

A Study of the Reliability of Survey Data on Abortion in Korea*

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Introduction

Induced abortion has been adopted, legally or illegally, in many countries as a means of birth control. In Korea, induced abortion was officially prohibited until the enactment of the Maternal and Child Health Law in 1973. However, abortion was practiced rather freely for sometime before the new law. The nation-wide trend of induced abortion in Korea has shown an upward direction over the past several years. Even the proportion of married women in rural areas who have experienced an induced abortion shows a steadily rising trend.¹⁾

Most information on the practice of induced abortion in Korea has been obtained from field surveys interviewing married women. No study has been completed analyzing abortion information obtained from clinic, hospital or other record systems. It is possible that the available studies misrepresent the abortion situation, especially in rural areas where the traditional climate may hinder women from disclosing their abortion experiences without distortion. Furthermore, there has been no way to check the accuracy of the available survey data against other source of information because physicians have not been cooperative in providing detailed information on their induced abortion services.

The present study partially fills this gap by examining the reliability of data on induced abortion collected in rural Korea. It was possible to carry out this project because the researcher was privileged to have the opportunity to obtain information on the induced abortions performed by a physician who accounts for all the induced abortions carried out in a particular area. The area is geographically closed and far enough away from large cities so that it could be assumed that all or nearly all of the induced abortions performed in the locality were done by the physician who allowed his clinic records to be used for this study. The present study compared information obtained

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1) George C. Worth and Chiha Kim Cheong, "Induced Abortion in Korea," *Population and Family Planning in the Republic of Korea*, Vol. II, 1974, pp. 372-379.

from clinic records and a household survey in order to make an estimate of the reliability of oral interview type survey data on induced abortion in Korea.

Methodology

The study area, Wachon Myun, Kyungsan Gun, Kyung Sang Book Do, is a doctorless township located in southeastern Korea approximately 30 kilometers from Taegu city to the northeast. The township is far away from urban areas or a national road and thus geographically closed. There is only one physician performing induced abortions in the general area. He practices in the adjacent township, Hayang Myun.

As of October 1973, the total population in the study area was 11,428. The township's population decreased 5.6 percent between 1970 and 1973. The total number of married women between the ages 15 and 49 was estimated to be 1,501 in 1973.

Data were gathered from both interviews with married women and clinic records.

Table 1. Characteristics of eligible women and respondents in wachon myun

| | Eligible women | | Respondents | |
|-------------------------|----------------|---------|-------------|---------|
| | Number | Percent | Number | Percent |
| <i>Age:</i> | | | | |
| 15-19 | 2 | 0.1 | 1 | 0.0 |
| 20-24 | 112 | 7.5 | 97 | 7.0 |
| 25-29 | 219 | 14.6 | 207 | 14.9 |
| 30-34 | 324 | 21.6 | 307 | 22.1 |
| 35-39 | 333 | 22.2 | 311 | 22.4 |
| 40-44 | 271 | 18.1 | 248 | 17.8 |
| 45-49 | 240 | 16.0 | 218 | 15.7 |
| Total | 1,501 | 100.0 | 1,389 | 100.0 |
| <i>Education:</i> | | | | |
| Illiterate; no school | 495 | 32.9 | 458 | 33.0 |
| Primary school | 904 | 60.2 | 837 | 60.2 |
| Middle school | 76 | 5.1 | 70 | 5.0 |
| High school | 26 | 1.7 | 24 | 1.7 |
| Total | 1,501 | 100.0 | 1,389 | 100.0 |
| <i>Living children:</i> | | | | |
| 0 | 85 | 5.7 | 84 | 6.0 |
| 1 | 181 | 12.1 | 168 | 12.1 |
| 2 | 173 | 11.5 | 158 | 11.4 |
| 3 | 276 | 18.4 | 254 | 18.3 |
| 4 | 337 | 22.5 | 311 | 22.4 |
| 5 | 269 | 17.9 | 247 | 17.8 |
| 6 or more | 180 | 12.0 | 167 | 12.0 |
| Total | 1,501 | 100.0 | 1,389 | 100.0 |

Interviews were conducted by well trained nurses with all the eligible women in the township. Clinic data were gathered for all induced abortions performed at the Hayang clinic during the four years from 1970 to 1973. The records of all the induced abortion acceptors during the time period whose addresses fell in Wachon Myun were separated and subjected to detailed analysis.

Interviews were conducted among 1,389 women, 93.5 percent of the total eligible women, from September to December 1974. Characteristics of the sample women are presented in Table 1. According to the clinic records, a total of 540 women in Wachon Myun received an induced abortion at the study clinic during the period 1970-73. However, only 76.5 percent of them (413 women) were confirmed as Wachon Myun residents during interviewing. The rest were confirmed as residents of the township by the physician who performed their abortion operations.

