Original Article

Knowledge, attitude and practice of medical ethics among medical intern students in a Medical College in Kathmandu

Ramesh P Aacharya[1], Yagya L Shakya[2]
Department of Emergency and General Practice
Tribhuvan University Teaching Hospital
Institute of Medicine, Maharajgunj
Kathmandu, Nepal
Email: raacharya@yahoo.com

Abstract: This baseline study was conducted to find out the knowledge, attitudes and practices of medical ethics among the undergraduate medical interns who did not have structured ethics curriculum in their course. A descriptive, cross-sectional study was carried out using a self-administered structured questionnaire among the medical undergraduate interns of Maharajgunj Medical Campus, the pioneer medical college of Nepal which enrols 60 students in a year. A total of 46 interns participated in the study. The most common source of knowledge on ethics was lectures/seminars (35.7%) followed by experience at work (24.5%), training (21.4%) and own reading (17.3%). The main contents of Hippocratic Oath were known to 98.8% while 60.9% knew the main contents of Nepal Medical Council (NMC) code of ethics. Great majority (91.3%) regard ethics as very important in medical profession. "Doctors know the best irrespective of patients' opinion" was disagreed by only 39.1% indicating the paternalistic attitude. However, 78.3% were in favour of adhering to the patient's wish. None of the participant agreed to abandon confidentiality. Only about one-fourth (26.1%) claim to encounter ethical dilemma every day while the highest number (43.5%) had once in a month. To deal with the situation of ethical dilemma, majority approached to immediate supervisor followed by head of the department and colleagues. Eighty-seven percent of participating interns were involved in research activities involving human subjects. Only one of the participants had encountered the ethical issue on end-of-life and it was do-not-resuscitate consent in a terminally ill patient. On implementation of the curriculum on medical ethics focus should be - principles of biomedical ethics, sensitive ethical dilemmas like end-of-life care and practical experiences with participation in deliberations of the ethics committee.

Keywords: Biomedical ethics, ethical dilemma, medical education, interns doctors.

Background: Medical Council regulations on undergraduate medical courses include practice the principles of medical ethics as one of the core competencies[1] and is an important component of medical education. Regional meetings of medical councils coordinated by World Health Organization (WHO) South East Asia Regional Office (SEARO) has realised the need to incorporate medical ethics in undergraduate medical education[2]. Students need to develop a rational approach to solve ethical dilemmas that they will face in daily responsibilities of caring the patients. Tribhuvan University (TU), Institute of Medicine has incorporated the medical ethics in the latest version of undergraduate medical curriculum[3] and its implementation is in the process. However, the medical interns enrolled in this study were from the previous curriculum and did not undergo structured curriculum on ethics.

There have been many reports stressing the importance of incorporating ethical and legal issues in medical curricula[4] .Medical students are taught various subjects to tackle medical problems; they also need ethics to solve the moral quandaries that they are likely to face in their practice in the future.[5] Medical ethics are integral to all clinical encounters and public health interventions, and a foundation in medical ethics is essential for students to become virtuous doctors[6]. Studies in other South Asian countries have realised the need of medical ethics to be part of the undergraduate medical curriculum[7-8]. Doctors are expected to have ingrained attitude and practice of ethics. A study in neighbouring Indian state of Manipur revealed the need to sensitise the doctors on medical ethics[9]. In the developed world, ethical discussions centre on 'micro ethics' like cloning and euthanasia but underdeveloped countries are lagging to deal with the basic questions of ethical professional practice[10]. However, the ethical issues of all nature do exist in our society as well. Science and technology has to be used to protect rather than endanger human dignity, health, well-being and diversity. Incorporating bioethics in medical curriculum contributes to ensure the appropriate use of science and technology in this direction[11].

Studies have revealed that most of the knowledge of biomedical ethics is acquired during the undergraduate training[12]. Ethics teaching has been shown to have a profound influence on medical professionals' attitudes[10,13]. It should be a part of ongoing medical education including residency[12-14]. Effective medical ethics education enhances the goals of medicine in tangible ways[15]. It is important to identify deficiencies of students and/or professionals on ethical issues and arrange sensitization and at times, appropriate training[16-17]. However, implementation of medical ethics curriculum remains ambiguous[18].

