The Analysis of Trends in Induced Abortion in Japan—An Increasing Consequence among Adolescents

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Abstract

Objectives: The purpose of this study was to examine trends in induced abortions in Japan.

Methods: The Ministry of Health, Labour, and Welfare compiled data on induced abortions, live births, and the population of women aged 15–49 years. These data were provided by 47 prefectures in Japan and were used to examine the number of induced abortions and various characteristics of women who received abortions from 1955 through 2001. We examined abortion numbers, abortion ratios (number of legal abortions per 1,000 live births) and abortion rates (number of legal abortions per 1,000 women aged 15–49). We were particularly interested in examining abortion trends among adolescents. These trends were also compared to those in the United States.

Results: A total of 341,588 legal induced abortions were reported in Japan in 2001, representing a 2.5% increase from 1998 to 2001. From 1998 to 2001, the abortion ratio (292) increased by 5.4%; from 1996 through 2001, the abortion rate (11.8) increased by 8.3%. Women less than 20 years old contributed most to these increases. In 1999, the abortion ratio among Japanese adolescents was 5.7 times as high as the ratio among U.S. adolescents, while the abortion rate among U.S. adolescents was 1.8 times as high as the rate among Japanese adolescents.

Conclusions: Recent increases in induced abortion among Japanese women may be related to several factors, including changes in sexual behavior among adolescents and a decline in their use of contraceptives. More appropriate educational efforts and interventions are needed to prevent unintended pregnancies.

Key words: induced abortion, abortion ratio, adolescent, contraception, sex education

Introduction

In 1948, Japan became one of the first countries to legalize abortion with the legislation of the Eugenic Protection Law. This law was initially instituted to prevent the live births of abnormal infants from the eugenic point of view and to protect the health of women. Induced abortion was permitted if one of the parents or their relatives had hereditary disorders or anomalies, hereditary psychiatric diseases, hereditary mental deficiencies, or leprosy. This law was also used to force a pregnant woman to obtain an abortion if she had a psychiatric disease or mental disorder regardless of her opinion. In 1949, the law was revised so that induced abortion was permitted for economic and physical reasons. The length of gestation for legal induced

abortion was incrementally changed from before 28 weeks gestation prior to 1976 to before 22 weeks in 1990. These changes occurred with the advance of medical technology and the active movement by persons opposed to abortion (1). In 1996, the Eugenic Protection Law was substantially revised as the Maternal Body Protection Law; leprosy was excluded from the law. Since 1996, induced abortion has focused on the protection of maternal health. Few researchers have examined trends in induced abortion in Japan, and very few references are available in English. In this report, we examine trends in the numbers, rates, and ratios of induced abortions in Japan from 1955 through 2001. We also pay special attention to abortion among adolescents. Finally, we compare abortion data from Japan and from the United States because these data were readily available during the time that analyses were conducted of Japan's data.

Methods

Legal induced abortion in Japan is defined as a procedure that is performed by a licensed physician who is authorized by

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the medical association in each prefecture, with the consent of the patient, to artificially remove the fetus and its appendage (placenta and umbilical cord) when the fetus is unviable outside the maternal body. Women are allowed to obtain an abortion before 22 weeks of gestation. For each year since 1955, the staff of the Ministry of Health, Labour, and Welfare has compiled data from 47 prefectures to estimate the total number of legal induced abortions in the same systematic way without the change of the limit of the length of gestation for legal induced abortion (2). The data gathered included year of the procedure, age of the woman, gestational age of the fetus, the reason for the procedure, and the prefecture where the procedure was performed. In each prefecture, the municipal health centers provided aggregated data annually. Data concerning the number of live births were provided by Vital Statistics of the Ministry of Health, Labour, and Welfare (3). Unknown values for the number of live births (0.001% of total live births in 2001) and induced abortions (0.03% of total induced abortions in 2001) were very small and were not redistributed.

