



PERCEPTION OF DOCTOR-PATIENT CONFIDENTIALITY AMONG CLINICAL YEAR MEDICAL STUDENTS IN MALAYSIA

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ABSTRACT

Doctor-patient confidentiality refers to a private and protected communication between a doctor and a patient. Doctor patient confidentiality is a cornerstone of the ethical code; however, medical practitioners are not always aware of its importance, limitations and drawbacks. The purpose of this cross-sectional study was to determine the perception of doctor-patient confidentiality and its associated factors among clinical year medical students. The data were collected from a total of 102 students of private medical school in Malaysia. We calculated unpaired t-test and one-way ANOVA. Our study showed the positive perception among clinical year medical undergraduates. There were no significant association between demographic variables, ethic course attended and perception of medical students towards doctor-patient confidentiality. In order to further enhance students' understanding towards doctor-patient confidentiality, medical school should strengthen the curriculum incorporating principles and code of clinical as well as medical ethic during their clinical postings. With a good knowledge of doctor-patient confidentiality, the healthcare system will be better and a good communication between doctors and patients could be created.

KEYWORDS: Confidentiality, patient, privacy, medical student.

INTRODUCTION

Confidentiality refers to the information or data about people that should not be shared without their permission or authorization.^[1] This notion can alternatively be explained as one of the people's basic needs, a universal value, privacy rights and also a feature of private life.^[2] Doctor patient confidentiality is a cornerstone of the ethical code. However, medical practitioners are not always aware of its limitations and on the other hand, they are not aware of its drawbacks too. When there is an underlying ethical or legal commitment, this may lead to breaches or promote upholding it.^[3]

Since ancient times, when ethical commitments were codified in the form of oaths, such as Hippocrates famous Oath, medical ethics have been of enormous relevance in healthcare provision. Many of the concepts advocated in this oath are still applicable today, including as the principle of "no harm" and the need to protect secrecy, while modern bioethics has shifted.^[4] Medical secrecy assures that the doctor who is treating the patient has to make sure not to reveal the patient's information to anybody without their permission, including the patient's relative to enhance patient's care

by encouraging trust and an approachable relationship between the doctor and not to forget the presence of ethical and legal constraints for confidentiality.^[5]

Legal restrictions differ slightly by country, but ethical restrictions should be dictated by universal medical principles. For example, when there is a strong likelihood that patients would injure themselves or others, resulting that the only way is to break the confidentiality, a breach is permissible. Even in such cases, breaches of confidentiality are permitted only to a necessary amount and to be shared only within appropriate subjects.^[6] Discussions of private information regarding patients are done in public spaces or open areas in the hospitals where they might readily be overheard by someone or even as a doctor to be sharing to your close ones at home are some of the most common yet clearly unacceptable violations.^[7] All in all, doctor patient confidentiality is important just to gain the trust of the patient towards the doctor and for patients to disclose their health information to doctors with better interactions adding up to higher quality health visits.^[8]

Most physicians viewed the doctor–patient relationship as more than just a "commercial transaction," with reciprocal trust and understanding. Other than that, it is a matter of individual interdependence between a doctor and their patients.^[8] A study in Turkey shows that doctors have a hard time protecting the patient confidentiality in situations such as working at emergency department (ER). It is less likely to maintain the confidentiality because doctors will be having close collaboration with their nurses, carers, technical personnel, and physicians from different departments.^[9] Previous study in Switzerland showed that medical practitioners with less experience misunderstood doctor–patient confidentiality as many of them were not able to identify violation or breach of patient confidentiality.^[7]

Studies showed that medical students are having a limited level of awareness towards patient confidentiality,^[10,11,21] however, medical students who were exposed to Medical Ethic Code and Hippocratic Oath acquire more knowledge about doctor-patient confidentiality than others.^[12] Therefore, awareness of doctor-patient confidentiality should be raised among medical students as they are the future doctors. This is to ensure a more trustworthy doctor-patient confidentiality.