Methods: A cross sectional study was carried out using a self-administered structured questionnaire about knowledge, attitude and practice of healthcare ethics among the medical undergraduate interns of Maharajgunj Medical Campus (MMC) – the first medical college of Nepal enrolling 60 students per year. Recently, the number of enrolment has been increased to 75 students per year. The knowledge was assessed on training in medical ethics, existing professional code of conduct and ethical guidelines. Attitude of medical intern students was compiled in terms of informed consent, confidentiality and paternalism. The statements to assess the attitude were optioned in 5 point Likert scale – strongly disagree, disagree, not sure, strongly agree and agree. Similarly, the practice was evaluated with their involvement in informed consent process and encountering ethical dilemmas in medical practice. The questionnaire was pilot tested in 5 interns and necessary revisions were made.

Before the commencement of the study, ethical approval was taken from the Institutional Review Board (IRB) of TU, Institute of Medicine.

Results: Questionnaires were distributed to 55 medical undergraduate interns and out of them 46 (84.6% response rate) returned the filled questionnaires. Among the total participants of this study, almost three-fourth (73.9%) had completed 11 months of their internship.

I. Knowledge

a. Regarding the source of knowledge of medical ethics, naturally there were more than one sources for three-fourth (73.9%) of the participants. The most common source was lectures/seminars (35.7%) followed by experience at work (24.5%), training (21.4%) and own reading (17.3%). One participant mentioned YouTube video as a source of knowledge of medical ethics. Only one participant had attended formal training on ethics.

b. Codes and guidelines: The 'yes' answer to a question – would you say 'you know the main contents of' was as follows:

   i. Hippocratic Oath 98.8%
   ii. Nepal Medical Council (NMC) code of ethics 60.9%
   iii. Nepal Health Research Council (NHRC) ethical guidelines 4.3%

None of the participants knew the main contents of Nuremberg code and Helsinki declarations.

II. Attitude :

a. Importance of ethics – Regarding the importance of ethics in their work, great majority (91.3%) mentioned as very important. The statement that 'Ethical conduct is only important to avoid legal action' was disagreed by 87% while 8.7% were 'not sure'.

b. Autonomy

   i. A statement on autonomy 'Consent required only in case of operations and not for tests and medications' was strongly disagreed by 26.1% and disagreed by 52.2% (Fig-I). Similarly, when asked about the stand on dealing with patients who refuse blood transfusion or operation or treatment; 82.6% were in favour of respecting patient decision while the remaining 17.4% mentioned to find another doctor with their belief. None of the participants were in favour of attempting the procedure forcefully.
   ii. Paternalism – Three different statements were used to assess the paternalistic attitude (Table-1).

c. Justice – Regarding resource mobilization, the statement 'Certain medical practitioners charge more from financially sound patients in order to raise money for treating poor patients', was agreed by about one-fourth (26.1%). A substantial number of participants (30.4%) were in dilemma and answered as 'not sure', while 43.4% disagreed with this statement.

d. Confidentiality–'Confidentiality cannot be kept in modern era and should be abandoned' was strongly disagreed by 34.8% and disagreed by 60.9%. The remaining 4.3% were 'not sure'. None of the participant agreed with this statement.

