

# CHARACTERISTICS OF REPEAT ABORTERS IN VIETNAM

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**Abstract.** Two hundred and sixty married women seeking induced abortion service in Hanoi, Vietnam were interviewed to determine the magnitude of repeat induced abortion and explore selected characteristics of the repeat aborters. Seventy-one percent of the sample reported having had at least one previous induced abortion. After adjustment for age and number of living children, poor attitudes toward contraception, low use of modern contraceptives and failure of contraception were shown to be significantly associated with repeat induced abortion. Woman's age, number of living children, contraceptive knowledge and experience and desire for no more children were positively related to repeat induced abortion. Socio-demographic characteristics were not related to repeat induced abortion. Improvement of attitudes toward contraception, persuasion to use modern contraception and promotion of contraceptive effectiveness are recommended strategies to prevent repeat induced abortion.

## INTRODUCTION

Induced abortion occurs in great numbers throughout the world (Henshaw *et al*, 1999). Repeat induced abortion accounts for a substantial proportion of all induced abortion in many countries, with reports ranging from 34% to 77% (Vach *et al*, 1998; Westfall and Kallail, 1995; Heinrich and Bobrowsky, 1984). The risks on subsequent pregnancies of repeat induced abortion are reported to be higher than those of the first induced abortion (Levin *et al*, 1980). Along with the high rate of induced abortion, public health services have been faced with serious health problems and severe financial costs (Singh *et al*, 1997).

Although repeat induced abortion status has been addressed in many previous reports, most studies have focused only on determinants of women having an induced abortion (Okonofua *et al*, 1999; Gorbach *et al*, 1998). Studies on repeat induced abortion in the existing literature were almost all conducted in developed countries. The results of these studies varied greatly. Characteristics of women who have repeat induced abortion are unclear.

In Vietnam, induced abortion is legal and provided without charge at all levels of the public

health system. Data for 1995 showed an annual induced abortion number of nearly 1.4 million, a rate of 83 induced abortions per 1,000 women of reproductive age and an average of 2.5 abortions during the lifetime of a woman. These rates were documented as the highest among countries where abortion is legal (Henshaw *et al*, 1999; Goodkind, 1994). Contraceptive prevalence rate in 1996 was 68.3%. Intrauterine devices were used predominantly (54.8%) followed by traditional methods such as periodic abstinence and withdrawal (23.9%) (NCPFP, 1997). Prevention of induced abortion was considered as a high priority in the National Family Planning Program (Ministry of Health, Vietnam, 1997).

Repeat induced abortion is common in Vietnam (Vach *et al*, 1998; Hieu *et al*, 1993) but characteristics of women having repeat induced abortion have not been fully explored. Therefore, this study aimed to determine the magnitude of repeat induced abortion among the aborters and to identify their characteristics with an emphasis on socio-demographic and contraceptive knowledge, attitude and practice in order to gain better insight into the repeat aborters. Information from this study would be helpful for program planners and policy makers to orient future interventions to prevent repeat induced abortion.

## MATERIALS AND METHODS

A cross-sectional study was conducted at the Institute for the Protection of the Mother and

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Newborn, Hanoi, Vietnam. This is the leading research institute for Obstetrics, Gynecology, Neonatology and Family Planning in Vietnam with 300 in-patient beds. This study was approved by the Scientific and Ethical Review Group of the Institute.

A consecutive sample of 260 married women seeking induced abortion services between April and June 1997 was recruited and interviewed by trained interviewers before performing induced an abortion procedure. The main instrument for collecting data was a structured questionnaire. It covered socio-demographic information, reproductive history, contraceptive and induced abortion experience, and knowledge and attitudes toward contraception and induced abortion.

