

## Characteristics of women applying for a legal abortion in the Islamic Republic of Iran, 2011–2012

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### ABSTRACT

**Background:** Legal abortion has been permitted in the Islamic Republic of Iran since 2003 if there is serious and incurable disease that would cause the mother or the fetus suffering.

**Aims:** This study evaluated the characteristics of women applying for a legal abortion licence to the Tehran Province General Office of Legal Medicine, and compared the findings with earlier studies to evaluate changes over time.

**Methods:** All women visiting the office between August 2011 and 2012 to apply for a legal abortion licence were interviewed and sociodemographic data, reason for the application and outcome of the application were recorded.

**Results:** A total of 1378 women applied for a licence, and 48% were issued. Most applications (80.6%) were for fetal rather than maternal indications and 90.2% of the licences issued were for fetal indications. Most of the applications for fetal indications (53.7%) were granted a licence, while 75.7% for maternal indications were rejected. Neurological abnormalities in the fetus were the most common reason for the application (24.6%) and licences issued (30.7%). Neurological and psychological disorders were the most common maternal reason in all applications (25.7%) and in unsuccessful applications (28.6%). Cardiac disease (23.1%) was the most common maternal reason in successful applications.

**Conclusions:** Comparison of the results with those of earlier studies shows an increase in the number of women applying for a legal abortion licence and in the number of licences issued. Similar studies are recommended to provide information on the effect of national abortion laws and help improve the legal abortion process in the Islamic Republic of Iran.

**Keywords:** Pregnancy; Abortion, legal; Abortion licence; Iran

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## **Introduction**

Abortion refers to the termination of pregnancy before the 20th week of gestation or a fetus less than 500 g of weight, and may be spontaneous or induced (medically, non-medically or criminally) (1). Therapeutic or legal abortions are performed for medical reasons related to the mother or the fetus (2). In some countries there are legal restrictions on abortion (3). Given its integration with legal, judicial, moral and social issues, abortion is not just a medical problem (4). Before the 1979 Islamic Revolution in Iran, abortion was legal for the purposes of saving a mother's life or her mental and physical health, or after diagnosis of fetal defects. After the revolution, however, abortion regulations were abolished, and abortion was allowed only in the few cases in which the pregnancy threatened the life of the mother (5,6).

The legal vacuum on legal abortions was problematic in the Islamic Republic of Iran because many fetal anomalies and diseases existed. This became a subject of discussion in 1997 following a fatwa by the Supreme Leader of the Islamic Revolution authorizing legal abortion for fetuses with major thalassemia. Based on Islamic law and guided by modern medicine, the medical abortion law was prepared in 2003, revised and ratified by the Islamic Parliament in 2005 (6,7), and approved by the Guardian Council on 15 June 2005. The law states that:

*legal abortion is allowed provided that three specialists make definite diagnoses about the fetus being malformed or retarded, thus causing the mother to suffer severely, or about the mother's own life-threatening conditions, and given the general office of legal medicine's final approval, provided the fetus is not yet four months old, the time at which spirit is breathed into it, and provided the mother's consent, and the superintendent doctor has no responsibilities toward the matter and will not be punishable by law with regard to this action.*

Based on this law, the Iranian Legal Medicine Organization has adopted procedures in recent years for authorizing legal abortion, which require at least one of a list of 51 conditions to be met for a licence to be issued; 22 relate to the health of the mother and 29 to the health of the fetus. These 51 conditions are serious and incurable diseases that will cause the mother, the fetus or the future child to suffer (6,8,9). The Supreme Leader of Iran, Ayatollah Khamenei, issued a fatwa on this matter in 2003, stating that, "if the fetal condition can be definitively diagnosed, and if the survival of this fetus causes serious suffering, which is typically the

case, performing an abortion is permitted before the spirit is breathed into the fetus. However, to take precaution, the blood money (*dieh*) for the fetus should be paid” (6,8). To summarize, the therapeutic abortion law was approved by the Iranian parliament in 2003. Before this law, abortion permissions were severely restricted in the Islamic Republic of Iran. At that time, a guideline on indications for abortion was presented by the Legal Medicine Organization of Iran. Parliament and the Islamic Consultative Assembly approved this in 2005 (2).

Epidemiological studies are important to determine the current status of a condition and estimate the facilities needed to manage it (10). Given the undeniable problems and complications caused by induced abortion, understanding the different aspects of the issue and devising appropriate strategies to eliminate or reduce these problems is essential (11).

