

Attitudes toward Prenatal Testing and Abortion in East, Southeast, and South Asia : Based on a Survey of Women in Nine Countries

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Attitudes toward Prenatal Testing and Abortion in East, Southeast, and South Asia: Based on a Survey of Women in Nine Countries

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Abstract

Noninvasive prenatal genetic testing (NIPT) is becoming more widespread around the world, but not much is known about its current use in Asian countries. Globalization may lead to similar use as in the West, but differences in legal systems, cultures, health and welfare systems, family systems, and values and norms such as religion and views of life, body, science, and ethics may lead to different attitudes toward and use of prenatal testing. Previously, a survey on reproduction, including questions on third party reproduction, prenatal testing, abortion, was conducted in 14 countries by Shirai et al. After that, Shirai et al. are currently conducting a research project on prenatal testing and views of disability in nine countries in East Asia, Southeast Asia, and South Asia- Japan, South Korea, Taiwan, Vietnam, Myanmar, Thailand, Singapore, Philippines, India. In this paper, I discuss the overall state of the relationship between prenatal testing and abortion. Although it is a simple tabulation of the questionnaire, the suggestion obtained is that the position of induced abortion in society, including whether it is legal or not and attitudes towards it is one of the major factors that determines the use of prenatal testing technology.

In Myanmar and the Philippines, abortion is banned. More specifically, in Myanmar, abortion is prohibited except in cases where the mother's life is in danger. In the Philippines, it is outlawed without exception, and the Constitution stipulates that the fetus has the same protections as the mother. In both countries, a strong stigma against abortion is prevalent throughout the population.

In Taiwan, as in Japan, there is a double standard: there is an abortion offense in the penal code, but it is conditionally permitted under the Eugenic Health Act. In Taiwan, the law stipulates that abortions can be performed in cases in which pregnancy or childbirth will cause damage to physical and mental health and affect family life. These exceptional cases include forced sexual intercourse, pregnancies by close relatives, and cases of fetal disorders.

Abortion is legal in Vietnam, and there are no limitations on the length of the pregnancy or required health conditions. The Law on the Protection of Public Health states that women have the right to have an abortion on request and that the Ministry of Health is obliged to ensure medical care.

Based on a simple tabulation of an Internet survey conducted by the authors in nine Asian countries, this paper suggests that the picture of Japan extracted from the simple tabulation of this survey is different from that of Taiwan, Vietnam, and the Philippines. In Taiwan and Vietnam, the sense of burden associated with raising a child with a disability tends to coincide with the acceptance of fetal disability as a reason for abortion. On the other hand, in the Philippines, disability is also seen as a gift, with large families raising children and a value system present in which abortion is not tolerated by society as a whole. Japan is like neither of these countries, and although the burden of raising a child with a disability is considered high, the acceptance of abortion is a matter of differing attitudes, and it is likely that different from the patterns of Vietnam and Taiwan, and also from the Philippines.

Key Word: Prenatal Testing, Noninvasive prenatal genetic testing (NIPT), disability, Abortion, Asia

Overview of prenatal testing and induced abortion in Asia

Prenatal examinations in Japan are characterized by multiple ultrasound examinations performed during antenatal checkups and a smaller number of screening examinations using maternal blood. Ultrasonography is performed as a medical checkup with the purpose of managing the mother and monitoring the growth of the fetus. Obstetricians and gynecologists familiar with prenatal examinations consider ultrasound examinations distinct from the more precise tests, such as the nuchal translucency test. However, fetal “abnormalities” may be detected during a prenatal checkup, with amniocentesis and other diagnostic procedures implemented in such cases.

Japan has traditionally been cautious about maternal blood screening tests out of concern that prenatal testing discriminates against people with disabilities. However, with the introduction of NIPT in 2013, tests began to be performed by non-obstetricians and spread rapidly.

In recent years, some clinics have begun to specialize in fetal diagnosis. Prenatal testing will undoubtedly become increasingly liberalized; however, this trend also poses a significant problem such as ethical conflicts and lack of counseling support.

In Myanmar and the Philippines, abortion is banned. More specifically, in Myanmar, abortion is prohibited except in cases where the mother’s life is in danger. In the Philippines, it is outlawed without exception, and Article 12 of the Constitution stipulates that the fetus has the same protections as the mother. The crime of abortion is defined in the Criminal Code of 1870 and in Articles 256–259 of the Amended Criminal Code of 1930. However, it is permissible to save a woman’s life, according to Article 11-4 of the Penal Code. In both countries, however, black-market abortion is a fact of life, despite the strong stigma against abortion among the population.

In Taiwan, as in Japan, there is a double standard: there is an abortion offense in the penal code, but it is conditionally permitted under the Eugenic Health Act. In Taiwan, the law stipulates that abortions can be performed in cases in which pregnancy and childbirth will cause damage to physical and mental health and affect family life. These exceptional cases include forced sexual intercourse, pregnancies by close relatives, and cases of fetal disorders.

However, a pregnant woman needs the consent of her spouse to have an abortion, and in the case of a minor, the consent of a parent or guardian is required. In late 2000, the oral abortion drug RU486 was approved for use within seven weeks of conception. Surgical abortion is permissible within 24 weeks of gestation.

Abortion is legal in Vietnam, and there are no limitations on the length of the pregnancy or required health conditions. In Article 44, the Law on the Protection of Public Health states that women have the right to have an abortion on request and that the Ministry of Health is obliged to ensure medical care. However, it must not be performed in a medical institution that is not licensed by the Ministry of Health. Article 243 of the Penal Code defines an illegal abortion as a case in which a person performs an illegal abortion on another person.

In Japan, there is a double standard. The Penal Code stipulates that abortion is a crime, but the Maternal Protection Law of 1948 allows abortions in cases of forced sexual intercourse or if the mother is in danger. It also stipulates that spousal consent is required for abortion. The following year, economic reasons were added to the law, and abortions became permissible as an alternative to contraception. Abortions have also been performed for economic reasons when fetal disabilities have been identified.

In a recent research project, the authors conducted interviews in 14 Asian countries with obstetricians,

gynecologists, and other health professionals as well as women who had given birth, finding that the accessibility of abortion and attitudes toward it may influence the type of prenatal testing undertaken.

In the research project just before that, in Myanmar and the Philippines, prenatal genetic testing, such as NIPT, was not widespread, but non-genetic prenatal testing is common. Although advanced medical care is provided in Manila, the metropolitan area of the Philippines, the women surveyed identified precision ultrasound and fetal function evaluation as tests they themselves had undergone. The obstetrician/gynecologist replied that their hospital's board of directors does not approve of in vitro fertilization (IVF), but fetal surgery is allowed and will be performed unhesitatingly and professionally in the future. Another public hospital obstetrician/gynecologist responded that even in cases in which a black-market abortion failed and bleeding would not stop, he/she would perform a cesarean section, even in the second trimester of pregnancy, thus using medical techniques to save the fetus.

In Myanmar, the women themselves said that abortion was totally unacceptable. However, they had access to woman-centered contraception, such as the oral contraceptives, injections, and implants at public expense or at low cost. Access to contraception is similar in the Philippines.

In the urban areas of Taiwan and Vietnam, NIPT was used particularly often as a screening test.

In Vietnam, accessing emergency contraception and early abortion is relatively low barriers to access. Abortion costs are covered by health insurance if the abortion is motivated by medical issues in the fetus or the pregnant woman. Our respondents stated that maternal serum markers and combined marker and NT testing were widely used, and that abortions were sometimes performed without a definitive test.

