

Prenatal Genetic Test: Legal and Technical Implications for Genetic Selective Abortion in Malaysia

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ABSTRACT

The purpose of prenatal chromosomal abnormality testing is to accurately determine a patient's risk of carrying a foetus that has a chromosomal abnormality. There are many different prenatal screening and diagnostic test options available; each has its own relative benefits and drawbacks, different specification of test and performance levels. There is no one test that is better than another when it comes to screening test characteristics, so patients must make complex decisions and receive thoughtful, patient-cantered counselling from obstetric care professionals. This article discusses the general legal provisions governing abortion in Malaysia and its exceptions to address the possibility of genetic selective abortion in Malaysia. The discussion focused on the statute of general application i.e., the Penal Code and the Guidelines on Termination of Pregnancy for Hospitals (hereinafter referred to as the Guidelines), 2012 established by the Ministry of Health Malaysia. The guidelines emphasizes the importance of collaboration among healthcare professionals, policymakers, and support groups to ensure safe abortions. It outlines legal aspects, standard operating procedures, and organizational strategies for providing comprehensive and supportive care throughout the termination of pregnancy process. The focus is on protecting women's health and well-being while adhering to legal and ethical considerations. This is, in line with the more flexible approach towards abortion as per the Abortion Care Guideline issued by the World Health Organization (WHO) on 8 March 2022.

Keywords: pre-natal genetic test, guidelines, selective abortion, Penal Code, genetic disorders

INTRODUCTION

According to the American College of Obstetricians and Gynaecologists (ACOG, 2020), there are two main kinds of prenatal genetic tests: (1) Prenatal diagnostic tests, which are performed on foetus or placenta cells and can inform future parents if their foetus is truly affected by a particular disorder, or (2) Prenatal screening tests, which are investigations that provide information related to the chances of the foetus having an aneuploidy and a few other disorders. Prenatal screening has been included into many health care systems, according to Ravitsky (2017), based on two opposing arguments. "Access to prenatal testing supports and promotes women's informed choices, empowering them to manage their pregnancies—and hence their lives—in ways that align with their preferences and goals," is the reproductive autonomy justification cited in the first model.

Prenatal screening is thought to be intended "to reduce the incidence of certain conditions in the population to reduce the burden of disease," according to the public health justification cited in the second model. "The societal consequences of reproduction and the aggregate impact of women's individual reproductive decisions on the overall health of future populations" are highlighted in this second model. Nonetheless, due to their practical ramifications, both of these models—also referred to as idealised paradigms because real-life scenarios typically incorporate their theoretical underpinnings (Begović, 2019)—raised several ethical questions.

Apart from ethical questions, legal question arises in Malaysia, i.e., whether there is an option for genetic selective abortion in Malaysia which is permitted by the law? This article discusses the general legal provisions governing abortion in Malaysia and its exceptions in relation to address the possibility of genetic selective abortion in Malaysia.

Justification of Abortion: Theoretical Debate Continues

Judith Jarvis Thomson's much-discussed violinist analogy, which aims to show that no one has a right to utilise another person's body, is a key argument used to support the legitimacy of abortion from this perspective (Thomson, 1971). For the purposes of argument, Thomson concedes that the foetus has human rights; her point is that abortion is still legal in some situations, even with this concession. The liberal pro-choice camp also frequently argues that the foetus does not have the same moral standing as children and adults because it lacks certain characteristics necessary for personhood, such as sentience or self-awareness. Thomson's logic is not the only argument in this camp.

The woman's right to regulate her body always takes precedence over the foetus's interests, and if this can be demonstrated, it will be much easier to defend this position. These arguments serve as the main defence of the liberal pro-choice stance, but other, less liberal moral theories are also used. The most prevalent of these are consequentialist arguments, which contend that prohibiting abortion will force women to have illegal abortions, which are far more dangerous for women (Grimes et al., 2006), or that restricting abortion will increase the rate of child abuse (Bitler & Zavodny, 2002).

In the absence of discussion on the legal status of genetic selective abortion in Malaysia, this article is to fill the gap.

