

Bioethics Education in the Medical Programme among Malaysian Medical Schools: Where Are We Now?

Joong Hiong Sim¹ , Olivia Miu Yung Ngan^{2,3} and Ho Keung Ng²

¹Medical Education & Research Development Unit, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia. ²Office of Medical Education, Faculty of Medicine, The Chinese University of Hong Kong, Hong Kong SAR, China. ³CUHK Centre for Bioethics, Faculty of Medicine, The Chinese University of Hong Kong, Hong Kong SAR, China.

Journal of Medical Education and Curricular Development
Volume 6: 1–9
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DOI: 10.1177/2382120519883887



ABSTRACT

INTRODUCTION: A global trend in medical education is the inclusion of bioethics teaching in medical programme. The objective of this article is to describe the current state of bioethics education in the medical programme among Malaysian medical schools.

METHOD: A national survey was conducted among Malaysian medical schools between January and March 2019. One representative from each medical school was invited to respond to the survey. Respondents were faculty members involved in teaching and assessment of bioethics in their medical schools, or/and in developing and coordinating bioethics curriculum. Descriptive statistics were reported.

FINDINGS: Out of 30 medical schools, 11 completed and returned the survey (overall response rate = 36.7%). Of these 11 schools, 6/10 (60%) were from public institutions while 5/20 (25%) were from private institutions. All except 1 school implemented a formal bioethics curriculum. A wide range of bioethics topics are currently taught in the medical programme. The majority involved in teaching bioethics were health care professionals (mainly clinicians), followed by lawyers. Lecture and attendance, respectively, are the most common teaching and assessment method. Major barriers to the implementation of bioethics education included limited qualified teaching staff (6/11 = 54.5%), no established curriculum to follow (5/11 = 45.5%), limited financial resources to hire qualified staff (4/11 = 36.4%), and no consensus among faculty members (4/11 = 36.4%).

CONCLUSION: Bioethics education in Malaysia is relatively new and mostly limited by a shortage of scholars in bioethics. National support and institutional collaboration in providing bioethics training is the key to enhance the quality of bioethics education.

KEYWORDS: Bioethics education, medical programme, medical schools, Malaysia

RECEIVED: August 22, 2019. **ACCEPTED:** September 27, 2019.

TYPE: Original Research

FUNDING: The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This research was funded by the Association of Commonwealth Universities (ACU) Fellowship Grant through the International Funding (Grant no: IF036-2018).

DECLARATION OF CONFLICTING INTERESTS: The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

CORRESPONDING AUTHOR: Joong Hiong Sim, Medical Education & Research Development Unit, Faculty of Medicine, University of Malaya, 50603 Kuala Lumpur, Malaysia. Email: simjhjp@um.edu.my

Introduction

Bioethics, broadly include medical ethics and health care ethics, emerged in the 1960s, when an unprecedented process of science and technology development took place.¹ The impact of science breakthroughs brought positive changes to medicine and also give rise to ethical dilemmas. An acquaintance of knowledge in bioethics is essential, as health care providers possess a duty to maintain professional competence and deliver a standard of care to patients.² A global trend in medical education is the inclusion of bioethics teaching in the required curriculum of medical schools.³ In the United Kingdom, the General Medical Council (GMC) requires medical graduates to behave according to legal standards and comply with GMC's clinical and ethical guidelines. In the United States of America, the Association of American Medical Colleges (AAMC), similarly anticipates and requires graduates to demonstrate professionally and ethically in clinical practice.⁴ To execute these requirements, the AAMC⁴ and GMC² impose on medical schools to implement bioethics education.

The importance of bioethics education is recognised and integrated among Western countries, and there is much

research from the United States of America and other Western developed countries in the past 2 decades.^{5–7} Among countries in the Asia-Pacific region, bioethics education in the medical programme does not begin to emerge in the recent decade. How bioethics is taught in medical education is little known and greatly varies by country. In Japan, 60.8% of medical schools offer bioethics training in the first year of the programme, but only 11.4% of schools offer in the clinical year.⁸ In China, most medical schools provide bioethics courses intermittently with varying teaching hours and placed different emphasis on teaching topics.⁹ In India, bioethics is delivered sporadically during the entire medical curriculum or remained unimplemented in some medical schools.¹⁰ In Southeast Asia region, other countries such as Pakistan,¹¹ India,¹² and Indonesia,¹³ only a handful of institutions impart bioethics in the medical education, whereas some are not yet prepared to commit to bioethics teaching in the curriculum.

Malaysia is a unique country signified by the rich multiracial, multicultural, and multireligious populations.¹⁴ The teaching pedagogy, content topics, and assessment method applied to the Western settings cannot be generalised to the pluralistic



non-Western developing countries. To date, there are Malaysian studies related to bioethics but most narrowly focused on specific topics such as euthanasia^{15,16} and end-of-life care¹⁷ rather than bioethics education. It is unclear how bioethics is taught in the Asia-Pacific region despite its importance. The lack of literature calls for momentum to gather empirical data on bioethics education in the medical programmes among medical schools. The objective of this article is to describe the current state of bioethics education in the medical programme among Malaysian medical schools.