Results of Internet women survey in nine Asian countries

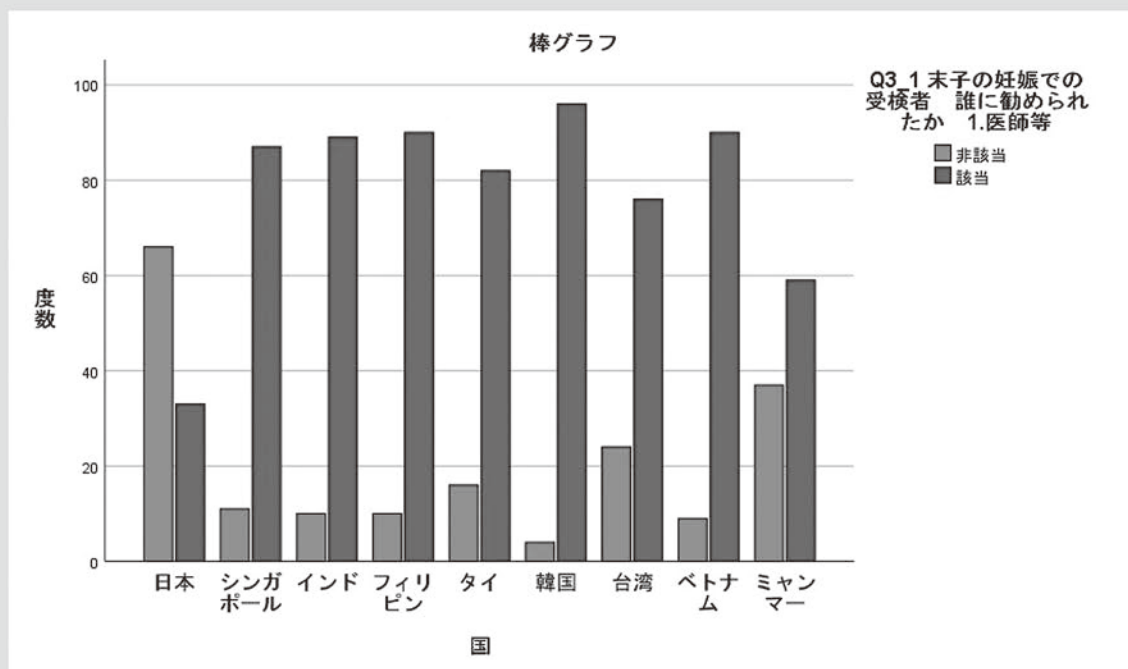
What follows are the results of a 2021 Internet survey of 100 women each who had given birth and whose youngest child was under five years old in each of nine Asian countries, Japan, South Korea, Taiwan, Vietnam, Myanmar, Thailand, Singapore, Philippines, India. This survey is part of study project JSPS KAKENHI Grant Number JP 20H01564, Prenatal Testing and Disability in Modern Asia: International Comparison. This survey was approved by Shizuoka University's Institutional Review Board (20-32).

The questionnaire was translated into each country's official language, and it was noted that participants could fill it out in their native language.

While Japan has relatively standardized health and welfare systems for both urban and non-urban areas, in some Asian countries, urban and non-urban areas have completely different systems. For this reason, the population was allocated by region in the survey.

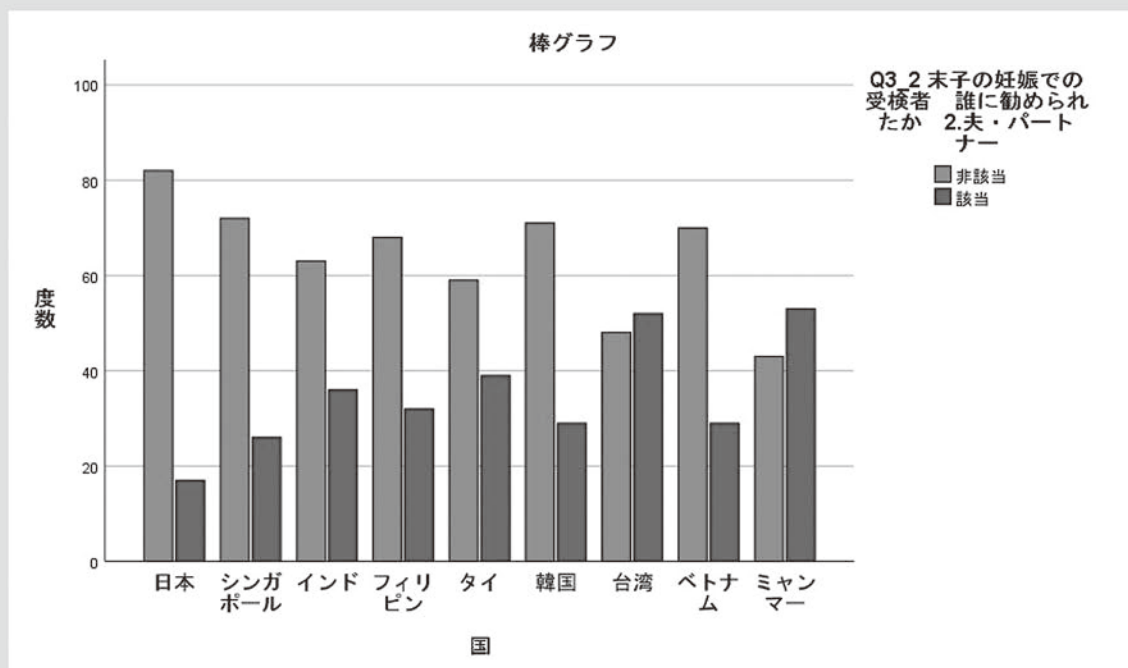
From here, a summary of the survey results is presented. A high percentage of women in all countries received ultrasound examinations as prenatal testing. This may be related to measures implemented to reduce perinatal and neonatal mortality rates, such as confirmation of placental position. In countries other than Japan, the percentage of respondents who underwent combined fetal examinations, fetal function evaluations, or similar tests was high, while the percentage of respondents who underwent NIPT was high in Singapore, Thailand, Vietnam, Taiwan, South Korea.

The respondents were asked about the testing they had undergone during their pregnancy with their youngest child and their current awareness of the test as reported below. The Figure 1 show those who underwent prenatal genetic testing and those who recommended that they do so. The red, right bars indicate the percentage of "yes" responses. The percentage of respondents who answered "recommended by a doctor" was low in Japan.



Japan, Singapore, India, Philippines, Thailand, Korea, Taiwan, Vietnam, Myanmar
日本、新加坡、インド、フィリピン、タイ、韓国、台湾、越南、緬甸

Figure 1 Prenatal genetic testing recipient was recommended by a physician to undergo prenatal genetic testing (red, right is yes)



Japan, Singapore, India, Philippines, Thailand, Korea, Taiwan, Vietnam, Myanmar
日本、新加坡、インド、フィリピン、タイ、韓国、台湾、越南、緬甸

Figure 2 Prenatal genetic testing recipient was recommended by a husband/partner to undergo prenatal genetic testing (red, right is yes)