Previous studies showed that ethics courses, years of professional experience and gender were associated with the level of awareness towards patients' confidentiality. Ethics courses such as theoretical health law education received during medical school is having a positive association with maintaining patients' confidentiality. However, the level of knowledge which corresponds with years of practical training has a more significant association with the level of awareness towards patients' confidentiality.^[2,11,12,18] Moreover, healthcare institutions and universities also play an important role in protecting clinical documentation by practicing control procedure on clinical documents and promote theoretical training based on the level of awareness towards doctor-patient confidentiality among the students.^[14]

The knowledge, perception and opinion towards doctor-patient confidentiality and patient's right to privacy has been studied among health professionals, health works, doctors, nurses, and medical students in many countries such as Japan, Turkey, Korea, Pakistan, Brazil, Spain, India, United States and Ghana.^[8,12,14-20] In Malaysia, there is limited knowledge about the doctor-patient confidentiality from the physician's and medical student's perspective. Therefore, this study was aimed to fill this research gap. The objective of our study was to determine perception towards patient privacy and doctor-patient confidentiality among clinical year medical students in private medical school in Malaysia. We also aimed to find out the association between sociodemographic factors, academic year, family factors, ethics course attended, and perception towards patient privacy among clinical year medical undergraduates.

MATERIALS AND METHODS

Study design, place and population

A cross-sectional was done at private medical university, Manipal University College Malaysia (MUCM) in Malaysia from January to February 2022. The university offers three courses which are Bachelor of Medicine and Bachelor of Surgery (MBBS), Bachelor of Dentistry (BDS) and Foundation in Science (FiS). There are two campuses; one is located in Muar, Johor State and one is located in Melaka State in Malaysia. There were approximately 1000 students attending MBBS programme. The estimated total number of clinical year students was 500.

Sample size and sampling

We used Epi info software version 7.2.4 to calculate the sample size. We used the expected frequency of 88.2% (the medical student considered that violation has been committed by the doctor in aspect of doctor patient confidentiality),^[10] population size of 500, confidence limit of 95%, and the margin of error 6%. The minimum sample size needed was 86. We allowed non-response rate of 20%, and final sample size required was 108. We employed non-probability purposive sampling. Clinical year medical students of both Melaka and Muar campus of the university were eligible to participate in this study. We included the medical students who were willing to participate in this study, who provided written informed consent and those who completed all required sessions of the given questionnaire. Pre-clinical year students of MBBS programme, dentistry students and the students who were attending foundation programme were excluded.

Data collection

The data were collected by the distribution of questionnaires via social media such as whatsapp, instagram, facebook, etc. The questionnaire consisted of three sections. The first section included the information sheet and written informed consent form. The second section consisted the sociodemographic data such as the participant's age, gender, ethnicity, religion, marital status, academic year, parents' educational level and occupation, siblings' educational level and occupation, and ethics course attended. The third section consists of the questionnaire "Opinion of the Healthcare Professionals on Patient Privacy" to assess the participants' perception towards the patient's privacy and doctor-patient confidentiality. The questionnaire was taken from a previous study and permission was granted from the study authors. We modified the few items in the questionnaire accordingly to better suit our student population,^[2] and the content validity of the questionnaire was checked with the experts. The questionnaire includes 22 Likert-type items. For each item, points were assigned to be strongly agree (5), agree (4), neutral (3), disagree (2), and strongly disagree (1). We calculated the mean scale score and higher score indicated higher the respect for patient privacy. We checked the internal consistency of the scale by

calculating Cronbach's alpha coefficient. The Cronbach's alpha coefficient of the scale was 0.974.

