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# A Correlational Study of Infertility and Marital Satisfaction

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An Abstract Presented to the Faculty of the Graduate School
of Lindenwood College in Partial Fulfillment of the
Requirements for the Degree of
Master of Art
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**ABSTRACT**

This study examined the correlation between infertility and marital satisfaction. Thirty-six subject participated in the study. The participants were recruited from a support group. Other recruits came from friends. The survey was sent, completed, and returned by mail as to retain anonymity. The subjects came from St. Louis, MO. Most of the individuals in the study were white, Non-Hispanic, middle class, and college graduates. Each individual completed a demographic questionnaire and the Kansas Marital Satisfaction Scale. The compiled results found that there is a significant relationship between gender and marital satisfaction in a group of individuals with fertility problems. Another result of the study found that there is no relationship between infertility treatment and marital satisfaction in the same group.

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# CHAPTER 1

## INTRODUCTION

Childlessness has been evidenced throughout history. The first recorded childless couple was Abraham and Sarah. There is a well known Bible passage where Abraham was told by God to leave his home and go to a place God would show him. God promised Abraham that he would be the father of a great nation; that Sarah his wife would give birth to a son. This seemed impossible to them as Abraham was 100 and Sarah was 90 and barren. However, God kept His promise and Isaac was born. This is recorded in Genesis 12:1-3, 15:2, 17:16-19, & 21:1-3. (New American Standard Version).

Childlessness touches the lives of all races, economic levels, and intelligence's. In looking at presidential couples throughout history our first president was never a biological father. Martha Washington had children from a previous marriage, but she and George never had a child together. Another well known couple was Andrew and Rachel Jackson. They ended up adopting a son. Other childless presidential couples are the Madisons, Polks, Arthurs and the Hardings (Gormley, 1977). They may have been childless by choice. Childlessness may be chosen, but when it is not it is called infertility.

Infertility is a problem that is not often spoken of even though it is common in today's society. Many couples do not realize the prevalence of infertility until they begin to seek help for their own infertility. Infertility has been found to occur in one out of every six couples who decide to have a biological child (Menning, 1988). There is a relatively high rate within today's population. Speroff, Glass & Kase (as cited in Eunpu, 1995) define infertility as participating in unprotected intercourse while failing to conceive a child without success within a one year period. Infertility is increasing in the United States according to several theorists. Raymond (1991) is quoted as stating that one factor which contributes to this increase is the definition itself. That is, the required time period with no conception has decreased from five years to one year in order to be termed infertility. He also notes that another factor which may contribute to a couple's infertility is their delay in attempting to have their first child. A large number of these couples have come from the "Baby Boomer" generation. Many couples want a career and home before starting their family.

Infertility constitutes a developmental crisis and touches every aspect of the couple's lives. This causes them to review every facet of their being (Eunpu, 1995). Stresses may be experienced in their life. Finances are impacted, as couples try to determine whether or not to continue with the expensive testing. Many insurance companies do not pay for required test and procedures. Careers are evaluated as the woman tries to decide

whether to "climb the career ladder" or prepare for staying at home. Sexual expression become an appointment rather than enjoyment as couples look to basal temperature charts and ovulator indicators as a sign of the right time.

The Census Bureau (1995) examined a span of years between 1970 and 1995 to determine number of children in a household. In 1970 they reported that married couples without children was 30.3% of 81.2% of households reporting. In 1995, 28.9% of 70% of households reporting stated they had no children. In 1976, the Census published a report giving the number of childless women between the ages of 15 and 44 as 35,100. The same study in 1994 showed 142,000 women being childless between the ages of 15 and 44.

Statement of Purpose

Childless and infertile couples have been around since the beginning of recorded time. The quality of the marital relationship of these couples is put to the test by themselves and others. When infertility exists, some couples divorce. Others take career opportunities that they might not had considered if children were present. Others are drawn closer together as they face the battle of infertility together. The purpose of this study is to examine the correlation between infertility and marital satisfaction with regard to gender and fertility treatment. Therefore, there are two hypothesis:

1. There is no relationship between gender and marital satisfaction in individuals with fertility problems.

2. There is no relationship between fertility treatment and marital satisfaction in individuals with fertility problems.

# CHAPTER 2

# LITERATURE REVIEW

## History of Infertility

The inability of couples to conceive is not a recent development. As noted it began in the beginning. Throughout history women have generally been regarded as the reason the couple could not conceive. Infertility has carried the stigma of misfortune and disgrace. In some cultures infertility was considered to be a curse from a demon or displeased god who needed to be appeased with prayers, religious rites, and/or magic potions (Freeman & Bullough, 1993). Infertile women were called "barren" or "sterile" while men who were unable to achieve an erection were described as "impotent" (p.7). Women were ostracized for being barren, but men often did not suffer the ridicule that women did.

