

Review

Medical ethics in the Islamic Republic of Iran

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الأخلاقيات الطبية في إيران

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الخلاصة: تترافق الاتجاهات الحديثة في مجال التكنولوجيا الطبية بمناقشات متزايدة حول الجوانب الأخلاقية لمجالات المعرفة الحديثة في العديد من المجتمعات، ومن بينها جمهورية إيران الإسلامية. ولأخلاقيات الطب تاريخ طويل في هذا البلد. وقد أولى كبار الأطباء الإيرانيين اهتماماً خاصاً لتعليم وممارسة الأخلاقيات التقليدية المعروفة. وقد تم على مدى العقود القليلة الماضية، قطع خطوات عملاقة في ميدان الأخلاقيات الطبية والبيولوجية، ولاسيما في مجالات التعليم والتدريب والأبحاث والتشريع. ويقدم الباحثون في هذه الورقة تاريخاً موجزاً لأخلاقيات الطب في إيران، كما يتعرّضون إلى الأنشطة المعاصرة وبعض الموضوعات المتعلقة بالخطط المستقبلية.

ABSTRACT Recent trends in biomedical technologies have been associated with increasing discussion about ethical aspects of the new knowledge in many societies, including the Islamic Republic of Iran. Medical ethics has a long history in our country, and great Iranian physicians laid special emphasis on teaching and practising traditional ethics. In recent decades, great strides have been made in biomedical ethics, especially in the fields of education, research and legislation. We present a brief history of medical ethics in our country. Current activities and topics of future plans are also discussed.

L'éthique médicale en Iran

RÉSUMÉ L'évolution récente des technologies biomédicales a été associée à des débats croissants autour des aspects éthiques des nouvelles connaissances dans de nombreuses sociétés, y compris en République islamique d'Iran. Notre pays a une longue tradition d'éthique médicale, et de grands médecins iraniens ont accordé une importance particulière à l'enseignement et la pratique de l'éthique traditionnelle. Ces dernières décennies, de grands progrès ont été accomplis dans le domaine de l'éthique biomédicale, notamment en ce qui concerne la formation, la recherche et la législation. Nous présentons un bref historique de l'éthique médicale dans notre pays. Les activités en cours et les thèmes abordés dans les plans pour l'avenir sont également examinés.

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Introduction

Biomedical advances, new medical technologies and public concern about ethics in recent decades have stimulated a renewed interest in medical ethics. Advances in genetics, stem cell research, and organ transplantation are some of the medical issues that have raised concern. An emphasis on ethics has also been expressed by members of the medical and religious professions in the Islamic Republic of Iran.

Recent major biomedical activities in the Islamic Republic of Iran, with the emphasis on medical ethics, are reviewed in this document.

The Islamic Republic of Iran and the history of medical ethics

The Islamic Republic of Iran is a Middle Eastern country with a land area of 1 648 000 km² and a population of 67 million. The per capita gross domestic product (GDP) was about 7219 Intl \$ in 2002, with health expenditure at 6% of GDP [1,2].

The Islamic Republic of Iran (the ancient Persia), a country with one of the oldest civilizations of the world, promotes today the “dialogue among civilizations”. In a response to the proposal made by the president of the Islamic Republic of Iran in September 1998, the United Nations General Assembly declared 2001 as the year of Dialogue among Civilizations [3]. The Iranian government subsequently founded the International Centre for Dialogue among Civilizations (ICDAC) in February 1999 [4].

The name Iran is associated with great scholars such as Avicenna, from whom not only the Islamic Republic of Iran but also Europe and several other countries of Asia

have benefited. The combination of Iranian culture and Islam, which emphasizes the acquisition and propagation of knowledge, led in the past to the golden period of scientific achievement, particularly in the field of medicine. Great Iranian Muslim scholars laid huge emphasis on teaching and practising ethics. Razi (865–925 AD) was one of the foremost Iranian physicians who described the basic principles of medical ethics. Ali ibn Abbas Ahvazi (930–994 AD), known as Haly Abbas to the Europeans, authored a book on medicine entitled *Kamil al-tana'at al-tebbiyah* (The complete medical art). Matters related to medical ethics are discussed in detail in the first chapter of this book [5]. Ibn Sina (Avicenna) (981–1037) also wrote valuable guidelines on teaching and practising ethics for physicians.

