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CURRICULUM STUDIORUM

Brian E. Lynch was born March 2, 1951 in Belleville, Ontario, Canada. He received the Bachelor of Arts degree from the University of Ottawa, Ottawa, Ontario in 1973 and the Bachelor of Psychology degree from the University of Ottawa, Ottawa, Ontario in 1975.
ABSTRACT

The effects of vasectomy were examined on tests of masculine identification, compensatory masculine behaviour and autocracy in the family. Twelve vasectomy Ss matched for age, education, occupation and income with twelve control Ss were tested at pre- and post-treatment periods. Results of analyses of covariance indicated no differences between males who had undergone a vasectomy and males who had not. These findings did not support the experimental hypotheses, but were congruent with some of the existing literature.
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INTRODUCTION

Research has delineated the various physiological side effects of male sterilization. Unfortunately the psychological effects of vasectomy have not been as clearly outlined. The literature suggests that vasectomy has an effect on masculine identification and subsequent behaviour patterns.

It is the purpose of this study to investigate the relationship between vasectomy and compensatory masculine behaviour. It is hoped that the findings will elucidate the effect of vasectomy on male identification and behaviour. Further, it may suggest possible instances where vasectomy would not be the ideal means of contraception.

The first chapter of this thesis outlines the relevant literature related to fertility control, psychological effects of vasectomy and the cognitive components of vasectomy, followed by a discussion of the hypotheses tested. The second chapter deals with the variables, subjects, measurement instruments, procedure and statistical analysis used in the study. Chapter three discusses the results, and chapter four, the discussion.
CHAPTER I
REVIEW OF THE LITERATURE

Today man is faced with the realization that his survival on this planet is dependent upon the control of population, technology and pollution. It would be naive to assume this threat has not been confronted before, in some form or another, but never has its proportions been so awesome. The control of population by male sterilization is the main impetus of this study. Paul Ehrlich, who is associated with the Zero Population Growth group, maintains that earth's current human population is approximately five times too large for the present environment (Cord, 1972). Over-population not only stretches the physical limits of existence on this planet but also the ecological limits. A prime factor in the poisoning of ecological systems and increasing the threat of world-wide plague, weather change and thermonuclear war is over-population. Ehrlich and Holdren (1970), though pessimistic about present population levels, do stress that population control, as a factor in the attack on pollution, constitutes a definite move toward manageable control and should be initiated with vigour.

The necessity of some form of global birth control is obvious but too much vigour in implementing such a
program may cloud relevant areas of concern. Although much has been said concerning the physiological effects of male sterilization, the area of psychological functioning post-operatively has not been dealt with in sufficient detail. Research suggests various aftereffects in varying degrees of concordance. Therefore, it would be of interest to know if vasectomy has an effect on masculine identification with resultant compensatory masculine behaviour.

The present study examines only a few aspects of personality. It is hoped that the total personality profile post-vasectomy may eventually be understood.

This chapter reviews pertinent literature related to the present study under the headings of Fertility Control: History and Problems, Psychological Effects of Vasectomy and Cognitive Components of Vasectomy. The chapter ends with a statement of the hypotheses tested.

1. Fertility Control: History and Problems

This section reviews studies in the area of fertility control in general and some of the various problems associated with it.

Contraception is by no means a present day concern. Man has sought ways of controlling conception since the days of the early Egyptians. It was discovered that a medicated tampon to prevent conception was used during
the reign of Amenemhat III of the 12th Egyptian Dynasty (Moos, 1968). Himes (1963), in a book on the history of contraception, illustrates the fact that the modern birth control movement was begun in 1822. Along with many other types of contraceptives which are used even today, he states that abortion has always been a viable practice.

The use of oral contraceptives has grown enormously in the United States and in Canada. In 1956, 400,000 women in the U.S. were using "the Pill" and that number increased to 5,000,000 in 1961, (Ryder and Westoff, 1966). Projections for 1980 place the figure somewhere in the vicinity of 50,000,000.

As effective as "the Pill" is in preventing pregnancy, there has been much controversy over its long term physiological effects (Culliton, 1970). This controversy has steered many couples to alternative fertility controls. More and more couples who have all the children they wish and are concerned about the possible side effects of oral contraceptives are turning to sterilization. By 1970, Presser and Bumpass (1972) state that more than one in six of such couples had already been sterilized and nearly 50% more indicated that they would seriously consider sterilization as an operation to prevent future unwanted pregnancies. Sterilization, by 1970, was chosen first by couples where the wife's age was 30-44
years and in couples regardless of age, intending no more children, it was second only to "the Pill" (Westoff, 1972).

The Association for Voluntary Sterilization (1972) estimates the total number of sterilized married couples to be as high as four million. What seems important to note is that voluntary sterilization (tubal ligation or vasectomy) is rapidly accelerating but substantive research on its effects is lagging. Surprisingly, vasectomy has been very much on the upswing. It was estimated for 1970 that 100,000 vasectomies would be performed in the United States (Los Angeles Times, 1971). What the actual figure amounted to was 750,000 males under-went a vasectomy in that year.

In the late 1950's it was estimated that 45,000 vasectomies were performed in the United States (Sheps and Ridley, 1965). McCary (1967) has noted that the Association for Voluntary Sterilization estimated there would be 200,000 vasectomies per annum in the U.S.A.. Even the experts in the area of vasectomy are astonished by such a rapid increase in this form of contraception.

Kendall (1972) points out the danger that, "In an America swept by a wave of enthusiasm for ecological balance and control of the size of the population, we may become oversold on voluntary sterilization as a solution." How realistic such a concern is, in view of present world
population, is questionable. Perhaps what is not so question-
able is the idea that, at present, we do not fully realize
the ramifications, both physiologically and psychologically,
of such a procedure as vasectomy. Even though it was as long
ago as 1823 when Dr. James Blundell first proposed surgical
sterilization, relatively few follow-up studies on this
procedure have ensued since then (Sheps and Ridley, 1965).

Reports of adverse physiological effects following
vasectomy have been sparse. Similarly, few studies have
investigated the psychological effects of vasectomy. A
number of studies, however, have insinuated that there are
some adverse psychological reactions to the operation, (Moos,
1968). Ziegler et al. (1968) illustrate the fact that in
various interview and questionnaire follow-up studies
conducted in the United States, Europe and Asia, 90% of
the subjects and their wives expressed satisfaction with
vasectomy as a contraceptive procedure (Dandekar, 1963,
Ferber et al. 1967, Garrison and Gamble, 1950, Houser, 1955,

The interesting dichotomy which presents itself
throughout these studies and other such investigations
(Henderer, 1947, Johnson, 1964, and Parker, 1965) is the
indication that psychological complications following
vasectomy are quite common. Although Dandekar (1963)
reported a 92% favourable attitude toward vasectomy in a
study consisting of 1191 men, there was also 53% who reported "weakened sexual desire". Similarly, Lee (1966) reports positive attitudes toward vasectomy in Korea but in the same study mentions 20 post-vasectomy "sterilization neuroses" supposedly due to confusion about the difference between vasectomy and castration. Ferber et al. (1967) suggest that the conflicting information is in the direction of equating vasectomy with castration and the resulting necessity of coping with this association. They draw this conclusion from the fact that 8% of the men interviewed after obtaining a vasectomy through the Human Betterment Association, stated that it had been a personal sacrifice on their part.