Methodology

Study design

A national anonymous cross-sectional survey was conducted among all 30 medical schools in Malaysia between January and March 2019. The study was approved by the Institutional Research Ethics Committee (Ref: UM.TNC2/UMREC - 445). Informed consent was obtained from all participants.

Sampling and recruitment of respondents

One representative from each medical school was invited to complete the survey. Inclusion criteria of respondents were as follows: (1) faculty members involved in bioethics teaching and assessment in the medical schools, or/and (2) involved in developing and coordinating bioethics curriculum in their medical schools. Eligible respondents were identified during the 7th Malaysian Medical Educators' Network Meeting in December 2018. Email address and telephone contact of eligible respondents were provided by representatives from the respective medical schools. For medical schools with no representative in the meeting, emails were sent to Deans of the medical schools to help identify the relevant respondents.

Data collection and data analysis

The 30 medical schools in Malaysia are located over a vast region, covering 13 states and 3 federal territories. Due to geographical constraints, eligible respondents were invited via emails, with a link to the survey questionnaire. The questionnaire was administered online, and a hard-copy of the questionnaire could be made available upon request. Two weeks after the first invitation email, another email was sent to nonrespondents individually, as a gentle reminder to complete the questionnaire. A second and final reminder was sent a week later.

Study instrument

A survey questionnaire developed after the discussion at the first meeting of the Asia Pacific Bioethics Education Network (APBEN) in 2018, was used to collect data for this study. The questionnaire contains both closed-ended and open-ended questions in 5 sections: (1) information of medical programme; (2) course structure and content; (3) capacity of teaching staff;

(4) teaching and assessment methods, and (5) barriers to implementation of bioethics education.

Findings and Discussion

To enhance readability, the main findings are summarised and presented as charts (Figures 1 to 5). Due to the small sample size, only descriptive statistics are presented and discussed.

Demographics of survey respondents

Of the 30 medical schools accredited by the Malaysian Medical Council (MMC), 10 are from public institutions and 20 are from private institutions. In Malaysia, medical schools from public institutions are funded by the government. Medical schools from private institutions are either established locally or having twinning programmes with partner universities abroad or foreign universities with off-shore campuses in Malaysia. Most of the medical schools in Malaysia are relatively new. Only 12 of the schools (40%) had been established for more than 10 years. The remaining 18 schools (60%) were set up in 2010 or later.

There were 17 returned responses, of which 5 incomplete responses and 1 repeat response were then excluded. The final sample consists of 11 medical schools, with an overall response rate of 36.7%. Of these 11 schools, 6 (6/11=54.5%) were from public institutions and 5 (5/11=45.5%) were from private institutions. The responding schools have a history ranging from 5 to 55 years, with a median of 12 years, providing a good representation from both small and large, as well as conventional and newly established medical schools. The student intake size varies by medical schools ranged between 50 and 200 with a median of 80.

Overview of bioethics education

All, except for 1 medical school (10/11=90.9%), have a formal bioethics education in the medical programme with 5 to 15 years of experience and a median of 8 years. Of the 11 schools, 9 (9/11=81.8%) implemented bioethics education when they started the medical programme.

Two schools (2/11=18.2%) taught bioethics as an independent course only, that is a course with its course name and course code. Five (5/11=45.5%) taught bioethics as an independent course and integrated curriculum throughout medical education. The remaining 4 schools (4/11=36.4%) taught bioethics as a subtopic alongside with other courses. The medical school without a formal course taught ethics as part of personal and professional development module. All medical schools imposed the course as mandatory for all medical students. Apart from the medical programme, 7 medical schools (7/11=63.6%) offered bioethics to students from other programmes such as Nursing, Biomedical Sciences, Pharmacy, Traditional Chinese Medicine, and Paramedical. Most of the medical schools (7/11=63.6%) offered bioethics courses throughout the entire medical programme in both preclinical

