

ISLAMIC INPUT IN MEDICAL PROGRAM: A REALIZATION OF A HOLISTIC MEDICAL EDUCATION

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ABSTRACT

An important learning outcome of a medical curriculum is to produce safe doctors over a period of training. The learning process should equip undergraduates to become competent practitioners who are able to provide holistic care to patients, physically, emotionally, psychologically and spiritually. They should have the expertise to attend to patient's medical and health needs that should be delivered in the most ethical manner through mastery of good communication skill and portrayal of compassion during the provision of care. This constitutes the basic attributes of medical professionalism that one should develop during medical training and enhanced throughout one's career life. For Muslim medical professionals, they need to conform to the Islamic core values that constantly promote the ideals of professionalism, which include positive attitudes such as dedication, respect, compassion, empathy, honesty, altruism, responsibility, integrity, self-improvement, magnanimity and accountability. In achieving this, a holistic medical curriculum should be adopted that ensures applications of behavioural and ethical standards, based on the Islamic worldview, during the period of training. The training process would enable medical undergraduates to execute their duties as safe doctors, at the end of training, with greater accountability and within the realms of acceptable legal rulings for the benefit of the society and also be in conformity with the demands of the Maqasid al Shari'ah. This paper discusses the ideals of holistic medical education and the experience of IIUM in implementing its curriculum, Islamic Input in Medical Program or IIMP, which primarily aimed at developing four main attributes of medical professionalism of expertise, ethic, communication and other skills such as leadership, competency in medical fiqh and ethical reasoning skills in approaching medical ethical dilemmas. The challenges, the success and way forward for improvement are also discussed.

Keywords: Medical education, Holistic, Islamic Input, Professionalism, Medical Ethic

Introduction

Nurturing safe doctors at the end of medical training is the most desired learning outcome of a medical undergraduate curriculum. Medical teachers have the moral duty to guide, nurture and assist students to become 'safe doctors' as aspired by the curriculum. A good medical program should provide opportunities for development of good professionalism, leadership qualities and skills in resolving medical ethical dilemmas amongst medical undergraduates, whom would later on become competent doctors providing holistic care to patients, physically, emotionally, psychologically and spiritually. These doctors have the expertise to attend to patient's medical and health needs that are delivered in the most ethical manner through mastery of good communication skill and portrayal of compassion during the provision of care. This constitutes the basic attributes of medical professionalism that medical undergraduates should develop during medical training and enhanced it throughout their career life.

For Muslim medical professionals, they need to conform to the Islamic core values that constantly promote the ideals of professionalism, which include positive attitudes such as dedication, respect, compassion, empathy, honesty, altruism, responsibility, integrity, self-improvement, magnanimity and accountability., during the period of training. A holistic medical curriculum is needed to achieve these ideals of medical education whereby the application of behavioural and ethical standards that is based on the Islamic worldview becomes the main objective of teaching and learning.

The Kulliyah of Medicine, IIUM has implemented its holistic personal and professional development curriculum called the Islamic Input in Medical Program (IIMP) since its inception in 1997. This curriculum, which runs parallel to the professional medical curriculum, is designed to train a different 'breed' of doctors who not only excel in their professional duty as safe doctors but also portray conduct, (*akhlak*) expected of a good Muslim. As implementers of the curriculum, one of challenges for medical educators is the need to be role models of 'safe doctors' for students to emulate. The training process would enable medical undergraduates to execute their duties as safe doctors, at the end of training, with greater accountability and within the realms of acceptable legal rulings for the benefit of the society and also be in conformity with the demands of the *Maqasid al Shari'ah*. To date, fourteen batches of students had graduated and serve at various hospitals and higher learning and research institutions as medical officers, specialists, consultants, lecturers, assistant and associate professors and researchers.

This paper discusses the ideals of holistic medical education and the experience of IIUM in implementing its curriculum, Islamic Input in Medical Program or IIMP, which primarily aimed at developing four main attributes of medical professionalism of expertise, ethic, communication and other skills such as leadership, competency in medical fiqh and ethical reasoning skills in approaching medical ethical dilemmas. A comprehensive evaluation of its success in achieving its noble objectives has not been fully studied although perception study of the undergraduates about the curriculum had been undertaken before its first

curriculum review in 2009 after a decade of its existence. The perception study of the medical teachers about the challenges of implementing the curriculum has not been undertaken. This is among the many challenges that the faculty members are facing in ensuring that the IIMP curriculum stays in its course and achieve its objective of shaping holistic doctors.

