Original Research

Are Sri Lankan Allopathic Medical Practitioners Ethical Enough? A KAP Survey in Selected Allopathic Healthcare Institutions in Sri Lanka

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Abstract

Background: Healthcare practitioners should provide comprehensive care to patients, their families, and communities through proper ethical conduct. However, in the recent past, there has been growing public concern regarding the ethical conduct of healthcare professionals, which is often reflected in complaints about poor ethical conduct. Medical ethics are concerned with moral values and judgments, as they apply to medicine. The following four principles form the basis of ethical medical practice: autonomy, justice, beneficence and non-maleficence.

Objective: This study assessed the knowledge, attitudes, and practices of medical ethics among medical officers in Sri Lankan healthcare institutions.

Methods: This was a descriptive cross-sectional study, and data collection was performed for three months in four conveniently selected healthcare institutions. The sample size was 210 and proportionate sampling was performed to calculate the sample size for each institution. A pre-tested, validated, and self-administered questionnaire was used for data collection.

Results: Of the total number of participants (N=210), only 176 returned completed questionnaires (response rate=83.8%). Only 169 questionnaires were considered for the analysis because of the incompleteness of the seven returned questionnaires. Most of the doctors (n= 130,76.9%) have a "Good" knowledge level of medical ethics. Regarding the participants' attitudes, the majority strongly agreed with the statement "Doctor should always do his best for the patient (n= 162 (95.9%). Regarding participants' practices, all participants (N=169) claimed that they always "showed respect, dignity, responsiveness, and attention to patients' health needs.

Conclusions and Recommendations: This study shows that Sri Lankan doctors have a sound knowledge of basic medical ethical principles. They ensured the privacy and informed consent of patients and respected their dignity in their practice. We recommend that education and training in all aspects of medical ethics be initiated as continuous medical education for all doctors.

Keywords: Medical Ethics; Allopathic Practitioners; KAP Survey

Background

Healthcare practitioners should provide comprehensive care to patients, their families, and communities through proper ethical conduct. However, in the recent past, there has been growing public concern regarding the ethical conduct of healthcare professionals, which is often reflected in complaints about poor ethical conduct [1]. Ethics is the study of morality – a careful and systematic analysis of moral decisions and behaviors and practising those decisions. Medical ethics is concerned with moral values and judgments as they apply to medicine [2]. Four principles form the basis of ethical medical practice: autonomy, justice, beneficence, and non-maleficence[3].However, traditional medical training offers little help in resolving the ethical dilemmas encountered by healthcare professionals [4]. Historically, several reports have emphasized the significance of incorporating ethical

issues into medical curricula [5]. Hence, training in medical ethics has become mandatory in the undergraduate curriculum by regulatory bodies of medical education in many countries [6]. Public awareness of the ethical conduct of healthcare practitioners and complaints against physicians are increasing [7]. However, when searching for literature, renowned research articles in this area conducted in local settings were hardly found. Therefore, researchers have deemed it imperative to conduct a study focusing on the knowledge, attitudes, and practices of medical officers in Sri Lankan healthcare institutions related to medical ethics.

Methods

This was a descriptive cross-sectional study in which data were collected for three months from March 2021. The study was conducted in four healthcare institutions representing secondary and tertiary levels of healthcare, the urban-rural environment in Sri Lanka, one from each of the four provinces: northwestern, Uva, southern, and eastern. Provinces and healthcare institutions were selected solely based on the convenience of the investigators. The study population consisted of 378 medical officers from the District General Hospital Chilaw (N=126), Base Hospital Mahiyanganaya (N=58), New District General Hospital Kamburugamuwa, Matara (N=35), and District General Hospital Ampara(N=159). The sample size was 210, calculated using the Rao Soft ® sample size calculator [8]. Proportionate sampling was performed to calculate the sample size from each institution, which consisted of 70 medical officers from District General Hospital Chilaw, 32 from Base Hospital Mahiyanganaya, 20 from New District General Hospital Kamburugamuwa, Matara, and 88 from District General Hospital Ampara. A medical officers' pay sheet was used as the sampling frame to select study participants, enabling a random sample of medical officers covering a range of medical specialties and subspecialties included in the study. A pre-tested validated self-administered questionnaire consisting of four sections was used as the study instrument: Section A (Socio-demographic data of the participants), Section B (Knowledge of various dimensions of medical ethics), Section C (attitudes of participants towards multiple dimensions of medical ethics), and Section D (Practice of participants towards various dimensions of medical ethics). A thorough literature review was conducted prior to the development of a self-administered questionnaire. It was developed based on questionnaires used by Ranasinghe and others in 2009, Abdulrazeq and others in 2017, Mohamed and others in 2009, and the "Guidelines on Ethical Conduct for Medical & Dental Practitioners registered with the Sri Lanka Medical Council"[9,10,11]. The latter was studied in detail and used as the basis for developing the questions in Sections B, C, and D. Similarly, relevant questions from the questionnaires of the other two studies were also incorporated, so that a comprehensive questionnaire that included the most common ethical issues encountered by Sri Lankan doctors was designed. In Section B, five marks were awarded for each correct response, giving a total of 100 marks for knowledge. In the analysis, a knowledge score of 60 or above was considered as "good knowledge" since the questions asked were mainly focused on routine clinical practice [9].