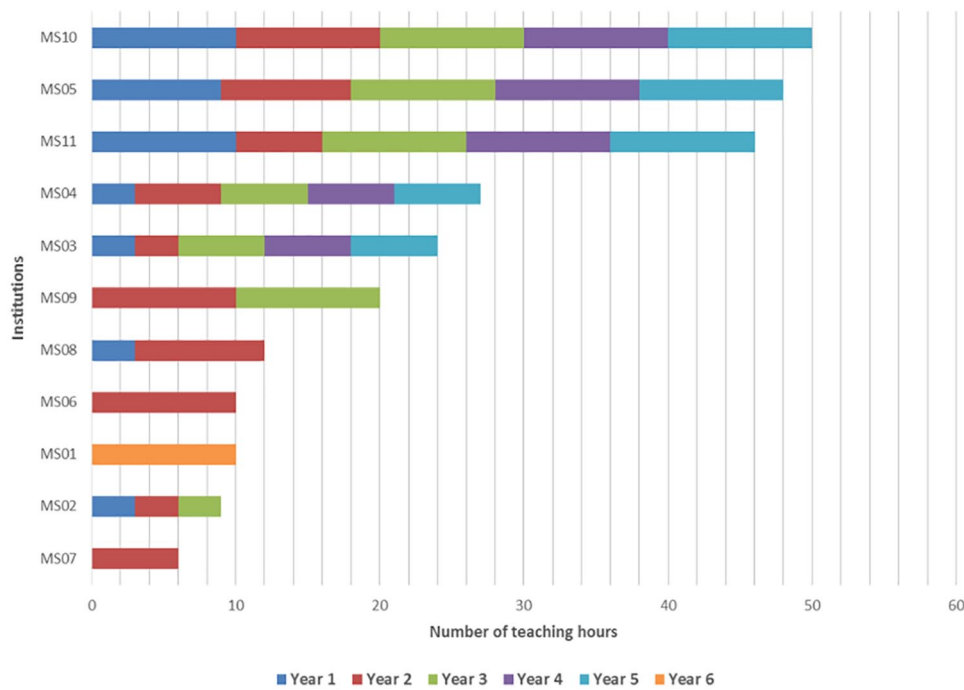


Figure 1. Number of teaching hours for bioethics course by year.

and clinical years. Three schools offered the courses during the preclinical years, whereas 1 school only offers during the clinical years.

The majority (8/11 = 72.7%) delegated the Medical Education Unit (MEU) to oversee the bioethics curriculum while others (3/11 = 27.3%) have Medical Ethics & Law Unit, Community Medicine Department, or Faculty of Medicine managing the curriculum. As bioethics is a multidisciplinary subject, the MEU works closely with other departments in particular clinical departments, law faculty, and other institutions for the development and teaching of bioethics.

Compared to Western developed countries with decades of experience,^{18,19} bioethics in medical education is relatively new in Malaysia and not yet fully implemented in all medical schools. In the United States of America, bioethics courses were introduced in the 1970s and primarily offered as an elective course. After almost 50 years, by 2019, bioethics received more attention and only a few institutions did not include bioethics teaching in medical education.¹ In the United Kingdom, the remit of bioethics in medical schools was not recognised until the 1980s.²⁰ The GMC has made an utmost effort emphasising and implementing the teaching of bioethics to UK medical schools.^{21,22} Malaysian Medical Council recognises the essence of bioethics and communication skills training in clinical practice but is yet to make any recommendation how bioethics shall be embedded in the medical curriculum.²³

Teaching hours

Figure 1 shows the number of teaching hours by year for each medical school. Students' exposure to bioethics varies between 6 to 50 hours, with a mean and median of 23.8 and 20 hours,

respectively. The majority (6/11 = 54.5%) have at least 20 hours dedicated to the teaching of bioethics, followed by less than 15 hours (3/11 = 27.3%), and less than 10 hours (2/11 = 18.2%). Despite the wide variation in teaching hours, all respondents perceived that the current teaching time allocated for bioethics education as just right and appropriate at the respective institution. This reflects institutional perceived challenges in fitting bioethics into the already crowded medical curriculum. We extrapolate that irregular offering of bioethics courses could be due to limited qualified teaching staff, and no established guideline to follow, as we reported later this in the article.

The inconsistent course structure and teaching hours allotted to the courses implies that the development of bioethics education is still in its early stage in Malaysia, where medical education is still exploring the new field and experimenting with new approaches within institutional capacity. The discrepancies observed in Malaysia are similar to other countries, such as there was no uniformity across medical schools regarding the appropriate/optimum number of teaching hours for bioethics. In the United States of America, medical schools devoted between 5 to 200 hours in bioethics education, with a median of 28 hours.⁵ In the United Kingdom, medical schools allocated 38 hours on average, ranging from 27 to 55 hours.²⁴ The penetration of bioethics education in developing countries are also scarcely observed. In Iran, some medical schools offered bioethics as a distinct, one-off workshop rather than an independent course.²⁵ Only one-fourth of Iran universities had a dedicated ethics department devoted to learning and teaching, whereas other universities dedicated nonethics department such as psychology department and forensic medicine to oversee the courses. In Turkey, two-fifth of the medical schools has a separate