Medical ethics was a part of the curriculum for medical students in traditional Iranian medicine in medieval times, and great Iranian physicians have paid special attention to ethics in their practice, teaching and manuscripts. Persian medical ethics was “modern” in speaking not only of the cognitive but also of the characterological attributes of a good physician [6,7]. After the introduction of modern medical education in the Islamic Republic of Iran, the first college of medicine, Dar ul-Funoon, was established in the nineteenth century. With the foundation of the faculty of Medicine in Tehran University in 1934, education in medical ethics comprised a part of medical student education courses [8].

The first Farsi book of medical ethics, *Medical ethics and customs*, written by Dr M.N. Etemadian was published in 1963 [9]. Topics such as doctor–patient relationship, confidentiality, abortion and euthanasia were thoroughly discussed. Currently, medical ethics is taught in 19 lectures (2 credits) to medical students in Iranian medical universities at national level. Books

and guidelines have been printed and are a part of the curriculum. Problem-based case studies for teaching medical ethics were introduced 2 years ago. A book on this topic, *Pezeshk va molahezat-e akhlghi* (Health care professional and ethical issues), using a detailed case study approach has recently been published in Farsi [10].

In the Islamic Republic of Iran, ethical issues are discussed among physicians, legal experts and religious scholars. The principles of bioethics and solutions to ethical problems are therefore derived from the Islamic legal rulings. They are updated in the light of the Holy Quran, the traditions of the Prophet of Islam ﷺ, the consensus of scholars, and human wisdom or intellect.

Iranian Islamic culture essentially emphasizes altruism, benevolence to fellow human beings, seeking perfection, life after death and association of a human being with God and the universe.

Principles of Islamic ethics

Special attention has been paid toward moral ethics in Islam [11]. The essential core of Islamic teachings is the perfection of ethical conduct of a human being. The prophet of Islam, Muhammad ﷺ, has said, "I have been appointed as prophet of God for the completion and perfection of moral ethics," (Ali al-Hakim al-Nisaburi (d. 405 AD), *Al-Mustadrak ala al-sahihayn* (The supplement), Vol. 2:282). The road to moral and spiritual perfection is described as the "quest for God" in Islam. The seekers after God must satisfy 2 conditions: their actions must be governed by the prescriptions or ordinances of the "divine law" (*al-sha'ra*), and they must ensure that God is constantly present in their hearts [12]. Man is a being with dual aspects, soul and body. Man's reality is not merely his physical nature. Human reality depends on the eternal soul. Man has certain perfections by virtue of his

spiritual self. Any act that is consistent with man's spiritual perfection is valuable, and any act that is irrelevant to the higher aspect of the soul is an ordinary and mediocre act [13]. In accordance with this approach, virtues like honesty, truthfulness, beneficence and the like are notions which have affinity to the higher self. A most significant Islamic principle is: "Man has an innate nobility and sublimity which is the same as his spiritual being and the divine breath" [13]. Although physically and naturally all men live in different conditions and situations and with varying physical needs, they are equally situated in respect to their spiritual perfection. Inevitably, in that domain likes and dislikes and notions of what is good and evil assume a uniform, universal and permanent aspect. All perceptions of good and evil signify a thing's relation with its perfection. Nevertheless such perfections of good and evil can be universal and permanent [13].

On the other hand, God gave man life and with that also gave man the freedom and the authority to do good or to indulge in evil. God also gave man the basic knowledge of good and bad at the time of his inception [14]. The Holy Quran (91: 7-10) says: "The human soul—the way He moulded it and inspired it with knowledge of its evil and its good—bears witness to the fact that indeed he who cleanses it (of all impiety) shall be successful while he who corrupts it shall face doom."

It is for this reason that ethical values like justice, honesty, trustworthiness and truthfulness have never been questioned philosophically, even if there is considerable practical deviation from these values or a huge difference in their practical application [14].