Islamic Input In Medical Program

Islamic Input in Medical Program (IIMP), which IIUM pioneers since its establishment in 1997, is a curriculum for personal and professional development that runs parallel with the professional medical curriculum. It is a commitment of the University to make a difference in medical education whereby the curriculum, teaching methodology, learning experience and assessment are integrated with Islamic values. An important feature of this curriculum is that professionalism is defined within the framework of Islamisation of human knowledge that the University champions. Professionalism is defined as an obligation to acquire the necessary expertise to attend to patient's medical and health needs, which are to be delivered in the most ethical manner through good communication skill and portrayal of compassion during the provision of patient care. Students are trained to adopt the correct mindset that is in consonant with the Islamic worldview and principles, such as "*Doctor as an agent of healing and Allah is the Ultimate Healer*" and "*Work as ibadah*". Such mindset is an important motivation to learn medicine within the framework of Islamic medical professionalism. In addition to this, students are trained to adopt the correct mindset of a Muslim doctor as well as acquire competency in *fiqh ibadah*, medical ethic and leadership, all within the framework of islamisation of human knowledge. The learning experiences would equip medical students with the necessary knowledge and skills as safe doctors providing holistic care to patients.

Basically, IIMP is an effort to Islamize the medical curriculum and consists of two separate but closely related components: Islamization and legal medicine. Islamization deals with putting medicine in an Islamic context in terms of epistemology, values and attitudes. It represents a commitment towards Islamization of medical sciences by bridging the dichotomy between traditional Islamic sciences and the medical sciences. Legal medicine deals with issues of application of the Law (*syaria'h*) from a medical perspective including the 'grey area' for which simple categorization as good and bad, legal and illegal is not easy. The curriculum ensures that medical students are exposed to the Islamic perspectives of medicine and its practice in terms of its worldview, professionalism, leadership and ethic. Students are prepared to internalize the moral and ethical dimensions of the profession, are introduced to basic Islamic concepts, are drawn to appreciate the human body and organs as the precious gift of the Creator reflecting His mercy and Bounty, are familiarized with *fiqh* issues (Islamic medical jurisprudence) and appreciate the Islamic medical heritage. Medical teachers with fundamental knowledge of Islam are entrusted to integrate the Islamic input in their teaching of medical sciences as well as to demonstrate good values that are in consonance with Islam in terms of their professionalism, leadership and ethic.

Throughout the 5-year undergraduate program, the curriculum provides venue for the islamisation process to take place. Teaching and learning medicine are based on the tawhidic paradigm and guided by the IIMP ideals. IIMP is based on 3 assumptions: a) that Islam has moral values that are universal and, being found in other religions and belief systems, can be taught to and be appreciated equally well by Muslims and non-Muslim students; b) a physician must understand Islamic Law relating to medicine, *fiqh tibbi*, in order to practice successfully in a Muslim community whose culture and social norms are shaped by the shariat and c) a successful physician must be equipped with personal, communication, leadership and management skills based on Islamic teachings and empirical social and managerial sciences.

In the pre-clinical phase IIMP presents the Islamic epistemological perspectives of basic medical sciences so that students, while learning these knowledge can appreciate the signs of the Creator, *ayat al allah*, from the book of empirical scientific observation, *kitab al kawn*, alongside appreciating the signs of the Creator from the book of revelation, *kitab al wahy*. For example, in studying the heart, knowing that the heart rhythm arises from a specialized tissue, the sino-atrial node, which continues to produce the impulse until a person die should bring a student to appreciate his Creator; for a believer, this knowledge and appreciation should make him/her closer to Him. In learning anatomy from dissecting the cadaver, students should appreciate that anatomical landmarks, which are consistent in every human has important bearing in clinical examination. An example would be that of the cricothyroid membrane, which when externally compressed consistently occludes the esophagus, thus prevent aspiration of gastric content into the lung during insertion of endotracheal tube under anesthesia. In the clinical phase, IIMP teaches students to help patients solve problems related to practical ibadah such as ablution, wudhu, prayer, *solat*, fasting, *saum*, pilgrimage, *hajj & umrah* and the lawful and prohibitions in activities of daily living such as *halal* medicine, food and nutrition, exercise and healthy life styles.