Economic status was measured based on 4 questions concerning monthly income per person of the aborter's family (score 1-4) and the ownership (score 1-2), architecture (score 1-4) and area (score 1-4) of the aborter's living house. The economic status was defined as the sum of scores for all 4 questions (theoretical range 0-14). Knowledge of the aborter was evaluated by knowledge of modern contraceptives (13 questions) and traditional contraceptives (2 questions) that showed awareness of contraceptives, understanding about the correct use and side-effects of methods. The general knowledge of the aborter was determined by combining knowledge of modern and traditional methods with awareness of fertile period and knowledge about supply sources of family planning (total of 17 questions). Each question on knowledge was scored 0 for an incorrect and 1 for a correct answer (theoretical range 0-17). Attitudes toward contraception and induced abortion were measured by 9 questions on beliefs and perceptions of the aborter regarding contraception and induced abortion. The attitude questions were scored based on the Thurstone scale divided into three degrees, namely disagree, not sure and agree. For positive questions, the scores of 1, 2 and 3 were given to the answers "disagree", "not sure" and "agree", respectively. In contrast, the scores of 1, 2 and 3 were given to the answers "agree", "not sure" and "disagree" respectively, in the negative questions (theoretical range 9-27). The questionnaire was pretested and modified accordingly. Final reliability coefficient (Cronbach alpha) was 0.78 for knowledge scores and 0.83 for attitude scores.

All questionnaire data were double-entered into the computer using Epi-Info software. Statistical analysis was performed using STATA soft-

ware. Characteristics of the aborters were summarized according to repeat aborter and first aborter groups. Continuous variables were explored using mean and standard deviation (SD) and the difference between the two groups tested using Student's *t*-test. Categorical variables were stated as percentages and the differences in proportions between the two groups was tested using Chi-squared test. Multivariate logistic regression was applied to measure association between characteristics of the aborters and the repeat induced abortion with emphasis on knowledge, attitudes and practice of contraception and socio-economic status. In order to adjust for confounding, age and number of living children were included in the model.

## RESULTS

One hundred and eighty-five (71%) among 260 women seeking induced abortion reported having at least one previous induced abortion. Of the repeat aborters, 52% had had one previous induced abortion and 48% had had at least two previous induced abortions.

### Socio-demographic and reproductive characteristics of the aborters

The average ages were 31.8 (SD: 5.5) and 28.5 (SD: 4.9) years ( $p < 0.05$ ), respectively, for the repeat aborters and the first aborters (Table 1). Age groups 30-34 and 35-40 were more common among repeat aborters than among first aborters. The education, occupation and economic status of the aborters were similar in the two groups.

The repeat aborters had significantly higher mean numbers of pregnancies and living children than the first aborters, 4.5 versus 2.2 pregnancies and 1.5 versus 1.1 living children (Table 2). In addition, significantly more repeat aborters than first aborters stated that they desired no more children. A larger proportion of repeat aborters sought abortion service at low gestational age (under 6 weeks) than did first aborters, 82.7% vs 62.7% ( $p < 0.05$ ).

### Contraceptive knowledge, attitudes and practice of the aborters

The repeat aborters reported significantly more experience of any contraception in the past than the first aborters, 91.9% vs 74.7% (Table 3). Nearly 80% of the repeat aborters stated that they had become pregnant while they were using a contraception compared to 50% of the first aborters.

Table 1  
Socio-demographic characteristics of repeat aborters and first aborters.

Characteristic	Repeat aborter (N=185)	First aborter (N=75)
Age (years)* (%)		
19-24	10.3	21.3
25-29	28.1	42.7
30-34	24.3	17.3
35-40	37.3	18.7
Mean age** (SD)	31.8 (5.5)	28.5 (4.9)
Education (%)		
Secondary school	6.6	2.7
High school	50.3	49.3
College	15.7	14.7
University or higher	27.5	33.3
Mean economic score (SD)	8.2 (2.0)	8.0 (2.0)

SD = Standard deviation.

\* Significant at  $p < 0.05$  by chi-squared test.

\*\* Significant at  $p < 0.05$  by Student's *t*-test.

Table 2  
Reproductive history of repeat aborters and first aborters.

