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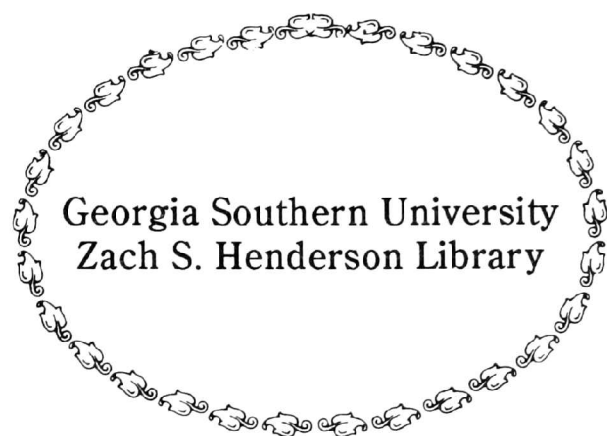
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COMPARISON STUDY OF FIRST TIME ABORTION
PATIENTS VERSUS REPEAT ABORTION PATIENTS
USING ROTTER'S LOCUS OF CONTROL

Sharon Holmes



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Abstract

Increases in the number of abortions and high repeat-abortion rates has caused concern among health care providers. The purpose of this study was to determine if there was a correlation between the scores on Rotter's Locus of Control Scale of women obtaining an abortion for the first time versus women repeating the procedure. The sample for this study consisted of 84 women who went to a private abortion clinic in a southeastern city. Rotter's (1966) Locus of Control Test with an additional questionnaire was utilized to obtain demographic data and the responses were analyzed using descriptive statistics.

Significant relationships were seen between repeat aborters, income and religious preference. However, when adjusted for income, repeat abortion was no longer significant.

The findings of this study indicate that only income and religious preference were found to be significantly related ($p \leq 0.05$) to Locus of Control Score.

Findings from this study suggest further research needs to be conducted on women who have multiple abortions. Additional attention should be given to women with no prior contraceptive use particularly those women repeating the procedure.

Introduction

The legalization of abortion has resulted not only in increasing numbers of women who obtain termination procedures, but in growing numbers who have obtained more than one abortion (Tietze, 1978). According to Eiberstadt (1988), following the liberalization of abortion laws by the United States Supreme Court in 1973, the number of legal abortions increased annually. By the early eighties, the ratio of abortions to live births in this country was over 0.4 to 1 (Eiberstadt, 1988).

The Center for Disease Control reported in 1988, that 17,614 more abortions were performed than in 1987, an increase of 1.3 percent. Locally in Savannah, approximately 2,000 abortions were performed during 1988-1989, with approximately 25 percent repeating the procedure for a second or more time (Savannah Women's Clinic, 1990).

According to Rickels, Huggins, Garcia and Polin (1980), one in ten women of childbearing age in the United States has had at least one abortion, with an estimated 23 percent of these women having additional abortions. Based on such alarming figures, the issue of abortion recidivism deserves further investigation.

Are there characteristics that differentiate repeaters from women who have had only one abortion? Several

researchers have reported that women who have had one abortion and those who have had more than one differ on their personality adjustment with repeaters showing a greater degree of psychological disturbance (Berger, Gold, Andres, & Gillet, Kinch 1984). In a study conducted by Freeman, Rickels, Huggins, Garcia and Polin, women repeating abortions showed a higher mean score on dimensions of somatization, hostility and psychoticism based on scores from the SCL-90 inventory. Other studies have found repeaters are more likely to be separated or divorced, to be in relationships of shorter duration, to be in a less happy relationship or to be more sexually active (Berger, et al. 1984).

One major controversy centers on whether repeaters use abortion as a backup for, or as an alternative to contraception (Berger, et al. 1984). Research focused on the contraceptive behavior of these women has been inconclusive. Women having repeat abortions were more likely to be using coitus-independent methods rather than coitus-dependent methods than were those having first abortions (37.1 versus 25.2 percent) (Bracken & Kasl, 1975). However, women having repeat abortions were more likely to report medical problems as a reason for their contraceptive failure than were women in the first time abortion group who were more likely to admit to

carelessness (40.9 versus 26.3 percent respectively stating medical or technical problems).

A study conducted using locus of control as the instrument, showed that internal versus external control are related in significant and even dramatic ways to health-related behavior. At least two studies suggest that females who are internal are more likely than externals to practice birth control effectively (Lundy, 1972; MacDonald, 1970).

According to a study conducted by the World Health Organization (WHO), women with a history of repeat abortions are significantly more likely to have premature deliveries and low birth weight infants than women who never had an abortion or who have had only one (WHO, 1978). Despite what has been researched, increase in repeat abortion is a major concern to health care providers. Because of the possible complications of repeat abortions and the cost to the health care system, efforts to define their cause and to reduce their incidence are important factors that need to be investigated.

Significance of Problem

Increases in the number of repeat abortions and high repeat-abortion rates has caused concern among health care providers. Medical, administrative, nursing and counseling personnel are troubled by women who come back to their facilities for a repeat abortion.

The possibility of medical complication is just one of the many side effects of a repeat abortion. Repeated abortions have been associated with miscarriage, premature delivery, and low birth weight infants (Family Planning, 1979). In a study conducted by WHO (1979), having more than one induced abortion may increase a woman's risk of unfavorable outcomes in later pregnancies.

Purpose

The ultimate goal of this study is to obtain a better understanding of abortion recidivism. The purpose is to determine if there will be a correlation between the scores on Rotter's Locus of Control Scale of women obtaining an abortion for the first time versus women repeating the procedure.