Freedom is among the highest of human values and is above man's animal nature and material values [15]. A human act is valuable if it is done by informed freedom.

From the Islamic viewpoint, people are autonomous in the decision-making process if they are able to understand and make intelligent decisions for themselves which are intentional and voluntary [16].

In conclusion, in Islamic ethics, the 4 principles of medical ethics (beneficence, non-maleficence, autonomy and justice) and other similar values such as freedom, helping fellow human beings, etc. are completely acceptable. But their interpretation and practical application may be different from those of other religions and cultures. For example, since Islam places more emphasis on respect to all human beings, the interpretation of the principle of "respect to autonomy" may be limited in some situations.

Bioethics activities in the country

In the current decade, great efforts are being exerted in medical ethics education, research and legislation in the Islamic Republic of Iran.

Research and education

Recent developments in medical ethics in the field of research started with the establishment of a medical ethics research centre, since when other activities at national and local levels have been gradually carried out.

Establishment of a medical ethics research centre

The medical ethics research centre was established by the Ministry of Health and Medical Education in 1993. At present, the centre is known as the Office of Study for Humanistic and Islamic Sciences on Medicine and Medical Ethics [17]. The goals are:

- organizing discussions on medical ethics at university level;
- training specialists in medical ethics;
- research on various aspects of contemporary medical ethics;
- publication of textbooks for the medical school curriculum;
- establishment of a council to address ethical issues in medicine and research in accordance with Islamic rules and universally recognized codes.

The first international conference on medical ethics was organized in Tehran in 1993 by the centre. Collection, organization and categorization of scientific publications on medical ethics were accomplished in the conference. The proceedings of the conference were published as a series of books (7 volumes) in Farsi [18].

From 1993 onward, seminars and courses on medical ethics for physicians, nurses and pharmacists were established in different regions of the country. Weekly workshops on biomedical ethics for physicians and specialists were also organized about various topics related to current important issues.

The National Committee for Medical Research

This committee was established in 1998 with the following responsibilities:

- to apply Islamic, legal and moral principles to biomedical research;
- to guard human rights and legally protect the participants, the researchers and the institutes involved in research;
- to promote mandatory inclusion of advisors on ethical issues in all research projects at universities, private research foundations and industries.

Members of the National Committee are the Deputy for Research of the Ministry of

Health and Medical Education, head of the National Medical Research Council, head of the Medical Ethics Research Centre, a clergyman conversant with medical issues, 2 nationally known researchers and an epidemiologist or biostatistician.

Regional committees for ethics in medical research

The establishment of the national committee paved the way for the organization of regional committees in over 40 medical universities throughout the country. These committees undertake the supervision and observation of national and international laws on medical ethics in research. They approved over 305 graduate level research projects during 1999–2001.

Local ethics committees have also been established in over 70 research centres involved in biotechnology, molecular and cellular biology and related fields [17]. The current trend is towards approving a common guideline for all ethics committees throughout the country.

National codes of ethics in biomedical research

In 2000, a guideline comprising 26 National Codes of Ethics for biomedical researchers was prepared by Ministry of Health and Medical Education. These codes are in accordance with the international declarations such as the Council for International Organizations of Medical Sciences guidelines [19] and the Helsinki Declaration [20] and have been customized according to the code of religious laws in shi'a (the official religion in the Islamic Republic of Iran) and specific cultural issues of the Iranian population. The code for the protection of human participants in medical research (to be used by the local committees of ethics in medical

research for making ethical judgments) is as follows.

- Informed consent in all investigations where human beings are involved is mandatory; in the case of interventional research, this should be in the form of a written statement.
- Nothing can justify exposing a human being to unnecessary harm or restricting his/her volition.
- The consent should be both informed and voluntary. It should be verified that there are no predictable risks to participants that are more than minimal. Behaviours such as threats, temptation and coercion will also annul the consent. Whenever these conditions are not observed, the scientist is accountable for any possible damage.
- In all studies where the researcher has a higher rank than the participant(s) in the study, the reason for selecting the participant(s) must be approved by the Committee of Ethics in Research. The situation requires that a trusted third person take the consent.
- In all medical research, therapeutic or non-therapeutic, the scientist is obliged to inform the participants in an appropriate way about the duration of the research, the methods used and the possible harms and benefits. The scientist should also give accurate answers to his/her participants' questions. These should be reflected in the consent form.
- Before any medical research can be done, preliminary actions should be executed to minimize harm to research participants and to maintain health. Each participant should have his/her own insurance in the case of a research mishap. In addition, all scientists should be covered by some indemnity insurance.