The low confirmation rate of the clinic records is accounted for in part by the client falsification their names, addresses, ages, etc.. It was found that about 25 percent of the repeat abortion users reported different names to the clinic at least once, while roughly 28 percent of them provided different ages to the clinic.

Findings

The oral reports of rural Wachon Myun women about their experience with induced abortion provided a much lower abortion rate than the records obtained from the local clinic. As shown in Table 2, during the interviews the respondents reported a total of 200 abortions for the four year period from 1970 to 1973. The clinic records for the same period of time shown 671 induced abortions, three times more than the interview data. If this observation is correct, more than two-thirds of the all induced abortions obtained by Wachon Myun women were missed by survey interviews.

Undercounting was found not only in the number of abortions obtained by women but also in number of women who experienced induced abortions. According to the clinic records, of all the women who had received induced abortion in the study clinic during

Table 2. Number of women experiencing induced abortion and incidence of induced abortion by year.

| Calendar year | Total married eligible women | Interview data | | Clinic data | | Rate of under-reporting in interview (A/B) |
|---------------|------------------------------|--------------------|---------------|--------------------|---------------|--|
| | | Women experiencing | (A) Incidence | Women experiencing | (B) Incidence | |
| 1970 | 1,565 | 21 | 27 | 123 (98) | 150 | 441% |
| 1971 | 1,543 | 34 | 43 | 115 (83) | 146 | 286 |
| 1972 | 1,522 | 39 | 48 | 141(117) | 172 | 313 |
| 1973 | 1,501 | 68 | 82 | 161(115) | 203 | 228 |
| Total | | 162 | 200 | 540(413) | 671 | 298% |
| Practice rate | 1,533* | 12.3 | 15.2 | 35.2 | 43.8 | |

* Average number of married eligible women in Wachon Myun for the four years from 1970-73.

() Number of women confirmed by survey interview as Wachon Myun residents.

Table 3. Circumstances surrounding induced abortions reported during interviews

| | Number | Percent |
|-----------------------|--------|---------|
| <i>Location:</i> | | |
| Local private clinic | 184 | 92.0 |
| Hospital | 2 | 1.0 |
| Other clinic | 6 | 3.0 |
| Others | 8 | 4.0 |
| Total | 200 | 100.0 |
| <i>Practitioner:</i> | | |
| General practitioner | 186 | 93.0 |
| Ob-Gyn | 4 | 2.0 |
| Others | 10 | 5.0 |
| Total | 200 | 100.0 |
| <i>Method:</i> | | |
| D and C | 188 | 94.0 |
| Bougie and injection | 8 | 4.0 |
| Drugs | 4 | 2.0 |
| Total | 200 | 100.0 |
| <i>Complications:</i> | | |
| None | 140 | 70.0 |
| Mild | 28 | 14.0 |
| Severe | 22 | 11.0 |
| Very severe | 10 | 5.0 |
| Total | 200 | 100.0 |

the four-year period, 540 were from Wachon Myun. Of the 540 women, 413 were confirmed by the interview data as Wachon Myun residents. Nevertheless, during the interviewing only 162 women disclosed themselves to be induced abortion users. These 162 women reported receiving a total of 200 abortions during the study period. Details are given in Table 3. The rest of the respondents, including the women who were identified as Wachon residents and abortion users by clinic records, during interviewing said they did not have any experience with induced abortion.

Both the interview and clinic data show an increasing use of induced abortion in Wachon Myun. However, the induced abortion practice rate per 100 married eligible women calculated from the interview data and that calculated from the clinic data showed a large difference. According to the interview data, only 12 percent of the married eligible women had experienced induced abortion at least once during the four years. The clinic records, on the other hand, indicate that about 35 percent of the married eligible women had experienced at least one induced abortion during the study period. The average incidence of induced abortion per married eligible woman during the 1970-73 period in Wachon Myun was 「.12」 by interview data but .44 according to clinic data.

In order to examine the characteristics of the two sets of data, they were compared with the findings of the Korean Institute for Family Planning on induced abortion. As shown in Table 4, the interview data were closer to the KIFP data than the clinic data. However, both sets of data obtained during the present study show discrepancies when compared to the results of the KIFP study.

Assuming KIFP's data are reasonably accurate, the abortion rates per 1,000 population were too low when calculated from the interview data and too high when the clinic data were used. On the other hand, the abortion live birth ratio based on the interview data were very similar to the KIFP findings, while the ratios obtained from the clinic data were much higher than KIFP's results.

