BELIEFS ABOUT THE FETUS AS A MODERATOR OF POSTABORTION ADJUSTMENT

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Table of Contents

ABSTRACT

The purpose of this study was to determine whether women who have had abortions report different levels of well-being than women who have not had abortions, and to examine the possible moderating effect of perceived status of the fetus. We hypothesized that women who have had abortion(s) and who believe the fetus is human will have a more difficult postabortion adjustment than women who believe the fetus is less than human. We also hypothesized that women who have had abortions would consider maternal-related facets of their self-concepts less important than would women who have not had abortions in order to preserve their self-esteem.

Subjects were obtained through physician's offices and were categorized into three pregnancy history groups: the Abortion Group (N=132), the Never Pregnant Group (N=209), and the Other Outcomes Group (N=476). The scales used to measure well-being were: The Satisfaction with Life Scale, Rosenberg's Self-Esteem Scale, The Positive and Negative Affect Schedule, and a scale measuring 12 specific facets of the self-concept. The Beliefs About the Fetus Scale, devised by the authors, measured the women's perceived status of the fetus. It was found that women in the Abortion group reported slightly lower well-being than women in the Other Outcomes Group. It was also found that women who have had abortions and who tended to believe the fetus was human scored lower on measures of well-being than the women who tended to believe the fetus was not human, whereas the women who did not believe the fetus was human were no different on the well-being measures than the other two groups. The implications of these findings and their relationships with previous research findings are discussed.

Beliefs About The Fetus as a Moderator of Postabortion Adjustment

There has been a steady increase in the number of induced abortions in Canada. For example, 11,200 women had abortions in 1970 whereas 66,251 women had abortions in 1988. There was a decrease of 728 abortions from 1980 to 1981 and a decrease of 4,519 from 1982 to 1983, but from 1983 to 1988 abortions increased steadily again (Statistics Canada,1990). Peppers (1987-1988) reports that approximately 1.5 million abortions are conducted annually in the U.S.

In view of the large number of abortions that are performed and the fact that the effects of abortion on mental health are unclear, further study seems required. In this paper the term "mental health" will be used to refer to general psychological adjustment, including cognitive, emotional, sexual, and social aspects of the individual. The term "fetus" will be used to refer to all stages of development before birth.

Mental Health Consequences of Abortion

Recent reviews of the literature have concluded that there are rarely negative psychological aftereffects of abortion (Adler et al., 1992; Blumenthal, 1991; Minden and Notman, 1991), The U.S. Surgeon General Koop (1989a, January 9), after reviewing over 250 articles pertaining to the health risks of abortion, found that most studies conclude that the majority of women respond positively to their abortions but that a number of other studies contradict this general finding.

The results of Adler's (1975) factor analysis study suggests that emotional responses to abortion do not fall along a simple positive-negative dimension. She found positive emotions (e.g., happiness, relief) were experienced most strongly two to three months

following the abortion. Of the two negative emotion factors, internally-based emotions (e.g., regret, anxiety, depression, doubt, anger) were felt more strongly than socially based-emotions (e.g., shame, guilt, fear of disapproval). A similar mixture of positive and negative emotions was reported by Lazarus (1985) and Margolis, Davison, Hanson, Loos and Mikkelsen (1971). While 44% of Miller's (1992) sample reported feeling only relieved, 38% indicated that they felt relief mixed with distress. While most women will admit to a small amount of negative affect postabortion, Kummer (1963), Shusterman (1976), Brekke (1958) and Ashton (1980) report that for most women, these effects are not serious and are temporary. Some researchers have gone so far as to say that abortion does not affect women at all (Smith, 1973; Notman, Kravitz, Payne et al. , 1972; Olson, 1980; Kretzschmar & Norris 1967; Ford, Castelnuovo-Tedesco & Long, 1972; Ashton,1980).

However, other studies suggest that a considerable number of women display significant negative responses to their abortions (Friedman, Greenspan & Mittleman, 1974; Ashton, 1980, Reardon, 1987; Speckhard, 1987b). Talan and Kimball's (1972) sample of women referred to abortion as a necessary act that was not taken lightly and that had negative emotional effects of varying intensity. Over one-quarter of Burnell, Dworsky and Harrington's (1972) sample indicated a need for psychotherapy after abortion. Reardon (1987) reported that up to 10% of the women in his study required psychiatric hospitalization or other professional treatment. They reported that the abortion led to an intense emotional crisis that reactivated underlying conflicts about femininity, motherhood, self-esteem, self-control and rejection. Similarly, Bolter (1962) attributes post-abortion emotional disturbance and guilt to interference with the woman's role as childbearer and childrearer.

Potential physical complications of the abortion procedure are often not considered as contributors to the problems felt by women after their abortions. It has been found that miscarriage, cervical incompetence, bleeding, premature delivery, ectopic pregnancy and postpartum complications double when the woman's first pregnancy is aborted (Dalaker, Lichtenberg & Okland, 1979; Mitteilung, Schott, Ehrig & Wulff, 1980). Ney and Wickett (1989) have therefore predicted that with the increased use of abortion, more women will be distressed in subsequent pregnancies. Women who have abortions seem to be aware of this possibility. Ashton (1980) found that most of his subjects consulted a general practitioner after their abortions, with one-third being worried about sterility, mental health, fetal abnormality in future pregnancies, weight gain and fear the pregnancy might not have been completely aborted.

The literature on postabortion depression, grief and regret puts into question the widely held impression that women are not negatively affected to any significant extent. The following three sections lend support to this hypothesis.

Depression. While the majority of studies downplay or report few negative reactions to abortion, in some lists of the immediate effects of abortion the number of patients reporting feelings of "relief" and "well being" nearly equaled the number designated as having depression (Ford, Castelnuovo-Tedesco & Long, 1971; Levene & Rigney, 1970; Pion, Wagner, Butler & Fujita, 1970; Wallerstein, Kurtz & Bar-Din, 1972; Ewing & Rouse, 1973; Blumberg, Golbus & Hanson, 1975). Kumar and Robson (1978) found significantly more women who had had a previous abortion, as compared to those who had not had a previous abortion, became depressed during pregnancy with a subsequent wanted child.

Grief. The postabortion grief literature also suggests mixed postabortion reactions. Several researchers have proposed explanations for grief reactions to abortion. Peppers (1987-

1988) suggests that some women experience a minimally dysfunctional grief reaction while others suffer greatly, and that the intensity of the reaction is associated with the length of the pregnancy. Bernstein and Tinkham (1971) disagree, saying that grief will occur regardless of the infant's size or weight and that it is the interruption of an important psycho-biological event which brings on grief reactions. The importance of postabortion grief was suggested by Klaus and Kennel, (1976); Wright and Zucker, (in press); and Wright (1977).

Ney (1983) attributed difficulties in postabortion mourning to the woman's "contribution" to the death of the lost person. Lloyd and Laurence (1985) attributed postabortion grief to the lack of recognition of the baby and the death of the baby, and by the silence which a woman frequently meets after her abortion.

Kent, Greenwood, Loeken and Nicholls (1978) studied fifty postabortive women in psychotherapy whose presenting problems were not reactions to their abortion. They found that while recovering from their presenting problem, the women expressed feelings of pain and a sense of bereavement and mourning for the "child who should have been born". Rational considerations (e.g., "the abortion had been almost unavoidable") held by most of the women seemed to have reinforced the blocking of deeper feelings, and to prevent their emergence into consciousness at an earlier stage. Similarly, Speckhard (1987b) found that the women interviewed in her study expressed surprise at the intensity of the grief uncovered by therapy. Her clients used a great deal of denial, repression and projection in dealing with the stress of their pregnancies and subsequent abortions. They also described high degrees of boundary ambiguity with respect to the aborted fetus and maintained an ongoing high level of attachment to the fetus despite its loss.

The grief literature provides provocative insight into the psychological reactions to

abortion. While it has often been found that women react positively after abortion, the grief literature questions these general positive reactions. Most studies have looked at the immediate or short-term reactions to abortion, and usually by means of a questionnaire. However, many of the studies on postabortion grief were interviews of therapy patients, and tended to be long-term follow-up studies, which might explain the different findings.

Regret. The prevalence of postabortion regret has been questioned. Several studies have found that most women do not regret their abortions (Lask, 1975; Greer et al., 1976, Smith,1973), while other studies indicate that some women do feel regret, and others do not, (Burnell & Norfleet, 1987; Ashton, 1980; Hamilton, 1941). Miller (1992) found that women who have a traditional female role orientation enjoy being pregnant, want to have a baby to take care of and love, are ambivalent about their abortion decision, and are emotionally upset during the first few postabortion weeks. Peck and Marcus (1966), Senay (1970) and Simon, Senturia and Rothman (1967) found that women felt a mild to moderate degree of guilt, regret or remorse following their abortions which diminished over time. Kent et al. (1978) noted profound regret in their sample.