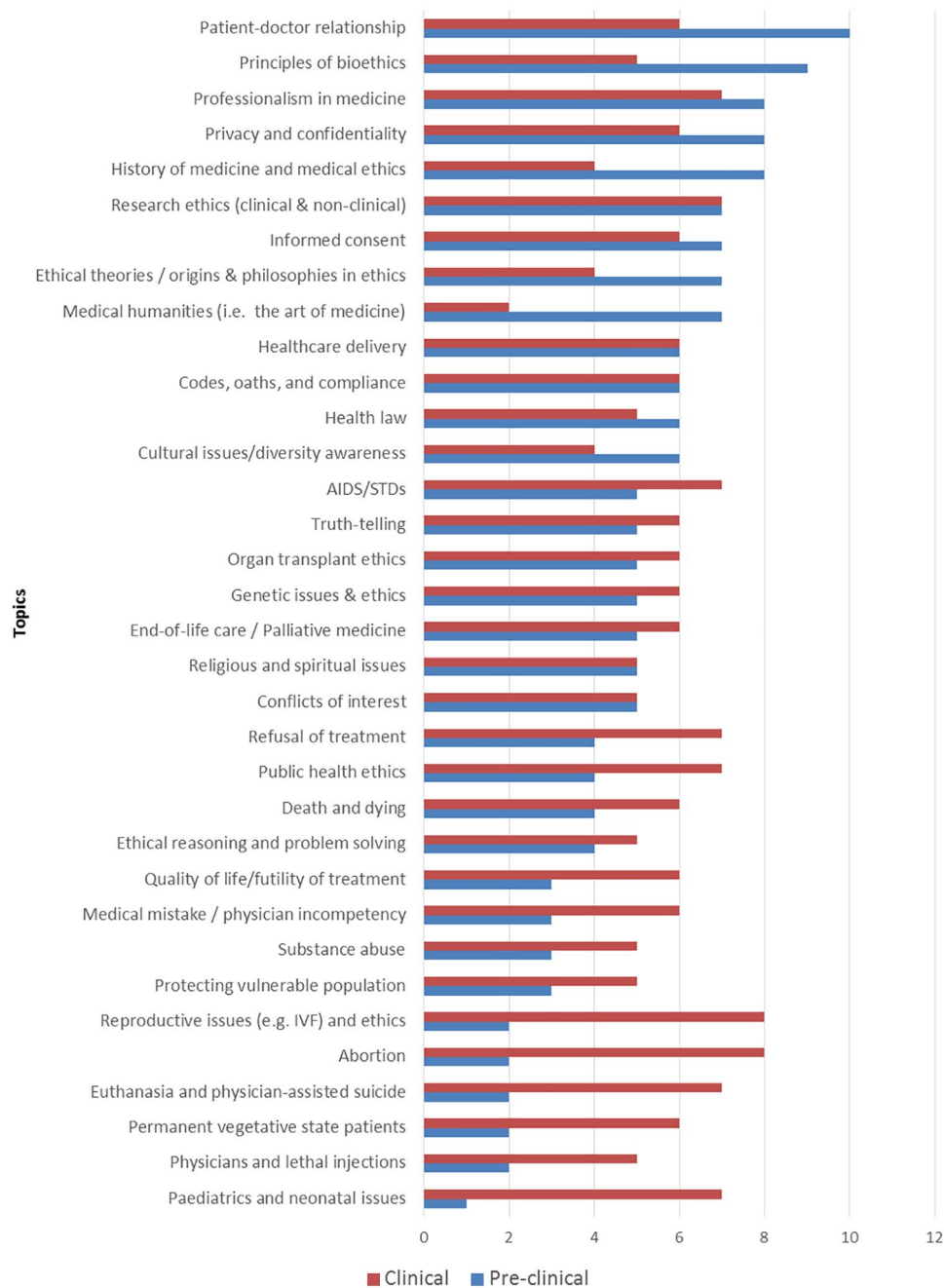


Figure 2. Bioethics topics currently taught at the 11 medical schools.

department for medical ethics, and half of these departments did not hire professor with an expertise in ethics.²⁶

Course content of bioethics education

Figure 2 presents the topics covered in the bioethics courses. The most commonly taught topics are patient–doctor relationship and principles of bioethics while the least covered topics are physicians and legal injections, as well as paediatrics and neonatal issues. Like other medical schools in developing countries,^{9,27} course topics in Malaysian medical schools were not consistent and varied greatly. Most bioethics topics shared similarity with the UK and USA medical schools.¹⁸

Three patterns were observed in the teaching topics (Figure 2). First, specific topics are more frequently taught in the preclinical years, including principles of bioethics, history of medicine, and medical humanities. Second, there are topics more commonly covered in the clinical years than the pre-clinical years, including paediatrics and neonatal issues, abortion, reproductive ethics, and medical errors. The observed patterns could be inferred as an implied consensus on what bioethics topics need an early introduction, while some could be introduced at a later stage. For example, incorporating topics such as principles of bioethics, history of medicine and medical ethics, can help to lay the foundation for bioethics education. Other topics such as the refusal of treatment and

