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Case Study of Gamete Donation and its Place in the
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Durham
University

Anthropology Department

***Medical Ethics in Theory and Practice
in Iran:***

***A Case Study of Gamete Donation and its
Place in the Curriculum of the Tehran
University of Medical Sciences***

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By

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Qualification degree: Master

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Abbreviations

ARTs: Assisted reproductive technologies

DI: Donor insemination

IVF: In vitro fertilization

ICSI: Intra cytoplasmic sperm injection

CCMECP: Central Committee of Medical Ethics Curriculum Planning

HFEA: Human Fertilization and Embryo Act

MOHME: Ministry of Health and Medical Education

MEHRC: Medical Ethics and History Research Centre

NRTs: New reproductive technologies

TUMS: Tehran University of Medical Sciences

WHO: World Health Organization

Glossary

Aberou: Face (literally is 'the water of face')

Fiqh: Islamic jurisprudence

Fatwa: Islamic religious ruling

Ghabih: Despicable

Ibn haram: Illegal child

Mahram: People who are religiously prohibited from marrying forever. For example, a man cannot marry his mother, daughter, sister, maternal aunt, paternal aunt, niece, mother in-law or daughter in-law; the equivalent relatives are similarly prohibited for women.

Marja' al-taqlid: Literally, "an authority to be emulated," designating the highest ranking authorities of Twelver Shiite community. This authority and power depend on two theoretical structures: the first is *ijtihad*, the making [of] religious judgment and interpretations" "the theory states that although the fundamentals of *Shai'ah* (the divine law) are definitively known, its details are uncertain and difficult of access, a matter of (informed) opinion, not knowledge. The second theoretical structure supporting *marja' al-taqlid* is the delegation of juristic authority to those who best know the *Shai'ah*, namely the *maraji'* (plural of *marja'*).

Muta'ah: Shiite term for temporary marriage. It is often a private and verbal contract between a man and an unmarried woman [Shiite] Muslim, Christian, Jewish or Zoroastrian (virgin, divorced, or widowed).

Orph: Convention

Sighe: Temporary marriage in Persian

Taqlid: "People who are not trained in *ijtihad*, the *amah* (common people), are dependent on the *mujtahids* and must submit to their ruling. This submission is known as *taqlid* and should be offered to the most learned jurist".

Zina: Adultery

ABSTRACT

Iran is the only Islamic country in the Middle East which undertakes gamete donation, an assisted reproductive technology which has developed in the past 30 years. This study addresses the current situation and future potential of gamete donation in Iran in the context of the various cultural, legal and religious dilemmas which accompany it. This project utilizes a mixed methods approach, including informal group discussion and participant observation. Additionally, semi-structured interviews were conducted with practitioners (N=12) in three fertility centres as well as with the members of the Planning Committee of the Medical Ethics Centre of Tehran University of Medical Sciences (TUMS) (N=7). General information about the centres was also collected using a questionnaire (N=3).

The results of the study suggest that the practice of gamete donation can result in bioethical issues in the legal, socio-cultural, political and religious contexts in Iran. The identity of a child resulting from gamete donation is an important legal issue that overrides other issues such as inheritance. In addition, gamete donation creates new categories of relatedness involving genetic and social factors that generate socio-cultural complexity and ambiguity. The socio-cultural context in Iran may create specific stigmas and social pressures for the child, donor and recipient. Other issues that might occur include the exploitation of the donor, harassment and blackmail of the recipient, commercialisation of the whole procedure, and incest.

In addition, the varieties of *fatwas* that have been raised in relation to gamete donation generate an unclear and ambiguous religious situation for patients, donors and physicians. Moreover, the results show a gap between permitting gamete donation by *fatwas* and its practice. The lack of specific laws, guidelines, unique codes of practice, and health policies related to gamete donation not only causes problems related to the practice of gamete donation, but also has considerable socio-cultural repercussions in Iran.

This thesis also considers how the medical ethics curriculum of Tehran University of Medical Sciences can be adapted and further developed to address the issues raised by the use of this new biotechnology in the Iranian context. Analysis of the current medical ethics curriculum at TUMS, demonstrates that it offers physicians an ethical framework and also provides training related to some of the bioethical issues which are involved in gamete donation practices, although gamete donation has not been specifically included in this curriculum. In the absence of this type of medical ethics curriculum,

gamete donation practices continue to be considered in a haphazard and informal way during teaching rounds in the clinical years.

Chapter1

Introduction

Current advances in biotechnology and biomedicine have brought about major developments in treatment options. However, these novel developments have frequently been central issues in scientific debates because they raise significant bioethical issues that cross disciplines. Assisted Reproductive Technologies (ARTs) create opportunities to overcome infertility by making gamete donation possible. In the gamete donation procedure, the egg of a recipient or donor is inseminated with sperm from a donor or from the recipient's partner. Subsequently, the fertilized egg is transferred to the womb of a recipient woman. Gamete donation raises particular bioethical issues in Middle Eastern Muslim countries, and has resulted in heated arguments against its use. Although most of these countries utilize ARTs, there is a wide diversity of legislation governing their use and varying degrees of social acceptance of the technology.

Given this variation, training in medical ethics relating to biotechnologies such as ARTs becomes a challenge for medical education. Physicians have to find a framework to determine their ethical boundaries and resolve ethical issues in practice. Therefore, another aim of this project is to explore the bioethical issues involved in gamete donation. Alongside biomedicine and biotechnology, more contextualised variables, such as religion, law, culture and policy, are thus brought into view. These aims are thus best investigated using the perspectives of medical anthropology, which addresses the intersection of biomedicine, biotechnology and religion, and examines them by focusing on the "interplay of local and global concerns, that is, exploring how these are mutually shaped by social, cultural, economic and political factors (Inhorn, 2003b; 2005; 2006b).

Rationale for the research

Infertility represents one of the main reproductive problems in the world. It is estimated to affect over 15 percent of reproductive-age couples worldwide (Inhorn, 2009) and between 10 and 15 percent of Iranian couples (Abbasi-Shavaziet *al.*, 2006). ARTs have been welcomed, despite the complex bioethical issues they raise. This study thus focuses on the following two critical questions: 1) what have been the cultural, legal and religious dilemmas raised by gamete donation procedures in Iran? 2) How has

the medical ethics curriculum of Tehran University of Medical Sciences responded to address the problems raised by the use of this new biotechnology?

Medical ethics differ from one society to another due to various cultural, social, economic and political elements. In Iran, the only formal ethics training in medical education takes place in a medical ethics curriculum that aims to make practitioners explicitly aware of medical ethics issues in their society (Larijani and Zahedi, 2007a). It is clear that the material used in medical ethics courses attempts to create a practical structure to deal with medical ethics problems as early and extensively as possible. Therefore, this study focuses on the ethical issues involved in gamete donation, and explores the current and potential role of medical ethics curricula to address these issues in the Iranian context.

Chapter 2

Methodology

The approach of the research

In Iran, gamete donation is a new practice and involves issues that have cultural, economic, political, religious and legal dimensions. Given this complexity, understanding ARTs in the Iranian context requires multi-disciplinary investigation. The experiences and views of patients, donor and physicians and others who are involved in gamete donation represent an important resource that provides useful information for the way we might understand bioethics in contemporary Iran. The use of qualitative methods captures the views of those people most closely involved in gamete donation using various techniques, including interviews, participant observation, and group discussion. According to Kirk and Miller (1986), the value of these methods is that they allow people to express themselves using their own language, and on their own terms. Moreover, the varieties of approaches included in qualitative methods are useful for discovering common elements in different cases (Mason, 2002, p. 3). By this method various settings can be investigated and the interconnections of separate parts that make a complex and unified whole demonstrated (Katz and Mishler, 2003).

The research uses Tehran University of Medical Sciences (TUMS) as a case study; it focuses on people involved in gamete donation and on the medical ethics curriculum of TUMS. The fieldwork for this project was undertaken at TUMS, which provides both medical education and health services. It is the oldest and one of the most prominent universities in Iran; its hospitals are considered to be the most important government hospitals, to which many people are referred from all over the country. Given its position, TUMS therefore offers a fulcrum for appreciating the diversity of cultural attitudes in Iran. The university hosts three IVF centres that are involved with egg and embryo donation. However, none of these offer sperm donation, despite the fact that the practice is not explicitly restricted or banned by legislation in Iran. The administrators of the centres personally have banned the practice of sperm donation religiously and culturally; the majority of these practitioners also reject sperm donation personally, even in private clinics. Although sperm donation has not been accepted in the way that egg donation has, there are clinics in Iran that undertake sperm donation.

The centres have a total of twelve physicians involved in some form of gamete donation. Eleven of these physicians are female since, after 1980, only women could apply to study Obstetrics and Gynaecology in Iranian Universities. Of the twelve physicians involved in gamete donation at TUMS, six of the female physicians are equally divided between the Mirzakoochak Khan and Shariati Centres; the Vali e asr Centre has one male and five female physicians. In addition, since practitioners have also worked in private hospitals and clinics, the private sector is also represented and the views expressed here are not limited to those who only work in university hospitals.

Sample

The full sample of this study is 19 participants, which includes the total number of professionals who were involved in gamete donation practice or medical education at TUMS during the time this fieldwork was completed. This inclusive sample was selected to cover as wide a representation of these groups as possible in carrying out the research. The sample included all the members of the Central Committee of Medical Ethics Curriculum Planning (MCMECP) (N=7: one female and six males), and all the physicians of the different centres (N=12). The data were collected during two field sojourns: the first in March–April 2010 and the second in August 2010. Sixteen participants were interviewed during the first visit, and the remaining three were interviewed during the second. Some follow-up research was also conducted.

Techniques

This research utilized four techniques for data collection: informal group discussion, participant observation, interviews, and questionnaires. The informal group discussion yielded important information in terms of religion and law, and included participants who were religious and legal scholars and practitioners. In these informal meetings which took place in December, 2011, discussion centred on primary questions and concerns pertaining to gamete donation in both theory and practice. This project has benefited greatly from participant observation through involvement with the lives of two infertile women over the course of two years. The researcher was their family consultant who had close relations with them. One of the women adopted a child after eleven years, and the other undertook egg donation. Personal communication with members of some infertility institutions such as Avicenna and Royan helped the researcher in this project. Conversation with Iranian infertile women who live in the UK offered another opportunity to consider socio-cultural issues related to use of ARTs amongst Iranian.

Additional information was obtained through communication with patients at the centres and with both physicians and patients at the Mother's Hospital and Research & Clinical Centre for Infertility in Yazd, the Women's Hospitals in Yazd, and the Bakhtar Hospital in Khoram Abad. These informal interviews were conducted in December 2011.

The interviews were semi-structured with open-ended questions (Appendix 3). They were conducted by the researcher with all the physicians, and took place either in private rooms in the clinics or in their offices or clinics, because they had different posts besides their clinical practice. Each interviewee was briefed on the project and given an explanation of the interview procedure such as its length and confidentiality protocols. Details were also provided about medical anthropology research and fields of investigation, since this subgroup of anthropology is new and relatively unfamiliar to the practitioners.

Although administrative management and most interviewees welcomed this project, the interviewees could be divided into three groups: first, those who talked extensively and openly about the subject. The second type provided information by answering the guided question. Finally, a few respondents answered briefly and indifferently, because they thought the topic was unimportant as an issue for research.

The lack of official documents regarding gamete donation procedures in Iran required the use of a more general survey on gamete donation procedures in these three centres. The questionnaire (Appendix 3) consisted of ten open and closed questions to demonstrate the number of gamete donations undertaken annually in a single centre. In addition, some questions were asked regarding differences between services for infertile men and women, and regarding the rules and conditions governing gamete donation. These questionnaires were conducted with the head of the infertility sector or the head of the infertility research sector at each centre.

Writing up: the structure of this dissertation

In order to address the two questions raised, the dissertation is structured in the following manner. In Part 1, I consider the question of gamete donation in Iran. I begin by describing Iran and the national context in which gamete donation has emerged. Then I consider how global theories of medical ethics apply to the Iranian context. This leads to a detailed exposition of the religious, legal and policy contexts of gamete donation in Iran and a description of the debates that have occurred as a result. I then consider what other researchers have contributed to our understanding of infertility and gamete donation in Iran, before presenting the findings of my own empirical research regarding current practice with regard to gamete donation in TUMS.

Part 2 goes on to consider the current and potential role of medical ethics education in addressing some of the dilemmas raised in Part 1. After a consideration of medical ethics curricula worldwide, I look at the situation at TUMS in Iran and review what academic researchers have had to say about it as well as providing empirical findings from my own interviews. My discussion chapter draws these two parts together.

Chapter 3

Iran: The national setting for gamete donation

The Islamic Republic of Iran has a rich cultural and social background; its earliest documented civilization dates back to 3000 years BC. This country was a dynastic state before the Iranian Islamic Revolution (1979), and then it became the Islamic Republic of Iran in which, according to Articles 6 and 7 of the constitution, people can directly and indirectly select all senior political positions.

Iran is made up of diverse ethnic groups and religions. Ninety-eight percent of the population is Muslim, with the Shiite population making up 89 percent and the Sunni population nine percent (Country Cooperation Strategy for Islamic Republic of Iran 2010 ~ 2014, n.d). According to Article 13 of Iran's constitution, other religions which have been legitimized in Iran include Christianity, Judaism and Zoroasterism. Since the majority of Iranian Muslims are Shiites, the official religion of Iran is Shi'ism (the TwelverJa'fari School), but other Islamic schools of thought, including the Sunni *mazhabs* (Hanafi, Maliki, Shafii, Hanbali) and Zayidi Shiism, are respected. These branches are free to practice religious teaching and manage legal affairs involving personal status (marriage, divorce, inheritance and wills) and related litigation in courts of law (Iran's Constitution, Article 12). Since representatives of religious minorities attend parliament as MPs, religious differences are accommodated in Iranian law. Therefore, Islam plays an important role in Iran, not only because of the Muslim majority but also because of its theocracy, rules and laws should be in accordance with religious essentials, including civil, penal, financial, economic, political, cultural, military, service and other legislation (Iran's Constitution, Article 4).

During the last three decades in Iran, various events have resulted in significant changes for the country. Some of these changes exist in the structure of the population. According to the 2011 Population and Housing Census, Iran has a population of 74,691,702 people. The gender structure consists of 51% men and 49% women. Another feature of Iran's population structure is that the urban population makes up 71% of the total population; the average household size is 3.6 (The Population of Iran, 2011). The country is also one of the youngest countries of the world, with 35 million young people under twenty four years old (Young Population, 2011).

Iran has achieved remarkable progress in diverse aspects of its health care system. For example, it is estimated that around 90% of Iranians are covered by the health insurance system, which includes hospitalization, diagnostic tests and pharmaceuticals (WHO, 2006: 25–26).