Part of the reason that women were blamed for infertility was society's lack of knowledge concerning reproduction. Since it was a society where men ruled and women remained quietly at home caring for the children progress and research in the area was slow to come. This attitude began to change with the discoveries made by several scientists. William Harvey (1578-1657), best known for his demonstration of the circulation of blood, was the founder of embryology. Through his observations of reproduction in different types of animals, he focused on the importance of the egg. With chickens he concentrated on the

development of the chick embryo. He also performed dissections of the uteruses of deer at various stages of mating and pregnancy. It was through these experiments on chickens and deer that he was able to postulate that the same cycle of fertility that occurred in animals also happened in humans (Freeman & Bullough, 1993). Anton Van Leeuwenhoeck (1632-1732) made the discovery of sperm while observing a sick male's semen through a microscope. Under the microscope he saw thousands of round animalcula with tails five to six times the size of their bodies. The long tails were needed to help them swim through the female organs to fertilize the egg. He concluded sperm were important for the fertilization of the female egg. Later, Robert Meyer and Robert Shroeder were scientists who discovered that menstruation was the result of the break down of the endometrium [lining of the uterus] due to the degeneration of the Corpus Luteum [a yellow body in the human ova] (p.14). An important discovery took place in 1920 when it was discovered that ovulation took place in the middle of the intermenstrual stage. A 1936 study by another scientist named Hartman provided the key to the menstrual cycle. Hartman (as cited in Freeman & Bullough, 1993) said that a standard menstrual cycle was 28 days and that ovulation occurred from day 8 to day 22 with the highest occurrence on days 11 to 14. In the twentieth century, all of these discoveries have led to a better understanding of the reproductive process. At last it became clear to men (and women) just how a female's body functioned.

Societal View of Infertility

Many societies view infertility as a personal problem experienced by the couple only and do not wish to get involved. As a result, the couple often has little outside support. There are certain roles men and women play in the social ladder and in many societies it is not favorable if the couple is unable to bear children. Motherhood is often thought to be an essential part of being a woman . Western society's attitude towards parenthood comes from a Judaeo-Christian belief which sees children as a blessing from heaven and barrenness as a curse or punishment (Miall, 1994).

Societal attitudes toward women bearing children and staying at home with them have changed through the decades. Thurton (1989), reported that in 1962 of the mothers he interviewed 85% stated that women who could bear children, should bear children. Twenty-two years later, in 1980, only 43% of those who were interviewed had this conviction.

Western civilization tends to profess two common views on reproduction: that all married couples should reproduce and all married couples should want to reproduce (Miall, 1989). Because of this pressure many couples who are intertile comply with these norms by adoption or foster care. According to Peck & Senderwiz (as cited in Miall, 1985) this type of attitude is documented in the literature as "Pronatalism" and is known as "any attitude or policy that is pro-birth, that encourages

reproduction, that exalts the role of parenthood" (p. 384) Living in a community where fertility is valued to such a high degree, causes the childless to be discredited. The feelings of not belonging and isolation emerge. Attitudes such as these start the stigmatization process in many societies.

Causes of Infertility

Though there is no writtern evidence to prove that the childless presidential couples mentioned earlier suffered from infertility problems, they certainly may have. As noted, this problem can affect anyone. No one is immune from its causes.

Although the inability to bear children has always been an issue, looking back through history it is understandable that the causes of infertility were not an issue until humanity had a concept of reproduction. When humankind learned how reproduction occurred, infertility and its causes became an issue. There are numerous causes related to each of the sexes. Due, however, to the societal pressures associated with this problem, women seem to suffer the most. Menning (1988) reported that for 90% of couples experiencing infertility there was a physical cause, with 80% of the causal factors being one or the other partner in the couple. The remaining 20% of factors were shared by both partners (Furrest & Gilbert, 1992).

According to Morrissey (1996), there are three main causes which have been identified as affecting the rise in infertility. First, men and women are getting married at an older age and delaying childbearing until their careers are established. Their bodies are older causing some medical problems to arise. Second, the increase of sexual activity during adolescence years has attributed to a rise in sexually transmitted diseases which have resulted in infertility. Third, an increase in pollution, drug use, and poor nutrition have been shown to affect men's and women's fertility.