Severe Complications of Abortion. Some women experience more severe reactions to abortion. For example Reardon (1987) cited that no less than 90% of women experience moderate to severe emotional and psychiatric stress following an abortion. Adler et al. (1990) on the other hand, suggests that most women do not experience severe negative reactions to abortion. The proportion of women who suffer serious psychiatric complications related to abortion is approximately 10% (Ashton, 1980; Friedman, Greenspan & Mittleman, 1974). Some of these complications of abortion are: conversion disorder (Tollefson, 1983), anniversary reactions (Cavenar, Maltbie & Sullivan, 1978; Buckles, 1982; Tishler, 1981; Stone Joy, 1985;

Reardon, 1987), post-traumatic stress disorder (Lemkau,1988; Speckhard & Rue, 1992; Barnard, 1990; Selby, 1990; Vaughan, 1991), severe neurosis in the form of obsessive-compulsive behavior (Lipper & Feigenbaum, 1976), psychotic decompensation (Spaulding & Cavenar, 1978; Ford et al., 1971; Lask, 1975; Wallerstein, Kurtz & Bar-Din, 1972; Brewer, 1977; Blumberg et al., 1975 and Sim & Neisser, 1979), suicide (Jansson, 1965; Tishler, 1981) and suicidal ideation (Reardon, 1987; Speckhard, 1987b, Vaughan, 1991). Even though only a minority of the total population of women who have abortions suffer from severe complications, these women remain an important group of patients because induced abortions are now very common and are increasing.

David (1973), Simon, Senturia and Rothman (1967) and Meyerowitz, Satloff and Romani (1971) report that when extreme reactions to abortion occur, they are generally associated with problems existing prior to the abortion. Similarly, women who have mental health problems prior to their abortions are considered at risk for problems after their abortions.

Psychosocial Well-Being After Abortion

So far women's emotional reactions to abortion have been discussed. These reactions (whether positive and/or negative) will most likely affect their psychosocial well-being, which is the next topic of discussion.

A woman's sexual, social, interpersonal, occupational and sometimes religious life are included under the label of "psychosocial" being. The woman's social activities (Ashton, 1980; Barnes, Cohen, Stoeckle & McGuire, 1971; Burnell et al., 1972), work (Ashton, 1980; Greer et al.,1976; Barnes et al., 1971; Smith, 1973), religious attitudes (Barnes et al.,1971), are all found to be little affected by the abortion experience. Reardon (1987) however reported that 1%

to 2% (15,000-30,000) women per year in the U.S. suffer such trauma as to render them unable to work.

The research on interpersonal and sexual relationships following abortion has yielded varying results. While some studies have shown that positive changes have taken place in relationships after abortion (Greer et al., 1976; Burnell & Norfleet, 1987), others have reported detrimental effects of abortion on interpersonal relationships (Smith, 1973; Jansson, 1965). In terms of sexual relations, it has been found that while some women complain of problems in their sexual relations and/or complain of sexual dysfunction postabortion (Kenyon, 1969; Friedman et al., 1974), others find no change or positive changes in their sexual relations postabortion (Patt, Rappaport & Barglow, 1969; Burnell & Norfleet, 1987).

The literature on the psychosocial well-being of women postabortion is similar to other literature on responses to abortion: the research generally leads us to believe that women are little affected by the abortion experience, but there is some evidence which indicates that some women experience considerable distress after their abortions.

At Risk Populations

The following is a list of populations who have been found to be at risk for negative reactions to abortion:

1) adolescents (Adler, David, Marecek, Melton, Morris, Russo, Scott,Weithorn &Wells,1987),
2) women who fall between the ages of 21 and 30 (Lask, 1975); 25 to 29 year olds (Jansson, 1965),
3) foreign-born women (Lask, 1975),

4) women who express a moderate or strong degree of ambivalence towards termination (Lask, 1975, Payne et al., 1976; Friedman et al., 1974),

5) women whose personal relationships are fixated at an immature level (Payne, Kravitz, Notman & Anderson, 1976),

6) women who find themselves in an unstable, conflictual relationship with their lovers (Payne et al., 1976),

7) women who have had a history of negative relationships with a lover (Payne et al, 1976),

8) women who were deserted by their partner (Lask, 1975),

9) unmarried women (Jansson, 1965; Smith, 1973; Brody, Meikle, & Gerriste 1971; Adler, 1975),

10) married women with children (Gebhard, 1958; Kopp, 1934; Pedkham, 1936; Stix, 1935; Niswander & Patterson, 1967),

11) women who fail to consciously inhibit fantasies of the fetus (Senay, 1970),

12) women who feel their decision to abort was not their own (Friedman et al., 1974),

13) women who make the decision to abort alone (Moseley, Follingstad & Harley, 1981),

14) women who are persuaded to abort against their initial wishes (Bracken, Klerman & Bracken, 1978); women who are coerced into having an abortion (Friedman et al., 1974),

15) women who have low levels of perceived social support from important others (Major & Cozzarelli, 1992),

16) women whose parents oppose the abortion and peer group opposition to the abortion (Moseley et al.,1981),

17) women who have a positive attitude toward the pregnancy (Sclare, & Geraghty, 1971; Ashton, 1980),

18) women who are Catholic or women who are 'religious' (Adler, 1975; Osofsky & Osofsky, 1972; Payne et al., 1976), women who attend church frequently (religiosity) (Adler, 1974),

19) women who delay seeking their abortion (Bracken & Kasl, 1975; Kaltreider, 1973),

20) women who undergo particular kinds of abortion procedures (such as saline abortions) (Olson, 1980; Kereeny, Glascock & Horowitz, 1973; Tietze & Lewit, 1973; Potts, Diggory, & Peel, 1977; Kaltreider, Goldsmith, & Margolis, 1979; Marder, 1970; Pahl & Lundy, 1979),

21) women who have an abnormal personality structure (Sclare & Geraghty 1971),

22) women with a history of mental health problems (Doane & Quigley, 1981; Ashton, 1980; Sim & Neisser, 1979),

23) nulliparous women (Bracken, 1978),

24) women who have abortions for genetic or medical reasons (Blumberg et al., 1975; Donnai, Charles, & Harris, 1981; Jorgensen, Uddenberg, & Ursing, 1985; Rayburn & Laferla,1986; Fletcher, 1983; Sclare & Geraghty, 1971),

25) women who blame their pregnancies on themselves (Major & Cozzarelli, 1992),

26) women who have low preabortion coping expectancies (Major & Cozzarelli, 1992).

Before/After Studies

So far a general description of postabortion mental health has been presented, specific psychological reactions to abortion have been discussed, and those groups of women who are

more vulnerable to negative responses to the abortion experience have been noted. This section describes studies which have specifically compared the mental state of women just before the abortion to their mental state following the abortion.

The before/after studies consistently report a decrease in psychological conflict from the time the woman finds out she is pregnant to the time after the procedure. For example, there is a decrease in anticipatory distress (Cohen & Roth, 1984), a decrease in feelings of desperation (Smith,1973), a decrease in feelings of anger, anxiety, depression, guilt and shame, (Payne et al.,1976), and a decrease in the severity of depression from before to after the abortion (Greer et al.,1976).

Several studies have compared pre- and post- abortion MMPI scores. Results suggest similar conclusions to the above findings, i.e., that there is a reduction in psychological conflict from before to after the abortion. Brody et al. (1971) found abortion applicants to show a marked degree of psychological disturbance pre-abortion as compared to a control group of women at the same stage of pregnancy. Postabortion, there was a large decline in psychopathology in the experimental group. Preoperatively, Margolis et al. (1971) found abnormal elevations on MMPI scales predicting depression, psychopathic deviation and schizophrenia; postabortion, the scores on these scales went down to normal for half of the sample. Similarly, Niswander, Singer and Singer (1972) found that while the post abortion tests showed a significant reduction in stress for abortion patients, this group was more depressed and generally less well-adjusted than the control group. The woman's mental health postabortion in these before/after studies is not surprising given the disturbing situation (unwanted pregnancy) they were experiencing. These studies confirm that an unwanted pregnancy is distressing, and that the distress of the unwanted pregnancy is somewhat relieved

when women have an abortion. However, different results on the effects of abortion might be found if a woman's pre-pregnancy mental health were compared with her postabortion mental health both in the short-term and the long-term. This would allow researchers to look at the impact of abortion unclouded by the initial relief reaction.

The next section is a discussion of the problems and limitations of the studies that have been conducted on the mental health effects of abortion.

Problems With Previous Research

The quality of the studies done on the mental health effects of abortion has been questioned. Peppers (1987-1988) suggests that the literature on the social, emotional and psychological after-effects of elective abortion can best be characterized as relatively unsystematic and methodologically questionable. Gibbons (1984) reports that considerable variation exists in the findings as a result of the methodology, analysis and interpretation of the studies. Lazarus and Stern (1986) and Ney and Wickett (1989) found early studies to be biased and tended towards selective recall of unusual or outstanding cases. They also found that psychoanalytic studies were limited by small sample size, difficulty in evaluating and validating patient data, and by the subjective nature of the investigations.

Doane and Quigley (1981) and Ney and Wickett (1989) report that less than half of the articles on therapeutic abortion state exactly how many subjects were observed, and less than 10% of the published studies reported in the literature made use of control or comparison groups. Other problems have included selection of the sample and lack of attention to the psychiatric status of the abortee (Simon & Senturia, 1966). In not more than 10% of the studies were detailed or precise comparisons made of patients symptoms before and after

abortion (Ford et al., 1971; Greer et al., 1976; Lask, 1975; Barnes et al.,1971; Simon et al., 1967; Ewing & Rouse 1973; Jacobs, Garcia, Rickels, & Preucel, 1974; LeRoux, Barnes, Gottesfeld, West, & Tolch, 1970). The definitions of psychological symptoms experienced by patients have been unclear (Doane & Quigley, 1981), and the time between abortion and follow-up has not been considered in many studies (Ney & Wickett, 1989; Simon & Senturia, 1966).