IIMP uses the theory of the purposes of the Law, *maqasid al shariat*, principles of the Law, *qawa'id al shari'at*, specific legal rulings from the Quran and *sunnat*, and comparing with European ethico-legal sources as basis for discussing medical ethico-legal issues such as autonomy, doctor-patient relationship, privacy and confidentiality, professionalism, animal and human research, resource allocation, end of life issues and medical malpractice. Other issues such as assisted reproduction, genetic testing, cloning, cosmetic surgery, brain death, withdrawal and withholding of life- support measures, DNR, organ donation and trans- plantation are also discussed applying the same principles.

IIMP also focuses on developing students with important soft skills such as personal, communication, leadership and management skills based on Islamic teachings and empirical social and managerial sciences. Students learn these skills through participation in the co-curricular activities and also a special module, made compulsory for all final year students. The

"Leadership Game" provides experiential learning for students where activities that they experienced throughout the planning and execution of a chosen group program are recorded and compiled in a portfolio for assessment and evaluation. This module provides exposure and opportunity for learning important skills of organization, collaboration and working as a team especially for students who had never had such experience before, as they have never participated in any co-curricular activities. For the experienced students, this module allows them to share their experience and guide their inexperienced peers, thus making learning enjoyable and strengthen the spirit of brotherhood or *ukhuwah* among them.

Implementing The Curriculum

The teaching of IIMP is integrated in three ways. Firstly, the teacher of the medical specialty is also the teacher of IIMP. Secondly, the teaching material is integrated. For example when teaching cardiopulmonary resuscitation (CPR), the ethico-legal-fiqhi and Islamic conceptual issues are discussed at the same time, say for example the issue of when to stop CPR. Thirdly, the examination of IIMP is integrated in the general examination and not as a separate paper.

Learning experiences that allow development of medical professionalism, acquiring skills in fiqh ibadah, analytical skills in medical ethic and other soft skills such as communication, leadership, followership and management skills are discussed in the following paragraphs. Other than these formal elements provided by the curriculum, informal experiences collectively known as the hidden curriculum, played a role in molding the professional attitude of these future doctors. This is the curriculum of rules, regulations and routines, the ambience of the learning environment and the behaviors of teachers, the implementers of the curriculum, who ideally should be the role model for students. Teaching in the hidden curriculum occurs through role modeling and the framework of the educational environment itself. Role modeling is important in the development of the ideal attributes of professionalism. This is easier said than done as it is challenging to become "someone who, in the performance of a role, is taken as a model by others", bearing in mind that role modeling is in the eye of the beholder i.e. the student, not the teacher. By this statement it means that there are individuals who are seen as mentors but do not realize that they are teaching professional values, and those not seen as mentors may believe that they are. This is an important fact for teachers to realize but can be achieved through proper training.

Developing Medical Professionalism

Professionalism is defined as "a body of qualities or features as competence, skills, behavior, characteristic, etcetera of a profession". It is the outward visible expression of values, behavior and attitudes that are developed over a period of training. It is the core competency expected of doctors that need to be developed during medical training. One needs to have the necessary expertise to perform one's duty as a doctor, which should be delivered in the most ethical manner. This requires, among others, good communication skill and portrayal of compassion during the period of patient care. This represents the operational definition of professionalism, which evolves around acquiring four main attributes, summarized as 2E's and 2C's. The 2E's stands for Expert and Ethical while the 2C's represent Communication and Compassion.

According to this definition, a doctor is duty bound to discharge his responsibilities towards his patients according to his level of expertise, (E for expertise) and in the most ethical manner (E for ethical). In Islam, one cannot be ethical without having good *akhlaq* as ethic is part of *akhlaq*, which describes the relationship between man and man, man and his creator, i.e. Allah as well as between man and his environment. The other two attributes of medical professionalism that doctors must develop over the years of training and beyond are communication with compassion (the 2C's), which actually means the ability to communicate effectively and compassionately. This is not an easy task but with dedication and perseverance, one could certainly achieve it. From the perspective of Islam, failure to fulfill this minimum obligation is a sin, since justice could not be upheld and patients are at risk of harm. For a patient, being seen and cared by a knowledgeable and competent physician is all what he wants and is anxious to know whether his ailment is treatable or otherwise, for he wants to return back to his pre-morbid state as soon as possible.