According to Johnson (1964), vasectomy does have some effect on the psychological functioning and family relationships of an individual. In a study of 83 male patients in a psychiatric hospital, Johnson noted that at some time following their vasectomy, these patients had a disruption in their day-to-day functioning both psychologically and interpersonally. It is this discrepancy and indefinite delineation of the total psychological effect of vasectomy which has prompted the present investigation.

This section reviewed the important studies dealing with fertility control. They have shown that problems in male sterilization are both physiological and psychological
and are not yet fully understood.

2. Psychological Effects of Vasectomy

This section reviews relevant studies in the area of psychological effects of vasectomy.

As early as 1929 studies were being carried out in an effort to clarify the effect that vasectomy has on an individual. Although Popenoe (1929) centred most of his work on the mentally ill, he did report on one group of normal men who had undergone a vasectomy. The study consisted of analyzing questionnaire responses from 65 vasectomized men. The total time that elapsed from questionnaire to vasectomy ranged over twenty years. His results show a general pattern of sexual satisfaction after vasectomy. Popenoe's study, like many to follow, focused on sexual and contraceptive satisfaction. Garrison and Gamble (1950) in an interview procedure, assessed 50 men including 10 physicians. These results express a better than 75% satisfaction rate. Similarly, Poffenberger and Poffenberger (1963) conducted several studies on workers and couples in a university community. They found a high satisfaction rate with both samples in terms of sexual satisfaction following vasectomy. Landis and Poffenberger (1965) completed a study of 330 vasectomized males in which 99% of them stated that they would choose such an operation again if required. Dandekar (1963) and the Simon Population Trust (1969) study
are also questionnaire studies which report post-vasectomy sexual satisfaction for the most part. In all of the aforementioned studies, the trend was toward satisfaction with the operation.

Studies reported by Truesdale (1965); Ziegler, Rodgers and Kriegsman (1964); Ferber, Tietze and Lewit (1967) all correlate very highly with the findings of general improvement or no change in sexual desire, enjoyment or frequency of intercourse after vasectomy.

In a contrary finding, however, Johnson (1964) interviewed 83 psychiatric patients who had been previously vasectomized. Eleven of the men were hospitalized within a year after the operation. A very high rate of dissatisfaction with the operation and lessened sexual activity were reported. Johnson claims that one cannot dismiss the fact that the operation must have played some role in the breakdown. How much of a role, he does not state. Regardless, it is worth noting that the sterilization of these eleven patients was followed by psychiatric hospitalization within a year. A generalization to any population other than the sample studied by Johnson, however, must be undertaken with care. In contrast, dissatisfaction with vasectomy was reported by only 5% of the subjects of most U.S. studies.

Wolfers (1970) suggests that questionnaire surveys such as Garrison and Gamble (1950); Dandekar (1963); Landis
and Poffenberger (1965); Ferber, Tietze and Lewit (1967) and the Simon Population Trust study (1969) indicate that a vast majority of males would choose to have a vasectomy again if the circumstances arose. In addition, these same males would recommend such an operation to others. A small proportion of these males, however, ranging from 1\% to 3\% have suffered some deterioration in their sex lives which is rarely, if ever, reported. Interestingly, few authors have pointed out this paradox. Johnson (1964-) suggests that in an effort to demonstrate the benefits of vasectomy, many authors and researchers have inadvertently overlooked its problems.

Two fairly recent studies were reported on Canadian men by Grindstaff and Ebanks (1971) and Alderman (1971). These studies also suggest a large percentage of responses in the direction of complete satisfaction with the operation. The Alderman study found some 93\% of the men pleased with the operation, 71\% claimed improved sexual satisfaction and only 0.4\% reported decreased sexual satisfaction following their vasectomy.

It seems quite clear that for the most part vasectomy is a safe and reliable form of contraception. What seems also apparent is the fact which Johnson (1964-) points out, namely, that there are peculiar and adverse psychological effects which are being ignored.
The material reviewed up to this point suggests that vasectomy as a sterilization procedure is a many-faceted phenomenon with some conflicting findings. Although much of the literature has been interested in the sexual and physical aftereffects of a vasectomy, there has been little done on the psychological effects of such an operation. Rodgers, Ziegler, Rohr and Prentiss (1963) launched a longitudinal study of just such effects in 1963. Although, in general, their results on the MMPI were within normal limits, there were clusters of slightly elevated scores on the anxiety and depression scales.

In an unpublished thesis, Kendall (1972) discovered that men who elect and actually undergo vasectomy have a significantly lower self concept, as measured by the Tennessee Self Concept Scale, than men who would never consider having the operation. He also suggests that further research is needed in order to get a clearer psychological profile of men undergoing a vasectomy.

Cord (1972), in his doctoral dissertation arrived at the conclusion that vasectomized men did not differ in anxiety levels and masculine identity from the control group. To the contrary, Ziegler (1971) reported a lowered score for men post-vasectomy on the MF scale of the MMPI. He states:

we concluded that after a vasectomy
a man may be more concerned about what is masculine and what is not and may tend to eliminate questionable "unmasculine" activities from his behaviour. (p. 72)

Rodgers et al. (1965) did a follow-up study on 35 of the 48 original men in their earlier study in 1963 (Rodgers et al. 1963). This consisted of an MMPI and a follow-up questionnaire. The findings in this study were in accord for the most part with the previous study as regards enthusiasm for the procedure, sexual functioning and enjoyment of intercourse. All of these factors were in the direction of positive attitudes. There also emerged, however, a general increase in maladjustment across the scales. The authors agreed that their findings were consistent with the ambiguous findings of previous studies regarding the psychological effects of vasectomy.

In a critique of questionnaire studies Wolfers (1970) states:

the collection of data by questionnaire surveys is too simple a procedure to assess reliably the psychosocial and sexual effects of contraceptive vasectomy. Motivated by the possibility of receiving help with their problems, a much higher
proportion of respondents stated sexual inadequacies had led them to seek the operation and had (in their own opinion) resulted from it than has hitherto been found by traditional survey methods.

(p.300)

Wolfers (1970) sent questionnaires to 95 vasectomized men with the suggestion that if they encountered problems post-operatively, they could request an appointment with a visiting psychologist. The questionnaire included no questions relating to sexual or marital adjustment. Only a few persons requested appointments, but from this sample Wolfers concluded that screening of applicants for vasectomy is required and that males who have a history of marital, psychological or sexual problems should be counselled against such an operation.