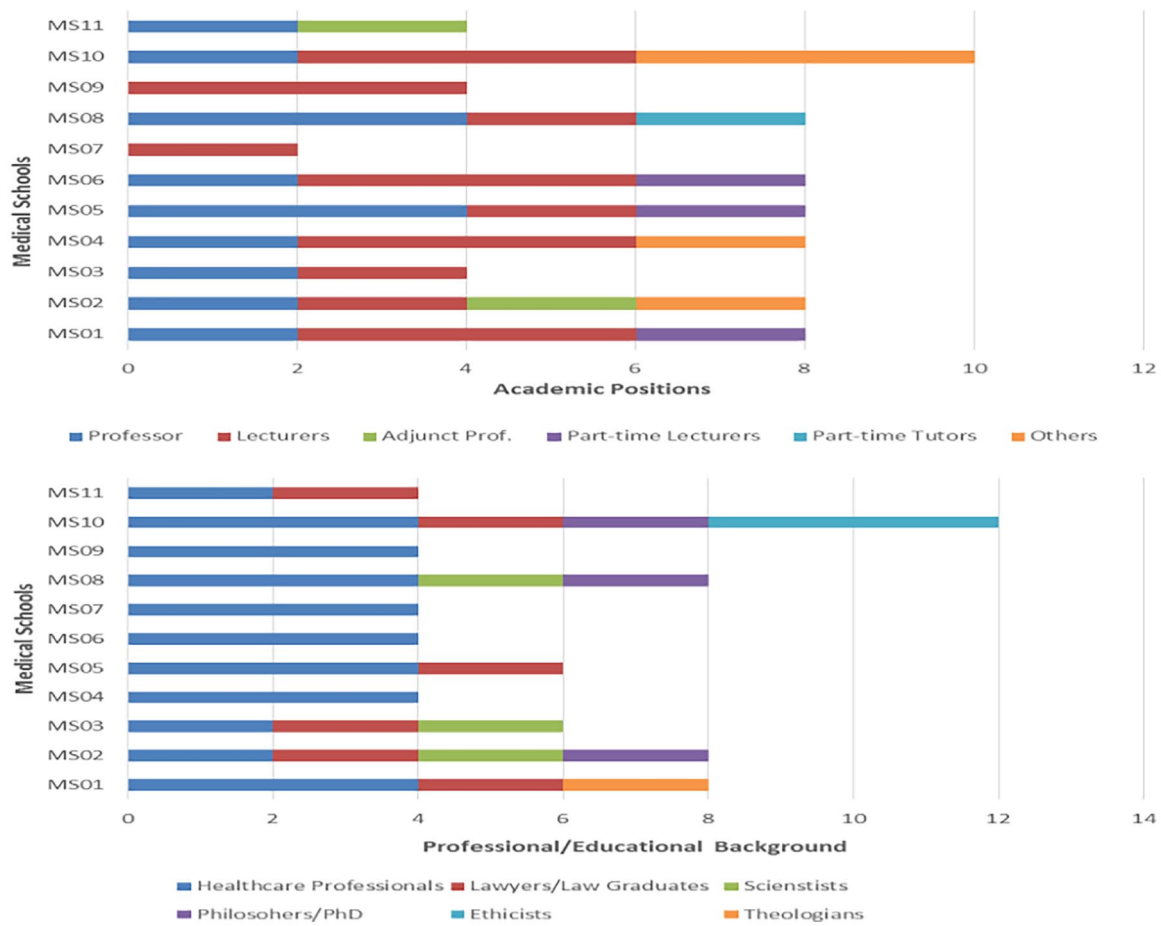


Figure 3. Capacity of teaching staff involved in teaching bioethics.

reproductive ethics are of clinical nature and hence more appropriate to be taught in the clinical years. Interestingly, we observed a group of topics that are equally emphasised throughout the medical curriculum, such as patient-doctor relationship, informed consent, professionalism, as well as privacy and confidentiality. The observed patterns emerge as common topics valued in bioethics curriculum for work readiness in the health care setting.

Findings of this study indicated that the current teaching topics in Malaysia incline towards a Western framework⁵ with a limited regional attention of a pluralistic society. In the free-text response, respondents reported that some bioethics topics most needed in the Malaysian context were not yet taught in their medical schools. These include: (1) cultural competency in a multiracial society, (2) value-based practice, (3) conscientious objection in health care, (4) religion and ethics, (5) religious and spiritual issues, and (6) clinical professionalism.

The written comments highlight the reconsideration to address the cultural appropriateness at the design and implementation of bioethics in medical education. Malaysia has a multiethnic population with 91.8% of the population coming from 3 main ethnic groups: Malay (69.1%), Chinese (23.0%), Indian (6.9%), and others that include the indigenous

population (1.0%).¹⁴ The cultural and religious diversity should be acknowledged, as they have important implications not only towards health belief practice but also medical professionalism.²⁸ It implies that bioethics in medical education shall also be attentive to cross-cultural values and beliefs. For example, at least one teaching module should teach medical students to recognise the relationships between spirituality, religion, and health. This is essential to train/prepare them to appreciate the influence of spirituality on decision-making in treatment.

Capacity of teaching staff

Figure 3 shows the capacity and education background of teaching staff involved in bioethics teaching. The top chart shows that most medical schools include professors, lecturers, and tutors for teaching bioethics, while a few other schools also engaged part-time staff to teach bioethics. The bottom chart shows that health care professionals, mainly clinicians, formed the largest teaching group, followed by individuals with a legal background. Four schools (36.4%) involve only health care professionals in teaching bioethics while 5 schools (45.5%) recruit a multidisciplinary team. Only 3 medical schools (27.3%) provide professional training or educational activities for teachers with no ethics background before the teachings. Two of these 3

medical schools were from private institutions. From the findings, it is unclear what factor(s) could have affected the provision of ethics training.