Characteristics	Repeat aborter (N=185)	First aborter (N=75)
Mean age at first marriage - years (SD)	23.3 (3.0)	23.8 (3.0)
Mean number of pregnancies** (SD)	4.5 (1.6)	2.2 (0.7)
Mean number of living children** (SD)	1.5 (0.7)	1.1 (0.6)
Number of living children* (%)		
None	6.0	12.0
one child	40.5	62.7
two or three children	53.5	25.3
Desire for more children* (%)		
no	58.4	32.0
yes	41.6	68.0
Gestational age at induced abortion* (%)		
under 6 weeks	82.7	62.7
6 - 12 weeks	17.3	37.3

SD = Standard deviation.

\* Significant at  $p < 0.05$  by chi-squared test.

\*\* Significant at  $p < 0.05$  by Student's *t*-test.

However, the traditional methods were more commonly used than the modern methods.

The repeat aborters had better knowledge of both traditional and modern contraception than the first aborters. Mean score of the general knowledge of the repeaters was significantly higher than that of the first aborters, 9.0 (SD: 3.4) vs 7.2 (SD:

3.5). The repeat aborters stated less worry about induced abortion and less concern about contraception than the first aborters. The general attitude of the repeat aborters was significantly more likely to be in favor of induced abortion and not in favor of contraception than the first aborters, mean scores of 19.7 (SD: 3.2) and 22.0 (SD: 2.6), respectively.

Table 3  
Knowledge, attitudes and practice of contraception of repeat aborters and first aborters.

Characteristics	Repeat aborter (N=185)	First aborter (N=75)
Experience of contraception in the past* (%)		
never	8.1	25.3
ever	91.9	74.7
Contraceptive use at the time of conception* (%)		
no method	21.6	49.3
traditional method	63.3	42.7
modern method	15.1	8.0
Mean score of knowledge of traditional methods** (SD)	1.0 (0.5)	0.8 (0.5)
Mean score of knowledge of modern methods** (SD)	6.9 (2.7)	5.5 (2.9)
Mean score of general knowledge** (SD)	9.0 (3.4)	7.2 (3.5)
Mean score of perceived worry about induced abortion** (SD)	2.7 (0.5)	2.9 (0.3)
Mean score of belief that induced abortion is harmful** (SD)	2.6 (0.6)	2.9 (0.3)
Mean score of perception that induced abortion cannot be used as contraception** (SD)	2.7 (0.5)	2.9 (0.3)
Mean score of belief that contraception is necessary** (SD)	2.6 (0.5)	2.9 (0.3)
Mean score of general attitude** (SD)	19.7 (3.2)	22.0 (2.6)

SD = Standard deviation.

\* Significant at  $p < 0.05$  by chi-squared test.

\*\* Significant at  $p < 0.05$  by Student's *t*-test.

Table 4  
Crude and adjusted\* odds ratios for selected characteristics of repeat aborters.

Characteristics	Crude odds ratio	Adjusted odds ratio (95% CI)
Experience of contraception in the past		
never	1	1
ever	3.85	3.36 (0.90-12.61)
Contraceptive use at the time of conception		
no method	1	1
traditional method	3.38	2.57 (1.08-6.16)
modern method	4.32	4.11 (1.18-14.32)
General knowledge scores	1.15	1.32 (1.15-1.52)
General attitude scores	0.76	0.63 (0.54-0.74)
Desire more children		
yes	1	1
no	2.98	1.70 (0.45-6.37)
Education		
Secondary school	1	1
High school	0.42	0.41 (0.07-2.43)
College	0.44	0.30 (0.04-2.31)
University or higher	0.34	0.28 (0.04-2.04)
Economic score	1.10	1.03 (0.86-1.23)

\* Adjusted for age and number of living children.