Medical teachers are responsible to nurture their students to achieve a certain level of professionalism, which has to be clearly defined from the outset. Their attitude and practice of professionalism have important impact on the minds of these future doctors. They should motivate their students to become committed in acquiring those four main attributes of professionalism mentioned above, which are acquiring the necessary expertise expected of a doctor, delivering care to patients in the most ethical manner and ensuring that this is done through good communication skills and portraying compassion. The quest for professionalism should be regularly reminded and demonstrated as one of the learning objectives and enforced in every learning and teaching activities.

Teaching professionalism requires various approaches. Lectures, student workshop, interaction with patients, reflection on real-life practices of healthcare professionals, small group discussions of "Case Studies", observation and emulating others, especially the teachers and other healthcare professionals, discussion of patient care during bedside teaching and in case reports are among the methodologies used to provide experience and strengthens the commitment to professionalism.

Medical teachers, as implementers of the curriculum should be equipped with the knowledge and skills of teaching as well trained to become role models for students. Their professionalism and etiquette (*'adab*) in dealing with the patients is a source of inspiration for students to emulate. Role modeling is a powerful force in teaching medical professionalism and is critical to the quality of medical practice and education and to professional self-regulation. Marinker used the term "*the hidden curriculum*" to describe the effect of the professional attitudes and behavior of clinical teachers on students and doctors in training. The

everyday behavior of clinical teachers is the living demonstration of their expertise, ethics, and commitment to professionalism. What they do and how they do it matters as much as what they say as in, for example, communicating with patients, students and colleagues; recognizing the limits of their own practice; using clinical audit to improve their practice; applying formative peer appraisal for their own professional development; handling personal criticism; tackling poor performance in themselves and others; and caring for colleagues in difficulty. This is the commitment that should be developed in order to achieve the learning objective of nurturing safe doctors, which is required to safeguard the wellbeing of a community.

A specifically designed workshop on medical professionalism and proper physician etiquette is carried out during the third year prior to the commencement of clinical rotation in the ward. It is a student-centred approach of learning that is integrated with Islamic values, in line with the vision and mission of the University. Its main objective is to provide understanding of the importance of professionalism in patient care and to enhance it further as they undergo the clinical postings until the end of the medical course. Students are divided into small group of ten, where each group is assigned a Case Study to discuss on the issue at hand, that is professionalism. Through active deliberation of these cases, which portray bad professionalism, they would learn the importance of exercising good professionalism and proper etiquette while dealing with patients.

In order to ensure that the learning objectives are reached, each group is assigned a lecturer who shall guide and motivate the students under their charge. More importantly, the teachers should remind students that it is not an option but an obligation to become good doctors, which from the Islamic perspective, is a trust or *amanat* that must be fulfilled. They should be committed to acquiring the four main attributes of professionalism and observing the teachings of Islam in their journey to become good Muslim Doctors. Each group is then required to demonstrate their understanding on good professionalism and proper etiquette in managing their 'patient' (Case Study) using audio-visual aid, power point and other methods such as role-play. They are also required to write a report and submit it to the coordinator/facilitator of the workshop on the workshop day for grading purposes. Clinical situations (the Case Studies), appropriate for their level, are selected for discussions at this workshop. The examples of case studies are as follows:

- i. The first impression – appearance and composure
- ii. Examining patient of different gender
- iii. Medical confidentiality
- iv. Taking verbal consent
- v. Refusal of treatment and at own risk discharge
- vi. Breaking bad news
- vii. Making do'a before a procedure
- viii. Solat for the sick

Equally important is that, each group is required to integrate Islamic values while deliberating on the Case Studies and hopefully this skill would be translated into real life experience. The experience obtained during the workshop should help them understand the true 'meaning' of and strengthen their commitment to improving and enhancing professionalism as they go through their clinical training where they learn to interact with patients and develop the skills of history taking, formulating diagnosis and examining a patient as a professional doctor. Putting into practice the knowledge learnt about medical professionalism, and internalizing it in real-life is not an easy task, but with perseverance and patience, one can achieve it.