In sum, past research findings on postabortion adjustment have been mixed, with some studies reporting positive or no reactions to the procedure, other studies reporting considerable negative effects, and still others both of positive and negative reactions. The present study will attempt to account for the varying reactions to abortion by examining the possible moderating effects of Beliefs about the Fetus.

Beliefs about the Fetus

The more important something is to a person the greater the "grief" there should be when it is lost. It is therefore possible that a woman's beliefs about the status of the fetus will affect her postabortion adjustment. For example, if she takes little notice of the fetus (i.e. "it is merely a glob of tissue"), then the woman may not feel any negative effects after an abortion. However, if she believes the fetus to be a human being then her postabortion adjustment may be more difficult. It is hypothesized that beliefs about the status of the fetus may be an important moderator of postabortion adjustment.

There has been some research that has hinted at such an hypothesis. The specific meaning a woman attributes to her pregnancy, as well as the degree of ambivalence over her pregnancy and abortion, are found to moderate a woman's adjustment postabortion (Lask, 1975;

Gould, 1980; Tietze, 1975; Greer, 1976; Major, Mueller, & Hildebrandt, 1985; Ashton, 1980; Friedman et al., 1974; Payne et al., 1976; Friedman, 1973; Minden & Notman, 1991; Schmidt & Priest, 1981). Friedman (1973), in her pre-abortion consultation with several hundred women, found that women become pregnant for many different reasons and that their pregnancies have just as many meanings. The postabortion course (positive or negative) depends on the meaning or perceived lack of meaning of the pregnancy and on the woman's coping ability. Minden and Notman (1991) suggest that even when the pregnancy is not consciously wanted there may be regret, since most women have mixed feelings and some may have unconscious wishes to carry a pregnancy to term.

Women who are intensely ambivalent about pregnancy and abortion appear to suffer guilt and depression in the early postabortion period (Ashton, 1980; Friedman et al., 1974; Lask, 1975; Payne et al., 1976). Minden and Notman (1991) suggest that a sense of loss, disappointment, regret and anger is felt by women who are ambivalent about their pregnancies and abortions.

Other studies have found that religious beliefs are also important predictors of postabortion outcomes. Payne et al. (1976) and Burnell et al. (1972) reported that women with strong religious convictions experience more negative reactions postabortion than do other women. Osofsky and Osofsky (1972) specify Catholics as having a more difficult post course than non-Catholics. Interestingly, Adler (1974) found that type of religion shows little relationship to any of the emotion factors (internal or social), but that religiosity, as reflected in the frequency of church attendance, showed a stronger relationship with the strength of socially based emotions (shame, guilt, fear of disapproval).

In sum, there is suggestive evidence from past research that beliefs about the status of the fetus moderate postabortion adjustment. It seems that the "meaning" attached to or associated with pregnancy is an important influence on postabortion adjustment. However, the evidence is only suggestive because it is based on categorizations of women into religious groups, or on case studies of relatively small numbers of women. In the present study a more precise measure of beliefs about the fetus was used to assess the hypothesized moderated relationship among larger numbers of subjects.

Self-Concept

Variable results in previous research could also be due to the use of overly general measures of adjustment. Research on attitudes and personality traits has found that specific measures must be used to predict specific behaviors (Ajzen, 1987). In the case of abortion, it may be important to examine more specific forms of adjustment rather than "general well-being." It is possible that abortion may have stronger effects on specific aspects of women's self-concepts.

Researchers have often claimed that the self-concept has a strong hierarchical structure with specific facets at the base and a general factor at the apex (Marsh & O'Neill, 1984). For example, the Self-Description Questionnaire (Marsh & O'Neill, 1984) includes measures of academic self-concept (reading, math, school) and non-academic self-concept (physical abilities, physical appearance, peer relations and parent relations). In a later version, other dimensions of the total self-concept were included (emotional stability, problem solving/creative thinking, general self, religion/spirituality and honesty/reliability). Scores on specific facets of the self-concept are often summed to obtain a score for general self-esteem. Marsh, Byrne and

Shavelson's (1988) correlational studies on academic achievement and self-concept support the multidimensional and hierarchical view of the self-concept.

In the case of postabortion adjustment, researchers have commonly used general measures of emotional health or well-being or self-esteem and have found few negative effects. But it is possible that abortion has significant negative effects on specific facets of the self-concept (e.g., on perception of one's morality, or on one's real or potential mothering abilities) and relatively little effects on general self-esteem or well-being. Furthermore, there is an appealing psychological reason why low esteem on a specific facet may not affect general self-esteem or well-being. According to Rosenberg's (1982, p.538) selectivity hypothesis, an individual "will be disposed to value those things at which he considers himself good and to devalue those qualities at which he considers himself poor" (1982, p. 538). It follows from this hypothesis that women who have had abortions may cope with their lowered self-perceptions on specific facets (e.g. morality) by denying or reducing the importance of those facets to their general self-evaluation. These effects may not have been observed in previous research because of the use of general measures.

In the present study the importance a woman attributes to both the status of the fetus and specific aspects of her self-concept will be examined in relation to general postabortion adjustment.

METHOD

Subjects and Procedure

General practitioners, obstetricians and gynecologists in Thunder Bay and Ottawa were asked if they or their staff would consent to distributing questionnaire packages to their female

patients between 18 and 70 years of age who come to their offices for appointments. A questionnaire package was given to those women who agreed to participate. The packages included consent forms, an outline of the study and a list of support people and agencies the women could contact if they felt distressed after completing the questionnaire (See Appendices A-E). The packages were given to the women by the receptionist. The women who completed the questionnaires in the waiting room of the physician's office sealed them in an envelope separate from the consent forms and gave them to the receptionist to be picked up later by the researcher. Those who completed the questionnaires at their convenience (e.g., at home) sent them and the consent form directly to the researcher in a self-addressed stamped envelope.

The total sample consisted of 820 women: 132 of the women had had one or more abortions; 209 women had never been pregnant; and 476 women had 'other' pregnancy outcomes, which included any combinations of the following: miscarriage, ectopic pregnancy, early infant death, normal birth-weight children, low birth-weight children and premature children.

The women's ages ranged from 18 to 68 years with a mean age of 35.0 years and standard deviation of 10.9 years. Sixty-one point two percent of the women were married, 25% were single, and 6.0% were divorced. Years of education of the sample ranged from 5 to 22 years with a mean of 14.9 years and a standard deviation of 2.67 years.

Measures

Each participant received a questionnaire which included a pregnancy history section, a 'Beliefs About The Fetus' scale, Rosenberg's Self Esteem Scale (Rosenberg, 1965), The Satisfaction With Life Scale (Diener et al., 1985), a scale measuring 12 specific facets of the

self concept, a scale measuring the perceived importance of these specific facets, the Positive and Negative Affect Schedule (Watson et al., 1988), and a 30-item version of Holmes and Rahe's (1967) Social Readjustment Rating Scale. All of the measures can be found in the Appendices.

Beliefs about the Fetus Scale. This scale was devised by the authors and consisted of 9 typical pro-choice and pro-life items which assessed a woman's beliefs about abortion and the status of the fetus. Subjects indicated their degree of agreement with the items on 7-point Likert scales.

The Satisfaction With Life Scale (SWLS). The Satisfaction With Life Scale (Diener et al., 1985) was used to measure the women's overall judgment of their lives. Each of the five items of the scale were rated on a 7-point Likert scale. The SWLS has been shown to have favorable psychometric properties with a test-retest correlation coefficient of .82 and a coefficient alpha of .87. A principle axis factor analysis by Diener et al. (1985) showed that sixty-six percent of the variance was accounted for by a single factor.

Facets of Self-Concept and Importance Ratings. The women were asked to rate themselves on a 7-point Likert scales ranging from "below average" to "above average" on 12 facets of the self-concept, several of which were specific to mothering. They were also asked to rate how important these facets were to them. These facets were written based upon ideas presented by Tschirhart-Sanford and Donovan (1984) and from Pelham and Swann (1989).

Self-Esteem. Rosenberg's (1965) Self-Esteem Scale was used to measure global feelings of self-worth and self-acceptance. The women rated on a 7-point Likert scale how they felt on each of the 10 items. Reliability studies have shown that the scale is internally consistent. Dobson et al. (1979) obtained a Cronbach alpha of .77 for their sample while

Fleming and Courtney (1984) reported a Cronbach alpha of .88. Silber and Tippett (1965) reported a test-retest correlation of .85, and Fleming and Courtney (1984) a test-retest correlation of .82 for their samples. Fleming and Courtney (1984) found no significant correlations between Self-Esteem Scale scores and gender (.10), age (.13) or marital status (.17).

The Positive and Negative Affect Schedule (PANAS). The Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988) is a list of 10 positive and 10 negative affects. Highly positive affect is a state of high energy, full concentration, and pleasurable engagement, whereas low positive affect is characterized by sadness and lethargy. Negative affect is a general dimension of subjective distress and unpleasurable engagement that subsumes a variety of aversive mood states, including anger, contempt, disgust, guilt, fear and nervousness, with low negative affect being a state of calmness and serenity (Watson et al. 1988). Watson et al. (1988) report that the PA and NA scales are not strongly correlated (with r's ranging from -.12 to -.23) and are related to different classes of variables. For example, NA (but not PA) is related to self-reported stress and (poor) coping (Clark & Watson, 1986; Kanner, Coyne, Schaefer, & Lazarus, 1981; Wills, 1986), health complaints (Beiser, 1974; Bradburn, 1969; Tessler & Mechanic, 1978; Watson & Pennebaker, in press), and frequency of unpleasant events (Stone, 1981; Warr, Barter, & Brownbridge, 1983). In contrast, PA (but not NA) is related to social activity, life satisfaction and to the frequency of pleasant events (Beiser, 1974; Bradburn, 1969; Clark & Watson, 1986; Watson, 1988). Internal consistencies for both scales are acceptably high with alpha reliabilities ranging from .86 to .90 for positive affect, and from .84 to .87 for negative affect. The women in our study were asked to indicate the extent to which they have felt the various emotions in the past 3 to 4 months.

