared to 40.1% i.e. 81 out of 202 MCOMS students. There was a significant difference amongst two groups in 13 out of 25 questions in this study compared to only seven out 25 significant differences in Nepal S et al study.<sup>6</sup> The reason could be due to difference in university curriculum as GMC intakes Tribhuvan University based curriculum where medical ethics is introduced only in third year of their five and half year MBBS course whereas MCOMS intakes Kathmandu

University curriculum where they have at least two lectures on medical ethics delivered by Forensic Medicine department in the first semester itself in addition to the actual course in sixth and seventh semesters of third year of MBBS course. Southgate LJ et al in their study concluded that teaching medical ethics vary according to the place in the curriculum.<sup>5</sup> We can adopt different methods of teaching and learning medical ethics beside the conventional theoretical one. For example, as mentioned by Grant Valerie J in her article, we can also initiate case-based, multidisciplinary seminars in our medical colleges itself for clinicians, philosophers and students to discuss and debate on current issues related to medical ethics for arising more interest and maximum learning among the participants.<sup>6</sup> According to Glick SM, the interdisciplinary teaching of medical ethics along with its inclusion in the entire duration of medical course should be planned instead of a year or two of our curriculums. He also emphasized on paying attention to the ethical problems faced by students themselves

and keeping critical examination of students 'progress'.<sup>7</sup> Adopting the given methods above and more, we can inculcate medical ethics in the undergraduate medical students and transform them into academically and ethically competent future medical practitioners of this nation. This study can also be helpful in planning the modifications that are required in teaching modality and the curriculum itself.

## CONCLUSION

Students after medical ethics theory class had a better understanding of medical ethics compared to the students who did not have. Furthermore, active teaching methods like group discussions, role play and pedagogy can be incorporated to have more effective impact on the students.

**Conflict of interest:** None

**Source(s) of support:** None

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