

Characteristics of women undergoing repeat induced abortion

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§ See related article page 653

Abstract

Background: Although repeat induced abortion is common, data concerning characteristics of women undergoing this procedure are lacking. We conducted this study to identify the characteristics, including history of physical abuse by a male partner and history of sexual abuse, of women who present for repeat induced abortion.

Methods: We surveyed a consecutive series of women presenting for initial or repeat pregnancy termination to a regional provider of abortion services for a wide geographic area in southwestern Ontario between August 1998 and May 1999. Self-reported demographic characteristics, attitudes and practices regarding contraception, history of relationship violence, history of sexual abuse or coercion, and related variables were assessed as potential correlates of repeat induced abortion. We used χ^2 tests for linear trend to examine characteristics of women undergoing a first, second, or third or subsequent abortion. We analyzed significant correlates of repeat abortion using stepwise multivariate multinomial logistic regression to identify factors uniquely associated with repeat abortion.

Results: Of the 1221 women approached, 1145 (93.8%) consented to participate. Data regarding first versus repeat abortion were available for 1127 women. A total of 68.2%, 23.1% and 8.7% of the women were seeking a first, second, or third or subsequent abortion respectively. Adjusted odds ratios for undergoing repeat versus a first abortion increased significantly with increased age (second abortion: 1.08, 95% confidence interval [CI] 1.04–1.09; third or subsequent abortion: 1.11, 95% CI 1.07–1.15), oral contraceptive use at the time of conception (second abortion: 2.17, 95% CI 1.52–3.09; third or subsequent abortion: 2.60, 95% CI 1.51–4.46), history of physical abuse by a male partner (second abortion: 2.04, 95% CI 1.39–3.01; third or subsequent abortion: 2.78, 95% CI 1.62–4.79), history of sexual abuse or violence (second abortion: 1.58, 95% CI 1.11–2.25; third or subsequent abortion: 2.53, 95% CI 1.50–4.28), history of sexually transmitted disease (second abortion: 1.50, 95% CI 0.98–2.29; third or subsequent abortion: 2.26, 95% CI 1.28–4.02) and being born outside Canada (second abortion: 1.83, 95% CI 1.19–2.79; third or subsequent abortion: 1.75, 95% CI 0.90–3.41).

Interpretation: Among other factors, a history of physical or sexual abuse was associated with repeat induced abortion. Presentation for repeat abortion may be an important indication to screen for a current or past history of relationship violence and sexual abuse.

Repeat pregnancy termination procedures are common in Canada (where 35.5% of all induced abortions are repeat procedures)^{1,2} and the United States (where 48% of induced abortions are repeat procedures).^{3–7} Rates of repeat induced abortion increased in both countries for an initial period after abortion was legalized, as a result of an increase in the number of women who had access to a first, and consequently to repeat, legal induced abortion.^{1,6,8,9} At present, rates of initial and repeat abortion in Canada and the United States appear to be stabilizing.^{2,7}

Research concerning characteristics of women who undergo repeat induced abortions has been limited in scope. In a literature search we identified fewer than 20 studies in this area published over the past 3 decades. However, available research has shown several consistent findings. Women undergoing repeat abortions are more likely than those undergoing a first abortion to report using a method of contraception at the time of conception.^{7,8,10,11} In addition, women seeking repeat abortions report more challenging family situations than women seeking initial abortions: they are more likely to be separated, divorced, widowed or living in a common-law marriage, and to report difficulties with their male partner.^{1,5,8,11,12} They also are older,^{7,13} have more children^{1,5,13} and are more often non-white^{7,11,13} than women seeking initial abortions.

There is little evidence to suggest that women seeking repeat abortion are using pregnancy termination as a method of birth control.^{1,5,6,8,11} Evidence also does not indicate that women seeking repeat abortion are psychologically maladjusted.^{8,13}

Our literature review showed that many studies of repeat abortion are 20 to 30 years old and are based on data collected when abortion was a newly legalized procedure.^{5,11} Furthermore, in studies of correlates of repeat abortion the investigators did not examine a range of personality characteristics that are known to influence women's reproductive health outcomes,^{14,15} including attitudes about sexuality,¹⁴ health locus of control,^{16,17} degree of social integration,¹⁶ attitudes about contraception^{18,19} and history of sexual or physical abuse.^{20–22} The objective of the current study was to identify characteristics of women who undergo repeat induced abortion.