The Social Readjustment Rating Scale. The Social Readjustment Rating Scale (Holmes and Rahe, 1967) assesses the amount of stress in a person's life. In the present study it was used as a covariate that could otherwise possibly obscure the relationship between abortion and adjustment. Forty-three "life event" items make up the scale, with each item being weighted depending on how 'stressful' it is considered to be. For example death of spouse is given the highest stress value (100), and minor violations of the law the lowest stress value (11). The social readjustment (stress) rating of each item was derived by Holmes and Rahe (1967) in the following way: A sample of 394 subjects weighted each life event after comparing it to marriage which was given an arbitrary rating of 500. Those life events for which the sample believed needed a great deal more social readjustment than marriage were weighted proportionately higher than 500. Those life events for which the sample believed needed a great deal less social readjustment than marriage were weighted proportionately lower than 500.

RESULTS

Measures

Internal consistency checks were performed on all of the multi-item scales used in this study. The Cronbach's alphas were: .89 for Satisfaction with Life; .88 for Self Esteem; .90 for Positive Affect; and .90 for Negative Affect. A principal components factor analysis with obliminal rotation was conducted on the items of the Beliefs about the Fetus Scale and one major factor emerged, accounting for 59.6% of the total variance. In constructing the scale items were written tapping both beliefs about the "human-ness" of the fetus, and beliefs about the rights of the fetus or the legality of abortion. We had expected that two dimensions might

emerge in the factor analyses, but the scale was quite unidimensional (the Cronbach's alpha was .91). A Beliefs about the Fetus score was therefore computed for each subject by taking the mean of their responses to the nine items. The means and standard deviations for all of the measures are reported in Table 1.

Classification of Women Into Pregnancy History Groups

The women were asked if they had ever been pregnant. If they had been pregnant they were then asked to indicate which of the following pregnancy outcomes pertained to each of their pregnancies: (1) Full-term, normal birth-weight; (2) Full-term, low birth-weight; (3) Premature; (4) Miscarriage; (5) Abortion; (6) Stillbirth; (7) Early infant death; and (8) Ectopic pregnancy. A breakdown of pregnancy histories is presented in Table 2.

A large (and unmanageable) number of pregnancy outcome groups could be formed from the data and so analyses were performed to determine which groups could be collapsed. Women whose pregnancy outcomes had been only live births (full-term normal birth-weight, full-term low birth-weight and/or premature delivery) were extracted from the total data set, and it was found that women with different live-birth outcomes did not differ from one another on the dependent variables. Similarly, women whose pregnancies had resulted in dead fetuses (miscarriage, stillbirth, early infant death, ectopic pregnancy) were extracted from the total data set and it was found that women with different dead-fetus pregnancy outcomes also did not differ from one another on the dependent variables. Many of the women who had dead fetuses also had at least one live-birth pregnancy outcome, and further analyses revealed that the "only live-birth" and "only dead fetus" women did not differ on the dependent variables.

On the basis of these analyses and on the fact that the N's in some of the more specific groups were relatively small, it was decided to categorize the women into three possible groups: (1) the "Abortion" Group (N = 132) consisted of women who had at least one abortion in their pregnancy histories (amongst any other pregnancy outcome); (2) the "Never Pregnant" Group (N = 209); and (3) the "Other Outcomes" Group (N = 476) consisted of women who had never had an abortion in their pregnancy histories yet had had any combination of the other pregnancy outcomes.

Pregnancy History and Psychological Adjustment

The first set of analyses tested whether women who had had abortions displayed similar levels of adjustment as women in the two other groups. Multivariate analysis of variance was used to compare the three groups of women on: Negative Affect, Positive Affect, Self Esteem, Life Satisfaction, and on Specific Facets of the Self Concept (see Tables 3 and 4).

Negative Affect, Positive Affect, Life Satisfaction, and Self-Esteem. There was a significant overall multivariate effect for Negative Affect, Positive Affect, Life Satisfaction and Self-Esteem, F (8, 1600) = 3.75, $p < .01$, Wilks. The means, standard deviations and univariate results are reported in Table 2. An inspection of the univariate tests revealed significant effects for Negative Affect and Self-Esteem. Scheffe's multiple comparison tests revealed that the Other Outcomes group was higher in Self-Esteem and lower in Negative Affect than the Abortion group and the Never Pregnant group. Although there were significant group differences in Self-Esteem and Negative Affect, the sizes of these differences were very small, accounting for approximately 1-2% of the variance. Analyses were also performed on the sub-

groups of the Abortion group (e.g., Abortion only, Abortion and Live Kids, Abortion and Dead Kids) and no significant sub-group differences in adjustment emerged.

Pearson correlations were computed between Life Stress, Age, Health and Education on the one hand, and Self-Esteem, Positive and Negative Affect, Life Satisfaction on the other. A number of these correlations were significant (see Table 5). Similarly, a MANOVA was performed to assess possible pregnancy history group differences in Life Stress, Age, Health and Education, and again a number of group differences emerged. The means, standard deviations and F values are reported in Table 6.

The analyses reported above were therefore performed a second time, controlling for Age, Health, Education and Life Stress. The MANCOVA for Negative Affect, Positive Affect, Self Esteem and Life Satisfaction showed a significant overall effect, F (8, 1556) = 2.19 p = < .05. The univariate effect for Self-Esteem remained significant, but in the MANCOVA there was no longer a significant univariate effect for Negative Affect, F (2, 781) = 1.16, p = .32.

Specific Facets of the Self-Concept. There was a significant multivariate effect for the 12 specific facets of the self-concept, F (24, 1410) = 3.38, p < .01. Significant univariate effects (see Table 3) were found for the following facets of the self concept : The Control I Have Over My Life; My Real or Potential Mothering Abilities; My Religious/Spiritual Self; My Nurturing Ability; and Myself as Morally Upright. Scheffe's multiple comparison tests showed that the Abortion group rated themselves less highly than the Other Outcomes group on The Control I Have Over My Life, My Real Or Potential Mothering Abilities and My Religious/Spiritual Life. The Abortion group rated themselves less highly than the Never Pregnant group on their moral uprightness. The Other Outcomes group rated themselves more highly than the Never Pregnant group on their Real Or Potential Mothering Abilities, and on

their Nurturing Abilities. However, the effect sizes were again quite small, ranging from 1% to 4%.

When these analyses were performed a second time controlling for the covariate (see Tables 5 and 6) there was again a significant overall effect, F (24, 1372) = 3.89 $p < .01$. The univariate effects for My Real or Potential Mothering Abilities and My Nurturing Ability remained significant, while the effects for The Control I have Over My Life, F (2, 697) = .73 p = .48, My Religious/Spiritual Self, F (2, 697) = 1.73, p =.18, and for Myself as Morally Upright, F (2, 697) = 2.53, p = .08 were no longer significant. The univariate effect for My Reproductive Potential, F (2, 697) = 16.87, $p < .01$ became significant after partialling out the covariates.

Perceived Importance of Specific Facets of the Self Concept.

Rosenberg's selectivity hypothesis states that "an individual will be disposed to value those things at which he considers himself good and to "devalue" those qualities at which he considers himself poor" (Rosenberg, 1982 p. 538). In the present study it was proposed that women who have had abortions would "devalue" or consider less important maternal aspects of their self-concepts in order to maintain their global self-esteem. An analysis of the means of the importance ratings for each of the facets revealed that this was not the case (see Table 7). A significant multivariate effect did emerge for the importance placed on the specific facets of the self-concept, F (24, 1438) = 8.99, $p < .01$, Wilks, but the means were generally not in the predicted direction. Specifically, women in the Abortion group placed greater importance on The Control I Have Over My Body than did the Other Outcomes group, and greater importance on My Real or Potential Mothering Abilities, My Nurturing Ability and My Reproductive Potential than did women in the Never Pregnant group.

The MANCOVA for the Importance of the facets of the self-concept showed a significant overall effect, F (24, 1400) = 7.24, $p < .01$. The effects for My Real or Potential Mothering Abilities and The Control I Have Over My Body remained significant, while the effect for The Control I Have Over My Life F (2, 712) = 1.96, $p = .14$ was no longer significant. The univariate effect for My Nurturing Ability F (2, 712) = 3.29, $p < .05$ became significant after partialling out the covariates.

Beliefs About the Fetus

It was hypothesized that women who believe that fetuses are human would be more negatively affected by their abortions than women who believe that fetuses are less than human. It was also predicted that the negative effects would be more evident on specific facets of the self-concept (e.g., childbearing, child rearing issues) than on general well being (e.g., self-esteem).

Hierarchical regressions were performed for each dependent variable to assess the predicted interaction between Beliefs About the Fetus and pregnancy history groups. In this procedure the main effects (i.e., pregnancy history group and beliefs about the fetus) are first entered into a regression equation followed by their product vectors. A significant increase in the R-square for the set of product terms indicates a significant interaction (see Cohen & Cohen, 1983, p. 310). The results of these analyses are reported in Table 8. In this Table only the results for the interaction terms are reported because inclusion of the main effect results would be lengthy and distracting for the reader. There were significant interaction effects for Self-Esteem, Negative Affect, The Control I Have Over My Life, My Real or Potential Mothering Abilities, and The Control I Have Over My Body.

