



Islamic Perspectives on Prenatal Diagnosis and Termination of Pregnancy: A Literature Review

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Prenatal screening and diagnosis aim to identify possible congenital anomalies in fetuses during pregnancy. Decisions on prenatal diagnosis and termination of pregnancy are heavily value driven, where religious beliefs also play a major role. This article reviews and analyzes the Islamic ethical discourse on prenatal diagnosis and termination of pregnancy due to fetal anomaly. The article provides an in-depth content analysis of the contemporary Islamic bioethical discourse, points out existing gaps in the literature, and demonstrates the importance of understanding the Islamic perspectives on the beginning of life in antenatal care. For the purposes of this article, a scoping literature review was conducted on available theoretical and empirical literature in English and Arabic. Results indicate a real scarcity of literature addressing the Islamic ethical perspectives on prenatal diagnosis and termination of pregnancy, and the urgent need for further research that addresses the topic in depth and breadth.



Introduction

The introduction of prenatal screening and diagnosis technologies seems to challenge the idea of parents' unconditional love and acceptance for their offspring and render it rather conditional. Prenatal screening and diagnosis aim to identify possible congenital anomalies in fetuses during pregnancy in order to allow families to make more informed decisions about their offspring. A congenital anomaly is defined as a structural or functional abnormality that occurs during intrauterine life and may be identified before, at, or after birth (WHO 2025). The field of prenatal screening and diagnosis has witnessed significant developments in the past decades. These ongoing developments indicate great potential for future detection of genetic anomalies (Hui 2019). The detection of fetal anomalies, however, is not a purely technical matter; it also encompasses truly challenging ethical and social aspects. The challenge of prenatal screening and diagnosis lies mainly in the information it reveals about the health of the fetus and the ethical dilemmas this information imposes; the hardest among those is the question of whether to continue or terminate the affected pregnancy.

Decisions regarding prenatal screening and diagnosis and termination of pregnancy are heavily value driven (Carlson and Vora 2017). In this context, religious beliefs play a major role in the choices families make regarding prenatal tests (García, Timmermans, and Leeuwen 2008; Gitsels-van der Wal, Manniën, Ghaly, et al. 2014). Attention to religious worldviews, including Islamic views, is therefore crucial in antenatal care, in addition to the fact that high rates of consanguineous marriages, often associated with fetal deformities, exist among Muslim communities (AbdulAzeez et al. 2019; Hamamy 2012).

Muslims consider their religion a major part of their daily life and adhere to the Islamic *shari'a* (path) for resolving the various ethical issues they face, including bioethical ones. As far as prenatal diagnosis and termination of pregnancy are concerned, Muslims are faced with an intricate ethical situation, as the issue of when a human life begins has not been resolved in Islam (Ghaly 2012; Sachedina 2009). It follows that the inevitable link between the issue of termination of pregnancy due to fetal anomaly and the topic of abortion is perplexing due to the varying opinions and controversies around abortion in Islam. Accordingly, the potential options prenatal diagnosis offers Muslim families is combined with unclarity and many unaddressed ethical questions.

In general, Islamic ethical perspectives on the beginning of life are almost entirely determined by views on personhood and the moral status of the fetus. Religious scholars sought to define this status in accordance with Qur'anic embryology, which played a major role in shaping the discussion (Sachedina 2009). The Qur'an explains that the human fetus goes through various developmental stages from the moment of conception right up until birth,

through which an important incident takes place: the moment of ensoulment or breathing the soul (*nafkḥ al-rūḥ*). Although scholars differ on the status of the fetus prior to that moment, they all agree that the moment of ensoulment is decisive and grants full protection to the fetus (Khorfan and Padela 2010; Rispler-Chaim 1993). The exact time at which ensoulment takes place, however, has been another challenging and debatable issue.

In order to understand and untangle the various ethical challenges surrounding the topic, this article aims to review and analyze the Islamic ethical perspectives on prenatal diagnosis and termination of pregnancy due to fetal anomaly. It therefore seeks to answer the following question: What are the major Islamic ethical perspectives on prenatal diagnosis and termination of pregnancy due to fetal anomaly? Accordingly, this article brings together the existing Islamic ethical perspectives on prenatal diagnosis and termination of pregnancy due to fetal anomaly. Through an in-depth content analysis of those perspectives, the article points out gaps in the contemporary Islamic bioethical discourse on prenatal diagnosis and termination of pregnancy due to fetal anomaly. Finally, the article demonstrates the significance of understanding the Islamic perspectives on the beginning of life and sheds light on the importance of considering those perspectives in antenatal care for Muslim patients.

Methodology

For the purposes of this article, a scoping literature review was conducted on available theoretical and empirical literature in English and Arabic on Islamic ethical perspectives on prenatal diagnosis and termination of pregnancy due to fetal anomaly. Scoping reviews aim to provide an overview of the existing body of literature on an emerging topic or field. They aim to determine the scope, coverage, and types of available literature, examine and clarify key concepts, and identify and analyze existing gaps in the field (Munn et al. 2018). A scoping review, therefore, secures the fulfillment of this study's objectives in a way other (systematic) methods may not, especially considering that a substantial number of relevant and important sources on the topic are not listed in several databases (i.e., scriptural texts and classical Islamic Arabic sources).

Databases such as Limo, JSTOR, PubMed, Google Scholar, IMSE were consulted, but a substantial number of sources were identified through manual searching and a review of reference lists. Keywords guiding the search included the following terms: beginning of life, antenatal, prenatal, diagnosis/screening, termination of pregnancy, abortion, therapeutic/medical abortion, NIPT, fetal/foetal anomaly*, congenital anomaly*, abnormality*, malformation, genetic disorder, *ijbād* (abortion), and *janīn mushawwāb* (deformed fetus). Those terms were crossed with: Islam*, Muslim*, religion*, ethics*, Islamic law, *fatwā* (religious ruling/opinion), and *fiqh* (Islamic jurisprudence). The search yielded

twenty-seven sources, among which were two books; fifteen journal articles, three of which were empirical studies; seven legal rulings and resolutions (*fatwās*); and three conference papers (see tables 1 and 2). Due to a scarcity of sources on the topic, this article had to benefit from Islamic sources on abortion and disability. The review also consulted primary sources including the Qur'an and Sunna, major *fiqh* encyclopedias, and major works on Islamic bioethics. It is important to note that a number of Arabic sources were excluded from the results of the scoping literature review due to their poor quality (lingual, methodological, and/or analytical) and the fact that they were not evaluated or published in recognizable, peer-reviewed journals.

Regarding terminology, we use the term “abortion” to refer to the wider general debate on abortion—regardless of its motives—in early and contemporary times. We use the term “termination of pregnancy” to refer to the particular debate on pregnancy termination due to fetal anomaly in light of recent technologies in prenatal diagnosis.

Results

Beginning of Life in Islamic (Scriptural) Sources

Investigating the Islamic perspective on any ethical concern begins with consulting the Qur'an and the Sunna (Prophet Muḥammad's tradition), the most authoritative religious sources for Muslims (Brockopp and Eich 2008). The different schools of law (*madhāhib*) within the two main Islamic denominations (Sunnī and Shī'ī) emerged due to the varying interpretations of these sources. When the main Islamic sources are silent on a certain issue, qualified religious scholars practice independent legal reasoning (*ijtihād*) and develop religious opinions (*fatāwā*) based on Islamic principles (Gatrad and Sheikh 2001; Ghaly 2012). Therefore, and in order to understand the different ethical perspectives on prenatal diagnosis and termination of pregnancy, it is important to start our review by presenting the main texts in the Qur'an and Sunna, which have laid the basis for all the ethical views, discussions, and debates on issues at the beginning of life, including prenatal diagnosis and termination of pregnancy.

In its twenty-third chapter, the Qur'an explains the journey of human life:

And indeed We created man from a draught of clay. Then We made him a drop [*nutfa*] in a secure dwelling place. Then of the drop We created a blood clot [*'alaqa*], then of the blood clot We created a lump of flesh [*mudgha*], then of the lump of flesh We created bones and We clothed the bones with flesh; then We brought him into being as another creation [*kehalqan ākhar*]. Blessed is God, the best of creators! Then indeed you shall die thereafter. Then surely you shall be raised up on the Day of Resurrection. (Qur'an 23:12–16)^{1,2}

Author(s), year of publication, title	Aim	Type + methodology	Results
Ahaddour, C. 2021. Ethical Issues at the Beginning of Human Life: Towards a Contextualized Islamic Understanding of Prenatal Diagnosis and Termination of Pregnancy	To shed light on Islamic normative perspectives on the question of when human life starts and the moral status of the fetus, which plays an important role in the permissibility of termination of pregnancy	Theoretical research	<ul style="list-style-type: none"> A call for the study of lived experiences/lived religion in ethical approaches to prenatal diagnosis and termination of pregnancy. The need for the development of a contextualized Islamic ethical framework on prenatal diagnosis and termination of pregnancy based on a dialogue between Islamic sources and the lived experience of Muslims.
Al-Alaiyan, S. 2014. An Islamic Legal Perspective on the Status of the Malformed Fetus and the Previabie Infant	To review religious and ethical aspects of decisions regarding the termination of deformed fetuses and previable babies in the context of Islamic law	Theoretical research: mini review	<ul style="list-style-type: none"> Abortion is permitted if continuing the pregnancy would put the mother's life in danger. This is the only reason accepted for abortion after nineteen weeks of gestation.
Al-'Awwārī, A. B. A. 2010. <i>Al-durr al-thamīn libayān hukm 'ijhād al-'ajina al-mushawwahin: dirāsa fiqhiyya muqārana</i> [Aborting Deformed Fetuses: A Comparative Jurisprudential Study]	To address the religious debate on the issue of terminating pregnancy due to fetal anomaly and present the prevailing opinion	Theoretical book	<ul style="list-style-type: none"> Religious scholars have disagreed on the ruling of terminating pregnancy due to fetal anomaly. The author defends the opinion of the impermissibility of terminating pregnancy due to fetal anomaly before ensoulment. There is no disagreement among scholars regarding terminating pregnancy after ensoulment, even in the case of fetal anomaly.
Al-Bar, M. A. 1989. <i>Al-janīn al-mushawwah wal-'amrādāli-wirathiyya</i> [The Deformed Fetus and the Hereditary Diseases]	Extensive review of prenatal anomalies—their types, causes, and diagnosis—and the Islamic rulings regarding the termination of anomalous fetuses	Theoretical book	<ul style="list-style-type: none"> The most important result of this review is the permissibility of prenatal diagnosis and termination of anomalous fetuses before 120 days.
Al-Barbari, M. J. A. M. 2021. <i>Ijhādāli-janīn al-mushawwah bayn al-mu'ayāt al-ḥibbiyya wal-ijthādāt al-fiqhiyya</i> [Aborting the Deformed Fetus: Between Medical Factors and Legal Reasoning]	To facilitate the process of legal reasoning concerning termination of pregnancy in light of medical advancements and the ethical dilemmas they cause	Theoretical research Conference paper	<ul style="list-style-type: none"> Egyptian law seems to have failed in solving the issue of termination of pregnancy for fetal anomaly and responding to the needs created by advancements in prenatal diagnosis. Religious scholars differ in their opinions on aborting the malformed fetus. The majority allow the termination of severe anomalies before 120 days. After 120 days, termination is impermissible.

