

**Abstract:** There has been an ascending trend in executing research projects in many developing countries in the past few decades along with improved health and in response to it, but these developments have not taken place at a rate commensurate with that of moral values. The foundation of correct clinical medicine was based on research many years ago, and the use of human subjects is necessary in many clinical studies. Therefore, supervision of compliance with all moral principles and codes in research seems to be necessary in order to protect the rights and welfare of human subjects and to prevent them from being exposed to possible risks resulting from research. In fact, the Nuremberg Code, the Helsinki Declaration, and the Belmont Report established ethical principles, rules, and codes in life sciences research to upgrade research qualitatively and quantitatively and to prevent any harm befalling human subjects in research projects. Many years have passed since the development of the Helsinki Declaration, and most countries of the world feel they are obliged to follow the principles mentioned in it. Nevertheless, a large number of studies have shown that, in spite of the great potential in executing research projects, the execution and examination of, and the supervision over, research projects are not desirable, especially in Middle Eastern countries. Islam has always emphasized individual abilities for making commitment to perform different duties. Moral intelligence is an applicable background in realizing research ethics. Reinforcing this ability, we can therefore contribute to the development of behavior according to medical and research ethics.

**Key Words:** Ethics, Islam, Developing Countries

**ETHICS IN ISLAM**

Philosophers divide ethics into two parts; theoretical ethics which deals with studying the moral characteristics and behaviors and responding to the questions and deductions about goodness or badness of actions and practical ethics that is an attempt for achieving the desired ethical condition and moral virtues [1, 2]. Allama Mohammad Hossein Tabatabai, one of the eminent scholars of Islam, states that ethics is the technical discussion of human qualities and its objective is to differentiate between moral virtues and moral vices, so that humans can identify them and try to approach virtues and keep away from vices [1]. However, what is important is that humans are not born ethical and they should be educated. From the perspective of scholars, an educated person is one that what is called virtue has been rooted in his mind and behaviors. Prophet Muhammad (PBUH) says, “I have been sent for education” or “I have been sent to promote good morals”. This implies that education and training together have been strongly emphasized by Islam. Hence, people who are involved in the training and education of the public first of all need to know and understand the ethical obligations related to their profession in order to perform their job duties without the need for any external observer and then, they should be aware that they also have responsibility of moral education of individuals, so they should be committed to practical ethics [3].

**MEDICAL ETHICS PHILOSOPHY**

Medical ethics philosophy is part of medical ethics, which tries to use philosophical analyses to explain the right and the wrong in practical field of various subjects and medical health care. Traditional medical ethics was mainly based on the thoughts and ideas of eminent philosophers like Socrates, Plato, and Aristotle [4,5]. They had learned ethics with medical sciences, which was defined as taking care of ego and the art of living. At the time, Hippocratic was the first one who developed a famous oath, in which ethical principles were blended into medicine. In fact, Hippocratic’s oath constitutes a moral undertaking for texts and applying ethical principles of medical profession [6]. Religious teachings have also had an irreplaceable role in the formation of medical ethics in human societies.

Islam and Islamic scholars, especially in the flourishing period of Islamic civilization, have always paid a special attention to ethics in medicine and this is well evident in the treatises and books written by scholars at that era. One of the most valuable manuscripts of this period is the medical letter of

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advice written by Ali bin Al-Majusi Ahwazi which is more comprehensive than Hippocratic’s Oath [7,8]. However, with the emergence of various theories in the field of ethics philosophy, medical ethics was also influenced. The most influential philosophical schools in this area included Kantian task-based school, profit-based ethics school, and virtue-based ethics school [9]. Making practical decisions in medical ethics are typically requires a clear understanding of the relevant philosophical issues. Hence, detailed explanation of principles and foundations of determining the good and evil in medical ethics seems to be an undeniable necessity. To make ethical debates useful and applicable, appropriate criteria for understanding, practice, and decision-making in a way that people who believe in ethics acknowledge it. In western countries, four key principles are now being proposed and used to guide ethical decision-making which include individual authority, usefulness, non-harmfulness, and justice [10,11]. This theory is one of the most common hypotheses in medical ethics which is used for resolving the ethical problems and issues [12]. Since Islam has propose more comprehensive and sometimes different views from the western culture in each of the four principles mentioned above, determination of a specific framework for ethical decision-making in medicine for Muslim physicians finds a special important. This is the important duty of Shite philosophers, ethics scholars, jurists, and medical scientists to study and review the various issues and debates raised and develop a comprehensive, acceptable, and common framework in Islamic communities. Medical ethics education for physicians is one of the most important educational needs in medicine which has evolved over the recent decades. Undoubtedly, medical education alone is not enough for strengthening and developing the moral competencies necessary for a good doctor. The need for medical ethics education for physicians and health care staff is widely and increasingly felt and it seems now is the right time for proper placement of medical ethics in medical curriculum. Today, in many countries at all levels of medical education, including general, specialized, and even retraining courses, medical ethics is taught through new approaches. The present paper aims to comprehensive identify and discuss different approaches to medical ethics training in the world, describe the procedure of medical ethics training in Iran, and finally propose practical recommendations for promoting this process. Due to the high interdependence between culture and medical ethics, the Islamic beliefs and behaviors of people and medical staff must be taken into account in this regard (13-16).