An important index of development is the literacy rate. In 2006, over 88% of Iranians over six years old were literate with slightly higher literacy among men than women (WHO, 2006). However, after the revolution the numbers of female students in university increased (Mahmodi, 2013). Moreover, although radical fluctuations in the unemployment rate have been presented by different resources, estimates vary from 13.5% to 20% and unemployment is much more common among women than men. However, women are involved in social activities and are allowed to take on most jobs, such as education, medical and service-related occupations, and hold some top posts such as MP or minister, although such female-held top posts are few. According to Hossein Chavoshi et al. (2004), the increases in women's education have not provided much opportunity for increased employment.

One of the challenges for Iran was the eight-year war imposed by Iraq (1979–1988) which had serious negative effects on the country's economic and social structures (Workman, 1991). After the end of the war, Iran began to reconstruct its infrastructure and economy and gradually paid attention to social and cultural issues. In recent years, technological innovations have become more noticeable. Medical technologies are an important target in the development of strategic plans. The Islamic Republic of Iran has widely accepted new technologies such as ARTs (Tremayne, 2006a; 2009, 2012a, 2012b; Abassi-Savazi et al., 2006). Iran was the first Muslim country in which infertile individuals benefited from gamete and embryo donation and surrogacy. There are many fertility clinics in different cities in Iran. These vary in terms of quality and quantity, and are mostly accessible in big cities. However, health centres and professional hospitals have developed that provide care for women and infants and that focus on prevention, timely treatment, and raising education and awareness among women.

Chapter4

Medical ethics in Iran

Innovations in biomedicine and biotechnology have introduced novel practices in research and treatment, in fields such as transplant medicine, genetics and reproduction (Millerand and Campbell, 2009). Bioethics, rather than medical ethics, is the discipline that examines these new biological discoveries and biomedical advances from a moral and ethical perspective (Millerand and Campbell, 2009). Bioethics approaches such questions from different disciplinary perspectives, such as philosophy, psychology, sociology, theology and anthropology. Within anthropology, medical anthropology is the sub-field that has done most to bring culture into bioethical debate. For anthropologists, culture is the meeting place of medical issues and moral and ethical domains of individual and social aspects of peoples' lives.

Medical ethics in theory

In Iran, the main source of ethical reasoning, when considering the new technologies, is provided by Islam. Islamic ethics provides an important underpinning for medical ethics and bioethics in contemporary Iran where it is taught alongside western medical ethics. An outline of western ethical theories is presented in Appendix 1. The Islamic orientation in medical ethics arises because of influences of Islamic teaching in Iranian culture and a theocratic state which has been in place over the last three decades. There are some similarities between the fundamentals of Islamic ethics theory and other approaches to ethics. For instance, it has been argued that in both Islamic and deontological theories, duty, which is regarded as an obligation to each other, is important. However, in Islam this is defined in terms of a divine love by which a person enjoys his duty and is happy to undertake it (Motahhari, 1964). In addition, in the Islamic viewpoint persons bear powers that lead them to adopt an act or behaviour, namely self-interest and self-divinity (Mojtabavi, 2010). These powers manipulate dignity (*Keramatenafs*), the maintenance and development of which is the main objective of an Islamic-inspired personal ethic (Motahhari, 1964; Mojtabavi, 2010). It is important that dignity can be stabilized by foster-

ing self-divinity and overpowering self-interest (Mojtabavi, 2010). Nevertheless, according to Normohamadi (2012) Islamic medical ethics that is based on principles, targets, methods and resources can be regarded as close to deontology.

The Four fundamental principles of medical ethics in the Iranian context

Justice

In Appendix 1, I indicate the four universal elements of medical ethics as defined by the WHO's report on teaching medical ethics (1995). Infertility in Iran can be considered in the context of these four elements. Since there is both a national health service and private health services there are inequalities based on wealth when it comes to access to services. Equity is an important point in justice, which means that people should receive fair treatment equally. It is also important that infertility should be regarded as a disability and fertility treatment a right, which an infertile person should be provided, usually by state agencies (Dickens, 2002). Instead, in Iran, it seems that an infertile person is not regarded as a patient in the conventional sense. For example, the costs of infertility treatments have not been borne by either health insurance or any health policy. However, in 2011, some insurance organisations have conditionally agreed to cover all or part of infertility treatment costs. At present, it would seem that, different insurance organisations have defined different conditions and there is a period of transition regarding the medical status of infertile couples. For example, according to the Medical Services Insurance Organization, only clients of particular institutions can benefit from infertility insurance services. Likewise, Alborz Insurance covers only infertile couples who are in their first marriage with an age limitation of 40 years for infertile women. As a result, there is inequality in insurance coverage for services available to infertile couples. The university hospitals do award opportunities for infertile couples to benefit from gamete donation procedures at a low cost. However, the universities of Iran only cover public hospitals where the cost of IVF is relatively low, amounting to around \$300 (3,000,000 Iranian Riyals) in state clinics (Vali e asr Reproductive Health Research Centre, n.d). That is approximately equal to the lowest monthly income in Iran (Minimum Wage, 2012). Certain conditions may lead to infertile men consulting private clinics, at considerable cost. Other things making the overall cost extremely expensive include the concentration of the IVF clinics in major cities, the frequent need to repeat the procedure, and the fact that some state clinics do not practice sperm donation (Vali e asr Reproductive Health Research Centre, n.d).

Furthermore, another conspicuous problem is the additional cost to procure gametes. These are not provided for free which results in the possibility of commercialization, especially in egg donation given the limited number of eggs available. As a result, economic differences create a situation of inequality of access to infertility treatment amongst infertile couples. Iranian infertile couples who are in comfortable

socio-economic positions can negotiate and find ways to access infertility treatments. However, payment for gametes creates conditions in which destitute donors are financially exploited while infertile couples may be subject to financial ruin. To sum up, the practice and the consequences of gamete donation result in complex bioethical issues in terms of justice and access to treatment in Iran.

Beneficence and Non-maleficence

Beneficence and non-maleficence (Aiken, 2004, cited in Butts and Rich, 2005: 13) are important for both parents and child in the context of third-party donation. The beneficence involved with a gamete donation procedure is that it enables an infertile couple to become parents. However, it may also result in potential psychological problems for a child who is born through gamete donation in some societies such as those found in the Middle East (Inhorn, 2006b) and for the parents because of different social pressures such as stigma (Inhorn, 2006a). Appropriate safeguards need to be in place to ensure that people putting themselves forward for infertility treatment are in a position to care for their child; parents who are substance abusers may not be suitable, for example (Aramesh, 2006). The best treatment method is one that guarantees a healthy life for both the child and parents as long as possible. According to the WHO, health is a state of complete physical, mental and social well-being. This concept may be usefully applied when considering some of the access issues that arise in infertile couples' and donors' lives.

Autonomy

Autonomy is the fourth main principle in medical ethics: Women's autonomy in particular has long been an important when dealing with fertility issues in developing countries. In these countries, women are often not seen as the main decision-makers in terms of childbearing, contraceptive methods, and abortion (Kohan et al., 2012). A typical example is Iran, where fertility has rapidly declined during the last two decades (Hosseini Chavoshi et al., 2004; Abbasi-Shavazi et al., 2009; Abbasi-Shavazi, 2001, cited in Fargues, 2003; and Simelela, 2006). This trend has been due to the interaction of different circumstances, including improvements in the health system, rural development, expectation of education, particularly for girls, revival of family planning programs, ideational changes in society and the agreement of religious clerics about birth control (Hosseini Chavoshi et al., 2004). Religion is particularly important in dictating the pace of change. For example, sterilization is now permitted in Iran, Turkey and Tunisia which are the only Muslim countries that allow tubal ligation and vasectomy (Fargues, 2003; Boonstra, 2001).

However, although both sexes have equal opportunities to access different contraceptive methods, women bear much more responsibility for family planning. According to Kohan et al. (2012) Iranian men are the principal decision-makers in fertility. In addition, Mazloumi et al. (2007) conducted a survey in central Iran, and their results show that only 28% of women had absolute autonomy in making decisions about contraceptive choices. However, women's autonomy may have been improving; according to Shad-Talb "Iranian girls gradually practice democracy within the family." (2001, cited in HosseinChavoshi et al., 2004: 2)

Women's autonomy is differently perceived across societies within Iran. Hossein Chavoshi et al's research (2004) distinguished four main items that served to enable women's autonomy: economic decision making, mobility, freedom from threat, and access to and control over resources. The result shows that there is an association between women's autonomy and reproductive behaviour, in which freedom of mobility plays an important role. Although a person should be free to make a decision in terms of the treatment they receive, Iranian women may encounter some obstacles to autonomous decision-making in infertility treatments. Aramesh (2006) indicates that Iran is a typical example of Kuhse's view (2001), suggesting that infertile women experience considerable pressure within a strongly patriarchal society in the form of pressures to maintain family values, disparagement of the infertile woman, loss of economic support and polygamy, and hence experience restricted autonomy in decision-making.

Religions and gamete donation

Even though some Western intellectuals argue that religion has been forsaken (Dutney, 2007), where ARTs are concerned it continues to be an important factor in the running of laboratories and clinics (Thompson, 2007). Furthermore, it is a significant factor in decision-making particularly in Islamic contexts (Dutney, 2007; Inhorn, 2003b). Religious arguments about ethical issues of gamete donation have arisen since the advent of new IVF techniques and have opened the doors to new areas of debate (Song¹, Informal interview, 2 July, 2010). Indeed, some religions take an interest in ARTs given the im-

¹ The head of Theology and Religion department of Durham University

portance of the family and the institution of marriage (Dutney, 2007; Inhorn, 2006a; Inhorn, 2006b; Murphy, 2009; Omani Samini et al., 2007; Omani Samini, 2009).

There are various religious viewpoints concerning the practice of gamete donation. For instance, Jewish Halakhic law permits sperm donation because the principal factors which make a child acceptable are gestation and giving birth, which rely on the mother. In Israel, using the sperm of non-Jews is permitted by some Israeli conservative rabbis (Kahn, 2000 cited in Inhorn, 2006b).

Christian opinion regarding gamete donation has been divided. Song (2010) suggests three broad categories: first, those who reject gamete donation because of the implicit adultery; second, those who believe that gamete donation causes many problems for the child who results from gamete donation, such as identity, stigma and other socio-cultural issues; third, those who agree with gamete donation if the recipient and the donor are satisfied and there is a situation which can probably provide for the needs of the child (Song, Informal interview, 2, July, 2010).

There are various Islamic viewpoints regarding gamete donation. The Sunni clerics have issued *fatwas* regarding ARTs in which artificial insemination has only been accepted for an infertile married couple (WHO, 2003). In 1980, Sunni clerics at Al-Azhar University issued an authoritative *fatwa* forbidding egg, sperm and embryo donation (Inhorn, 2003b; Inhorn, 2006b), as did the Third Conference of the Islamic Fiqh Council (Omani Samani et al., 2007). These procedures are regarded by some Sunnis as comparable to adultery (*zina*) and a child born by the gamete donation method is regarded as an 'illegal' child (*ibn haram*) (Inhorn, 2006b; Clarke, 2006a; 2009).

However, in Iran there are various *fatwas* concerning ARTs that are issued by *maraji*. *Marja' al-taqlid* - literally an authority to be emulated – designates a *fatwa* from the highest ranking authorities of Twelve Shiite communities. This authority and power depends on two theoretical structures: the first is *ijtihad*, the making of religious judgment and interpretations where “the theory states that although the fundamentals of *Shai'ah* (the divine law) are definitively known, its details are uncertain and difficult to access; a matter of (informed) opinion, not knowledge.” The second theoretical structure supporting *marja' al-taqlid* is the delegation of juristic authority to those who best know the *Shai'ah*, namely the *maraji* (plural of *marja*] (Dabashi, 2001: 488-492). In addition, “people who are not trained in *ijtihad*, the *amah* (common people), are dependent on the *marja' al-taqlids* and must submit to their ruling. This submission is known as *taqlid* and should be offered to the most learned jurist” (Dabashi, 2001: 488-

492). As a result, each Shiite Muslim has a particular *marja' al-taqlid*, who is individually adopted, and mostly follows the *fatwas* that are issued by him.

Therefore, Shiite clergies' *fatwas* have not been unique. For example, embryo donation is not allowed by some Shiite clerics such as Ayatollahs Saafi Golpaygani, Tabrizi and Fazel Lankarani. Many Shiite clerics do not allow sperm donation, such as Ayatollahs Sistani, Khoie and Sobhani (Avicenna research centre, 2003: 392-408). Other Shiite clerics have issued *fatwas* permitting gamete and embryo donation and surrogacy under certain conditions, and these clerics have been considered as flexible and open-minded scholars (Clarke, 2007; Inhorn, 2006c).

For instance, Ayatollah Sayyed Ali Khamenei's *fatwas* are the most flexible in which both sperm and egg donation with and without temporary marriage has been authorized (Khamenei, n.d., Dutney, 2007; Inhorn, 2006b; Omani Samani et al., 2007) and there is just the common condition for these practices, which is avoiding touching and looking at the private parts of the patient's body (Khamenei, n.d.; Clarke, 2007). In contrast, other Shiite clerics, such as Ayatollah Mohammad Husayn Fadlallah, suggest temporary marriage (*muta'ah*) as a main condition for allowing egg donation. Indeed, Ayatollah Mohammad Husayn Fadlallah believes that this procedure is justifiable because of the acceptability of polygyny, whereas he does not authorize sperm donation because that would equate to polyandry, which is prohibited in Islam. This means a child resulting from egg donation without *muta'ah* and any resulting from sperm donation are regarded by Ayatollah Fadlallah as the result of adultery (Clarke, 2006a).

Therefore, since Iran is primarily a Shiite Muslim country, it differs from other predominantly Sunni Islamic countries in the Middle East in terms of ARTs. *Fatwas* play a significant role in Iran, for example, there have been *fatwas* that express favourable opinions on topics that received legislation, such as the organ transplant law (in 2006) and the embryo donation law (in 2004). It can be said that the main function of a *fatwa* as a kind of Islamic injunction is to determine the boundaries of what is forbidden and to indicate the red line; a kind of 'no-trespassing' sign.

As a result, the influences of religion on people's decision-making vary from country to country and even from community to community. The position of religion also affects legislation and policies related to biotechnology and biomedicine with the influence of religion on law and policy being different from country to country.

The importance of religion in legislation and policies in Iran is clear. Government legislation in Iran holds Islamic sources and precepts as a legal basis, and laws must agree with Islamic sources.