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Author(s), year of publication, title	Aim	Type + methodology	Results
Al-Matary, A., and J. Ali. 2014. Controversies and Considerations Regarding Pregnancy Termination for Fetal Anomalies in Islam	To review the Islamic basis for the permissibility and prohibition of abortion as expounded by Islamic scholars and councils as well as the authors' opinion	Theoretical research	<ul style="list-style-type: none"> • The authors urge Muslim lawmakers to consider abortion post-ensoulment in cases incompatible with life or severely malformed fetuses. • The authors recommend that an institutional committee monitored by a national committee make decisions pertaining to abortion to ensure ethics are preserved and mistakes prevented. • Anomalous fetuses must be detected at the earliest possible time to enable an appropriate medical intervention prior to 120 days.
Al-Qahtāni, M. M. 2003. <i>Ijhād al-janīn al-mushawwah wa-hukmuh fī al-sharīʿa al-Islāmiyya</i> [Aborting the Deformed Fetus and Its Ruling in Islamic Law]	To address the issue of terminating pregnancy in the case of a deformed fetus and its ruling in Islam	Theoretical research	<ul style="list-style-type: none"> • Islam protects the fetus' right to live. • Early religious scholars have unanimously agreed on the prohibition of abortion after ensoulment. • The ruling on termination of pregnancy due to fetal anomaly varies according to the severity of the anomaly. It is permissible in the case of severe anomalies and impermissible in the case of simple, treatable diseases.
Al-Sasiyya, L. 2019. <i>Ahkām ijhād al-janīn al-mushawwah wirāthiyyan</i> [The Rulings on Aborting the Deformed Fetus Due to Genetic Anomaly]	To explore the Islamic rulings on ethical issues raised by technological advancements in prenatal diagnosis and genetics and termination of pregnancy	Theoretical research	<ul style="list-style-type: none"> • The majority of religious scholars permit termination of pregnancy for severe fetal anomaly and untreatable conditions before 120 days. • After 120 days, termination of pregnancy remains impermissible.
Al-Shawabka, R. 2019. <i>Mawqif al-sharīʿa min al-janīn al-mushawwah</i> [Sharīʿa's Position on the Deformed Fetus]	To review and summarize Islamic legal rules regarding the deformed fetus	Theoretical research Conference paper	<ul style="list-style-type: none"> • The author defends that terminating anomalous fetuses incompatible with extrauterine life is permissible before ensoulment. Anomalies compatible with extrauterine life do not justify termination of pregnancy.
Badawī, A. T. A. 2019. <i>Ijhād al-janīn al-mushawwah</i> [Aborting the Deformed Fetus]	To discuss ensoulment and link it with the topic of termination of pregnancy in the case fetal anomaly	Theoretical research Conference paper	<ul style="list-style-type: none"> • <i>Maqāsid al-sharīʿa</i> is crucial in answering the question of aborting the deformed fetus.

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Author(s), year of publication, title	Aim	Type + methodology	Results
<p>Badlis, M., and A. Kashnit 2019. <i>Ijhaḍal-janān al-mushawwah fil-qanūn wal-ḥiqh al-Islāmī</i> [Abortion of the Deformed Fetus in Law and Islamic Jurisprudence]</p>	<p>To summarize and compare the Arabic legal and Islamic perspectives on termination of pregnancy in the case of fetal anomaly</p>	<p>Theoretical research</p>	<ul style="list-style-type: none"> • The majority of scholars allow termination of pregnancy for severe fetal anomaly. • The Palestinian Higher Board of Ifṭā' permits termination of pregnancy for severe fetal anomaly before ensoulment. • Most Islamic countries criminalize abortion except in very special circumstances like rape. • Tunisian law is the only to allow abortion for fetal anomaly after three months. • Religious scholars have unanimously agreed that termination of pregnancy for fetal anomaly after ensoulment is impermissible and disagree about it before ensoulment. • Termination of pregnancy for fetal anomaly is a slippery slope. • Religious scholars and physicians should work together to organize and create a framework. • The authors recommend clearly defining and listing the anomalies that justify termination of pregnancy.
<p>Bagheri, A., and Afshar, L. 2011. <i>Abortion in Different Islamic Jurisprudence: Case Commentaries</i></p>	<p>To present major Islamic traditions, Sunni and Shiite schools, from five Muslim countries—Iran, Egypt, Malaysia, Saudi Arabia, and Turkey—on abortion rulings on a thalassaemia major case</p>	<p>Theoretical research</p>	<ul style="list-style-type: none"> • The study shows a diversity of opinions on abortion among Islamic traditions in five countries. The commentaries elaborate how different schools of Islam hold different views, from permission to prohibition of abortion in the same case. • Religious convictions play a role regarding antenatal screening
<p>Gitseis-van der Wal, J. T., J. Manniën, M. M. Ghaly, et al. 2014. <i>The Role of Religion in Decision-making on Antenatal Screening of Congenital Anomalies: A Qualitative Study amongst Muslim Turkish-Origin Immigrants</i></p>	<p>To explore the role the religious beliefs of pregnant Muslim women play in their decision-making on antenatal screening and termination of pregnancy, and whether their interpretations of the religious doctrines correspond with the main sources of Islam</p>	<p>Empirical qualitative research: pilot study using in-depth interviews with ten pregnant Muslim women of Turkish origin in a medium-sized city near Amsterdam</p>	

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Author(s), year of publication, title	Aim	Type + methodology	Results
			<ul style="list-style-type: none"> • Women were unaware that within Islamic tradition there is the possibility of termination if a fetus has serious anomalies. • Incomplete knowledge of religious doctrines may be influencing decisions on antenatal screening and termination of pregnancy. • Counsellors should be aware of the role of religious beliefs in the decision-making process on antenatal screening tests.
<p>Haidar, H., et al. 2015. Noninvasive Prenatal Testing: Implications for Muslim Communities</p>	<p>To present some Islamic views regarding fetal development and abortion and the legislative developments surrounding abortion for fetal conditions in Iran and Saudi Arabia and to discuss possible implications of noninvasive prenatal testing for Muslim communities</p>	<p>Theoretical research</p>	<ul style="list-style-type: none"> • Noninvasive prenatal testing is justified based on the Islamic principle of choosing the lesser evil. • Noninvasive prenatal testing is a particularly important prenatal testing option in Muslim societies. • Noninvasive prenatal testing's potential to diagnose numerous fetal conditions prior to ensoulment and without risk to the fetus may have significant implications for prenatal care in Muslim communities.
<p>Hedayat, K. M., P. Shooshtarizadeh, and M. Raza. 2006. Therapeutic Abortion in Islam: Contemporary Views of Muslim Shiite Scholars and Effect of Recent Iranian Legislation</p>	<p>To review 1) the Islamic basis for the prohibition of abortion and the reasons for its justification, 2) contemporary rulings from leading Shiite scholars and the Sunni school, and 3) the status of abortion in Muslim countries, with special emphasis on the therapeutic abortion law passed by the Iranian parliament in 2003</p>	<p>Theoretical research</p>	<ul style="list-style-type: none"> • Abortion is generally forbidden according to Islamic teachings. • Abortion is permissible under certain circumstances if carried out before ensoulment at four months of gestation and after that to save the life of the mother.

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Author(s), year of publication, title	Aim	Type + methodology	Results
<p>Jabr, K. A. 2007. <i>Al-ahkām al-fiqhiyya fil-'isqāṭ al-janīniyya dhat al-tashawwuhāt al-khalqiyya al-'anfā</i> [Jurisprudential Rulings on Terminating Severely Malformed Fetuses]</p>	<p>To examine the issue of terminating severely malformed fetuses from an Islamic perspective in light of medical advancements in prenatal diagnosis</p>	<p>Theoretical research</p>	<ul style="list-style-type: none"> Traditionally, the wellbeing of the mother was the sole consideration for abortion. Currently, several Sunni and Shiite scholars have permitted abortions for profound fetal abnormalities when not compatible with life or when there are serious social or economic hardships entailed by carrying a child to term The author concludes that aborting deformed embryos should be prohibited in the first, middle, and last periods of pregnancy, even if the baby will be born with deformities, due to the author's belief that termination of pregnancy is against God's will.
<p>Rispler-Chaim, V. 1999. <i>The Right Not to Be Born: Abortion of the Disadvantaged Fetus in Contemporary Fatwas</i></p>	<p>To answer the question of whether Islamic medical ethics recognizes the right of the deformed fetus and the fetus of rape not to be born</p>	<p>Theoretical research</p>	<ul style="list-style-type: none"> The <i>mufsis</i> (Muslim legal scholars or jurists) have sympathy for suffering, so the condition of the deformed child and the raped mother and her fetus are discussed. <i>Mufsis</i> are still not ready to acknowledge the right not to be born in the way this right is acknowledged in the West. But <i>mufsis'</i> concessions to individuals' appeals have already become ethical precedents.
<p>Saniei, M., et al. 2008. <i>Prenatal Screening and Counseling in Iran and Ethical Dilemmas</i></p>	<p>To find out the attitudes of Iranian scholars towards prenatal screening and counseling with respect to ethical issues</p>	<p>Empirical mixed methods: questionnaire and interviews with 201 physicians and genetic and religious scholars</p>	<ul style="list-style-type: none"> Iranian scholars were willing to consider prenatal screening to help prevent the transmission of diseases to the next generation. This goal is attained through the autonomous choice of the couple to participate in prenatal screening and counseling

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Author(s), year of publication, title	Aim	Type + methodology	Results
Sasongko, T. H., et al. 2010. Permissibility of Prenatal Diagnosis and Abortion for Fetuses with Severe Genetic Disorder: Type 1 Spinal Muscular Atrophy	To discuss and postulate that with our current knowledge of determining spinal muscular atrophy types and severity with great accuracy, abortion is legally applicable for type 1	Theoretical research	<ul style="list-style-type: none"> Termination of such fetuses can be permissible and done according to the laws of the Muslim community (before 120 days). The clinicians responsible for decision-making and the parents who wish to terminate the pregnancy are therefore in a safe position, from the religious point of view.
Shaw, A. 2012. 'They Say Islam Has a Solution for Everything, So Why Are There No Guidelines for This?' Ethical Dilemmas Associated with the Births and Deaths of Infants with Fatal Abnormalities from a Small Sample of Pakistani Muslim Couples in Britain	To present ethical dilemmas concerning termination of pregnancy, management of childbirth, and withdrawal of life support from infants in special care	Empirical qualitative research: case studies taken from a qualitative study of sixty-six families of Pakistani origin referred to a genetics clinic in southern England	<ul style="list-style-type: none"> Parents negotiated between the authoritative knowledge of their doctors, religious experts, and senior family members when faced with ethical dilemmas. There was little knowledge of the view that Islam permits termination of pregnancy for serious or fatal abnormalities within 120 days. It is important to consider some of the implications of these observations for the counselling and support of Muslim parents.