- The way that results of a study are reported should guarantee all rights of every related element (research subject, researcher, the research itself and the related institution)
- The participant should be aware that she/he can withdraw from the research project at any time. She/he should also be informed about and supported for any possible harm caused by abandonment of the research.
- If the subject's knowledge of certain information affects the validity of research result, at the discretion of the researcher, the subject must be denied such information upon the approval of the ethics committee. Comprehensive arrangements must however be made to inform the subject of such information at an appropriate time.
- It is the duty of the scientist to make sure that the participant is informed; informing by other persons will not obviate this responsibility.
- Including an uninformed participant is prohibited unless the participant waives his/her rights.
- In clinical trials where groups of controls and cases are necessary, participants should be aware that they are participating in an investigation where they will be placed in one of the groups by chance.
- Research on human participants is not justified unless the benefits to be derived outweigh the risks. The arbitrators who will judge the issues are committees of ethics in medical research, who will get advice from related specialists.
- In non-therapeutic research, the level of harm participants are exposed to should not surpass the level that the participant may face in everyday life.
- Exposing an individual to harm is not justified in any circumstances solely by affirming that the procedure is practical, simple, fast, comfortable, or cost-effective.
- Whenever a research project would expose participants to possible risks and the participants are of low socio-economic status or from less-educated groups of the community, the appropriate committee should verify that the patient understands the implications of participating.
- It is the scientist's responsibility to ensure the confidentiality of the participants and to set up appropriate measures to ensure this will not be breached. If there should be any obstacle to this, the scientist must inform his/her participants.
- In research in which the participant is unaware of the drug used, the scientist must establish measures to provide the required information to the participant and/or his/her physician in the event of an emergency.
- Any possible harm as a result of participation in a study should be indemnified according to enacted laws.
- Research methods should not violate the accepted morals of society.
- When there is no obvious advantage, it is the committee of ethics in medical research that decides which method should be applied and how the selection of participants (from prisoners or certain groups such as minors, mentally retarded individuals or psychotics as opposed to normal individuals) should be made.
- Participation of prisoners is not prohibited as long as the results of the study are exclusively applicable to those in jails. A written statement of consent should be obtained in this case.

- The scientist cannot include prisoners as “preferred subjects” merely because they are available for research projects.
- Participation of people with cognitive impairment or those who are not legally able to enter into contracts, such as children, is the responsibility of their guardians, who will have to give their permission. This principle will also apply if a participant develops any sign of cognitive impairment or psychosis during a research project, in which case previously given consent would be void. On the other hand, when a minor reaches full legal majority, a written statement of consent must be obtained from him/her.
- Performing non-therapeutic investigation on embryos (from the time of fertilization until the end of the eighth week of gestation) is not permitted unless such studies bring beneficial consequences to the embryo and/or its mother [21]. Written informed consent, both from the mother and the guardian of her embryo, must be obtained in this case.
- When it seems necessary, there is no prohibition against study on aborted embryos when it is considered necessary, provided that the legal codes of practice are observed.

Approval and financial support of each project will be confirmed only when the above code has been respected.

Publications

A number of reference books are available for medical students in the Islamic Republic of Iran. *Medical ethics with a brief overview of medical history* is one such reference book, which was published by the Ministry of Health and Medical Education in collaboration with the faculties of the Tehran University of Medical Sciences in 1991 [22].

Since 1993, great achievements have been made in authoring, translating and publishing medical ethics books and other sources. Over 30 foreign texts and books on biomedical ethics have been translated in that time. The book *Ethics in medical research* by Trevor Smith has been translated recently (2002) [22]. In the preface, the correlation between ethics and research, history of international laws, philosophy of ethics in Islam, status of ethics and research in the Islamic Republic of Iran are discussed in detail.