Hypothesis

There will be a significant difference on Rotter's Locus of Control Scale between women obtaining an abortion for the first time as compared to a woman repeating the procedure for the second or more times.

Definition of Terms

For the purpose of this study, the following terms have been defined:

Coitus-independent: A method of contraception that involves being taken on a daily basis or surgically inserted for long term protection (ex. pill, IUD, Nor-plant).

Coitus-dependent: A method of contraception that involves being taken or inserted before or during intercourse (ex. condom, foam, sponge, diaphragm).

Number of pregnancies: Actual number of times being pregnant.

Number of previous abortions: Total number of abortions individual has had in their lifetime.

Years at risk for pregnancy: Present age minus 12 years. (For this study, 12 years was arbitrarily designated as the year menses started.)

Induced abortions: The internal expulsion of the product of conception from the uterus either by two methods: sharp curettage method (dilatation and curettage, or D&C) and suction curettage (vacuum aspiration).

Review of Literature

Since the Supreme Court upheld *Roe versus Wade*, in 1973, increasing numbers of women have obtained an abortion with a growing number of those obtaining more than one abortion (Tietze, 1978). According to Eiberstadt (1988), following the liberalization of abortion laws, the number of legal abortions has increased annually. After the abortion law was liberalized, the number of abortions performed increased annually from approximately 11,000 in 1970, to over 66,000 in 1982 (Berger et al. 1984).

The Center for Disease Control reports that 17,614 more abortions were performed in 1988 than in 1987, an increase of 1.3 percent. By the early eighties, the ratio of abortion to live births in this country was over 0.4 to 1 (Eiberstadt, 1988).

Locally in Savannah, approximately 2,000 abortions were performed during 1988-1989 with approximately 25 percent of those repeating the procedure (SWC, 1990). These data are consistent with a statistical model, developed by Christopher Tietze & John Bongaarts, that is intended to predict the likelihood of repeat abortion (Tietze & Bongaarts 1982).

Tietze demonstrated that even if all women who had first abortions used the most effective means of

contraception, a substantial number of them would experience a contraceptive failure within a few years, and an increasing proportion of abortion each year would be repeat abortions (Steinhoff, Smith, Palmore, Diamond & Chung 1979).

· According to Freeman, et al. (1980), one in ten women of childbearing age in the United States has had at least one abortion with an estimated 23 percent of these women having additional abortions. There are medical concerns about possible negative effects of repeated abortions on subsequent pregnancies.

Repeated abortions have been associated with miscarriage, premature delivery, and low birth weight infants. Women who had had two or more induced abortions were 2.7 times more likely to have a future first-trimester spontaneous abortion and 3.2 times more likely to have a second-trimester incomplete abortion than were women with no history of induced abortion (Anonymous, 1979). Because of the medical complications of repeat abortions and the cost to the health care system, efforts to define their cause and reduce their incidence are important factors that need to be investigated.

Since large numbers of women are having repeat abortions, one may ask which women are obtaining them. Are there characteristics that differentiate repeaters from women who have had only one abortion? Many studies have

investigated variables associated with repeat abortions.

In a study conducted by Bracken & Kasl (1975) of 345 women aborting at a New York clinic, similarities were noted between first and repeat aborters based on background variables. It appears both groups of women had: The same number of siblings (three); on average 1-3 sexual partners in the 12 months before pregnancy, and the same coital frequency with their partner (just over once weekly) (Bracken & Kasl, 1975). One difference is that women having a first abortion had been in a relationship with their partner for an average of 10 months compared with 7 months for those repeaters.

Differences in age, marital status and religion were noted in a study conducted by Heinrich & Bubrosky (1984). Comparing women obtaining a first abortion to those repeating; 49.9 percent of those women were married, whereas only 37.7% of the single women had had a previous abortion. The findings of this study suggest that married women were less likely to have two or more previous abortions than those who were not married or who were married but not living with spouses. A significantly higher percentage of women who were divorced, separated, or widowed had two or more previous abortions than the married and single women combined (Heinrich & Bobrowsky, 1984). Fifty-two percent of the women were Protestant with the

second largest group being Catholic. (Heinrich & Bobrowsky, 1984).

It appears 73.5 percent of the women who had an abortion graduated from high school and 52.4 percent of the women were between 20-29 years old.

Racial differences have differing effects on repeat abortion rates, although rates among black women were still slightly higher than among white women (Bracken et al., 1972). According to a study by Heinrich and Bobrowsky, when race was studied, 40.2 percent (162) of the 403 women were black, 26.6 percent (107) were white, 26.8 percent (108) were Hispanic, and 26 (6.6) oriental.

Women having their first abortion were somewhat more likely to have ended their education at the high school level or lower than were the repeaters (63 percent compared with 41 percent). When socioeconomic class was studied, women getting their first abortion were slightly less likely than repeaters to have a middle-class background (30 percent compared with 41 percent), and were a little more likely to be unemployed (47 compared with 41 percent) (Berger et al. 1984).

Contraceptive Behavior of Repeaters

It has been difficult for many to understand why the abortion rate is so high in the United States, a country with widespread contraceptive use and extensive methods. American women are less likely to use birth control and

more likely to have abortions than their counterparts in most other western countries (Alan Guttmacher Institute, 1988).