With the exception of the youngest (<20 years old) and the oldest (≥ 40 years old) age groups in Japan, we categorized the women who obtained legal induced abortions into 5-year-age groups. Abortion ratios (the number of legal abortions per 1,000 live births) and abortion rates (the number of legal abortions per 1,000 women aged 15–49 years) were used to examine the respective population and are presented by age group. The abortion ratio reflects the likelihood that a woman will have an abortion when she gets pregnant and the abortion rate reflects the incidence of abortion for all women aged 15–49 years. To calculate the ratios, we used the number of induced abortions (numerator) obtained from Maternal Body Protection Statistics and the number of live births (denominator) obtained from Vital Statistics (2, 3). The number of live births for women less than 15 years old was combined with the number of live births for women aged 15–19 years old. The number of live births for women aged 45 years and older was combined with the number of live births for women 40–44 years old. Data for women of unknown age was 0.03% of the total for 2001 and were not redistributed. Abortion rates were computed and provided by Maternal Body Protection Statistics (2). For Japanese data, women aged 15–49 years were considered the ‘reproductive age’ population. To make rates comparable to the U.S., Japanese

women aged 40–44 years were used for the denominator for the age group ≥ 40 years old (this adjustment doubles the rate usually used for the Japanese rate for women 40 years old and older). Additionally, U.S. women aged 15–19 years were used for the denominator for the age group <20 years old (even though U.S. published abortion rates use different age categories). Data concerning the gestational age of the fetus were categorized as <8 weeks, 8–15 weeks, and 16–21 weeks gestation so that we could focus on the early and late gestations. Unknown gestational age was 0.03% of the total of induced abortions and was not redistributed. Since 1997, the reason for the abortion was documented as either a threat to the women’s physical or mental health, rape, or incest. Before 1997, leprosy in one or both parents and hereditary disease in parents or relatives were also included as valid reasons for induced abortion.

All U.S. abortion statistics provided in this report were based on previously published surveillance data for abortions performed from 1990 through 1999 (4–12). These data were provided voluntarily by the state health departments, New York City and the District of Columbia and were compiled by the Centers for Disease Control and Prevention in the same systematic way.

Results

Overall trends in Japan

The total annual number of legal induced abortions in Japan has gradually declined from 1,170,143 in 1955 to 333,220 in 1998 (Fig. 1). Between 1998 and 2001, the number increased by 2.5% (Table 1). A total of 341,588 legal induced abortions were reported in 2001. The legal induced abortion ratio (number of induced abortions per 1,000 live births) demonstrated an inconsistent trend over time (Fig. 1). For example, the abortion ratio increased from 672 per 1,000 live births in 1955 to 716 in 1957. Then, the ratios gradually declined in the 1960s and early 1970s except for a remarkable peak (594) in 1966. From the mid-1970s through the early 1980s, we noted increases in the ratios that were followed by declines in the early to late 1990s before this trend reversed (Table 1). Between 1998 and 2001, the abortion ratio increased by 5.4% to 292 per 1,000 live births. The legal induced abortion rate (number of induced abortions per 1,000 women aged 15–49 years) continuously

Fig. 1 Number, ratio*, and rate† of legal induced abortions in Japan, by year, 1955–2001. *Number of abortions per 1,000 live births. †Number of abortions per 1,000 women aged 15–49 years.

Table 1 Number, ratio*, and rate** of legal induced abortions in Japan, by year by age group, 1990–2001

	Number	15–49		<20		20–24		25–29		30–34		35–39		40–49	
		Ratio	Rate	Ratio	Rate	Ratio	Rate	Ratio	Rate	Ratio	Rate	Ratio	Rate	Ratio	Rate
1990	456797	374	14.5	1854	6.6	450	19.8	144	19.7	276	25.4	1101	22.7	4585	5.9
1991	436299	357	13.9	1805	6.9	438	19.1	139	19.1	254	23.7	1012	21.7	4334	5.6
1992	413032	342	13.2	1738	6.8	428	18.6	137	17.7	240	22.3	912	20.6	4042	5.3
1993	386807	326	12.4	1706	6.6	432	17.8	137	16.8	221	20.4	825	19.2	3707	4.6
1994	364350	294	11.8	1628	6.4	408	17.1	129	15.8	193	18.6	706	18.1	3241	4.3
1995	343024	289	11.1	1621	6.2	412	16.6	133	15.4	184	17.2	4555	16.9	2902	3.8
1996	338867	281	10.9	1809	7	424	16.8	132	14.5	175	16.7	588	16.1	2700	3.4
1997	337799	283	11	1863	7.9	440	17.1	139	14.7	173	15.9	556	15.5	2467	3.5
1998	333220	277	11	1986	9.1	450	17.7	141	14.5	161	14.9	502	14.7	2172	3.4
1999	337288	286	11.3	2180	10.6	491	18.8	149	14.6	160	14.5	472	14	1995	3.2
2000	341146	287	11.7	2249	12.1	512	20.5	154	15.4	156	14.5	420	13.2	1736	3.1
2001	341588	292	11.8	2220	13	525	20.6	161	15.2	158	13.7	404	13	1597	3.1

(Number and Rate are provided by Maternal Body Protection Statistics) * Number of abortions per 1,000 live births. ** Number of abortions per 1,000 women aged 15–49 years.

decreased from 50.2 per 1,000 women aged 15–49 years in 1955 to 10.9 in 1996 (Fig. 1). The abortion rate increased by 8.3% between 1996 and 2001; in 2001, the rate was 11.8 (Table 1).