Wolfers, Subbiah and bin Mazurka (1973), in an effort to escape the questionnaire weakness, personally interviewed 246 Malayan men who had a vasectomy one to four years previously. The results are in much the same vein as the previous study. What seems to be required in this instance is an emphasis on pre-operative counselling for candidates who have less than four or five children or have children of only one sex and generally, a clearer explanation of the fate of the sperm.

Wiest and Janke (1974) have presented a methodological
critique of research on the psychological effects of vasectomy. They note that most of the research to date has utilized either questionnaires or interviews with little emphasis on more standardized psychological tests with the exceptions of Ziegler et al. (1966) and Ziegler et al. (1969). They point out also a very major flaw in many of the studies to date, that being the lack of experimental designs which would clearly result in causal inferences. All too often, the effects of the vasectomy are muddled in a mass of confounding variables and this makes interpretation difficult. The authors make reference to an interesting study by Phoenix (1973) who studied the sexual behavior of Rhesus monkeys after vasectomy. Believing these monkeys to be free of any of man's so-called psychological flaws (guilt, castration anxiety etc.), Phoenix suggests that the adverse effects of vasectomy found in man are not due to the physiological effects of the operation, because these monkeys showed no significant difference in sexual behavior as compared to their controls. Obviously, caution is required in inferring that discoveries made in lower animals apply to human beings as well.

The Simon Population Trust Study (1969) contacted vasectomized couples a year or more after the operation in order to fill out a questionnaire. The results indicated that the majority of couples reported no general health change post-
vasectomy; 11.4% reported improved health and only 0.2% reported any deterioration. The author suggests that the proportion of wives reporting improved general health (31%) is chiefly due to reduced anxiety over pregnancy. Approximately 75% of the couples reported a satisfactory sex life and only 1.5% of the men and women respectively reported a deterioration in sexual functioning. As high as 99% said they would recommend such an operation to others.

This pattern, as set out here and as previously stated in this review, is representative for the most part of the majority of questionnaire studies. Wiest and Janke suggest that these studies have inherent flaws in that they do not account for the total possible picture in arriving at conclusions. They suggest that several processes may be at work in the studies, such as acquiescence, yea-saying (Couch and Keniston, 1960) or dissonance reduction (Ziegler, Rodgers and Prentiss, 1966). They also suggest that the questionnaire would be a much more effective tool in delineating the effects of vasectomy if there were special effort made to disguise its use rather than sensitizing the respondent to his vasectomy. The author feels that Wolfers (1970) has recognized this problem and attempted to circumvent it. She asked intensive questions about the effects of the operation only from those respondents who requested a psychological interview after
completing the questionnaire.

Wiest and Janke's discussion of interview studies on vasectomy, points to a very volatile issue, that being the possibility of a self-fulfilling prophecy. Hildum and Brown (1956), who have written extensively about verbal reinforcement and interviewer bias, also warn against the subtle way such a process can take over even the most carefully designed study. The flexibility of the interviewer can lead to his unwitting confirmation of his own hypothesis by indirectly suggesting the nature of responses considered most interesting.

Hinderer (1947) assessed the psychological adjustment of 23 sterilized men and reported that 22 of them had positive outcomes. Unfortunately, the interviewer's criteria for a positive outcome was not sufficiently explicit. This made the evaluation of the study very difficult. Garrison and Gamble (1950) and Poffenberger and Poffenberger (1963) also did interview studies which resulted in positive ratings. Poffenberger and Sheath (1963) interviewed 61 Indian men who reported almost unanimous satisfaction with the operation.

Johnson and Miller (1964) after interviewing 41 wives of vasectomized males concluded:

if the sterilization occurred in a setting of coercion or of negativism,
the evidence of marital dissolution
was high . . . The evidence from our total population does not support sterilization as a method of preserving a marriage or of improving sexual functioning. The latter might occur, but certainly not with any predictable frequency. (pp 39-40)

As in the questionnaire studies, interview studies suffer from limited generalization because of poor design. That is, many of the studies, because of improper controls in design, (experimenter bias, or control groups), fail to permit generalization, past the sample studied. Wiest and Janke (1974) suggest that standardized psychological tests, although not perfect, do avoid many of the pitfalls into which the above-mentioned studies fall.

Canfield's (1972) doctoral dissertation attempted to determine if there were any changes in the personality characteristics and sexual adjustment of the partners involved in a vasectomy operation. He used the Holtzman Ink-blot Technique (HIT) and the Marriage Adjustment Schedule (MAS) to tap the personality characteristics and to determine sexual adjustment. He was able to confirm his expectation that there would be no changes in measured personality characteristics
and sexual adjustment after a vasectomy. He concluded that vasectomy is a safe contraception procedure in terms of emotional and sexual adjustment.

Ziegler and Rodgers and Prentiss (1969), using a more sophisticated experimental design, compared 22 couples using "the Pill", with 37 couples where the husband was vasectomized. The strength of their study lies in the fact that these couples were a follow-up of their earlier study which comprised 42 pill using couples and 48 vasectomy couples. The study utilized administration of the California Personality Inventory, (CPI) Minnesota Multiphasic Personality Inventory (MMPI) and the Scripps Clinic and Research Foundation (SCRF) general description scale. At the two year follow-up there were some differences to be noted but these disappeared at the four year measure. At the two year follow-up, they discovered differences in the self and spouse descriptions (SCRF scales), in several MMPI scales and in their rated psychiatric status. The authors concluded from these noted changes that "vasectomy men cathect masculine role behavior more strongly, their wives assume a more complementary and compliant role in relation to them, and both assume a more responsible and solicitous attitude toward their children".

Although the differences reported at the two year follow-up disappeared after a few years, Ziegler et al. (1969)
continue to state that vasectomy proves a threat to masculinity. It is this threat which they claim precipitates psychological coping in a dissonance-reducing paradigm. Unfortunately, as Wiest and Janke (1974) point out, the hypothesis that vasectomy poses a psychological threat for some men may be based upon clinical impressions, but the hypothesis is not strictly supported by any known research data.

This section reviewed the important studies dealing with possible psychological effects of vasectomy. One of the purposes was to illustrate the various approaches researchers have taken in attacking the problem. Further it attempted to show that much of what is reported is supposition and lacks a foundation based upon research findings.

3. Cognitive Components of Vasectomy

This section reviews studies in the area of cognition and its role in vasectomy.

Ziegler, Rodgers and Kriegsmen (1966) suggested that vasectomy has a demasculinizing potential which precipitates self inspection, and presumed inspection by others, for evidence of unmasculine behavior. The resultant introspection motivates an individual to behave in stereotype masculine ways in an effort to reduce the cognitive dissonance brought on by self-scrutiny. In fact an individual may seek out more
socially dictated masculine interests and activities as proof of his virility. The sudden interest in male oriented behavior may compensate for feelings of diminished manhood.

Ziegler, Rodgers and Prentiss (1969) suggest that in order to counter-balance their husbands more masculine, autocratic and domineering role in the family post-vasectomy, the wives took on a more feminine subservient role.