Data analysis

The data collected were entered into Microsoft Excel and the compiled data were statistically analyzed using Epi Info version 7.2.5.0. In this study, the independent variables were gender, ethnicity, religion, marital status, academic year, ethic courses attended, parents' education level and occupation, and sibling's educational level and occupation. Descriptive statistics such as frequency and percentage were calculated for the categorical variables gender, ethnicity, religion, marital status, ethic courses attended, parents' education level and occupation, and sibling's educational level and occupation. Mean and standard deviation were also calculated for quantitative variables such as age and perception. We calculated independent t-test and one-way ANOVA to determine the association between demographic variables and perception of doctor-patient confidentiality. P value <0.05 was considered statistically significant.

Ethical statement

The participants were given information sheet and informed consent form that included all of the study's crucial and pertinent details. Also, the participants were given a complete discretion over whether or not to take part in the study. Participants were not pressured or forced to participate in this study nor were they offered any incentives to encourage them to do so. Any information submitted by the participants would be kept strictly and totally confidential and used solely for the purposes of this study. The participants' confidentiality was protected at all times. Lastly, this study was approved by Research Ethics Committee of the Faculty of Medicine, Manipal University College Malaysia (RP044/2022).

RESULTS

Table 1 shows the demographic characteristics among clinical year medical students. A total number of 102 responses were received out of 108 clinical year medical students from the online questionnaire (response rate of 94.4%). Among the participants, 34.31% were males and the remainder of 65.69% were females. With regards to ethnicity, 6.86% of the respondents were Malays, 36.27% were Chinese, 41.18% were Indians and the remaining 15.69% were other ethnicities. 91.18% of the respondents were from fourth-year while only 8.82% were from fifth-year of MBBS programme. Regarding parent's and sibling's occupation, 11.76%, 13.73% and 26.83% of the students had father, mother and sibling who worked as healthcare personnel respectively. Among the students, 44.12% had every attended medical ethics courses.

Table 2 shows the Perception of doctor-patient confidentiality of clinical year medical students.

Table 3 shows the mean score of the perception towards doctor-patient confidentiality of clinical year medical students was 4.11 indicating positive perception.

Table 4 shows the association between sociodemographic characteristic and perception towards doctor-patient confidentiality. There was no statistically significant relationship between sociodemographic characteristics and perception towards doctor-patient confidentiality among the students ($P>0.05$).

Table 1: Sociodemographic characteristic of the participants (n=102).

Variables	Frequency (%)
Academic year	
Fourth-year	93 (91.18%)
Fifth-year	9 (8.82%)
Age	
< 22	17 (16.67%)
≥ 22	85 (83.33%)
Mean (SD)	22.5 (1.18)
Gender	
Male	35 (34.31%)
Female	67 (65.69%)
Ethnicity	
Malay	7 (6.86%)
Chinese	37 (36.27%)
Indian	42 (41.18%)
Others	16 (15.69%)
Father's occupation	
Healthcare profession	12 (11.76%)
Non healthcare profession	90 (88.24%)
Mother's occupation	
Healthcare profession	14 (13.73%)
Non healthcare profession	88 (86.27%)
Father's education	
Primary school	6 (5.88%)
Secondary school	39 (38.24%)
Undergraduate	37 (36.27%)
Postgraduate	20 (19.61%)
Mother's education	
Primary school	5 (4.90%)
Secondary school	45 (44.12%)
Undergraduate	39 (38.24%)
Postgraduate	13 (12.75%)
Siblings	
Yes	42 (41.18%)
No	60 (58.82%)
Sibling's education (n=42)	
Primary school	0 (0%)
Secondary school	4 (9.52%)
Undergraduate	34 (80.95%)
Postgraduate	4 (9.52%)
Sibling's occupation (n=41)	
Healthcare profession	11 (26.83%)
Non healthcare profession	30 (73.17%)
Ethic course attended	
Yes	45 (44.12%)
No	57 (55.88%)

Table 2: Perception of doctor-patient confidentiality of clinical year medical students (n=102).