In Japan, women with a known age of 20–24 years obtained 24% of all abortions in 2001 (data not shown); the percentages were lowest for women less than 20 years old (14%) and for women greater than or equal to 40 years old (7%). Trends in the abortion ratios by age group of women who obtained a legal induced abortion from 1990 to 2001 are shown in Table 1. Although the abortion ratio has declined over time, we found that the ratio for women aged 40 years and older was substantially higher than the ratios for women in all other age groups from 1990 to 1998. However, the ratio for women less than 20 years old showed a decline until 1995, then increased. From 1999 through 2001, the ratio among women in this age group exceeded that of the women aged 40 years and older. The abortion ratio for adolescents was 2,220 per 1,000 live births in 2001. For the women less than 30 years old, the ratios increased since 1995: for women less than 20 years old, the ratio was 1.4 times as high in 2001 than in 1995. For the other age groups (30–34 years, 35–39 years, and ≥40 years) the ratios decreased from 1990 through 2001. The lowest ratio in 2001 was recorded for women aged 30–34 years.

Trends in the abortion rates by age group of women who obtained a legal induced abortion from 1990 to 2001 are also shown in Table 1. For all age groups, with one minor exception (<20 years, 1990–1991), the rates declined until 1995. However, for women less than 25 years old (<20 years, 20–24 years), the rates increased from 1995 through 2001. The rate for women less than 20 years old was 2.1 times as high in 2001 as the rate in 1995; the rate for women aged 20–24 years was 1.2 times as high. For women aged 25–29 years, the trend was inconsistent. For women 30 years old and older (30–34 years, 35–39 years, and ≥40 years) the rates declined.

The distribution of gestational age by age group of women who obtained a legal induced abortion for 2001 shows that the percentage of procedures obtained before 8 weeks of gestation was lowest for women less than 20 years old (48%) and increased with advancing age (data not shown). Furthermore, women less than 20 years old had the highest percentage of

induced abortions obtained at 16 weeks of gestation or later (5%). Since 1955, the health of the mother was identified as the reason abortion was being obtained for 99% of the procedures (data not shown). Genetic impairments were indicated as reasons for the other procedures before 1997; very few procedures (<1%) were performed as a result of rape or incest. Data by prefecture indicated that prefectures with metropolitan areas tended to have lower abortion rates (data not shown).

Comparison with the trends in the United States

The legal induced abortion ratios by age group in Japan and in the United States for 1999 are shown in Table 2. In Japan, the abortion ratio in 1999 was highest for the youngest women (2180 abortions per 1,000 live births for women <20 years old) and second highest for the oldest women (1995 abortions per 1,000 live births for women aged 40–49 years). The ratio was lowest for women aged 25–29 years (149 per 1,000 live births). The abortion ratio in the United States was highest for the youngest women (381 abortions per 1,000 live births for women <20 years old) and for the oldest women (329 per 1,000 live births for women aged 40–44 years). The ratio was lowest for women aged 30–34 years (152 per 1,000 live births). Ratios in Japan exceeded abortion ratios in the United States for all age groups except for women in the 25–29 year age group. The ratio for the women less than 20 years old in Japan was 5.7 times as high as the ratio in the United States. The ratio for women 40 years old and older was 6.0 times as high in Japan as the ratio in the United States. In contrast, the ratio for women aged 25–29 years was 1.4 times as high in the

Table 2 Abortion ratio and rate by age, in Japan and in the U.S., 1999

		15–44	<20	20–24	25–29	30–34	35–39	40–44
Ratio	Japan	286	2180	491	149	160	472	1995
	the U.S.	709	381	316	208	152	193	329
Rate	Japan	11.3	10.6	18.8	14.6	14.5	14	7.1
	the U.S.	2	19.1	35	25	14	7	2

(Rates in Japan are provided by Maternal Body Protection Statistics, and Ratios and Rates in the U.S. are provided by CDC)

Fig. 2 Abortion ratios* and rates† obtained by women <20 years old, by year, Japan and the United States‡, 1990–2001. *Number of abortions per 1,000 live births by women aged <20 years. †Number of abortions per 1,000 women aged 15–19 years. ‡ Not currently available after 1999.