Considering all of the above, it can be said that the interview data obtained during the present study have somewhat different characteristics than the data obtained in other rural areas as well as from national figures. In order to establish the reasons for this, whether it is the result of the characteristics of the study area or is due to the quality of survey, further analysis is necessary.

Table 4. Abortion rates per 1,000 population, total abortion rates and abortion live birth ratio by year.

| Calendar year | Abortion rates per 1000 population | | | Total abortion rates per married eligible women | | | Abortion ratio per live birth | | |
|---------------|------------------------------------|--------|-------|---|--------|-------|-------------------------------|--------|-------|
| | Interview | Clinic | KIFP* | Interview | Clinic | KIFP* | Interview | Clinic | KIFP* |
| 1970 | 2.9 | 12.6 | 10 | | | | .18 | .79 | .3 |
| 1971 | 4.3 | 12.4 | 11 | | | | .25 | .71 | .3 |
| 1972 | 4.7 | 14.8 | 11 | | | | .28 | .87 | .4 |
| 1973 | 7.8 | 17.8 | 12 | 1.42 | 3.92 | 2.05 | .43 | .97 | .4 |

* Data based on KIFP's report on the 1973 National Family Planning and Fertility Survey Report, p.162.

Data Reliability

The reliability of both sets of data, that obtained from the clinic records and that obtained during the field survey, is difficult to judge. Although we have two independent sources of information on the abortion experience of what is assumed to be the same group of women, we know that only 76.5 percent of the women whose clinic records were analyzed could be found among the survey respondents. Moreover, the assumption that there was a perfect correspondence between the sample universe and the clinic records is based on the judgment of a single physician.

It is possible that either or both the clinic records or the survey missed women and/or abortions. Moreover, it is also possible that even for respondents who were interviewed no clinic records could be found because of changes in name, address, or other characteristics. Migration may also have influenced the rate of correspondence. If women having abortions were more likely than others to move from Wachon Myun including

all the clinic records in the analysis, even those that could not be verified during the survey, would serve to increase the differences between the clinic data and that obtained from the field survey.

There is also the reverse problem, where abortions reported during the interviewing could not be found in the clinic records. Of the abortions reported during the survey 92 percent were found in the clinic records. The confirmation was considerably higher for abortions occurring in 1973 (97.3 percent) than for those occurring in 1970 (84.0 percent). This suggests that the clinic records, especially for the early period, may not accurately reflect the total number of abortions obtained by women in the study area. Unfortunately, it is not possible to estimate the extent to which the failure to confirm abortions reported during the interviewing with the clinic record data results from mistakes in the clinic records, errors in the matching procedure or during the interview operation or the fact that some respondents received abortions at clinics or other health facilities outside the study area.

Several procedures may be employed to test the reliability of the two sets of data. To begin we need to estimate the number of pregnancies that occurred in the study area. We can do this by applying the pregnancy rate confirmed for other areas to the data obtained during the present study. We estimated the pregnancy rate in the study community by applying the rate obtained by Hong in an earlier study.²⁾ Hong reported on a community with an estimated total population of 21,782, 13.1 percent or 2,861 of whom were married eligible women. This rate corresponds closely to that found in the Wachon area. Among these women, Hong found 825 pregnancies resulting in 598 live births and 165 induced abortions. The crude birth rate, therefore, would have been approximately 35 without induced abortion. We can assume that a crude birth rate of approximately 35 per 1,000 represents a reasonable standard by which to judge the reliability of the two sets of data under consideration here.

If we accept the standard estimate of the crude birth rate for Korea during the years 1956 to 1960, that is before the widespread use of contraception, we can also use this figure to help estimate the reliability of the present data. The generally accepted estimate of the crude birth rate during the years 1956 to 1960 is 44.7. Since 26.8 percent of the eligible women in present study reported themselves to be currently practicing contraception, we estimate the crude birth rate to be $44.7 \times (1 - .268)$ or 32.7. This assumes that contraception is 100 percent effective and distributed indiscriminately among eligible women of all ages. The figure, however, does not take into account induced abortions that took place during the 1956-1960 period.

Hong estimates an induced abortion rate of 10 percent for the 1956-1960 period in rural areas. If we assume that pregnancy wastage remained constant from the 1956-1960 period to 1966-1970, we can use more recent data collected by Hong to estimate total pregnancies. If pregnancy wastage accounted for 7.5 percent and induced abortion accounted for 10 percent of all pregnancy terminations, then live births accounted for 82.5

2) Sung-Bong Hong, personal communication, 1975.

percent of all pregnancies.