Although this country has one of the most advanced health care systems, American women have a harder time obtaining birth control than women in smaller countries (Anonymous, 1988). Cost is one reason why American women don't use birth control as often. Because contraceptives are considered preventive care, they are generally not covered under health insurance policies (Anonymous, 1988).

The structure of the health care system is another deterrent. Family planning clinics have the stigma in this country of primarily targeting women of lower socioeconomic status, thus giving the image that the care is not as good as private care (Anonymous, 1988). Whatever the reasons, costs of contraception, inconvenience, or practicing contraception consistently and effectively, American women are at risk of having a first abortion, and if these types of difficulties persist, will have a repeat abortion as well.

One major controversy centers on whether repeaters use abortions as a backup for or as an alternative to contraception. Research focused on the contraceptive behavior of these women has been inconclusive (Berger, et al., 1984). One study conducted by Shepard and Bracher (1979) investigated the relationship between abortion

experience and contraceptive practice among women having a first or repeat induced abortion. Of the 443 women who participated in this study, each responded to her past contraceptive history, the contraceptive she was using at conception and her future plans for contraception.

Women having a first abortion were significantly more likely never to have used any form of contraception or, if a birth control method was used, it employed coitus-dependent methods. Increasing age was associated with increased likelihood of having used contraception. Older women, black women, and women on welfare, were all significantly more likely to have used both coitus-dependent and independent methods than were young, white, and non-welfare women (Shepard & Bracken, 1979). Women having a repeat abortion were significantly more likely to have used contraception, especially coitus-independent techniques at the time of present pregnancy (Shepard & Bracken, 1979).

When asked about future contraceptive plans, almost all women intended to improve their contraceptive practice with coitus-independent methods. The pill was mentioned more frequently by both groups but particularly those having first abortions (Shepard & Bracken, 1979).

In any sample of repeat aborters, there will be a number of women who are victims of repeat contraceptive failure (Bracken, Hachamovitch & Grossman, 1972). Research

into the phenomenon of frequent contraception failure has suggested that women who experience constant contraceptive failure, or who use contraceptives erratically or frequently discontinue contraception, show some personality weakness. This includes immaturity, impulsiveness, avoidance of responsibilities, dependency and low levels of interest (Gournds, Davies, & Mowbin, 1970). It should be recognized that even with universal use of the most effective contraceptive methods, unintended pregnancies and abortions would not disappear.

Locus of Control

Rotter (1966) states that when a reinforcement is seen by a person as not being entirely contingent upon his action, but seen as under the control of luck, chance, fate, powerful others, or because of the great complexities of forces surrounding him, we label this a belief in external locus of control. "If the persons perceives that the event is contingent upon his own behavior or his own relatively permanent characteristics, we have termed this belief in internal locus of control" (Rotter, 1966, p. 1).

Strickland (1978), in her review of internal-external expectancies and health related behaviors, concluded that "results of research conducted with various instruments suggest that beliefs about internal versus external control are related in significant and even dramatic ways to health related behaviors" (Strickland, 1978, p. 1192).

Strickland (1978) states that internals, in contrast to externals, would be more sensitive to health messages, would have increased knowledge about health conditions, would attempt to improve physical functioning, and might even, through their own efforts, be less susceptible to physical and psychological dysfunction. According to Rotter, Chance and Phares, 1972, internals will be more likely to take steps to better their environmental conditions than will externals. At least two studies suggest that females who are internal are more likely than externals to practice effective birth control (Lunz, 1972; MacDonald, 1970).

The internal - external variable appears to be a promising one in relation to predicting use of birth control (Strickland, 1978). When internal versus external locus of control was tested among first and repeat abortion patients, women in the repeat abortion group who had not practiced contraception were more likely to have external locus of control (Bracken & Karl, 1975).

Methodology

In the following section, sample description, instrumentation, data collection procedures and data analysis will be described.

Sample Description

The sample for this study consisted of women who went to a private medical clinic in a southeastern city. Services provided at the clinic included: abortions up to 15 weeks, pregnancy testing, Pap smear and birth control counseling, with only cash or major credit cards accepted as payment. All women who went to the clinic for abortion purposes between September 1-31, 1991, were asked to participate. The analysis was conducted only on those women who volunteered for the study and completed the study's questionnaires.

Instrumentation

To collect data to test the study's hypothesis, the following instruments were used:

Rotter's (1966) Locus of Control Test

When a reinforcement is perceived by the subject as following some action of his own but not being entirely contingent upon his action, then, in our culture, it is typically perceived as the result of luck, chance, fate, under the control of

powerful others, or as unpredictable because of the great complexity of the forces surrounding him. When the events are perceived in this way by an individual, they demonstrate beliefs in external control. If the person perceives that events are contingent upon his own behavior or his own relatively permanent characteristics, they demonstrate beliefs in internal control. (Rotter, 1966).

Rotter's (1966) Locus of Control test was developed by Julian B. Rotter as a way to determine whether an individual has external or internal control in regard to their personal belief.

Rotter's instrument is a 29-item, forced-choice, self-administered questionnaire. There are two answers for each question. The participants are asked to select the one answer they actually believe to be more true rather than the one they think they should choose or the one they would like to be true. The questionnaire includes six filler questions intended to make the purpose of the test somewhat ambiguous. The instrument takes approximately 15 minutes to complete. Reliability and validity were established by Bracken and Kasl, (1975) using Locus of Control Score in a similar study.

Another questionnaire was developed by the principle researcher to obtain demographic information, birth control

use, number of pregnancies, and abortion history (see appendix B). It also was a self-administered questionnaire.