With the ratification of the abortion law in 2003, various studies have been conducted on abortion in general in Iran and the effect of the abortion laws (7,12). Sadr and colleagues conducted a study to examine abortion licences issued by the Iranian Legal Medicine Organization from 22 December 2003 to 20 December 2004. They found that a substantial number of individuals who would have previously have sought an illegal abortion began to apply for a legal abortion after the law was passed, and concluded that this change had a significant positive effect on the health of mothers (7). Another study on abortion licences issued by Kerman Province General Office of Legal Medicine in 2005 compared the results with those obtained in previous years and concluded that the increase in the number of legal abortion licences issued had reduced the number of illegal abortions, which had in turn improved the health and safety of pregnant women (12).

These studies have undoubtedly contributed to the decisions made by the authorities for new abortion acts. Studying the characteristics of women applying for legal abortion licences, the reasons for their application and the result of the application would be useful to the authorities to help them better evaluate the current status of abortion and compare them with previous or future years and take appropriate action to address any limitations. Therefore, the aim of our study was to evaluate applications for a legal abortion licence made through the Tehran Province General Office of Legal Medicine in 2011–2012. Our specific objectives were to assess the characteristics (socioeconomic and obstetric) of the women applying for legal abortion, the reasons for applying for an abortion and the result of the application (issuance or non-issuance of the abortion licence).

## **Methods**

### *Study design and sample*

This was a prospective study of all the women who visited the Tehran Province General Office of Legal Medicine to apply for a legal abortion licence between 23 August 2011 (1/6/1390 Iranian calendar) and 21 August 2012 (31/5/1391 Iranian calendar).

### *Data collection*

In Tehran Province General Office of Legal Medicine, women applying for a legal abortion are referred to the Women's Office. The outcome of the application is usually received after one or two visits and on the same day in the case of fetal indications for a legal abortion licence. For applications based on indications of the mother, the outcome takes three days to one week.

For data collection, the women were approached on their last visit when the outcome of their application for a legal abortion licence was confirmed. Most of the women agreed to be interviewed and for their data to be reviewed; 11 women did not wish to be interviewed but some information was available for them, namely: reason for applying for an abortion licence, fetal or maternal indication for the abortion, fetal age, issuance of the abortion licence or not, if not, the reason for not issuing the licence. The data were collected by two of the researchers of this study (AJ and FS) who worked at the Women's Office.

The researchers interviewed the women at the Women's Office and data were also obtained from the women's medical documents. The data recorded for each women included: age, husband's age, level of education, occupation, husband's occupation, gravidity, parity, number of living children, history of abortion, number of abortions, reason for requesting an abortion, type of fetal or maternal indication for the abortion, history of using medications for every acute/chronic disease or exposure to radiation during pregnancy, fetal age, person or place referring the woman, issuance of the abortion licence or not, if not, the reason for not issuing the licence, and reason for any delays in applying for the licence.

### *Statistical analysis*

The data obtained were analysed using descriptive statistics. Participants were divided into 2 groups – those who were issued the licence and those who were not. Differences between the

2 groups were compared according to socioeconomic and obstetric characteristics using the independent *t*-test (for continuous variables) and the chi-squared test (for categorical variables).

Mother's medication use, her diagnosis of communicable diseases that could cause fetal anomalies and her exposure to radiation were considered fetal indications for an abortion in the analysis of the data as they could have adverse effects on the fetus. Some fetal problems that did not require an abortion licence or that should have been followed up by a hospital were also taken to be fetal indications, including partial moles, intrauterine growth restriction, abnormal amniotic fluid, intrauterine fetal death and a blighted ovum.

### *Ethical considerations*

The study was approved by the Ethics Committee of Tehran University of Medical Sciences.

A letter of introduction was provided by the authorities of Tehran University of Medical Sciences to the Tehran Province General Office of Legal Medicine. The researchers explained the objectives of the study to the office authorities and obtained their consent before collecting data on the women.

The researchers explained the objectives of the study to the women visiting the office to apply for a legal abortion licence and recorded their data. The women were assured that the information they gave would be kept confidential and they gave their verbal, informed consent to participate.