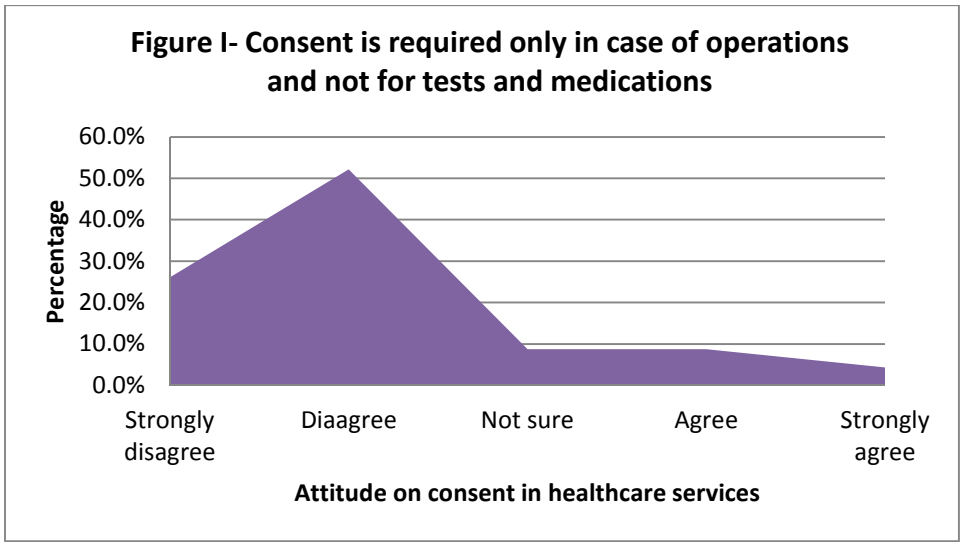
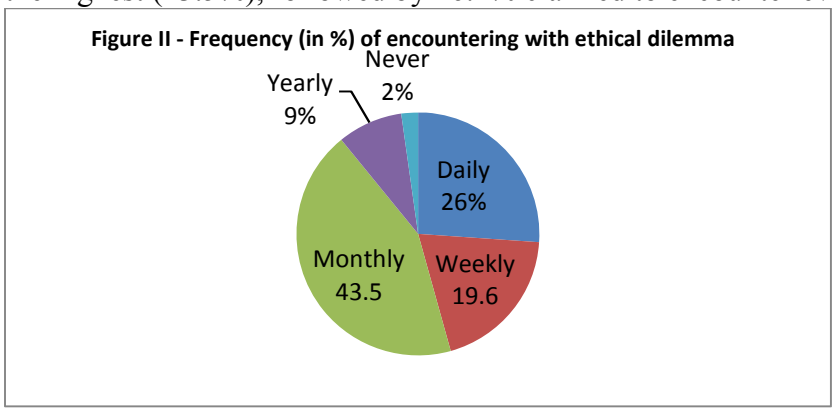


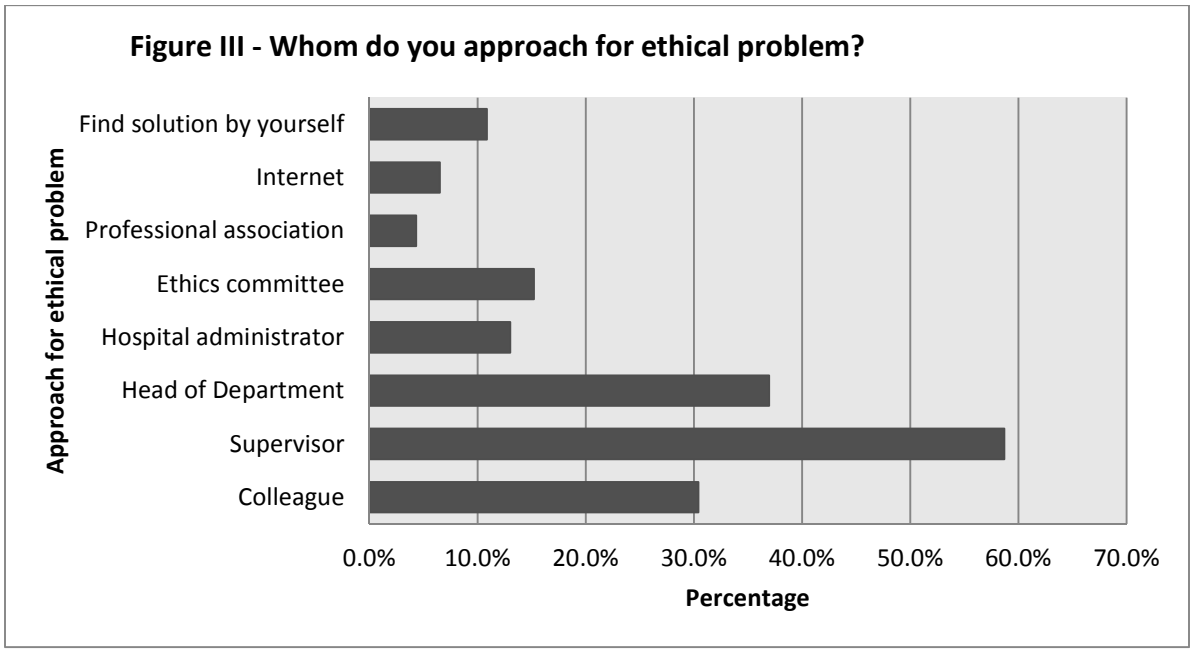
Table 1 – Paternalism (n = 46)

Statement	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
'Doctors know the best irrespective of patients' opinion	2 (4.3%)	16 (34.8%)	10 (21.7%)	16 (34.8%)	2 (4.3%)
'Patient should always be informed of wrong doing'	0 (0.0%)	8 (17.4%)	10 (21.7%)	18 (39.1%)	10 (21.7%)
'Patient wishes should be always adhered'	2 (4.3%)	8 (17.4%)	0 (0.0%)	32 (69.6%)	4 (8.7%)

III. Practice :

a. Frequency of ethical dilemma – Coming across ethical dilemma once in a month was the highest (43.5%), followed by 26.1% claimed to encounter every day (Fig-II).