Procedures

1. Research arrangements were discussed and agreed upon between the director of the abortion clinic and the principle researcher.
2. The principle researcher attended four weeks at the clinic in order to recruit participants for the study by meeting with incoming patients and providing them with a brief explanation of the proposed study.
3. After the women agreed to participate in the study, a consent form was completed (See appendix A).
4. The participants completed the questionnaire in a waiting area before they received counseling about their abortion.
5. The principle researcher computed all scores from the Rotter Locus of Control questionnaire. A response that indicated external control was given the value 1. A response that indicated internal control was given the value 0. When summed, a higher score would indicate a more externally controlled individual.
6. The principle researcher tabulated the information from the other instrument designed to obtain demographic information: birth control used, number of pregnancies, and abortion history.

7. All data from the Rotter's and researcher's instruments were then entered onto a computer file using the Statistical Package for the Social Science (SPSS/SP+) student software package.

Data Analysis

Variable Coding

The study's outcome variable Locus of Control Score was entered as a continuous variable and was based on the number of external control responses in the twenty-nine questions of Rotter's Locus of Control test. A score closer to zero would indicate more internal control and a score closer to 20 would indicate more external control.

There were several variables considered as extraneous for this study. Age was initially coded as a continuous variable and later coded into three separate groups: group 1, age \leq 19.08 years; group 2, age = \geq 19.08 years to 25.00 years; and group 3, age = $>$ 25.00 years.

Years at risk for pregnancy was first considered a continuous variable, but later coded into three groups: risk group 1 = \leq 6 years; group 2 = $>$ 6 years to 11 years; and group 3 = $>$ 11 years.

The birth control methods indicated by the sample were coded 1 for coitus dependent methods, a code of 2 for coitus independent, and a code of 3 for none. Income was coded as 1 for \$0 - 10,000, 2 for \$15 - 25,000, 3 for \$30 - 45,000 and 4 for \$50,000 or more.

Religion was initially coded into five categories: no religious preference, Catholic, Jewish, Protestant, and other religion. Later religion was coded into the categories of no religious preference and any religious preference. A Tukey's multiple range test was used to show there was no statistically significant difference in mean Locus of Control between any of the religious preference groups.

Respondents having had an abortion in the last five years were coded as 1 for "yes" and 0 for a response of "no". A code of 1 was assigned to respondents who indicated ever having had an abortion and code of 0 for those who never had an abortion.

Ethnic background was coded as 1 for African-American, 2 for white, 3 for Hispanic, 4 for Asian, and 5 for other. Marital status was coded 1 for single, 2 for divorced/separated, 3 for widow, 4 for married, and 5 for living with someone in a relationship other than marriage.

Descriptive Statistical Analysis

Description statistical analyses were used in describing the sample. These analyses included frequencies, means, ranges and standard deviations.

Analytical Statistical Analysis

A one-way analysis of variance (ANOVA) was conducted between the independent variables age, number of pregnancies, numbers of live births, number of previous

abortions, age at first abortion, years at risk for pregnancy, employment, marital status, living situation, birth control used, type of birth control, abortion within five years, repeat abortion, and number of previous abortions and the outcome variable Locus of Control score. All continuous independent variables (age, years at risk) were entered as categorized data as defined above. The purpose of this analysis was to identify factors statistically significantly related to the Locus of Control Score.

A multi-variable model was constructed which included the independent variable repeat abortion with Locus of Control Score as the outcome variable. Extraneous variable factors found significantly related to Locus of Control Score in the above one-way analysis of variance were also included in the model.

Results

Descriptive statistics for the entire sample (N=84) are reported for the study's continuous variables in Table 1, and for the study's categorical variables in Table 2.

Ninety-one women completed the questionnaire with seven requesting to be dropped from the study. The age of the respondents ranged from 14 to 40 years with a mean age of 23 years (2.061) [Table 1]. The number of pregnancies for the entire study population (N=84) ranged from 1-6 (\bar{x} =2.2) [sd=1.265].

The number of live births ranged from 0-4 (\bar{x} =0.823). Age of the first abortion ranged from 12-36 years old with the number of previous abortions ranging from 1-4 (\bar{x} =1.4) [Table 1].

The Rotter's Locus of Control Scores ranged from 0-20 (\bar{x} =9.5, sd=4.145) [Table 1].

Valid percentages were used to report all of the categorical variables. These percentages were based on only the number of respondents who actually answered each question. The sample consisted of 37% (N=31) African-American women, 60.2% (N=50) Caucasian women, 1.2% (N=1) Hispanic women and 1.2% (N=1) Asian women [Table 2].

Regarding marital status, 87.8% (N=72) of the women were either single, divorced, widowed or separated and

Table 1

Mean and Standard Deviation of Selected Continuous Data
(N=84)

<u>Variable</u>	<u>Mean</u>	<u>SD</u>	<u>Range</u>
<u>Age</u>	23.0	6.061	14 - 40
<u>Number of pregnancies</u>	2.2	1.265	1 - 06
<u>Number of live births</u>	0.8	0.944	0 - 04
<u>Number of previous</u>			
<u>Abortions</u>	1.4	0.926	1 - 04
<u>Age at first abortion</u>	22.0	5.605	12 - 36
<u>Years at risk for</u>			
<u>pregnancy</u>	10.0	5.512	2 - 28
<u>Score - Rotter's Locus</u>	9.5	4.145	0 - 20

Note: Refer to definitions for explanation of headings
used in this table.