A journal entitled *Teb va tazkyeh* (Medicine and purification) has also been published by the Ministry of Health and Medical Education since 1993. The first book in Farsi about medical, legal, ethical and religious aspects of organ transplantation in the Islamic Republic of Iran published in 1999 [23]. A further book on this issue was published in 2004 [24]. A problem-based approach for teaching medical ethics was introduced recently in a book in Farsi on health care and professional and ethical issues using this approach [10].

National bioethics committee

The Iranian national commission for the United Nations Educational, Scientific and Cultural Organisation is drafting a guideline for the constitution of a national bioethics committee [17]. The committee will include representation from the Ministry of Health and Medical Education; the Ministry of Science, Research and Technology; the Organization for the Protection of the Biological Environment; the Ministry of Agricultural Jihad; the Legal Medicine Organization of the Islamic Republic of Iran; the *Hozehelmieh* (Seminary of religious jurisprudence) of Qom; the Iranian Academic Centre for Education, Culture and Research; and the Medical Council of the Islamic Re-

public of Iran (a nongovernmental organization). Two specialists in the philosophy of ethics, 2 lawyers, 2 biotechnologists, 2 biologists, and 1 specialist from each of immunology, genetics, pharmacology, biochemistry, psychology and epidemiology will comprise the permanent members [17]. This committee will discuss important issues of bioethics in the country.

Bioethics legislation in the Islamic Republic of Iran

The official religion in the Islamic Republic of Iran is Shi'a, a branch of Islam, and fatwa (religious opinion about whether an action is permissible or not) of religious scholars is essential for the success and acceptability of an act by the general public. There have been positive fatwas about bioethical issues such as organ transplantation, abortion and genetic research in the Islamic Republic of Iran, some of which have been implemented into law by parliament in recent years.

Organ transplantation and brain death

Organ transplantation has a long history in the Islamic Republic of Iran and the country

has one of the most successful programmes in the Middle East (Table 1). Data comparing organ transplant rates in Asia, Europe and the United States of America with those in the Islamic Republic of Iran are shown in Table 2 [25].

Ethical problems associated with organ transplantation have been important issues in recent years all over the world. In our country, altruism based on religious ethical teachings and the traditional cultural values of helping fellow human beings have a significant place in the context of organ donation. In the Holy Quran it is mentioned: "... and whosoever gives life to a soul, it shall be as if he has given life to all mankind" (5: 32). In 1998, the consensus of physicians and religious leaders in the Islamic Republic of Iran paved the way for advancement and rapid progress for a nationwide organ transplantation programme. In this regard, parliament approved the Deceased or Brain Dead Patients Organ Transplantation Act (Act. H/24804-T/9929, June 4 2000) (Table 3). According to the Act, cadaver organs and tissues and organs of brain-dead persons can be used for transplantation if the

Table 1 History and current data for organ transplantation in the Islamic Republic of Iran

Organ or tissue	First transplant	Total no.	2002		
			Total	Living donor	Cadaver donor
Cornea	1935	> 18 000	2581	–	2581
Kidney	1967	> 14 000	1681	1585	96
Bone marrow	1990	> 800	170	170	–
Liver	1993	55	23	1	22
Heart	1993	45	11	–	11
Lung	2001	4	1	–	1
Heart + lung	2002	1	1	–	1
Pancreas + islet cells (preliminary studies)	1999	–	–	–	–

Table 2 Comparison of transplant rates in the year 2000 in different geographic regions

Region	Population (millions)	No. transplants/million population		
		Kidney	Liver	Heart
Islamic Republic of Iran	65	24	0.3	0.2
Asia	3600	3	0.3	0.03
Europe	520	27	10	4
United States of America	260	52	19	8

person expressed in his/her will a desire to donate organs, or with the consent of his/her family and definite establishment of brain death by specialists.

Usually organ transplantation is assisted by charity organizations and there would be a gift to the donor as well. The law relating to organ donation was approved by the government of the Islamic Republic of Iran in 1997.