Overview of the Criminal Provisions under the Penal Code

In Malaysia, the Malaysian Penal Code (Act 575) governs the majority of criminal offences in Malaysia. Offences close to abortion seem to be governed indirectly under Provisions of the Penal Code i.e., under section 312, section 313, section 314, section 315 and section 315. According to Section 312 of Penal Code, whoever intentionally induces a miscarriage in a pregnant woman is subject to a maximum three-year jail sentence, a fine, or both. If the mother is at a late stage of pregnancy during which the child is actively moving, imprisonment for a term which may extend to 7 years, or fine. This provision, however, does not apply to a licensed physician registered under the Medical Act of 1971 who terminates a woman's pregnancy if he or she believes, in reasonable care, that the continuation of the pregnancy would pose a greater risk to the pregnant woman's life, mental or physical health than if the pregnancy was terminated. This is due to the exception clause, provided in Section 312. Only a licensed medical professional has the authority to evaluate "in good faith" whether the pregnant woman's life or health is in danger if the pregnancy continues. In brief, Section 312 of the Penal Code sets out that voluntary miscarriage is an abortion if the element of voluntary and the absence of good faith is fulfilled. In addition, a heavier punishment will be imposed if the woman intentionally induces a miscarriage after the fourth month of pregnancy. Moreover, Section 313 of the Penal Code stated that whoever commits the offence defined in section 312, without the consent of the woman, whether the woman is quick with child or otherwise, shall be punished with imprisonment for a term which may extend to twenty years and shall also be liable to fine. Meaning that, the person is still liable for the offence regardless of the stage of pregnancy when movements of the foetus has been felt or not. Under section 313 of the Penal Code, the punishment is harsher compared to the punishment under Section 312. The difference between Section 312 and Section 313 is that Section 313 is for a miscarriage that had been done without the consent of the child's mother. Hence, miscarriage that has been conducted without the mother's consent carries a heavier punishment. Furthermore, Section 314 sets out that whoever causes an involuntary abortion that leads to the woman's death can be imprisoned for ten years or fined. This provision illustrates a situation where during carrying a miscarriage subsequently results in death of the mother. If the medical practitioner does not get agreement from the mother, the punishment is imprisonment for a term that may amount to twenty years. While with consent, they are subject to imprisonment for a term of up to 10 years, as well as a fine. It should be emphasised that the provision goes on to say that the wrongdoer does not have to be aware that the act is likely to result in death (Nur Ras Firzaa, 2019).

Section 315 of the Penal Code on the other hand provides that whoever prevents a child from being born alive or causes it to die after birth can be imprisoned for ten years or fined unless it is for the purpose of saving the mother's life. This section contains similar meaning and exception as Section 312 of the Penal Code. However, this section emphasises on the outcome of the child after birth.

Lastly, Section 316 of the Penal Code established that whoever does any act under such circumstances that if he thereby caused death, he would be guilty of culpable homicide, and does by such act cause the death of a quick unborn child, shall be punished with imprisonment for a term which may extend to ten years, and shall also be liable to fine. This section provides that causing death of a quick unborn child by an act amounts to culpable homicide. In short, this section shows that if a person knows that he is likely to cause the death of a pregnant woman, a person commits a conduct that, if it results in the woman's death, would be culpable homicide. If the mother of the child is harmed but does not die; nonetheless, the death of an unborn child is caused as result, the individual is guilty of the offence specified in this section.

Could there be Exceptions due to Results of Prenatal Genetic Test?

The breadth of testing capabilities and the quantity of testing solutions have grown significantly in recent years. Prenatal genetic testing can include both screening and diagnostic tests, depending on the specific purpose and method used. Screening is typically performed to assess the risk of certain genetic conditions in the foetus and is often offered to pregnant individuals, especially those with certain risk factors, such as advanced maternal age or a family history of genetic disorders. However, positive screening results cannot make a definitive diagnosis. If a woman receives a positive result on a screening test, she should discuss her options with her health care provider, including whether she may wish to undergo any diagnostic tests, which have greater accuracy and reliability than genetic screening alone. Diagnostic tests can detect many genetic conditions caused by defects in a gene or chromosome. They usually can tell prospective parents whether their foetus has a particular genetic problem. Some diagnostic tests carry risks to a woman, such as a slight risk of pregnancy loss.