Another major problem causing infertility is sexual dysfunction. These are mainly physical problems. Some examples of this include for the female, "impaired or inhibited orgasm" (Burns, 1995). Instead of working with their spouse to achieve orgasm, women work with their spouse to achieve parentgood. The female sacrifices her own emotional and physical needs to complete the task at hand. Many woman feel this is a price they have to pay to have a baby. Another common problem in the female gender is "vaginismus", which is defined as involuntary vaginal spasms which make entry into the vagina impossible or very painful (p. 36). Along with the female dysfunction the male gender has common problems such as: "erectile dysfunction (impotence)", which is the inability to achieve or sustain an erection (p. 39). Males also suffer from "inhibited male orgasm". It is the recurrent inhibition of orgasm manifested by the delay or absence of ejaculation following adequate sexual excitement (p. 41). When these problems occur the questions remains - Is this a true sexual

dysfunction or a product of the overall relationship? If the latter, once the relational problems are addressed the infertility disappears. True sexual dysfunction is a factor in infertility and can cause extreme marital problems. Many couples obsess about the problem and make it even more difficult to deal with. Often, the natural response is to avoid talking about sexual relations (Whiteford & Gonzelez, 1995).

Other problems arise through a fear of intimacy. Burn's (1995) defines intimacy as "...sharing of rituals and common dreams, of big events and daily doldrums. It is a commitment to each other, and the feeling of belonging to each other. An important aspect is sharing of one's self, physically, mentally, and emotionally in an honest and unguarded fashion." (p. 29). When a couple is infertile, it is hard to maintain a healthy, intimate relationship.

Sexual difficulties in infertility often reflect problems from past traumas, practices in upbring or insecurities. How do these problems cause infertility? The psychological aspect prevents intercourse and, sometimes, ovulation. A woman's mentrual cycle is sensitive to her emotional state. The stresses caused by these experiences interfere with the menstrual cycle. Traumatic early sexual experiences, such as rape, or sexual abuse can have a negative impact on fertility. Another factor is a restrictive upbringing. The traditional religious view and improper knowledge of sex and the reproductive process has been found to affect fertility. Another problem is insecurity in one's sexual orientation. Any of these three sexual traumas

cause a feeling of helplessness between the spouses at their inability to undo a past inflicted pain. Infertility has also been known to reopen past psychological wounds from other traumas (Burns, 1995).

Many couples respond to their infertility with feelings of depression. The common characteristics of depression are a sense of despondency and overwhelming despair. This inhibits the enjoyment of all activities, including lovemaking (Burns, 1995).

A fertile women is born with about 400,000 eggs. Her system is driven by two hormones: Follicle-stimulating hormone (FSH) and Luteinizing hormone (LH). An absence of either can have an affect on the release of the egg, causing fertility problems (Garner, Menning & Wentz, 1996). A 1994 study of Speroff, Glass & Kase (as cited in Garner, et al, 1996) found that of female problems causing infertility, "13% were due to endometriosis, 39% to ovulatory problems, 18% to coital/cervical problems, and 30% were due to tubal damage" (p. 17).

Male factors include semen analysis. A normal analysis would be defined as a volume of 1.0 to 5.0 ml or more, with a sperm number of 20 million/ml or more, and a motility of 50% or more with good forward progression, morphology 50% to 60% (Lipshultz, 1996). Therefore, if the male is deficient in either of these areas, fertility can be an issue. When facing fertility testing this is often the simplest and easiest sample to obtain, but can be the most difficult for the couple emotionally. Men feel this

threatens their masculinity and women try to protect them, so this sample is often put off as long as possible.

Treatment of Infertility

Treatment options for infertility are varied and can encompass many facets of the couple's life. Technology has made many new advances, however, often the couple may feel like technicians with their bodies mere instruments. They may live in a regimented life with intercourse scheduled around ovulation. Sperm specimens may be collected often for evaluation. Postcoital exams, inseminations, and invitro fertilization procedures all further add to the dehumanization of the couple's attempt to reproduce (Burns, 1995). Abbey, Andrews and Halman (1994) found treatment options to be a life stress which resulted in the reduction of marital intimacy.

Treatment for infertility involves complete medical history reviews and physical examinations. Women should have a baseline lab study for hormone levels and an examination to check cervical, uterine, tubal peritoneal, ovarian and immunologic functioning. Men would need baseline lab studies to include a semen analysis (Eunpu, 1995).