Ziegler et al. (1966) stated that adverse changes in marital satisfaction and general behavioral adjustment for husband and wife were attributed to other life circumstances, other than vasectomy and only favourable changes were attributed to vasectomy. The selected attention which is suggested by these results points to the very profound effect such an operation has on an individual or couple.

The inferences made in these studies and in many others suggest the possibility of a cognitive element in the overall adjustment of a couple to vasectomy. It is believed that this cognitive element is in the direction of consonance and that vasectomy requires of the partaker a degree of dissonance-reduction. Festinger's (1957) theory of cognitive dissonance provides a useful model for understanding the altered awareness that seems to accompany vasectomy. As Ziegler et al. (1966) suggested in reference to reported better sexual intercourse after vasectomy, "... the investment the subjects have in
the operation is too great to allow themselves to have self-doubts about it". It can be further emphasized that the adverse effects Rodgers, Ziegler and Levy (1967) inferred from their data are not necessarily inevitable, physiological outcomes of the surgical procedure, but are thought to be the result of the respondent's understanding and beliefs about the operation, some of which derive from the general cultural context.

Presser and Bumpass (1972) concluded:

that a small but substantial minority of the population still have serious misconceptions about vasectomy, specifically the erroneous view held by some of the people that it interferes with a man's physical ability to have sexual intercourse. This view is supported by our data on attitudes of friends and relatives about the operation. Since the attitudes and reactions of friends are important factors in motivation, it is essential to have a strong and incisive educational activity to supplant misinformation and rumour about vasectomy.
The need to reduce cognitive dissonance is thought to be a motivational force that impels an individual to action. One type of action can be compensatory behavior. Compensatory behavior can be any type of stereotyped masculine behavior that, if indulged, may lead to a reduction in cognitive dissonance.

Cognitive dissonance or consonance, as viewed by Festinger (1957), is not defined by the external conditions of the environment, but rather it is defined in terms of the experiencing individual's internal subjective experience. With this in mind and the fact that vasectomy, for all intents and purposes, is not reversible, one can surmise that the operation requires a great deal of personal involvement on the part of the male in a patriarchal society (Wolfers, 1970). Therefore, in terms of the theory, the male reduces cognitive dissonance in varied ways, one being compensatory behavior, another possibly increased intake of consonant information and decreased intake of dissonant data, and lastly, avoidance or removal of himself from the dissonance-creating environment.

In accordance with this line of thought, the male's attitude and conception of himself in the family structure may alter in the direction of dissonance-reduction. It is logical to assume that anyone's perceived role may alter in accordance with changes in the environment. If the changes
involve a change in one's behavior to inclusion of more stereotyped masculine activities, it is therefore reasonable to assume his role in the family will change also. A change in role may involve a change also in autocratic behavior. The compensatory male who feels a need to indulge in compensatory behavior may also act more authoritarian in line with his perceived change in status.

This section reviewed the important studies dealing with cognition and its effect on behavior and male identification.

4. Summary and Hypotheses:

This chapter has reviewed the major studies on vasectomy and its psychological effects. The purpose in reviewing these studies has been to show the reasoning for the present study and develop hypotheses in accordance with the literature reviewed.

The first section illustrated the need for research into vasectomy and, in particular, the psychological aspects of vasectomy. The second section outlined the various positive and adverse psychological effects of vasectomy. It showed that much of the literature to date has not been particularly successful in delineating the psychological effects of such an operation. Most of the studies suggest that indeed adverse effects are a result of male sterilization to some degree or other. The impression of these findings and the suggestion that cognitive factors are at work laid the groundwork for
the present study. Vasectomy seems to have a demasculinizing potential which may precipitate a change in psychological set and a resultant behavior and identification pattern. Therefore, males may feel the need to compensate for such feelings with exaggerated masculine behaviors. The second section also implied the need for more research to support the suppositions which have been put forth. The last section outlined the cognitive components of such an operation and their effect on one's behavior and identification. This cognitive component which may be explained in terms of dissonance reduction, necessitates a change in a male's behavior and identification.

No attempt so far has attempted to delineate the effect vasectomy has on male identification, in and out of the family setting, and the compensatory behavior pattern which may ensue.

In view of these studies, the major hypothesis of the present study is that differences do exist between vasectomized and non-vasectomized males relative to the issues of compensatory masculine behavior, masculine identification and role identification in the family structure.

Stated in the null form the hypotheses are as follows:

1. There are no significant differences in stereotype masculine behavior
between males who have undergone a vasectomy and those who have not.

2. There are no significant differences in masculine identity between males who have undergone a vasectomy and those who have not.

3. There are no significant differences in the degree of expressed autocracy in the family, between males who have undergone a vasectomy and those who have not.

The following chapters present an explanation of the measurement instruments and method used as well as the results and discussion of the present study.
CHAPTER II
RESEARCH DESIGN

This chapter deals with the research method used to test the hypotheses presented in the first chapter. The first and second sections describe the subjects and measurement instruments used in the study. The third and fourth sections explain the procedure and statistical analyses employed in the analysis of the data.

1. Subjects:

Twelve males with a mean age of 31, incomes of form $15 - $25,000, occupations ranging from managerial to professional and educations from high school to university degrees, living in Ottawa and undergoing a vasectomy constituted the treatment group. It is understood that due to the surgical nature of the study, it was impossible to assign subjects randomly to their respective groups. The control group consisted of twelve males, each of whom was matched individually with a member of the treatment group for age, income, occupation and education. The only difference between experimental and control patients was that the control subjects were not receiving a vasectomy operation.

2. Measurement Instruments:

A self-administered battery was developed as the basic instrument for this study. The battery consisted of (1) a
letter of explanation of the study (2) an instruction sheet (3) a MMPI booklet and answer sheet (4) the Levinson - Huffman test on the Traditional Family Ideology (TFI) (5) a General Interest and Activities Inventory (GIAI) and (6) a personal history questionnaire designed to tap socioeconomic, social and sexual history information.
(A) Minnesota Multiphasic Personality Inventory - APPENDIX I

The MMPI is a psychometric instrument designed to provide, in a single test, scores on a number of phases of personality. The shortened version of the MMPI, consisting of 399 true-false items was used in this study in order to preserve all the scales yet save time in administration. The instrument served primarily as an objective global assessment of personality, and in particular, an assessment of the Ss profile on the validity and masculinity - femininity (MF) scales. The MF scale (5) was designed originally to measure masculine and feminine interest patterns. Because masculine and feminine interests in comparison to one's total profile are facets of behavior, it was decided to use this scale as one of the dependent measures in the study.
The TFI was used to measure the male role attitudes in the family structure in the area of masculinity. The forty-item Traditional Family Ideology Scale (TFI) was constructed in 1954 by Levinson and Huffman. The test was administered to 109 adults registered in evening college courses. The sample was relatively heterogeneous in terms of religion, occupation, age and marital status. Along with the college students, the sample included skilled workers, professionals and housewives. The range of ages was approximately twenty to forty, with the mean in the mid-twenties. On the TFI, scores may vary from ten to seventy. High scores are read as autocratic; while low scores are indications of a more democratic orientation in the family. The initial sample had a mean score of 33.3 and a standard deviation of 7.8. The split-half reliability (corrected by the Spearman-Brown formula) was 0.84. The extreme high and low quarters of the initial sample were adequately differentiated by thirty-five of the items. It was found by Levinson and Huffman that the TFI was able to detect autocratic and democratic patterns of thought.
The subjects were asked to indicate in this study the point of their agreement or disagreement on a scale ranging from +3 (strong agreement) to -3 (strong disagreement). The range was then transposed to one in which the scores extended from one (strong disagreement) to seven (strong agreement) on the thirty-four autocratic items and reversed on the six democratic ones.