No.	Statement	Frequency (%)					Mean
		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	
1.	Protecting privacy and observing this in the work environment are important for me.	67 (65.69%)	25 (24.51%)	6 (5.88%)	1 (0.98%)	3 (2.94%)	4.49
2.	I will approach with due care to protect privacy in the work environment.	66 (64.71%)	25 (24.51%)	7 (6.86%)	0 (0%)	4 (3.92%)	4.46
3.	I will pay attention that in the work environment, patients' personal data are not overheard by people other than healthcare professionals.	62 (60.78%)	28 (27.45%)	5 (4.90%)	3 (2.94%)	4 (3.92%)	4.38
4.	I feel uncomfortable when I hear a conversation between patient and his/her doctor (example, consultation about STD).	24 (23.53%)	25 (24.51%)	31 (30.39%)	10 (9.80%)	12 (11.76%)	3.38
5.	Patient's trust in the doctor/nurse is harmed when they share information about the patient's private life, with other people.	55 (53.92%)	27 (26.47%)	12 (11.76%)	4 (3.92%)	4 (3.92%)	4.23
6.	It is important that the patient's body is not seen by other patients and professionals during the treatment.	48 (47.06%)	30 (29.41%)	14 (13.73%)	4 (3.92%)	6 (5.88%)	4.08
7.	I feel uncomfortable when patient's body or certain parts of his/her body are seen.	23 (22.55%)	25 (24.51%)	21 (20.59%)	14 (13.73%)	19 (18.63%)	3.19
8.	During the physical treatment, parts of the body other than the treated part should be covered or concealed with proper clothes.	63 (61.76%)	22 (21.57%)	8 (7.84%)	3 (2.94%)	6 (5.88%)	4.30
9.	During the examination, treatment and care, all healthcare professionals should be careful about the protection of patient privacy.	68 (66.67%)	18 (17.65%)	8 (7.84%)	3 (2.94%)	5 (4.90%)	4.38
10.	Mortality does not legitimize breach of privacy.	37 (36.27%)	26 (25.49%)	27 (26.47%)	6 (5.88%)	6 (5.88%)	3.80
11.	Right to privacy is a right with a legal aspect.	55 (53.92%)	29 (28.43%)	10 (9.80%)	4 (3.92%)	4 (3.92%)	4.25
12.	Privacy is related to the human rights.	61 (59.80%)	25 (24.51%)	8 (7.84%)	1 (0.98%)	7 (6.86%)	4.29
13.	Privacy cannot be protected only through	44 (43.14%)	24 (23.53%)	20 (19.61%)	9 (8.82%)	5 (4.90%)	3.91

	legal arrangements.						
14.	Protection of privacy ensures balance in the interpersonal relations.	55 (53.92%)	28 (27.45%)	11 (10.78%)	2 (1.96%)	6 (5.88%)	4.22
15.	During the transfer of patients within the hospital, his/her privacy should not be breached.	58 (56.86%)	28 (27.45%)	8 (7.84%)	1 (0.98%)	7 (6.86%)	4.26
16.	Those not directly related with the patient's treatment should not accompany the patient during the medical intervention.	32 (31.37%)	31 (30.39%)	25 (24.51%)	8 (7.84%)	6 (5.88%)	3.74
17.	Paying attention to patient privacy enhances patient's satisfaction.	56 (54.90%)	30 (29.41%)	8 (7.84%)	2 (1.96%)	6 (5.88%)	4.25
18.	Relation between the healthcare personnel and the patient is based on trust.	56 (54.90%)	32 (31.37%)	5 (4.90%)	3 (2.94%)	6 (5.88%)	4.26
19.	Treatment and care can never be a justification for the breach of privacy.	44 (43.14%)	30 (29.41%)	17 (16.67%)	6 (5.88%)	5 (4.90%)	4.00
20.	Health care professional should not be disturbed when the patient cared is of different gender.	50 (49.02%)	29 (28.43%)	12 (11.76%)	3 (2.94%)	8 (7.84%)	4.08
21.	Protection of patient privacy is so important that it cannot be left to sensitivity of the healthcare professional about the issue.	51 (50.55%)	30 (29.41%)	11 (10.78%)	5 (4.90%)	5 (4.90%)	4.15
22.	Healthcare personnel is obliged to protect patient privacy.	62 (60.78%)	24 (23.53%)	8 (7.84%)	2 (1.96%)	6 (5.88%)	4.31

Table 3: Descriptive statistics of perception of doctor-patient confidentiality of clinical year medical students (n=102).