Addressing the unfulfilled need of teaching capacity might depend on institutional support, as well as the availability of suitable faculty members. Unlike China having philosophers to teach bioethics courses,⁹ Malaysian medical schools had physicians taking up the role as ethics teacher predominately because of the conventional imperative to make the curriculum relevant to the clinical settings. This could also be due to the limited number of established Malaysian scholars with an ethics background, especially with philosophy, social science, or humanities background. This phenomenon of having physicians playing a primary role as ethics teachers, followed by few philosophers or ethicists were nevertheless, reported in Canadian, North American, and most Asia-Pacific medical schools.^{29,30}

With an acute shortage of scholars in bioethics field in Malaysia, less than half of the medical schools neither had a separate department for medical ethics nor recruited full-time faculty. The lack of teaching staff creates concerns about quality teaching, particularly in Asia-Pacific regions. It is of paramount importance to engage teaching staff from a more diverse educational background, given the multidisciplinary nature of bioethics.³¹ While clinicians are much needed to guide students on clinical ethics, a lawyer is imperative to provide for medico-legal perspective, a philosopher to guide students on principles of bioethics, and theologians to share on religious and spiritual issues. Empirical data from this study revealed that little emphasis was given to the training of staff teaching bioethics, which is a concern for the future of bioethics education. Faculty development to provide professional training is essential to enhance teaching and learning of bioethics. The success depends heavily on faculty support, availability of resources, as well as cooperation from the individual teachers. Successful implementation of bioethics education requires stakeholders equally see bioethics in medical schools as a priority and develop an innovative and sustainable teaching pedagogy.

Teaching and assessment methods

Figure 4 shows the teaching and assessment method in bioethics. All medical schools adopted didactic lecture as the mode of delivery, followed by small group discussion (9/11 = 81.8%), and role-play (7/11 = 63.6%). Other teaching methods such as fieldwork, teaching symposium, ethics in the news, and site visits were used sparingly.

In terms of course assessment, attendance taking was commonly used (11/11 = 100.0%), followed by presentations (9/11 = 81.8%), class participation (7/11 = 63.6%), essays (7/11 = 63.6%), and written exam using multiple choice questions or MCQs (7/11 = 63.6%). For grading scheme, 7 of the medical schools (63.6%) used 'Satisfactory/Unsatisfactory' or 'Pass/Fail', while the remaining 4 (36.4%) used the letter grade system.

In designing the bioethics education, the 11 medical schools differed in terms of compliance with guidelines in ethics teaching, learning, and assessment. The majority (9/11 = 81.8%) followed guidelines by the MMC, and the remaining 2 schools did not design the curriculum in compliance with any guideline in ethics teaching, learning, and assessment. Institutions with medical programmes in collaboration with foreign universities from the United Kingdom and Australia observed both the GMC Guidelines as well as the World Health Organisation teaching guidelines on bioethics. The variance of the guideline adherence could be due to oversight at MMC. In Malaysia, all medical schools in public institutions confer their own medical degrees. However, for medical schools in private institutions, only those locally established medical schools confer their own medical degrees. For medical schools having twinning programmes with foreign partner universities, or foreign universities with off-shore campuses in Malaysia, the medical degrees are conferred by their partner or parent universities.

There is no consensus as to which is the most effective teaching and assessment method in bioethics education, and lecture emerged as the most commonly practised by medical schools in the East⁹ and the West.²⁴ Considering the crowded timetable in the medical curriculum and limited expertise to teach bioethics, using didactic lecture is acceptable to alleviate packed schedule and deliver quality teaching. It is essential to recognise that there is no one best method and/or tool to assess bioethics, and the appropriate teaching method is context dependent. Although attendance is not strictly considered an assessment method, students who have not attained a minimum attendance of 90% would be barred from taking the final examination.

The assortment of teaching and assessment methods reported in this study is appropriate in a resources-limited setting like Malaysia. To deliver an effective ethics learning, lectures should be followed up with tutorials or small-group discussions, in particular, case-based discussions. Resources available on e-learning platform such as videos, online modules, could also be considered to support proactive learning among students. Our findings revealed that fieldwork, site visits, ethics in the news are used sparingly, although these teaching methods can help students see and feel bioethics at work in real life. For example, fieldwork may involve taking small groups of students to observe court proceedings in a medical negligence suit to expose students to the legal aspect of bioethics, and after that to present and discuss the case observed.

Barriers to implementation of bioethics in medical education

Figure 5 shows the barriers to implementation of bioethics in medical education. The main barriers reported were limited existing qualified teaching staff (6/11 = 54.5%), no established curriculum to follow (5/11 = 45.5%), limited financial resources