Every law passed by the parliament needs to be reviewed and ratified by the Guardian Council. This Council includes twelve members: six lawyers who are recommended by the chairman of the judiciary and are approved by the parliament, and six Islamic scholars who are selected by the Supreme Leader. One of the Council's duties is to ensure that the parliamentary laws which are passed conform to Islamic principles and to Iran's Constitution (Article 4, 91 of Iran's Constitution). There are cases that are found by the Guardian Council which go against Iran's constitution and Islamic principles. If parliament does not approve the Guardian Council's verdict on these laws according to the advice of the State, they will be referred to the Majma Tashkhise Maslahat Nezam, which is an assembly whose main role is resolving legislative disagreements between parliament and the Guardian Council (Article 112 of the Iranian Constitution).

In Iran, there is just one law in terms of ARTs: the Embryo Donation Law. This law was passed by the parliament in 2004, although the Guardians Council twice returned the passed Law of Embryo Donation to parliament for some rectifications in 2002 and 2004. One area which prompted the Guardians' rejection involved avoiding religiously prohibited aspects of examination and diagnosis such as touching and looking at the private parts of the patient's body. It was rectified by parliament via the addition of a phrase to the law which states "under consideration of the fundamental Islamic rules." Formerly, the infertility clinics have been obliged to undertake embryo donation according to these conditions (SadeghiMoghadam, 2006). However, the legal document is short in length. Yet it covers embryo donation in general, the condition of demand for donated embryos, the responsibility of parents and the evaluation of qualified applicant couples in family courts. Issues such as identity, inheritance and economic aspects of donation transactions process are mostly absent.

The law was implemented by the Ministry of Health and Medical Education with the cooperation of the Ministry of Justice. Its implementation is only embodied by 10 Articles, which cover the general points. Consequently, many questions still exist regarding embryo donation and surrogacy. The existing rules and conditions do not cover gamete donation at all.

To sum up, the embryo donation law does not mention the practice of gamete donation directly, but third party gamete donation has been legitimated by *fatwas*, since *fatwas* can be a source of legitimation for action. It might be that the positive *fatwas* on gamete donation of Ayatollah Khamenie, the supreme leader of Iran, encourage and further develop the practices of gamete donation. However, there is not a specific parliamentary law or uniform and accurate guideline concerning gamete donation. As a

consequence, different clinics undertake this procedure according to positive *fatwas* on gamete donation.

Gamete donation the focus of different Debates

ARTs have been at the center of ethical, legal, and religious discussions and arguments (Hudson et al., 2009; Kitzinger and Williams, 2005; Maklin, 1995; Melhuus, 2005; Tsuge, 2005 cited in Inhorn, 2008; Asghari, 2008; Shariarie, 2006). Although reproduction is largely a private matter, some 'private' issues raise 'public' interest because they involve concerns over what might be thought to be 'natural'. Procreation represents one such area where natural processes are changing with the emergence of ARTs which fundamentally threaten the normative construction of marriage and paternity (Simpson, 2001).

The concerns of Islamic authorization

Religion directly impacts upon the practice of ARTs in Muslim societies ((Inhorn, 2008, Larijani and Zahedi, 2007b). The debates over gamete donation raise questions of 'God's sovereignty' with some Islamic scholars, seeing gamete donation as directly contradicting it. Abdolhadie Mesbah (2007, cited in Khodaparast et al., 2011) argues that scientists' interventions in reproduction usurp God's role and cause a "confusion of relations" and ambiguous identity. These interventions can therefore be conscientiously unacceptable.

Besides, some *marja al taqlid* and scholars believe that although gamete donation is not in contradiction with the sovereignty of God, there are other reasons to disagree with it. One of the main concerns in authorizing the use of gamete donation is the marital relation between the donor and the recipient that has been faulted in the practice of egg donation according to the *muta'ah* condition in Shiite views. By contrast, some religious quotes such as Imam Sadeg's documents based on the Hadith and Quran have been invoked to reject sperm donation (RahmaniManshadi, 2008, Naseri Moghadam, 2008, Sistani, 2006).

As suggested above the use of ARTs raises further religious objections as the practice of IVF involves touching and looking at the private parts by doctors and nurses. A number of Quranic verses call for the segregation of private parts of the body from the touch and view of others except for the partner (Sistani, 2006; Rahmani Manshadi, 2008; Naseri Moghadam, 2008) or the doctor, in the case of patients. However, infertile couples have been restricted from this exception, as they are not considered to be patients on religious grounds. Even if the infertile person is assumed to be a patient, the donor cannot be (Sheahriari, 2007).

On the other hand, solid evidence can be drawn from these religious documents that demonstrate that this injunction applies to cases of immoral, ignominious, sacrilegious or unchaste behaviors (Sistani, 2006; Rahmani Manshadi, 2008; and Naseri Moghadam, 2008). Indeed, this evidence thus can refer to protecting the body against encroachment from others' sexual enjoyments, for example, in the case of an extramarital affair and the charge of adultery (Naseri Moghadam, 2008).

Another significant issue for gamete donation in Islamic societies is "relation confusion" (Inhorn, 2006a; Inhorn, 2011) which is described as a serious danger "against nature and God" (Inhorn and Lanman, 2011). A close alignment between ideas of 'blood' and genetics is one of the main factors that determine the relationship between persons that define the roles of parents and children (Nasiri Moghadam, 2008). In this regard, an ideational and moral issue involves preserving the "origins" of a single child, which means his or her relationships to a known genetic mother and father. Consequently, lineage of the child is traced to the donor, and all related rights and relations to lineage will be given to the donor, who will be recognized as having partial rights over the child (Inhorn, 2003b).

Indeed, an infertile person is considered as the adoptive mother or father of such a child (Inhorn, 2011), and adoption is implicitly unacceptable in Islam; it does not bear full parentage (Inhorn, 2003b). In other words, in Islamic rules, an adopted child is not considered the same as a genetic child in some matters such as inheritance and *mahram*; adoption is thus eschewed because of the loss of lineage (Inhorn, 2003b). However, adoption should not be confused with fostering which is just bringing up a child that is not one's own by birth. Fostering is regarded as morally admirable in some Islamic countries. Adoption on the other hand is not generally approved of and is not a common solution to infertility. This is in contrast to many Western societies where adoption is considered to be an acceptable solution to infertility (Inhorn, 1996 cited in Inhorn, 2003b).

Rejection of adoption in some Islamic countries is influenced by cultural anxieties which undermine the practice of adoption. For example, across all social classes in Egypt, adoption raises concerns that the child will be of "bad blood," that the real parents will want to reclaim the child, that there will be a lack of emotional feeling between the child and the social parents and relatives, that there might develop erotic feelings with the adoptive parents or between the parents' birth children and the adopted children, that there will be a stigmatization of the adoptive children by the family and community, that there will be a stigmatization of the parents for being infertile, and that there is a lack of availability of adoption for the poor (Inhorn, 2003b).

In contrast, adoption in countries such as Iran and Tunisia is legally acceptable (Omani Samani et al., 2007; Omani Samani, 2009). In 1975, a law was introduced in Iran allowing couples to adopt an orphan with all parental rights, birth certificate and inheritance rights (Abbasi-Shavazi et al., 2006). Recently, Iran has developed schemes to encourage people to adopt a child; it has achieved some success, and adoption has become more socially acceptable in Iran.

In addition, the lineage of the child resulting from gamete donation has been clearly determined by most positive *fatwas* on gamete donation. It is postulated that the donor is the parent of the child (Avicenna research centre, 2003). Although the lineage of the child theoretically is clear, in practice this problem remains in anonymous donation practices.

Anonymity and disclosure

Questions of lineage manifest in issues such as inheritance, *mahram*, incest and the right to know genetic parents, have generated diverse arguments (Shariarie, 2007; Nasiri Mogadam, 2008). In Iran, as in other societies, the principal anxiety that drives these arguments is that of donor anonymity or nondisclosure of the procedure. This is important to determine the child's genetic, and hence lineage, 'identity'; however, anonymity has usually been accepted by social parents and the donors as overriding these anxieties in practice (cf. Daniels, 2007). Different studies show that donors prefer to be anonymous for example, Robinson et al. (1991) point out that anonymity is an important factor for undertaking gamete donation (cited in Blyth et al., 2004). A study from Queensland, Australia confirmed that 59 percent of the population who agreed with sperm donation would be less likely to undertake donation and 29 percent would absolutely avoid donation without anonymity (Condon and Harrison, 1992 cited in Blyth et al., 2004).

In addition, several studies have shown that social parents would choose third party anonymity. Robinson et al. (1991 cited in Blyth et al., 2004) examined disclosure among recipients and found that only 15 percent of them tended to tell their child who their genetic parents were. The European Study of Assisted Reproduction Families (Golombok et al., 2002 cited in Ethics Committee of the American Society for Reproductive Medicine, 2009) carried out further research with 94 families who had conceived children by Donor Insemination (DI) and whose children were in early adolescence at the time of the study; results indicated that only 8.6 percent of the children had been told about the donor. Even if tradi-

tionally it is generally acceptable for social parents to adopt a child, they prefer to keep the origins of the adopted child secret in order to avoid complicating the child's life (McGee et al., 2001).

Indeed, where gamete donation has taken place, anonymity enables the social parents to achieve their desire to be 'normal' parents who can have a family like most families in their society. This situation can only be maintained as long as the origins of the child remain a secret (Cook et al., 1995; Daniels and Taylor, 1993; Rowland, 1983; Snowden et al., 1983 cited in McGee, 2001). There is no solid evidence that keeping the truth secret is better (Pourbakhsh, 2009). While this situation might affect the sexual and emotional relationship between a couple and the relationship between parents and child because the social parents always carry the burden of the secret (Matot and Gustin, 1990 cited in McGee et al., 2001), it is also a kind of deceit that could cause tension and a distressing environment for the family (Humphrey and Humphrey, 1988 cited in McGee et al. 2001; McMichael, 1980; McWhinnie, 1984; Triseliotis, 1993; Pourbakhsh, 2009). Someday, the origin of the child might be revealed, the social parents should brace themselves to face some problem such as stigma and be prepared to alleviate the child's distress (Cook et al., 1995; Daniels and Taylor, 1993; Rowland, 1983; Snowden et al., 1983 cited in McGee, 2001). Maintaining anonymity can also prevent interference by the donor in rearing and training of the child (Larijanie and Zahedi, 2007a).

However, disclosure of the identity of the genetic parent(s) to a child who results from gamete donation is considered to be a human right according to Articles 8 and 16 of the Human Rights Act (British Medical Association Ethics, Science and Information Division, 2004). It is also can be justified by the principal Islamic tenet: wish for others what you wish for yourself. The preference of most people is to know about their genetic lineage and identity. This is the basis for a view that a child resulting from gamete donation has a right to know their genetic parents which is strongly endorsed by religion (Aramesh 2006; Pourbakhsh, 2009). Another reason for knowing is that it allays concerns about possible unintended incest violations.

Disclosure is also considered important for access to the child's genetic history (Pourbakhsh, 2009; Larijanie and Zahedi, 2007a). Genetics provides an important tool for diagnosis and treatment of diseases, and genetic history can provide crucial information (Lamport, 1988 cited in McGee et al., 2001). Generally, the issue of genetics usually features in the first meeting between patients and their physician (Daniels, 2007) in determining a diagnosis of adverse health conditions which may have a genetic component.

This could burden genetic parents with responsibility for disclosure, and could result in a child's isolation due to religious and socio-cultural stigmatization, and impact adversely on the relationship between children and social parent(s) (Khodaparast and Rasekh, 2007; Pourbakhsh, 2009). It may even result in social violence and crisis for the donor and recipient families that can lead to further anxiety surrounding the use of ARTs (Khodaparast and Rasekh, 2007).

With respect to telling the truth to children who result from gamete donation, social parents can be divided into three groups. The first group consists of couples who disagree with disclosure; the second group of parents are those who want to tell their children the truth, but they are confused as to how to do so; and the third group of parents discloses the truth to the children from the beginning (Kirkman, 2003). Which of these three options, parents will choose largely depends on the prevailing values of the society in question. According to Strathern (1992a) the answer to "where did I come from?" precedes the answer to "who am I?" (cited in Kirkman 2003: 2231). Social norms and values have a strong influence in determining the level of secrecy surrounding gamete donation; it is therefore not surprising that legislation concerning the anonymity of donors varies from country to country.

Inheritance

Gamete donation also raises fundamental questions regarding legal inheritance, since gamete donation confuses the blood tie that is a fundamental element in the relationship between offspring, parents and their relatives and upon which inheritance practices rely. It is also the main determining factor in inheritance, according to Islamic jurisprudence and other legislation, which privileges lineage (Abbasi-Shavazi et al., 2008; Dutney, 2007; Inhorn, 2003b; Inhorn, 2011; Kirkman, 2003; Omani Samani et al., 2007; Omani Samani, 2009; Robertson, 1995). Islam privileges and perhaps even mandates genetic inheritance (Inhorn and Lanman, 2011; Ghebleii Khoie, 2006). The positive *fatwas* on gamete donation regard genetic parents as the 'real parents' in terms of inheritance (Avicenna research centre, 2003). On the other hand, a birth certificate is issued based on social parents' identities, and this certification is a legal document in terms of inheritance. Therefore, in this case all parties involved, including the child who results from gamete donation, the donors and the recipient, are in a complex and unclear situation.

Morality

Islamic ethics binds the right of procreation to support the public interest and the nation, contrary to a liberal ethics which tends to privilege individual reproductive choice over public interest. For couples facing moral dilemmas over reproduction, Islamic ethics allows the use of any method which is not forbidden by the Quran and Sunnah.

According to Khodaparast et al. (2011) there is a moral problem when the child produced from gamete donation is introduced as a second-class human because of unnatural procreation. The children born from ARTs may encounter some problems such as psychological harm, disordered family relationships, social stigma and the violation of children's moral rights (WHO, 2003; Murphy, 2009). It seems these issues are due to cultural rigidity, social conventions and public beliefs that can generally provide circumstances for acceptance or rejection of a new technology. As a result, it is necessary that ARTs be culturally accepted in a particular society in order to reduce these potential moral problems (Amidi, 2011). Acquainting people with ARTs appropriately and encouraging them to learn about ARTs objectively can reduce the negative attitude of gamete donation (Khodaparast et al., 2011). For example, social stigma will be reduced as long as the practice of gamete donation is welcomed by a society (Murphy, 2009).

Commercialization

ARTs also raise concerns as to what to do about commercial issues that their introduction makes possible. There are clear policies or laws governing financial issues in gamete donation in some countries. Since Iran has no clear laws or rules about the financial practices surrounding gamete donation, these methods may create circumstances for the development of gamete and embryo businesses. Consequently, the practice may result in the abuse by people who participate in illegal procreation and black markets (Khodaparast et al., 2011). When gametes and embryos are traded, this commercialization may gradually lead some people to be merely a means to benefit others (Khodaparast et al., 2011; Larigani and Zahedi, 2007a).