Response: -3 -2 -1 0 +1 +2 +3
Score 1 2 3 4 5 6 7

Therefore the individual's total scale score is the sum of his item scores. The total scores can thus fall between 40 and 280 points. Dividing the total score by 40 yields a mean score per item on a scale ranging from one to seven. For convenience of comparison, the analysis of the present study used the mean per item, multiplied by 10. Thus, the possible range is 10 to 70 points.
The behavioral assessment was the most difficult to measure as there are no standardized tests to date which measure exclusively such an activity. Therefore, a self-rating scale of interests and activities which the author felt were indicative of stereotyped masculine and feminine activities was developed for use in the present investigation. Ss were asked to rate their list of activities and interests on a scale extending from, like very much to dislike very much. The individual item scores extend from one to seven and the total result is a summation of the particular items. A total score was obtained for each S by summatng his rating of each item. Masculine items were scored 1= dislike very much to 7= like very much. Female items were scored in a reverse manner. The result was a score which ranged from 20 to 140 with a mean of 70. The higher the score the more expressed interest in masculine activities and interests.
The dependent variables in the present study are masculine identification, compensatory masculine behavior and family role identification. Masculine identification was measured by the individual's change score in the MF scale of the MMPI. The compensatory behavior was measured by the General Interest and Activities Inventory (GIAI), and the family role identification was measured by the Levinson-Huffman Test on Traditional Family Ideology (TFI).

3. Procedure:

The treatment and control groups were pre-tested in early spring using the self administered test battery. The treatment group received all of their instructions and tests at the doctor's office while the control group were tested by the experimenter. The treatment group was tested one week prior to the vasectomy and instructed to return to the doctor's office with the finished battery of tests. The treatment group was then instructed to return four months post-vasectomy in order to fill out a post-test battery. As a vasectomy takes a minimum of eight weeks in order to reach zero sperm count and therefore allow for its use as the contraceptive method, a four-month pre-to-post-test period was chosen. This time period allowed for at least two months of sexual activity without the necessity of another type of birth control method. Instructions, test battery and time
period were the same for both groups. The control group, matched for age, income, occupation and education, underwent a pre-and post-testing with a similar four month interval.

4. Statistical Analyses:

The statistics used in this study were calculated both manually and with the use of the computer program entitled Statistical Procedure for the Social Sciences (SPSS, 1975). Analysis of covariance was applied to all three dependent measures (MMPI, TFI, GIAI). The pretest scores on all three measures were used as the covariate. Keith (1972) states that by using the pretest scores as covariates we make the actual treatment effect more specific. Pearson Product Moment correlation coefficients were calculated for both groups on all dependent measures.

Chapter II discussed the subjects, measurement instruments, procedure and statistical analyses used in the study. Chapter III presents the results of the study and Chapter IV discusses the results and implications of the study.
CHAPTER III

RESULTS

Chapter III presents an analysis of the data collected and deals with the various statistical procedures used. The chapter also illustrates the results in tables and graphs.

Prior to the analysis of covariance a test of the assumptions underlying the procedure was done. As with most sets of real data it did not satisfy the assumptions completely. However, as Ferguson (1966) points out, moderate departures from the assumptions of normality and homogeneity may occur without seriously affecting the validity of the inferences drawn from the data.

The results of the analysis of covariance for the MF scores of the MMPI are presented in Table 1. No significant difference was found between vasectomized and non-vasectomized males ($F = .09; 1, 21 \text{ df}; \text{n.s.}$).

Figure 1 illustrates the MMPI masculinity changes from pre- to post- treatment for both vasectomy and control groups. The mean pre-treatment and post-treatment vasectomy group scores were 61.17 and 60.17 respectively. The mean pre-treatment and post-treatment control group scores were 55.50 and 54.83 respectively. Figure 1 indicates no apparent differences in the two groups.
Table 1
Analysis of Covariance for Masculinity-Femininity Scores Designated MF

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Between</th>
<th>Within</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum of Squares:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretest Scores</td>
<td>192.66</td>
<td>820.67</td>
<td>1013.33</td>
</tr>
<tr>
<td>Adjusted Sum of Squares:</td>
<td>1.72</td>
<td>398.91</td>
<td>400.63</td>
</tr>
<tr>
<td>Posttest Scores</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>1</td>
<td>21</td>
<td>22</td>
</tr>
<tr>
<td>Variance Estimates</td>
<td>$s_{b}^2= 1.72$</td>
<td>$s_{w}^2= 19.00$</td>
<td></td>
</tr>
</tbody>
</table>

\[ F = .09 \quad p > .05 \quad n.s. \]

n.s. = not significant at the .05 level of significance
Figure 1. Mean Pre- and Post-treatment Masculinity-Femininity Scores (MF) for Two Groups of Male Subjects.
The non-significant F following the analysis of covariance precluded the possibility of conducting post hoc statistical analysis.

Table 2 presents the analysis of covariance results for the TFI scores of the Levinson-Huffman test. No significant difference was found between vasectomized and non-vasectomized males (F = .18; 1, 21 df; n.s.).

The role identification changes from pre-to post-treatment for both groups are illustrated in Figure 2. The mean pre-treatment and post-treatment vasectomy groups scores were 29.40 and 28.60 respectively. The mean pre-treatment and post-treatment control group scores were 29.85 and 29.00 respectively. Figure 2 again indicates no apparent differences in the two groups.

The non-significant F precluded the possibility of conducting post hoc statistical analysis.

The results of the analysis of covariance for the GIAI scores of masculine behavior are presented in Table 3. The difference between vasectomy and control groups was not found to be significant (F = 1.96; 1, 21 df; n.s.).