Methods

We surveyed a consecutive series of women presenting for induced abortion at the London Health Sciences Centre, London, Ont., the regional provider of abortion services for a wide geographic area, between August 1998 and May 1999. Women were given a description of the study at the beginning of their initial appointment at the clinic and were asked to consider participating. They were assured that their identity and responses would remain confidential and that their decision concerning participation would not affect their care in any way. Participants completed a confidential self-report questionnaire in a private setting at the clinic before receiving any counselling or other intervention. These procedures were approved by the University of Western Ontario's Office of Research Ethics.

The participants completed a 65-item self-report questionnaire. We developed this instrument on the basis of the research literature^{1,7,8,15-18} as a means of collecting data concerning correlates of repeat induced abortion with a brief assessment that could be administered readily in a clinical setting. Most questionnaire items represented face-valid single-item self-reports of demographic or personal characteristics that were developed and pilot tested specifically for this investigation and in accordance with standard procedures for research in this area.^{18,23,24}

The questionnaire included initial items assessing the woman's demographic characteristics, relationship status, and reports of relationship conflict, a history of sexual abuse or coercion, or physical abuse by a male partner at any time in the past. Subsequent items assessed attitudes and practices regarding contraception, including method of contraception (if any) used at the time of conception, whether the woman had missed taking any birth control pills during the month that conception occurred, whether she had taken formal sex education classes in high school, and history of STD and HIV testing. Self-report items also sought information regarding past pregnancy and abortion.

We used one-way analysis of variance to compare the mean age of women presenting for first, second, or third or subsequent abortions and χ^2 tests for linear trend to examine other characteristics. Conceptually and clinically significant correlates of repeat induced abortion were then entered into a stepwise multivariate multinomial logistic regression to identify factors that were significantly and uniquely associated with number of induced abortions.²⁵ This analysis allows for a reference category (women presenting for a first abortion) to be compared with 2 or more other reference categories (women presenting for a second abortion and women presenting for a third or subsequent abortion). Characteristics are entered into the regression analysis beginning with the characteristic most strongly associated with the reference category, and additional characteristics are added in order of decreasing strength of association until a characteristic is entered that is not significantly associated with the reference categories under study.²⁵

Results

Of the 1221 women approached, 1145 (93.8%) provided informed consent to participate in the study. Data for 18 women were excluded from the statistical analyses owing to missing responses that precluded stratification into initial versus repeat abortion categories, resulting in a final sample

of 1127. Of the 1127 women, 769 (68.2%) were undergoing a first induced abortion, 260 (23.1%) a second abortion, and 98 (8.7%) a third or subsequent abortion. The participants were young (mean age 23.65 years [standard deviation (SD) 6.36 years]), primarily white (971 [86.2%]) and primarily Canadian born (962 [85.4%]).

More than a quarter of the participants (288 [26.4%]) reported significant conflict in their relationship with the man involved in their pregnancy, and 1 in 5 (218 [19.5%]) reported having been physically abused at least once by a male partner. More than a quarter (301 [27.0%]) reported that they had experienced sexual abuse or sexual violence at least once in the past.

Most of the participants (1013 [90.1%]) had used contraception at some point in the past. Although most (947 [87.8%]) felt that oral contraception is a good form of birth control, more than half (565 [52.6%]) felt that the best form of birth control would be one that they did not have to remember to take. Nearly 1 in 5 women (196 [18.3%]) indicated that they sometimes could not afford to buy their method of birth control. More than half (616 [55.3%]) reported that they or their partner had been using a method of birth control at the time of conception, with use of condoms (371 [60.2%]) and orally administered contraceptives (244 [39.6%]) predominating.

Women seeking a second abortion (mean age 25.3 [SD 6.2] years) or a third or subsequent abortion (mean age 26.7 [SD 5.7] years) were significantly older than those seeking a first abortion (mean age 22.7 [SD 6.3] years) ($p < 0.05$, Tukey's honestly significant difference test).²⁶ Women undergoing repeat abortion were also more likely than those undergoing a first abortion to be born outside Canada and to be black or of Middle Eastern ethnicity ($p < 0.025$) (Table 1).

Women undergoing repeat abortion were more likely than those seeking a first abortion to report having been physically abused by a male partner, having experienced sexual abuse or sexual violence ($p < 0.001$) and having experienced substantial conflict with the man involved in their current pregnancy ($p < 0.01$). They were less likely to report that they had "lots of friends" ($p < 0.001$), were a "traditional woman" ($p < 0.025$) and had "lots of plans for the future" ($p < 0.001$).