However, although it is possible that payment by recipients could be an early warning sign of potential financial abuse of gamete donation, financial abuse can occur in pretty much any area of biotechnology. The limitation of payment can decrease the numbers of donors, but there are different ethical, legal and religious ways to reduce these abuses. According to Khodaparast et al. (2011) the practical one is with regard to informed consent which not only preserves patients' autonomy but also con-

stantly provides information to make sure that patients' autonomy has not been compromised under various pressures from partners, families, or practitioners asserting economic or social pressure. The information should somehow point out the physical, economic, moral and social consequences of donation. Therefore, raising awareness among both donor and recipient could reduce the chances of financial abuse and exploitation especially for women, while also preserving their dignity. Such practices also help to guard donors' autonomy by preventing them from being coerced or encouraged by their partners or others to undertake donation.

Wider impacts of ARTs

ART is regarded as a relevant field for social workers and counselors (Daniels, 2007). ARTs can change the cultural and social structure and the function of institutions within a society. The constructs of family and kinship are central to these discussions. Because ARTs raise questions about legitimacy and the place of procreation within marriage they lead to discussions about the forms that marriage might take in society. Some scholars define marriage by the universal core functions of an institution in which control of, or rights over sexual activity and legitimizing of children are its central function (Seymour-Smith, 1986:179). Thus, sexual union in marriage is often seen to create a symbolic link between natural substance and law or code. A child who results from this relation connects the parents through blood ties, or 'shared biological substance' (Schneider, 1980:34 cited in Carsten, 2000:6-7). However, based on Leach's (1995) definition of marriage as 'a bundle of rights' including legal fatherhood and motherhood, domestic services, a monopoly of sexual access between married partners, and so on, marriage can be defined by no single right. The bundle of rights is different from one society to another (Ingold, 1994:797-798).

Following Carsten, kinship might thus be understood as the culture of relatedness, that is, a meeting place of local ideas of nature and culture (Strathern, 1992b:87; cited in Carsten, 2000:10). In this sense, kinship is always seen as being both social and natural (Strathern, 1992b cited in Carsten, 2000: 10; Carsten, 2004:167). As a result, ideas about kinship reveal local ideas about biological relations and how these are shaped by procreation, pregnancy, delivery and nurturing (Frishkopf, 2003).

However, genetic relations, in terms of legal definition and social convention as expressed through the idiom of 'blood' in many societies (Naseri Moghadam, 2008; Thompson, 2005 cited in Harrington et al., 2008). ARTs challenge such views of kinship as fixed by birth since they introduce new kind of ge-

netic relationship by which kinship can be recognized and which fall outside of the conjugal pair (Simpson, 2001). The meaning of biological parenthood, which can be partial in gamete donation and surrogacy procedures, creates “ambiguous kinship” (Thompson, 2005) as donation can alter of the meaning of consanguineous relations such as with a mother, father and sibling. The use of ARTs creates the possibility of a new kind of kinship that must be made sense of within existing moral, legal and religious frameworks (Tremayne-Sheibani, 2006c).

Yet, social determinants of kinship in practice override mere biological connections (Gellner, 1960; Thompson, 2001; Parkin and Stone, 2004 cited in Tremayne-Sheibani, 2006c). In this view, a child’s “community” is prioritized over his or her individual genetic identity (Thompson, 2001). For example, *rezaie* kinship (Khatib-Chahidi, 1992; Parkes, 2005 cited in Tremayne-Sheibani, 2006c) involves a woman undertaking breast feeding a baby and usually fosters him or her in Islamic countries. Therefore, various meanings of kinship in different societies lead anthropologists to replace relatedness with kinship as a fluid model. Relatedness is an unstable process that can move strategically from genetic explanations to social ones in order to account for the new kinds of relationship that ARTs usher in (Tremayne- Sheibani, 2006c).

In Iran, marriage is strong bedrock of family and community life (Tremayne-Sheibani, 2006c) and children are known by lineage affiliation that is reckoned through blood ties which are legitimated through marriage. In articles 997 and 1105 of Iran’s civil law, the family is a group which includes a wife, husband and children who are related to each other by marriage or lineage (Omani Samani et al., 2007). In addition, Article 10 of Iran’s civil law specifies the importance of the family as a fundamental institution. Since the family is the fundamental unit of Islamic society, all laws, regulations, and pertinent programs must facilitate the formation of a family, and safeguard its sanctity and the stability of family relations on the basis of the law and the ethics of Islam (Omani Samani et al., 2007).

This chapter has looked at the points of intersection between the emerging uses of ARTs on the one hand with prevailing norms in Iran and other Islamic societies. It has also considered the relationship between religion, law and policy in the Iranian context. We can see how the practice of gamete donation links to fundamental cultural issues such as the significance of reproduction and what it means to be infertile, and the understanding of what constitute relatedness, family and lineage. These issues help us better understand the motivations of infertile couples as well as the actions of doctors. In the

next chapter I shall go on to consider empirical research that has looked at fertility and infertility in both Iran and the Middle East more generally.

Chapter5

Fertility and Gamete Donation in Iran

Infertility in Muslim communities

The domination of Islam across the Middle East results in critical differences between the way that ARTs are practiced here and elsewhere in terms of gamete donation in theory and practice. Research conducted regarding infertility and gamete donation demonstrates the presence of several medical ethics issues in a distinctive light. A case study of Egypt showed that five important factors led to the demand for new reproductive technologies (Inhorn, 2003a, Inhorn, 2003b), among which demographic and epidemiological factors were indicated as significant. According to the Egyptian Fertility Care Society, the prevalence of infertility in 1995 was 12 percent. The main cause of infertility in women was tubal infertility; however, infertile men represented more than half of the cases in couples who opted to overcome their infertility via New Reproductive Technologies (NRTs). According to Inhorn (2003a; 2003b; 2004), Egypt is seen as an over-populated country where government agencies provide few policy guidelines and economic resources to support NRTs because of the primary focus on population control programs. Another relevant factor is represented by the range of available methods for treating infertility, ranging from traditional healers through to advance ARTs. Since infertility has traditionally been a female stigma, gender is an important aspect of the problem.

Fertility and gamete donation in Iran

Infertility can bring psychological, social and economic problems for infertile couples. A survey that considered psycho-social aspects of infertility amongst 100 Iranian practitioners involved with infertility treatment was conducted in 2000 in Iran (Akhondi et al., 2001). The information showed that gynecologists mainly treated infertile patients from middle and high income levels, while other practitioners such as embryologists, urologists and Infectious disease specialists dealt with infertile patients with low incomes. The results of this research suggest that disappointment, frustration, dismay and anxiety were the main emotional and psychological problems for infertile couples. In addition, the analysed data indicated some social and familial problems, such as broken marriage relationships, which can result in divorce and remarriage (Akhondi et al., 2001).

In 2009, a phenomenological study regarding the experience of infertility was performed in Esfahan province of Iran. The results of the study show that infertility can have negative effects on the marital relationship of infertile couples. However, it can have either a positive or negative impact on their emotional relationship. This means some couples overcome the suffering caused by infertility by strengthening their emotional relationship. For other couples, infertility pervades different aspects of their lives

and impairs their emotional relationships. The data indicated that stigma, insinuation, sarcasm and curiosity led infertile couples to become isolated and sensitive (Khoda Karami et al., 2010).

A case study of infertility issues has been the base for a documentary called 'Absence of Miss A or Mr B' (Avicenna research centre and Documentary Experimental Film Center, 2010). This documentary is a narrative of a woman who lived in a village in Markazi province in Iran and endured infertility for eight years. She and her husband undertook different treatments and she finally got pregnant through the second IVF procedure. She explains the negative effects of their infertility on their life, and describes how they withdrew themselves from social networks because of this stigma. Ultimately, they broke ties with their relatives to prevent the breakdown of their marital relationship. The documentary shows how her community considered the infertility to be the woman's problem despite the fact that the cause of infertility was the man. Significantly, the recommended solutions of the patriarchs of the village were either remarriage or divorce, and the woman twice acquiesced to her husband's remarriage and several *muta'ah*.

A survey was conducted in Iran in 2005, to study infertility in Iranian women in Tehran. Thirty infertile women participated in the in-depth interviews. The women were all over twenty years old, were married more than two years, and were experiencing infertility for a variety of reasons. The information showed that infertility has a particularly negative effect on the relationship of a wife with her husband's family. Educated women and women who were able to work felt more confident about the IVF procedure in comparison with those women who were ranked as 'dependent' on their husbands (Abbasi-Shavazi et al., 2008; Abbasi-Shavazi et al., 2006). The nature of dependency was not explained, but it could be for economic or decision-making reasons or both.

These studies demonstrate the often desperate situation that infertile couples have been facing. In addition, it has been predicted that women bear more difficulty and responsibility in this regard. While ARTs can end these sufferings, they raise a variety of ethical and social issues as demonstrated in the last chapter.

Abbasi-Shavazi et al. (2008, 2006) also demonstrate that the majority of the women are aware of egg donation and most of them regarded egg donation as just one of many treatment methods. The data analysed indicate different respondents' religious viewpoints on egg donation, ranging from the opinion that it is a sin, to the belief that it is religiously accepted, or to the view that it can be practiced

despite the fact that it is a sin. The interview results suggested that recipients persisted in keeping their gamete donation procedures secret, as they believed that disclosing the information would lead to social stigma and pressure. The researchers also pointed out that fertilization by customary treatment methods such as Intra Cytoplasmic Sperm Injection (ICSI) and IVF are socially unacceptable and the pregnancies which result from these treatments are not regarded as natural conception.

Abbasi-Shavazi et al. (2006) went on to compare the results of their survey with those which had been conducted by Karami-Nouri (2002) regarding psycho-social aspects of infertility in Iran. He examined the social and psychological aspects of infertility in five cities in Iran: Asfahan, Teheran, Tabriz, Shiraz and Mashhad. It was pointed out that a reason for the negative attitude towards gamete donation, were legal and religious prohibitions. By 2005, however, egg donation had been legally and religiously accepted. The result, therefore, indicated that the agreement of clerics and lawyers about egg donation practices resulted in a positive shift in attitudes towards egg donation. However, it is important to bear in mind that the Iranian law is silent regarding egg and sperm donation. The 2004 law only talks about embryo donation, although egg donation legislation could be inferred from the embryo donation law. It is significant that Karami-Nouri (2002) indicated that gamete and embryo donations go against ethics and convention (*orph*).

The controversial nature of ARTs has lead a variety of professionally interested parties to introduce constructive information and solutions for the authorities. For example, the dilemmas of gamete donation have been considered in the Avicenna research centre by a fellowship of different professional people. In the first and second meetings of the fellowship in 2007, confidentiality in infertility treatment and a right to know biological parents were investigated as interdisciplinary issues. They suggested that a child resulting from gamete donation should be able to have access to genetic information that might be crucial for medical purposes. Localization of the model and the experiences of other countries in terms of infertility were among other issues raised (Avicenna Research Centre, 2009).

The results of some recent research indicate both negative and positive attitudes to gamete donation and surrogacy in different communities of Iran. For instance, research that studied the attitude of infertile women towards surrogacy was conducted amongst clients of the Hazrat Masomeh Centre for Infertility Treatment in Iran in 2008. Three hundred Shiite Muslim women between 22 and 43 years of age were studied. Eighty six percent of the samples were housewives. The results of the study demonstrate the length of infertility: 28% percent of women had been infertile for between 5 and 10 years;

61.3% had a positive attitude towards surrogacy and 38.7% negative. The majority of the women stated that the emotional relationship between the surrogate mother and the resulting child from surrogacy can create serious concern (Ahmarie Tehran et al., 2011).

According to Ahmarie Tehran et al. (2011) the women who had a positive attitude believed that this method can result in consolidating family ties and preventing divorce. Nevertheless, many of those with positive viewpoints believed that the method was contrary to Islamic beliefs and the natural creation of a human being. The result showed that the anonymity of a surrogate mother could cause serious problems. The data illustrate a direct correlation between positive attitude and education levels, family income and number of years of infertility.

Another example documenting people's attitudes is a survey, in Khoram Abad, which considered the attitude of infertile couples towards gamete donation and surrogacy as treatment methods for infertility. In this study, 150 couples with a mean age of 32 and who had been married 34 months on average were interviewed. Many couples came from the middle social and economic classes; 32 percent of them had high levels of education and around 70 percent had graduated from school. The results of the research indicated that there were significant negative attitude towards gamete donation and surrogacy, and also the majority of the couples believed that those methods were religiously prohibited (Akbari et al., 2006a).

In research which considered the attitude of men and women towards egg donation in Shiraz, one hundred and two females and 104 males were interviewed. The result of the study demonstrated that over 60 percent of respondents tended to hide the egg donation procedure, and a minority believed that religion was a barrier for egg donation. The majority of participants preferred egg donation to adoption, and they stated that infertility is not just a woman's problem but can be a factor to threaten the marital relationship. Just 40 percent believed that the donor has a right to consider the baby as her own. The data showed that men generally agreed to the use of egg donation in specific cases, which included infertility due to either high age or having a disabled child, or the risk of genetically inherited problems. The results of the survey also show a direct correlation between education level and positive attitudes. Researchers suggested that there is no clear gender distinction in women's and men's attitudes to treatment through egg donation (Fereydouni et al., 2009).

Another survey considered the attitude of Christians to egg donation as an infertility treatment in 2005 in Esfahan. The participant group was 100 and contained over 50 percent women. Over 50 percent of informants were married; around 60 percent had a diploma and over 40 percent had an academic education. The majority of participants (74%) were in favor of egg donation, although this agreement was not supported by their knowledge of different aspects of donation, as about 68% of those were unaware of its religious aspects and around 65% were unaware of the method. However, the researcher believes although the attitude seems positive, the information regarding the patient selection method and religious aspects were limited (Khalili and Gasemi, 2006).

Further research investigated the attitude of the community of Khoram Abad to gamete donation. There were 140 participants, including 80 women and 60 men. In the full sample, 85% were married and 70% of those had a child, and 60% had a diploma or higher education. Just three percent suffered from infertility. The result of this research demonstrates that only a minority of respondents had information regarding gamete donation. In addition, there were a few agreements to gamete donation, although around half the respondents preferred adoption to gamete donation. As mentioned earlier, in Iran, adoption is more acceptable than in some other Islamic countries. Moreover, the collected data show that the majority of the study population believed that gamete donation was religiously prohibited (Akbari et al., 2006b).

In contrast, the result of a study conducted in Mashhad on infertile women who were in the 'end-stage' step of embryo donation showed different attitudes. A convenience sample of thirteen women demonstrated that religious advice to have a child was an important factor in them undertaking embryo donation. It also illustrated a significant association between education level and awareness of the method and positive attitude towards embryo donation (Ahanchiean and Mahram, 2006).