Dependent variable	n (%)
Perception of doctor-patient confidentiality	
Mean (SD)	4.11 (0.90)
Minimum - Maximum	1-5

Table 4: Association between sociodemographic characteristic and perception towards doctor-patient confidentiality.

Independent variables	Perception score Mean (SD)	Mean difference (95% CI)	P value
Gender			
Male	3.88 (1.00)	0.36 (-0.01, 0.73)	0.058
Female	4.23 (0.83)		
Ethnicity			
Malay	4.01 (0.86)	-	0.530
Chinese	4.00 (0.90)		
Indian	4.12 (0.90)		
Others	4.39 (0.95)		
Clinical years (Semester)			

Fourth-year	4.12 (0.93)	0.08 (-0.55, 0.71)	0.797
Fifth-year	4.04 (0.58)		
Parents' occupation			
Father's occupation			
Health Care Profession	4.14 (1.07)	0.05 (-0.51, 0.60)	0.867
Non- Health Care Profession	4.10 (0.89)		
Mother's occupation			
Health Care Profession	4.04 (1.06)	-0.08 (-0.60, 0.44)	0.753
Non- Health Care Profession	4.12 (0.88)		
Parents' education			
Father's education			
Primary / Secondary school graduate	3.95 (1.06)	-0.29 (-0.66, 0.78)	0.120
Graduate / Post graduate	4.24 (0.74)		
Mother's education			
Primary / Secondary school graduate	4.02 (1.03)	-0.18 (-0.54, 0.18)	0.315
Graduate / Post graduate	4.20 (0.76)		
Sibling's Education			
Primary / Secondary school graduate	4.22 (0.38)	0.99 (-0.78, 0.98)	0.822
Graduate / Post graduate	4.12 (0.85)		
Sibling's Occupation			
Healthcare professional	4.48 (0.47)	0.51 (-0.06, 1.07)	0.078
Non- healthcare professional	3.97 (0.88)		
Ethic course attended			
Yes	4.28 (0.78)	-0.30 (-0.66, 0.05)	0.092
No	3.98 (0.98)		

DISCUSSION

We conducted this study to investigate the perception of doctor-patient confidentiality and its associated factors among clinical year undergraduate medical students of private medical university in Malaysia. Our study showed that the clinical year medical students had positive perception towards doctor-patient confidentiality. Moreover, most of our students had agreed or strongly agreed regarding the statements on protecting privacy in patient's care, and responsibility in sharing information and data protection. Previous study done among doctors and nurses in Turkey showed that majority of the participants were aware of patient's right to privacy and supported that it is essential to have respect for patient privacy and confidentiality.^[2] However, many of the medical students from Iran University of Medical Sciences answered incorrectly about confidentiality and disclosure of patient's information while only few students answered correctly regarding patient illness to be discussed among health professionals without breaking their privacy and confidentiality.^[11]