To deal with the situation, majority claimed to approach immediate supervisor followed by head of the department and colleagues (Fig-III).

b. Research ethics – Big majority (87.0%) of participating interns claimed to be involved in research activities involving human subjects. In this process, 82.6% were involved in taking informed consent – written 47.8% and verbal 34.8%. A small number (6.5%) did not realise the participant's right to withdraw from the study as a part of informed consent.
c. Ethical issue on end-of-life – Only one of the participants had encountered the ethical issue on end-of-life and it was do-not-resuscitate consent in a terminally ill patient.

Discussions: Regarding the source of knowledge of medical ethics, the most common source was lectures/seminars (35.7%) followed by experience at work (24.5%), training (21.4%) and own reading (17.3%). B Shiraz et al reported similar findings in a study among surgical residents and interns in Pakistan[7]. Another study among medical students in India revealed lecture to be the most common (54.7%) source[19].

Ethical codes and guidelines are the basis for acquiring knowledge on the subject. In this study, almost all (98.8%) claimed to know the main contents of' Hippocratic Oath. However, only 60.9% were acquainted with the code of ethics for medical practitioners published by the Nepal Medical Council (NMC). In Karachi, about half of the surgical residents and interns had heard about the Code of Ethics formulated by the Pakistan Medical and Dental Council[7].

Regarding the importance of ethics in their work, great majority (91.3%) mentioned as very important. In a study from Barbados, all physicians and 90% of nursing staff responded that knowledge of ethics is important to their work[16]. The statement that 'Ethical conduct is only important to avoid legal action' was disagreed by 87% while 8.7% were 'not sure'. This was different than the study done on medical students done in India where 37.8% had rather agreed and 18.3% were uncertain[19].

A statement on autonomy 'Consent required only in case of operations and not for tests and medications' was disagreed by 78.3% (strongly disagreed by 26.1% and disagreed by 52.2%). Thus, about one-fifth (21.7%) of the interns either do not feel the need of consent for tests and medications or not sure about the issue. In studies from Barbados, 91% of medical students and 72% of physicians disagreed[16-17].

Sensitivity to cultural diversity need to be reinforced continually starting from the medical student life and continue throughout the professional careers.[20] In this study, when asked about the stand on dealing with patients who refuse blood transfusion or operation or treatment; 82.6% were in favour of respecting patient decision while the remaining 17.4% mentioned to find another doctor with their belief. None of the participants were in favour of attempting the procedure forcefully. The ethical and medicolegal reasoning regarding consent to and/or refusal of treatment is based on the principle of autonomy.[21] Autonomy can be ensured only when the individual comprehends the procedure and the consequences and thus, it is informed consent or informed refusal.

The Hippocratic physician respected a principle of professional responsibility and by tradition, the duty of the patient was to accept the physician's decisions and intervention[22]. Beauchamp and Childress define paternalism as "the intentional overriding of one person's known preferences or actions by another, where the person who overrides justifies the action by the goal of benefiting or avoiding harm to the person whose preferences or actions are overridden" [23]. Paternalistic attitude prevailed in the participants as majority (60.8%) of them either disagreed (39.1%) or were not sure (21.7%) about the statement - "Doctors know the best irrespective of patients' opinion". This may be due to the focus on learning abundant clinical information rather than the ethics. On the other hand, the statement that 'Patient wishes should be always adhered' was agreed by 78.3% revealing the important understanding of autonomy. Such contradiction was observed in Indian study as well[19]. Anyone not adhering to the patient's wishes indicate the lack of knowledge of the basic principles of medical ethics[16].