Figure 3 illustrates the behavioral interest and activities change from pre-to post-treatment for both vasectomy and control groups. The mean pre-treatment and post-treatment vasectomy group scores were 83.25 and 83.33 respectively.
Table 2
Analysis of Covariance for the Traditional Family Ideology Scores Designated TFI

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Between</th>
<th>Within</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum of Squares:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretest Scores</td>
<td>1.26</td>
<td>1175.59</td>
<td>1176.85</td>
</tr>
<tr>
<td>Adjusted Sum of Squares:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Posttest Scores</td>
<td>1.54</td>
<td>177.76</td>
<td>179.30</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>1</td>
<td>21</td>
<td>22</td>
</tr>
<tr>
<td>Variance Estimates</td>
<td>$S_b^2$ = 1.54</td>
<td>$S_w^2$ = 8.46</td>
<td></td>
</tr>
</tbody>
</table>

$F = .18$ $p > .05$ n.s.

n.s. = not significant at the .05 level of significance
Figure 2. Mean Pre- and Post-treatment Traditional Family Ideology Scores (TFI) for Two Groups of Male Subjects.
### Table 3

Analysis of Covariance for General Interest and Activities Inventory Scores Designated GIAI

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Between</th>
<th>Within</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum of Squares:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretest Scores</td>
<td>26.44</td>
<td>1804.92</td>
<td>1830.96</td>
</tr>
<tr>
<td>Adjusted Sum of Squares:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Posttest Scores</td>
<td>55.69</td>
<td>597.98</td>
<td>653.67</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>1</td>
<td>21</td>
<td>22</td>
</tr>
<tr>
<td>Variance Estimates</td>
<td>( S_b^2 = 55.69 )</td>
<td>( S_w^2 = 28.48 )</td>
<td></td>
</tr>
</tbody>
</table>

\[ F = 1.96 \quad p > .05 \quad \text{n.s.} \]

n.s. = not significant at the .05 level of significance
Figure 3. Mean Pre- and Post-treatment General Interest and Activities Scores (GIAI) for Two Groups of Male Subjects.
The mean pre-treatment and post-treatment control group scores were 85.33 and 88.08 respectively.

The non-significant F following the analysis of covariance precluded the possibility of conducting post hoc statistical analysis.

It may be concluded that on all the dependent measures, the MF scale, the TFI and the GIAI, there were no significant differences between vasectomy and non-vasectomy groups from pre-to post-treatment.

The power of the F test on each dependent measure was calculated. The results were as follows, MF=.98, TFI=.35 and GIAI=.75. Therefore, the power of the F test on the MF scores resulted in a probability of greater than 9 chances in 10 of rejecting the null hypothesis in favour of the alternative hypothesis. The results for the remaining two measures were considerably less powerful. Therefore, it stands to reason that with the sample size being as small as it was an increase in size might possibly result in significance. The present lack of significance may have been partially due to the small number of subjects used.

Table 4 presents the correlation coefficients obtained for the vasectomy group on the three dependent measures. A significant positive correlation (r=.60, 10 df; p .05) was obtained between the TFI scores and the GIAI scores.
Table 4
Pearson Product Moment Correlations Between TFI, GIAI and MF Scores for the Vasectomy Group

<table>
<thead>
<tr>
<th>Correlations</th>
<th>r</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>TFI with GIAI</td>
<td>.60</td>
<td>.05</td>
</tr>
<tr>
<td>TFI with MF</td>
<td>-.20</td>
<td>n.s.</td>
</tr>
<tr>
<td>MF with GIAI</td>
<td>-.26</td>
<td>n.s.</td>
</tr>
</tbody>
</table>

df = 10
all tests: two-tailed
The correlation coefficients obtained for the control group on the three measures are presented in Table 5. A significant negative correlation \((r = -.45, \text{10 df}; p < .05)\) was obtained between the TFI scores and the GIAI scores.

The fact that a positive correlation was obtained between TFI and GIAI scores for the vasectomy group but a negative correlation for the non-vasectomy group makes interpretation difficult. On the one hand, it would seem that as autocratic role identification increases so also does one’s masculine interest pattern increase. However, the inverse relationship indicated by the negative correlation for the control group would tend to dispute this conclusion.

Table 6 indicates the correlation coefficients obtained when the vasectomy and control groups were combined. The result is a significant \((r = .29, \text{10 df}; p < .05)\) but low positive correlation. Since \(r = .29\) accounts for only about 9% of the variance and is the largest coefficient, it appears best not to draw conclusions about the relationship which exists between masculine identification, role identification and interests/activities.

As cited in Chapter II socioeconomic data was gathered on both groups. The mean ages for the vasectomy and non-vasectomy groups were 30.4 and 31.8 respectively. Both groups had finished an average of 1-2 years in university, were
Table 5
Pearson Product Moment Correlations Between TFI, GIAI and MF Scores for the Control Group

<table>
<thead>
<tr>
<th>Correlations</th>
<th>r</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>TFI with GIAI</td>
<td>-.45</td>
<td>.05</td>
</tr>
<tr>
<td>TFI with MF</td>
<td>-.03</td>
<td>n.s.</td>
</tr>
<tr>
<td>MF with GIAI</td>
<td>-.01</td>
<td>n.s.</td>
</tr>
</tbody>
</table>

_df = 10
all tests: two-tailed
Table 6
Pearson Product Moment Correlations Between TFI, GIAI and MF Scores for all the Subjects

<table>
<thead>
<tr>
<th>Correlations</th>
<th>r</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>TFI with GIAI</td>
<td>.29</td>
<td>.05</td>
</tr>
<tr>
<td>TFI with MF</td>
<td>-.10</td>
<td>n.s.</td>
</tr>
<tr>
<td>MF with GIAI</td>
<td>-.17</td>
<td>n.s.</td>
</tr>
</tbody>
</table>

$df = 10$
all tests: two-tailed
employed in managerial positions and had a mean income of $20,000 per annum. The vasectomy group had only 15 children total while the control group had 23. Therefore, the vasectomy group had only 1.3 children per family while the control group had 1.9 or nearly 2 children per family. Interestingly, the present literature reports that males who undergo a vasectomy are older and have larger families than those of the present study.

Several questions were addressed to the area of birth control and sex life satisfaction. The two groups reported having read something on birth control at the pre-treatment period but did not report any increase at the post-treatment period. All subjects reported satisfactory sex lives with no specific sexual problems. The two groups reported that the decision for a vasectomy had been a joint decision between husband and wife. While the vasectomy group reported no frequency change in intercourse, the control group reported a slight decrease in their rate of sexual intercourse. It is difficult to analyse this change as the question concerning frequency of intercourse did not require a numerical response from the subject, but rather a quantitative adjectival response (see Appendix 4). Therefore when the control group reported a "decrease" in sexual intercourse at the post-treatment, one did not know the degree or magnitude of the
change. In the construction of the questionnaire certain items were included to control for response bias on the part of the subjects. These control items were not included in the final analysis.

This chapter has concerned itself with the statistical analysis of the data. The analyses of covariance yielded non-significant results. The discussion and possible implication of these results are dealt with in Chapter IV.
CHAPTER IV
DISCUSSION

Chapter IV deals with a discussion of the findings of Chapter III. Also discussed, are the implications for future research in the area of male sterilization.

A lack of any significant differences between vasectomy and non-vasectomy males from pre-to post-treatment made it impossible to reject any of the null hypotheses. This could mean that there was an insufficient time interval between pre- and post-treatment for the expected differences to appear. That is to say, based upon a review of the literature, there is every reason to expect there should be some psychological effects due to vasectomy. The present study may not have permitted adequate time for those effects to appear.