The nature of the interactions was elucidated by deriving regression equations for adjustment on Beliefs About the Fetus for the Abortion Group for the different pregnancy history groups (see Cohen & Cohen, 1983, p. 316-325). The findings are depicted in Figures 1 to 5. For all variables except The Control I Have Over My Life (Figure 5) the regression lines indicate a negative relationship between adjustment and Beliefs About the Fetus, whereas the regression lines were flat for the Never Pregnant group and for the Other Outcomes group. The findings thus indicate that women who have had abortions and who believe that the fetus is human tend to be less well adjusted (on some of the variables) than women who have not had abortions; however, women who have had abortions and who believe that the fetus is not human are as well adjusted as women who have not had abortions. Overall, it was found that women who have had abortions and who believed the fetus to be human reported slightly lower well-being, and this was true for both general and specific aspects of well-being.

The regression analyses were then performed a second time on each of the dependent variables, partialling out those covariate(s) which were significantly associated with pregnancy history group or with the dependent variables (see Tables 5 and 6) When Education, Health and Life Stress were partialled out of the regression equation for the pregnancy history group-by-Beliefs-About-The-Fetus interaction, the effect for Self-Esteem was no longer significant, F (2, 8) = 2.25 p = .11. When all of the covariates were partialled out of the regression equation for the pregnancy history group-by-Beliefs-About-The-Fetus equation the effect for Negative Affect F (2, 9) = 4.04 p = .02, and The Control I have Over My Life F (2, 8) = 3.31, $p < .05$ remained significant while the effects for My Real or Potential Mothering Abilities F (2, 7) = 5.45, $p > .05$ and The Control I Have Over My Body F (2, 7) = 5.45, $p > .05$ were no longer significant. Simple correlation and regression analyses indicated generally no significant linear

or curvilinear associations between the number of years since abortion and the dependent variables.

Discussion

This study examined whether women who have not had abortion(s) would report greater well-being than women who have had abortions. We also hypothesized that women who have had abortion(s) and who believe the fetus to be human will have a more difficult postabortion adjustment than women who believe the fetus to be less than human, and that the effects would be strongest on specific facets of the self-concept. Finally, in order to preserve their self-esteem, we hypothesized that women who have had abortions would consider maternal-related facets of their self-concepts of less importance than would women who have not had abortions.

Pregnancy History and Psychological Adjustment

It was found that women who have not had abortion(s) but who had been pregnant reported greater well-being both on two of the four general measures, (Self-Esteem and Negative Affect), and on four of the 12 specific measures (The Control I Have Over My Life, My Real or Potential Mothering Abilities, My Religious/Spiritual Self and Myself as Morally Upright) as compared to women who have had abortions. When variables such as age, education, health and life stress were partialled out in the analyses some of these significant effects disappeared, although other effects remained significant. These significant findings are contrary to those of most past studies on postabortion adjustment. Numerous previous studies have reported that abortion does not affect most women negatively to any significant extent (Kummer, 1963; Shusterman, 1976; Brekke, 1958; Ashton, 1980; Major, Mueller, & Hildebrandt, 1985; Adler

et al., 1990) and some research has concluded that abortion does not affect women at all (Smith, 1973; Notman, Kravitz, Payne et al., 1972; Olson, 1980; Kretzschmar & Norris, 1967; Ford, Castelnuovo-Tedesco, & Long, 1972; and Ashton, 1980). The divergent findings might be due to methodological differences between the present and past studies For example, the sample size in this study was relatively large in comparison to past studies. In most previous studies samples were obtained through abortion clinics, whereas the present sample was obtained from a variety of physicians' offices. Furthermore, in past studies the purpose of gathering specific information about postabortion psychological adjustment was made clear to subjects. In contrast, the intent of obtaining specific information on postabortion psychological well-being was relatively less obvious in this research as the study was introduced as a "pregnancy outcome" study. The women may have therefore responded more openly, given the less direct nature of the situation.

While the abortion group scored lower than the Other Outcomes Group on measures of well-being, their scores were not so low as to be pathological. In fact, the effect sizes were very small (approximately 1-2%) and were probably only significant due to the large sample size.

Beliefs About The Fetus

We found support for our second hypothesis, which was that women who tended to believe that fetuses are human would be more negatively affected by their abortions than women who tended to believe that fetuses are less than human. Specifically, women who tended to believe the fetus was human reported lesser well-being than women in the other groups, whereas those women who did not perceive the fetus to be human tended to be as well

adjusted as the women who have not had abortions. Only one of the five significant interactions did not show this pattern: Beliefs About The Fetus were related to The Control I Have Over My Life for women who had never been pregnant. This finding is puzzling and requires confirmation and explanation in future research.

Overall, the present findings regarding beliefs about the fetus are somewhat similar to previous research on predictors of postabortion adjustment, which has consistently found that women who are ambivalent about having an abortion experience greater postabortion adjustment difficulties than women who are not ambivalent about their decision to abort (Friedman, 1973; Minden & Notman, 1991; Schmidt & Priest, 1981). The reasons for the ambivalence have not been examined in previous studies and it is possible that beliefs about the fetus may be a key factor. Some women may be ambivalent about having an abortion because they believe fetuses should be considered human. Similarly, religiosity has also been related to postabortion adjustment (Payne et al, 1976; Burnell et al, 1972; Osofsky & Osofsky, 1972), but researchers have not been specific about the psychological factors that are responsible for this effect. It is possible that women who have had a strict religious upbringing tend to believe the fetus to be more human than women who have not had such a strict upbringing. The findings regarding beliefs about the fetus, ambivalence, and religiosity have implications for counselling women who are considering abortion. In the course of counselling, a clear understanding of a woman's religious upbringing and her beliefs about the fetus should be assessed and considered in deciding whether to abort or not.

Perceived Importance of Specific Facets of the Self-Concept

Another hypothesis in this study, derived from Rosenberg (1982), was that women who have had abortions would consider maternal-related facets of their self-concepts less important than would women who have not had abortions in order to preserve their self-esteem. This hypothesis was not supported in our study. One possible explanation is that almost all of the women who had abortions have also had a child, and so they may have had little motivation to devalue the importance of maternal-related facets of their self-concept. Perhaps the conflict of having had an abortion and subsequently a child contributed to the slightly lower sense of well-being, and greater level of life stress of women in the Abortion Group

Limitations With The Present Study and Suggestions for Future Research

One limitation of this study is that the sample may not have been selected randomly. Although each receptionist was asked to give questionnaires to all female patients, there might have been some selection bias. The questionnaire may have only been given to those women who were expected to be able to complete it, or who were expected to be "good subjects".

Another limitation of this study is that causal inferences cannot be made. While the findings suggest that there is a difference in well-being between women who have had abortion(s) and women who have not had abortions, the findings are correlational. Perhaps more confident causal relationships could be inferred in future research if changes in adjustment are examined before and after abortions. A longitudinal study of the well-being of many women throughout their child-bearing years would be effective in determining whether or not abortion actually causes a decrease of well-being.

Thirdly, as a result of the nature of our sampling procedure, unequal group sizes were inevitable. Although this poses no problem in the interpretation of the results, stronger

findings may have emerged if there were more equal numbers of observations among the groups (Judd and McLelland, 1989). But our group sizes were considerably large, and power was probably not a major problem. Furthermore, unequal N's are not as serious a problem in oneway ANOVAs as they are in factorial ANOVAs.

It is also recommended that future researchers obtain more extensive information on demographic characteristics of their subjects. The findings may vary depending on socioeconomic status or cultural background. Future researchers could also assess whether religious group differences in reactions to abortion are due to varying beliefs about the fetus.

While the women in our study who had had abortion(s) reported a greater amount of stress in their lives than women who had not aborted, we cannot conclude that this stress is caused by the abortion. However, the possibility of a relationship between stress levels and women who have had abortion(s) is intriguing. Perhaps higher stress levels (due to factors other than unwanted pregnancy) of a woman who is carrying an unwanted pregnancy might contribute to her decision to abort. Another possibility is that the stress in the woman's life is a consequence of the abortion. Major and Cozzarelli (1992) suggest that life events occuring subsequent to the abortion are potentially important predictors of adjustment.

Women who are considering having an abortion (and the researchers who study them) should probably also consider the psychological consequences of other outcomes to unwanted pregnancies other than abortion. For example, the effects of the unwanted pregnancy on children who are born is an important concern. David (1992) studied children who were considered unwanted on the basis that their mothers were twice denied abortion for the child they were carrying. He concluded that unwantedness in early pregnancy has a detrimental effect on children's psychosocial development. Forssman and Thuwe (1966), in a less

methodologically sound study, demonstrated that children born subsequent to a denied abortion were at greater risk than controls for adverse psychosocial problems during their developmental years with such differences gradually diminishing in adulthood. Cameron, Blumberg, and Sherman's (1974) study of 200 women who were denied abortion did not support the above research: Whether the woman's pregnancy had been considered as highly desired or deeply regretted, it had little relationship to the claimed regard for a given child at the time of the interview.