12.2% (N=10) were married or living with someone in a relationship (Table 2).

Fifty-six percent (N=47) of the women had completed high school with 10.7% (N=9) having a college degree, 10.7% (N=7) having obtained an associate degree, 1.2% (N=1) attended graduate school. Nearly seventeen per cent (16.7%, N=4) had less than a high school diploma with 4.8% (n=4) not responding.

Fifty-four percent (N=44) of the women reported incomes between \$0-10,000; 37.8% (N=31) had incomes between \$14-25,000; 7.3% (N=6) reported incomes of \$40-40,000; and 1.2% (N=1) reported over \$50,000 a year (Table 2).

With regard to employment status, 18.1% (N=15) reported being unemployed, 13.2% (N=11) were higher skilled labor, 13.2% (N=11) were in the service industry, 12.0% (N=10) were health care professionals, 8.5% (N=7) were homemakers, 7.2% (N=6) were in the field of education, 6.0% (N=5) were clerical and 4.8% (N=4) worked for the government [Table 2].

When asked about living situation if not single, divorced, separated, or widowed, 28% (N=14) reported living with both mother and father. Twelve percent (N=6) reported living with mother only and 2% (N=1) lived with father only. Fourteen percent (N=7) reported living with a relative other than a parent and 14% (N=7) reported living with a friend but not in a romantic relationship and 30% (N=15) reported "other".

Fifty-two percent (N=42) of the women reported that they did not use a birth control method for this pregnancy while

Table 2

Frequencies of Selected Categorical Data (N=84)

<u>Variable</u>	<u>Frequency</u>	<u>Percent</u>
<u>Race:</u>		
African-American	31	37.3%
White	50	60.2%
Hispanic	1	1.2%
Other (Korean)	1	1.2%
<u>Education:</u>		
Less than 12th Grade	14	16.7%
High School	47	56.0%
Associate Degree	9	10.7%
Graduate School	1	1.2%
College Degree	9	10.7%
Other	4	4.8%
<u>Religion:</u>		
No Religious Preference	9	10.7%
Jewish	1	1.2%
Protestant	18	21.4%
Catholic	10	11.9%
Other	46	54.8%
<u>Income:</u>		
\$ 0 - 10,000	44	12.0%
\$14 - 25,000	31	37.8%
\$30 - 45,000	6	7.4%
\$50,000 or More	1	1.2%
<u>Employment:</u>		
Health Care Professional	10	12.0%
Clerical	5	6.0%
Homemaker	7	8.4%
Government	4	4.8%
Education	6	7.2%
Services	11	13.2%
Higher Skilled Labor	11	13.2%
Unemployed	15	18.1%
Professional	7	8.4%
Wholesale/Retail Trade	7	8.4%

(table continues)

<u>Variable</u>	<u>Frequency</u>	<u>Percent</u>
<u>Marital Status:</u>		
Single	42	51.2%
Divorced/Separated	12	14.6%
Widowed	0	0.0%
Married	18	30.0%
Not Married/living with someone	10	12.2%
<u>Type of Birth Control</u> <u>Usually Preferred:</u>		
Coitus - Dependent	30	35.7%
Coitus - Independent	34	40.5%
No response	27	23.8%
<u>Was Birth Control Used</u> <u>For this Pregnancy:</u>		
Yes	39	48.1%
No	42	51.9%
<u>Abortion Within 5 Years:</u>		
Yes	21	26.9%
No	57	73.1%
<u>Repeat Abortion:</u>		
Yes	22	26.8%
No	60	73.2%
<u>Number of Previous Abortions:</u>		
1 only	16	76.2%
2-3	3	14.3%
4 or more	2	9.5%
<u>Living Situation</u> <u>if Not Married:</u>		
Living with mother and father	14	28.0%
Living with mother	6	12.0%

(table continues)

Living Situation
if Not Married:

Living with father	1	2.0%
Living with friend/ roommate (not relative)	7	14.0%
Living with relative other than parent	7	14.0%
Other	15	30.0%

Note: Refer to definitions for explanation of headings
used in this table.

48.1% (N=39) did use birth control. For this pregnancy, coitus-dependent methods were used by 69.2% (N=27) of the women while 30.8% (N=12) used coitus-independent methods.

Thirty-seven percent (N=31) of the participants reported that this pregnancy was their first pregnancy, 22.6% (N=19) the second pregnancy and 20.2% (N=17) the third pregnancy with 20% (N=17) reporting their 4th to 6th pregnancies. The number of living children ranged from 0 to 9 with 45.2% (N=38) reporting no living children and 25.0% (N=21) having at least one, and 30% (N=25) reporting between 2-4 living children. Seventy-two percent (N=60) reported this was their first abortion, for 26.8% (N=22) this was a repeat abortion.

When asked if they had an abortion within the last five years, 73.1% (N=57) reported no and 26.9% (N=21) answered that they had. Seventy-six percent (N=16) of the women reporting an abortion in the last five years had only one abortion, 14.3% (N=3) had two abortions and 9.5% (N=2) had four abortions.

A univariant analysis was conducted to evaluate the effects of the variables, race, education, religious preference, income, marital status, birth control method used, birth control type and repeat abortion on the outcome variable locus of control score (N=82). Significant differences were observed between repeat abortion ($p=0.0024$), income ($p=0.001$), religion preference ($p=0.003$)

and Rotter's Locus of Control Score (Table 3). The results (Table 3) indicated that women who had repeat abortions, middle/higher income, or had no religious preference had higher mean scores for Locus of Control Score which implies their Locus of Control was more externally oriented.