United States as the ratio in Japan. Although adolescents and women greater than or equal to 40 years old had the highest abortion ratios in the United States, we found that these ratios were substantially lower than ratios in Japan.

The abortion rates by age group in Japan and in the United States for 1999 are also shown in Table 2. The abortion rates were highest among 20–24 year old women in both countries and lowest for women aged 40 years and older. We also found that abortion rates in Japan were higher than rates for U.S. women 30 years old and older, but lower than rates for U.S. women less than 30 years old (<20 years, 20–24 years, and 25–29 years). We observed the greatest difference in rates among women 20–24 years old; the rate in the United States was 1.8 times as high as rates in Japan.

The abortion ratio for women less than 20 years old in Japan showed a decline from 1,854 per 1,000 live births in 1990 to 1,621 in 1995; the ratio increased by 38.7% between 1995 and 2000 when the highest level was recorded (2,249 per 1,000 live births) (Fig. 2). However, the ratio in the United States gradually declined from 517 per 1,000 live births in 1990 to 381 in 1999. The ratios in Japan were substantially higher than the ratios in the United States. The abortion ratios in Japan were 3.6 times as high in 1990 and 5.7 times as high in 1999 than were those in the United States for the same years. The abortion rate for adolescents in Japan declined from 6.9 per 1,000 women in 1991 to 6.2 in 1995 and increased to 13.0 in 2001—more than double the rate in 1995. Although the U.S. abortion rates among adolescents showed gradual declines from 1990 to 1999, we found that the rates in Japan were substantially lower than those in the United States. In 1990, the abortion rate was 4.7 times as high in the United States as the rate in Japan; by 1999, the rate in the United States was 1.8 times as high as the rate in Japan.

Discussion

Overall trends in Japan

The gradual declines in the abortion ratios and rates may reflect factors such as a better economic status, improved knowledge of family planning, and increased use of contraceptives (13). The peak in abortion ratios in 1966 reflects the superstition called *Hinoeuma*—the belief in Japan that females

who are born in the year of *Hinoeuma*, which comes every 60 years, will kill their relatives. Thus, many Japanese avoided having babies in 1966, which had an impact on the denominator (live births) of the ratio (Note: the numerator [the number of abortions] did not increase). The declines in live births from women aged 20–39 and the increases in ratios among 20–39 had the largest impact on this peak (data not shown). This finding emphasizes the strong cultural beliefs and behaviors among Japanese.

Reasons for high prevalence and decrease among older women

The substantially higher abortion ratio and rate among Japanese women greater than 30 years old than U.S. women in the same age group may be due to contraceptive failures, low rates of contraceptive use, and differences in contraceptive methods. Contraceptive failure may lead to unintended pregnancy, which is often linked to induced abortions. Reasons for induced abortions among older women are; health or economic reasons, or the idea that they have reached their desired family size. Japanese women sometimes feel embarrassed that they are sexually active even though they are middle aged. Low rates of contraception are also a reason for induced abortion. The prevalence of contraceptive use among married women in Japan was 56% in 2000, while the corresponding number among married women in the United States was 76% in 1995 (14, 15). Furthermore, in the United States, sterilization is a contraceptive choice among women as they grow older: 72 percent of women aged 40–44 years use sterilization as their contraceptive method of choice. The male partners of women in this same age group also use sterilization, which contributes another 36%. Overall, 31% of U.S. married women and 17 percent of their partners used sterilization in 1995 (15). In Japan, sterilization is not a preferred choice of contraception: only 5.3% of married women used female sterilization, and 1.1% used male sterilization in 2000 (14). Data from the Maternal Body Protection Statistics (2) indicate that a total of 3,530 sterilization procedures were performed in Japan in 2001; most (3,522) were among females. Additionally, only 210 sterilization procedures were obtained by women aged 40 years old and older in 2001.