'Patient should always be informed of wrong doing' was agreed by 60.8% in this study. Studies have shown up to 74.5% of medical students and 79% nurses agree with this statement[16-17]. In relation to mistakes and/or negligence, the explanation for the excessive deference towards health care professionals was the presumption of beneficence to their patients but the medical fraternity should be more open to scrutiny with regards to their decision making[24].
Regarding resource mobilization, the statement 'Certain medical practitioners charge more from financially sound patients in order to raise money for treating poor patients', was agreed by about one-fourth (26.1%). A substantial number of participants (30.4%) were in dilemma and answered as 'not sure', while 43.4% disagreed with this statement. Of course, the issue of justice is not straight forward and probably, because of this, the opinion is fairly distributed throughout the scale. It is important to elucidate the moral dimension of distribution choices through balanced argumentation to come to a decision of healthcare package[25].

None of the participant agreed with this statement - 'Confidentiality cannot be kept in modern era and should be abandoned'. It was disagreed by 95.7% - strongly disagreed by 34.8% and disagreed by 60.9%. The remaining 4.3% were 'not sure' about the issue. Similar studies have revealed the disagreement ranging from 82% to 89%[16-17]. Though electronic medical records pose new

obstacles to maintain confidentiality, physicians have a professional ethical obligation to protect patients' health information and it cannot be abdicated[26]. At times the perception of physician may be inconsistent with the patient's perceptions of how his/her medical information should be treated[27].

Coming across ethical dilemma once in a month was the highest (43.5%), followed by 26.1% claimed to encounter every day. To deal with the situation, majority claimed to approach immediate supervisor followed by head of the department and colleagues. Similar findings have been reported in other studies majority of physicians and medical students reporting to the immediate supervisor[16-17] .Regarding ethical issue on end-of-life, only one of the participants had encountered the ethical issue on end-of-life and it was do-not-resuscitate consent in a terminally ill patient.

Big majority (87.0%) of participating interns claimed to be involved in research activities involving human subjects but only 4.3% knew the main contents of Nepal Health Research Council (NHRC) ethical guidelines. In the research activities, 82.6% were involved in taking informed consent – written 47.8% and verbal 34.8%. A small number (6.5%) did not realise the participant's right to withdraw from the study as a part of informed consent. A signed consent document does not necessarily mean an informed consent and rather it is a process of giving the participant understandable information about the study, providing ample opportunity for the participant to consider all options and alternatives to taking part in the study, ensuring that the participant comprehends the information he or she is given, obtaining the participant's voluntary agreement to take part, and continuing to provide additional pertinent information during and after study completion[28]. None of the participants of this study knew the main contents of Nuremberg code and Helsinki declarations. This is one of the important areas in biomedical ethics which needs priority in medical education.

Limitations: The sample size of this study was limited due to the number of students in the college. It may not represent the national scenario. All the principles of biomedical ethics have not been explored to the same extent. As the sample size was small, no comparisons were planned between the groups and statistical tests were not used.

Conclusions: This baseline study among the medical graduates of the institute serves a basis to identify the areas requiring focus on implementation of the curriculum on medical ethics. Paternalism was evident in the attitude that doctors know the best irrespective of patients' opinion. However, it was better regarding the informing wrong doing and adhering to patient wishes. The principles of biomedical ethics and sensitive ethical dilemmas like end-of-life care deserve attention including deliberation activities of the ethics committees. The results of the study are expected to assist the faculties for upgrading the quality of teaching medical ethics and guiding them for professional conduct.

Conflict of interests: None.

Authors' contributions: RPA conceptualized, designed the study and drafted the manuscript. YLS coordinated data collection and revised the manuscript. Both authors reviewed and approved the final manuscript.

Acknowledgements: The authors are grateful to Dr. Shankar Raj Lamichhane of Nepal Medical Students' Society for his assistance in data collection.