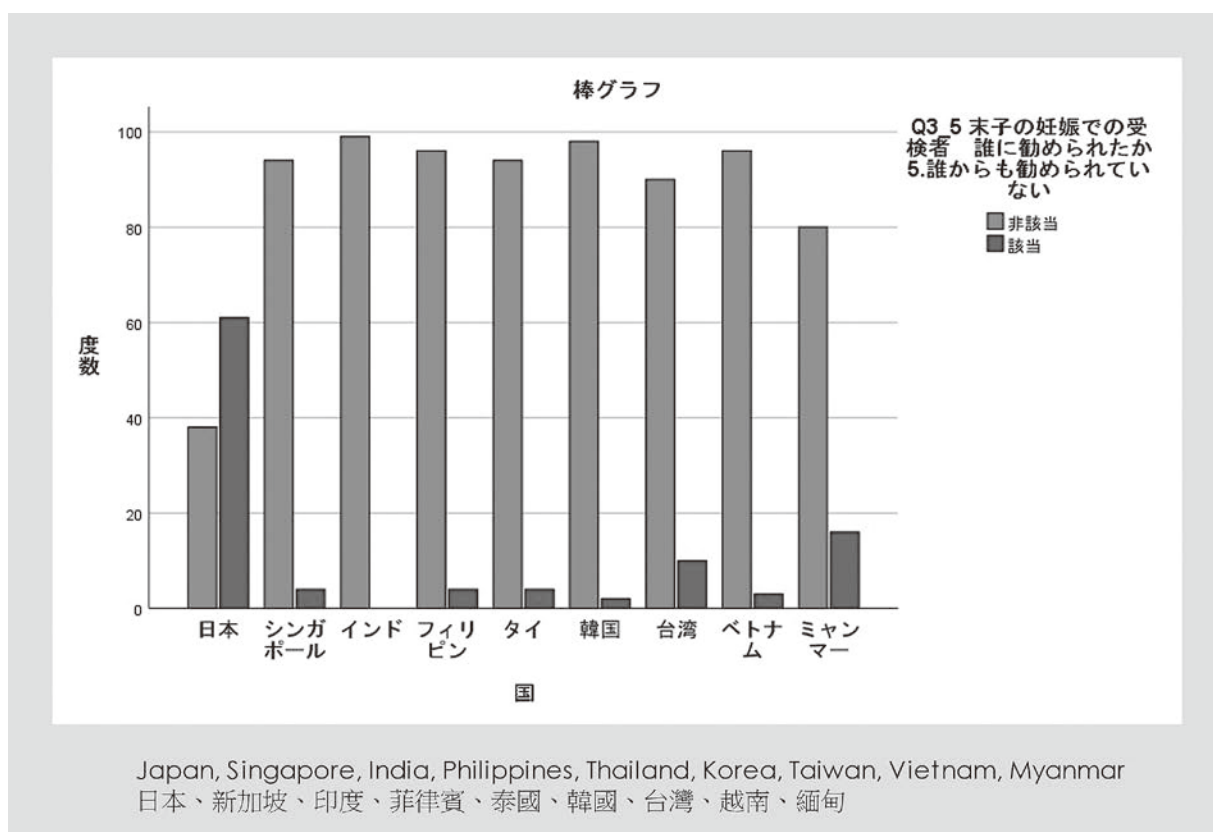


Figure 3 Prenatal genetic testing recipient was recommended by no one to undergo prenatal genetic testing (red, right is yes)

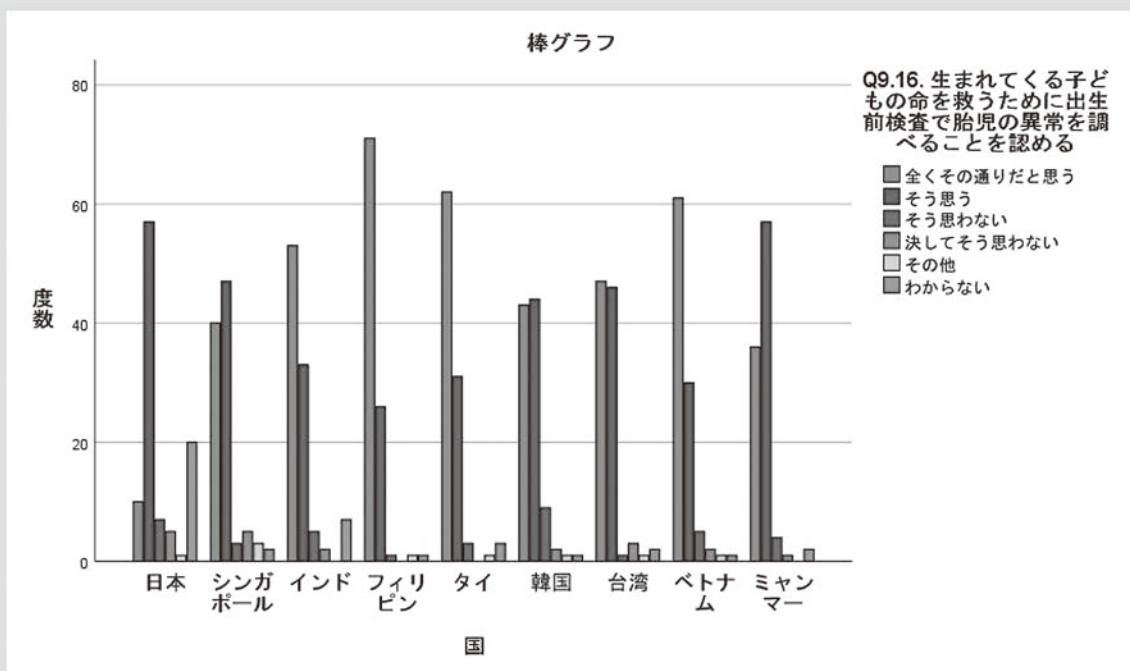
Figure 2 indicates whether husbands/partners recommended testing. As in the case of doctors, the percentage of respondents who answered that their husbands/partners recommended the testing was also very small in Japan. In other countries, the percentage of respondents who said that doctors recommended it tended to be larger.

Figure 3 is the percentage of respondents who answered that no one recommended that they take the test. This answer was most common in Japan. In other words, many Japanese respondents took the test on their own without being advised to do so by their doctors, husbands, or partners, revealing a completely different pattern from that of other Asian countries. In other countries, physicians were frequently reported to make this recommendation.

Although this question was assumed NIPT, this finding is probably related to the fact that in the past, the committee of Japan's Ministry of Health, Labor, and Welfare that evaluated maternal serum markers expressed the view that physicians do not need to actively inform pregnant women about testing. It may also reflect the taboo against taking genetic tests in the society as a whole.

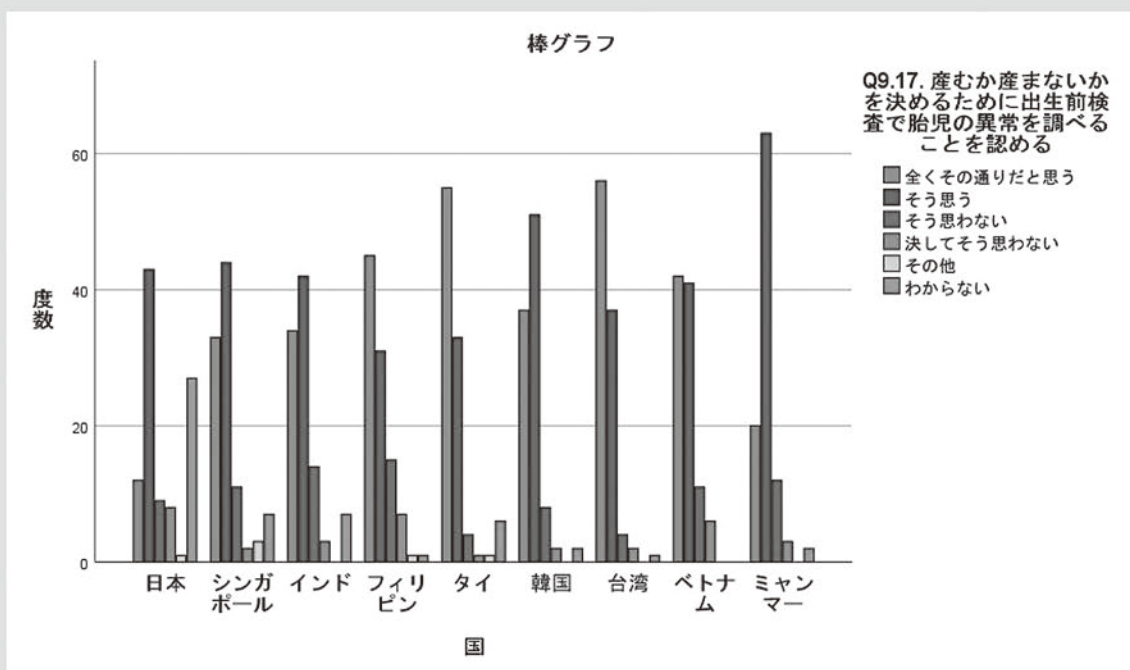
A person to consult when test results indicate a possible genetic abnormality.