To further examine the relationship between Locus of Control score and repeat abortions, a multi-variable (ANOVA) model was constructed to control for the effects of income, religion, and age group. In this analysis, repeat abortion was no longer significantly related ($p=.450$) to Locus of Control score. However, income and religious preference remains significant ($p=0.050$ and 0.024 , respectively) factors. Age group was not a significant factor ($p=0.798$).

A further analysis was done to explore why the repeat abortion variable was no longer significant in the multi-variable model. The results of a chi-square analysis to examine the relationship between income and repeat abortion showed that women with middle/higher incomes tend to have repeat abortions in this sample ($p=.001$) (Table 4). However, a similar analysis examining the relationship between repeat and religious preference (dichotomus variable) was not significant ($p=.04916$).

Table 3

One Way (ANOVA) Analysis to Assess the Relationship
Between Study Factor and Locus of Control Score

<u>Factor</u>	<u>(N)</u>	<u>Rotter's Mean Score</u>	<u>STD</u>	<u>P-Value</u>
<u>Race</u>				
African-American	31	10.03	4.17	.170
White	50	9.04	4.09	
Hispanic	1	16.00	.00	
<u>Education</u>				
Less than High School				
High School	14	9.64	3.32	.415
Associate Degree	47	9.93	4.13	
Graduate School	9	8.11	5.40	
College Degree	1	3.00	.00	
Other	9	8.33	4.53	
	4	10.75	2.06	
<u>Income</u>				
\$0 - 10,000				
\$14 - 25,000	44	11.00	3.62	.001*
\$30 - 45,000	31	8.45	4.05	
\$50,000 or More	6	4.84	4.02	
	1	10.00	.00	
<u>Marital Status</u>				
Single				
Divorced/ Separated	42	9.67	3.68	.603
Widowed	12	9.42	4.44	
Married	0	0.00	N/A	
Living with someone in relationship	18	8.89	4.58	
	9	19.40	28.45	
<u>Birth Control Generally Used</u>				
Yes				
No	39	9.46	4.27	.089
No Answer	42	11.59	14.43	
	3	9.66	1.53	
<u>Birth Control Method</u>				
Coitus-Dependent				
Coitus-Independent	30	9.03	4.65	.998
None Used	34	10.82	3.61	
	16	7.00	3.26	

(table continues)

<u>Factor</u>	<u>(N)</u>	<u>Rotter's Mean Score</u>	<u>STD</u>	<u>P-Value</u>
<u>Abortion Within Past 5 Years</u>				
Yes	20	9.00	4.40	.514
No	57	9.72	4.15	
<u>Age</u>				
< 19 years	25	10.06	3.15	.196
19.09 - 25.0 years	31	9.23	4.76	
> 25 years	19	8.42	8.42	
<u>Years at Risk Grouping</u>				
Years <6	15	10.67	3.20	.055
Years >6 and <11	16	10.00	4.62	
Years >11	13	7.08	4.02	
<u>Repeat Abortions</u>				
Yes	22	7.77	7.77	.024*
No	61	10.08	10.08	
<u>Religious Preference</u>				
No Preference	8	13.50	2.61	.0003*
Any Preference	75	9.04	4.05	

Note: Refer to definitions for explanation of headings
used in this table.

*p < .05

Table 4
Chi-Square Analysis of the Relationship between
Income and Repeat Abortion (N=82)

<u>Income (\$)</u>	<u>Repeat Abortion</u>		<u>P-value</u>
	<u>Yes, N(%)</u>	<u>No(N%)</u>	
\$0 - 10,000	4 (19)	40 (66)	0.001*
\$14 - 25,000	14 (67)	7 (28)	
> \$30,000**	4 (18)	4 (7)	

Note: Refer to definitions for explanation

of headings used in this table.

* $p \leq .05$

**The sample's one individual who made \$50,000 or more was
 combined with the \$30 - 45,000 group.

Discussion

The goal of this study was to obtain a better understanding of abortion recidivism. The purpose was to examine the correlation between scores on Rotter's Locus of Control Test and women obtaining their first abortion versus women repeating the procedure.

Statistical analysis initially revealed repeat abortion, religious preference and income to be significantly related to Locus of Control score. However, after adjusting for income, repeat abortion was no longer significantly related. The findings from this study indicate that only income and religious preference were found to be significantly related ($p \leq 0.05$) to Locus of Control Score.

Income was found to be significantly related to both Locus of Control score and repeat abortion status. Therefore, for this sample, lower income women were having fewer abortions than expected as well as having a more internal Locus of Control. This result is just the opposite of what was expected. In this study, women of middle/high income tend to have more repeat abortions and a more external locus of control.

Since women in this study who obtained an abortion paid with cash or credit card, the cost of abortions may be

an important barrier for low income women, explaining the lower rate of abortion in lower income women. Women who were middle/higher income possibly can afford to pay the fee for an abortion in comparison to lower income women who may find the fee a financial burden. With low income women having fewer abortions, they may have more live births due to a lack of funds, possibly forcing many low-income women to go on welfare.

In a report by Henshaw and Silverman, 1988, the absence of medicaid funding for abortion services appears to prevent some women from obtaining such services. The abortion rate of women covered by medicaid was about three times that of women not covered. Another study on this subject found that about 20 percent of women who would have obtained a medicaid-funded abortion, had funding been available, carried their unwanted pregnancies to term in the absence of funding. (Torres, Donovan, Ditters & Furrent, 1986).