The biggest factor for the decrease of the number and ratio of induced abortions among older women is that more older women choose live births rather than induced abortions. The

average age of the first marriage increased from 23.8 years in 1955 to 27.0 years in 2000. Therefore women have the first babies at older ages; the percentage of women aged 30 and over was 89,381 (13.5%) in 1980 and 206,463 (36.3%) in 2000 and also the number of live birth for women aged 30 and over increase from 448,062 (28.4%) in 1980 to 523,310 (43.9%) in 2000 (3).

Reasons for high prevalence and increase among younger women

From the increases in the number, ratio, and rate in abortions by the youngest age group (<20 years) from 1995 through 2001, we noted that adolescents contributed substantially to the recent increases in the overall number of induced abortions in Japan. Among younger women, unintended pregnancies usually result in induced abortions because these young women are unmarried and cannot afford a child. It is against Japanese cultural norms to have a birth outside of marriage. Moreover, in recent years, evidence suggests that the age at which women first marry has also increased in Japan. The average age of the first marriage for Japanese women was 23.8 years in 1955 and 27.0 years in 2000 (3). Although the number of live births outside of marriage increased from 12,548 in 1980 to 20,369 (1.7% of all live births in Japan) for all women and from 1,103 to 3,372 (16.1% of live birth) of women less than 20 years old in 2001, this is substantially lower than the 1,349,249 births of all women outside of marriage (33.5% of all births) and 359,520 (79.1%) of live birth of women less than 20 in the United States (3, 16). Japanese women with an unintended pregnancy usually get married or have an abortion. Interestingly, the percentage of marriages as a result of unintended pregnancies increased from 13% in 1980 to 26% in 2000 for all women in Japan (3). Among women less than 20 years old, the comparable statistics were 47% in 1980 and 82% in 2000. It is estimated the number of unintended pregnancy is dramatically increasing considering the increase both in the number of live birth outsidess of marriage and induced abortions. These unintended pregnancies among adolescents might reflect multiple factors. For example, the view towards sexuality has changed. In 1984, 33% of third year high school girls (17–18 years old) did not approve of premarital sex, but by 2002, only 3.7 percent did not approve (17). In another survey, investigators (18) showed that the percentage of women aged 16–19 years who approved of premarital sex increased from 45% in 1973 to 88% in 1993. Adolescents have also become more sexually active. Investigators (17) previously reported that 46% of third year high school girls had experienced intercourse in 2002; whereas, only 12% of third year high school girls had had intercourse in 1984. Other data show that the percentage of unmarried women aged 16–19 years who had experienced intercourse was 25% in 2000 and 14% in 1990 (14).

Contraceptive use in Japan has also declined in recent years. Unfortunately, the rate of non-contraceptive use for women in high school increased from 10% in 1996 to 18% in 2002. The rates of consistent contraceptive use among the same group who had frequent intercourse remain low –28% in 1996 and 22 in 2002. (17).

In Japan, the number of contraceptive choices is also

limited. For example, in 2000, the most popular contraceptive method among unmarried women was the condom (93%). The IUD is not commonly used in Japan (0%), and oral contraceptives, although a legal birth control method since 1999, are used by only 2.7% (14). In comparison the current contraceptive methods used among U.S. adolescents are the condom (37%), oral contraceptives (44%), and other methods (19%) (15).

The number of unintended pregnancies and the number of induced abortions among Japanese adolescents may continue to increase unless preventive interventions are implemented.

The impact of oral contraceptives in Japan

Some researchers have mentioned that the large number of abortions in Japan is related to limited contraceptive methods. Goto (13) pointed out that limited availability of effective contraceptives, such as oral contraceptives, has contributed to the increase in abortions among young people. Maruyama and others (19) estimated that 28 percent of the abortions in Japan in 1996 could have been prevented by approval and use of oral contraceptives. Hormonal methods may pose some additional benefits in Japan. Women would have more control in preventing unintended pregnancies. Providing women with more contraceptive choices could enhance their opportunity of finding a method that is appropriate to their individual needs (13).