References:

1. Nepal Medical Council. Accreditation Standards for the MBBS (Bachelor of Medicine and Bachelor of Surgery) Degree Program for Institutions Admitting 50 Students Annually. http://www.nmc.org.np/information/accreditation-standards-for-the-mbbs-50-stundents.html. Accessed 15 October 2015.
2. World Health Organization, Regional Office for South-East Asia. Facilitators' Guide for teaching medical ethics to undergraduate students in medical colleges in the South-East Asia Region. 2010.
3. *MBBS Curriculum*. Institute of Medicine, 2009.
4. Mattick K, Bligh J. Undergraduate ethics teaching: revisiting the Consensus Statement. *Med Educ*. 2006 Apr; 40(4):329-32.
5. Ravindran GD. Medical ethics education in India. *Indian J Med Ethics*. 2008 Jan Mar; 5(1):18-9.
6. Gordon M S. Teaching and learning medical ethics and law in UK medical schools. *Clin Ethics* 5(3):156-158.
7. Shirazi B, Shamim MS, Shamim MS, Ahmed A. Medical ethics in surgical wards: knowledge, attitude and practice of surgical team members in Karachi. *Indian J Med Ethics*. 2005 Jul-Sep;2(3):94-6.
8. Zoheb R. Bioethics Teaching and Assessment: My Experience of Three Institutes. *Bangladesh Journal of Bioethics.* 2014; 5(2):44-48.
9. Brogen AS, Rajkumari B, Laishram J, Joy A. Knowledge and attitudes of doctors on medical ethics in a teaching hospital, Manipur. *Indian J Med Ethics.* 2009 Oct-Dec; 6(4):194-7.
10. Elger B S, Harding T W. Terminally ill patients and Jehovah's witnesses: teaching acceptance of patients' refusals to vital treatments. *Med Educ*. 2002; 36:479-488.
11. Selvakumar D, Joseph LB. The importance of including bio-medical ethics in the curriculum of health education institutes. *Educ Health*. 2004 Mar;17(1):93-6.
12. Hernández González A, Rodríguez Núñez A, CambraLasaosa FJ, Quintero Otero S, RamilFraga C, García Palacios MV. Knowledge of health care ethics in paediatric residents. *An Pediatr (Barc)*. 2014 Feb;80(2):106-13.
13. Sulmasy DP, Geller G, Levine DM, Faden RR. A randomized trial of ethics education for medical house officers. *J Med Ethics.* 1993; 19:157-63.
14. McKneally MF, Singer PA. Bioethics for clinicians: 25. Teaching bioethics in the clinical setting. *CMAJ*: 2001; 164(8): 1163-7.
15. Eckles RE, Meslin EM, Gaffney M, Helft PR. Medical ethics education: where are we? Where should we be going? A review. *Acad Med.* 2005 Dec; 80(12):1143-52.
16. 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 Jun 9; 7:E7.
17. Walrond ER, Jonnalagadda R, Hariharan S, Moseley HS. Knowledge, attitudes and practice of medical students at the Cave Hill Campus in relation to ethics and law in healthcare. *West Indian Med J.* 2006 Jan; 55(1):42-7.

18. Rhodes R, Cohen DS. Understanding, being, and doing: medical ethics in medical education. *Camb Q Healthc Ethics*. 2003 Winter; 12(1):39-53.
19. Chatterjee B, Sarkar J. Awareness of medical ethics among undergraduates in a West Bengal medical college. *Indian J Med Ethics*. 2012 Apr-Jun; 9(2):93-100.
20. Ramesh K. Start sensitising medical students. *Indian J Med Ethics* 2007; 4(2):64.
21. Migden DR, Braen GR. The Jehovah's Witness blood refusal card: ethical and medicolegal considerations for emergency physicians. *Acad Emerg Med*. 1998 Aug;5(8):815-24.
22. Mallardi V. The origin of informed consent. *Acta Otorhinolaryngol Ital*. 2005 Oct; 25(5):312-27.
23. Beauchamp TL, Childress JF. *Principles of Biomedical Ethics*. 6th edition, New York: Oxford University Press. 2009.
24. Hartwell M. Medical negligence: Can doctors and nurses still rely on the doctrine that they know best? *Leg Med*. 2005 Oct;7(5):293-8.
25. Leget C, Hoedemaekers R. Teaching medical students about fair distribution of healthcare resources. *J Med Ethics*. 2007 Dec; 33(12):737-41.
26. Black L, Anderson EE. Physicians, patients and confidentiality: the role of physicians in electronic health records. *Am J Bioeth*. 2007 Mar; 7(3):50-1.
27. Petronio S, Dicorcia MJ, Duggan A. Navigating ethics of physician-patient confidentiality: a communication privacy management analysis. *Perm J*. 2012 Fall; 16(4):41-5.
28. Raich PC, Plomer KD, Coyne CA. Literacy, comprehension, and informed consent in clinical research. *Cancer Invest*. 2001; 19(4):437-45.