### **Results**

Over the study period (23 August 2011 to 21 August 2012), 1 378 women visited the Tehran Province General Office of Legal Medicine to apply for a legal abortion licence; of these, 661 women (48%) were issued the licence and 717 women (52%) were not. Tables 1 and 2 show the socioeconomic and obstetrics characteristics of the women categorized according to their licence status (issued or not). The majority of the women in both groups had a high school diploma and above, were housewives, had a history of abortion, used medication or were exposed to radiation during the pregnancy, had similar problems in the family, and were referred by a gynaecologist. There were significant differences between the 2 groups for the women's age, husband's age, number of living children, number of sons and daughters,

medication use or exposure to radiation during pregnancy, referral person/place, gestational age based on ultrasound, gravidity, parity, number of spontaneous abortions, and gestational age based on abdominal examination (Tables 1 and 2).

A total of 1 110 women (80.6%) had applied for an abortion licence for fetal indications, while 268 women (19.4%) had requested it for maternal indications. In the group issued a licence, 596 women (90.2%) had requested an abortion licence for fetal indications while 65 (9.8%) had requested it for maternal indications. In the group not issued a licence, 514 women (71.7%) had requested an abortion licence for fetal indications and 203 women (28.3%) for maternal indications. Just over half (53.7%) of the women applying for a licence for fetal indications were granted the licence, while only 24.3% requesting a licence for maternal indications were given a licence.

The greatest proportion of the women applying for an abortion licence for fetal indications had a fetus with neurological abnormalities (26.0%); neurological abnormalities were the most frequent reason for applying for an abortion licence in both the group that was issued a licence (33.9%) and the group that was not (16.9%). Eye anomalies, mother's medication use, mother's diagnosis of communicable diseases that could cause fetal anomalies, mother's exposure to radiation, positive screening test results for fetal anomalies without confirmation (i.e. without ultrasound or amniocentesis), partial moles, intrauterine growth restriction, abnormal amniotic fluid, intrauterine fetal death and a blighted ovum were conditions/factors for which an abortion licence was never issued (Table 3).

Neurological and psychological disorders were the most frequent reasons for applying for an abortion licence because of maternal indications (25.7%). In the group issued a licence, the most frequent reason for requesting an abortion was cardiac disease (23.1%), while in the group that was not issued a licence, neurological/psychological disorders (28.6%) was the most common reason. No abortion licences were issued for women with lung disease, thyroid disorders, unwanted pregnancy, old age, abnormalities in their other children and paternal problems, such as abnormalities or medical disorders (Table 4).

The most frequent reasons for non-issuance of an abortion licence were gestational age over 19 weeks (23.4%), fetal anomalies not confirmed (16.9%) and the absence of life-threatening risks for the mother (16.6%). The most frequent reasons for the 19-week delay in visiting the office included failure to undergo ultrasound imaging before the gestational age of 19 weeks

(36.2%) and failure to have the anomaly diagnosed by the ultrasound images obtained before this date (27.5%).

## **Discussion**

During the year surveyed (23 August 2011 to 22 August 2012) in our study, 1 378 women visited the Tehran Province General Office of Legal Medicine to apply for a legal abortion licence, and almost half (48%) were issued a licence. A previous study of 245 women applying for a legal abortion licence at this office, from May 1999 to May 2000, reported that 126 (51.4%) of the women were issued a legal abortion licence, while 119 (48.6%) were not, because of a lack of sufficient indications (13). The percentage of licences issued in this earlier study is similar to ours. However, the number of women applying for a licence was different; far more women applied for an abortion licence in our study indicating a 5.6 times increase in abortion licence applications in 2011–2012 compared with 1999–2000. In the General Office of Legal Medicine in Kerman Province in 2005, 24 out of the 47 women applying for a licence in that year were issued one (12), which is also consistent with our results, suggesting that almost half of the women have been successful in their application for a licence.

Our study also showed that more women requested an abortion licence for fetal rather than maternal indications (80.6% versus 19.4%), and similarly more licences were issued (90.2% versus 9.8%) for fetal than maternal indications. Moreover, most of the applications for a licence for fetal indications were granted a licence (53.7%), while most applications for maternal indications were rejected (75.7%). Our findings differ from other studies. A study conducted on legal abortion licences issued by the Iranian Legal Medicine Organization in 2004 showed that the reasons for issuing a licence to 1 101 women included fetal anomalies and diseases in 64% of the cases and maternal conditions in 36% (7). In the study in 2005 in Kerman, 68% of the licences issued were because of fetal indications (12) and in the previous study at the Tehran office in 1999–2000, 17% were issued because of fetal indications (13).