### Association between selected characteristics and repeat induced abortion

Multivariate logistic regression adjusted for age and number of living children revealed that contraceptive use at the time of conception as well as knowledge and attitudes toward contraception were significantly associated with the repeat induced abortion (Table 4). Repeat aborters who were significantly more likely to have better knowledge of contraception and report that they became pregnant while using a contraception than were first aborters. By contrast, the repeat aborters were less likely to express positive attitudes (*ie* in favor of contraception and less in favor of induced abortion) than were first aborters (adjusted odds ratio = 0.63; 95% CI: 0.54-0.74).

Experience of any contraception in the past and desire for no more children were not associated with repeat induced abortion when controlling for the other characteristics. Educational and economic status showed no relationship with repeat induced abortion.

### DISCUSSION

This study revealed that more than 70% of women seeking induced abortion services had had at least one previous induced abortion. The repeat aborters tended to be older women with high parity and have had all their desired children. They were more likely to have had contraceptive experience in the past and more likely to have used a method at the time they became pregnant than the first aborters. The repeaters also tended to have better knowledge of contraception than the first aborters. In contrast, they more commonly had an unfavorable attitude toward contraception and a favorable attitude toward induced abortion.

The proportion of repeat induced abortion in this study is consistent with that of a recent study (Vach *et al*, 1998) showing nearly 77% repeat induced abortions among aborters. However, it is substantially higher than that of an earlier report (Hieu *et al*, 1993).

Repeat aborters were more likely to report both previous and current use of contraception. A possible explanation is that the repeaters were more active in controlling their fertility than the first aborters so they tended to seek both contraception and induced abortion to achieve their goal. In addition, the previous induced abortion experience

might urge them to use a contraception to avoid subsequent induced abortion. In turn, the more common use of contraception among repeat aborters was a possible explanation for their better knowledge of contraceptive methods. On the other hand, it also reflected poor practice of contraception such as incorrect and inconsistent use leading to contraceptive failures. More favorable attitudes toward induced abortion and unfavorable attitudes toward contraception among repeat aborters is consistent with the fact that they practice more traditional methods. The characteristics of repeat aborters identified in this study are mostly consistent with those reported in studies in other settings.

A similar study among 580 induced abortion women in Canada (Berger *et al*, 1984) showed a lower proportion of repeat induced abortion (22%). The repeat aborters were older with higher number of living children and their attitude was more tolerant to induced abortion than the first aborters. No association between socio-demographic characteristics and repeat induced abortion was found, implying that the socio-demography might have little effect on the repeat induced abortion.

An Australian study (Callan, 1983) indicated that women seeking repeat induced abortion had better knowledge of contraception and were more likely to use a contraception than first abortion seekers. They also had more favorable attitudes to induced abortion than the first aborters. However, similar age between the first and the repeat aborters in this study might result from different pattern of subjects between the two studies. This study investigated only single women while our study included only married women.

The results of a Singapore study (Tsoi *et al*, 1984) also revealed that repeat aborters had more pregnancies and more living children than first aborters. A higher proportion of traditional methods was found among the repeat than among first aborters which is comparable to the findings of our study. No relationship between repeat induced abortion and educational and socio-economic status was recorded.

However, several findings inconsistent with those of the current study have been documented, namely, a higher proportion of repeat aborters not using any contraception at the time of conception (Osler *et al*, 1997) and a significant relationship between repeat induced abortion and socio-economic status (Osler *et al*, 1992).

In conclusion, poor attitudes toward contraception, low use of modern contraceptives and failures of contraception were shown to be significantly associated with repeat induced abortion. Woman's age, number of living children, contraceptive knowledge and experience and desire for no more children were positively related to repeat induced abortion. By contrast, socio-demographic characteristics were not related to the repeat induced abortion. The findings of this study suggest a need for improving attitudes toward the use of modern contraception and promoting contraceptive effectiveness in order to prevent repeat induced abortion. It is recommended that the family planning program should pay more attention to the contraceptive users to ensure that they can apply the method correctly in order to reach the goal of avoiding unintended pregnancy. However, this study was conducted at a hospital in the capital city so its results may not be representative of aborters in other settings. Further study on a larger scale including various groups of aborters will be necessary to better understand repeat aborters in Vietnam.

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