An important learning experience that enhances understanding and strengthens commitment to professionalism is the reflective session, "*A reflection on observation of professionalism in the labor room*", as part of the "Workshop on Obstetric Analgesia" during the Obstetric posting, in the third year. This learning activity involves every student, either as 'student expert' or as 'active participant'. There are five main topics discussed, with each topic assigned to two students, who perform the role as 'Student Experts'. The five main topics are:

- i. Taking consent
- ii. Common drugs in obstetric practice
- iii. Monitoring of analgesia
- iv. Spinal anesthesia
- v. Epidural anesthesia

Two students are assigned to each of the above topics where they are tasked to be the 'expert' who will 'teach' the other fellow friends (who are the 'active participants') during the workshop day. These 'experts' are required to collaborate with the manager of the Clinical Skills Laboratory in setting up the five learning stations with the appropriate learning materials, such as spinal and epidural needles, syringes, drugs, vital signs monitors, consent form, etcetera. Then students are asked to volunteer as the 'expert' during the learning session, where they are required to meet the supervisor at least a day prior to the workshop, to rehearse their role and/or clarify doubtful facts about their topic. This exclusive session is also an opportunity to learn other topics prepared by the other 'student experts'. The remaining students (the active participants) are tasked to write one-page report of 200 words on "*Reflection of Professionalism*", which will be discussed on the workshop day. It is a group activity of at least two persons, where they are required to write on their observations and reflection of professionalism among healthcare professionals and medical students in the labour room.

On the workshop day, the 'active participants' are divided into five groups where they rotate to spend fifteen minutes at each station to learn from the 'experts'. The 'student experts' are the resource persons who demonstrate and teach 'the active participants' the assigned topic, for a total of five times. Once the five rotations have been completed, the whole group would

then give their feedbacks and comments about the learning experience either as 'student experts' and 'active participants'. The active participants are required to share their reflections on professionalism with their peers and supervisor and submit their reports to the supervisor for evaluation. The supervisor give feedbacks, comments and recommendations to these reflections for students to emulate or avoid, with regards to professionalism. It is important for the supervisor to re-emphasize to students that professionalism is the core competency of doctors that must be developed during medical training.

Acquiring Skills In *Fiqh I'badah*

Students also learn about *fiqh ibadah* such as performance of obligatory *solat* during sickness, ablution, *tayamum* which take place during clinical posting in the Department of Orthopedic, Traumatology and Rehabilitation. The learning activities centered on small group discussions and demonstrate practical ibadah skills of a given case scenario such as patient on plaster, splint, indwelling urinary catheter and so on. In this learning session, students are able to discuss the *fiqh* issues and demonstrate the practical ibadah skill, which is verified by a religious scholar from other faculty of the same university. There are no specific fiqh issues discussed during the two-week rotation in anesthesia and critical care. However, an important learning experience, the small group discussion on medical ethic, as mentioned below is an effort to ensure that as Muslim practitioners, one should be aware that the establishment of ethical codes needs "to conform to the basic tenets of '*aqidat al tawhid*' and resolving ethical dilemmas require the understanding and application of the conventional ethical principles of autonomy, beneficence, non-maleficence and justice as well as the *Maqasid* and *Qawa'id al-shari'ah*.

Analytical Skills In Medical Ethic

An understanding of ethical principles, both contemporary and Islamic and its application in the decision-making process is paramount to the provision of good patient care, especially in situations that poses ethical dilemma to patients and doctors. Knowledge in medical ethic is acquired through small group case-based discussion of common bioethical dilemmas such as being carried out during the two-week Anesthesiology attachment in the fourth year. Strictly speaking, there is no need for a "medical ethic" for Muslim physicians as Islam considers medical ethic the same ethic as in other areas of life, which is derived from the *syari'ah* or the Law. In order to speak in the same language with the rest of medical fraternity, the so called medical ethic in Islam would be best described as a mere reinstatement of general ethical principles using medical terminology and with medical applications². It is important for students to understand the contemporary ethical and Islamic medical ethics, in particular the *Maqasid* and *Qawaid al-sharia'ah* and their application in resolving common ethical dilemmas in clinical practice. Students are required to prepare a presentation script of a particular topic and deliberate on it during the small group discussion that is guided by a teacher.