In our study, there were no statistically significant association between gender, ethnicity, academic year, parents' education, parents' occupation, sibling's education, sibling's occupation, ethic course attended and perception of medical students toward doctor-patient confidentiality. On contrary to our findings, previous survey done among doctors and nurses in Eskisehir Osmangazi University Hospital, Turkey showed the significant association between gender, the title of doctors, years of professional experience and perception

of patient's privacy. In this study, doctors and nurses who are male, specialist doctors, with professional experience of 21 years and above had a better perception of patient's privacy.^[2] Besides, a study carried out among medical students in 10 Spanish medical schools showed the significant association between academic year, gender, parents' educational level and knowledge of patient's privacy as clinical year students. The authors stated that female students and the students whose parents were college-graduated had better knowledge and perception of patient's privacy.^[18] Moreover, a study done among physicians in Geneva, Switzerland showed significant association between ethic courses attend, practical training, gender and attitude towards medical confidentiality. In this study, physicians who had theoretical health law education, hospital experience, female physicians defended confidentiality more strongly.^[13] Furthermore, a study among medical students of Iran University of Medical Science showed that female students had significantly better awareness and attitude towards patient's privacy compared to male students.^[11] Another study in Korea about nurses' and patients' perception of privacy protection behaviours and information provision showed significant association between level of education, nursing position and privacy protection behaviours. The study showed that nurses who had a higher educational level and had a charge nurse or higher position attributed greater importance to privacy protection behaviours.^[22]

As attitude towards medical ethic is the fundamental part for doctor-patient confidentiality, a study about knowledge and attitude towards medical ethics had been

done among undergraduate students in private medical college of Malaysia. The study showed the significant association between academic years and attitude towards medical ethic which included respect and confidentiality. Among clinical year students, Year-3 and Year-5 medical students had better attitude towards medical ethic. However, there were no significant association between socio-demographic characteristic such as gender, ethnicity, nationality, scholarship status and attitude towards medical ethics and doctor-patient confidentiality.^[21]

To the best of our knowledge, the information about perception of doctor patient confidentiality among clinical year medical students in Malaysia is limited. Our study revealed that most of the undergraduate medical students were aware of medical ethics, confidentiality and medicolegal issues, and they had positive perception about it. It was observed that majority of the students stated their positive opinions on the notion of privacy, as being confidentiality on all kinds of information concerning the patient.

During the course of this study, we encountered a few limitations. As our study was conducted only in one medical school, the generalisability of the findings to other settings is limited. Due to time limitation, we were not able to reach most of the final year students as only 8.82% of them participated. Hence, selection bias might be occurred in our study. As our study was a cross sectional study and therefore, we were not able to neither focus on any changes over time nor inference of causality.

Doctor patient confidentiality is vital to gain the trust of patients and to make them feel comfortable with their doctors by disclosing their health information and particulars freely without hesitations. In order to improve perception of doctor patient confidentiality among medical students, we recommended the medical ethic seminar and workshops, and case discussion related to this issue should be done during clinical postings. It is found that when medical ethics and professionalism are included in curricula, it helps medical students to comprehend the importance of medical ethics. Moreover, students should be reinforced to learn about medical ethics from a variety of sources throughout the undergraduate medical curriculum. Last but not least, preclinical students should also be sensitized.

As our study included only clinical year students, future research can be carried out in other medical institutions in order to get a result that able to represent the medical student's population in Malaysia. Moreover, qualitative study should be done to explore the student's opinion on breaching confidentiality and patient's privacy in clinical settings. Not only the physician's opinion and perception about patient's privacy and confidentiality, but also other allied health professionals' perception should be studied.

CONCLUSION

There was a positive perception towards doctor-patient confidentiality among clinical year medical undergraduates. Most of the students had agreed or strongly agreed regarding the statements on protecting privacy in patient's care, and responsibility in sharing information and data protection. Most of the undergraduate medical students were aware of medical ethics, confidentiality and medicolegal issues. There were no significant associations between gender, ethnicity, academic years, parents' education, parents' occupation, sibling's education, sibling's occupation, ethic course attended and perception of medical students towards doctor-patient confidentiality. In order to further enhance students' understanding towards doctor-patient confidentiality, colleges or any other institute of medical education should play a role in enhancing knowledge of doctor-patient confidentiality towards medical students by conducting workshops, seminar and talk, and case-based discussion related to medical ethics and patient privacy and confidentiality.

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