In section C, responses were measured using a 5-point Likert scale ranging from "Strongly Disagree" (1) to "Strongly Agree" (5). In section D, responses were measured using a 3-point Likert scale ranging from "Never" (1) to "Always" (3). The face and content validity were assessed by experts. The questionnaire was modified and refined based on feedback from experts. The questionnaire was then pre-tested among 15 medical officers at a Base Hospital. Based on their feedback, several minor modifications were made and a final version of the questionnaire was produced. Statistical analyses were performed using Microsoft Office Excel and the Statistical Package for the Social Sciences (SPSS 21.0). Ethical approval was obtained from the Ethical Review Committee of the Postgraduate Institute of Medicine, Colombo. Administrative clearance was obtained from the relevant authorities.

Results

Of the total number of participants (N=210), 176 returned completed questionnaires with a response rate of 83.8%. Of the 176, 07 returned questionnaires, seven were omitted from the analysis because of incomplete answers, and only 169 returned completed questionnaires were considered for the analysis. Among the respondents, the majority (n=108, 63.9%) were males with a mean age of 39.71(5.636) years, mean experience of 11.08 (4.720) years, and the majority (n=75,44.4%) had work experience of 10-14 years.

The majority(n=96,56.8%) were from medical disciplines, with only a bachelor's degree being the highest educational qualification (n=155, 91.7%).

Table 1 describes the participants' knowledge of various dimensions of medical ethics. Those who responded "Don't know" for a specific statement were also included in the "False" category in the analysis.

All participants identified statement 13, "No doctors should advertise their successes in treatment" as "True". One hundred and sixty-two participants (95.9%) identified statement 21, "It is the clinician in charge of the care of patients, is ethically responsible for the confidentiality of medical records" as "True". Of the total respondents (N=169), 160(94.7%) had marked statement 1, "There is a written document which provides guidelines on ethical conduct for Sri Lankan doctors" as "True".

Only 15 (8.9%) respondents, 15 (08.9%) do not know that, "The doctor should take informed consent from the parent of a child, aged 12-18 years, for treatment or procedure," statement 9 (Table 1).

Most participants (n= 107, 63.3%) thought that statement 16, "Any payment to a healthy research participant should be for expenses, time, inconveniences or discomfort, and never for the risk" was true. Another important finding is that out of the total participants, nearly half (n= 84,49.7%) think that statement 18, "Individual gifts of minimal value from pharmaceutical companies are permissible as long as they serve an immediate purpose, e.g. writing pads and pens" is "False" (Table 1).

Table 2 describes the distribution of the respondents according to their level of knowledge. The majority of the doctors (n= 130, 76.9%) have a "Good" knowledge level of medical ethics.

Table 3 shows how participants responded to statements related to their attitudes towards common ethical encounters in their day-to-day clinical practice. Most of the doctors (n= 146, 86.4%) strongly disagreed with statement 26, "Maintaining patient confidentiality is not important." Seventy medical officers (41.4%) strongly disagreed with statement 32 "In case of disagreement between patients/families and healthcare professionals about treatment decisions, doctors' decisions should be final". Of the total participants, 162(95.9%) strongly agreed with statement 28, "Doctor should always do his best for the patient." One hundred fourteen participants (67.5 %) agreed with statement 31, and patient consent should be considered when divulging his/her information to a third party. Although 94 (55.6%) participants and 60 (35.5%) participants "strongly agree" and "agree" with the statement "Patient wishes must be adhered to", still 15 (08.9%) participants strongly disagree with it.