Table 1: Empirical and theoretical literature on prenatal diagnosis and termination of pregnancy due to fetal anomaly from an Islamic perspective.

Author/organization, year, title	Main points
ECFR. 2018. <i>Ijhādāḷ-janīn al-mushawwah</i> [Aborting a Malformed Fetus] Fatwa 60 (10/4)	It is not permissible to terminate pregnancy after four months, even if the fetus is deformed, and even if its survival after birth requires life support. However, withdrawal of life support is permissible if it was used to prolong the child's life and not for treatment.
IMANA. 2005. Medical Ethics from Islamic Perspective	Fetal congenital malformations for which abortion is permitted are lethal malformations not compatible with extrauterine life. But even in these situations, it is preferable to do so before the 120th day after fertilization or nineteen weeks of gestation. Abortion of nonlethal malformations may be permissible before the 120th day of conception after consulting Islamic scholars and medical experts in the field.
Iran Single Article Act on Therapeutic Abortion. 2005.	Therapeutic abortion is allowed for a range of fetal and maternal conditions before nineteen weeks of gestation with the consent of the pregnant woman and after a definitive diagnosis of a profound fetal anomaly or a life-threatening maternal disease by three medical specialists.
Jordan's Board of Ifta'. 1993. Issues in Pregnancy and Childbirth Resolution No. (35)	Termination of pregnancy for fetal anomaly is permissible before four months at the request of both parents if it has been confirmed that the deformity will make its life unstable. Termination of pregnancy is not permissible after four months, even if the fetus is deformed. However, if it jeopardizes the mother's life, then it is permissible to abort it.
Muhammad, A. J. 2012. <i>Istikhdam al-wasa'il al-haditha fi kashf 'uyub al-ajinnah wa 'ilajihā</i> [Using Recent Technologies in Detecting and Treating Fetal Abnormalities]	It is permissible to use prenatal diagnosis technologies to detect fetal anomalies under two conditions: a) the use of these technologies does not cause harm to the fetus or the pregnant woman, and b) the tests are performed by specialized medical professionals. However, termination of fetuses whose anomaly is not compatible with extrauterine life is permissible before 120 days. Abortion is impermissible after 120 days unless it is decided by specialized physicians that the continuation of pregnancy causes danger to the mother.
National Fatwa Committee of Malaysia. 2002. 52nd conference held on 1 July 2002	It is <i>makruh</i> (disliked) to terminate a pregnancy before it reaches forty days if the pregnancy does not harm the mother and it is consented to by both the husband and the wife. Termination of pregnancy is permissible if the fetus is suffering from a defect and can harm the life of the mother and if it is done before 120 days after the pregnancy was established. Termination of pregnancy is prohibited after 120 days unless it is done to protect the life of the mother due to severe deformity of the fetus.
Saudi Council of Senior Scholars. 2011. Fatwa no. 240	It is permissible to abort a malformed fetus after 120 days of conception (nineteen weeks of gestation) if its death is expected following delivery, if the fetus has severe disabilities that cannot be cured, or if the continuation of pregnancy is expected to result in the death of its mother. The fetus can be aborted at any stage of pregnancy if its death is medically confirmed in the womb of its mother. It is not permissible to abort a fetus without a medical report from a specialized and trustworthy committee composed of at least three physicians after obtaining written consent from the parents, or the mother alone if the continuation of pregnancy is affecting her health.

Table 2: Legal rulings and resolutions (*fatwās*) on prenatal diagnosis and termination of pregnancy due to fetal anomaly.

The fetal developmental phases explained in this passage demonstrate the humble origins of the human being (Sachedina 2009). Importantly, they indicate that the creation of the human being remains a divine matter despite the seemingly scientific information presented in the passage (Atighetchi 2007; Sachedina 2009). This is evident in the Qur’anic term “another creation” (*khalqan ākhar*), which by itself formed the core element of Islamic thought about the beginning of human life (Atighetchi 2007; Eich 2009).

Religious scholars and interpreters of the Qur’an unanimously agreed that the development of “another creation” refers to the moment of ensoulment (Albar 2001; Badawī 2019). They also stress that this is the phase where the fetus starts to have a human shape (*ṣūrat ādamī*) (Eich 2009; Wizārat al-Awqāf wal-Shu’ūn al-Islāmiyya 1983). The moment of ensoulment distinguishes two fetal states, one with a soul and one without, according to which the moral status of the fetus is defined and different legal rights and rulings are applied (Atighetchi 2007; Rispler-Chaim 1993; Sachedina 2009).

The Qur’an, however, does not specify the timing of the moment of ensoulment. But this information has been provided by the Prophet Muḥammad in three main prophetic traditions (*ḥadīths*), all of which are narrated with a high level of authenticity, in *Ṣaḥīḥ* Al-Bukhārī and/or *Ṣaḥīḥ* Muslim.³

The first *ḥadīth*⁴ explains that after the drop (*nuṭfa*) has settled in the womb for forty or forty-five nights, an angel enters the womb and determines the destiny of the fetus as dictated by God. But this *ḥadīth* does not explicitly mention the moment of ensoulment. Nonetheless, the second *ḥadīth*⁵ states that ensoulment takes place 120 days after conception. The third *ḥadīth*⁶ explains that an angel is sent to the fetus forty-two nights after it has settled in the womb to give it a form and “create” its senses, skin, flesh, and bones.

According to these *ḥadīths*, ensoulment takes place forty, forty-two, forty-five, or 120 days after conception. Scholars have sought to analyze and reconcile these *ḥadīths* both metaphorically and literally (Al-Bar 1989; Ghaly 2012). The different interpretations and considerations have resulted in the existence of varying religious opinions among both early and contemporary scholars on issues related to the beginning of human life (Atighetchi 2007).

It is worth pointing out that religious embryology and the different developmental phases defined in the Qur’an and *ḥadīth* (drop–clot–lump) do not fully accord with the biological phases identified by means of recent technological advancements in medical embryology (Atighetchi 2007; Ghaly 2014; Sachedina 2009). Religious scholars, through the controversial genre called “the scientific miracles in Qur’an and Sunna,” sought to reconcile scientific data with religious texts to prove the existence of modern medical knowledge on embryology in scriptural texts centuries ago (Ghaly 2014; Guénon 2019).

In the same vein, some physicians, such as Mukhtar Al-Mahdi and Abd Allah Basalama, argue that the moment of ensoulment can be identified through the

development of the fetal neural system. Interestingly, those physicians drew an analogy (*qiyās*) between the beginning and end of human life, saying that the functioning of the brainstem, which takes place around the twelfth week of pregnancy, marks the beginning of human life in analogy with (stem)brain death marking the end of human life (Ghaly 2012). Mohammed A. Albar (2001) also argues that the two timings of ensoulment mentioned in the *ḥadīths* refer to two different points in the development of the fetal central neural system; forty days marks the development of the brain stem, and 120 days marks the functioning and synapses between the higher and lower centers of the cerebrum. Yet, despite various reconciliation attempts, the prevalent Islamic position defends that the moment of ensoulment can only be known through revelation and conjecture (*ẓann*) (Atighetchi 2007; Eich 2009; Ghaly 2012).

Islamic Ethical Perspectives on Abortion

Islam holds that protecting human life (*ḥifẓ al-nafs*) is among the five higher objectives of Islamic law (*maqāṣid al-sharīʿa*) (Al-Bar and Chamsi-Pasha 2015). According to multiple scriptural texts, Islam equates the killing of a human with the killing of mankind, prohibits infanticide, and particularly warns its followers from killing their children out of fear of poverty (Qurʾan 5:32; 17:31, 33; 6:151). The ethical question regarding abortion in Islam is thus not a question about the value of life per se but rather about when this value becomes absolute (Sachedina 2009). In other words, the question is about whether the obligation to protect human life starts prenatally, and whether respect for life is a supreme or determinative ethical principle that is also relative to other considerations (Bowen 2003).

Throughout history, Islamic scholars have unanimously agreed that abortion is not allowed after ensoulment except to save the mother's health. Ensoulment thus has provided a decisive criterion for considering the obligation to protect human life. However, these scholars vastly disagreed on whether this would be after forty or 120 days from conception and whether there have to be compelling reasons for abortion (Al-Bar 1989; Atighetchi 2007; Bowen 2003; Khorfan and Padela 2010; Rispler-Chaim 1993; Wizārat al-Awqāf wal-Shuʿūn al-Islāmiyya 1983).

The Ḥanafī school of law were the most open towards abortion. The majority of Ḥanafīs tolerated abortion up to 120 days from conception, provided there is a valid justification. Some Ḥanafīs allowed abortion without the father's permission, and a minority allowed it without a justification, as long as it takes place within the lapse of 120 days. By contrast, the Mālikīs were far stricter, and the majority did not tolerate abortion even within the first forty days of pregnancy. A minority, however, tolerated abortion within the first forty days, but even those still considered it reprehensible. Between these two poles lies the Shāfiʿī school of law, who allowed abortion up to 120 days in the presence of valid reasons (except for Ghazālī (d. 1111), who prohibited abortion at any stage),

and the Ḥanbalī school, who allowed abortion up to forty days at the request of both parents (Al-Bar 2021; Al-Khatib 2021; Atighetchi 2007; Bowen 2003; Eich 2009, 2021; Rispler-Chaim 1993; Sachedina 2009; Shapiro 2014; Stodolsky and Padela 2021; Wizārat al-Awqāf wal-Shu'ūn al-Islāmiyya 1983; Yaseen 1996). At the same time, the majority of Shī'īs tended to prohibit abortion at any stage during pregnancy, apart from the Zaydī sect, who permitted abortion until 120 days from conception (Al-Awqāf al-Miṣriyya, n.d.; Atighetchi 2007; Bagheri and Afshar 2011; Sachedina 2009) (see Table 3).