Whereas prenatal diagnostic testing is performed to definitively diagnose or rule out specific genetic conditions in the foetus; and offered to individuals who have received positive results from prenatal genetic screening or have other indications of an increased risk. Chorionic villus sampling (CVS) and amniocentesis are common diagnostic tests. These procedures involve the collection of foetal cells for genetic analysis while screening tests are non-invasive prenatal screening (NIPS) for chromosomal abnormalities, maternal serum screening (e.g., quad screen), and ultrasound-based screenings.

Research has concentrated on using screening technologies like cell-free DNA to discover genetic disorders because intrusive diagnostic testing has dangers. Clinically, a sample of maternal blood can be used to screen for aneuploidy, copy number variations, and monogenic diseases; however, there is little information available regarding the accuracy of some of these testing procedures. To investigate the efficacy and accuracy of screening for more uncommon illnesses, more study is required. Patients, clinical providers, laboratories, and researchers must work together to properly verify and implement new testing methods as the range of prenatal genetic testing choices keeps growing. Adequate validation of prenatal tests and effective integration of emerging technologies into prenatal care will become even more important once prenatal treatments for genetic conditions become available (Steven, 2020).

It is to be noted that the Malaysian Penal Code does not provide provision on abortion as per discussed above. The law only provides for termination of pregnancy through the exception clause, provided in Section 312. As it stands, the Penal Code does not provide exception for pregnancies resulting from severe or fatal foetal impairment due to results from prenatal genetic test.

There is lack of clarity and the exception to Section 312 of the Malaysian Penal Code which leaves room for further interpretation. It should be noted that the Penal Code does not specify the definition of 'danger to life' or 'harm to the pregnant woman's physical or mental health'. This duty of proof is assigned solely to the medical practitioner who, by training and experience, is considered the best person to carry out the assessment and support the reasons for termination of the pregnancy. Besides that, the Malaysian Penal Code seems to provide that a registered medical practitioner ultimately gets to decide whether an abortion is permitted. The Penal Code also neither provide when a registered medical practitioner can legally perform an abortion, nor at what stage of the pregnancy that it can be performed. The law is also silent on the exact code of practice when a doctor believes that a mother's life is in danger if she continues with the pregnancy.

Apart from that, the current law does not address situations of a child who because of prenatal genetic test is seen not capable of living proper life or born in the context of mental or physical incapacity.

The legality of selective abortion based on genetic abnormalities varies widely from country to country. Laws and regulations regarding abortion, including selective abortion based on genetic factors, are influenced by cultural, religious, ethical, and social factors. In some countries, abortion is legal and accessible, while in others, it may be highly restricted or even prohibited. Decisions about pregnancy continuation or termination in cases of serious foetal abnormalities are complex and are often made in consultation with healthcare professionals, genetic counsellors, and based on the individual circumstances and values of the parents involved.

In Malaysia, since Malaysia is a multi-religious country where many of the population adhere to their respective religions, therefore, the issue of permissibility of abortion from religious perspective is important.

From the Islamic perspective, the 26th Convention of Fatwa Committee of National Council for Islamic Religious Affairs convened on 7th March 1990 states on the issue of the ruling of abortion due to doctor's advice that malformation towards child is unavoidable. Briefly, the fatwa states:

According to the scholarly consensus (ijma'), it is haram to abort a foetus which age is more than 120 days because the abortion is considered as a crime of killing towards the foetus which is blown by soul except the abortion is to save the mother's life due to great malformation.

It is makruh to abort a foetus which age is between one day to 40 days if there is harm towards the mother and granted permission from both husband and wife.

The consensus of the jurist rule that the ruling of aborting foetus which age is less than 120 days is permissible if the foetus has malformation and has illnesses which may threaten the life of the mother.