Table 4 illustrates how the participants responded to statements related to their practice towards common ethical encounters in their day-to-day clinical practice. It is noteworthy that all the participants (N=169) always "showed respect, dignity, responsiveness, and attention to patients' health needs". Out of the total participants, 138 (81.7%) "Always" "Ensure privacy when examining a patient." One hundred and thirty-seven participants (81.1%) "Always" take informed consent from the patient (before exposing any body part). " In contrast, 19 (11.2 %) participants did not practice it. Interestingly, 115 (68.0%) sometimes ordered investigations that were not indicated.

Discussion

This study achieved an 83.8% response rate, which is comparable to the rates of 79% in a similar study in Sri Lanka [12] and 78.1% in a study in Manipur, India [13]. Although doctors are a professional group with low response rates in research [14], in this study, the response rate was commendable. The reason may be the multiple study settings, and the researchers are the heads of the institutes where participants may feel obligated to complete the questionnaire.

In our study, we found that all participants identified statement 13, "No doctors should advertise their successes in treatment" as "True". This reflects current practice, and almost all medical officers refrain from advertising their success in clinical practice.

Considering statement 21, "It is the clinician in charge of the care of patients and is ethically responsible for the confidentiality of medical records," 162 (95.9%) marked it as "True." This is promising, as patients can trust doctors to keep their health-related information confidential.

In a study done in a poor resource setting in Nepal in 2016, among 118 doctors and 86 nurses, it was found that only two-thirds of the doctors (n=79) were aware of the contents of the Hippocratic Oath. However,

106 doctors (89.8%) were unaware of the content of the Nuremberg Code and 101 doctors (85.6%) were unaware of the content of the Declaration of Helsinki [15]. In our study, 146 (86.4%) participants were aware that "the Nuremberg Code and the Declaration of Helsinki are important landmarks in the evolution of research ethics." However, we did not explore whether they knew about the content of the Nuremberg Code and the Declaration of Helsinki. However, in this study, 160(94.7%) marked the statement, "There is a written document which provides guidelines on ethical conduct for Sri Lankan doctors" as "True," which means that only nine participants (05.3%) were unaware of this guideline.

When considering the level of knowledge of medical ethics among participants, the majority of doctors (n= 130,76.9%) had a 'good' level of knowledge about medical ethics. This is quite different from the findings of a study conducted in Sri Lanka in 2009, in which 254 doctors (81.2%) had "poor" knowledge of medical ethics [9]. In another study conducted in Kalutara District, Sri Lanka in 2014, among medical officers about medical ethics and medico-legal duties, 52.2% of doctors had poor knowledge, 43.9% had fair knowledge, and only 3.9% had good knowledge about medical ethics [12]. This may be because Sri Lankan medical faculties changed their traditional curricula by introducing behavioral science modules that included medical ethics and communication skills in the early 21st century [16]. In addition, conducting awareness workshops on the importance of ethical practices for medical officers would have also contributed to this knowledge gain.

When considering the participants' attitudes towards various dimensions of medical ethics, the majority of medical officers had positive attitudes toward maintaining patient confidentiality, patient autonomy, and beneficence (Table 3). However, it seems that the principle of autonomy still clashes with the religious perceptions of Sri Lankan doctors. It is evident from the participant's response to the statement "If the law permits abortion, still doctors can refuse to perform it" to which 112 (66.3%) of the medical officers agreed. Because most Sri Lankans are Buddhists, whether it is illegal or legal to perform an abortion is similar to killing a living being. This is similar to the findings of a study conducted in Northern India, in which 156 (63.9%) physicians disagreed with the above statement [17]. Similarly, in another study conducted at Queen Elizabeth Hospital, Barbados, only 7.0% of the respondents agreed with the statement, ' If the law allows abortion, a healthcare worker cannot refuse to perform it [1].

According to the study, most doctors (n= 146,86.4%) strongly disagreed with statement 26, "Maintaining patient confidentiality is not important" (Table 3). This is similar to the results of a study done in a study in Northern India in 2011 among a group of nurses and physicians which revealed that 81.3%, 217 physicians disagreed with the statement "Confidentiality is not so important aspect of treatment" This is also similar to the finding of the study done in the Islamic Hospital in Jordan among a group of medical residents in 2017 where it was found that 95 (85.6%) of the participants disagreed with the statement "confidentiality is not important"[10].