The estimated crude birth rate of 44.7 therefore corresponds to the 82.5 percent of all pregnancies that resulted in a live birth. Thus, the estimated total number of pregnancies per 1,000 population was 54.2. The estimated total number of induced abortions per 1,000 population is 10 percent of this figure or 5.4. The estimated crude birth rate, therefore, may be summarize as 32.7 (the estimated live birth rate) plus 5.4 (to account for induced abortions) or 38.1. Since there is reason to doubt Hong's estimate that 10 percent of all pregnancies ended with an induced abortion, the actual rate is probably closer to 35.4. This figure counts only half the abortions Hong suggests occurred during the 1956-1960 period.

Using the criteria of 35.4 as a reasonable crude birth rate, we may compare the rates obtained from the clinic records and interview schedules in the present study. The crude birth rates, live births plus induced abortions, calculated from the interview data averaged only 25 per 1,000 population over the four year period from 1970 to 1973. The rate was 23.1 in 1970, 25.2 in 1971, 24.1 in 1972 and 27.5 in 1973. The crude birth rates calculated on the basis of the live births reported during the survey and the induced abortions obtained from the clinic records are more reasonable. The average rate over the four year period is 34.8. The rate for 1970 was 33.4, for 1971 33.7, for 1972 34.4 and for 1973 the rate was 37.4.

We may adjust these rates to take account of the abortions reported during the interviews but not found in the clinic records. Doing so increases the rate slightly. On the other, we should also adjust the rate downward to take account of the fact that our calculations allow for an excessive number of pregnancies because they ignore the impact of repeated abortions.

The impact of repeated induced abortions was estimated as follows. The observed interval between pregnancies among those women who had experienced repeated abortions was 11.1 months. An average interval of 30 months between pregnancies among women who used neither induced abortion nor contraception has been reported by KIFP. Assuming a pregnancy interval of 30 months, we estimate an average of 1.6 pregnancies per woman would have occurred over the four year period. The rate of excessive pregnancies per 1,000 population therefore was 1.4 in 1970, 1.5 in 1971, 1.5 in 1972 and 1.9 in 1973. Thus, the final crude birth rate estimated on the basis of the corrected clinic data on induced abortions was 34.1 in 1970, 34.0 in 1971, 33.9 in 1972, and 36.0 in 1973. The average crude birth rate of the 1970-1973 period was estimated to have been 34.6.

A comparison of the rates obtained by these procedures suggests that the induced abortion histories provided in the clinic record probably offers a more reasonable picture of the experience of the study community than the interview data. The crude birth rate estimated on the basis of the pregnancy rate used by Hong was 35.0, which was very close to the estimate worked out on the basis of the 1956-1960 crude birth rate, corrected for excess abortions. That rate was 35.4. The interview data alone provide a crude birth rate of only 25.0, which appears too low. The combination of interview data and clinic records, on the other hand, yields an average rate of 34.6 which seems more reasonable than the lower rate obtained from the interview schedules alone.

The abortion rates provided in Table 2 also offer an opportunity to evaluate the reliability of the data. If we accept KIFP's data as a reasonable standard we can conclude that the clinic data indicate an excessive number of induced abortions or a lower than appropriate denominator for the rates. The data in Table 2 also suggest that the interview data may underestimate the number of induced abortions received by women in the community or include too large a number of married women and live births in the denominator. If the clinic records overestimate the number of abortions this would increase the crude birth rate calculated to include these abortions.

Since we don't know the accuracy of the population data for the study community and since there is no easy way to check the accuracy of the data, it is impossible to say whether or not the number of eligible women is correct. On the other hand, previous research both in Korea and elsewhere indicates that underenumeration of the population is typically a serious problem. Therefore, it seems unlikely that the rates obtained result from too high a count of the population at risk. One circumstance however could produce such a result. If the study community experienced high rates of outmigration the number of women considered at risk early in the period could be below the actual number found in the study community. We know the study community's population declined by roughly 5 percent between 1970 and 1973. Some of this decline occurred among married women. It is possible that more eligible women left the community than the available data indicate. Since all the abortions received by women living in the study community are included in the clinic record rates, it is possible that these rates include the experience of out-migrants. If this is the case, it compounds the problem of an underenumeration of the population.

All the data on fertility were obtained from the interview schedules. It seems likely that if the interviewing procedures missed abortions, live births were also missed. Failure to obtain complete pregnancy and live birth histories is a common problem of field surveys. There is little reason to think that the present study was completely free of such errors. A combination of factors therefore probably contributed to the large differences in abortion rates observed between the clinic records and the interview schedules. It seems likely that the enumeration of eligible women was not complete and that the clinic records overestimate the number of abortions obtained by community residents. These two factors mean that rates based solely on the clinic data will tend to overestimate the use of abortion. The field survey, on the other hand, probably missed not only abortions but live births as well and thus contributed to an underestimate of the abortion experience of this particular areas.