In Japan and South Korea, husbands/partners were very often the consulting parties when a fetus was found to have a disability, while doctors and other specialists were consulted less often. On the other hand, doctors and other specialists were the most common parties consulted in other countries. In Japan, a higher percentage of respondents indicated that they would consult their husbands or partners, rather than



Japan, Singapore, India, Philippines, Thailand, Korea, Taiwan, Vietnam, Myanmar
日本、新加坡、インド、フィリピン、タイ、韓国、台湾、ベトナム、ミャンマー

Figure 4 Allow prenatal testing for fetal abnormalities to save the life of the unborn child (left side of each country is strong affirmation, right side is strong denial, and rightmost is “don’t know”)



Japan, Singapore, India, Philippines, Thailand, Korea, Taiwan, Vietnam, Myanmar
日本、新加坡、インド、フィリピン、タイ、韓国、台湾、ベトナム、ミャンマー

Figure 5 Allows prenatal testing for fetal abnormalities to determine whether to have the baby or not (left side of each country is strong affirmative, right side is strong negative, and the rightmost is “I don’t know”)

doctors or specialists, if they learned that their fetus had a disability.

The survey also asked how contraceptive decisions were made. In countries other than Japan, the tendency was for respondents to make decisions on their own without consulting with their husbands/partners, but in Japan, a high percentage of respondents consulted with their husbands before making decisions. In general, women in Japan tend to consult with their husbands/partners rather than with specialists, but if these consultations with their husbands are not adequate, they often find themselves in a difficult situation.

The survey also revealed differences in national trends regarding attitudes toward abortion, health conditions, parenting goals, and feelings about the birth of a child with a disability.

Prenatal testing for the purpose of saving the life of the child was strongly favored in the Philippines, Thailand, Vietnam, and India (Figure 4). Prenatal testing to determine whether to terminate a pregnancy was strongly favored in Taiwan and Thailand (Figure 5). These differences are statistically significant.

In Taiwan, the percentage of respondents who would allow a fetus to be examined for abnormalities to inform the mother's decision about whether to give birth was higher than the percentage of respondents who would allow an abnormality to be examined to save the life of the unborn child.

Attitude towards abortion

We now turn to attitudes toward abortion. We presented a variety of conditions and asked whether abortion was permissible. The percentage of respondents who said that no conditions are necessary for abortion was small in all countries in Figure 6. This indicates that some conditions were considered neces-

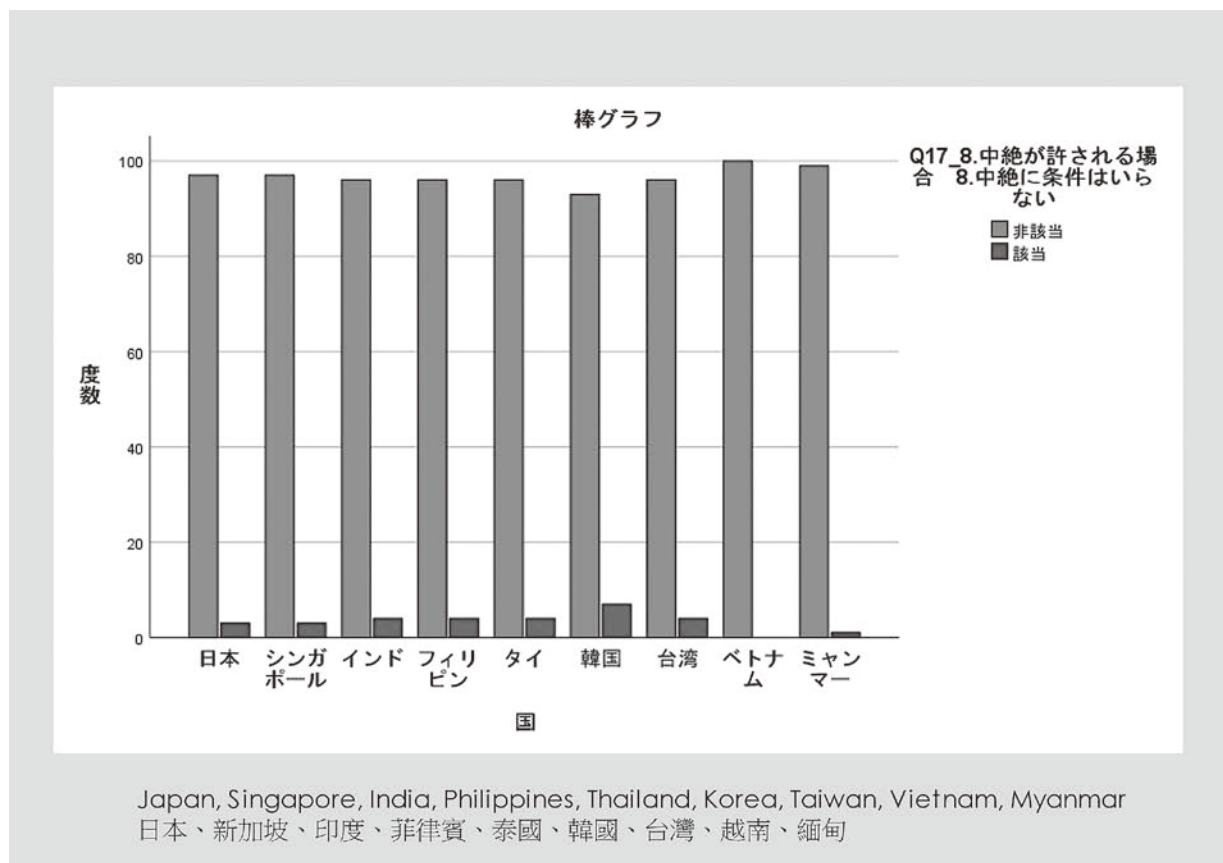


Figure 6 Permissibility of abortion: abortion possible without conditions (red, right bar is yes)