Common ethical issues that are discussed include brain dead, organ transplantation, Do not active resuscitation (DNAR), withholding and withdrawal of life support, euthanasia, end of life care and pain management in terminally ill patients. The detail of this learning activity is discussed in the Student Guidebook⁵. All these learning experiences should equipped them with the necessary competencies that would enable them to practice holistic patient care as doctors. Muslim doctors who are skillful in '*fiqh ibadah*' and Islamic medical ethic are better practitioners as they could function as educator and advocator for Muslim patients in performing their religious obligations. For non-Muslim doctors, competency in '*fiqh ibadah*' is advantageous as it provides cultural awareness on Islam and enhances their professional obligations to provide holistic care to his Muslim patients. It is an added value for them especially so in this country where Muslims form the majority of the total population and that Islam is the official religion.

Acquiring Soft Skills

The IIMP curriculum also emphasize on development of important soft skills such as communication, leadership, followership and management skills based on Islamic teachings and empirical social and managerial sciences. Briefly, this is a student-centered activity that is fully supported by the student's development fund whereby some financial assistance is provided. Usually, students acquire these skills through participation in the co-curricular activities. However, not all students are involved and thus having the opportunity to develop those important soft skills mentioned above. Thus, a special module, "*Leadership Game*" is made compulsory for all final year students to participate so as to ensure that every medical undergraduate of this university, an exposure to learning about leadership and followership skills before graduation. Leadership is about doing! The "*Leadership Game*" module or fondly known as "*Final Year Project*", is designed to allow experiential learning on leadership and management to take place. More importantly, it provides exposure and opportunity for learning important skills of organization, collaboration and working as a team especially for students who had never had such experience before, as they have never participated in any co-curricular activities. For the experienced students, this module allows them to share their experience and guide their inexperienced peers, thus making learning enjoyable and strengthen the spirit of brotherhood *ukhuwah* among them. This important learning experience ensures that every graduate from this medical school has the knowledge and ability to lead and work as a team, which are all important skills for successful medical practice. The detail of this learning module is not discussed in this paper.

Assessment

Teachers need to evaluate their students both to determine whether the lessons were learned and to motivate students to learn what is important. As mentioned before, IIMP is the curriculum for continuous personal and professional development of medical undergraduates to become "Safe Doctors". The main mission is about nurturing medical professionalism that is embedded with Islamic worldview. In implementing IIMP, the teacher's responsibility is to present the Islamic perspective of

medicine by integrating Islamic values and worldview into the body of existing medical and scientific knowledge so as to ensure that the students are presented with one integrated body of knowledge by the same medical teacher who teaches the medical subjects. Student's cognitive knowledge on Islamisation is tested at the end of every block or clinical posting and professional examination in the form of Multiple Choice Questions, short notes and essays.

The Islamic input questions are part of the examination papers. In the pre-clinical year (Year 1 and 2) block and professional examination, it is presented as short notes where student answer one out of the five given questions. In the block examination of the clinical years (Year 3,4 and 5), students' understandings of the Islamic aspects of patient management are tested in the Patient Management Problem (PMP) essay paper. In the final professional examination, Islamic input questions are presented in ten multiple-choice questions. However, evaluating cognitive knowledge on Islamic input in medicine in this manner does not guarantee that students really achieved the desirable learning outcome. Methods for evaluating professionalism are necessary to ensure that the learning objectives are achieved. Both quantitative and qualitative methods are necessary to evaluate student's understanding and commitment to acquire the noble learning outcome of being safe doctors. Thus, a descriptive questionnaire survey to determine the knowledge, attitude and practice of Islamic input among clinical students and medical graduates towards Islamic Medical Program is necessary. Likewise, a qualitative study through interviewing clinical students and medical graduates provide understanding on the impact of the curriculum on the development of attributes of professionalism, namely expertise, ethic, communication and compassion (the 2E's and 2C's). At the moment, the assessment of professionalism achieved by students is inferred from student feedback in a survey on perception of final year students on IIMC in 2009, which studied about the curriculum in general and the learning experiences that they have to undergo. The results were used in the First Review of IIMC in 2010 to improve the implementation of the curriculum. It was found that students prefer hands-on learning activities to didactic lectures, such as the practical ibadah skill by the Department of Orthopedic, Traumatology and Rehabilitation that was highly rated by them. Apart from a change in name, from Islamic Input in Medical Curriculum (IIMC) to Islamic Input in Medical Program (IIMP), the main decision taken was to have more student-centered learning activities and less of didactic lectures.