The fertility data obtained during the study are of limited usefulness in checking the reliability of the data because if the fertility histories suggest a very low fertility level, it is not possible to establish whether this level is the result of "extensive use of induced abortion" (or other factors causing lower than expected fertility) or "the result of errors" in the survey operation which caused live births to be underestimated. A variety of data could be used to establish the relative importance of the two factors. Unfortunately, the necessary data are not available. Therefore, the analysis and presentation must remain

speculative.

Fertility levels in the study areas were well below those found in other rural areas of Korea during approximately the same period of time. The total fertility rate in Kyung San was closer to that of Seoul than to other rural areas. Since abortion is widely available it seems unlikely that the greater practice of induced abortion alone could have produced these rates and more likely that they are the result of the survey's underestimation of fertility in the Wachon Myun study area. A comparison of the age specific fertility rates for several areas is presented in Table 5. In comparison with these other areas, the fertility of women in Wachon Myun aged 20 to 24 and those aged 30 and above was remarkably low. Unfortunately, the available data do not allow for the calculation of age specific induced abortion rates based on the clinic data so it is impossible to fully evaluate the contribution of abortion to the fertility level in the study community. In conclusion, it seems most reasonable to view both the abortion and fertility data obtained from the interviews as too low and the abortion data from the clinic records as somewhat more accurate than the interview data but still too high.

Prevalence of induced abortion

According to the clinic records, a total 540 women experience induced abortion during the four years from 1970 to 1973. The total number of induced abortions performed during the period was 671. Of the 540 abortion users, 97 women, 20 percent of all users, were found to have repeated induced abortions during the four year period. Three women experienced five abortions during the period and three other women had four abortions. One woman reportedly had three abortion in one year and 15 women experienced two abortions in 1973. The characteristics of women who received repeated abortions during the study period is shown in Table 10.

The period of gestation as reported in the clinic records varied from one to nine months. However, two months gestation was the modal category. As shown in Table 6, more than 85 percent of the women terminated their pregnancies by 12 weeks' gestation.

At the time of survey, 26.8 percent of the respondents were found to be current-users of contraception while 58.4 percent of the respondents were found to be ever-users of

Table 5. Age-specific fertility rates

| | Seoul(71) | Rural Areas(71) | Yesan(70) | Wachon(70-73) |
|----------------------|-----------|-----------------|-----------|---------------|
| 19 or less | 3.0 | 8.7 | 7.9 | 2.9 |
| 20-24 | 147.8 | 211.2 | 118.2 | 67.9 |
| 25-29 | 283.1 | 362.8 | 342.5 | 291.3 |
| 30-34 | 175.2 | 265.6 | 277.3 | 242.5 |
| 35-39 | 76.9 | 144.0 | 116.4 | 91.4 |
| 40-44 | 21.1 | 48.9 | 69.3 | 23.5 |
| 45-49 | — | 4.3 | 15.9 | 7.3 |
| Total Fertility Rate | 3,535.5 | 5,227.5 | 4,730 | 3,634 |

Table 6. Period of gestation at termination of pregnancy

| Months of gestation | Number of induced abortion performed | Percent |
|---------------------|--------------------------------------|---------|
| 1 | 7 | 1.0 |
| 2 | 464 | 69.2 |
| 3 | 115 | 17.1 |
| 4 | 22 | 3.3 |
| 5 | 27 | 4.0 |
| 6 | 20 | 3.0 |
| 7 | 12 | 1.8 |
| 8 | 2 | 0.3 |
| 9 | 2 | 0.3 |
| Total | 671 | 100.0 |

Table 7. Contraceptive use by acceptance of induced abortion

| Induced abortion | Contraception | | Total |
|------------------|---------------|-------------|------------|
| | Current-user | Non-user | |
| Ever-used | 152(40.9%) | 251(25.7%) | 413(29.7%) |
| Never-used | 220(59.1%) | 756(74.3%) | 976(70.3%) |
| Total | 372(100%) | 1,017(100%) | 1,389 |

Chi square: 30.12

df : 1

Level of significance: .001

contraceptives. Of the 1,389 respondents, 35.7 percent used only contraception, 7 percent used induced abortion only, and 22.7 percent used both contraception and induced abortion. The rest, 34.6 percent, never used either contraception or induced abortion.

A tendency was noted for those who used contraceptives to be more likely to use induced abortion than those who did not use contraceptives. As shown in Table 7, of the 372 women who were current-users of contraceptives, 40.9 percent experienced an induced abortion while of those who were nonusers of contraceptives only 25.7 percent had experienced an induced abortion. Roughly equal proportions of the respondents began contraception before and after their first experience with induced abortion; 44.6 percent used contraception before the first induced abortion whereas 45.5 began contraception after their first abortion.