Public and Government expenditures for funding abortions shows that if access to publicly funded abortions were available to indigent women who wished to obtain them, federal and state medicaid and social welfare expenditures of \$435-\$540 million would be saved in the following two years. Thus, for every public dollar spent to pay for abortions for low-income women, more than four dollars is saved in medical and social welfare costs over the next two

years. (Torres, Donovan, Ditters & Furrent, 1986). Nonetheless, anti-choice or "pro-life" forces have been powerful enough to stop most federal and state medicaid funding of abortions for poor women.

The present study found that of the women choosing to have an abortion, lower income women have more of an internal locus of control than women of middle/higher incomes. One assumption could be made that abortion may be more acceptable among women with middle/higher income than lower-income women.

In a study by Segal and Dulett (1973), which reported that middle-class white high school females who became pregnant were more external in locus of control than lower class, black high school females who became pregnant. At the time of this study (1973), in the upper-class group, pregnancy might have been an undesirable event, and internal students would have been expected to take precaution against pregnancy. Pregnancy may have been more acceptable among the lower class group and for some students might even have been a source of pride and success (Strickland, 1978).

In conclusion, Congress and State Legislatures have fought over proposals which outlaw or sharply curtail abortion bills that would require spousal or parental consent in federally and state funded abortions for poor women. With 1992 being an election year, politicians are

torn between voters and groups either "pro-choice" or "pro-life".

One might predict the abortion rate will continue to increase if more sex education is not taught in high schools along with the pros and cons of available contraceptive methods. Abortion facilities must give special attention via thorough counseling to women with no prior contraceptive use and particularly to those women repeating the procedure. Finally, further research is needed to clarify exactly why lower income women having a more internal locus of control tend to have fewer abortions than middle/high income women with a more external locus of control.

APPENDIX A

Instructions for Questionnaire #1

This questionnaire is about the way certain important events affect different people. Beside each number are two statements with the letters A & B beside them. Please select the one statement of each pair which you more strongly believe to be true. Be sure to select the one you actually believe to be more true, rather than the one you think you should choose or the one you would like to be true. There are no right or wrong answers. Select your answer by circling either A or B. Remember select only A or B for each number. In some cases you may find that you believe both statements, or neither one. If that's the case, be sure to select the one you more strongly believe.

QUESTIONNAIRE A

NAME: _____

1. A. Children get into trouble because their parents punish them too much.
B. The trouble with most children nowadays is that their parents are too easy on them.
2. A. Many of the unhappy things in people's lives are partly due to bad luck.
B. People's misfortunes result from the mistakes they make.
3. A. One of the major reasons why we have wars is because people don't take enough interest in politics.
B. There will always be wars, no matter how hard people try to prevent them.
4. A. In the long run people get the respect they deserve in this world.
B. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.
5. A. The idea that teachers are unfair to students is nonsense.
B. Most students don't realize the extent to which their grades are influenced by accidental happenings.
6. A. Without the right breaks one cannot be an effective leader.
B. Capable people who fail to become leaders have not taken advantage of their opportunities.
7. A. No matter how hard you try some people just don't like you.
B. People who can't get others to like them don't understand how to get along with others.
8. A. Heredity plays the major role in determining one's personality.
B. It is one's experiences in life which determine what they're like.

9. A. I have often found what is going to happen will happen.
B. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.
10. A. In the case of the well-prepared student, there is rarely, if ever, such a thing as an unfair test.
B. Many times exam questions tend to be so unrelated to course work that studying is really useless.
11. A. Becoming a success is a matter of hard work, luck has little or nothing to do with it.
B. Getting a good job depends mainly on being in the right place at the right time.
12. A. The average citizen can have an influence in government decisions.
B. This world is run by the few people in power, and there is not much the little guy can do about it.
13. A. When I make plans, I am almost certain that I can make them work.
B. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.
14. A. There are certain people who are just no good.
B. There is some good in everybody.
15. A. In my case getting what I want has little or nothing to do with luck.
B. Many times we might just as well decide what to do by flipping a coin.
16. A. Who gets to be the boss often depends on who was lucky enough to be in the right place first.
B. Getting people to do the right thing depends upon ability, luck has little or nothing to do with it.
17. A. As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.
B. By taking an active part in political and social affairs the people can control world events.

18. A. Most people don't realize the extent to which their lives are controlled by accidental happenings.
B. There really is no such thing as "luck".
19. A. One should always be willing to admit mistakes.
B. It is usually best to cover up one's mistakes.
20. A. It is hard to know whether or not a person really likes you.
B. How many friends you have depends upon how nice a person you are.
21. A. In the long run the bad things that happen to us are balanced by the good ones.
B. Most misfortunes are the result of lack of ability, ignorance, laziness or all three.
22. A. With enough effort we can wipe out political corruption.
B. It is difficult for people to have much control over the things politicians do in office.
23. A. Sometimes I can't understand how teachers arrive at the grades they give.
B. There is a direct connection between how hard I study and the grades I get.
24. A. A good leader expects people to decide for themselves what they should do.
B. A good leader makes it clear to everybody what their jobs are.
25. A. Many times I feel that I have little influence over the things that happen to me.
B. It is impossible for me to believe that chance or luck plays an important role in my life.
26. A. People are lonely because they don't try to be friendly.
B. There's not much use in trying too hard to please people, if they like you, they like you.
27. A. There is too much emphasis on athletics in high school.
B. Team sports are an excellent way to build character.