Alternatively, the questionnaires designed for the present study, may have lacked adequate validity to reflect any possible psychological changes, and furthermore, it may indeed be that there are psychological effects due to vasectomy but these effects are not manifested in masculine identification, masculine compensatory behavior, or family role identification. It is possible that psychological effects are manifested in other spheres of personality such as
introversion-extraversion, or somatization of anxiety. Psychological effects may even appear in job absenteeism or interpersonal relationships, parameters which were not measured in the present study.

It would be premature to suggest that there are no adverse effects due to vasectomy. The present sample which was composed of only 12 males undergoing a vasectomy was hardly representative of the male population in general. Gathering subjects for a study of this type is both time consuming and difficult. Contacting Family Practitioners and Urologists for their approval and their patients is not an easy task and the subject drop-out rate is extremely high.

The present study did not truly fulfill the criteria of an experimental design. Due to the nature of the operation, randomization of subjects was an impossibility. Perhaps, males who choose vasectomy are a group all their own, with personality and psychological factors which are not tapped by traditional psychometric measures.

Horenstein and Houston (1975) point out the difficulty some men have in adjusting to vasectomy psychologically. They suggest that adjustment fluctuates over time as a factor of general operative defensiveness. Furthermore, they suggest that future research employ more than one follow-up period. The present study, as previously noted, reflects this time
problem but longer term research involves factors not feasible in this study. In a long term study of vasectomy, time, money and interest are essential factors. With sufficient funding, time and interest, future vasectomy research will be able to address itself to some of the deficiencies of the present study.

In a very recent article Leavesley (1976) suggests that mastery of fertility (vasectomy) may be extremely beneficial. Although cognizant of the negative factors, he feels that the psychological boost gained from the mastery of fertility, supercedes the adverse effects. It seems plausible that the present study is a reflection of this type of reaction. The vasectomy males aware that they are in control of fertility see no need to exhibit a more masculine image in reaction to the operation.

Bourgeois and Audebert (1974) have pointed out the castration fear, confusion between fecundity and virility, the significance of procreation and contraception for men and the fragility of the male sexual identity. These ideas and conceptions have been the impetus behind the present study and the reasons for its design. Future research might employ larger samples, multiple testing periods, interviews and different controls. One type of control which has not been used, would be a group of males who are undergoing genital
surgery of another type other than vasectomy. Perhaps the surgical tampering of the male genitalia and the fear of subsequent impotence or castration is the real problem and not sterilization per se.

Horenstein and Houston (1975) suggest that future investigations should also employ individual difference measures as pre-operative predictors. With more careful study, using better designs and testing procedures the reported adverse psychological effects of vasectomy may be more fully understood and hence, coped with more effectively.
REFERENCES


This inventory consists of numbered statements. Read each statement and decide whether it is true as applied to you or false as applied to you.

You are to mark your answers on the answer sheet you have. Look at the example of the answer sheet shown at the right. If a statement is TRUE or MOSTLY TRUE, as applied to you, blacken between the lines in the column headed T. (See A at the right.) If a statement is FALSE or NOT USUALLY TRUE, as applied to you, blacken between the lines in the column headed F. (See B at the right.) If a statement does not apply to you or if it is something that you don't know about, make no mark on the answer sheet.

Remember to give YOUR OWN opinion of yourself. Do not leave any blank spaces if you can avoid it.

In marking your answers on the answer sheet, be sure that the number of the statement agrees with the number on the answer sheet. Make your marks heavy and black. Erase completely any answer you wish to change. Do not make any marks on this booklet.

Remember, try to make some answer to every statement.

NOW OPEN THE BOOKLET AND GO AHEAD.
TRADITIONAL FAMILY IDEOLOGY SCALE

Read each of the statements below and then rate them as follows:-

+3 strongly agree  +2 mildly agree  +1 indifferent  0 mildly disagree  1 strongly disagree  -2 mildly disagree  -3 strongly disagree

Indicate your opinion by marking the number in the left margin, according to the degree in which you agree or disagree.

There are no right or wrong answers, so answer according to your own opinion. It is very important to the study that all questions be answered. Many of the statements will seem alike but all are necessary to show slight differences of opinion.

1. Almost any woman is better off in the home than in a job or profession.
2. It's a pretty feeble sort of man who can't get ahead in the world.
3. A teen-ager should be allowed to decide most things for himself.
4. A marriage should not be made unless the couple plans to have children.
5. A wife does better to vote the way her husband does, because he probably knows more about those things.
6. It is a reflection on a husband's manhood if his wife works.
7. Whatever some educators may say, "Spare the rod and spoil the child" still holds, even in these modern times.
8. Women have as much right as men to sow wild oats.
9. Women think less clearly than men and are more emotional.
10. Faithlessness is the worst fault a husband could have.
11. It isn't healthy for a child to like to be alone, and he should be discouraged from playing by himself.
<p>| | | | | | | |</p>
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<tbody>
<tr>
<td>+3</td>
<td>+2</td>
<td>+1</td>
<td>0</td>
<td>-1</td>
<td>-2</td>
<td>-3</td>
</tr>
<tr>
<td>strongly agree</td>
<td>mildly agree</td>
<td>indifferent</td>
<td>mildly disagree</td>
<td>disagree</td>
<td>strongly disagree</td>
<td></td>
</tr>
</tbody>
</table>

12. Petting is something a nice girl wouldn't want to do.
13. Even today women live under unfair restrictions that ought to be done away with.
14. Some equality in marriage is a good thing, but by and large the husband ought to have the main say-so in family matters.
15. It helps the child in the long run if he is made to conform to his parents' ideas.
16. If children are told much about sex, they are likely to go too far in experimenting with it.
17. Women can be too bright for their own good.
18. The most important qualities of a real man are strength of will and determined ambition.
19. In making family decisions, parents ought to take the opinions of children into account.
20. One of the worst problems in our society today is "free love" because it mars the true value of sex relations.
21. Women who want to remove the word obey from the marriage service don't understand what it means to be a wife.
22. It doesn't seem quite right for a man to be a visionary; dreaming should be left to women.
23. A well-raised child is one who doesn't have to be told twice to do something.
24. It is only natural and right for each person to think that his family is better than any other.
25. It is a woman's job more than a man's to uphold our moral code, especially in sexual matters.
26. A man who doesn't provide well for his family ought to consider himself pretty much a failure as husband and father.

27. A child should not be allowed to talk back to his parents, or else he will lose respect for them.

28. There is a lot of evidence such as the Kinsey Report which shows we have to crack down harder on young people to save our moral standards.