THE IMPORTANCE OF ETHICS IN RESEARCH

There has been an ascending trend in executing research projects in many developing countries in the past few decades along with improved health and in response to it, but these developments have not taken place at a rate commensurate with that of moral values (17). The foundation of correct clinical medicine was based on research many years ago, and the use of human subjects is necessary in many clinical studies (18). Therefore, supervision of compliance with all moral principles and codes in research seems to be necessary in order to protect the rights and welfare of human subjects and to prevent them from being exposed to possible risks resulting from research. In fact, the Nuremberg Code, the Helsinki Declaration, and the Belmont Report established ethical principles, rules, and codes in life sciences research to upgrade research qualitatively and quantitatively and to prevent any harm befalling human subjects in research projects (19). Many years have passed since the development of the Helsinki Declaration, and most countries of the world feel they are obliged to follow the principles mentioned in it. Nevertheless, a large number of studies have shown that, in spite of the great potential in executing research projects, the execution and examination of, and the supervision over, research projects are not desirable, especially in Middle Eastern countries (20,21). For example, an investigation on the degree of compliance with moral principles in research in these countries indicated that about 28% of the studies were approved without receiving ethical approval, there were no plans for obtaining consents from the subjects in many of the proposals, and the fundamental and basic parts were omitted from many of the consents. In another study, 25% of researchers in developing countries said no institution such as the ministry of health, an ethical committee, or a research council examined their research. In Iran, the development of ethical guidelines and codes for the protection of human subjects in medical sciences research was started in 1997 and, following that, national and regional ethical committees were set up. The purpose of these committees was to observe compliance with religious, legal, and ethical standards in all epidemiological and clinical research, in studies related to basic sciences, and in research conducted in the health-treatment system, to protect human subjects against possible risks resulting from research, and to protect their rights and the rights of researchers and organizations conducting research (22).

THE DOMAINS OF MEDICAL ETHICS IN RESEARCH

The six guides on “research ethics” are presented to researchers for analysis and criticism hopefully to achieve more comprehensive and accurate ethical guides. These research domains include genetic research, special groups’ research, animal research, gamete and fetus research, tissue and organ transplantation research, and clinical practices.[23] “The ethical guide on genetics research” is mainly

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3777
about data collection, process, usage and saving in genetics, human proteomics and biological samples for a research purpose. Actions will be taken according to current national laws in cases of research, discovering and following the punitive crimes and ancestry studies [24]. “The ethical guide on special groups’ research” includes the ethical points in different areas. Mental disabilities, kids, pregnant women and neonates, urgent cases and prisoners are mentioned here with some notes. “The ethical guide on animal research” is compiled on the animal usage in research contributing greatly to solve chemotherapeutical problems related to human health.[25, 26] Concurrent with the growth, development and evolution in technology, different ethical dimensions of using gamete and fetus has also become controversial. Answering these issues requires serious and exact thoughts. There are various ideas regarding the position of human gamete and fetus; however, they must not be considered only as tissues according to “the ethical guide on gamete and fetus research”. Human tissues and organs can also be applied for medical, educational and research purposes. Hence, one of these guides, “The ethical guide on tissue and organ transplantation research”, is allocated especially to research on tissue and organ transplantation [27, 28]. “The ethical guide on clinical practices” is composed of a conscious testimonial and especial cases in clinical practices. It also contains the indemnification laws for the damaged ones during clinical practices [29, 30].

**ISLAM AND INDIVIDUAL ABILITIES FOR ETHICS IN RESEARCH**

Islam has always emphasized individual abilities for making commitment to perform different duties. Moral intelligence is an applicable background in realizing research ethics. Intelligence is defined as a universal concept related to the perceptive ability in scientific texts [31]. It has generally been related to the thinking and learning abilities and has often been applied to describe the events and the usage of skills [32]. People are different in their levels of intelligence caused by a mixture of variables such as their nature, heritage and acquired traits [33]. Ethics is also defined as a set of principles often applied as a charter for guidance [34]. Moral concepts, in fact, indicate forms of human life, describing the guiding values of people’s decisions. Being moral is known as a guiding capital for human communities and forms a pre-condition for an effective social life [31]. Many peoples’ behavior and actions are influenced by their moral values and are founded in ethics. Ignoring ethics in organizations and weakness in observing the moral principles can therefore cause many problems and question organization legitimacy and actions. Hence, moral intelligence is the ability to distinguish right from wrong. This type of intelligence can act as a kind of direction finder for actions in the nowadays-modern global environment, based on defined universals. Moral intelligence not only provides a strong and defensible framework for human action, but also has many applications in the real world. In fact, it guides all other types of human intelligences for performing valuable actions. Borba defines moral intelligence as the capacity of distinguishing right from wrong, having moral certitudes and act accordingly to behave correctly and honorably [35]. It indicates the human mental capacity of determining how to relate humane universal principles to his own values, purposes and actions. It also indicates an individual’s enthusiasm and ability for establishing some criteria and even subjects such as being effective, above his own interests, at the focus of individual reactions [31]. Reinforcing this ability, we can therefore contribute to the development of behavior according to medical and research ethics.

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