Conclusion

We can conclude from this study that some women may experience a very slight negative reaction to their abortion(s). The women's beliefs about the status of the fetus is one factor which determines which women will, and which women will not, react negatively after abortions. Those women who believe the fetus is human may have very slight negative reactions postabortion, whereas those women who do not believe the fetus is human will be as well adjusted as women who have not had abortions.

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Appendix A

Introductory Letter to Physicians

I am a masters student in clinical psychology at Lakehead University and I am writing to ask for your help with my thesis research. My study is a replication of a previous study on women in doctor's offices. I need *any* female patients between the ages of 18 and 70 years to complete a questionnaire. They may be given the questionnaire by yourself or your staff (or whichever way you prefer), and they may complete it while they wait for their appointment or at home alone (in which case a stamped self-addressed envelope will be provided). I will give your nurse or receptionist a luncheon voucher for their help.

The purpose of the study is to examine self-esteem and life satisfaction among three groups of women: (1) those who have had an abortion; (2) those who have had other pregnancy outcomes; and (3) women who have never been pregnant.

The project has been approved by the Ethics Committee for Research on Human Subjects at Lakehead University. I have also spoken to lawyers, the Ontario College of Physicians and Surgeons, and the Canadian Medical Protective Association and they all said the research can be conducted as long as participation is voluntary and the information provided remains confidential.

Enclosed is a brief description of the research, a cover letter, consent forms, and the questionnaire. If you have any questions please feel free to call or write. If your are interested I can give you a copy of the final report. I very much appreciate your help.

Gratefully,

Mary Pat Conklin
Department of Psychology
Lakehead University
955 Oliver Road
Thunder Bay, Ontario
P7B 5E1
(807)-343-8441

Appendix B

Cover Letter/Introductory Statement

Dear Participant:

I am a masters student in clinical psychology at Lakehead University and I am writing to ask for your help with my thesis research. I am looking for *any* women between the ages of 18 and 70 years to fill out a brief questionnaire regarding their life satisfaction, self-esteem, beliefs about abortion, and pregnancy history. I wish to compare (1) the responses of women who have had an abortion with (2) the responses of women who have had other pregnancy outcomes, and (3) the responses of women who have never been pregnant.

Depending on your beliefs and experiences, you may find that some of the questions deal with personal or sensitive issues. You do not have to respond to them if you do not want to. Your physician has kindly agreed to permit his or her patients to be asked if they would like to participate, but your physician is not involved in this study in any other way. Your participation is completely voluntary and your decision to participate (or not participate) will have no bearing on what happens with your physician. If you find any of the questions too personal you do not have to answer them, and you are free to withdraw at any time. To guarantee anonymity you will be asked not to put your name on the questionnaire. The information you provide will remain confidential and will be used for statistical purposes only. You are free to inquire about the findings of the study once it has been completed.

Thanks very much for your help.

Gratefully,

Mary Pat Conklin
Department of Psychology
Lakehead University
955 Oliver Road
Thunder Bay, Ontario
P7B 5E1
(807)-343-8441

Appendix C

PREGNANCY HISTORY STUDY

(Handout for Participants)

The purpose of this study is to examine some of the factors associated with post-abortion adjustment. The responses of women who have had an abortion will be compared to the responses of women who have not had an abortion. Past research has found that some women adjust very well to having an abortion but that other women have some difficulty (e.g., they may feel unhappy or guilty). In this study it was hypothesized that women's beliefs about the nature of the fetus and about the morality of abortion may predict how well (or how poorly) they adjust to their abortions. "Adjustment" was measured by questions tapping life satisfaction, mood, and self-esteem.

Responses to the questions can only be used for statistical purposes. This means that any single person's responses are meaningful only in relation to other peoples' responses, and that people cannot be accurately categorized into groups such as "well-adjusted" or "poorly-adjusted" etc. Your responses are therefore not "test results" and cannot be used as the basis of any kind of diagnosis. However, if you are personally concerned with how well you have been coping with your pregnancy outcomes feel free to contact Mary Pat Conklin (Department of Psychology, Lakehead University, 955 Oliver Road, Thunder Bay, Ontario, P7B 5E1, 807-343-8441) for referral information, or you may directly contact any of the following people/organizations:

Ottawa Distress Centre 238-3311

Family Physician

Psychologists/Psychiatrist or other therapists: See the yellow pages under "Psychologists" or "Physicians & Surgeons"

Action Life, 290 Nepean 235-0184, or 235-0402

Abortion Freedom of Choice CARAL 733-2003

Minister of your Church

Resources specific to Thunder Bay

Thunder Bay Crisis Line 344-4502

Right to Life Association 666 Dawson St. 345-5648

Abortion Rights 345-8703

Appendix D

Participant's Consent Form

1. Pregnancy History Study

2. I consent to take part in the above study on women and their pregnancy outcomes. I understand that the purpose of this study is to examine the relationship between beliefs about abortion and status of the fetus on the one hand, and the experience of abortion and childbirth on the other hand.

3. The investigator has explained to me that the study involves filling out a questionnaire regarding my pregnancy history, my beliefs about the fetus, and my life satisfaction, moods, and self-esteem.

4. I understand that my name will not appear on the questionnaire, and that this consent form will be kept separate from my questionnaire responses.

5. I understand that there are no direct benefits to me for participating in the study, and that questions on issues that I might find sensitive will be asked. My responses will remain completely anonymous and confidential. My participation in the study was completely voluntary and I may withdraw at any time. I have also been told that I may obtain a copy of the final results from Mary Pat Conklin, Department of Psychology, Lakehead University, 955 Oliver Road, Thunder Bay, Ontario, P7B 5E1, 807-343-8441.

6. This consent form with my signature will be kept separate from my questionnaire responses.

Signature: _____

Name (please print): _____

Date: _____

Appendix E

Physician's Consent Form

1. Pregnancy History Study

2. I consent to have my patients participate in the above study on women and their pregnancy outcomes. I understand that the purpose of this study is to examine the relationship between beliefs about abortion and status of the fetus on the one hand, and the experience of abortion and childbirth on the other hand.

3. The investigator has explained to me that the study involves filling out a questionnaire regarding pregnancy history, beliefs about the fetus, and life satisfaction, moods, and self-esteem.

4. I will inform my patients about the opportunity to participate in the study. I understand that there are no direct benefits to my patients for participating in the study, and that questions on issues that they might find sensitive will be asked. Their responses will remain completely anonymous and confidential. Their participation in the study is completely voluntary. Patients will be told that their decision to participate (or not participate) will have no bearing on what happens with their physician. Patients will be told that if they find any of the questions too personal they do not have to answer them, and that they are free to withdraw at any time. Myself and the participants will be able to obtain a copy of the final results from Mary Pat Conklin, Department of Psychology, Lakehead University, 955 Oliver Road, Thunder Bay, Ontario, P7B 5E1, 807-343-8441.

Signature: _____

Name (please print): _____

Date: _____

Appendix F

PREGNANCY HISTORY QUESTIONNAIRE

There are no right or wrong, or good or bad, answers to any of the questions below. Please just give the most accurate, truthful response for you. If you find any of the questions too personal, you do not have to respond, although it would be most helpful to us if you answered every question. To ensure anonymity, please do not put your name on this questionnaire. For each question your first impression is probably correct.

How old are you? _____ years

What is your marital status? _____

What was the highest level of education that you completed? _____

How many times have you been pregnant? ____ times

How many living children do you have? ____

In general, how is your health?

very good 1 2 3 4 5 6 7 very poor

Please indicate the outcomes of each of your pregnancies by placing a checkmark in the appropriate boxes below. For those boxes which have a diagonal slash, please indicate when the loss of the fetus or infant occurred (e.g. 2 months, 2 weeks).

PREGNANCY OUTCOME	1ST PREG	2ND PREG	3RD PREG	4TH PREG	5TH PREG	6TH PREG	7TH PREG	8TH PREG
Full term, normal birth weight								
Full term, low birth weight								
Premature								
Miscarriage	/	/	/	/	/	/	/	/
Induced abortion	/	/	/	/	/	/	/	/
Stillbirth	/	/	/	/	/	/	/	/
Early Infant Death	/	/	/	/	/	/	/	/
Ectopic Pregnancy	/	/	/	/	/	/	/	/
Now pregnant								
Multiple birth, twins etc.								
Your Age in years at time of pregnancy								

Beliefs about the Fetus

The next set of questions are concerned with your present beliefs about the fetus and your beliefs about abortion. (The term "fetus" will be used to refer to all stages of development before birth). The questions are in the form of statements with which you may agree or disagree. Please indicate your degree of agreement with each statement by placing the appropriate number from the scale below on the dash ("____") beside each statement. For example, if you strongly disagree with a statement place a "1" on the dash beside the statement, and so on.

1	2	3	4	5	6	7
strongly disagree	disagree	slightly disagree	neither agree nor disagree	slightly agree	agree	strongly agree

____ I believe that the fetus is a human being just as 4-year olds or 54-year olds are human beings; the only difference is that the fetus is at a very early stage of development.

____ I believe that the fetus is technically a human life, but the fetus cannot be considered a "person."

____ I believe that the fetus is a separate individual with unique characteristics.

____ I have difficulty attributing human qualities to the fetus.

____ For me, reproductive choice is my right and it must include the choice of abortion.

____ For me, the fetus is worth saving because the fetus is a human life.

____ I believe that the fetus should have the same rights as an infant who was just born.

____ No one has the right to take the life of a fetus.

____ For me, abortion is not wrong if I choose it. My body is my own.

The next questions are also in the form of statements with which you may agree or disagree. Please indicate your degree of agreement with each statement by placing the appropriate number from the scale below on the dash ("____") beside each statement.