29. Women should take an active interest in politics and community problems as well as in their families.

30. In choosing a husband, a woman would do well to put ambition at the top of her list of desirable qualities.

31. The saying "Mother knows best" still has more than a grain of truth.

32. A man can scarcely maintain respect for his fiancée if they have sexual relations before they are married.

33. The unmarried mother is morally a greater failure than the unmarried father.

34. It goes against nature to place women in positions of authority over men.

35. It is important to teach the child as early as possible the manners and morals of his society.

36. A lot of the sex problems of married couples arise because their parents have been too strict with them about sex.

37. The family is a sacred institution, divinely ordained.

38. A child who is unusual in any way should be encouraged to be more like other children.

39. A woman whose children are messy or rowdy has failed in her duties as a mother.

40. There is hardly anything lower than a person who does not feel a great love, gratitude, and respect for his parents.
<table>
<thead>
<tr>
<th></th>
<th>Like very much</th>
<th>Dislike very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Watching sports on T.V.</td>
<td></td>
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<tr>
<td>2</td>
<td>High-powered automobiles</td>
<td></td>
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<tr>
<td>3</td>
<td>War movies</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Fishing</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Hunting</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Engaging in contact sports (hockey, football etc.)</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>A night out with the boys</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Crafts (painting, sculpture etc.)</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Gardening</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Listening to music</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Attending the theatre (ballet, opera etc.)</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Flirting with women</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Household repairs or woodworking</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Poetry</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Pornographic magazines (Playboy, Penthouse)</td>
<td></td>
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<tr>
<td>16</td>
<td>Body building</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Clothing fashions</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Sex</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Interior decorating</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Good literature</td>
<td></td>
</tr>
</tbody>
</table>

*Instruction: Below is a list of every day activities and interests which many people share. Mark an X on one of the dashes extending from like very much to dislike very much, which most applies to you. Be sure to answer every item.*
PERSONAL HISTORY QUESTIONNAIRE

Instructions: Please complete this questionnaire. This information is strictly confidential; it does not require you to identify yourself.

1. _________ Age _________ _________ _________ Birthdate
   (Day) (Month) (Year)

2. Education:
   1. _________ Below 8th Grade
   2. _________ High School
   3. _________ 1 - 2 years University
   4. _________ University degree
   5. _________ Graduate School
   6. _________ Additional
   7. _________ Other (please specify) ________________________

3. Occupation:
   1. _________ Semi-skilled
   2. _________ Skilled Trade
   3. _________ Managerial
   4. _________ Professional
   5. _________ Other (please specify) ________________________

4. Income:
   1. _________ Below $7,000
   2. _________ $7,000 to $10,000
   3. _________ $10,000 to $15,000
   4. _________ $15,000 to $25,000
   5. _________ Other (please specify) ________________________
5. **Religious Preference:**
   1. ________ Protestant
   2. ________ Catholic
   3. ________ Jewish
   4. ________ Other (please specify) ________________

6. **Marital Status:**
   1. ________ Married
   2. ________ Single
   3. ________ Separated
   4. ________ Divorced
   5. ________ Spouse Deceased
   6. ________ First Marriage
   7. ________ Other (please specify) ________________

7. **Your Children:** Please include all children - living at home or away.
   1. ________ Boy - Age ______ 7. ________ Boy - Age ______
   2. ________ " " ______ 8. ________ " " ______
   3. ________ " " ______ 9. ________ " " ______
   4. ________ " " ______ 10. ________ " " ______
   5. ________ " " ______ 11. ________ " " ______
   6. ________ " " ______ 12. ________ " " ______
7. **Your Children - cont'd**

1. ________ Girl Age ______ 7. ________ Girl - Age ______
2. ________ " " _____ 8. ________ " " _____
3. ________ " " _____ 9. ________ " " _____
4. ________ " " _____ 10. ________ " " _____
5. ________ " " _____ 11. ________ " " _____
6. ________ " " _____ 12. ________ " " _____

Additional Children (please specify) __________

8. **Home:**

1. ________ Rent
2. ________ Buying
3. ________ Own
4. ________ Other (please specify) __________
5. ________ Number of bedrooms
6. ________ Approximate market value of your home

9. **Additional people living in your home**

1. ________ Your Mother
2. ________ Your Father
3. ________ Other (please specify) __________

10. **Mother:**

1. ________ Living
2. ________ Deceased
3. ________ Occupation
4. ________ Highest Grade completed
5. ________ Religious preference
6. ________ Approximate income during most of your childhood
11. Father:
   1. _________ Living
   2. _________ Deceased
   3. _________ Occupation
   4. _________ Highest Grade completed
   5. _________ Religious preference
   6. _________ Approximate income during most of your childhood

12. Did you grow up in a _____________ environment
    1. _____________ Rural
    2. _____________ Urban
    3. _____________ Suburban
    4. _____________ Other (please specify) _____

13. Your Sister(s) Age:
    1. _________
    2. _________
    3. _________
    4. _________
    5. _________
    6. _________

14. Your Brother(s) Age:
    1. _________
    2. _________
    3. _________
    4. _________
    5. _________
15. Are you presently using a birth control method:
   1. ________  The Pill
   2. ________  Intrauterine Device
   3. ________  Diaphragm
   4. ________  Foam
   5. ________  Prophylactics
   6. ________  Other (please specify) ______________

16. Who's decision was it to have a vasectomy?
   1. ________  Your own decision
   2. ________  Your wife's
   3. ________  A joint decision between you & your wife
   4. ________  Your Doctor's decision
   5. ________  Other (please specify) ______________
   6. ________  You are not having a vasectomy

17. Have you read much literature on Birth Control?
    Yes _____  No _____

18. Have you increased your reading on Birth Control lately?
    Yes _____  No _____

19. Is your sex life satisfactory?
    Yes _____  No _____
20. Have you ever had serious sexual problems: 
   i.e., impotence, frigidity etc.
   Yes _____  No _____

21. Has the frequency of sexual intercourse:
   a) _______ increased
   b) _______ decreased
   c) _______ remain the same
   d) _______ increased significantly
   e) _______ decreased significantly

22. Are you completely satisfied with your method of Birth Control:
   Yes _____  No _____

23. If you could, would you change your method of Birth Control:
   Yes _____  No _____
Dear Patients:

Many physicians, practicing general medicine, are interested in learning how they might improve their professional service to their patients. This can only be accomplished as they understand you more fully; consequently, we have developed this test battery, which will require only a small amount of your time. Some of the questions are self report while others require a little more thought. We ask that both you and your spouse fill out this battery individually and do not discuss the contents or answers. We ask this in an effort to better assess your individual answers.

A few of the items may appear similar and not very specific. Please fill in each of the blanks, to the best of your knowledge, answering each item in keeping with your thoughts and impressions.

Please work quickly. If you are uncertain about a question, give the answer that best approximates your opinion.

Because the information you are asked to give is of a personal nature, be assured that it will be handled in an entirely professional way and used only for scientific purposes. Please be frank in your answers. It cannot be stressed enough how important it is that you and your spouse complete the tests alone and with no discussion.

Your patience and cooperation in this venture is greatly appreciated.

Sincerely,

Brian E. Lynch, B.Ps.