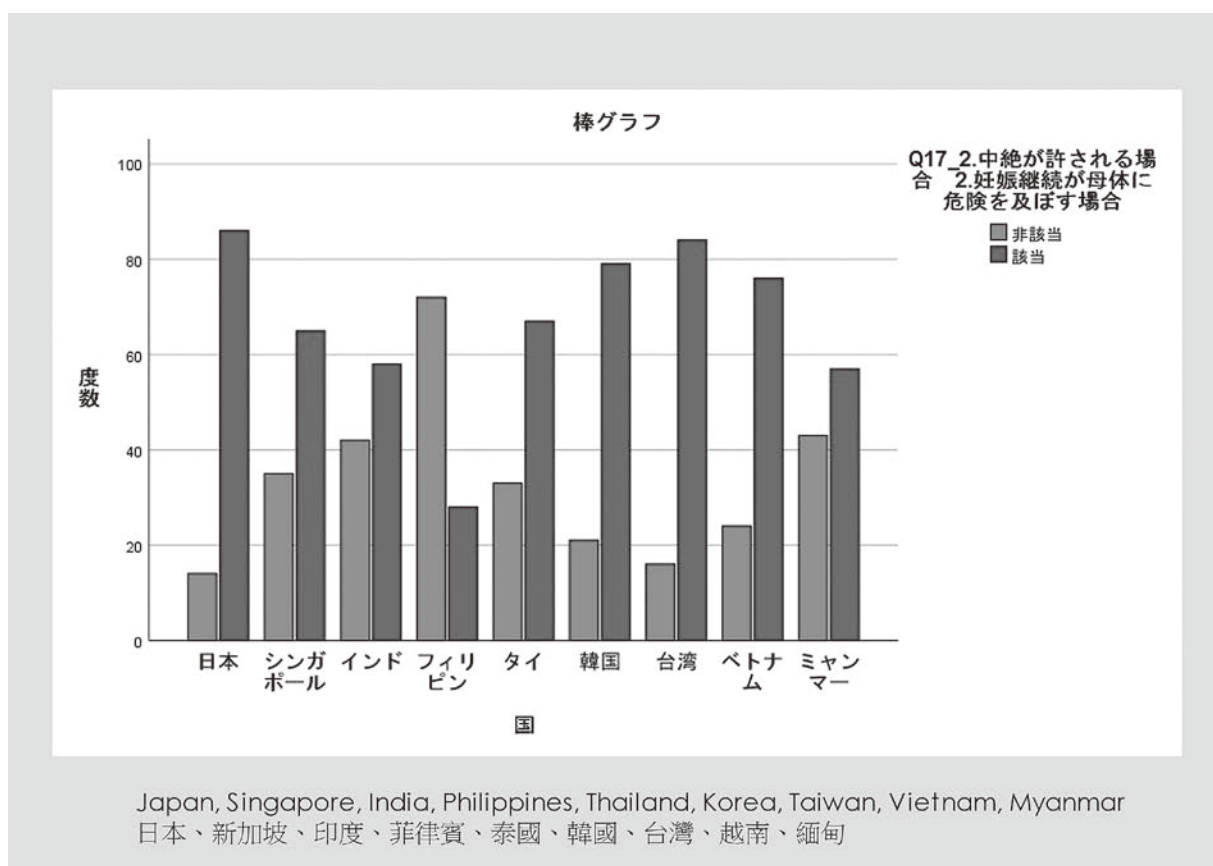


Figure 7 Permissibility of abortion: maternal risk (red, right bar yes)

sary. In which cases did people think abortion is acceptable?

Figure 7 shows the percentage of respondents who said that abortion is permissible “if the continuation of the pregnancy would be dangerous to the pregnant person.”

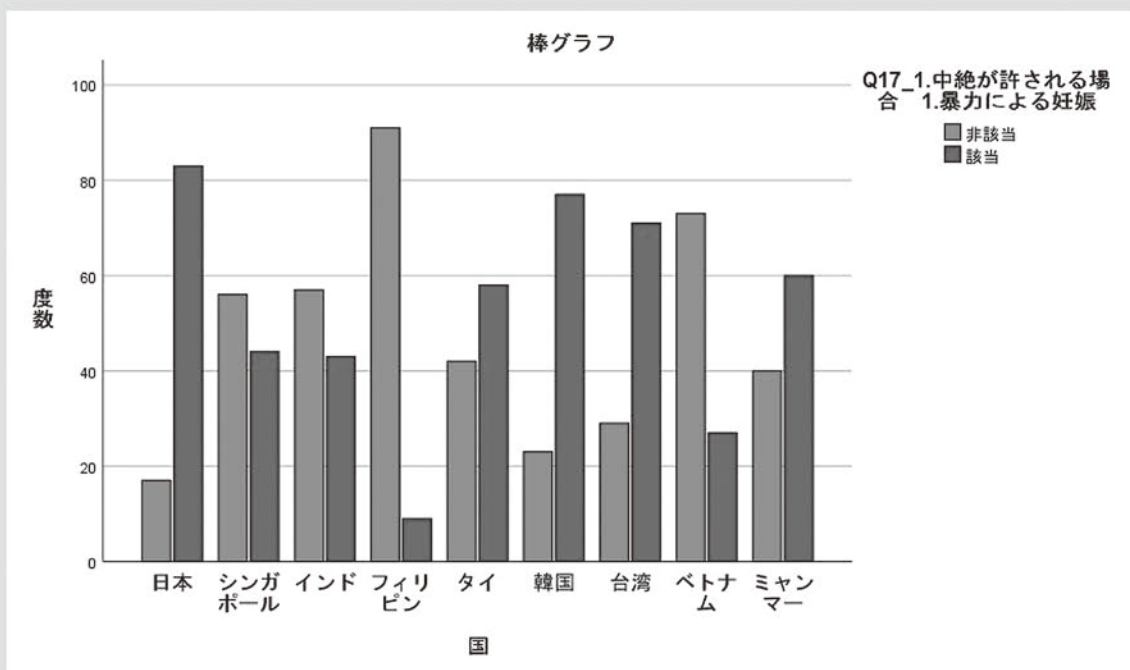
Overall, the percentage of respondents who answered that abortion is permissible was higher than the percentage who said that it is not. The level of permissibility was particularly high in Japan, with risk to the life of the pregnant person being the most common justification cited. For the Philippines, abortion in cases where the mother’s life is in danger tends to be more permissible than in other conditions, but still, unlike in other countries, more than 70% of respondents said that it is not permissible.

Figure 8 shows the percentage of respondents who answered that abortion is permissible in cases of pregnancy resulting from violence. In Japan, the percentage of respondents who said that it is permissible was higher. The same is true for South Korea.

Figure 9 shows the percentage of respondents who said that abortion is permissible when the fetus is found to be sick or disabled. A different trend can be seen in the case of maternal risk or pregnancy due to violence. In Taiwan, more than 80% of the respondents answered that it is permissible. Maternal hazards and fetal illness or disability were almost equally represented, indicating a very high level of permissibility.