To sum up, there are diverse attitudes across Iran and these vary with particular social circumstances, such as class, education and awareness and involvement with infertility. The negative attitudes were mostly derived from people who were unaware of ARTs or were not infertile, or were determined by levels of education, such as in the Khoram Abad survey. In contrast, there were some positive attitudes in large cities such as Shiraz where modern attitudes are evident or in Esfahan amongst Christian minorities. The positive attitude in Qom, which has historically been known as a religious city, reflects the role of religion in formulating public ideas. Although several studies have been conducted regarding

gamete donation in various communities of Iran, this subject has capacity to be deeply considered in different sectors of Iranian society making an Iranian cultural overview in terms of ARTs rather difficult.

Since Iran has poorly developed legal frameworks and policies governing ARTs, another important investigation has been the activity of professionals such as the Avicenna research centre to provide basic and credible information for overcoming the shortage of legal policies. These kinds of steps are aimed to help to overcome misconceptions about gamete donation. In particular, there are different groups who need support such as the children resulting from ARTs, the couple needing or using ARTs, and donor and practitioners who are involved in gamete donation.

Chapter6

The Results of the Study

Gamete donation at Tehran University of Medical Sciences

The results of questionnaires show that Tehran University Medical Sciences (TUMS) has three IVF clinics that are involved in gamete donation: Vali e asr, Shariati and Mirzakoochak Khan. All three clinics began offering gamete donation procedure around the year 2000. The centres only offer egg donation and the average number of egg donations in the centres is 40 per year. The cost of surgery and medicines for each donor has been estimated as £450 to £650 per donation, and every egg donation procedure takes two to three months. In one clinic, infertile couples requiring egg donation must provide their own donor, while the other two recommend suitable donors to recipients, especially when they would prefer to have an anonymous donor. However, each clinic relies on different conditions in deciding whether or not a match can take place. These include the age of donors and recipients, either the document of *muta'ah* between the donor woman and the infertile woman's husband or verbal agreement of these, or a form providing information about the recipient and the donor (Appendix 4). As a result, uniform rules cannot be found in terms of gamete donation in these centres, despite the fact that they are part of the same university.

Gamete donation in practice

The results of interviews with nineteen interviewees of Tehran University regarding gamete donation show that a minority of participants believe that gamete donation does not raise serious negative issues and consequences. They argued that gamete donation is similar to blood transfusion, meaning it is not important to consider what happens after donation; the gamete is not worth considering as an issue when so many wasted gametes are discarded daily.

The majority of respondents however acknowledged that although the practice of gamete donation in Iran can end infertility problems, various negative consequences and dilemmas in the socio-cultural, legal and economic domains may arise that can affect the lives of parents and the child who results from gamete donation.

A significant numbers of those interviewed indicated that there are important questions and dilemmas in terms of law and religion. Indeed, gamete donation is undertaken by different clinics just according to positive *fatwas*. As one respondent said:

I think some physicians obtain permission from a *fatwa* and then perform their intended work without any prior investigation regarding negative consequences for the individual and for the social life of the patient and society.

There is not a specific legal guideline or set of codes of practice to guide the practitioners involved in gamete donation. A physician said:

I think we have inadequate information about the issue of gamete donation and I do not know what my responsibility is, especially in some cases where they encounter problems.

Therefore, the shortcoming has led physicians to practice individually and based only on their personal discernment. One practitioner said:

I myself recognize which case is suitable for donation. For example, when I realized that an infertile couple is from a low economic class, or the man is a drug addict, I try to deter them, resorting to various excuses.

The main legal issue mentioned by respondents is the persistence of some legislation regarding the donor, recipient and the children resulting from gamete donation, despite the fact the legislation needs to be adapted to the *fatwas* of gamete donation. A typical example is the question of who the child's parents are; his/her problems are crystallized in practical issues such as inheritance. One participant said:

I think that most donors and recipients are unaware of the legislation on inheritance or confidence in anonymity. At present, infertile couples and the donor presume anonymity of both sides will always remain confidential; probably both the donor and the recipient are unaware of issues that may arise. Indeed, the donor satisfies the economic or moral benefit of gamete donation and the recipient is just happy to receive a child.

Inheritance disputes are a primary subject of legal cases; it is a problematic issue even amongst families whose inheritance rights are legally clear. These inheritance conflicts are

even more problematic in cases where the legal rights and roles are much more ambiguous. However, the unclear situation of the child resulting from gamete donation may affect the decision-making of donor and recipient. As one participant said:

If a donor knows that a child resulting from the gamete donation inherits from the genetic parents, she/he may not undertake the donation. Also, if the social parents know that the genetic parents inherit from the child, they may avoid the gamete donation or make different financial plans for their lives.

The other legal issue is lack of legislation concerning scenarios where the child would like to live with the donor or the donor offers to have the child live with them. Similarly, there is a lack of legal clarity about whether, when, from whom, and how the child is told that she/he is the result of a gamete donation. Legal ambiguity also exists concerning those conducting the procedure, who will respond to any problems that arise from the procedure for the donor, recipient, and/or practitioner, and how they will do so. As one participant mentioned, when a donor receives the medicine for an egg donation but she does not produce eggs because the injection has apparently failed, it is possible that the failure may be due to the donor having sold the medicines on to someone else. Legal solutions in such cases are very difficult. Also, it is not legally clear for practitioners involved in the donation who has the right in terms of confidentiality or who is legally responsible for any problem the child experiences as a result of gamete donation. As one respondent said:

I think if children resulting from gamete donation are dissatisfied with their lives all authorities involved in the procedure from top to bottom and their genetic and social parents must be answerable to the children.

In addition, the results of the group discussion with legal and religious scholars show that there are both legal and religious ambiguities. The main challenge that was raised by the participants in the group discussion was the legal silence in terms of gamete donation. Some scholars raised this as a serious legal problem, and noted that the absence of relevant laws results in neither the physician nor the donor or recipient having a clear legal understanding of the practice in which they are involved. Others believe this silence is not a problem but rather a strength because gamete donation is a new practice and one that should not be confronted directly but gradually and over time. Thus, on the one hand these issues differ from case to case, and on the other hand single individuals' situations are different even in the same case. Therefore, the lack of relevant laws enables flexibility in judicial rulings. For example, in

terms of transfer of an embryo to a woman whose husband had died, there are various judicial ruling for different cases.

In my discussion with legal and religious scholars and practitioners, they pointed out that there is a challenge about considering someone infertile as a patient when her/his marriage is in danger. One health practitioner indicated that some situations which are presumed risky for infertile couples such as divorce may have fewer negative consequences than gamete and embryo donation or even surrogacy; considering the fact that a child's life is also involved in this process. The results of participant observation show different aspects of this issue. For example, an infertile woman who needs IVF avoids using ARTs because of religious prohibition. Although at the moment there is no concern that her infertility would endanger her marriage, there is no guarantee that this safety will last forever especially when the woman cannot benefit from ARTs due to her age.

The scholars also mentioned that the position of a donor from the religious point of view was challenged. Some scholars believe a donor is not a patient, and the positive *fatwas* are just about the infertile party. However, other scholars believe that these *fatwas* implicitly agree with the existence of a donor in gamete donation. Moreover, the condition for avoiding touching and viewing the private parts of the body under embryo law has been discussed; some scholars believe that this condition proves that an infertile person is not regarded as a patient by the Guardian Council according to this condition and legally the person who uses ARTs has to comply with this condition. However, other scholars believe that the practice of ARTs without complying with this condition may seem to be an illegal practice but this condition has not been mentioned in administrative legislation.

Comments in interviews also show that some participants indicate that legal and religious issues should be considered by the Guardian Council and the law; the practitioners are merely executing the procedure and it is not necessary to go through details of different aspects of the procedure.

Another important dilemma mentioned in interviews related to question of identity. Various identity problems that mostly arise concerning donor anonymity and disclosure of the procedure were pointed out. Although it may primarily concern the child resulting from gamete donation, both social and genetic parents are also involved in these issues. As one respondent said:

These children have an identity problem even if the law and religion define two people as the child's parents, since the child knows three people made the decision and were involved with creating and raising him or her.

Losing the lineage and the genetic history of the child, which may be needed in order to provide essential health-related information for the child, was recognized as a concern. Losing one's lineage is more of an issue in the case of sperm donation since a person's lineage is culturally defined by the father's identity, but losing lineage may be an underestimated issue related to egg donation. In addition, the risk of incest between the children resulting from gamete donation increases due to the anonymity of the donation and the practice of using the same donor's gametes for different recipients. However, related to the issue of incest, it has been suggested that marriage contracts be changed so that the potential risks of genetic problems may be controlled. Moreover, it is possible that different factors cause these children to reject their identity as it has been defined by law and religion. As one respondent said:

When a child is told her/his mother is a donor, he/she prefers the social mother who has often a better socio- economic status than her/his genetic mother who is a widow and might have done the donation for financial reasons.

This concern may cause different issues in society, such as mistrust of the birth certificate and official documents that establish relations between individuals, as well as causing public confusion about identity especially amongst the children who come from families where infertility has been a problem.

In addition, interview respondents illustrated different factors that can result in the commercialization of gametes, where the trade in gametes is accepted culturally and ethically, with no legal or religious prohibitions. They indicated that gamete donation may change into a gamete trade, and it might find a market with other donor organs such as kidneys. This trade could have negative consequences, promoting a new eugenics, providing only infertile couples of a high economic class with a full range of gamete options, enhancing a money-making motivation amongst donors, exploiting donors and increasing the number of professional donors who donate more than three times.

Various issues regarding donor and recipient were also discussed. It was pointed out that the donor may not know the potential value of a gamete. Also, a donor woman's health can be in danger especially when she undertakes donation more than three times. It is possible that the relationship between the donor and her/his partner and the members of the donor's family would be affected; they tend to become unhappy relationships. There are also additional problems for infertile couples, such as concern over the ownership of the child, since they usually worry about the child realizing that he/she has resulted from gamete donation, and their concern may tempt the donor to harass or blackmail them. A participant said:

I know a patient who underwent egg donation five years ago; the donor was her friend. After she gave birth she was full of anxiety about the secrecy, so she moved house and changed her mobile number many times and gave up her work.

The results of informal interviews showed confidentiality is an important issue both for the donor and the infertile couples. It brings about some problems for families and even for clinics that undertake gamete donation due to nondisclosure of donor or recipient's identity. Also, the results of the participant observation and informal interviews show that child ownership is the main concern of infertile couples. As one patient said:

Since all my relatives know I was infertile for eighteen years and I tried any method, even asking my husband's and my families to donate an offspring to us, I should be worried about the disclosure of the identity of my child.

In addition, the results of interviews demonstrated that the relationship of the infertile couple may become unpleasant. The woman shoulders more of this problem, whether it is sperm or egg donation. In the egg donation procedure *muta'ah* is an issue for infertile woman because the donor is usually a young widowed woman, so the recipient can be threatened by remarriage of the donor with her husband. Egg donation is more acceptable than sperm donation in the society, since the donor and recipient are of the same sex and in Iran polygamy exists, and there are fewer clerics who allow sperm donation compared to those who allow egg donation. However, sperm donation is hardly accepted because it clashes with strongly upheld cultural norms, such as patriarchal dominance and a resulting gender inequality, prohibition of polyandry, and chastity as an important characteristic for women. It was interesting that despite the lack of sperm donation in the three TUMS centers, some of the interviewees brought up the subject with me. Perhaps this was because they were practicing sperm donation in their private clinics or they investigated sperm donation and ultimately rejected it. Several quotes of participants illustrate the gravity of issues related to sperm donation clearly:

In Iran, girls and boys are still viewed differently in terms of growing up and activities. For example, people cover small girls more than boys, or an illicit relationship between men and women is more unacceptable for women.

Another respondent, who was surprised and concerned by a *fatwa* on sperm donation that allow an infertile couple to use unknown sperm, said:

It is a strange *fatwa*; imagine a couple buys sperm from a centre and, after many years, they want to buy more sperm. Well, the sperm will be provided by another centre. What will happen? Many children will have half siblings and none of them will know the others. However, the frequent occurrence of sperm donation might alleviate its despicability.

Sperm donation is a despicable behaviour that can threaten the woman's chastity because pregnancy is known to be the result of sexual relationship, and the sperm of a foreign man in the woman's womb is not acceptable since polyandry is forbidden. We live in a society where a woman blushes even to talk about her breast disease, so how can sperm donation become acceptable? I work in a clinic that undertakes sperm donation and witnessed a woman who suffered psychological problems because of sperm donation. She said that she grew fond of the donor and would like to see him. Although I knew it is despicable, I was faced with a moral dilemma.

The results of the participant observation showed that accepting sperm donation is difficult both psychologically and morally even though it is religiously accepted. The results indicate that even after more than a decade of waiting the women preferred adoption to sperm donation. However, respondents indicated diverse socio-cultural issues related to cultural acceptance, such as reducing adoption. As a participant said:

Iran is greatly advanced in terms of adoption, both socially and legally, but it seems that gamete donation is a factor that causes people to avoid applying to adopt a child, which is religiously and culturally acceptable.

They also mentioned that although these practices might free couples suffering from infertility and its negative consequences, such as social stigma, these couples may become involved in different dilemmas and problems. For example, they may experience different stigmas, as one respondent described:

Iranians wish for modernity and are inclined towards Western culture in some respects; however, there are traditions to be observed, especially moral traditions such as the relationship between a man and a woman. So if infertility is seen as a sexual failure, gamete donation will not be culturally acceptable and it can create an ethical stigma, which is worse. However, the Iranian government oversees cultural manage-

ment through various means such as media, particularly TV and radio which are very important. The religious *fatwas* dominate the government practices. Therefore, the government can institutionalize new ideas in society especially by supporting official clerics such as the supreme leader.

However, participants pointed out that different *fatwas* for gamete donation created a doubtful atmosphere for its acceptance. *Fatwas* rely on who asks the question and how the issue which is the subject of the *fatwa* is explained. A participant said:

It is important who poses the question -- the infertile person, the physician or a lawyer -- because they ask differently, and gamete donation relies on various perspectives, so a *fatwa* may suggest that gamete donation is an allowable procedure but information about other concerns linked to gamete donation may not be found in the *fatwas*.

Moreover, the participants mentioned that when some clerics are aware of the consequences, difficulties and problems stemming from the procedure that are experienced by different groups, such as practitioners, attitudes towards *fatwas* may change. Indeed, the *fatwas* regarding egg donation with married donor and those regarding tubal ligation have been changed by some clerics when they found out more about these procedures.