We do not, however, recommend relying solely on hormonal methods in Japan. First, we cannot conclude that the high prevalence of hormonal methods in the United States has had an impact on the unintended pregnancies among adolescents. In the United States, oral contraceptives accounted for 44% of the current contraceptive methods used among U.S. adolescents (15), but the abortion rate in 1999 was 1.8 times as high in the U.S. as the rate for Japanese adolescents (19.1 vs 10.6 per 1,000 adolescents). Furthermore, the estimated pregnancy rates among adolescents were 8.3 times as high in the United States (83.6 per 1,000 women aged 15–19) compared to Japan (10.1 per 1,000 women <20 years old) (20). If hormonal methods really provide women with more control over their fertility, we would expect the pregnancy rate and abortion rate in the United States to be lower. The second reason that hormonal methods are not promoted in Japan is that oral contraceptives cannot prevent infections of sexually transmitted diseases (STDs) and HIV/AIDS. Some surveys in the United States have shown that most users of hormonal methods do not use them in combination with condoms (21). The incidence of STD infection has been very high among adolescents in Japan, but the incidence of HIV/AIDS is still low (22). In a survey conducted by a group funded by the Ministry of Health and Welfare in 2000, the investigators found that the incidence rate of Chlamydia infection was 4.8% among adolescent men and women aged 15–19 years and 6.2% among those aged 20–24 years (23). Previous research has also shown that approximately one quarter of Japanese people erroneously thought that oral contraceptives prevented HIV and STD infections (24).

The proposal—recommendations for sex education

One key issue to reducing unintended pregnancies among adolescents is providing the proper knowledge at the proper time and by the proper persons. Providing education on contra-

ception is as essential as knowing the mechanisms of fertility, sex, and reproduction. It is also important to provide sex education to both boys and girls. Condom use requires the cooperation of the men. Numazaki noted (25) that males should also take responsibility to avoid unintended pregnancies that may lead to induced abortions. Research on adolescents has documented the need for education that emphasizes practical methods of contraception and interventions to prevent HIV/AIDS, other STDs, and unintended pregnancies (26). The method that has been widely accepted in Japan, the condom, is 98% effective when used properly to prevent unintended pregnancies and STDs (27). Rosenberg and others (28) have suggested that the rate of breakage and complete slippage of condoms was only 1.04% and that the efficacy at preventing pregnancy may equal that of the most reliable forms of contraception. In Japan, the large number of unintended pregnancies, in spite of the use of condoms, is probably the result of incorrect or inconsistent use of condoms (29). By teaching adolescents how to use condoms properly, health care professionals could help young people avoid STD infections and reduce the number of unintended pregnancies. We also believe that by providing proper information on the benefits and adverse effects of oral contraceptives could help women make other contraceptive choices for preventing unintended pregnancy, even without the man's consent, or as a dual method with condoms to prevent STDs and HIV/AIDS.

Considering the fact that nearly half of high school students have experienced sexual intercourse, sex education should be offered in junior high school as well as in high school. In the United States, family planning experts suggest that if contraceptive education occurs in the same year that a teenager becomes sexually active, the teenager is more likely to use oral contraceptives or the condom at first intercourse (15, 30).

Adolescents should also be provided the opportunity to make life decisions based on proper and complete information. A 2002 report indicated that for women aged 16–19 years, the personal sources of the information about sex were their friends (73%), their partners (31%), and their teachers (1%). The media sources for information about sex were late night TV programs

(56%), magazines for women (51%), and TV dramas (44%) (31). These sources may be inappropriate. Moreover, the persons who teach sex education at school are often homeroom teachers, not medical doctors or health care providers (26). We believe a system should be developed so that medically trained staff can provide this very important educational function. Some researchers emphasize the importance of improving national programs for sexual and reproductive health education (13).

Several limitations exist about the accuracy of data. The number of induced abortions reported in Japan seems underestimated. As Henshaw mentioned (1986), many believe this figure to be a substantial undercount of the incidence of abortion (32). Matsuyama (1988) concluded that it may be estimated as 1.4 times higher considering the result of his investigation and the official report (33). Coleman (1991) said that it might be from 1.5 times to 4 times (34). About the U.S. data, the total number of abortions reported to CDC for 1997 was found to be approximately 12% lower than that reported for the same year by the Alan Guttmacher Institute, a private organization that contacts abortion providers directly to obtain the total number of abortions performed (4). In spite of these limitations, findings in this manuscript are helpful to determine the trends of induced abortion because the data reported are officially published by the governmental organization and have been collected in the same systematic way over the years.

More attention should be paid and more interventions should be implemented by the nation to collect more accurate data and improve reproductive health among Japanese men and women by using such data. We need to continue to monitor induced abortions in Japan and to use this surveillance data as a mechanism to examine our success or failures in implementing prevention strategies to reduce unintended pregnancies.

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