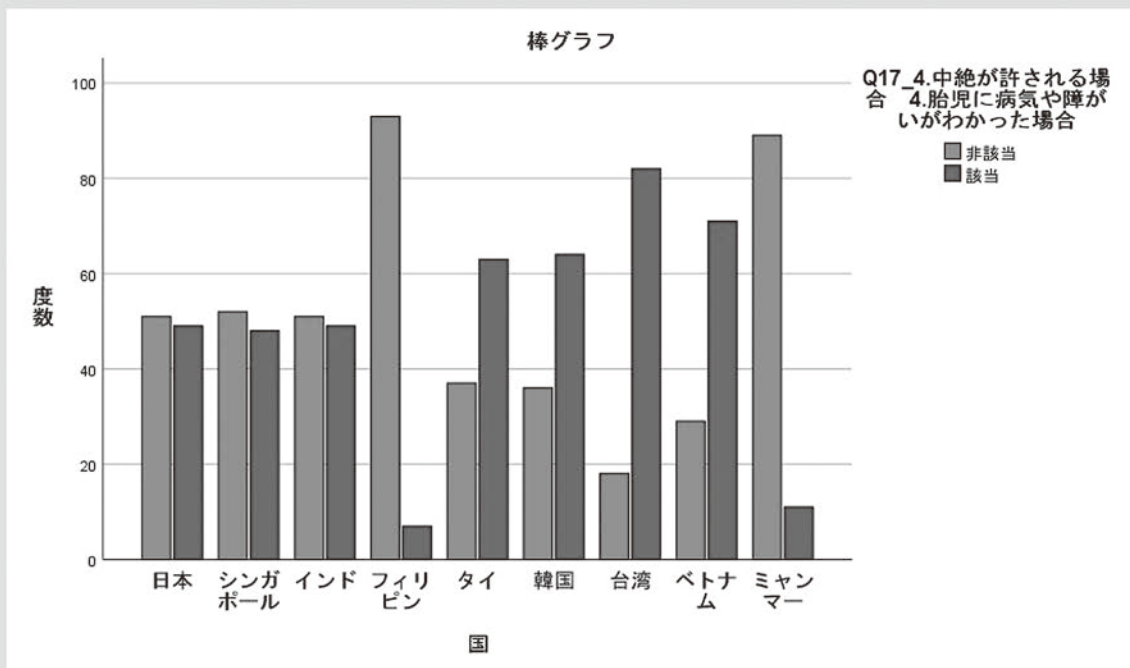
In Vietnam, the tolerance for abortion in cases of violence was not very high, but the tolerance when fetal illness or disability is found to be present was as high as the figure for maternal risk. In Japan, Singapore, and India, attitudes were split 50–50. In the Philippines and Myanmar, the percentage of respondents who said abortion was unacceptable was around 90%.

Finally, Figure 10 represents the response that abortion is not allowed under any circumstances. In the Philippines, this response was given by a majority. Myanmar also had an agreement rate of over 20%. All



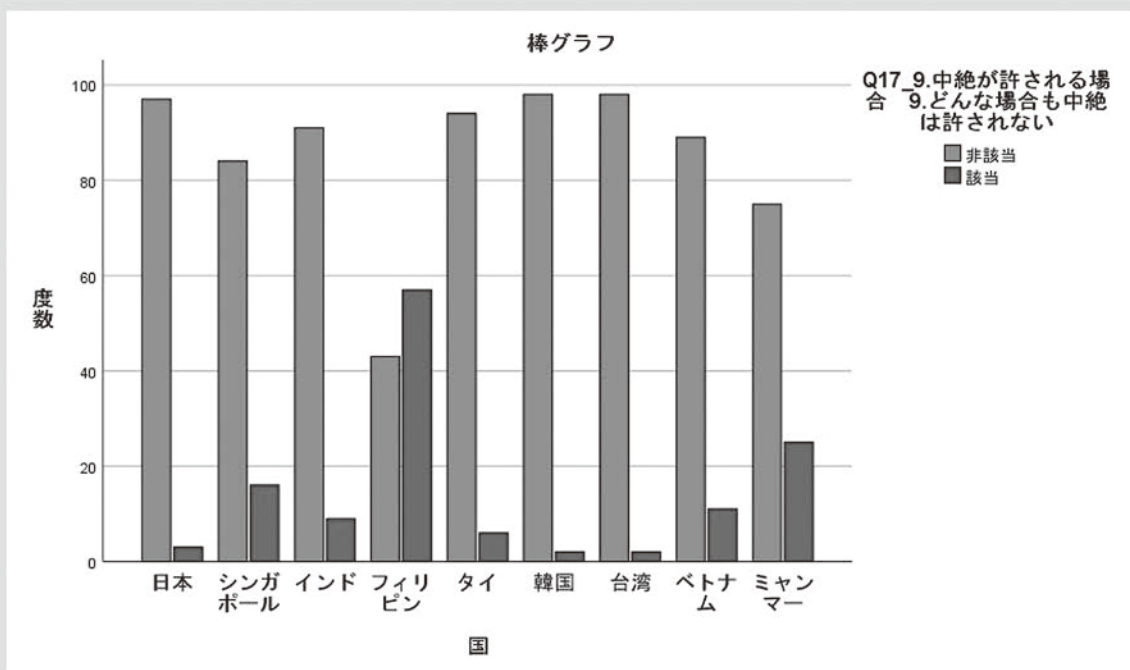
Japan, Singapore, India, Philippines, Thailand, Korea, Taiwan, Vietnam, Myanmar
日本、新加坡、インド、フィリピン、タイ、韓国、台湾、越南、緬甸

Figure 8 Permissibility of abortion: sexually violent pregnancies (red, right bar is yes)



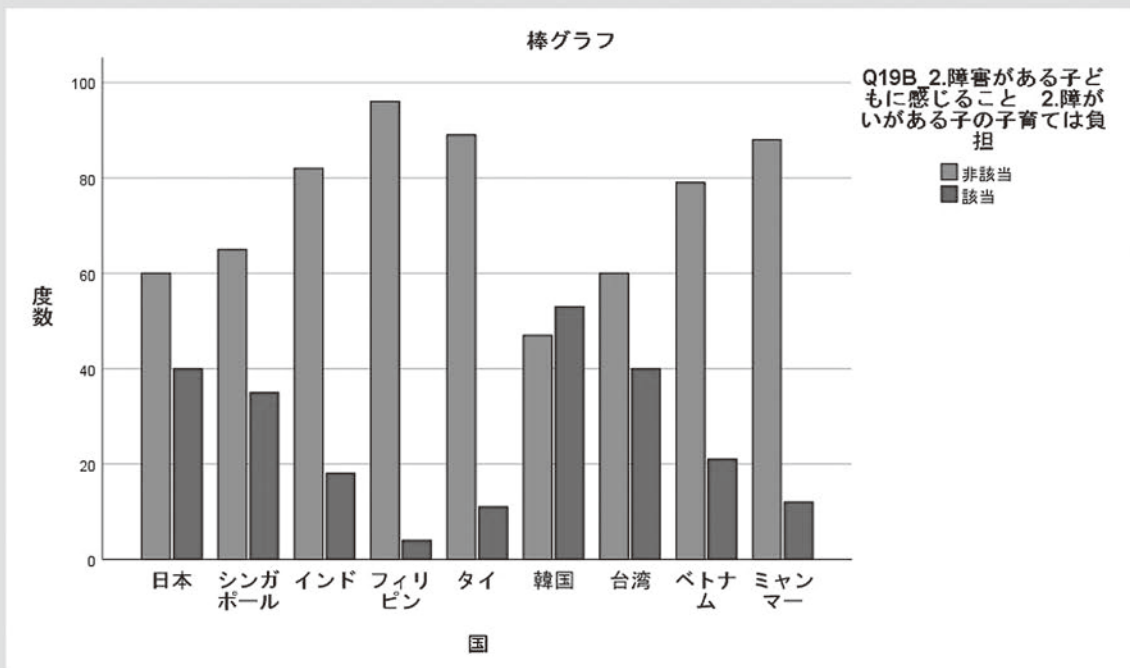
Japan, Singapore, India, Philippines, Thailand, Korea, Taiwan, Vietnam, Myanmar
日本、新加坡、インド、フィリピン、タイ、韓国、台湾、越南、緬甸

Figure 9 Permissibility of abortion: fetal disease or disability (red, right bar is yes)



Japan, Singapore, India, Philippines, Thailand, Korea, Taiwan, Vietnam, Myanmar
日本、新加坡、インド、フィリピン、タイ、韓国、台湾、ベトナム、ミャンマー

Figure 10 Permissibility of abortion: unacceptable in any case (red, right bar is yes)



Japan, Singapore, India, Philippines, Thailand, Korea, Taiwan, Vietnam, Myanmar
日本、新加坡、インド、フィリピン、タイ、韓国、台湾、ベトナム、ミャンマー

Figure 11 Views on children's disabilities: Burden (red, right bar is yes)

this suggests that attitudes toward abortion vary from country to country, and there seem to be some patterns in the conditions under which abortion is acceptable.