The results of the study revealed practitioner concerns that the child resulting from gamete donation may be under more pressure than their peers; these children may not only undergo social stigma and peers' harassment but also they may endure the stigma and pressure from the social parents. As a respondent said:

It is possible that the infertile parent of a child born as a result of donation may regret the donation and, not being able to express themselves properly, blame the child.

Another participant said:

I have a patient who used egg donation four years ago. This couple is now divorcing and the woman asked me to prove that she is not the mother of the child; she wants to cancel her child's name and details of her birth certificate.

Some issues involving the relatives of infertile couples were mentioned by these respondents; aberration of *mahram* and the possibility of emotional relationships developing were mentioned, as was an unwillingness to accept the child especially by the couples' families. However, the participants pointed out that these socio-cultural issues depend on the specific communities and families involved. Such concerns were felt to be more likely to arise in small cities.

Considering these problems it is not surprising that over half of the physicians expressed dissatisfaction about working in gamete donation cases; some of them said that they felt guilty and at fault. One of the physicians involved in gamete donation said:

I am happy to treat infertile couples using gamete donation, but when I encounter some of them who have problems with the child or the new situation I feel guilty and at fault. We realize gamete donation is not just a remedial method and it has close ties with different individuals' character that we are oblivious about.

Participants suggested that these practices are not regarded only as treatment methods but should be considered also in social, cultural, economic, political and religious contexts. Despite the fact that there are various concerns, significant numbers suggested that the practice of gamete donation can continue concurrently with attempts to reduce these problems. Suggestions as to how this might be achieved included: developing clerics' knowledge of different aspects of gamete donation, producing improved legal guidelines, and establishing an official organization for infertility. Such an organization could provide help to reduce the problems encountered by practitioners, social and genetic parents, and the child resulting from gamete donation. It was suggested that the principal activities of the organization could be registering information about relatives in situations involving embryo and gamete donation and surrogacy, investigating parents' credentials, managing the financial part of the procedure, and maintaining embryo and gamete banks. It is essential that all aspects of the procedure receive thorough attention. As one participant said:

It seems gamete donation has started hastily in Iran; its consequences in different aspects have not clearly and accurately been considered.

There is no solid evidence to easily accept the practice of gamete donation in Iran today; it may be better that a situation which leads infertile couples to get a baby by other means, such as adoption or remarriage, should emerge.

In addition the results of informal interviews in Yazd showed how the consequences of gamete donation that impact both practitioners and patients have gradually emerged over time. Some practitioners who were pioneers in ARTs and tried to pass embryo laws ultimately abandoned gamete donation because of its negative consequences. As one said:

When I asked a woman donor whether you have ever been a donor, she smiled and said I don't know how many children I have in different families, and it flashed in my mind that I have never thought about the nonmedical consequences of gamete donation.

And another said:

I saw some negative consequences of gamete donation in the beginning but these were not serious because any innovation brings about some consequences especially when it has an unnatural form. However, when I realized some were serious problems I thought these practices can only be done with more investigation and organization.

Nevertheless, a minority of participants believed that only some problems can be alleviated by law and religion. One participant said:

Law can bring about organization and can even change the manners of human beings in the long-term, however, some elements of feelings and emotions in person and a person's individual concerns, beliefs and ethical codes cannot be controlled by law.

In summary, the results of the study show different dilemmas and consequences of gamete donation that make the procedure more questionable. Gamete donation cannot be regarded just as a treatment method similar to others not only because of the natural complexity of the procedure but also because of the consequences that can interact with other individual and social factors. Gamete donation as a biotechnology should be considered in terms of legal, religious, and socio-cultural aspects in a particular context before undertaking its practice. However, the results show that gamete donation in Iran has been hastily practiced; it has not been thoroughly reviewed in its full context by clerics or by other lawmakers in a serious way. This lack of thoughtful review contributes to unclear, ambiguous, and complex situations for all involved.

The results also show that although various factors have been identified by some physicians which lead them to consider gamete donation problematic, these physicians nevertheless practiced like others who believed that gamete donation was an unproblematic method. It seems that physicians are willing to practice according to what legislation and *fatwas* tell them to do. In this regard, legislation and guidelines and codes of practice can make physicians more responsible in how they undertake gamete donation. Such guidelines can be also used by donor and recipient to increase awareness of the procedure and its consequences.

Chapter7

The Potential for Gamete Donation to be Included in the Medical Ethics Curriculum

Perspectives on curricula in various countries

Medical ethics has been presented as an interdisciplinary knowledge domain since 1960, and has been extended to encompass bioethics due to the expansion of new biotechnologies (Murray, 2003 cited in KhaghaniZadeh et al., 2011). Zahedi (2007) suggested that these developments, research and trials have all resulted in progress in three areas of medical ethics and bioethics. The first area of progress has involved decreasing paternalism and increasing liberalism in medicine. The second area of progress has been enhancing practitioners' responsibilities in terms of professional ethics, as reflected in official education pertaining to medical ethics. The last area has involved incorporating various disciplines such as the social sciences and the law, with medicine to form a more holistic approach to bioethics. These areas of progress provide a useful means for disseminating knowledge regarding medical ethics to practitioners.

According to the WHO (1995) with the expansion of knowledge and technology and changing social values, the issues that should be recognized and analysed based on the four ethical fundamentals will change. However, it is impossible for these elements to have equal value in a particular case. Furthermore, they are debatable in that they have been universally formulated and defined as a generalisation. Nevertheless, there are such definitions in medical dictionaries. A practitioner involved in a treatment procedure faces many medical ethics issues, and training in medical ethics can help a physician to prevent and resolve ethical issues (Larijani and Zahedi, 2007a). According to a report by the WHO, the teaching of medical ethics has varied significantly with regards to its content (Table 1).

Table1. Four examples given by the WHO, regarding subjects of medical ethics courses. Adapted from WHO (1995: 4-5)]

China	Japan	Malaysia	United Republic of Tan-
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			zania
-Euthanasia and Assisted Death in late cancer cases -Pain control -Eugenics -The mentally hand capped -The severely handi-capped - Sterilization of handi-capped person -Allocation of resources -Organ transplantation	-Bioethics -Physicians' obligations, patients' rights and responsibilities -Informed consent -Death with dignity and terminal care -Brain death and organ transplantation -In vitro fertilization -Prenatal gender determination -Diagnosis and treatment of genetic disease	-Research involving patients - Physician-patient relationship - Aspects of confidentiality - Importance of consent for invasive procedures	- Definition of medical ethics - Hippocratic Oath - Medico legal issues - Physicians' duties - Relationship between physicians and patients - Relationship of physicians with their colleagues - Euthanasia - Confidentiality in medical practice - Code of conduct in the community context - Rules concerning administration of drugs and the prescribing/ advertising of drugs

According to the WHO (1995) in the Fourth Consultation with Leading Medical Practitioners, participants suggested that all medical undergraduates should be exposed to a core content of medical ethics which consists of the following topics:

- Principles
- Children and young people
- Reproductive and genetic technology
- Care for the dying
- Research
- Doctors with dual obligations
- Relations between doctors
- Inter-professional relations
- Rationing and allocation of scarce resources

Medical ethics curriculum in Iran

In Iran, scholarly production and reflection concerning medical ethics have been rather unsystematic. Books have been published such as *Medical Ethics and Customs [Akhlaghva Adab e pezeshki]* by Etemadian (1963) and *Medical Ethics with a Brief Overview of Medical History [Akhlage Pezeshki Benzemame Mokhtasary a Taurikh Pezeshki]* by the Ministry of Health and Medical Education (MOHME) (Emami Razavi et al. 2009). In the last two decades, the Medical Ethics Studies and Research Center (MESRC), established in 1993, was the first official step taken by the Ministry of Health and Medical Education into medical ethics. Thereafter, activities have been developed by establishing National Research Ethics Committees in universities (1997) in order to implement the National Codes of Ethics in Biomedical Research in these educational centres (Emami Razavi et al., 2009; Larigani and Zahedi,

2007a). According to TUMS documents (2010), the materials related to history and medical ethics in Universities of Medical Sciences in Iran consist of ten topics (see Box 1).

Box 1. The material of medical ethics curriculum in Iran (Curriculum of General Practice, n.d)

- Definition and explanation of moral contexts
- The general history of medicine
- The medical history of Iran
- Ethical theories in different fields of medicine
- Patient-doctor relationship (professional confidentiality)
- Presenting selected medical texts of Islamic civilization
- The theories of Islamic jurisprudence in different fields of medicine
- The overview of Islam in terms of particular medical cases (transplantation, genetic cases, sperm bank, spacing between pregnancies, abortion, sterilization and insemination)
- The medical and philosophical aspects of death
- Medical oath

In Iran's Universities of Medical Sciences, which come under the auspices of the Ministry of Health and Medical Education, the medical education programme takes seven years to complete. TUMS recently changed the relevance and length of instruction of the medical ethics' course. Starting in the academic year 2006-2007, medical ethics has been recommended as a course for medical students before their clinical program(as an undergraduate), whereas before the change, the medical ethics content was dealt with in only two lectures in the fifth year of the medical programme (the first clinical year of the medical programme). With the collaboration of the Medical Ethics and History Research Centre (MEHRC), in which the activities related to medical ethics in universities have been covered, and the Educational Development Office of the Faculty of Medicine, an educational development project has been proposed in order to recognize, analyse and resolve ethical issues. The training leads physicians to strive to enhance the medical health and welfare of patients with respect to their rights and dignity (Larijani and Zahedi, 2007a).

The medical ethics curriculum of Tehran University of Medical Sciences

According to the documents of MEHRC, the Central Committee of Medical Ethics Curriculum Planning (CCMECP) was constituted in the first workshop of medical ethics curriculum planning. The com-

mittee had a meeting to determine the topics of the medical ethics course in order to inform lecturers about what should be taught in this course by 27 April 2006. The six members of the committee suggested investigating national and international resources to access diverse information to provide appropriate topics. It was decided that the medical ethics courses would be presented in different stages, and the first stage would include the medical ethics curriculum. Twenty-three topics (Table 2) were recommended by CCMECP for this curriculum and the topics were each scored from 1 to 10, with 1 deemed the least important and 10 the most relevant. Ultimately, the 12 topics with the top scores were prioritized. The second medical ethics curriculum planning workshop approved these topics by 2 July 2006 (Table 2). However, the scores for genetics and fertility and infertility show that these topics were regarded as less important and were not prioritized as topics for education.

Table 2: The recommended topics (sum of the individual score)

The recommended topics	Score (sum)
• Ethical theories and the method of analysis of ethics	60
• The relationship between physician and patient	60
• Professional behaviour	57
• Autonomy and informed consent	54
• Medical errors	53
• The relationship of the medical team	53
• The determination of the patient's role	52
• The participation of medical students in care of patients	50
• The legal framework of medicine	49
• The conflict of interest	47
• The allocation of limited resources	41
• Alternative decisions	40
• The rights of HIV and AIDS patients	36
• Ethics of mother and foetus	32
• The ethical issues of end-of-life care	32
• The order of non-resuscitation of cardiac and pulmonary patients	31

• Ethics in research	31
• The rights of the child	25
• Ethical consultation and ethical committee	22
• Transplantation	19
• Fertility and infertility	19
• Genetics	18
• Advanced care	18

During the last five years, the topics have been further changed by the CCMECP (Appendix 2). The final plan that was put in place for the academic year 2009-2010 (Box 2) shows significant changes, for example elaborating provisional obligations, responsibility and professional behaviours and ethics in beginning and end of life topics, or omitting ethics regarding mother and embryo topics. These changes are in accordance with the discourses and common issues arising in society. These topics have been determined according to both Islamic teaching on ethics and western bioethics so that contradictions are minimised.

Box 2. The final topics of the medical ethics curriculum of TUMS

- Responsibility and professional behaviour: the elements of professionalism, respect and humanitarianism, justice and occupational enhancement, righteousness and dignity, and conscientiousness
- Ethical theories
- Four fundamental elements and the method of analysis of ethics
- Autonomy and informed consent
- The determination of capacity and alternative decisions
- The relationship between physician and patient
- Ethics of beginning and end of life
- Confidentiality and truth
- Physicians' relationships with medical team members
- Medical errors
- Ethics in medical education
- The conflict of interests
- Practical teaching in terms of ethics on the teaching rounds

The absence of ARTs in the ethics curriculum is notable given the concerns identified earlier in this thesis. The absence may be due to several reasons. It seems since this course is primarily taught by General Practitioners, it covers the more common concerns that these practitioners encounter. ARTs, and the issues that their use raises, however, are more complex and more specific. Although 'ethics of the beginning of life' are covered in the curriculum framework, the scope is limited. Another reason for

exclusion of this topic is that as the problem of infertility is not covered by the health insurance system there is a sense that it is not a crucial factor deeply threatening to people's health and wellbeing.

Medical ethics curriculum in research

Ethics education can be a primary means of resolving issues and preventing medical ethical problems in the context of health care. Medical ethics education has clearly gone through interesting times over the last few decades. In most countries, a part of medical ethics is taught as formal curriculum in medical schools and certain institutions. The curriculum varies from one country to another. According to Eckles et al. (2005) there is significant variation in terms of content, teaching methods, the background of the teaching faculty and the number of hours in the medical ethics curriculum (cited in Inanc Salih and Boyle, 2009). Additionally, the efficiency of formal ethics education programs is affected by variables such as length of the course, teaching methods, outcome and materials in the ethics curriculum.

Various methods are applied for teaching medical ethics curriculum in Iran: these include lecture, group discussion, conference, clinical rounds and journal club (Asghari et al., 2011; Curriculum of Medical Ethics Lorestan University, 2011; Khaghani Zadeh et al., 2011; Shidfar et al., 2007). However, lectures and group discussions have been most commonly used. Shidfar et al. (2007) pointed out that teaching medical ethics by lecture was common amongst 90% of twenty-two faculties.

Moreover, different aspects of medical ethics curriculum have been investigated by Shidfar et al. (2007) in medical schools in Iran. The data have been collected by questionnaires, with twenty-two out of thirty-two responses collected amongst those sampled. The results showed that the majority of schools (77%) offered this course in the clinical period (*stageric*) during the 4th or 5th year of study, while the rest of the universities preferred to offer it in the physiopathology period. In addition, the information indicated that the responsible departments for teaching medical ethics curriculum were diverse in different universities; they included forensics, the clinical deputy and educational deputy of medicine, and theology and psychology departments. This diversity also attests to the variety of teachers responsible for delivering medical ethics curriculum. The results of the study also illustrated some similarities in

course content. Specifically, although sixteen topics were mentioned by universities as the medical ethics' content of the curriculum, seven of those were taught in 80% of medical schools.