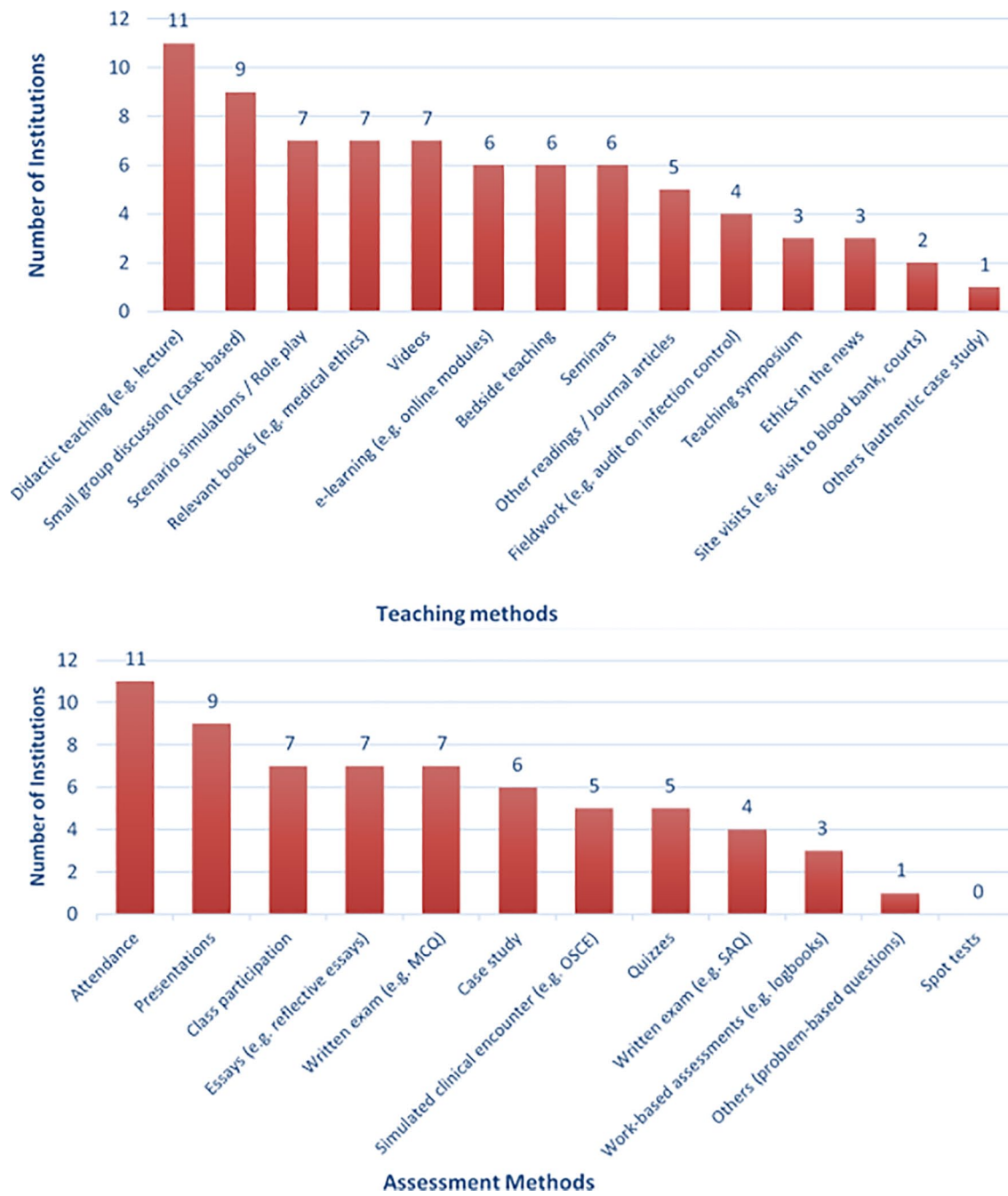


Figure 4. Teaching and assessment methods.

to hire qualified staff (4/11 = 36.4%), and no consensus among faculty members (4/11 = 36.4%).

Barriers reported here are not new and are observed in other institutions.^{19,24} It is encouraging to find barriers that were thought to be existing, such as ‘teaching ethics is not a priority’, and ‘resistance from the administration’, were not major obstacles observed in the Malaysian context. Besides, barriers such as resistance from students and poor attendance were also not evident from the data. This indicates that there is only a little resistance from students towards the implementation of bioethics education. Beyond our expectation, the commonly cited hindrance such as ‘lack of curriculum time’ was not the major obstacle observed in the Malaysian context. Our findings suggest that

Malaysian medical schools at the institutional level provide support to some degree and obstacles reported here are optimistically considered transitional and could be overcome when teaching resources meet the demand.

Limitations of the study

This study was limited by the low response rate. This limitation is also observed in another similar national survey.²⁴ According to Galea and Tracy,³² 2 major and related reasons for falling response rates are increased difficulty in locating eligible participants and an increased likelihood that if potential participants are located and contacted, they will not be