	Phase	Moral Status (IOMS) ⁷	Ḥanafī	Ḥanbalī	Shāfi'ī	Mālikī	Shī'ī
Before ensoulment	<i>nutfā</i> 40 days	Beginning of biological life	X	X	X	Minority	Some sects Zaydī
	<i>'alaqa</i> 80 days	Respect	X		X		Zaydī
	<i>mudgha</i> <120	Respect	X		X		Zaydī
Ensoulment							
After ensoulment	<i>khalqan ākhar</i> ≥ 120 days	Sanctity					
Danger on mother's health	Any time during pregnancy		X	X	X	X	X

Table 3: Abortion in the different schools of thought.

Although some jurists permitted abortion with minor restrictions, Albar (2001,1989) explains that the majority did not allow abortion without strong medical or social reasons. Notably, there exists a remarkable heterogeneity in opinions towards the permissibility of abortion for reasons other than those pertaining to the health of the mother (Shapiro 2014). Attention has been mainly directed to the mother's health, since she is the established life upon which the health and the survival of the fetus rely (Al-Bar 1989; Hedayat, Shooshtarizadeh, and Raza 2006; Sachedina 2009). Therefore, abortion was permitted to save the mother's life and physical or, at times, psychological, health (such as in the case of rape and incest). Abortion was also permitted to save the life of an existing suckling infant whose parents cannot afford a wet nurse, according to the Hanafī school. Anyhow, abortion was exclusively considered for reasons other than the fetus itself.

The reason for this exclusion was mainly due to uncertainty in identifying the presence of fetal health problems, not least the presence of the fetus itself (Al-'Awwārī 2010; Al-Matary and Ali 2014; Al-Qaḥṭānī 2003; Badlis and Kashnit 2019; Jabr 2007; Sachedina 2009).

Islamic Ethical Perspectives on Termination of Pregnancy due to Fetal Anomaly

In light of recent medical advancements in fetal imaging, prenatal diagnosis, and gene sequencing, which reveal highly accurate information about the health of the fetus, traditional considerations for abortion have had to be revisited. As mentioned before, the resolution of such ethical issues, on which the Islamic sources are silent, is left to qualified religious scholars who are called upon to practice *ijtihād*. Currently, this is done through transnational *fiqh* organizations (such as the Islamic Fiqh Council, the International Islamic Fiqh Academy (IIFA), the Islamic Organization for Medical Sciences (IOMS), and the Islamic Medical Association of North America (IMANA)) in the form of collective legal reasoning (*ijtihād jamā'ī*), where religious scholars, together with medical professionals, discuss and issue rulings on ethical matters (Brockopp 2008; Ghaly 2012). The rulings of these organizations are authoritative and respected because they are grounded in Islamic sources (Gitsels-van der Wal, Manniën, Ghaly, et al. 2014).

Against this backdrop, a major shift in abortion *fatwās* occurred in 1990, when the Islamic Fiqh Council in Mecca passed a *fatwā* in its twelfth session that pays particular attention to fetal health and anomalies. The *fatwā* states that termination of pregnancy is permissible before the lapse of 120 days from the moment of conception if the fetus is severely malformed with an untreatable condition that will be present at birth and cause pain and suffering for the child and their family. This has to be proven by a committee of competent and trustworthy physicians on the basis of clinical examinations and laboratory findings and following the request of both parents. Termination of pregnancy after 120 days remains unlawful even if the fetus is malformed, unless it is proven by the committee that the continuation of pregnancy will cause definite danger to the mother's life (IFC 1990).

The significance of this *fatwā* lies in relaxing the approach towards abortion in the case of fetal anomaly. Previous *fatwās*—in Saudi Arabia—allowed abortion only in the first forty days from the moment of conception. This forty-day limit may work for families who are aware of their genetic risks and undergo prenatal screening very early. However, it certainly does not work for others who are not at high risk or do not suspect being so, since it is almost impossible to ascertain congenital diseases within this period (Albar 2002; Rispler-Chaim 1999).

Similarly, IMANA (2005, 20) issued a statement and provided specific examples of fetal anomalies that justify termination of pregnancy:

Fetal congenital malformations in which abortion can be sought and is permitted are lethal malformations not compatible with extrauterine life such as bilateral renal aplasia, trisomy 13, 18, etc. But even in these situations it is preferable to do it before the 120th day after fertilization or 19 weeks of gestation,⁸ calculated from the first day of the last menstrual period. In non-lethal malformations

such as severe hydrocephalus, cervical meningomyelocele, chromosomal aneuploidies and unbalanced translocations, abortion may be permissible before the 120th day of conception after consulting Islamic scholars and medical experts in the field.

Furthermore, in Iran, where law conforms to Shī'ī principles, the Single Article Act of Therapeutic Abortion (2005) authorizes abortion for a wide range of fetal and maternal conditions before nineteen weeks of gestation. The act states that the consent of the pregnant woman, a definitive diagnosis of a profound fetal anomaly (developmental or physical) or a life-threatening maternal disease made by three medical specialists, and the permission of the Legal Medicine Organization have to be obtained for termination to be legal (Hedayat, Shooshtarizadeh, and Raza 2006; Mahdavi et al. 2020).

The European Council for Fatwa and Research (ECFR 2018), Jordan's Board of Iftaa' (1993), the Committee of Fatwa in Kuwait (Atighetchi 2007), the Mufti of Egypt (Muhammad 2012), former grand imam of Al-Azhar Jad Al-Haqq (Al-'Awwārī 2010; Badlis and Kashnit 2019), and the well-known scholar Yusuf Al-Qaradawi (Al-Qaradawi 1994; Al-Shawabka 2019; Badlis and Kashnit 2019) also issued similar *fatwās*. While all of them shared the core idea of the permissibility of pregnancy termination due to fetal anomaly prior to ensoulment, some differences between these *fatwās* exist. For instance, Al-Qaradawi allowed the termination only within the first forty days of pregnancy (Rispler-Chaim 1999; Shapiro 2014). Similarly, the Committee of Fatwa in Kuwait allowed abortion within the first forty days, but tolerated pregnancy termination between forty and 120 days when certain serious, untreatable physical or mental anomalies exist (Atighetchi 2007). The rest, however, permitted the termination up to 120 days.

According to several scholars (Al-Alaiyan 2014; Al-Matary and Ali 2014; Haidar et al. 2015; Sachedina 2009), terminating pregnancy due to fetal anomaly is ethically justified based on the principle of no harm (*lā ḍarar*). Remarkably, the Saudi Council of Senior Scholars made an explicit reference to this principle in its *fatwā* (no. 240 dated January 16, 2011). The *fatwā* refers to the principle of no harm mentioned in the following Qur'anic verses: "He has chosen [for] you and has placed no hardship for you in the religion" (Qur'an 22:78); "No soul is tasked beyond its capacity. Let no mother be harmed on account of her child, nor father on account of his child" (Qur'an 2:233). In this context, Abdulrahman Al-Matary and Jaffar Ali (2014) explain that Islam does not expect its followers to endure harm, nor does it intend to inflict difficulties upon them.

Furthermore, this latter *fatwā*, the *fatwā* of Al-Qaradawi, and others also refer to the principle of necessity (*ḍarūra*) (Al-Alaiyan 2014; Al-Shawabka 2019; Haidar et al. 2015; Rispler-Chaim 1993). According to Qur'an 2:173,⁹ any unlawful act becomes lawful in the case of necessity (i.e., when any of the higher objectives

of *shari'ah* is threatened). A closer look into these *fatwās* shows that this principle justifies terminating pregnancy to save the mother's life but not in the case of anomalous fetus (Sachedina 2009).

A more relevant principle that justifies the termination of pregnancy due to fetal anomaly, argues Abdulaziz Sachedina (2009), states that preventing harm has preponderance over advancing benefit (*daf' al-darar 'awla min jalb al-maṣlaḥa*). Likewise, Saleh Al-Alaiyan (2014, 2) explains that diagnostic and therapeutic medical interventions, such as prenatal diagnosis and the termination of affected pregnancies, “can be expected to result in a greater balance of benefits over harms for the child or person the fetus can later become.” Accordingly, he argues, any attempt to understand the anomalous fetus as a person in terms of independent moral status should be abandoned.

It is worth mentioning that some Muslim scholars still prohibit the termination of pregnancy due to fetal anomaly even before ensoulment (among them are the renowned scholars Muhammad Said Al-Buti and Misbah Al-Mitwalli Hammad). This group defends the sanctity of human life regardless of the existence of anomalies and argues that pregnancy termination transgresses this sanctity. They also consider fetal anomalies part of God's will and wisdom, which should be accepted in any case. Additionally, they argue that allowing termination of pregnancy for fetal anomaly is a slippery slope that may lead to the misuse of abortion for unwanted pregnancies (Al-'Awwārī 2010; Al-Barbari 2021; Al-Shawabka 2019; Badlis and Kashnit 2019; Bowen 2003; Jabr 2007).

Islamic Ethical Perspectives on Prenatal Screening and Diagnosis

According to the previously mentioned *fatwās*, the termination of pregnancy for fetal anomaly should take place prior to 120 days from the moment of conception. For Muslims, the possibility of obtaining diagnostic information early in the pregnancy is thus of vital importance (Haidar et al. 2015). It allows Muslims to consider all possible options, including pregnancy termination, in a timely manner (i.e., before the moment of ensoulment). To that end, the different prenatal diagnostic methods play an important role in the timing of the diagnosis, hence, some elaboration on those methods is due.

Prenatal screening and diagnosis comprise a number of tests performed at different stages during pregnancy. Distinction has been made between noninvasive prenatal screening and invasive prenatal diagnostic procedures. Noninvasive screening include biochemical screening of maternal blood, ultrasounds, and noninvasive prenatal testing (NIPT) using cell-free fetal DNA found in maternal blood. Current technologies in NIPT offer early screening for the most common chromosomal abnormalities, such as trisomy 13, 18, and 21 and X/Y syndromes (Levy and Stosic 2019; Strom 2022). Latest advancements in NIPT also allow the identification of some smaller anomalies that cause single-gene disorders. The major advantage of NIPT is its ability to detect

a number of disorders as early as nine weeks of gestation with a quite high accuracy, and without the risk of miscarriage usually associated with invasive procedures. However, to date, confirmatory invasive tests are still required (Di Renzo, Meyyazhagan, and Tsibizova 2023).