Research also examined the identity of medical ethics courses according to the viewpoints of fourteen medical ethics teachers at three Universities of Medical Sciences in Tehran. Researchers who were conducting this study pointed out three concerns related to medical ethical courses in Iran: teaching secular medical ethics, lack of Islamic ethics system due to scarcity of clear references to medical ethics, and ambiguity of different realms of medical ethics curriculum (Khaghani Zadeh et al., 2011).

Since medical ethics is a new module, revision of the curriculum can be an important step for continuing to develop and expand it. According to Asghari et al. (2009) the method of curriculum teaching has been revised in TUMS. By this revision, the practice of using student-centered and problem-based case discussions in small groups and clinical ethics portfolios were substituted for teacher-centered and information gathering methods. The study examined students' knowledge of medical ethics and moral judgment. The results demonstrated that the change had a great effect on improving the knowledge of students, while the students who were taught by the previous method had better moral judgment rather than those taught by the latter method.

Additionally, research investigating the attitude of medical students and graduates towards medical ethics curriculum was conducted at the Jondi Shapour University of Medical Sciences in Iran in 2007. 398 participants answered a four-level item questionnaire. 83.4% of the participants were students and the remaining 27.6% were graduates. The results of the survey showed over 50percent of respondents indicated that both the teaching method and material of medical ethics curriculum were poor, and men were more dissatisfied than women. The information demonstrated that the male respondents agreed more with the necessity of teaching this curriculum. Such agreement was significantly observed amongst medical graduates alike. Over 50 participants believed the suitable time to provide this curriculum was during the clinical period (Dibaii et al., 2009). Zahedi (2007) also suggested that the clinical models of teaching medical ethics can be most effective in learning.

Physicians can benefit from ethics education in their medical practices. Since the medical ethics curriculum is an official course in the medicine program, it is the first step by which a practitioner's frameworks are established to address medical ethics that can be important in any medical practice. Although a limited amount of research has been done about medical ethics curriculum in Iranian univer-

sities, this program still encounters many issues that should be considered. Topics for further exploration include lack of uniform material and topics, professional qualifications of teachers, dominance of theories over practical issues and formulating ethical issues by legal views (Tabei, 2012). The subjects that need to be considered by medical ethics are rapidly increasing, and one developing issue that deserves inclusion in medical ethics education is biotechnology. This study would indicate that the medical ethics curriculum of Tehran University of Medical Sciences does not currently cover this area and needs to be adapted and further developed to address the issues raised by the use of this new biotechnology in the Iranian context.

Medical ethics in the curriculum in practice

The analysed medical ethics curriculum of TUMS (Box 2) shows that this curriculum can provide students with an ethical framework in which certain factors can be introduced. Select parts of this curriculum will incorporate the main legal, socio-cultural and religious issues that can be applied to new technologies and methods in the context of medical ethical issues.

The results of the study show that more discussion of these aspects have been postponed until over the fourth year of the medical programme (clinical program), since this is the time point when students start to be directly involved with cases. This practical learning creates great opportunities to introduce and discuss medical ethics issues, although these aspects are covered by the medical ethics curriculum. As one physician said:

The students learn in practice what medical ethics issues are in terms of social, cultural and religious aspects, and how they can find alternative methods to resolve ethical dilemmas and issues.

In addition, the CCMECP suggests that the medical ethics curriculum should address and formulate those matters considered a priority, such as professionalism, the relationship between patients and doctors, conflicts of interest, and medical errors (Box 2). The medical ethics curriculum also has developed around matters that are important and which figure in international organizations, as in other countries, such as the four main elements of medical ethics (Box 2 and Table 2). The results of the present study also indicate that the topics listed in TUMS's final curriculum (Box 2) introduce those situations which tend to be fundamental issues for all physicians. One participant said:

All physicians encounter these matters in treating patients in their everyday work, although it is unlikely that ordinary practitioners will face cases such as organ transplant or gamete donation even in consultation. It is clear that the topics that cover more situations and issues are more important, although other dilemmas are discussed in practice during the three clinical years.

Most members of CCMECP indicate that the occurrence of medical ethics concerns in society and the physicians' needs are significant factors in forming the material for the course. An attempt has been made to adopt materials which cover more common ethical issues, although these materials theoretically cover some ethics concerns related to gamete donation which have been encountered by physicians.

Most participants indicated that ARTs should not be directly mentioned as a priority in the materials of the medical ethics curriculum for different reasons. The members of CCMECP argued for the lack of priority of the ethical issues of gamete donation and time limits for other prioritized topics as the main reasons for exclusion (Table 2 and Box 2). Moreover, the results of the study show that the physicians involved in gamete donation suggested that the medical ethics curriculum is not the right place for discussing ethical issues of gamete donation, because this procedure results in complex issues with ambiguous solutions. The gamete donation issues can be mentioned in the curriculum only as an example of a bioethical issue which affords no easy solutions in practice.

However, most of the participants suggested that the issues and dilemmas should be discussed with gynaecology and obstetrics residents and professionals. The results of this study show that ethical, cultural and religious issues are not only concerns for the patient and donor, but they are also serious issues for the physician in practice.

In addition, the results of the present study indicate that other personnel involved in gamete donation programs, such as laboratory staff and nurses, also have concerns about the ethics of their practice and the need for guidance. As one male participant said:

Sometime an accidental or intentional mistake can cause a big problem; for example, the clinic disclosing the name of the donor can bring about serious problems in terms of confidentiality, or changing a gamete by a member of the laboratory staff although selecting them may be regarded as an unimportant issue.

This study has shown that the ethical issues of new technologies such as gamete donation can be a useful example for illustrate more general issues and basic topics of medical ethic curriculum such as the four principles and specifically issues of autonomy and confidentiality. The results also point out that gynaecology and obstetrics residents should specifically be educated both in theory and practice, as one member of CCMECP said:

A program will be implemented for professional physicians and residents in order to teach special issues related to their subjects

To sum up, the results of the study highlight the development of medical ethics education and the medical ethics curriculum of Tehran University of Medical Sciences in the last two decades. The study shows that changes in the curriculum have tended to be more practical and pragmatic rather than oriented towards global trends in bioethics. The approach of providing the topics of the medical ethics curriculum shows that it includes basic medical ethics issues for any physicians in any practice, and can be specific to the needs of the particular society rather than addressing new developments in biotechnology. The study shows, however, that specific information and guidance on the ethics of new technologies are recognized as being needed by medical teams.

Chapter 8

Discussion and conclusion

This study has provided an account of gamete donation in theory and practice in Iran. It has considered the place of ethics in the teaching of medical science in a University setting with a focus on of the influence of legislation and religion, and the diverse debates that follow. It is clear that from the practitioner's point of view, the information about medical ethics education in terms of ARTs has been inadequate, which might be due to the novelty of medical ethics curriculum and ARTs, and the informality of medical ethics education of ARTs. Both physicians and the members of the Central Committee of Medical Ethics Curriculum Planning (MCMECP) mostly suggested that although gamete donation can cure infertility, the procedure produces complex questions, dilemmas and concerns in economic, legal, socio-cultural, religious, health, and political domains which they have yet failed to address systematically.

Concerns about adverse potential outcomes resulting from gamete donation procedures were identified. The different *fatwas* concerning gamete donation also raised important questions. Religious endorsement is ambiguous and as a result, is accepted by some and rejected by others because there are negative and positive *fatwas* of their *marja' al-taqlid*. Conversely some individuals disagree with the practice although their *maraji'* have issued positive *fatwas* about gamete donation.

In addition, there are some religious limitations such as the prohibition on touching and viewing private parts of the body as mentioned in the legislation on embryo (2004) and which has been attached to gamete donation; basically, infertile people are not to be regarded as patients. Likewise, the prohibition *muta'ah* or temporary marriage precludes Sunni Muslims from some aspects of ART use. These religious prohibitions result in some infertile couples, donors and physicians avoiding using ARTs. By contrast, others who undertake and practice ARTs ignore religious prohibitions. This might be due to two factors: the first is a person's outlook, which if it tends to modernity and scientism is likely to reject religious and cultural constraints surrounding ARTs. Even though Islam has a dominant position in Iran, it cannot be regarded as a closed or monolithic society because the thinking and behaviour of Iranians differ from group to group (Tremayne, 2006b; 2012a; 2012b). This is due to different factors; Iran is a society in transition from tradition to modernity but also has a strong religious state. Although the out-

reach of rationalism and a peremptory tendency to modernity attenuates what might be seen as traditional attitudes in some cases, still there are groups that uphold and abide by their long held traditions. In the last decade, contrasts between religious zealots and, open-minded religious people have been made highly visible. Also, contradictions occur when one person, who may think and behave as a 'modern' in some cases acts as a narrow-minded person in others. However, the bottom line is that infertile couples might always ultimately ignore religious rules because having child is so all-important for them.

The second factor is the lack of awareness of those involved in gamete donation about what the *fatwas* actually state. These may be likely to simply accept the practices because they are frequently practiced without legal prohibitions. In this situation, the practices are legally and religiously regarded as admissible until they become prohibited by law or strong *fatwas* of *marja' al-taqlids* who have authority. Although *fatwas* are regarded as a resource for the legislation or authority of particular practices, the issued *fatwas* of gamete donation are in regard to specific concerns which have been clearly articulated, and there are still substantial ethical, moral, religious and cultural issues in practice that religion cannot clarify (Tremayne, 2004 cited in Abbasi-Shavazi et al., 2008).

In addition, although *fatwas* related to gamete donation developed in Iran, bioethical issues related to gamete donation cannot be made clear merely by a few injunctions as the issues are complex and have close ties to different aspects of each individual's life. What appears to be absent are knowledgeable clerics who answer questions about ARTs in order to reduce the negative consequences associated with the practice of gamete donation in fertility treatment? Even if the relevant *fatwas* have answered the concerns comprehensively, there is still a gap between permitting gamete donation by *fatwas* and their practice that requires the serious intervention of health policies and law. The lack of specific laws concerning gamete donation and the absence of careful supervision of ARTs raises serious concerns in terms of medical ethics and encourages paternalism in decision-making that can threaten a patient's autonomy by allowing physicians' individual opinion to prevail in the absence of unique codes of practice.

This gap also becomes prominent in the mind-set of the physicians who see themselves as responsible for a technical procedure. As one participant mentioned "in the new world, a doctor is a technician." In this regard, the responsibility for everything else is delegated to others.

The policy makers have to manage the implications of those *fatwas* in theory and practice. An important area is the health system that can provide medical ethics education, providing clinical, non-clinical and public education, and guidelines and codes of practice to assist in the management of com-

plex bioethical issues. According to Dastjerdy² (2010) the design of the general guideline is on-going in Iran. However, guideline rules are not necessarily followed. If we consider US legislation, the number of embryos that can be transferred is specified, but physicians operate with more than the recommended numbers, so a high number of interventions result in multiple births (Pennings, 2009).

There are also some justice issues such as commercializing donation (see chapters 4, 6). In gamete donation people can be treated as instruments for others in ways that prove morally questionable, even though the donor may receive compensation for the inconvenience involved in participating in the procedure (Dickens, 2002). Indeed selling gametes may create illegal trafficking, as in cases of organ transplantation in Iran. In this regard, the economic and social status of infertile couples can result in the exploitation of the donor.

These dilemmas and concerns surrounding gamete donation do not end with the completed procedures; the other concerns will surface as the longer-term consequences of gamete donation. The first issue is the identity of the child, whereby the simple question “who are your parents?” may be turned into a complex question for a child resulting from gamete donation. The answer to this question may be different depending on legal and religious considerations (see chapter 4). This difference engenders ambiguity in several respects: responsibility to the child in different situations as participants mentioned (chapter 6), and inheritance that is an important issue for donor, recipient and the child resulting from gamete donation because of financial values (see chapters 4-6). The inheritance situation can be a critical factor in decision-making about undertaking gamete donation, and may impact on the behaviours and actions of genetic and social parents and the child in the future. However, at the time of donation, in many cases the donor and recipient probably think little about inheritance as the typically relinquishes all rearing rights and emotional dependency.

Donor anonymity is particularly contentious (see chapter 4), as recipients in Iran mostly prefer to keep the donation secret from the child born as a result of gamete donation. In Iran, the guarantee of anonymity is based on a pact between donor and recipient, in which donors are usually given assurance of non-disclosure; donors usually have an unfavourable social and economic status, and hence prefer to remain unknown (see chapter, 6). Since no official centre or organization has undertaken the registration

² Minister of Health and Education

of gamete donation practices, the only resource for providing information on genetic origin are the clinics which undertook the gamete donation practices. Some clinics are quite poor in terms of information about the donor or even the recipient. For instance, when one of the centres was asked to provide chronological information about its first gamete donations, it was unable to do so.

However, arguments that children born as a result of gamete donation have a right to know their genetic parents and history are compelling, and in a world of emerging medical technologies everyone should know his/her genetic history to be able to make the most of what these technologies can offer for improving health and recognizing risks. Of course, it is important who, when, where, and how this information is given to the child so that it might result in fewer negative consequences. As a result, concerns regarding identity may be a serious issue for the child, and to a greater or lesser extent, for the genetic and social parents (see chapters 4-6). It may be that voluntary registration is a useful means by which donor and offspring could share their information and also so that they could find half siblings and other genetic connections. For example, in September 2000, the Donor Sibling Registry was established in the USA; on 21 April 2006, 8345 donors and offspring were registered on this site and 2114 members had managed to trace their half siblings or donors and offspring (Daniels, 2007).

Anonymity also makes the need for physician's confidentiality more demanding and complicated, as many couples involved in third party donation in Iran presume secrecy to be their prerogative. It is therefore often unclear to physicians whether and, if so, when and who should disclose the information about the procedure and the donor to the child.

Other important aspects are the social and cultural domains that interact with gamete donation practices, since cultural perceptions of gamete donation can affect its practice. Although Iran is a country which includes various ethnic groups and tribes, each with their own unique subculture, many people appear keen to disregard aspects of their background culture in the drive for modernity. Nevertheless, some traditional concepts remain prevalent and specifically in relation to the family. Marriage, blood ties and lineage are fundamental and where these are outside of recognised norms people may be rejected by society. Gamete donation disorganizes the structure and function of family and relatedness in Iran. For instance, according to Inhorn (2006a) lineage, which is viewed by some Muslims as a "mixture of relation", is traced to the donor. All related rights and relations to lineage such as parentage should be given to the donor, even though the child is separated from the donor, despite this person technically being part of the child's lineage. In addition, the practice of gamete donation with anonymity and nondisclosure increases concerns about the risk of incest.

Gamete donation also challenges other Iranian conventions (*orph*). An important principle in Iranian cultural life is 'face' (*aberou*). Anything that jeopardizes the 'face' has less chance of social acceptability (Tremayne, 2006b). Sexual relations constitute an important factor in 'face' and being suspected of having extra-marital affairs can result in losing 'face' (see chapter, 6). Since a baby is the result of a sexual relation and as there are negative *fatwas* about gamete donation in circulation, there are unlikely to be consistently positive attitudes concerning these procedures. Social and donor families encounter stigma and social pressures when it is known that donor gametes have been used and also the child may be threatened with serious social and psychological consequences in later life (see chapters 4-6).