Three new learning activities were introduced, emulating the success of the "Practical Ibadah Skill" workshop. These are, the "Workshop on professionalism and proper physician etiquette" at the commencement of third year, small group discussion on medical ethics in the fourth year and "Leadership Game" in the final year. The assessment of these learning activities are carried out as student evaluation forms to evaluate their perception, comments and suggestion at the end of each program as well as educational portfolio of the "Leadership Game". Certainly, a detail qualitative research is needed to evaluate objectively the success of the program as a whole, in particular the type of medical professionals that it intend to produce, i.e. whether or not they reach the learning outcome by exhibiting the ideal characters of safe doctors. The closest study we had as to indicate that the curriculum does produce well-balanced doctors was a survey carried out by the Institute of Health Management, Ministry of Health Malaysia in 2008. The unpublished study, entitled, "Pre-employment training of physicians in Malaysia" targeted on housemen surveyed on issues such as preparedness of medical graduates for the transition from medical school to hospital practice, motivation, job satisfaction and communication skills. It is noteworthy that our graduates attained the highest scores in all the items being surveyed. It is hypothesized that what made the difference is the IIMP that our undergraduates underwent as students. Qualitative study is necessary to confirm or refute this hypothesis.

The Way Forward

It is important to showcase and share the experience of IIMP with others. Publication and research activities are very much needed and should be encouraged. Academician had begun writing their experiences in implementing the curriculum. They are encouraged to publish teaching materials that are integrated with Islamic worldview. Chapters in books written by the author on "Professionalism in Anaesthesia from the Islamic perspective" in "Essentials of Anesthesiology for Undergraduates" and "Ethic of CPR from the Islamic perspectives" in "A CPR Guide for Healthcare Providers" are examples of efforts of Islamisation of the teaching materials. Quantitative and qualitative study such as the usefulness of the various learning experiences, the impact on professional attitudes of clinical students and graduates and so on, are currently being studied. Although the Kulliyah of Medicine, IIUM is the pioneer in Islamic medical curriculum in the country, it needs to evaluate its program and undertake the necessary improvements especially on the part of implementation and realization of the learning outcome, which is the nurturing of a "Safe Doctor" within the framework of islamisation of knowledge. It needs to strategize and strengthen the curriculum further.

Producing its own teaching guide is the way forward apart from continuous training of the trainers to improve the confidence of the medical teachers, which is currently in the pipeline. Sharing experiences on Islamic medical education through seminars, conferences and workshops would further enhance the agenda of Islamisation of medical curriculum and practice. Annual update on Islamisation of medical curriculum and practice provide opportunities to share knowledge and experience among Kulliyah members as well as informing about the latest research activities that are carried out. Periodic in-house training for new academic members provides an overview of the program and ensures its sustainability. The establishment of Centre for Islamisation or CENTRIS by the University and Islamisation of Human Knowledge (IOHK) unit at every Kulliyah should enhance research activities in Islamisation of knowledge among the medical teachers. The spirit of IIMP also continues in the postgraduate programs and gives opportunities to islamise research activities and contributes to new understanding of medical practice from the Islamic perspective. Many other universities, locally and internationally have embraced the Islamisation of medicine effort taking this University as the reference institution. Countries like Indonesia, Brunei, Pakistan and Bangladesh have joined the bandwagon of Islamisation of medicine. This provides great opportunities for meaningful cooperation and collaboration to strengthen this agenda.

Conclusion

A holistic medical education is necessary to nurture safe doctors and IIMP is an example of the personal and professional development curriculum, designed to meet this noble learning outcome. The IIMP, that operates within the framework of islamisation of human knowledge that IIUM champions, is an experiment of reformation of knowledge in medicine and its professional practice that describes the way we train doctors according to the worldview of Islam to produce safe doctors who are able to provide holistic care to their patients. The experience gained over the past eighteen years has been very enriching although there are many weaknesses that need to be overcome. Having a standard "Teacher's Manual", which is in the pipeline that would ensure consistency in implementing the curriculum, may solve some of the problems in its implementation.

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