Diagnostic and medical procedures are stressful, time consuming and can last years. They are often costly and sometimes painful. The couple will likely view them as invasive. In addition, Eunpu (1995) states

that the long term effects of medications, such as fertility drugs Clomid and Pergonal, are unknown for the couple or the child they may conceive.

Effects of Infertility

Infertility has an effect on the individual as well as the couple. Seibel and Taymor (1982) state that infertile women have been found to be more neurotic, dependent, and anxious than fertile women. Infertile women experience conflict over their femininity and fear associated with reproducing. The stress and pressure felt by infertile couples is evidenced by the fact that suicide among childless couples is about twice as frequent as couples with offspring. Infertility is a life crisis. Menning (1980) states that during infertility treatment there are common elements to this crisis. First, a stressful event occurs that poses a threat which is unsolvable in the immediate future. Second, the crisis depletes the existing problem solving resources of the persons involved. Third, the problem is often perceived to be a threat to lifetime goals of the persons involved. Finally, the crisis may reacquaint the person with problems from the past.

Paulson, Haarmann, Salernd and Asmar (1988) state there is little doubt among clinicians that the problem of infertility is stressful, both emotionally and physically. Pines (1990) states that the lack of control over the reproductive capacities of one's body is an enormous personal crisis. A study by Link and Darling (as cited in Connelly, Edelmann, Cooke & Robson, 1992) found 40% of women and 16% of men had scores

indicative of clinically significant depression. Another study by Harrison, O'Moore, O'Moore, & Robb (as cited in Connelly, et al, 1992) also reported higher state anxiety scores for women but not for men in infertile partnerships. Miller and Kirsch (as cited in Stanton, Tennon, Affleck & Mondola, 1992) found the difference in anxiety scores were a reflection of men engaging in more problem-focused coping strategies and women engaging in more emotional-focused coping strategies. Thus, the crisis and the coping techniques may be experienced differently in men than in women.

Atwoud & Dobkins (1992) found four universal stages that couples experience as they go through the infertility problems. These include:

Stage 1. Disbelief and Denial - A couple finds out that they will be unable to conceive and their belief system is rocked. Couples in this stage are characterized as having grief, disbelief and denial. Feelings of denial serve a purpose in that couples can allow their minds and bodies to adjust to the overwhelming situation (Menning, 1980). This stage is temporary and it is important for the couple to communicate their feelings during this stage (Atwoud & Dobkins, 1992). Disbelief comes as dreams are shattered. Grief over the loss of a dream or "goal" is also common.

Stage 2. Anxiety, Anger, and Feeling of Loss of Control - In this stage the individuals experience sudden outbursts of tears and anger. These feelings of anger and frustration are often directed at the spouse (Atwoud & Dobkins, 1992). Irrational anger is often a front for intense

pain and grief that cannot be acknowledged (Menning, 1980). Neither partner wants to admit that they may be the cause of their childlessness. Many men and women, who seemingly have control in all affairs of their lives, suddenly no longer are "in charge".

Stage 3. Isolation, Alienation, Guilt, Low Self-Esteem, Grief and Depression - This stage changes the identity of the couple and in many ways is the most psychologically stressful. When the couple learns that a biological child is not possible it creates confusion and fear (Atwoud & Dobkins, 1992). In stage three the couple will cut themselves off from the support and comfort they need. This is due mainly to misdirected pity and advice from well-meaning family and friends (Menning, 1980). The couple needs time to mourn the loss of their dream of having a biological child. Often the couple has to make a crucial decision to face infertility together or go their separate ways (Atwoud & Dobkins, 1992).

Stage 4. Resolution - The feelings of relief and acceptance emerge in this stage. The peak of the grieving process occurs within the first several months of knowing about infertility and then levels off within the first year. This, however, is different from couple to couple (Atwoud & Dobkins, 1992). They wonder how this will affect their relationship with their friends and families. They cannot fulfill the expectations placed upon them by themselves or others. Finally, the concepts of sexuality, self-image and self-esteem are disconnected from childbearing and become a wholesome and complete part of their relationship again (Menning, 1980).

Other stresses can add to infertility problems such as biochemical changes, such as elevations in prolactin (hormone), will further impede conception (Eunpu, 1995). A 1987 report from McEnan, Costello, & Taylor (as cited in Eunpu, 1995) found that 39% of women and 1% of men had distress due to infertility. It is through these stresses that increasing levels of acting out behavior occurs, including extramarital affairs, alcohol abuse, and eating disorders (Burns, 1987).