However, the acceptability of sperm and egg donation varies according to context (Sauer et al. 1988). For example, David et al. (1988) show that egg donations from the close relatives of infertile women are more acceptable to couples than sperm donation from close relatives of infertile men (cited in Englert et al., 2004). This is a strategy that is likely to be more acceptable in Iran because of the prohibition on polyandry and negative *fatwas* on sperm donation. In this regard, the woman endures the pressures of committing a despicable (*ghabih*) act should she receive donor sperm, with negative reaction coming not only from society but also perhaps even from her husband. However, accepting a life without a child by a woman with an infertile husband is also problematic. (chapter, 4). Even in egg donation practices, there are problems for women. An infertile woman may also be anxious in case her husband chooses to marry the egg donor. Such anxieties are very real in a society in which attainment of motherhood is the primary target for women (Inhorn, 2003b) and one which prompts society, family and, in particular, the husband's family, to respect mothers (Abbasi-Savazi et al., 2006).

To summarise, ARTs recently have become an important route to overcoming infertility in the West and are now rapidly growing in developing countries too as a "perfect solution" for resolving infertility around the world (Inhorn, 2003b). However, the 'universalist' approach to bioethics often overlooks cultural factors which are crucial when discerning 'what ought to be' from 'what is' in any given society (Simpson, 2004). Nevertheless, indigenizing bioethics involves understanding values and norms that are activated when people begin to utilise new technologies (Simpson, 2004). While gamete donation organizes and challenges, it also enables couples to realise objectives which are in conformity with the dominant patterns of social organization in Iran today.

While medical ethics has historic antecedents in Iran, it has only recently received significant attention. The rapid development of biomedicine and biotechnology has resulted in new and complex questions being asked. According to Dastjerdy (2010), bioethics is at an early stage of development Iran.

Gamete donation as a bioethical issue have not been specifically considered in the medical ethics curriculum of most the universities of medical sciences (Shifar et al., 2007).

As gamete donation has far-reaching implications for society, involving economic, religious, political and cultural domains there is considerably more work to be done to understand the development of these treatments in the context of Iran.

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Appendix 1: An Outline of Western Ethics Theories

Ethical theories are important for regulating professional practices and public policy, and also for creating standards by which physicians can make decisions appropriately (Beauchamp and Walters, 1999: 10). Ethics can be understood in terms of two classic theories, namely utilitarianism and deontology, as well as alternative theories that highlight modern theoretical perspectives, such as casuistry virtue theory and the ethics of care (Beauchamp and Walters, 1999, p.15).

The diverse theories tend to demonstrate the factors and conditions that determined an activity and behaviour as right or wrong ones, and according to Shannon (1993: 3) these theories answer the question, “what should I do?”

Utilitarianism considers pain and pleasure as two primary matters which dominate human beings and determine the rightness and wrongness of activities (Mill and Bentham, 1987: 65). The right practice maximizes good consequences and minimises bad consequences, i.e. high pleasure and the absence of pain (Beauchamp and Walters, 1999: 10-11; Shannon, 1993: 3-4). Moreover, this theory indicates four resources to distinguish pleasure and pain: physical, political, moral and religious (Mill and Bentham, 1987: 83-84).

Another classic theory is deontological. Immanuel Kant, as a main theorist of the concept, believed that the motivation of an act may be neither self-interest nor the fulfilment of a natural disposition, but can merely be derived from duty. Nonetheless, other motives are considered as secondary aims of an action. In addition, Kant suggests that a moral action should imply goodwill and its duty can be derived from rules that are universally valid. Kant calls this the “Categorical Imperative”: for instance, “do not [commit] suicide”, “help others in distress.” A typical example in terms of bioethics is, “one must strive to treat every person as an end, never as a means” (Beauchamp and Walters, 1999: 13-14). Therefore, the answer to the question “what should I do?” is considered in terms of consequences of action by utilitarianism and in terms of obligation and duty by deontology (Shannon, 1993: 3-4).

Casuistry theory is an alternative to classical theory that is case-based. A particular case requires particular decision-making and judgment. Similarities and differences between previous cases and the case being considered are used to make a decision. This method is effectual for legal wording and guidelines because it is a practical method. A guideline can be derived from the accumulation of various cases according to differences and similarities (Beauchamp and Walters, 1999: 17-18).

Ethics of care theory focuses on some virtuous characteristics which are important for moral responses that are fundamental in medical ethics. These characteristics are sympathy, compassion, friendship, fidelity, love, humanity and so on (Keil and Wilson, 2001: 562). The noticeable point of the theory has been how relations' virtues fit into the moral rules, which seems to be difficult in practice (Beauchamp and Walters, 1999: 16-17).

Virtue ethics theory is not based on consequences of action or moral rules, unlike classical theories. Despite recognizing the importance of obligation, virtue theory emphasises that the main factor in creating a moral action is a person's virtuous character or disposition (Weiss, 2008: 113). These virtues can help a person understand the right action to take (Beauchamp and Walters, 1999: 15-16).

Key Domains of Medical Ethics

According to the WHO's report (1995), although Buddhist, Hindu and Islamic texts contain early definitions of medical issues, the WHO meeting suggested universal fundamental elements of medical ethics: autonomy, beneficence, non-maleficence and justice.

Autonomy is the most important element, which creates an opportunity for people to choose what they wish to see. There are two imperative conditions for autonomy: the first is the ability of a person to consider a plan of action and examine alternatives in order to make a decision (Shannon, 1993: 5). Indeed, an autonomous person can make a voluntary decision free of external restraint based on important capacities such as understanding and analyses (Beauchamp and Walters, 1999: 19-20). The second condition is the capacity to act on the decision (Shannon, 1993: 10).

According to ethics, as a result, each person lives with respect for his or her own values and principles that crystallize into ideas and conviction (Jennings, 2007: 72-80) and has the right to have certain views, make decisions and act according to his or her beliefs and values (Beauchamp and Walters, 1999: 19-20). However, individuals have to be responsible for actions which involve a network or society and can also expect to be shown respect by others (Jennings, 2007: 72-80). It is noticeable that the primary value of autonomy in terms of medicine and medical ethics is welfare, promotion of better health by the treatment or the prevention of diseases (Beauchamp and Walters, 1999: 19-20).

Beneficence is the positive feature of non-maleficence, and involves helping others to achieve welfare and reciprocating their favours. This action carries less risk for the person helping and the recipient (Shannon, 1993: 7).

Non-maleficence has close relevance to autonomy; people can enjoy their lives but should not inflict harm upon others (Edelman and Mandle, 2005: 44). It is explicitly stated in the Hippocratic Oath, “do not harm.” Harm includes moral and physical danger and risk whether for the recipient or the provider (Shannon, 1993: 6-7). This principle can be acceptably violated by professionals as long as it awards greater long-term welfare to patients despite short-term violence (Butts and Rich, 2005: 13).

The effects of harm can be analysed in several ways. The traditional method of examining whether the effects of an action are risky or harmful suggests four principles: a) the action should lack immorality and wrongness, b) a considered harm must be unable to produce good effects, c) a harmful effect is unlikely to be premeditated, and d) appropriate reasons must be provided, according to the consequences of the act, to perform the action (Shannon, 1993: 6-9).

Justice can be understood as comparative justice and non-comparative justice that can cover the health system of societies. The specifications of comparative justice usually are material that is generally based on the needs and condition of a person or group (Shannon, 1993: 8-9). Various criteria have been highlighted for setting valid material principles for the distribution of justice. The major factors are an equal share for each person and to each person according to individual need and effort, acquisition in a free market, social contribution and merit (Beauchamp and Walters, 1999: 22-23). In contrast, non-comparative justice is usually conveyed as a formal principle; it organizes a standard for justice independent of individual needs and status. Thus, the main problem of the rule is the absence of moral content, as equality and inequality, or the criteria by which equality can be determined, have not been formulated (Shannon, 1993: 8-9). Therefore, non-comparative justice is defined according to essential criteria that rely on the needs and condition of a patient in the context of health.

The methods of ethics

Theories are a primary condition in the design of a method. A method of ethics has been defined as “any rational procedure by which we determine what individual human beings ‘ought’ — or what it is ‘right’ for them — to do” (Sidgwick 1962, cited in Childress 2007: 17). The main point in the method of bioethics is to find the best way of guiding human actions in medical practice. Principle-based methods are regarded as wide and rich normative ethical methods. These methods must support general guidelines for moral action that are central to moral reasoning in bioethics. The guidelines can be categorised into principles and rules; for example, respect for autonomy is usually labelled a ‘principle’ while confidentiality is labelled a ‘rule’ (Childress, 2007: 17).

Appendix 2: Prioritized Topics

1. Responsibility and professional behaviour

The definition of professional behaviour and ethics

Communication skills

The relation between ethics, law and *shari'a*

The definition of profession and difference between profession and trade

Medical oath

Humanitarianism, truth, conscientious and righteousness

The awareness of medicine as a career

Occupational evaluation and consistency and continuity of services

The protection of medical resources and medical groups' status

2. The history of medical ethics and the philosophical theory of ethics

3. Four fundamental elements and the means of medical analysis

Autonomy, beneficence, non-maleficence and justice

Approach to medical ethics

The style of ethical analysis

4. The relationship between physician and patient

Good and effective relations with patients in terms of ethics and practice

Respect of patients' religion, gender and beliefs

Financial relation between physicians and patients

Care about patient's pain

Respect of patient's privacy

5. Autonomy and informed consent

The importance and right of autonomy

The right to reject treatment

The conditions of treatment without the patient's consent

The form and range of information that patients can receive

The condition of informed consent

The amount of information given to the patient

6. The determination of capacity and alternative decision-making

The definition of the capacity of decision-making

Ways of determining the patient's capacity

Adopting a representative person

Informed consent for cases of unpredictable capacity and imbalance

The policy in cases where there is lack of capacity to decide

7. Confidentiality and truth

The necessity of confidentiality and truth

Conditions for the infringement of confidentiality

Giving distressing news

Person responsible for giving medical information/diagnosis

Placebo deception

8. The relationship between physician and medical staff

The essential element of relationships with colleagues

The appropriate action toward professional misconduct

Reaction to colleagues' mistakes

9. Mistakes and medical responsibility

The definition of medical error

The necessity of informing the patient of a medical error

Avoidance of informing the patient of a medical error in certain cases

Ways of informing patients of a medical error

10. Ethics in medical education

Patient consent

Practice on dead and unconscious persons for educational purposes

The retention of quality of service to the patient during education

The reaction of medical students to medical errors of the medical team

11. Physician's conflict of interests

The definition of conflict of interest

The reaction to conflict of interest

12. The allocation of resources and justice

Equality in providing service

The reaction to inappropriate requests

The criteria for allocating resources for war and disasters

13. Ethics in research

Informed consent

Confidentiality

The evaluation of advantages and disadvantages

Justice in research

Research on vulnerable groups

14. Ethics in mother and foetus issues

The right of foetus to life

The conflict of the right to life of the foetus and the mother's right to life

The conflict of the right to life of the foetus and the mother's autonomy

The legal implications of abortion

15. End-of-life care

The essential ethics of non-resuscitation

Euthanasia

Indications to discontinue life-giving treatment

Active and inactive euthanasia

Brain death

Appendix 3: Guidelines for Interviews and the Survey Questionnaire

GUIDELINES FOR INTERVIEWING PRACTITIONERS IN FERTILITY CENTRES

ID NUMBER:

DATE:

INTRODUCTION: I would like to talk to you about certain ethical issues that are consequences of the new technology, gamete donation. I want you to tell me about the ethical problems that you face and the problems that you think will be encountered by the infertile couple, the donor couple and their family and the child who is born as a result of the involvement of the procedure of third-party donation.

Q1-Could you tell me about issues that you think are relevant to the legal problems?

NOTES:

PROMPTS=

1.1-Identity

1.2-The rights of the child

1.3-Inheritance

1.4- Selling gametes

Anything else

As you know, each new technology involves social and cultural acceptance. I would like to know, with respect to Iran, which is a traditional society, how social and cultural acceptance can be achieved.

Q2- To what extent does gamete donation occur socially and culturally?

NOTES:

PROMPTS=

2.1-Stigma toward the child and genetic and official families

2.2-Attitudes toward the child as an adopted child:

2.3-Behaviour of husbands' and wives' families toward infertile persons

Anything else

Some Shiite clerics accept gamete donation, so this agreement (*fetvia*) brings about new kinship with different problems.

Q3-Can you tell me about this new kinship?

NOTES:

PROMPTS=

3.1-The relationship between the child and the genetic and official families:

3.2-Prohibited marriages

3.3- New siblings and relatives

3.4- The relationship between the couple that makes the embryo

Anything else

Q4- Should these problems be included in the medical ethics course?

FERTILITY CENTRE SURVEY QUESTIONNAIRE

ID number:

Date:

Q1- When did the centre start?

Q2- Are both egg and sperm donation carried out?

Q3- Do you have rules regarding egg/sperm?

Q4- How many gamete donation procedures have been undertaken?

A-Sperm donation:

B-Egg donation:

Q5- How much is the cost of a cycle of gamete donation?

Q6- Have anonymous donor been used? (If not, why not?)

YES

NO

Q7- How many gametes have been provided by the centre?

A-Sperm

B-Egg

Q8- How many gametes have been provided by the infertile couple?

A-Sperm

B-Egg

Q9- What documents are needed for an infertile couple to be accepted for gamete donation?

Q10- How long does the procedure of gamete donation usually take?

Q11- How many egg donors have been:

A- relatives

B- friends

C- unknown

Q12- How many sperm donors have been:

A- relatives

B- friends

C- unknown

Appendix 4: The form for egg donors (Vali e asr Centre)

First and Surname: Date of Birth: Nationality: Religion:

Address and Contact Number:

Marriage situation: Conception records: Menses situation:

The background of disease

Have you had any blood transfusion or coagulation factors in the last five years?

Have you had intercourse or closed physical relation with persons who suffer HIV or C or B Hepatitis?

Yes No

Have you ever been in prison? Yes No

Have you had a tattoo this year? Yes No

Have you suffered from chickenpox? Yes No

Have you had any organ transplantation? Yes NO

Physical report

-Examining

-Examining skin for the injection of tattoo? Found Not found

_Examining vaginal for

-Examining for

Test report:

HIV AB FHS

HBS AG LH

HCV AB

VDRL

BGRH

Genetic consultation report:

Psychological consultation report:

How many times has she been a donor?

When was the last donation?