Especially in relation to prenatal testing, abortion is more acceptable in Taiwan and Vietnam than in the other countries we surveyed, especially when the fetus has a disability.

In addition to the permissibility of abortion within the legal system, attitudes and ideas about abortion correlated with attitudes and ideas about prenatal testing. In this survey, prenatal testing for life-saving purposes at birth, prenatal testing for the purpose of determining whether to continue a pregnancy, and the acceptability of having an abortion due to a fetal disease or disorder were associated at a statistically significant level with whether a woman would be willing to undergo NIPT or non-genetic testing (combined, fetal full examination, or fetal function assessment) if pregnant (except in countries with a ceiling effect on responses).

Views on children and Disabilities

The graphs in this section visualize the answers to a question about how the participants feel about children with disabilities. As shown in Figure 11, a high percentage of respondents in South Korea, Japan, and Taiwan answered, “Raising a child with a disability is a burden.” These three countries have very low birthrates.

As shown in Figure 12, the percentage of respondents who answered, “I am worried about the future of my child with disabilities” was high overall, especially in Vietnam, Taiwan, Thailand, Japan, and South Korea. Myanmar was unique in having a particularly low percentage of agreement.

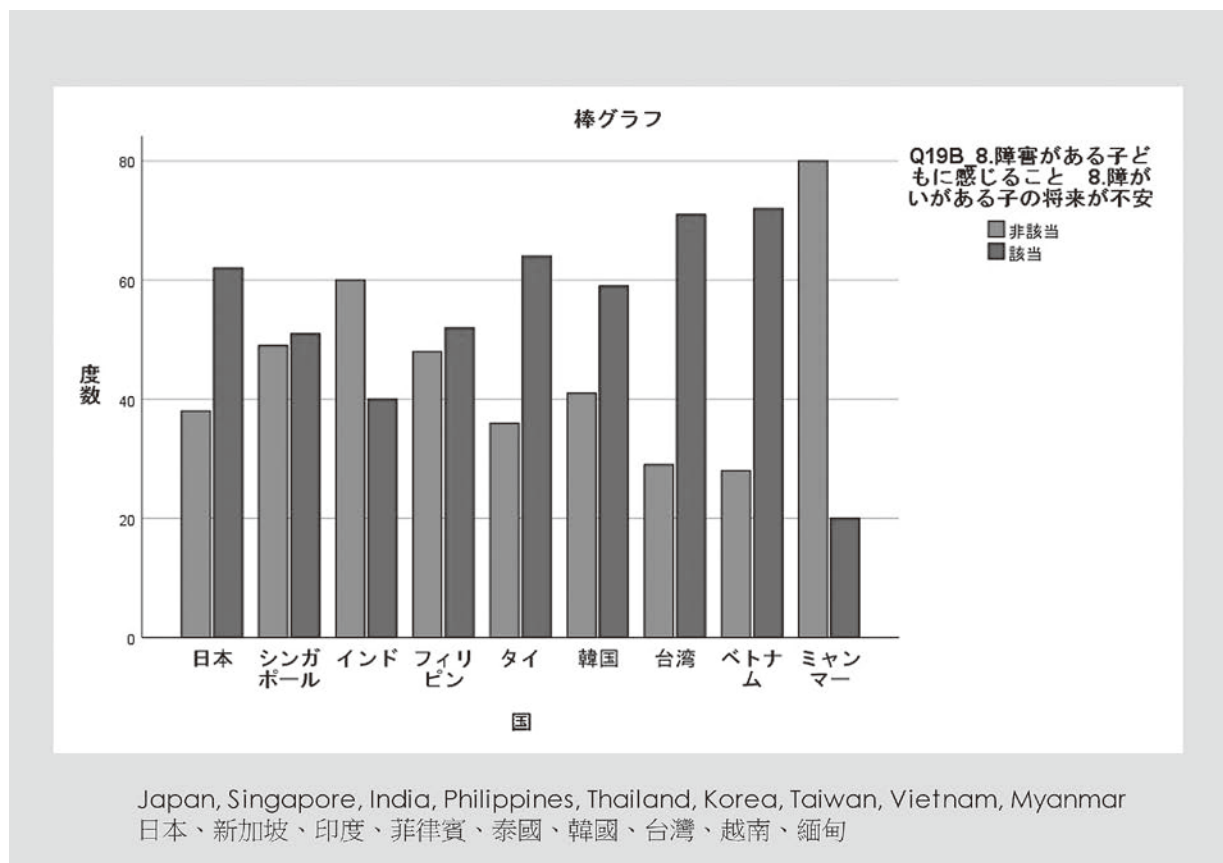
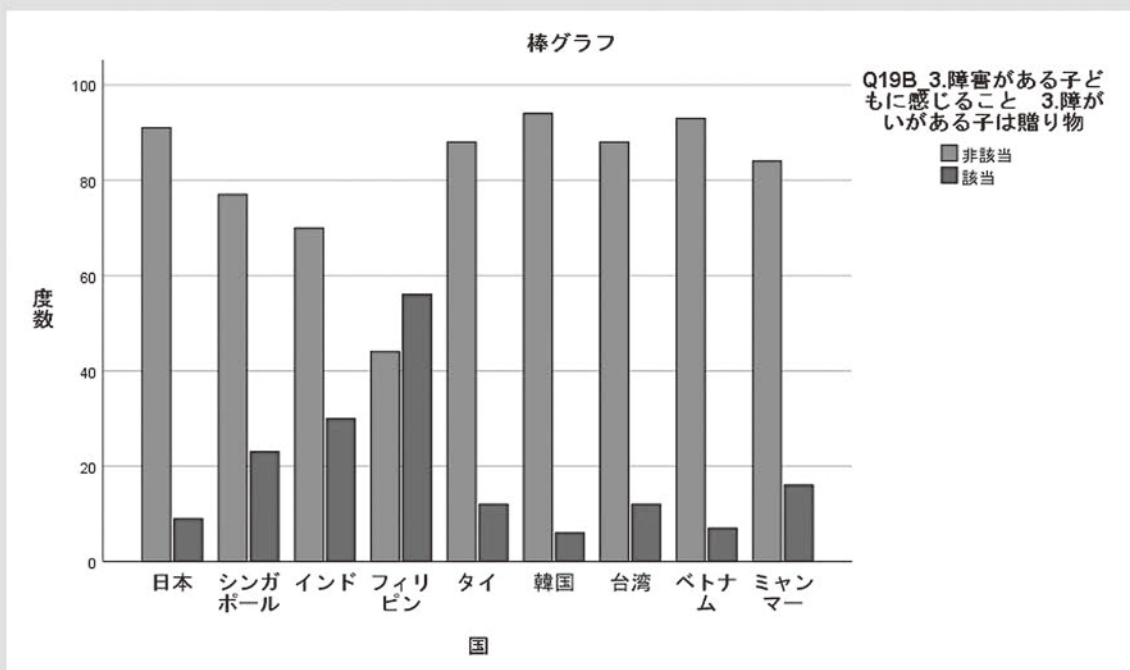
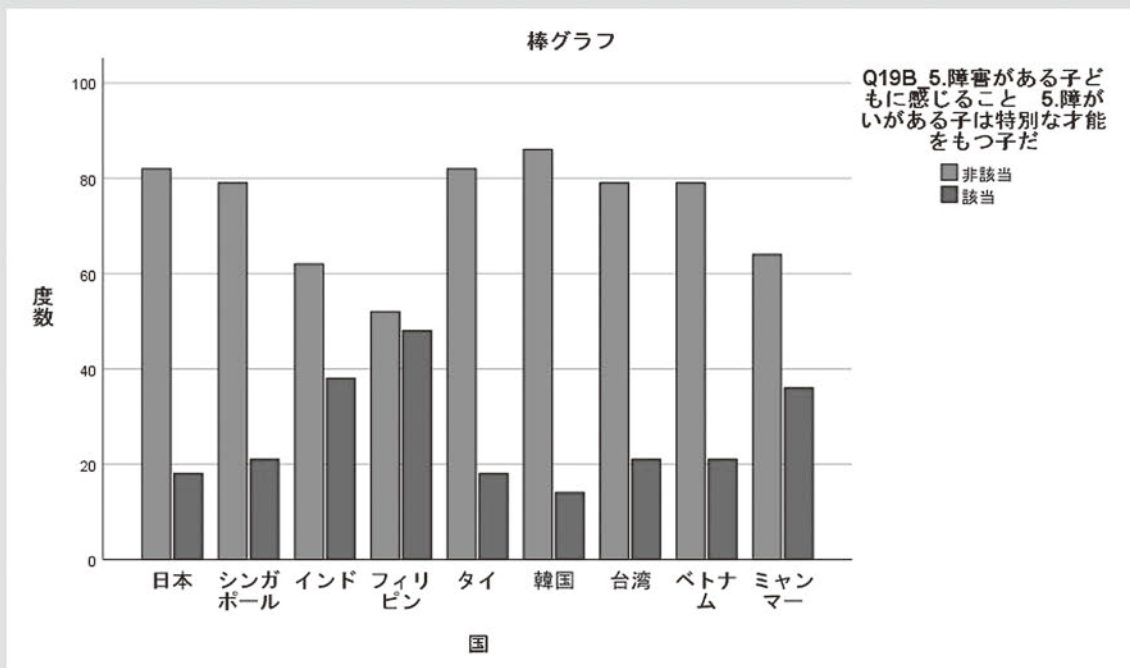