Among the participants, 60 (35.5%) medical officers agreed and 94 (55.6%) strongly agreed with the statement, 'Patient wishes must be adhered to' (Table 3). This may be because of the growing number of allegations in social media against medical professionals about "perceived wrongdoings" for patients, resulting in negative outcomes. Although these allegations are not evidence-based, it seems that most honest and hardworking doctors are frustrated with the public's perceptions. In such a situation, it is no wonder that doctors adhere to the patient's wishes irrespective of the consequences and availability of better alternatives. In a study conducted in Nepal in 2018 on a sample of resident doctors and ward nurses, 79 (66.9%) doctors agreed with this statement [15].

As shown in Table 4, the majority of Sri Lankan doctors manage to ensure the privacy and informed consent of patients and respect their dignity. A similar observation was made in a study conducted at the University of Alexandra Hospital in Egypt among 100 resident physicians, where compliance with ethical practices related to informed consent, respect for dignity, and privacy was 100.0%, 94.0%, and 90.0%, respectively [11].

Concerning informed consent, the Sri Lankan study is similar to the findings of a study conducted in Barbados, where 72 out of 78 physicians disagreed with the statement, "Consent only for operations – not for tests and medications"[1]. In contrast, the Sri Lankan doctors were better than the senior resident doctors of Pakistan, where only 58.3% disagreed with a similar statement

Table 1: Participants' Knowledge of Various Dimensions of Medical Ethics

	Issues in Medical Ethics	True	False
1.	There is a written document that provides guidelines on ethical conduct for Sri Lankan doctors.	160 (94.7%)	09 (05.3%)
2.	The Nuremberg Code and the Declaration of Helsinki are important landmarks in the evolution of research ethics.	146 (86.4%)	23 (13.6%)
3.	A child aged 12-18 years can give informed consent for treatment or a medical procedure provided he or she is competent to understand the nature, purpose, and possible consequences of the intervention.	109 (64.5%)	60 (35.5%)
4.	The doctor should take informed consent from the parent of a child, aged 12-18 years, for treatment or procedure.	154 (91.1%)	15 (08.9%)
5.	If the parents have never been married, only the mother has parental responsibility to consent to the treatment of the child.	55 32.5%)	114 (67.5%)
6.	When writing prescriptions full signature and the address of the physician is a must.	93 (55%)	76 (45.0%)
7.	When prescribing a drug in its brand name it should always be in parenthesis after the generic name.	141 (83.4%)	28 (16.6%)
8.	No doctor should advertise his/her successes in treatment.	169 (100%)	00
9.	Those who write articles or are interviewed by the press should refrain from publishing their photographs.	16 (09.5%)	153 (90.5%)
10.	In television and radio broadcasts, the announcing of names, specialties, and registered qualifications of participants should be confined only to the commencement and the end of the program	36 (21.3%)	133 (78.7%)
11.	Any payment to a healthy research participant should be for expenses, time, inconveniences, or discomfort, and never for the risk.	62 (36.7%)	107 (63.3%)
12.	It is considered unethical for a doctor to own a pharmacy for dispensing prescriptions by doctors other than him/herself or for the sale of medical or surgical appliances.	102 (60.4%)	67 (39.6%)
13.	Individual gifts of minimal value from pharmaceutical companies are permissible as long as they serve an immediate purpose, e.g. writing pads and pens.	85 (50.3%)	84 (49.7%)
14.	It is the responsibility of a doctor to bring instances of professional misconduct, incapability, dishonesty, or negligence of a fellow medical practitioner to the notice of the SLMC.	144 (85.2%)	25 (14.8%)
15.	If a patient infected with HIV refuses to give consent or declines to disclose information to the spouse or the sexual partner, the doctor may disclose information after informing the patient, only if he is the physician for both.	47 (27.8%)	122 (72.2%)
16.	It is the clinician in charge of the care of patients, is ethically responsible for the confidentiality of medical records.	162 (95.9%)	07 (04.1%)
17.	If the doctor examines a patient at the request of the police, informed written consent from the patient is not necessary to pass on information to the police.	100 (59.2%)	69 (40.8%)
18.	A doctor's conviction of a criminal offense that is not directly connected with the profession can lead to disciplinary proceedings at the medical council.	144 (85.2%)	25 (14.8%)
19.	Where the law allows therapeutic abortion to save the life of the mother, if there is any religious or moral objection to abortion by a doctor, he/she cannot be forced to perform or assist in the termination of pregnancy.	126 (74.6%)	43 (25.4%)
20.	If the criminal abortion was performed by the woman herself, it is unethical for a doctor to report this patient to the police or anyone else unless the patient's life is in danger or death occurs.	117 (69.2%)	52 (30.8%)

[18]. In Sri Lanka, the emphasis on obtaining informed consent is integrated into patient management training in undergraduate studies, potentially contributing to the high response rate.