Women presenting for repeat abortion were less likely than those seeking an initial abortion to report that they had had formal sex education ($p < 0.001$). They were more likely to have had an STD, to have undergone HIV testing and to have given birth ($p < 0.001$).

Finally, women presenting for repeat abortion were more likely than those presenting for a first abortion to report that they had used birth control at some point ($p < 0.001$), that they or their partner were using birth control at the time of conception ($p < 0.05$) and that they were using the birth control pill when conception occurred ($p < 0.001$). (Note, however, that reports of having missed pills during the month in which conception occurred did not

Table 1: Correlates of repeat pregnancy termination: χ^2 tests for linear trend

Correlate	No. (%) of women			p value
	First abortion n = 769	Second abortion n = 260	Third or subsequent abortion n = 98	
Born outside Canada	99 (12.9)	49 (18.8)	18 (18.4)	< 0.025
Ethnicity				
Black	23 (3.0)	16 (6.2)	9 (9.3)	< 0.001
Middle Eastern	4 (0.5)	3 (1.2)	3 (3.1)	< 0.025
Education				
Completed community college, nursing school or technical school	129 (16.8)	66 (25.4)	27 (27.6)	< 0.001
Currently attending high school	142 (18.5)	22 (8.5)	3 (3.1)	< 0.001
Completed some high school	73 (9.5)	34 (13.1)	14 (14.3)	< 0.05
No formal education	2 (0.3)	2 (0.8)	3 (3.1)	< 0.01
Living arrangements				
Lives with children	193 (25.2)	105 (40.5)	45 (45.9)	< 0.001
Lives with parent(s)	284 (37.0)	54 (20.8)	15 (15.3)	< 0.001
Lives with other friends or relatives	96 (12.5)	28 (10.8)	5 (5.1)	< 0.05
Lives with common-law partner	86 (11.2)	34 (13.1)	19 (19.4)	< 0.05
Relationship status				
Partner or boyfriend	367 (47.9)	112 (43.4)	36 (36.7)	< 0.025
Divorced	18 (2.3)	12 (4.7)	6 (6.1)	< 0.025
Relationship conflict and history of abuse				
Substantial conflict and fights with man involved in current pregnancy	181 (24.0)	73 (29.6)	34 (35.4)	< 0.01
Good relationship with man involved in current pregnancy	608 (81.0)	189 (75.3)	65 (68.4)	< 0.01
History of physical abuse by a male partner	105 (13.7)	73 (28.9)	40 (41.2)	< 0.001
History of sexual abuse or sexual violence	168 (22.0)	90 (35.2)	43 (45.3)	< 0.001
Social variables				
Has "lots of friends"*	674 (89.4)	208 (81.6)	69 (71.1)	< 0.001
Is a "traditional woman"†	386 (57.1)	119 (51.5)	37 (45.7)	< 0.025
Has "lots of plans for the future"‡	702 (92.7)	231 (90.6)	81 (85.3)	< 0.001
Sex education, STDs and practices regarding contraception				
Took sex education classes in school	692 (91.1)	216 (84.4)	78 (82.1)	< 0.001
History of STD	86 (11.3)	50 (19.5)	27 (28.1)	< 0.001
Has been tested for HIV	323 (42.7)	136 (52.3)	57 (60.6)	< 0.001
Has given birth to 1 or more children	276 (35.9)	147 (56.5)	66 (67.3)	< 0.001
History of use of birth control	673 (87.7)	247 (95.7)	93 (95.9)	< 0.001
Self or partner or both were using birth control when current pregnancy occurred	397 (53.1)	160 (62.3)	55 (58.5)	< 0.05
Was using birth control pill when current pregnancy occurred	137 (17.8)	78 (30.0)	28 (28.8)	< 0.001
Agreed with following statements				
The best birth control for me would be one that I don't have to remember to take	353 (48.1)	151 (59.9)	61 (64.9)	< 0.001
The birth control pill is a good form of birth control	681 (92.5)	204 (82.3)	62 (67.4)	< 0.001
Sometimes I can't afford to buy birth control	122 (16.3)	50 (20.1)	24 (25.8)	< 0.025
Birth control pills are too expensive for me	57 (7.6)	26 (10.4)	14 (15.2)	< 0.025

Note: Proportions reported are based on the number of participants who made a specific response divided by the number of participants who responded to the item in question.

*Single-item assessment of participants' degree of social integration.

†Single-item assessment of participants' sex-role traditionality.