1	2	3	4	5	6	7
strongly disagree	disagree	slightly disagree	neither agree nor disagree	slightly agree	agree	strongly agree

Life Satisfaction Questions

____ In most ways my life is close to my ideal.

____ The conditions of my life are excellent

____ I am satisfied with my life.

____ So far I have gotten the important things I want in life.

____ If I could live my life over, I would change almost nothing.

Self-Esteem Questions

____ On the whole, I am satisfied with myself.

____ At times I think I am no good at all.

____ I feel that I have a number of good qualities.

____ I am able to do things as well as most other people.

____ I feel I do not have much to be proud of.

____ I certainly feel useless at times.

____ I feel that I'm a person of worth equally as worthwhile as other people

____ I wish I could have more respect for myself.

____ All in all, I'm inclined to feel that I am a failure.

____ I take a positive attitude toward myself.

Specific Facets of the Self-Concept

The next questions have to do with your attitudes about some of your activities and abilities. For the first ten you are asked to rate yourself on the following 7-point scale:

below average 1 2 3 4 5 6 7 above average

____ myself as a sexual partner	____ the control I have over my body
____ my social skills	____ my physical attractiveness
____ the control I have over my life	____ my nurturing ability
____ my real or potential mothering	____ my reproductive abilities/potential
____ my religious / spiritual self	____ myself as morally upright
____ my sense of humor	____ my intelligence

Importance of the Specific Facets of the Self-Concept

Now rate how personally <u>important</u> each of these domains is to you on the following scale:

Not at all important 1 2 3 4 5 6 7 Very important

____ myself as a sexual partner	____ the control I have over my body
____ my social skills	____ my physical attractiveness
____ the control I have over my life	____ my nurturing ability
____ my real or potential mothering abilities	____ my reproductive potential
____ my religious / spiritual self	____ myself as morally upright
____ my sense of humour	____ my intelligence

Positive and Negative Affect Schedule

The final items are words that describe different feelings and emotions. Read each word and indicate the extent to which you have felt this way during the past 3-4 months. Use the following 1-to-7 scale to record your answers.

very little 1 2 3 4 5 6 7 very much

____ interested	____ irritable
____ distressed	____ alert
____ excited	____ ashamed
____ upset	____ inspired
____ strong	____ nervous
____ guilty	____ determined
____ scared	____ attentive
____ hostile	____ jittery
____ enthusiastic	____ active
____ proud	____ afraid

Social Readjustment Rating Scale

Have any of the following events happened to you in the last year? Please place a check mark beside the events you have experienced.

____ death of a spouse
____ divorce
____ death of a family member
____ marriage
____ marital reconciliation
____ change in health of a family member
____ sexual difficulties
____ business readjustment
____ death of a close friend
____ increase in number of arguments with spouse
____ foreclosure on a mortgage or loan
____ son or daughter leaving home
____ begin or end school
____ trouble with boss
____ change in residence
____ marital separation
____ jail term
____ personal injury or illness
____ fired at work
____ retirement
____ pregnancy
____ gain of a new family member
____ change in financial state
____ change to a different line of work
____ large mortgage
____ increase in responsibilities at work
____ trouble with in-laws
____ change in living conditions
____ change in work conditions
____change in sleeping habits

Table 1

Descriptive Statistics for all the measures on the entire sample

	Mean	Standard Deviation
Self-Esteem	5.44	0.96
Life Satisfaction	5.43	1.20
Negative Affect	3.14	1.35
Positive Affect	4.99	0.93
1-Myself as Sexual Partner	5.00	1.29
2-My Social Skills	5.52	1.16
3-The Control I Have Over My Life	5.31	1.30
4-My Real or Potential Mothering Abilities	5.69	1.21
5-My Religious/Spiritual Self	4.58	1.57
6-My Sense of Humour	5.61	1.14
7-The Control I Have Over My Body	5.40	1.41
8-My Physical Attractiveness	4.98	1.17
9-My Nurturing Ability	5.71	1.13
10-My Reproductive Potential	4.76	2.05
11-Myself as Morally Upright	5.66	1.13
12-My Intelligence	5.82	0.88
Perceived Importance of the Facets of the Self-Concept		
1-Myself as Sexual Partner	5.19	1.42
2-My Social Skills	5.92	1.01
3-The Control I Have Over My Life	6.32	0.90
4-My Real or Potential Mothering Abilities	6.12	1.34
5-My Religious/Spirtiual Self	4.86	1.89
6-My Sense of Humour	5.90	1.10
7-The Control I Have Over My Body	6.26	0.96
8-My Physical Attractiveness	5.35	1.31
9-My Nurturing Ability	6.00	1.16
10-My Reproductive Potential	4.35	2.16
11-Myself as Morally Upright	5.83	1.29
12-My Intelligence	6.19	0.85
Status of the Fetus	3.96	1.61

Table 2

Classification of Women Into Pregnancy History Groups

Pregnancy Outcome(s)	N
Abortion only	35
Abortion(s) and Live Births	63
Abortion(s), and Dead Fetus/Infant	5
Abortion(s), Live Births, and Dead Fetus/Infant	29
Live Birth(s) only	291
Live Birth(s), and Dead Fetus/Infant	132
Dead Fetus/Infant only	27
Never Pregnant	209
Pregnant for the first time	26
Total	817

Table 3

Group Differences in Self-Esteem, Positive and Negative Affect, and Life Satisfaction

		Abortion Group	Never Pregnant	Other Outcomes Group	F
Self-Esteem	M	5.21a	5.34a	5.55b	8.29**
	SD	1.05	0.98	0.90	
Positive Affect	M	5.01	4.99	4.98	0.04
	SD	0.97	0.90	0.93	
Negative Affect	M	3.48a	3.27a	2.97b	9.79**
	SD	1.45	1.29	1.31	
Life Satisfaction	M	5.22	5.39	5.49	2.58
	SD	1.34	1.21	1.14	

Note 1 "**" indicates $p<.01$

Note 2 Means in the same row with different subscripts are significantly different

BLE 4

oup Differences on Specific Facets of the Self Concept

		Abortion Group	Never Pregnant Group	Other Outcome Group	F
Iyself as a Sexual Partner	M	5.17	5.03	4.91	2.01
	SD	1.32	1.28	1.28	
Iy Social Skills	M	5.44	5.55	5.55	0.49
	SD	1.23	1.06	1.15	
he Control I Have Over My Life	M	5.03a	5.31	5.38b	3.59*
	SD	1.42	1.32	1.23	
Iy Real or Potential Mothering ilities	M	5.52a	5.29b	5.89c	17.64**
	SD	1.36	1.53	0.93	
Iy Religious/ Spiritual Self	M	4.22a	4.34a	4.71b	6.47**
	SD	1.70	1.65	1.47	
Iy Sense of Humour	M	5.53	5.68	5.60	0.67
	SD	1.16	1.00	1.18	
he Control I Have Over My Body	M	5.17	5.54	5.40	2.43
	SD	1.61	1.35	1.39	
Iy Physical Attractiveness	M	5.08	5.06	4.93	1.19
	SD	1.16	1.09	1.19	
Iy Nurturing Ability	M	5.67	5.48a	5.83b	5.90**
	SD	1.21	1.30	1.03	
My Reproductive Potential	M	5.13	4.63	4.72	2.35
	SD	1.89	1.95	2.13	
Myself as Morally Upright	M	5.41a	5.60b	5.75b	4.42*
	SD	1.30	1.15	1.06	
My Intelligence	M	5.90	5.82	5.82	0.24
	SD	0.92	0.81	0.87	

te 1 "*" indicates p < .05 "**" indicates p<.01
te 2 Means in the same row with different subscripts are significantly different

able 5

earson Correlations Between the Covariates and Facets of the Self Concept, Self-Esteem, ife-Satisfaction, Negative Affect and Positive Affect

	Age	Education	Health	Life Stress
Self-Esteem	.01	.16**	-.37**	-.29**
Life Satisfaction	.05	.12**	-.28**	-.20**
Negative Affect	-.15**	-.17**	.27**	.35**
Positive Affect	.01	.06	-.25**	.00
1-Myself as Sexual Partner	-.10**	.03	-.11**	.06
2-My Social Skills	.03	.14**	-.06	-.02
3-The Control I Have Over My Life	.06	.14**	-.35**	-.17**
4-My Real or Potential Mothering Abilities	.13**	.01	-.14**	-.01
5-My Religious/Spiritual Self	.23**	-.05	-.05	-.03
6-My Sense of Humour	.06	.03	-.06	-.01
7-The Control I Have Over My Body	.02	.05	-.29**	-.13**
8-My Physical Attractiveness	.00	.05	-.24**	-.05
9-My Nurturing Ability	.04	.06	-.17	.05
10-My Reproductive Potential	-.41**	.06	-.23**	-.04
11-Myself as Morally Upright	.07	.03	-.09*	-.07
12-My Intelligence	-.02	.19**	-.10**	.04

ote "*" indicates $p<.05$ "**" indicates $p<.01$

Table 6

Group Differences in Age, Health, Education and Life Stress

		Abortion Group	Never Pregnant Group	Other Outcomes	F
Age	M	33.11a	29.09b	38.15c	60.62**
	SD	8.19	9.84	10.74	
Health	M	2.09	1.91	1.97	0.84
	SD	1.14	1.21	1.25	
Education	M	14.59a	15.42b	14.76c	5.59**
	SD	3.09	2.30	2.66	
Life Stress	M	207.88a	165.56b	153.40b	13.95**
	SD	115.46	97.11	103.36	