Genetic research

There are few centres for genetic research in the Islamic Republic of Iran but the numbers are increasing. Given the importance of issues such as gene therapy, confidentiality of genetic information, sex selection before birth, eugenics, and cloning, there is a necessity for the adjustment of guidelines. There is no absolute restriction on

Table 3 Deceased or Brain Dead Patients Organ Transplantation Act, April 2000

Single article	Hospitals well equipped for transplantation of body organs shall be authorized, on obtaining permission in writing of the Ministry of Health and Medical Education, to use healthy organs of deceased patients or patients whose brain death is established by professional experts for patients whose lives depend on the transplantation of those organs only if consent was expressed in the will of the deceased or brain-dead patient for such transplantation, will of the deceased or brain-dead patient for such transplantation,
Sub article 1	The brain death shall be established at well-equipped government hospitals by professional experts, who are appointed by the Ministry of Health Medical Education to hold office for 4 years.
Sub article 2	Members of teams who diagnose the brain death shall not be members of transplantation teams.
Sub article 3	Physicians who are members of the transplantation team shall not be legally bound to pay blood money in compensation for the wounds to the dead body.

The executive by-law of the aforementioned Act shall be prepared within 3 months of the notification of the Act by the Ministry of Health and Medical Education and the representative of the judiciary in coordination with the Medical Association of the Islamic Republic of Iran and the Special Diseases Foundation.

genetic research in the Islamic Republic of Iran; moral principles and ethical codes must, however, be completely followed, particularly compulsory informed consent, informed choice, respect for individual autonomy, anonymity (no name and address, use of coding), relative risk assessment, confidentiality and privacy.

The Molecular Medicine Network is a newly founded organization whose goal is coordination and observation of research centres in regard to ethical issues [17].

Stem cell research and cloning

Human reproductive cloning is prohibited in the Islamic Republic of Iran. Embryonic stem cell research has, however, recently been approved by the religious authorities and some projects have been started.

Assisted reproductive health

At present, there are more than 15 active infertility centres in the country. In vitro fertilization and intracytoplasmic sperm injection are permissible and have been done in The Islamic Republic of Iran. The first infertility centre was established in Yazd (in the central region of the country) in 1986 and the first Iranian baby conceived by in vitro fertilization was born in 1989. Recently, parliament approved the Embryo Donation to Infertile Spouses Act of July 2003 (Ref. No. 33704, August 5, 2003). By virtue of this law, the donation of embryos is permitted under certain conditions.

Abortion

The majority of scholars consider life to begin at the time of conception. A mother is free to decide herself if she wants to conceive. After that, God is the owner of the life of that baby and she is only a carrier. Abortion is considered equivalent to murder, and is not ordinarily permitted. Therapeutic abortion is permissible before the end of the

16th week of gestation if there is a danger to the life of the mother. Parliament ratified the Therapeutic Abortion Act recently (Therapeutic Abortion Act. Ref. No. 2/85876, June 21 2005). Based on the act, therapeutic abortion in the above-mentioned circumstances will be permissible with the confirmation of 3 gynaecologists and the approval of the Legal Medicine Organization. This act will pave the way for therapeutic abortion under circumstances with such criteria as definite diagnosis of untreatable disorders, unusual problems for the family and life-threatening conditions for the mother. The Legal Medicine Organization has defined 51 fetal and maternal disorders that could be included in this bill.

Future of bioethics in the Islamic Republic of Iran

Considerable plans and activities are being carried out by the Ministry of Health and Medical Education and also the Ministry of Science, Research and Technology. The most important topics are:

- implementation of “nationwide strategic planning for medical ethics”;
- maintaining and strengthening a nationwide bioethics network in collaboration with intellectuals, philosophers, legal experts, sociologists, scholars and physicians;
- the establishment of a National Medical Ethics Information Centre and Library;
- planning special courses at master’s level and a PhD programme in medical ethics, with special attention to Iranian Islamic culture;
- organizing workshops on ethics in biomedical research;
- promoting dialogue among diverse groups on medical ethics;

- designing coordinated ethical codes with all stakeholders.

We hope that this document will encourage physicians, lawyers and religious

scholars to take a greater interest in the different issues of bioethics in the Islamic Republic of Iran.

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