Figure 12 Views on children's disabilities: Anxiety (red, right bar is yes)



Japan, Singapore, India, Philippines, Thailand, Korea, Taiwan, Vietnam, Myanmar
日本、新加坡、インド、菲律賓、泰國、韓國、台灣、越南、緬甸

Figure 13 Views on children's disabilities: Gift (red, right bar is yes)



Japan, Singapore, India, Philippines, Thailand, Korea, Taiwan, Vietnam, Myanmar
日本、新加坡、インド、菲律賓、泰國、韓國、台灣、越南、緬甸

Figure 14 Views on children's disabilities: Special talented (red, right bar is yes)

We next discuss the percentage of respondents who answered that “children with disabilities are a gift,” with the Philippines showing a high percentage of agreement in Figure 13. South Korea, Japan, Vietnam, Taiwan, and Thailand had low levels of agreement.

Finally, as shown in Figure 14, for the item “Children with disabilities are children with special talents,” the Philippines again had a high frequency of agreement, as did India and Myanmar. South Korea, Thailand, Japan, Singapore, Taiwan, and Vietnam had weaker agreement. These views on disability were probably a composite of individual circumstances, childcare availability, family burdens, public welfare, medical awareness and medical standards, and views of the body, life, and religion.

We now turn to the relationship between differences in attitudes toward prenatal testing based on views of disability. For example, in Japan, there was a statistically significant disparity between the beliefs that “raising a child is a burden” and “I feel sorry for my family and surroundings” in cases of child disability, on one hand, and the acceptance of undergoing testing for the purpose of determining whether to have an abortion, on the other hand. This is one example of the association between how a child’s disability is perceived and prenatal test acceptance.

Conclusion and future considerations

Regarding non-invasive prenatal genetic testing (NIPT), Japan tended to have a low take-up rate relative to other Western and Asian countries. In the survey, more than 80% of the respondents in countries/regions other than Japan were recommended to take this test by their doctors, and between 20% and 50% were recommended by their partners. In Japan, 30% of the respondents were recommended by their doctors, and less than 20% by their partners. More than 60% of the respondents answered that they were not recommended by anyone, which shows a completely different trend from other countries. This indicates that the respondents usually made the decision alone.

All countries and regions generally reported positive attitudes toward prenatal testing for the purpose of saving the unborn child and for deciding whether or not to have a baby. Japan was more in favor of the former, and South Korea and Taiwan supported the latter, but both countries reported strong agreement.

Attitudes toward and engagement in examinations were expected to be related to abortion. Taiwan and Vietnam most commonly supported abortion accessibility for reasons of fetal disease or disability. Vietnam appeared to have a lower percentage of tolerance for pregnancies due to sexual violence and a higher tolerance for abortions for medical reasons, such as maternal risk or fetal disability. Taiwan also had high acceptance of abortion for pregnancies resulting from sexual violence and a higher percentage for maternal danger and fetal disability, which were equally acceptable. In Japan, on the other hand, attitudes toward abortion due to fetal disease or disability were split between positive and negative, with greater acceptance of abortions due to maternal risk and sexually violent pregnancies. The acceptance for pregnancies resulting from sexual violence was the highest in Japan among the nine countries. A different trend was observed in the Philippines. Most Filipino respondents agreed that abortion is not allowable without conditions, with less than 30% approving of abortion when the mother is in danger and less than 10% approving of abortion in the case of a sexually violent pregnancy or a diseased or disabled fetus.

In the case of children with disabilities, less than 10% of respondents in the Philippines reported that parenting was a burden, and the percentage of respondents who reported that child with disabilities was a gift or had a special talent was notably higher than in other countries.

In Japan, Korea, and Taiwan, on the other hand, 40%–50% said that raising a child with a lifelong

disability is a burden, and only 10%–20% said that a child with a disability is a gift or has special talents. In Vietnam, the percentage of respondents who said that raising a child with a disability is a burden was not high (20%), but the percentage who said it is a gift or associated with special talents was also small (10%–20%), as in Korea and Taiwan.

Various factors correlated with the prevalence of prenatal testing and the choice to take such tests. They included coping with disability, whether society takes public responsibility for the care of children with disabilities and their families or the families take private responsibility—and, if families take private responsibility, whether the families are large or small groups. Other factors included views on disability, views on life, cost, and attitudes toward abortion, health, and medical systems.

The picture of Japan extracted from the simple tabulation of this survey is different from that of Taiwan, Vietnam, and the Philippines. In Taiwan and Vietnam, the sense of burden associated with raising a child with a disability tends to coincide with the acceptance of fetal disability as a reason for abortion. On the other hand, in the Philippines, disability is also seen as a gift, with large families raising children and a value system present in which abortion is not tolerated by society as a whole. Japan is like neither of these countries, and although the burden of raising a child with a disability is considered high, the acceptance of abortion is a matter of differing attitudes, and it is likely that different from the patterns of Vietnam and Taiwan, and also from the Philippines.

However, with regard to the Japanese responses, for example, there was not necessarily a relationship between the general attitude toward prenatal testing and the respondent's attitude toward taking such a test in their own next pregnancy, and it is possible that independent mechanisms were at work. Such a detailed analysis is a subject for future work.

Although the survey asked about attitudes toward disability; attitudes toward family, life, and science; experiences of and reasons for prenatal testing; and parties consulted, this report has focused only on attitudes toward abortion and prenatal testing. The other subjects are matters for future research. In addition, in this study, we also conducted an interviews survey after the Internet survey, so we plan to include that in our analysis in the future.

Acknowledgement

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