Note 1: "*" indicates $p < .05$ "**" indicates $p < .01$
Note 2: Means in the same row with different subscripts are significantly different

LE 7

p Differences On The Importance of The Facets of The Self-Concept

		Abortion Group	Never Pregnant Group	Other Outcome Group	F
yself As Sexual Partner	M	5.31	5.24	5.17	0.58
	SD	1.25	1.44	1.43	
y Social Skills	M	5.99	6.06a	5.85b	3.18*
	SD	1.00	0.87	1.07	
he Control I Have Over My Life	M	6.46	6.43a	6.27b	3.40*
	SD	0.85	0.73	0.96	
y Real Or Potential Mothering Abilities	M	6.03a	5.30b	6.52c	63.77**
	SD	1.47	1.77	0.80	
y Religious/ Spiritual Self	M	4.57a	4.51a	5.01b	6.08**
	SD	1.92	2.01	1.73	
y Sense of Humour	M	5.98	5.79	5.93	1.32
	SD	1.12	1.12	1.09	
he Control I Have Over My Body	M	6.38a	6.38a	6.20b	3.12*
	SD	0.81	0.83	1.04	
y Physical Attractiveness	M	5.36	5.37	5.37	0.00
	SD	1.32	1.32	1.31	
y Nurturing Ability	M	5.99a	5.49b	6.24a	28.07*
	SD	1.12	1.42	0.98	
My Reproductive Potential	M	4.14a	4.63b	4.26a	2.57
	SD	2.05	2.16	2.15	
Myself As Morally Upright	M	5.75	5.59a	5.95b	5.59**
	SD	1.34	1.49	1.14	
My Intelligence	M	6.25	6.24	6.19	0.32
	SD	0.86	0.81	0.82	

1 "*" indicates p < .05 "**" indicates p<.01
2 Means in the same row with different subscripts are significantly different

TABLE 8

Regression Analyses for the Pregnancy History Group by Beliefs About the Fetus Interaction

	RSQ-CHANGE*	F
Self-Esteem	0.01	3.77*
Negative Affect	0.01	5.55**
Positive Affect	0.00	0.46
Life Satisfaction	0.01	2.74
1-Myself as a Sexual Partner	0.00	0.10
2-My Social Skills	0.00	0.35
3-The Control I Have Over My Life	0.01	4.93**
4-My Real or Potential Mothering Abilities	0.01	6.15**
5-My Religious/Spiritual Self	0.00	0.76
6-My Sense of Humour	0.00	0.61
7-The Control I Have Over My Body	0.01	3.68*
8-My Physical Attractiveness	0.00	0.98
9-My Nurturing Ability	0.01	2.68
10-My Reproductive Potential	0.00	0.12
11-Myself as Morally Upright	0.01	1.40
12-My Intelligence	0.00	0.62

Note 1 "*" indicates $p<.05$ "**" indicates $p<.01$

Note 2 The Rsquare changes are for the Beliefs About the Fetus by pregnancy history interaction terms, which were entered into regression equations after the main effects.

Figure 1

Regression Lines for Negative Emotion on Beliefs About the Fetus for Different Pregnancy History Groups

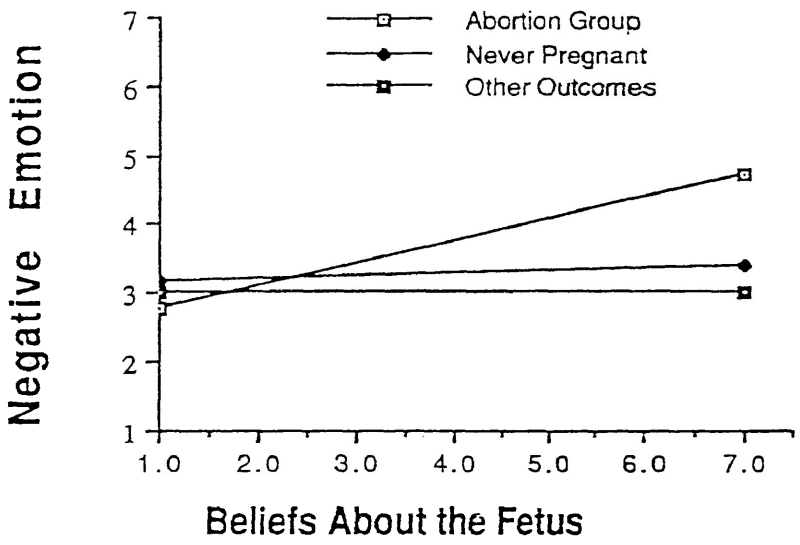

Figure 2

Regression Lines for Self-Esteem on Beliefs About the Fetus for Different Pregnancy History Groups

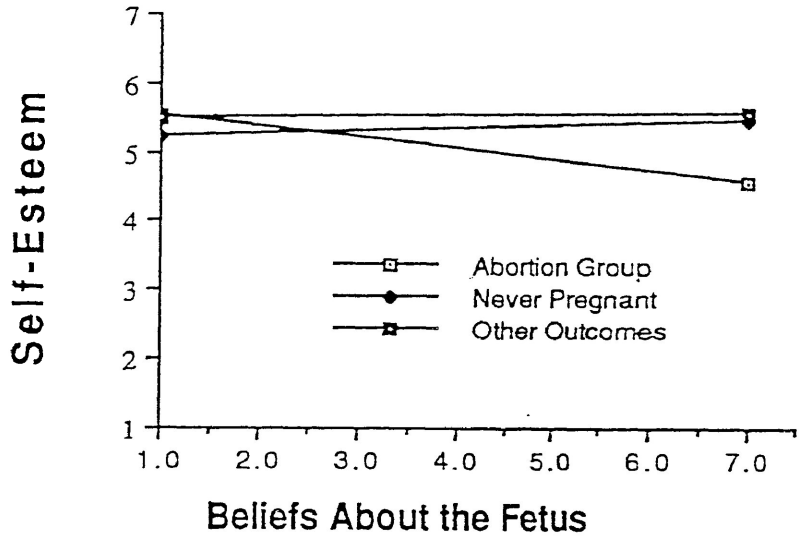

Figure 3

Regression Lines for Mothering Abilities on Beliefs About the Fetus for Different Pregnancy History Groups

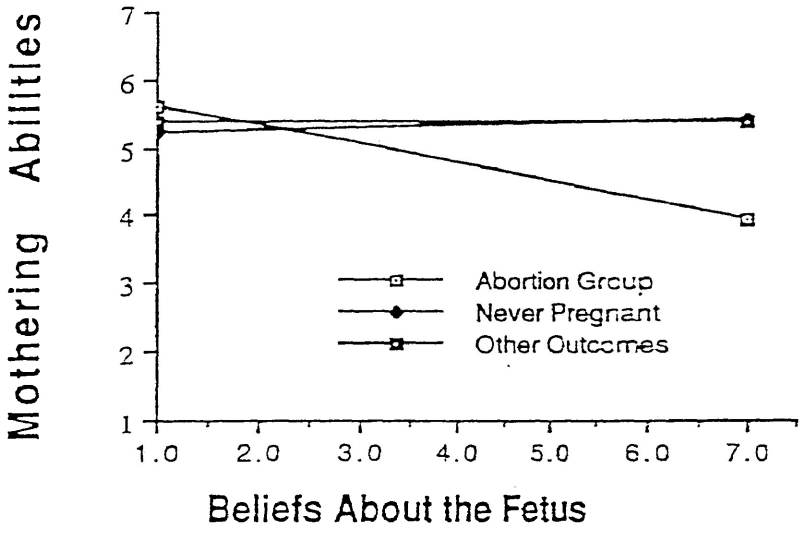

Figure 4

Regression Lines for Control Over My Body on Beliefs About the Fetus for Different Pregnancy History Groups

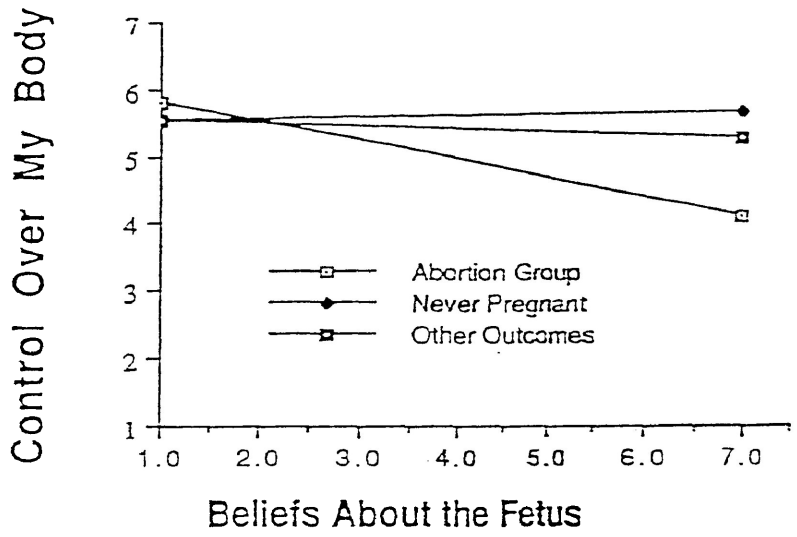

Figure 5

Regression Lines for Control Over My Life on Beliefs About the Fetus for Different Pregnancy History Groups