‡Single-item assessment of participants' future orientation.

differ between the 2 groups.) Women presenting for repeat abortion were more likely to agree that “the best birth control for me would be one that I don’t have to remember to take” ($p < 0.001$) and that “birth control pills are too expensive for me” ($p < 0.025$).

Characteristics examined in stepwise multivariate multinomial logistic regression analysis included age, country of origin, living with children, conflict with the man involved in the current pregnancy, history of physical abuse by a male partner, history of sexual abuse or sexual violence, having many friends, having plans for the future, having had formal sex education, having had an STD, use of birth control at the time of conception and oral contraceptive use at the time of conception. The analysis indicated that increased age, oral contraceptive use at the time of conception, history of physical abuse by a male partner, history of sexual abuse or sexual violence, having had an STD and being born outside Canada were uniquely associated, in descending order of strength of association, with undergoing repeat compared with initial abortion (Table 2).

Interpretation

We found unique associations between repeat induced abortion and increased age, oral contraceptive use, physical abuse by a male partner and history of sexual abuse or sexual violence. Our observations confirm earlier studies indicating an association between repeat abortion and age,^{7,13} relationship conflict^{1,5,8,11,12} and relatively greater contraceptive use,^{7,8,10,11} and go well beyond existing literature^{1,5,8,11,12} in identifying unique associations of a history of relationship violence or of sexual abuse or coercion with repeat abortion. Women presenting for a third or subsequent abortion were more than 2.5 times as likely as those seeking a first abortion to report a history of physical abuse by a male partner or a history of sexual abuse or violence.

Our findings of a relation between repeat abortion and physical abuse by a male partner and sexual abuse or violence suggest continued effects of these factors²⁰⁻²² on women’s health outcomes. It is possible that a history of physical abuse by a partner or of sexual abuse or violence results in lasting psychologic changes that lead the woman to decide that carrying a pregnancy to term is not desirable. It is also possible that physical or sexual abuse is an indicator of the existence of social environment factors that were initially conducive to abuse and that are currently conducive to the decision to terminate a pregnancy in the event that one occurs. Women undergoing repeat induced abortion do not, however, appear to be inconsistent users of contraception compared with women undergoing a first abortion. In fact, we found that the former were somewhat more likely than the latter to report using birth control at the time of conception.

Limitations of our study include reliance on self-reports of sensitive issues (e.g., use of contraceptives at the time of conception), which could result in social desirability response bias, and use of single items to measure most constructs in order to create brief assessments usable in clinical settings. Although considerable validity research attests to the accuracy of self-reports in the area of sexual and reproductive health behaviour,^{23,27,28} our study is based entirely on self-reports that are potentially subject to response bias and not subject to independent verification.

In summary, a key finding of our study is that women undergoing repeat induced abortion were considerably more likely than those undergoing a first abortion to have experienced physical abuse by a male partner or sexual abuse or coercion. These results emphasize the need for screening for a current or past history of physical or sexual abuse at the time of presentation for abortion.^{29,30} Such screening could result in offers of referral and counselling that might prove helpful to the woman in dealing with a history of physical or sexual abuse, and could potentially help avert a future abortion.

Table 2: Correlates of repeat abortion: multivariate multinomial logistic regression*

Predictor	Second abortion		Third or subsequent abortion	
	Unadjusted OR (95% CI)	Adjusted OR (95% CI)	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Age	1.07 (1.04–1.09)	1.08 (1.04–1.09)	1.10 (1.06–1.13)	1.11 (1.07–1.15)
Self or partner or both were using birth control when pregnancy occurred	1.98 (1.43–2.73)	2.17 (1.52–3.09)	1.85 (1.15–2.97)	2.60 (1.51–4.46)
History of physical abuse by a male partner	1.92 (1.41–2.61)	2.04 (1.39–3.01)	2.93 (1.89–4.54)	2.78 (1.62–4.79)
History of sexual abuse or sexual violence	2.55 (1.81–3.59)	1.58 (1.11–2.25)	4.41 (2.80–6.94)	2.53 (1.50–4.28)
History of STD	1.90 (1.30–2.78)	1.50 (0.98–2.29)	3.08 (1.87–5.06)	2.26 (1.28–4.02)
Born outside Canada	1.57	1.83 (1.19–2.79)	1.52 (0.87–2.64)	1.75 (0.90–3.41)

Note: OR = odds ratio, CI = confidence interval.

*Reference group is “initial abortion.” For all factors entered, $p < 0.05$.

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