It is interesting to note that 68.0% (115) of Sri Lankan doctors claimed that sometimes they order investigations that are not indicated. Determining the reasons for this practice would be useful in future studies.

A major limitation of our study is the small sample size (N=210). However, this represents only four provinces. Therefore, the generalizability of our results is not an issue. Another limitation is that the practices were studied using a self-administered questionnaire, in which the respondents would have suffered from social desirability bias. Third, because this was a cross-sectional study, we could not observe changes over time

Conclusions and Recommendations

This study shows that Sri Lankan doctors have a sound knowledge of basic medical ethical principles. They also had positive attitudes toward maintaining patient confidentiality, patient autonomy, and beneficence. However, it seems that the principle of autonomy still clashes with Sri Lankan doctors' religious perceptions. They were also very concerned about the social perceptions of their behavior. Most Sri Lankan doctors manage to ensure the privacy and informed consent of patients and respect their dignity in practice.

However, it seems that the principle of autonomy still clashes with Sri Lankan doctors' religious perceptions.

We recommend that education and training in all aspects of medical ethics be started as continuous medical education for all doctors. Ethics committees should be established in health care institutions to support medical officers in making the most appropriate decisions in cases of ethical dilemmas. It is further recommended to commence a postgraduate specialty in medical ethics so that graduates can be employed as ethicists in hospitals as members of the ethics committees. These strategies might help alleviate the clashes between professional ethics and doctors' religious and cultural views.

Doctors should always be encouraged to conduct clinical case conferences to discuss unethical practices and take preventive measures against such practices in the future. However, we emphasize that this should be done in a no-name, no-blame culture.

Table 2: Distribution of the respondents according to the Level of Knowledge

Level of knowledge	Frequency	Percentage (%)
Poor	39	23.1
Good	130	76.9
Total	169	100

Table 3: Participants Attitudes towards various Dimensions of Medical Ethics

Issues in Attitudes towards medical ethics	Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
1. Maintaining patient confidentiality is not important.	146 (86.4%)	00	00	07 (04.1%)	16 (09.5%)
2. Patient wishes must be adhered to.	15 (08.9%)	00	00	60 (35.5%)	94 (55.6%)
3. The doctor should always do his best for the patient.	00	00	00	07 (04.1%)	162 (95.9%)
4. If the law permits abortion, still doctors can refuse to perform it.	00	30 (17.8%)	00	112 (66.3%)	27 (16.0%)
5. Patients should always be informed of wrongdoing by anyone involved in his/her treatment.	23 (13.6%)	09 (05.3%)	12 (07.1%)	87 (51.5%)	38 (22.5%)
6. Patient consent should be considered when divulging his/her information to a third party.	00	19 (11.2%)	00	36 (21.3%)	114 (67.5%)
7. In case of disagreement between patients/families and healthcare professionals about treatment decisions, doctors' decisions should be final.	70 (41.4%)	42 (24.9%)	18 (10.7%)	39 (23.1%)	00

Table 4: Participants' Practices on Various Dimensions of Medical Ethics

	Issues in Practice in Medical Ethics	Never	Sometimes	Always
1.	I take informed consent from the patient (before exposing any body part).	19 (11.2%)	13 (07.7%)	137 (81.1%)
2.	I spend enough time explaining the nature, purpose, and possible consequences of treatment or procedure when obtaining informed consent from patients.	00	42 (24.9%)	127 (75.1%)
3.	I order investigations that are not indicated.	54 (32.0%)	115 (68.0%)	00
4.	I show respect, dignity, responsiveness, and attention to patient's health needs.	00	00	169 (100.0%)
5.	I ensure privacy when examining a patient.	00	31 (18.3%)	138 (81.7%)
6.	I engage in continuous medical education (CME) activities.	00	51 (30.2%)	118 (69.8%)
7.	I do not influence patients directly or indirectly to accept private treatment	34 (20.1%)	57 (33.7%)	78 (46.2%)
8.	When managing patients, I do not consider patient's religious and cultural views.	49 (29.0%)	69 (40.8%)	51 (30.2%)

Author declaration

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References

[1]. Hariharan S, Jonnalagadda R, Walrond E, Moseley H. Knowledge, attitudes and practice of healthcare ethics and law among doctors and nurses in Barbados. *BMC Med Ethics.* 2006;5(1):1–8.