On the other hand, from the Christianity point of view, because a human foetus is sacred and blessed of God, therefore, Christian believers have the responsibility to protect the life of the unborn (Jeremiah 1:5; Luke 1:41). There is no formal policy concerning abortion in response to lethal, severely disabling or variably severe birth defects, when the motivation for pregnancy interruption is other than personal convenience, social adjustment or economic advantage. However, such action would be consonant with church conviction on "in the gravest circumstances." For the Christians, there are circumstances of extreme foetal abnormality, which will result in severe suffering and very early death of an infant. In such cases, after competent medical consultations, the parent(s) may responsibly choose to terminate the pregnancy. (Anderson, R, 2009)

Hence, while the law in Malaysia remains unclear, the religious belief of Malaysians would influence the approach taken by pregnant mothers who are being diagnosed with abnormal foetus.

In India, abortion laws in India are governed by the Medical Termination of Pregnancy (MTP) Act. The law permits abortion under certain circumstances, including the risk of physical or mental health of the mother and the presence of foetal abnormalities.

In India, a single judge bench of the Delhi High Court, comprising Justice Sanjeev Narula, granted relief to a woman petitioner on 5 July 2024, allowing her to terminate her pregnancy of 22 weeks under Sections 3(2)(b) and 3(3) of the Medical Termination of Pregnancy Act (MTP Act), read with Rule 3(B)(c) of the MTP (Amendment) Rules, 2021. Section 3(2B) of the MTP Act ensures that gestational age does not hinder necessary medical intervention in cases of substantial foetal abnormalities. The petitioner delivered her first child on 10-10-2015 at Deen Dayal Hospital. The child had been suffering from mental disability since birth and was completely dependent upon the petitioner to take care of him for his basic needs and day-to-day activities. The petitioner conceived again after 9 years and got an ultrasound done on 12-02-2024, which confirmed a pregnancy of 12 weeks. The next ultrasound was done on 01-04-2024. On 29-04-2024, the doctors who had examined the petitioner counselled her about the possibility of chromosomal abnormalities in the ongoing pregnancy that could be a part of Dandy-Walker Continuum and advised her to go through a foetal MRI. The fetal MRI conducted on 21-05-2024 also suggested an abnormality of the Dandy-Walker Continuum likely mega cisterna magna where various tests further corroborated the finding of an abnormality. The Court concluded that Joubert Syndrome is

recognized as a severe condition due to its multisystem impact that affects not only neurological development but also leads to respiratory, renal, and ocular complications, hence, the court allowed the termination of the pregnancy.

Serious fetal abnormalities refer to structural or functional abnormalities in a developing fetus that are severe and often incompatible with a typical, healthy life. These abnormalities can affect various organ systems and may be identified through prenatal testing or imaging studies. It's important to note that the severity and impact of foetal abnormalities can vary, and decisions about pregnancy continuation or termination are highly personal and dependent on individual circumstances. Here are some examples of serious foetal abnormalities:

Trisomy 13 (Patau Syndrome):

Patau syndrome is caused by the presence of an extra copy of chromosome 13. It can lead to severe intellectual disabilities, heart defects, and other abnormalities. Many infants with Patau syndrome do not survive beyond the first year of life.

Trisomy 18 (Edwards Syndrome):

Edwards syndrome results from an extra copy of chromosome 18. It is associated with multiple physical abnormalities, including heart defects, kidney malformations, and developmental delays. Infants with Edwards syndrome often have a reduced lifespan.

Trisomy 21 (Down Syndrome):

Down syndrome is caused by an extra copy of chromosome 21. While individuals with Down syndrome can lead fulfilling lives, the condition is considered a chromosomal abnormality. The severity of intellectual and physical disabilities can vary.

Neural Tube Defects:

Conditions such as anencephaly (incomplete development of the brain and skull) or spina bifida (incomplete closure of the spinal cord) are examples of serious neural tube defects that can impact the central nervous system.

Severe Heart Defects:

Certain congenital heart abnormalities, especially those that significantly compromise heart function, may be considered serious fetal abnormalities.

Severe Renal or Kidney Anomalies:

Structural abnormalities in the kidneys or urinary tract that can lead to severe impairment may be categorized as serious fetal abnormalities.