28. A. What happens to me is my own doing.
B. Sometimes I feel that I don't have enough control over the direction my life is taking.
29. A. Most of the time I can't understand why politicians behave the way they do.
B. In the long run the people are responsible for bad government on a national as well as on a local level.

APPENDIX B

QUESTIONNAIRE B

1. Age _____
2. Race (circle one)
 1. African-American
 2. White
 3. Hispanic
 4. Asian
 5. Other
3. Completed Education (circle one)
 1. Less than 12th grade in high school
 2. High School
 3. Associate Degree
 4. Graduate School
 5. College Degree
 6. Other
4. Religious Group (circle one)
 1. No religious preference
 2. Jewish
 3. Protestant
 4. Catholic
 5. Other
5. What county do you live in? _____
What is your zip code? _____
6. What is your income for 1990? (circle one)
 1. \$0 - 10,000
 2. \$15 - 25,000
 3. \$30 - 45,000
 4. \$50,000 or more
7. Nature of employment (circle one)
 1. Health Care Professional
 2. Clerical
 3. Homemaker
 4. Government
 5. Education
 6. Services

- 7. High-skilled Labor
- 8. Unemployed
- 9. Professional
- 10. Wholesale/Retail Trade

8. Marital Status (circle one)

- 1. Single
- 2. Divorced/Separated
- 3. Widowed
- 4. Married
- 5. Living with someone in a relationship

In question 8 above, if you circled 1, 2 or 3 answer question 9.

9. Circle the category(s) below that best describes your current living situation:

- 1. Living with mother and father. (This includes adopted and foster parents.)
- 2. Living with mother only.
- 3. Living with father only.
- 4. Living with a relative other than parent.
- 5. Living with a friend/roommate (not a relationship).
- 6. Other _____.

10. What type of birth control do you generally use: (circle one)

- 1. Coitus-dependent (diaphragm, sponge, condoms, cream, foam, douche, rhythm, withdrawal).
- 2. Coitus-independent (pill, IUD).
- 3. None.

11. For this pregnancy were you using a birth control method?

Yes _____ No _____

If you answered yes: What type were you using?

- 1. Coitus-dependent (diaphragm, sponge, condoms, cream, foam, douche, rhythm, withdrawal).
- 2. Coitus-independent (pill, IUD).

12. Number of pregnancies _____.

Number of living children _____.

13. Have you had an abortion in the past 5 years not including this abortion?
- Yes _____ No _____
- a. If you answered yes, give the number of previous abortions _____.
- b. At what age did you have your first abortion? _____
- c. Not including this abortion, in what month and year did you have your last abortion? _____
14. Give the year or age when you started menses _____.

APPENDIX C

CONSENT FORM

I agree to participate in this study. I have received information concerning this study and understand that all information will be kept confidential.

References

- Anonymous (1979). Repeated Abortions Increase of Miscarriage, Premature Births and Low Birth Weight Babies. Family Planning Perspectives, 22 (2), 39-40.
- Anonymous (1988). Abortion as a Contraceptive. Newsweek, 6, (13), 71.
- Berger, C., Gold, D., Andres, D., Gillet, D., and Kinch, R. (1984). Repeat Abortion: Is it a Problem? Family Planning Perspectives, 15 (2), 70-75
- Bracken, M.B., MPH, Hachamovitch, M. and Grossman, G. (1972). Correlates of Repeat Induced Abortions. Journal of Obstetrics and Gynecology, 40, (6), 816-825.
- Eiberstadt, N. (1988). The Deadly Years. National Review, 4, 42.
- Freeman, C. W., Rickels, K., Huggins, G. R., Garcia, C. R. and Polin, J. (1980) Emotional Distress Pattern Among Women Having a First and Repeat Abortions. Journal of Obstetrics and Gynecology, 55 (5), 630-636.
- Gold, R. and Macias, J. (1986) Public Funding of Contraceptive Sterilization and Abortion Services, Family Planning Perspectives, 17, (25) 260-264.
- Henshaw, S.K. and Silverman, J. (1988). The Characteristics and Prior Contraceptive Use of V.S. Abortion Patients. Family Planning Perspectives, 20, (4), 158-158.
- Henshaw, S.K. and Wallisch, L.D. (1984). The Medicaid Cutoff and Abortion Services for the Poor. Family Planning Perspectives, 16, (4), 170-180.
- Rotter, J.B., (1966). Generalized Expectancies for Internal Versus External Control of Reinforcement. Psychological Monograph: General and Applied, 80, (1), 1-27.
- Rotter, J.B., (1975). Some Problems and Misconceptions Related to the Construct of Internal Versus External Control REinforcement. Journal of Consulting and Clinical Psychology, 43 (1), 56-67.

- Savannah Women's Clinic (medical record review, 1988-1989).
- Shepard, M.J. and Bracken, M.D. (1979). Contraceptive Practice and Repeat Induced Abortions: An Epidemiological Investigation. Journal of Biosocial Science, 11, 289-302.
- Steinhoff, P.C., Smith,, R.G., Palmore, J.A., Diamond, M. and Chung, C.S. (1979). Women Who Obtain Repeat Abortions: A Study Based on Record Linkage. Family Planning Perspective, 11, (1), 30-38.
- Strickland, B.R. (1978). Internal-External Expectancies and Health Related Behavior. Journal of Consulting and Clinical Psychology, 46, 1192-1211.