Invasive diagnostic tests can identify nearly all known genetic conditions and are performed at a later point in the pregnancy, typically during the second trimester between twelve and twenty-one weeks of gestation. Invasive procedures include amniocentesis (fifteen weeks), fetoscopy, chorionic villus sampling (CVS) (ten to twelve weeks), and percutaneous umbilical blood sampling (eighteen to twenty weeks). Notably, CVS has a relatively higher risk of miscarriage compared with the other invasive procedures, but at the same time, it has the advantage of providing diagnostic information about six weeks earlier than the other procedures, thus allowing earlier decision-making (Levy and Stosic 2019; Shulman, Dungan, and Wagner 2022). In the near future, invasive testing may be completely replaced by noninvasive prenatal diagnosis (NIPD), which does not require access to the uterus or the confirmation of invasive procedures (Hui 2019). Currently, available NIPD is limited to cases of preidentified genetic risk of monogenic diseases. Yet, and despite the technical challenges, ongoing research suggests that NIPD has the potential to diagnose a wide range of disorders through noninvasive whole genome sequencing using cell-free fetal DNA found in maternal blood (Scotchman et al. 2023).

In principle, Islam encourages the prevention of diseases rather than only curing them (Albar 2002) and welcomes scientific research and technologies that offer knowledge and help prevent the transmission of diseases to future generations (Rispler-Chaim 1999). According to Albar (2002), Mohammed Ghaly (2008), and Al-'Awwārī (2010), a number of Islamic teachings surrounding marriage and reproduction concentrate on preventing hereditary diseases. Albar (2002) argues that prenatal screening and the termination of affected pregnancies are among the reproductive options capable of preventing and managing a wide variety of genetic diseases.

Prenatal diagnosis of fetal anomalies needs to fulfill a number of conditions to justify pregnancy termination from an Islamic perspective. According to the aforementioned various *fatwās*, the diagnosis first has to be confirmed by a committee of competent, trustworthy physicians. A number of *fatwās*, such as the Saudi Council of Senior Scholars' *fatwā* and the Iranian Act of 2005, specify that the number of physicians in this committee should be at least three (Al-Alaiyan 2014; Mahdavi et al. 2020). Second, the diagnosis should either confirm fetal incompatibility with extrauterine life and/or the certain death of the child within a short period of time after their birth, or the existence of an anomaly that will result in the suffering of the affected child and a poor quality of life. Third, the diagnosis, and consequently, the termination, should be done

before the lapse of 120 days from the moment of conception. Finally, both diagnosis and termination requests should come from both parents (IFC 1990; IMANA 2005; Jordan's Board of Iftaa' 1993; Sasongko et al. 2010).

Prenatal diagnosis is intrinsically linked to the abortion debate. While abortion has been extensively debated in Islam, all religious scholars, the lenient as well as the strict, agree that the gravity of abortion at any point prior to ensoulment is less than that of abortion after ensoulment (Atighetchi 2007; Sachedina 2009; Wizārat al-Awqāf wal-Shu'ūn al-Islāmiyya 1983; Yaseen 1996). Here, it becomes critical for Muslim women to undergo prenatal tests and have their diagnostic results confirmed before the time limit of 120 days from conception (nineteen weeks of gestation) (Al-Matary and Ali 2014; Gitsels-van der Wal, Manniën, Ghaly, et al. 2014).

Considering this time limit for Muslims in antenatal care is, in fact, life-changing. Al-Matary and Ali (2014) argue that the prolonged suffering by the mother, disabled child, and family at large resulting from not performing prenatal diagnosis, and consequently, pregnancy termination, in a timely manner, can be completely avoided if attention is paid to religious considerations in antenatal care. In support of this argument, a study shows that about 7 percent of abortion requests in Iran were rejected only because of late referrals (gestational age of more than nineteen weeks), repeatedly resulting in devastating scenarios that could have been prevented (Mahdavi et al. 2020). Other evidence suggests that not performing in a timely manner prenatal diagnosis and termination of pregnancy for anomalies incapable of surviving birth has the potential to increase maternal morbidity and even mortality (Al-Matary and Ali 2014).

Islamic Ethical Perspectives on Disability

Prenatal diagnosis is also fundamentally linked to the question of disability. Ghaly (2008) explains that Islam neither views disabilities as a blessing nor a punishment; they are simply a human condition. Still, Islam emphasizes that the disabled must be treated with respect, integrated into society, and comforted with love and care (Ghaly 2008; Rispler-Chaim 2019). Veardit Rispler-Chaim (2019) states that Islamic law promotes the acceptance of disabled people and views disability as something that can be handled with medicine, while allowing for certain exemptions, but in no way should disability lead to discrimination in duties and rights in Islam. This has also been confirmed by the IIFA in its resolution on the rights of people with disabilities. Importantly, in this resolution, the IIFA (2015) encourages research that benefits the disabled and emphasizes the need to do "everything possible" to reduce the causes of disability, such as premarital examinations and vaccination. Remarkably, however, the resolution does not refer to prenatal diagnosis and termination of pregnancy as methods of reducing disabilities, despite its focus on the importance of treating and preventing disabilities.

Discussion

The discussion on prenatal diagnosis and termination of pregnancy due to fetal anomaly is not merely an ethical one but also firmly grounded in theology in many ways. For example, the Islamic view on life dictates that God alone is the giver and taker of life and that humans do not have the right to deliberately end their own lives or those of others (Al-Bar and Chamsi-Pasha 2015). Therefore, decisions to terminate pregnancies can be seen as playing God (Ghaly 2008; Rispler-Chaim 1993). At the same time, hardships, including anomalies and disabilities, are strongly linked to the will of God (Bryant et al. 2011; Scott, Futter, and Wonkam 2013). So, the rise of reproductive technologies and advancements in genetics introduce even further ethical dilemmas, especially regarding accepting God's will. These theological dimensions and ethical considerations, however, are almost entirely absent from the contemporary Islamic ethical discourse on prenatal diagnosis and termination of pregnancy.¹⁰

Literature on the topic can be seen as falling into two categories: normative Islamic literature and literature that addresses the views of Muslims. Normative Islamic literature is concerned with the study of scriptural texts, Islamic doctrines, and the religious rulings produced based on the scriptural texts by the different doctrines. This literature includes the aforementioned *fatwās* and resolutions produced by individual scholars as well as religious councils. This scoping literature review has, indeed, revealed a clear paucity in literature addressing the normative Islamic ethical perspectives on prenatal diagnosis and termination of pregnancy, as well as the absence of a rigorous ethical analysis on those perspectives. Furthermore, it unveiled a notable repetition in the content of the (Arabic) sources and a lack of attention to prenatal diagnosis and its ethical and practical aspects.

The second category, which addresses the views of Muslims, has nevertheless received relatively more attention in the literature. This literature focuses on the attitudes and experiences of the human actors engaged in various ways with the Islamic view on prenatal diagnosis and termination of pregnancy. This includes the views and attitudes of Muslim women (Alsulaiman et al. 2012; Amiel and Tarabeih 2023; Belahcen et al. 2014; Ranjbar et al. 2021), Muslim physicians (Ahmed et al. 2017; Gaboon et al. 2017; Saniei et al. 2008; Utine et al. 2011), midwives (Afhami et al. 2016; Gitsels-van der Wal, Manniën, Gitsels, et al. 2014), health-care researchers (Bryant et al. 2011), Muslim religious scholars (Saniei et al. 2008), and Muslim parents of disabled children (Ahmed et al. 2013; Alsulaiman et al. 2014; Bryant et al. 2011; Scott, Futter, and Wonkam 2013), among others. While many of these studies lack in-depth ethical analysis, their findings reveal interesting, multilayered, and interwoven ethical dimensions of the social, cultural, and religious aspects of prenatal diagnosis and termination of pregnancy due to fetal anomaly.

First, the studies demonstrate that religious beliefs about Islam appear to play a key role in the decision-making process concerning participation in

prenatal tests (AbdulAzeez et al. 2019; Amiel and Tarabeih 2023; Gitsels-van der Wal, Manniën, Ghaly, et al. 2014). Second, the lack of participation and/or refusal of pregnancy termination is in some cases associated with a general lack of knowledge about contemporary religious *fatwās* on the permissibility of aborting malformed fetuses (Gitsels-van der Wal, Manniën, Ghaly, et al. 2014; Shaw 2012). Third, attitudes and decisions regarding prenatal diagnosis and termination of pregnancy are, at times, influenced by factors other than the severity of the condition itself (Alsulaiman and Abu-Amero 2013; Ranjbar et al. 2021), where emotional factors are not less important than religious or social factors (Gesser-Edelsburg and Shahbari 2017). Fourth, studies also show that the availability of genetic counseling, or the lack thereof, influences Muslim couples' general attitudes towards prenatal diagnosis and termination of pregnancy (Saniei et al. 2008) and that counselors are expected to be aware of Islamic rulings on pregnancy termination in Muslim-minority countries (Gitsels-van der Wal et al. 2015). Finally, and most importantly, late referrals and the delayed detection of anomalies seem to be crucial obstacles in antenatal care for Muslims (Al-Matary and Ali 2014; Shoham-Vardi et al. 2004).

The introduction of prenatal diagnosis technologies and advancements in genetics have led to the rise of complex ethical questions. Those technologies provide information about fetuses that was not available to the early Muslim jurists who accepted abortion in the case of a valid justification prior to ensoulment. Thus, with prenatal diagnosis technologies, the question has turned into whether fetal anomaly may be considered a valid justification for pregnancy termination, and consequently, which kinds of anomalies would be sufficient for the termination.

Contemporary Muslim jurists who encountered such ethical questions permitted pregnancy termination for severely malformed fetuses. However, they did not define what is considered “severe.” There seems to be a general vagueness in the formulation of the various *fatwās* and resolutions about what constitutes an anomaly that justifies pregnancy termination. There is also a remarkable overlooking of the risk of miscarriage associated with performing invasive diagnostic tests, as well as a lack of an ethical view on prenatal screening tests, especially NIPT. Furthermore, contemporary *fatwās* do not clarify the course of action in the case of incompatibility with life outside the uterus or whether termination of pregnancy in such cases may be allowed after the lapse of 120 days, considering the baby will die in all cases and that the continuation of such pregnancies to term may lead to maternal health complications.

Among all, IMANA's *fatwā* was the only one to name types of anomalies that justify pregnancy termination. Still, this very *fatwā* states that even in these cases, it is “preferable” to terminate the pregnancy before 120 days counted from the moment of conception; yet another—even more—vague and confusing formulation, which raises questions about the permissibility of post-ensoulment pregnancy termination. None of the other *fatwās* specify anomalies

that justify pregnancy termination. This includes the Iranian Single Article Act on Therapeutic Abortion, although, surprisingly, the Iranian National Medical Council specifies fifty-one medical conditions that justify therapeutic abortion, but these are not explicitly mentioned in the Act (Hedayat, Shooshtarizadeh, and Raza 2006).