General of induced abortion was expressed by less than half of the respondents. On the other hand, a large proportion of the respondents disapproved of it. As shown in Table 8, the rate of approval of induced abortion in the present study never reached 15 percent whereas in KIFP's 1973 and 1971 studies the rate of approval was never less than 40 percent. The rate of approval of induced abortion among the ever-users of induced abortions was much higher than that found among other respondents. Over 60 percent of those who reported ever having had an induced abortion said they approved

Table 8. General attitude toward induced abortion

| General attitude | Wachon | KIFP 1973* | KIFP 1971* |
|------------------|--------|------------|------------|
| Approve | 11.9 | 44.4 | 64.4 |
| Depends | 37.6 | — | 12.5 |
| Don't approve | 36.0 | 41.2 | 15.9 |
| Don't know | 14.5 | 14.4 | 7.2 |
| Total percent | 100 | 100 | 100 |
| Total number | 1,389 | | |

* KIFP Ibid., p. 198

Table 9. Knowledge of the legal status of induced abortion

| Knowledge of legality | Wachon | KIFP 1971* | KIFP 1973* |
|-----------------------|--------|------------|------------|
| Legal | 26.9 | 43 | 67 |
| Illegal | 44.7 | 33 | 18 |
| Don't know | 28.4 | 24 | 15 |
| Total number | 1,389 | 4,632 | 1,919 |
| Total percent | 100 | 100 | 100 |

* KIFP, Ibid., p. 212

of the practice.

The respondents' knowledge of the legal status of induced abortion was relatively poor. Of the total of 1,389 respondents, only 26.9 percent knew that induced abortion is legal. Over 40 percent of the respondents thought that abortion was illegal.

The low levels of approval and the widespread belief that induced abortion was illegal may explain why the interview respondents failed to provide information on all the abortions they had received. Comparison with the data obtained from previous studies on knowledge, attitudes and practices related to induced abortion suggests that the women in the study area was much less well informed than women in other areas of Korea. Characteristics of women obtaining an induced abortion at the Hayang clinic.

As shown in Table 10, 47.4 percent of the women who had experienced induced abortion at the study clinic were in the age group 35 to 44. The highest rate of induced abortion was found in the age group 20 to 24, 66.7 percent, followed by the 40 to 44 age group, 44.2 percent, and the 35 to 39 age group, 38.2 percent.

Of the 540 abortions users during the four year period, 41.9 percent, or 226 women were illiterate or had no schooling, 48.7 percent were primary school graduates. The rest attended secondary school. The abortion rate was higher among the secondary school graduates than among those who had less education.

Women with more than three living children were more likely to have received an induced abortion than those who had a smaller number of children. However, it is noteworthy that among those women who had no children, almost 27 percent had terminated a pregnancy through induced abortion.

Table 10. Characteristics of women receiving an abortion at the Havang clinic.

| Characteristic | Number | Percent |
|---------------------------|--------|---------|
| <i>Age</i> | | |
| 15—19 | 12 | 2.2 |
| 20—24 | 78 | 14.4 |
| 25—29 | 78 | 14.4 |
| 30—34 | 96 | 17.8 |
| 35—39 | 135 | 25.0 |
| 40—44 | 121 | 22.4 |
| 45—49 | 20 | 3.7 |
| Total | 540 | 100.0 |
| <i>Education</i> | | |
| Illiterate/no school | 226 | 41.8 |
| Primary school | 263 | 48.7 |
| Middle school | 42 | 7.8 |
| High school | 9 | 1.7 |
| Total | 540 | 100.0 |
| <i>Living children</i> | | |
| 0 | 25 | 4.6 |
| 1 | 40 | 7.4 |
| 2 | 54 | 10.0 |
| 3 | 138 | 25.6 |
| 4 | 135 | 25.0 |
| 5 | 115 | 21.3 |
| 6 or more | 33 | 6.1 |
| Total | 540 | 100.0 |
| <i>Religion</i> | | |
| Buddhist | 229 | 42.4 |
| Protestant | 34 | 6.3 |
| Catholic | 13 | 2.4 |
| Others | 10 | 1.8 |
| No religion | 254 | 47.0 |
| Total | 540 | 100.0 |
| <i>Economic status</i> | | |
| Upper | 54 | 10.0 |
| Middle | 275 | 50.9 |
| Lower | 211 | 39.1 |
| Total | 540 | 100.0 |
| <i>Husband occupation</i> | | |
| Farmer | 476 | 88.1 |
| Labor | 14 | 2.6 |
| Seller | 35 | 6.5 |
| Professional | 5 | .9 |
| Others | 5 | .9 |
| Unemployed | 5 | .9 |
| Total | 540 | 100.0 |

No important differences in the practice of induced abortion were observed among respondents with different religious backgrounds. Percentwise, women with no religious affiliation showed a somewhat higher practice rate than those who had a specific religious affiliation.