The time differences in the studies may be responsible for this difference; in 1999–2000, the legal abortion law had not yet been ratified, which would explain why only 17% of abortion licences were issued for fetal indications. However, in 2003–2004, i.e. a year after the ratification of the law, the number of licences issued for fetal indications increased to 64% and then to 68% 2 years after execution of the law. It is therefore only natural for the number

of women applying to the Office of Legal Medicine for an abortion licence for fetal indications to have increased 9 years after the law took effect. In fact, increased awareness in mothers and medical personnel about this law and the more frequent referral of mothers to legal medicine offices have played a key role in this increase.

In our study, fetal neurological abnormalities were the most frequent reason for requesting an abortion licence in cases with fetal indications (24.6%). Applications on this basis also had the highest rate of success in having the licence issued (30.7%).

The greatest proportion of the women in our study who applied for an abortion licence because of maternal indications did so because of neurological and psychological conditions (25.7%). For those issued a licence, the reasons included cardiac disease (23.1%), cancer (18.5%), and neurological and psychological diseases (16.9%). In the group not issued a licence, 28.6% were for neurological and psychological diseases. No abortion licences were issued for applications because of lung disease, thyroid disorder, unwanted pregnancy, old age, abnormalities in the other children and paternal problems. The previous study at the Tehran Office of Legal Medicine in 1999–2000 reported cardiovascular diseases in the mother (27%), fetal problems (17%) and renal disease in the mother (11%) as the most frequent reasons for visiting the office, and cardiovascular diseases in the mother (36%), major thalassaemia in the fetus (17%) and malignancies in the mother (17%) as the most frequent indications among women who were granted a licence (13). The 2003–2004 study found the most common fetal indications for issuance of an abortion licence were anencephaly and major thalassaemia, and the most common maternal indication was cardiovascular diseases (7). The 2005 study in Kerman also reported major beta thalassaemia as the most common fetal indication and cardiovascular diseases as the most common maternal indication for applying for an abortion licence (12).

These studies are consistent with our study in terms of the maternal indications reported for issuance of legal abortion licences—cardiovascular diseases. However, their findings about fetal indications differ from our findings. In 1999–2000, the only fetal indication was major thalassaemia; in 2003–2004, anencephaly and major thalassaemia were the most common fetal indications; and in 2005, major thalassaemia was the most common fetal indication. In our study, fetal neurological abnormalities was the most frequent reason for the issuance of an abortion licence for fetal indications.

The preparation of the legal abortion law by the Iranian Legal Medicine Organization in 2003 and its ratification by the Islamic Parliament in 2005 appear to have greatly increased the issuance of legal abortion licences for fetal indications, as applications with a variety of fetal indications were granted the licence after 2005. Therefore, based on the results of our study, it appears only reasonable that fetal neurological abnormalities and genetic disorders would be the most frequent fetal indications for an abortion licence being issued.

Our results showed that a gestational age over 19 weeks was the most common reason for the not granting an abortion licence (23.4%). No similar studies were found on this subject.

Our study had some limitations. Because of the high volume of attendees, not all the information on the women and their application was complete. However, this problem was kept to a minimum. Nonetheless, for some women, data were missing for some questions and they were therefore excluded in the percentage calculation for that question. As the sample of women was large, losing such a small number in each question would not likely affect the findings and conclusion.

## **Conclusion**

Comparison of the results obtained from this study with those from previous studies conducted in the Islamic Republic of Iran showed an increase in the number of women applying for a legal abortion licence and consequently an increase in the number of licences issued. The increase was mostly in applications for fetal rather than maternal indications. The laws introduced on abortion for fetal reasons seem to have led to this increase.

In each country, policies on abortion greatly affect the related implementation. Our findings can help policy-makers to modify existing guidelines for better implementation. For example, the most frequent reason for the non-issuance of a licence was gestational age over 19 weeks because aborting a fetus after 19 weeks is forbidden in the Islamic Republic of Iran. Therefore, early detection of fetal malformations is important and directives should be formulated to encourage and allow for this.

Similar studies are recommended to examine trends over time in the Tehran office and also to examine other offices across the country. Such findings can be used to determine the effect of national abortion laws and to provide information that can help policy-makers to change the abortion laws in the Islamic Republic of Iran based on the existing problems .

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