The question of “where to draw the line” seems to be a common dilemma shared by both Western ethicists and Muslim religious scholars. The dilemma is even greater when we consider the fact that the severity of a condition is a subjective matter (Alsulaiman and Abu-Amero 2013; Rispler-Chaim 1999). The vagueness of scriptural texts on the topic makes it even harder to define a clear outline for the anomalies that justify pregnancy termination. However, some anomalies are explicitly excluded from the accepted conditions for termination, such as deafness and blindness, with which, according to Al-Qaradawi and Jad Al-Haqq, many people can live an active and good life (Al-‘Awwārī 2010; Al-Qaradawi 1994; Ghaly 2008; Rispler-Chaim 1993). Some other excluded defects are ventricular septal defects, intellectual disabilities, and enzyme and immune deficiencies (Al-Qaḥṭānī 2003).

Remarkably, Muhammed Naim Yaseen suggests that the vagueness of the scriptural texts and the chosen timing of ensoulment (a somewhat late timing, 120 days after conception) are part of divine wisdom. The fundamental benefit of this wisdom lies in the opportunity it provides Muslims to face the many risks that affect their offspring or threaten the health of their pregnant women prior to ensoulment (Yaseen 1996). This provides what Al-Matary and Ali (2014, 2) call “a period of opportunity” women can utilize to safeguard their health and wellbeing.

Termination of pregnancy for fetal anomaly after ensoulment remains out of discussion in the contemporary Islamic bioethical discourse. Nonetheless, Al-Matary and Ali (2014) suggest revisiting the abortion debate and considering pregnancy termination for fetal anomalies past 120 days due to the enormous amount of suffering and futile efforts mothers and anomalous fetuses go through. Yet, while this suggestion is valid and has a strong medical and ethical basis, the time limit of 120 days in itself is not the main challenge facing Muslim patients. Especially with NIPT that allows early detection, and the potential of NIPD, Muslims, in principle, can have their decisions made in a timely manner.

The biggest challenge Muslims face lies in the reality of medical systems and the actual possibility of having a final diagnosis before 120 days. Medical systems are unfortunately often overloaded, many health-care providers are overwhelmed, and medical care is rarely sensitive to patients’ religious preferences and worldviews. This all leads to late referrals, delayed diagnoses, and devastating outcomes. Furthermore, in some countries, especially Muslim-minority countries, second trimester tests are performed at twenty weeks, a timing that proves too late for Muslim women and deprives them the opportunity

to consider the termination of their pregnancy (Gitsels-van der Wal, Manniën, Ghaly, et al. 2014).

To that end, a contextualized Islamic ethical framework on prenatal diagnosis and termination of pregnancy for Muslims is urgently needed. A framework that is developed based on theoretical and empirical research, and that is faithful to the Islamic sources “text” as well as Muslims’ lived experiences “context” (Ahaddour 2021).

Conclusion

The Islamic view on the beginning of life is significantly shaped by the moment of ensoulment, which distinguishes two fetal statuses: a fetus with a soul and a fetus without. This defines the moral status of the fetus and determines which of the different legal rights and rulings are applied to it, the most important of which are rulings on abortion. Throughout history, Muslim religious scholars unanimously have agreed that abortion is impermissible after ensoulment, except to save the mother’s life, whereas they disputed the permissibility of abortion before ensoulment, the timing of ensoulment, and whether there has to be valid justification for abortion.

The introduction of prenatal diagnosis technologies and advancements in genetics has led to complex ethical questions about whether the presence of a fetal anomaly may be a valid justification for pregnancy termination from an Islamic perspective. Contemporary Muslim religious scholars permit termination of pregnancy for severe fetal anomaly prior to the moment of ensoulment (120 days from conception or nineteen weeks of gestation). However, the majority do not define what is considered severe. So, the question of where to draw the line remains a major concern.

Islamic perspectives on prenatal screening and diagnosis and termination of pregnancy due to fetal anomaly are significantly understudied. A rigorous ethical analysis on the topic hardly exists. Research focuses mainly on the attitudes and experiences of different actors, with very limited theoretical research reflecting the complexity and reality of the ethical challenges faced by Muslims.

Further interdisciplinary research based on a dialogue between religion and medicine is needed to advance knowledge in this understudied field. Moreover, the development of a contextualized Islamic ethical framework that is faithful to both the “text” and the “context” is necessary to guide health-care professionals and families and establish religious sensitivity in antenatal care.

Limitations

The scarcity of sources investigating Islamic ethical perspectives on prenatal diagnosis and termination of pregnancy due to fetal anomaly constituted a major limitation of this review.

Notes

- ¹ Also confirmed in Qur'an 22:5.
- ² Throughout this article, we use Sayyed Hossien Nasr et al.'s (2015) version of Qur'an translation.
- ³ Muslims consider these two books to be the most authentic after the Qur'an. The authentic prophetic traditions represent the commentary of the word of God, since they develop and complete its indications and precepts (Atighetchi 2007).
- ⁴ *Hadīth* text reads: "Hudhayfa bin 'Usayd reported directly from Allah's Messenger that he said: 'When the drop (of semen) [*nutfā*] remains in the womb for forty or forty five nights, the angel comes and says: My Lord, will he be good or evil? And both these things would be written. Then the angel says: My Lord, would he be male or female? And both these things are written. And his deeds and actions, his death, his livelihood; these are also recorded. Then his document of destiny is rolled and there is no addition to nor subtraction from it'" (Muslim, n.d., no. 2644).
- ⁵ 'Abdullah bin Mas'ūd reports: "Messenger of Allah, the truthful and the receiver of the truth informed us, saying: "The creation of you (humans) is gathered in the form of semen [*nutfā*] in the womb of your mother for forty days, then it becomes a clinging thing [*'alaqa*] in similar (period), then it becomes a lump of flesh [*mudgha*] like that, then Allah sends an angel who breathes the life into it; and (the angel) is commanded to record four things about it: its provision, its term of life (in this world), its conduct; and whether it will be happy or miserable'" (see Al-Bukhārī, n.d., no. 3208; Muslim, n.d., no. 2643a).
- ⁶ *Hadīth* text reads: "When forty-two nights pass after the semen gets into the womb, Allah sends the angel and gives him shape. Then he creates his sense of hearing, sense of sight, his skin, his flesh, his bones, and then says: My Lord, would he be male or female? And your Lord decides as He desires and the angel then puts down that also and then says: My Lord, what about his age? And your Lord decides as He likes it and the angel puts it down. Then he says: My Lord, what about his livelihood? And then the Lord decides as He likes and the angel writes it down, and then the angel gets out with his scroll of destiny in his hand and nothing is added to it and nothing is subtracted from it" (Muslim, n.d., no. 2645a).
- ⁷ The IOMS holds that the moment of conception marks the beginning of human biological life. This life deserves respect and dignity from the moment the fertilized ovum settles in the womb and full protection and sanctity from the moment of ensoulment (see Ghaly 2012).
- ⁸ Gestational age is calculated from the first day of the last menstrual cycle before pregnancy. Conception takes place at day fourteen to sixteen of the cycle. Therefore, there is about two weeks difference between gestational age and the moment of conception (fetal age).
- ⁹ The verse reads: "But whosoever is compelled by necessity—neither coveting nor transgressing—no sin shall be upon him. Truly God is Forgiving, Merciful."
- ¹⁰ A few sources mention the theological concept of *'iza* (lesson), where the existence of disabled people is considered part of divine wisdom that has an educative dimension, a lesson to healthy people to appreciate their health (see Al-Qaḥṭānī 2003; Al-Sasiyya 2019).

References

- AbdulAzeez, Sayed, Nourah H. Al Qahtani, Noor B. Almandil, Amani M. Al-Amodi, Sumayh A. Aldakeel, Neda Z. Ghanem, Deem N. Alkuroud, Ameen AlTurki, Quds Abdulhakeem AlQattan, Abdulrahman Alghamdi, Norah Fahad Alhur, Hatoon Ahmed Al Taifi, Halah Egal Aljofi, Rabindran Jermy, Vinoth Raman, Antonino Giambona, Aurelio Maggio, and J. Francis Borgio. 2019. "Genetic Disorder Prenatal Diagnosis and Pregnancy Termination Practices among High Consanguinity Population, Saudi Arabia." *Scientific Reports* 9 (1). <https://doi.org/10.1038/s41598-019-53655-8>.
- Afhami, Narges, Parvin Bahadoran, Hamid Reza Taleghani, and Nafisehsadat Nekuei. 2016. "The Knowledge and Attitudes of Midwives Regarding Legal and Religious Commandments on Induced Abortion and their Relationship with Some Demographic Characteristics." *Iranian Journal of Nursing and Midwifery Research* 21 (2): 177–82. <https://doi.org/10.4103/1735-9066.178244>.