No differences were observed in the rates of induced abortion among women from different economic statuses. However, differences in the induced abortion rate were observed when respondents were classified by their husbands' occupation. Proportionately more women whose husbands were engaged in commerce had experienced induced abortions than those whose husbands were engaged in farming.

Table A1. Total population and eligible women

| | 1970 | 1971 | 1972 | 1973 | Total | Mean |
|-------------------------------|--------|--------|--------|--------|--------|--------|
| Total population | 11,915 | 11,747 | 11,587 | 11,428 | 46,677 | 11,670 |
| Eligible women | 1,565 | 1,543 | 1,522 | 1,501 | 6,131 | 1,533 |
| Observed no. of population | 9,394 | 9,843 | 10,117 | 10,575 | 39,929 | 9,982 |
| Observed no. of married women | 1,234 | 1,293 | 1,329 | 1,389 | 5,245 | 1,311 |

Table A2. Confirmation rate of induced aborters as Wachon residents by characteristics

| | Total number of aborters | Nq. of aborters confirmed as Wachon residents | Rate of confirmation |
|------------------------|--------------------------|---|----------------------|
| <i>Age</i> | | | |
| 15-19 | 12 | 1 | 8.3% |
| 20-24 | 78 | 41 | 52.6 |
| 25-29 | 78 | 53 | 68.0 |
| 30-34 | 96 | 81 | 84.3 |
| 35-39 | 135 | 117 | 86.7 |
| 40-44 | 121 | 103 | 85.1 |
| 45-49 | 20 | 17 | 85.0 |
| <i>Education</i> | | | |
| Illiterate/no school | 226 | 178 | 82.5 |
| Primary school | 263 | 193 | 73.5 |
| Middle school | 42 | 35 | 83.3 |
| High school | 9 | 7 | 77.8 |
| <i>Living children</i> | | | |
| 0 | 25 | 2 | 8.0 |
| 1 | 40 | 32 | 80.0 |
| 2 | 54 | 42 | 77.8 |
| 3 | 138 | 114 | 82.6 |
| 4 | 135 | 99 | 73.3 |
| 5 | 115 | 94 | 81.7 |
| 6 | 27 | 24 | 88.9 |
| 7 | 6 | 6 | 100.0 |
| Total | 540 | 413 | 77.4 |

Table A3. Comparison of rates of induced abortion between aborted women confirmed by interviews and aborted women performed at local clinic by socio-demographic characteristics (1973)

| | Women with induced abortion performed at clinic | | | Women with induced abortion confirmed by interviews | | |
|------------------------|---|-------------------|--------|---|-------------------|------|
| | Total married women | Induced abortions | Rate | Respondents | Induced abortions | Rate |
| <i>Age</i> | | | | | | |
| 15-19 | 2 | 3 | 150.0% | 1 | 0 | 0.0% |
| 20-24 | 112 | 24 | 21.4 | 97 | 2 | 2.1 |
| 25-29 | 219 | 31 | 14.2 | 207 | 9 | 4.3 |
| 30-34 | 324 | 35 | 10.8 | 307 | 24 | 7.8 |
| 35-39 | 333 | 49 | 14.7 | 311 | 24 | 7.7 |
| 40-44 | 271 | 38 | 14.0 | 248 | 16 | 6.5 |
| 45-49 | 240 | 8 | 3.3 | 218 | 0 | 0.0 |
| <i>Education level</i> | | | | | | |
| Illiteracy | 495 | 78 | 15.8 | 458 | 24 | 5.2 |
| Primary school | 904 | 96 | 10.6 | 837 | 46 | 5.5 |
| Middle school | 76 | 10 | 13.2 | 70 | 3 | 4.3 |
| High school | 26 | 4 | 15.4 | 24 | 2 | 8.3 |
| <i>Living children</i> | | | | | | |
| 0 | 85 | 8 | 9.4 | 84 | 1 | 1.2 |
| 1 | 181 | 14 | 7.7 | 168 | 3 | 1.8 |
| 2 | 173 | 25 | 14.5 | 158 | 8 | 5.1 |
| 3 | 276 | 44 | 15.9 | 254 | 13 | 5.1 |
| 4 | 337 | 36 | 10.7 | 311 | 15 | 4.8 |
| 5 | 269 | 50 | 18.6 | 247 | 22 | 8.9 |
| 6 | 108 | 9 | 8.3 | 100 | 9 | 9.0 |
| 7 | 59 | 2 | 3.4 | 55 | 3 | 5.5 |
| 8 | 13 | 0 | — | 12 | 1 | 8.3 |
| Total | 1,501 | 188 | 12.5 | 1,389 | 75 | 5.4 |