Severe Skeletal Anomalies:

Conditions affecting the development of the skeletal system, such as thanatophoric dysplasia, can result in significant deformities and challenges.

Severe Chromosomal Abnormalities:

Beyond trisomy, other chromosomal abnormalities can lead to serious foetal conditions, such as Turner syndrome, Klinefelter syndrome, or cri-du-chat syndrome.

While prenatal genetic testing is primarily focused on assessing the genetic health of the foetus, certain genetic abnormalities or conditions identified in the foetus may have implications for the health of the expectant mother. It is important to note that the relationship between foetal genetic abnormalities and maternal health is complex

and depends on the specific circumstances of each case. Here are some scenarios in which foetal genetic abnormalities may have potential implications for the expectant mother:

Rh Incompatibility:

Rh incompatibility occurs when the mother is Rh-negative, and the foetus is Rh-positive. Incompatibility can lead to haemolytic disease of the newborn (HDN), which, in severe cases, may cause complications for both the foetus and the mother.

Hypercoagulable Conditions:

Certain genetic conditions in the fetus, such as factor V Leiden mutation or prothrombin gene mutation, may increase the risk of blood clotting disorders. In some cases, this can potentially impact the mother's health, increasing the risk of thromboembolic events.

Maternal Mosaicism:

If prenatal testing reveals mosaicism in the foetus, indicating the presence of abnormal cells, there may be implications for the mother's health if similar chromosomal abnormalities are detected in her cells. This scenario is relatively rare.

Severe Fetal Anomalies Affecting Pregnancy Complications:

Certain severe fetal anomalies, especially those affecting organ systems crucial for pregnancy maintenance, could lead to complications that may impact the health of the expectant mother. For example, certain heart or placental abnormalities might affect maternal well-being.

Complications of Delivery:

Some genetic conditions in the foetus may be associated with physical abnormalities that could complicate the delivery process, potentially impacting the health and well-being of the mother.

Hence, as it stands, probably the result of pre-natal genetic testing which could indicate danger to the life of the mother, as per examples above would be reasons to justify legal abortion in Malaysia.

CONCLUSION

In conclusion, abortion following a prenatal diagnosis is only legally possible if the statutory criteria in the Malaysian Penal Code are met. The doctor's liability in performing abortion may be exempted if it is performed under a good faith. However, it should be noted that doctors can become liable if there is an element of negligence from the doctors due to negligent prenatal diagnosis (Kuek, 2022). The consideration of selective genetic abortion is timely in Malaysia as this is in line with the more flexible approach towards abortion as per the Abortion Care Guideline issued by the World Health Organization (WHO) on 8 March 2022 to protect the health of women and girls and help prevent over 25 million unsafe abortions that currently occur each year. Further research and policy development in Malaysia's context of prenatal genetic testing and selective abortion could focus on several critical areas. Firstly, there's a need to establish and refine ethical guidelines for healthcare professionals engaged in genetic counselling, ensuring a standardized and principled approach. Secondly, assessing the effectiveness of public awareness campaigns and developing targeted educational initiatives could enhance societal understanding of the ethical, legal, and medical aspects of genetic testing. Culturally sensitive counselling approaches should be developed to navigate the influence of diverse cultural and religious beliefs on decision-making. Research should explore the long-term psychological, emotional, and social impacts on parents who undergo genetic testing, and support systems should be created to aid those facing difficult decisions. Evaluation and potential reform of existing policies are necessary to ensure they align with evolving medical technologies and societal norms. Additionally, efforts should be directed towards investigating and addressing the accessibility and affordability of genetic testing across socio-economic groups. Research should examine the impact of economic factors on decision-making, and policies should be developed to protect against genetic

discrimination in areas such as employment, insurance, and education. Special attention must be paid to minority communities, understanding their unique challenges and perspectives. Staying updated on technological advancements in genetic testing and engaging in international collaboration can facilitate the development of policies that are not only current but also consider global ethical standards. Finally, longitudinal studies can offer insights into the long-term outcomes and experiences of individuals and families who undergo prenatal genetic testing, providing valuable information for shaping future policies.

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