- Ahaddour, Chaïma. 2021. "Ethical Issues at the Beginning of Human Life: Towards a Contextualized Islamic Understanding of Prenatal Diagnosis and Termination of Pregnancy." *Louvain Studies* 44 (4): 319–39. <https://doi.org/10.2143/LS.44.4.3290039>.
- Ahmed, Shenaz, Hussain Jafri, Yasmin Rashid, Gerald Mason, Yasmin Ehsan, and Mushtaq Ahmed. 2017. "Attitudes towards Non-Invasive Prenatal Diagnosis among Obstetricians in Pakistan, a Developing, Islamic Country." *Prenatal Diagnosis* 37 (3): 289–95. <https://doi.org/10.1002/pd.5008>.
- Ahmed, Shenaz, Louise D. Bryant, Mushtaq Ahmed, Hussain Jafri, and Yasmin Raashid. 2013. "Experiences of Parents with a Child with Down Syndrome in Pakistan and Their Views on Termination of Pregnancy." *Journal of Community Genetics* 4 (1): 107–14. <https://doi.org/10.1007/s12687-012-0124-y>.
- Al-Alaiyan, Saleh. 2014. "An Islamic Legal Perspective on the Status of the Malformed Fetus and the Previabable Infant." *Journal of Palliative Care & Medicine* 4 (2). <https://doi.org/10.4172/2165-7386.1000174>.
- Al-Awqāf al-Miṣriyya. n.d. "Mawsū'at al-fiqh al-Islāmī." In *Egypt: Egyptian Ministry of Awqaf and Islamic Affairs*. Accessed January 30, 2024. <https://shamela.ws/book/437/791>.
- Al-'Awwārī, 'Abdufattaḥ Bahjī 'Alī. 2010. *Al-durr al-thamīn libayān ḥukm 'ijhād al-'ajinna al-mushawwabīn: dirāsa fiqhiyya muqārana*. Cairo: Dār al-Kutub al-Qānūniyya.
- Al-Bar, Mohammad Ali. 2021. "Abortion: *Shafi'i* Perspective." In *Abortion: Global Positions and Practices, Religious and Legal Perspectives*, edited by Alireza Bagheri, 147–53. Switzerland: Springer.
- Al-Bar, Mohammed Ali. 1989. *Al-janīn al-mushawwāb wal-'amrād al-wirathīyya*. Jeddah, Saudi Arabia: Dar Al-Manara.
- Al-Bar, Mohammed Ali, and Hassan Chamsi-Pasha. 2015. *Contemporary Bioethics: Islamic Perspective*. New York: Springer.
- Al-Barbari, Muna Jabr Ali Muhammad. 2021. "Ijhād al-janīn al-mushawwāb bayn al-mu'tayāt al-ṭibbiyya wal-ijtihādāt al-fiqhiyya." *Tajdīd al-'ulūm al-'arabiyya wal-islāmīyya bayn al-aṣāla wal-mu'aṣara* [Renewal of Arabic and Islamic Studies: Between Tradition and Modernity], Al-Azhar University, Egypt.
- Al-Bukhārī. n.d. *ṣaḥīḥ al-Bukhārī*. Translated by Muhsin Khan.
- Al-Khatib, Mu'taz. 2021. "Abortion in the *Hanbali* School of Jurisprudence: A Systematic Ethical Approach." In *Abortion: Global Positions and Practices, Religious and Legal Perspectives*, edited by Alireza Bagheri, 155–67. Switzerland: Springer.
- Al-Matary, Abdulrahman, and Jaffar Ali. 2014. "Controversies and Considerations Regarding the Termination of Pregnancy for Foetal Anomalies in Islam." *BMC Medical Ethics* 15 (1). <https://doi.org/10.1186/1472-6939-15-10>.
- Al-Qaḥṭānī, Musfir bin 'Alī bin Muḥammad. 2003. "Ijhād al-janīn al-mushawwāb wa-ḥukmuh fī al-sharī'a al-Islāmīyya." *Majallat al-Sharī'ah wal-Dirāsāt al-Islāmīyya* 18 (54): 157–217.
- Al-Qaradawī, Yusuf. 1994. *Fatāwā mu'aṣira*. 3 vols. Vol. 2. Al-Mansoura, Egypt: Dar Al-Wafā'.
- Al-Sasiyya, L'mara. 2019. "Aḥkām ijhād al-janīn al-mushawwāb wirathīyyan." *Majallat al-'Ulūm al-Islāmīyya wal-Hādāra* 4 (1).
- Al-Shawabka, Raed. 2019. "*Mawqif al-sharī'a min al-janīn al-mushawwāb*." *Qaḍāyā ṭibbiyya mu'aṣira fil fiqh al-Islāmī* [Contemporary Medical Issues in Islamic Fiqh], 9th International Conference, Nablus, Palestine.
- Albar, Mohammed A. 2001. "Induced Abortion from an Islamic Perspective: Is it Criminal or Just Elective." *Journal of Family and Community Medicine* 8 (3): 25–35.
- Albar, Mohammed A. 2002. "Ethical Considerations in the Prevention and Management of Genetic Disorders with Special Emphasis on Religious Considerations." *Saudi Medical Journal* 23 (6): 627–32.
- Alsulaiman, Ayman, and Khaled K. Abu-Amero. 2013. "Parent's Attitudes toward Prenatal Diagnosis and Termination of Pregnancy Could Be Influenced by Other Factors Than by the Severity of the Condition." *Prenatal Diagnosis* 33 (3): 257–61. <https://doi.org/10.1002/pd.4055>.
- Alsulaiman, Ayman, Jenny Hewison, Khaled K. Abu-Amero, Shenaz Ahmed, Josephine M. Green, and Janet Hirst. 2012. "Attitudes to Prenatal Diagnosis and Termination of Pregnancy for 30 Conditions among Women in Saudi Arabia and the UK." *Prenatal Diagnosis* 32 (11): 1109–13. <https://doi.org/10.1002/pd.3967>.

- Alsulaiman, Ayman, Ahmed Mousa, Altaf A. Kondkar, and Khaled K. Abu-Amero. 2014. "Attitudes of Saudi Parents with a Deaf Child towards Prenatal Diagnosis and Termination of Pregnancy." *Prenatal Diagnosis* 34 (2): 153–58. <https://doi.org/10.1002/pd.4273>.
- Amiel, Aliza, and Mahdi Tarabeih. 2023. "Prenatal Testing and Pregnancy Termination among Muslim Women Living in Israel Who Have Given Birth to a Child with a Genetic Disease." *Journal of Religion and Health* 62 (5): 3215–29. <https://doi.org/10.1007/s10943-023-01904-6>.
- Atighetchi, Dariusch. 2007. *Islamic Bioethics: Problems and Perspectives*. The Netherlands: Springer.
- Badawī, Ammar Tawfeeq Ahmad. 2019. "Ijhād al-janīn al-mushawwah." *Qadāyā ṭibbiyya mu'āsira fil fiqh al-Islāmī* [Contemporary Medical Issues in Islamic Fiqh], 9th International Conference, Nablus, Palestine.
- Badlis, Mostapha, and Azziddin Kashnit. 2019. "Ijhād al-janīn al-mushawwah fil-qanūn wal-fiqh al-Islāmī." *Majallat 'Āfāq 'Ilmiyya* 11 (2).
- Bagheri, Alireza, and Leila Afshar. 2011. "Abortion in Different Islamic Jurisprudence: Case Commentaries." *Asian Bioethics Review* 3 (4): 351–65.
- Belahcen, Amina, Meriem Taloubi, Sana Chala, Amal Thimou Izgua, and Asmaa Mdaghri Alaoui. 2014. "Mother's Awareness and Attitudes towards Prenatal Screening for Down Syndrome in Muslim Moroccans." *Prenatal Diagnosis* 34 (9): 821–30. <https://doi.org/10.1002/pd.4373>.
- Bowen, Donna Lee. 2003. "Contemporary Muslim Ethics of Abortion." In *Islamic Ethics of Life: Abortion, War, and Euthanasia*, edited by Jonathan E. Brockopp, 51–80. Columbia, South Carolina: University of South Carolina Press.
- Brockopp, Jonathan. 2008. "Islam and Bioethics: Beyond Abortion and Euthanasia." *Journal of Religious Ethics* 36 (1): 3–12.
- Brockopp, Jonathan, and Thomas Eich. 2008. "Medical Ethics and Muslim Perspectives." In *Muslim Medical Ethics: From Theory to Practice*, edited by Jonathan Brockopp and Thomas Eich, 1–13. Columbia, South Carolina: University of South Carolina Press.
- Bryant, Louise D., Shenaz Ahmed, Mushtaq Ahmed, Hussain Jafri, and Yasmin Raashid. 2011. "All Is Done by Allah? Understandings of Down Syndrome and Prenatal Testing in Pakistan." *Social Science & Medicine* 72 (8): 1393–99. <https://doi.org/10.1016/j.socscimed.2011.02.036>.
- Carlson, Laura M., and Neeta L. Vora. 2017. "Prenatal Diagnosis Screening and Diagnostic Tools." *Obstetrics and Gynecology Clinics of North America* 44 (2): 245–56. <https://doi.org/10.1016/j.ogc.2017.02.004>.
- Di Renzo, Gian Carlo, Arun Meyyazhagan, and Valentina Tsibizova. 2023. "A Brief History of Noninvasive Prenatal Diagnosis and Its Forecast." In *Prenatal Diagnostic Testing for Genetic Disorders: The Revolution of the Non-Invasive Prenatal Test*, edited by Gian Carlo Di Renzo, 3–21. Switzerland: Springer.
- ECFR (European Council for Fatwa and Research). 2018. "Ijhād al-janīn al-mushawwah Fatwa 60 (10/4)." Accessed January 19, 2022. <https://bit.ly/3JmF9G0>.
- Eich, Thomas. 2009. "Induced Miscarriage in Early Mālikī and Ḥanafī Fiqh." *Islamic Law and Society* 16 (3/4): 302–36. <https://doi.org/10.1163/092893809X12469547140991>.
- . 2021. "Maliki Perspectives on Abortion." In *Abortion: Global Positions and Practices, Religious and Legal Perspectives*, edited by Alireza Bagheri, 137–45. Switzerland: Springer.
- Gaboon, Nagwa E. A., Khadijah H. Bakur, Alaa Y. Edrees, and Jumana Y. Al-Aama. 2017. "Attitude toward Prenatal Testing and Termination of Pregnancy among Health Professionals and Medical Students in Saudi Arabia." *Journal of Pediatric Genetics* 6 (3): 149–54. <https://doi.org/10.1055/s-0037-1600131>.
- García, Elisa, Danielle R. M. Timmermans, and Evert van Leeuwen. 2008. "The Impact of Ethical Beliefs on Decisions about Prenatal Screening Tests: Searching for Justification." *Social Science & Medicine* 66 (3): 753–64. <https://doi.org/10.1016/j.socscimed.2007.10.010>.
- Gatrad, A. R., and A. Sheikh. 2001. "Medical Ethics and Islam: Principles and Practice." *Arch Dis Child* 84 (1): 72–75.
- Gesser-Edelsburg, Anat, and Nour Abed Elhadi Shahbari. 2017. "Decision-making on Terminating Pregnancy for Muslim Arab Women Pregnant with Fetuses with Congenital Anomalies: Maternal Affect and Doctor-Patient Communication." *Reproductive Health* 14 (1): 49. <https://doi.org/10.1186/s12978-017-0312-7>.