Summary and Conclusions

The present study attempted to examine the reliability of survey data on induced abortion collected among rural Korean respondents. Although the research design was limited because of the nature of the available data, the study was able to document the large differences that may result when two independent sources of information on the practice of abortion are used to examine the experience of a single community. While no exact figure can be specified, it seems likely that all but the best survey operations run the risk of missing a large number of induced abortions. In the present case, a comparison of the results of a field survey with available clinic data indicated that the survey underestimated not only the number of abortions but also the number of women who obtained abortions. It is unlikely the same degree of error would be found in other

communities. The survey data suggest that both the attitudes and level of knowledge in the community studied during this project are different from those in other areas. Nevertheless our results should caution researchers against too heavy reliance on sample surveys and alert them to the need to carefully examine the reliability of their survey instruments.

Table A4. Ratio of induced abortion to 100 pregnancies, live births and married women
1974 survey

| | Calendar year | | | |
|--|---------------|-------|-------|-------|
| | 1970 | 1971 | 1972 | 1973 |
| Total eligible women | 1,565 | 1,543 | 1,522 | 1,501 |
| No. of pregnancies | 405 | 410 | 416 | 450 |
| No. of live birth | 242 | 246 | 222 | 226 |
| No. of induced abortions | 150 | 146 | 172 | 203 |
| No. of spontaneous abortions | 13 | 18 | 22 | 21 |
| Rate per 100 pregnancies | | | | |
| L. B. | 59.8 | 60.0 | 53.4 | 50.2 |
| I. A. | 37.0 | 35.6 | 41.3 | 45.1 |
| S. A. | 3.2 | 4.4 | 5.3 | 4.7 |
| Induced abortion rate per 100 live births | | | | |
| | 62.0 | 59.3 | 77.5 | 89.8 |
| Induced abortion rate per 100 eligible women | | | | |
| | 9.6 | 9.5 | 11.3 | 13.5 |

農村地域 人工流産調査의 信憑性에 관한 研究

李 性 寬*

오늘날 우리나라에 있어서 人工流産은 醫學的인 理由보다 人口調節의 目的으로 使用되고 있음은 周知의 事實이다. 이러한 傾向은 都市에서는 그 增加率이 緩和되고 있으나 農村地域에서는 急激한 增加一路에 있다.

이때까지의 人工流産에 관한 結果는 家庭訪問을 통한 質問調査方法에 의하여 이루어졌기 때문에 應答者의 記憶喪失이나 故意的인 應答回避로 인하여 相當數가 漏落된 것으로 推測된다.

今般 著者는 局限된 地域에 있어서 現地 所在 醫師의 技術, 醫療費 그리고 有利한 地理的인 條件으로 인하여 大部分의 當地域 婦人들이 人工流産 施術場所로 利用하고 있는 開業醫의 協調를 얻을 수 있어서 從來하던 方式의 質問調査와 病院에서 實施한 臨床記錄簿 結果를 比較하여 다음과 같은 結論을 얻었다.

調査地域인 慶山瓦村面에 있어서 1970년부터 1973년까지 4年間に 同地域婦人들이 遂行한 人工流産率을 보면 質問調査에서는 人員(可妊婦數)으로는 12.3퍼센트(162名)인데 反하여 臨床例는 35.2퍼센트(540名)였고, 件數로는 各各 15.2퍼센트(200명)와 43.8퍼센트(671명)로서 臨床例가 質問調査結果에 比하여 3배나 높았다. 그러나 臨床例中 同地域住民中에서 確認할 수 있었던 例는 413例로서 이는 質問調査結果의 2.5배에 해당하였다.

出生 100에 대한 人工流産比는 質問調査結果에서는 21이었으나 臨床例는 72였다. 反復流産率은 15.3퍼센트이며, 件數로는 總流産數의 34퍼센트를 차지하고 있었다. 즉 2회가 19.9퍼센트(件數로는 251%), 3회가 3.0퍼센트(4.9%), 4회가 0.5퍼센트(1.8%) 및 5회가 0.5퍼센트(2.2%)였다.

現在避妊實施率은 人工流産經驗者가 36.9퍼센트인데 比하여, 未經驗者는 22.6퍼센트로서 人工流産經驗者에서 顯著하게 높았다.

以上の 結果로 보아 質問을 통한 人工流産調査結果에는 많은 漏落者가 있음이 確認되어 앞으로 人工流産調査에 있어서 慎重한 注意를 考慮할 것을 提示하였다.

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