[2]. Iswarya S, Bhuvaneshwari S. Knowledge and attitude related to medical ethics among medical students. *Int J Community Med Public Health.* 2018;5(6):2222–5.

[3]. Beauchamp T, Childress JF. *Principles of Biomedical Ethics.* Oxford University Press; 2013.

[4]. Hariharan S, Jonnalagadda R, Gora J. Knowledge, attitudes and practices of healthcare personnel towards care-ethics: a perspective from the Caribbean. *Internet J Law Healthc Ethics.* 2006;5(1):1–8.

[5]. Jalal S, Imran M, Mashood A, Younis M, Peshawer CMH. Awareness about knowledge, attitude and practice of medical ethics pertaining to patient care, among male and female physicians working in a public sector hospital. *Eur J Environ Public Health.* 2018;2(1):1–8.

[6]. Janakiram C, Gardens SJ. Knowledge, attitudes and practices related to healthcare ethics among medical and dental postgraduate students in South India. *Indian J Med Ethics.* 2014;11(2):99–104.

[7]. Baldwin D, Daugherty S, Rowley B. Unethical and unprofessional conduct observed by residents during their first year of training. *Acad Med.* 1998;73:1195–200.

[8]. Sample size calculator by Raosoft, Inc. [Internet]. [cited 2018 Oct 27]. Available from: http://www.raosoft.com/samplesize.html.

[9]. Ranasinghe A, Fernando B, Sumathiplala A, Gunathunga W. Medical ethics: knowledge, attitude and practice among doctors in three teaching hospitals in Sri Lanka. *BMC Med Ethics.* 2020;21(69).

[10]. Abdulrazeq F, Al-Maamari A, Ameen W, Ameen A. Knowledge, attitudes and practices of medical residents towards healthcare ethics in the Islamic Hospital, Jordan. *Yemeni J Med Sci.* 2019;13(1):1–9.

[11]. Mohamed AM, Ghanem MA, Kassem AA. Knowledge, perceptions and practices towards medical ethics among physician residents of University of Alexandria hospitals, Egypt. *East Mediterr Health J.* 2012;18(9):935–45.

[12]. Amarasinghe P, Weerasinghe M. Knowledge and perception on medical ethics and medico-legal duties among government medical officers in a district of Sri Lanka. *Sri Lanka J Med Admin.* 2018;20(1):26–31.

[13]. Brogen A, Rajkumari B, Laishram J, Joy A. Knowledge and attitudes of doctors on medical ethics in a teaching hospital, Manipur. *Indian J Med Ethics.* 2009;6(4):194–7.

[14]. Thorpe C, Ryan B, McLean S, Burt A, Stewart M, Brown J, et al. How to obtain excellent response rates when surveying physicians. *Fam Pract.* 2009;26:65–8.

[15]. Adhikari S, Paudel K, Aro AR, Adhikari TB, Adhikari B, Mishra SR. Knowledge, attitude and practice of healthcare ethics among resident doctors and ward nurses from a resource poor setting, Nepal. *BMC Med Ethics* [Internet]. 2016;17(1):1–8. Available from: http://dx.doi.org/10.1186/s12910-016-0154-9.

[16]. Karunathilake I, Samarasekara D, Dias R, Olupeliyawa A. Medical education reforms in Sri Lanka. *Asia Pac Biotech News.* 2006;10(15):809–11.

[17]. Chopra M, Bhardwaj A, Mithra P, Singh A, Siddiqui A, DR R. Current status of knowledge, attitudes and practices towards healthcare ethics among doctors and nurses from Northern India: a multicentre study. *J Krishna Inst Med Sci Univ.* 2013;2(2):102–7.

[18]. Imran N, Haider II, Jawaid M, Mazhar N. Health ethics education: knowledge, attitudes and practice of healthcare ethics among interns and residents in Pakistan. *J Postgrad Med Inst.* 2014;28(4):383–9.