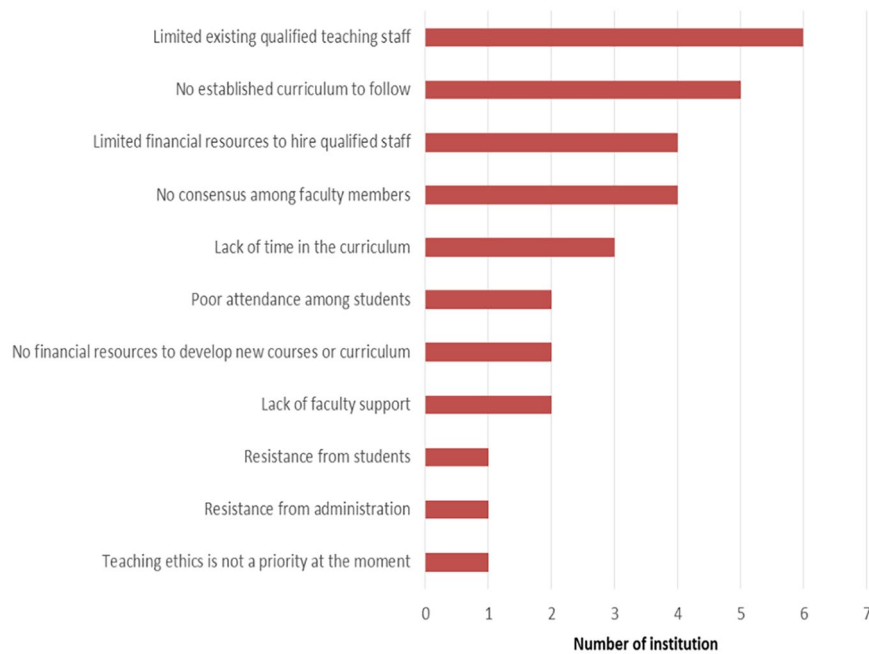


Figure 5. Barriers to implementation of bioethics education.

willing to take part. A general decrease in ‘volunteerism’ and increased frequency of contacts by research groups could also contribute to this reduced research participation rate.³³ In the Malaysian context, additional contextual constraints could be taken into account. First, there was an unfettered rise of private and foreign medical schools in Malaysia over the past decade.³⁴ However, there is little aligning effort made between MMC, Malaysia Medical Association, and Malaysia National Council of Bioethics with regard to the quality of medical education in the country, especially bioethics education. Despite its importance, the subject is not yet implemented in some young or newly established medical schools such that no information could be provided, leading to nonrespondents. Second, most eligible respondents would be busy clinicians, who may require multiple reminders to complete the questionnaires. Although the first author had made utmost efforts in reminding medical schools, only 11 medical schools completed and returned the survey. Third, identified respondents were no longer serving in their teaching capacity, either had been promoted or had left the medical school, and replacement was not available/identified. Fourth, there might be difficulties in identifying eligible staff within the institution. Fifth, the response rate for medical schools from public institutions is much higher (6/10 = 60.0%) compared to those from private institutions (5/20 = 25.0%). The unequal response rates and small sample size requires careful interpretation in the findings to avoid response bias. Due to the small sample size, the authors were cautious not to use inferential statistics in data analysis. It is also not the authors’ intention to generalise the findings to other settings.

Significance of the study and further research

This study is the first national survey assessing the penetration of bioethics in medical education among all Malaysian medical schools. The findings should give national and international educators and researchers some insights into the current state of bioethics education in Malaysian medical schools. Whenever possible, we compare and contrast the current state of bioethics education in Malaysian with the literature reported globally, in particular in the Western settings.

The survey instrument includes both closed-ended and opened-ended questions. However, this questionnaire structure did not allow sufficient rooms for supplementary comments to be raised. Thus, the data do not fully describe each institutional barrier in the sample population but rather their views about predetermined issues. A qualitative study should be subsequently adopted to explore underlying reasons for nonrespondents and elaborate on the findings and explore ways forward to enhance bioethics education among Malaysian medical schools.

Following this national survey, similar studies on a regional scale could be extended to countries in the Association of South-East Asian Nations (ASEAN) region, in Asia, as well as the Asia-Pacific region.

Conclusion

The current status of Malaysian bioethics teaching in medical education has some similarities and differences in terms of course structure, teaching hours, content dedicated to bioethics education, teaching and assessment methods, as well as barriers to the implementation with neighbour developing countries and Western countries. The inconsistent teaching hours, course

structure, assessment methods, and implementation barriers call for a more open discussion with medical educators and other stakeholders regionally and globally. In the Malaysian context, the success of implementing bioethics education requires efforts at different levels. At the departmental level, teaching staff should be supported by adequate ethics training. At the institutional level, faculty needs to allocate adequate teaching time for bioethics and to integrate bioethics teaching both vertically and horizontally throughout the curricula of all medical schools.⁵ Due to the multidisciplinary nature of bioethics, a multidisciplinary team comprising teaching staff from various backgrounds (clinicians, lawyers, scientists, and philosophers), is much desired. At the national level, findings of this study also inform the crucial need to develop some interinstitutional collaboration, setting up a national bioethics education network to connect faculty members who are involved in the teaching and/or research in bioethics.

Authors' Note

The first author presented a preliminary version of this paper at the 2nd Meeting of the Asia Pacific Bioethics Education Network (APBEN) 2019, hosted by the Chinese University of Hong Kong.

Acknowledgements

The authors would like to thank the Association of Commonwealth Universities (ACU) and the Hong Kong Jockey Club for funding this research through the International Grant (grant no. IF036-2018), and APBEN for permission to adopt and adapt the survey questionnaire for this study.

Author Contributions

JHS and HKN contributed to the conception of the study. JHS was primarily responsible for the design of the data collection and acquisition, and the first draft of the manuscript. JHS and OMYN worked on data analysis and interpretation. All authors made substantial edits and approved the final manuscript.

ORCID iD

Joong Hiong Sim  <https://orcid.org/0000-0002-4962-0417>

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