- Ghaly, Mohammed. 2012. "The Beginning of Human Life: Islamic Bioethical Perspectives." *Zygon: Journal of Religion and Science* 47 (1): 175–213.
- Ghaly, Mohammed. 2014. "Human Embryology in the Islamic Tradition: The Jurists of the Post-Formative Era in Focus." *Islamic Law and Society* 21 (3): 157–208.
- Ghaly, Mohammed M. 2008. "Physical and Spiritual Treatment of Disability in Islam: Perspectives of Early and Modern Jurists." *Journal of Religion, Disability & Health* 12 (2): 105–43. <https://doi.org/10.1080/15228960802160647>.
- Gitsels-van der Wal, Janneke T., Judith Manniën, Mohammed M. Ghaly, Pieter S. Verhoeven, Eileen K. Hutton, and Hans S. Reinders. 2014. "The Role of Religion in Decision-making on Antenatal Screening of Congenital Anomalies: A Qualitative Study amongst Muslim Turkish Origin Immigrants." *Midwifery* 30 (3): 297–302. <https://doi.org/10.1016/j.midw.2013.04.001>.
- Gitsels-van der Wal, Janneke T., Judith Manniën, Lisanne A Gitsels, Hans S. Reinders, Pieter S. Verhoeven, Mohammed M. Ghaly, Trudy Klomp, and Eileen K. Hutton. 2014. "Prenatal Screening for Congenital Anomalies: Exploring Midwives' Perceptions of Counseling Clients with Religious Backgrounds." *BMC Pregnancy and Children* 14 (1). <https://doi.org/10.1186/1471-2393-14-237>.
- Gitsels-van der Wal, Janneke T., Linda Martin, Judith Manniën, Pieter Verhoeven, Eileen K. Hutton, and Hans S. Reinders. 2015. "A Qualitative Study on How Muslim Women of Moroccan Descent Approach Antenatal Anomaly Screening." *Midwifery* 31 (3): e43–e49. <https://doi.org/10.1016/j.midw.2014.12.007>.
- Guénon, Melanie. 2019. "Abd Al-Majīd Al-Zindānī's *Ijāz 'ilmi* Approach: Embryonic Development in Q. 23:12–14 as a Scientific Miracle." *Journal of Qur'anic Studies* 21 (3): 32–56. <https://doi.org/10.3366/jqs.2019.0398>.
- Haidar, Hazar, Veardit Rispler-Chaim, Anthony Hung, Subhashini Chandrasekharan, and Vardit Ravitsky. 2015. "Noninvasive Prenatal Testing: Implications for Muslim Communities." *AJOB Empirical Bioethics* 6 (1): 94–105. <https://doi.org/10.1080/23294515.2014.993101>.
- Hamamy, Hanan. 2012. "Consanguineous Marriages: Preconception Consultation in Primary Health Care Settings." *Journal of Community Genetics* 3 (3): 185–92. <https://doi.org/10.1007/s12687-011-0072-y>.
- Hedayat, K. M., P. Shooshtarizadeh, and M. Raza. 2006. "Therapeutic Abortion in Islam: Contemporary Views of Muslim Shiite Scholars and Effect of Recent Iranian Legislation." *Journal of Medical Ethics* 32 (11): 652–57. <https://doi.org/10.1136/jme.2005.015289>.
- Hui, Lisa. 2019. "Noninvasive Approaches to Prenatal Diagnosis: Historical Perspective and Future Directions." In *Prenatal Diagnosis*, edited by Brynn Levy, 45–58. New York: Springer.
- IFC (Islamic Fiqh Council). 1990. 12th session, Mecca, February 10–17, 1990, corresponding to Rajab 15–22, 1410 H.
- IIFA (International Islamic Fiqh Academy). 2015. "Resolution No. 213 (9/22) Rights of People with Disabilities in Islamic Jurisprudence." 22nd session, Kuwait, March 22–25, 2015, corresponding to Jumadah Al-Akhirah 2–5, 1436 H.
- IMANA (Islamic Medical Association of North America). 2005. "Medical Ethics from Islamic Perspective." *The Journal of IMANA* 36 (1).
- Jabr, Karima Aboud. 2007. "Al-ahkām al-fiqhiyya fil-'isqāṭ al-janīniyya dhat al-tashauwwhāt al-khalqiyya al-'anīfa." *Majallat Abḥāth Kulliyat al-Tarbiya al-'Asasiyya* 6 (1): 36–68.
- Jordan's Board of Iftaa'. 1993. "Issues in Pregnancy and Childbirth Resolution No. (35)." Accessed December 19, 2023. https://www.aliftaa.jo/Decision.aspx?DecisionId=36#.Yeg0o_7MKUn.
- Khorfan, Rhami, and Aasim I. Padela. 2010. "The Bioethical Concept of Life for Life in Judaism, Catholicism, and Islam: Abortion When the Mother's Life is in Danger." *Journal of the Islamic Medical Association of North America* 42 (3): 99–105. <https://doi.org/10.5915/42-3-5351>.
- Levy, Brynn, and Melissa Stosic. 2019. "Traditional Prenatal Diagnosis: Past to Present." In *Prenatal Diagnosis*, edited by Brynn Levy, 3–22. New York: Springer.
- Mahdavi, Seyed Amirhosein, Asieh Jafari, Khadijeh Azimi, Nikoo Dehghanizadeh, and Abdolrazagh Barzegar. 2020. "Therapeutic Abortion in Iran: An Epidemiologic Study of Legal Abortion in 2 Years." *BMC Research Notes* 13 (1). <https://doi.org/10.1186/s13104-020-05098-y>.

- Muhammad, Ali Jum'a. 2012. "Istikhdām al-wasa'il al-ḥadīthā fī kashf 'uyūb al-ajinnah wa 'ilājihā." Accessed December 19, 2023.
- Munn, Zachary, Micah D. J. Peters, Cindy Stern, Catalin Tufanaru, Alexa McArthur, and Edoardo Aromataris. 2018. "Systematic Review or Scoping Review? Guidance for Authors When Choosing between a Systematic or Scoping Review Approach." *BMC Medical Research Methodology* 18 (1): 143. <https://doi.org/10.1186/s12874-018-0611-x>.
- Muslim. n.d. *ṣaḥīḥ Muslim*. Translated by Abdul Hamid Siddiqui.
- Ranjbar, Fahimeh, Fatemeh Oskouie, Shahrzad Hashemi Dizaji, and Maryam Gharacheh. 2021. "Experiences of Iranian Women with Prenatal Diagnosis of Fetal Abnormalities: A Qualitative Study." *The Qualitative Report* 26 (7): 2282–96. <https://doi.org/10.46743/2160-3715/2021.4688>.
- Rispler-Chaim, Vardit. 1993. *Islamic Medical Ethics in the Twentieth Century*. Social, Economic and Political Studies of the Middle East, Vol. 64. Leiden, The Netherlands: Brill.
- . 1999. "The Right not to Be Born: Abortion of the Disadvantaged Fetus in Contemporary Fatwas." *The Muslim World* 89 (2): 130–43.
- . 2019. "Some Observations on Attitudes to Disability in Islamic Law." *International Journal of Middle East Studies* 51 (1): 116–19. <https://doi.org/10.1017/S0020743818001204>.
- Sachedina, Abdulaziz. 2009. *Islamic Biomedical Ethics: Principles and Application*. New York: Oxford University Press.
- Saniei, Mansooreh, Elnaz Jafari Mehr, Saeed Shahraz, Ladan Naz Zahedi, Ala Melati Rad, Saye Sayar, Roya Sherafat Kazemzade, Ahmad Shekrachi, and Mohammad Reza Zali. 2008. "Prenatal Screening and Counseling in Iran and Ethical Dilemmas." *Community Genetics* 11 (5): 267–72. <https://doi.org/10.1159/000121397>.
- Sasongko, Teguh H., Abd Razak Salmi, Bin Alwi Zilfalil, Mohammed Ali Albar, and Zabidi Azhar Mohd Hussin. 2010. "Permissibility of Prenatal Diagnosis and Abortion for Fetuses with Severe Genetic Disorder: Type 1 Spinal Muscular Atrophy." *Ann Saudi Med* 30 (6): 427–31. <https://doi.org/10.4103/0256-4947.72259>.
- Scotchman, Elizabeth, Joseph Shaw, Natalie Chandler, and Lyn S. Chitty. 2023. "Developing and Delivering a Clinical Service for the Non-invasive Prenatal Diagnosis of Monogenic Conditions." In *Prenatal Diagnostic Testing for Genetic Disorders: The Revolution of the Non-Invasive Prenatal Test*, edited by Gian Carlo Di Renzo, 305–19. Switzerland: Springer.
- Scott, Chantelle Jennifer, Merle Futter, and Ambroise Wonkam. 2013. "Prenatal Diagnosis and Termination of Pregnancy: Perspectives of South African Parents of Children with Down Syndrome." *Journal of Community Genetics* 4 (1): 87–97. <https://doi.org/10.1007/s12687-012-0122-0>.
- Shapiro, Gilla. 2014. "Abortion Law in Muslim-Majority Countries: An Overview of the Islamic Discourse with Policy Implications." *Health Policy Planning* 29 (4): 483–94. <https://doi.org/10.1093/heapol/czt040>.
- Shaw, Alison. 2012. "‘They Say Islam Has a Solution for Everything, So Why Are There No Guidelines for This?’ Ethical Dilemmas Associated with the Births and Deaths of Infants with Fatal Abnormalities from a Small Sample of Pakistani Muslim Couples in Britain." *Bioethics* 26 (9): 485–92. <https://doi.org/10.1111/j.1467-8519.2011.01883.x>.
- Shoham-Vardi, I., N. Weiner, D. Weitzman, and A. Levcovich. 2004. "Termination of Pregnancy: Attitudes and Behavior of Women in a Traditional Society." *Prenatal Diagnosis* 24 (11): 869–75. <https://doi.org/10.1002/pd.867>.
- Shulman, Lee P., Jeffrey S. Dungan, and Andrew F. Wagner. 2022. "Techniques for Prenatal Diagnosis." In *Emery and Rimoin's Principles and Practice of Medical Genetics and Genomics: Perinatal and Reproductive Genetics*, edited by Reed E. Pyeritz, Bruce R. Korf and Wayne W. Gordy, 35–55. Cambridge, MA: Academic Press.
- Stodolsky, Muhammed V., and Aasim I. Padel. 2021. "Abortion in Hanafī Law." In *Abortion: Global Positions and Practices, Religious and Legal Perspectives*, edited by Alireza Bagheri, 127–36. Switzerland: Springer.
- Strom, Charles M. 2022. "Non-Invasive Prenatal Testing and Noninvasive Prenatal Screening." In *Emery and Rimoin's Principles and Practice of Medical Genetics and Genomics: Prenatal and Reproductive*

- Genetics*, edited by Reed E. Pyeritz, Bruce R. Korf and Wayne W. Grody. Cambridge, MA: Academic Press.
- Utine, G.E., P.Ö Kiper, B.V Salanci, Y. Alanay, D. Aktaş, M. Alikışıfođlu, K. Bodurođlu, and E. Tunçbilek. 2011. "Opinions of Turkish Physicians towards Termination of Pregnancy for Fetal Disorders." *Genetic Counseling* 22 (4): 401–9.
- WHO. 2025. "Congenital Anomalies." Accessed January 5, 2025. https://www.who.int/health-topics/congenital-anomalies#tab=tab_1.
- Wizārat al-Awqāf wal-Shu'ūn al-Islāmiyya. 1983. In *Al-mamsū'a al-fiqhiyya*. Kuwait: Ministry of Awqaf and Islamic Affairs.
- Yaseen, Muhammad Naim. 1996. *Qađāya ṭibbiyya mu'āşira*. 1st ed. Jordan: Dar Al-Nafa'is.