Marital Satisfaction and Infertility

Fertility is usually taken for granted as many couples spend years practicing contraception until the "right" time arrives to start their family (Leiblum, 1993). They may then discover that their attempts to get pregnant are in vain. Their hopes for having a biological child are compromised by a previously but unforeseen problem. It would seem that with emotions at their maximum, marital satisfaction would suffer.

Ulbrich, Coyle, & Llabre (1990) state that marital satisfaction during and after infertility is influenced by many factors. These include the duration and outcome of the couples infertility investigation; the decisions they have to make during the transition time; the distress associated with infertility, and the resources available to help them adjust to nonparenthood. All of these factors will affect the health of the marriage relationship.

Ulbrich, et al (1990) found that infertility may not significantly impair marital satisfaction. Their findings showed wives reporting more stress associated with infertility than their husbands. Husband's response tended to be shaped by the structure of the marriage itself. The socio-economic status of the couple played a role in the husband's response. In two income families the husband appeared to adjust better to a childless marriage.

A Wright, Duchesne, Sabourin, Bissonnette, Benolt, & Girard (as cited in Leiblum, 1993) study found that men and women did not differ from fertile couples on their scores on the Dyadic Adjustment Scale. The infertile couples response to infertility was in the well-adjusted range. Another study by Greil, Leiko and Porter (as cited in Ulbrich, et al, 1990) noted that couples often report that as they experienced infertility it brought them closer together. They found higher levels of communication and greater marital affection in couples who were childless and shared infertility as a crisis. Couples involved in infertility treatment for long periods of time were more likely to be commited to continuing their marriage. Leiblum and Kemmann (as cited in Leiblum 1993) found that when couples in an invitro fertilization program were asked how infertility affected their marriage, 50% said it improved marital communications, a sensitivity to their partners feelings and a sense of closeness in marriage. More than one quarter of the wives reported an increased sense of intimacy

and marital satisfaction. More than one quarter of the husbands had a higher sense of marital satisfaction.

A review of the literature on infertility studies shows a similar response in relation to infertility and marital satisfaction. Women generally react with more stress than men to infertility and women often report less marital satisfaction over an extended period of time. Infertility has a negative impact on both sexual and marital satisfaction for some couples, but does not appear to be a major cause of separation or divorce. When infertility is faced as a couple, however, many come through the ordeal stronger marital partners.

# CHAPTER 3

# METHOD

## Subjects

The sample consists of 36 individuals who are or have experienced infertility. Participation was voluntary. A summary of the participant's demographics appears in Table 1 and 2. These tables are defined by gender.

The gender mix of individuals participating is 42% men and 58% women. The average length of marriage was 8.767 years for the males and 8.0 years for the females. The longest marriage was 33 years and the shortest marriage was 1.5 years. The tables show the 53.3% and the males were in infertility treatment and 81% of the females were in treatment for infertility. The KMS scores by gender were an average of 20.4 for the males and 18.476 for the females. These two scores are in the extremely satisfied range for the males and the very satisfied range for the females.

Table 1 Sample Decriptives by Female

| GENDER | YEARS MARRIED | INFERTILITY TREATMENT | KMS SCORES |
|---|---|---|---|
| F | 4.5 | Y | 12 |
| F | 3 | Y | 21 |
| F | 7.5 | Y | 16 |
| F | 6 | Y | 18 |
| F | 1.5 | Y | 15 |
| F | 5 | Y | 15 |
| F | 14 | N | 20 |
| F | 7 | N | 21 |
| F | 33 | Y | 21 |
| F | 3 | Y | 18 |
| F | 16 | Y | 20 |
| F | 3 | N | 18 |
| F | 15 | Y | 21 |
| F | 1.5 | Y | 19 |
| F | 5 | Y | 21 |
| F | 10 | Y | 21 |
| F | 4 | Y | 21 |
| F | 2.5 | Y | 21 |
| F | 10 | Y | 18 |
| F | 7.5 | N | 19 |
| F | 9 | Y | 12 |
| | | | |
| | AVERAGE | YES = 17 | AVERAGE |
| F = 21 | 8 | NO = 4 | 18.476 |
| | | | |

Table 2 Sample Decriptives by Male

| GENDER | YEARS MARRIED | INFERTILITY TREATMENT | KMS SCORES |
|---|---|---|---|
| M | 5 | Y | 21 |
| M | 7 | Y | 21 |
| M | 33 | N | 21 |
| M | 3 | Y | 18 |
| M | 16 | N | 21 |
| M | 3 | N | 21 |
| M | 15 | Y | 21 |
| M | 1.5 | N | 21 |
| M | 5 | Y | 21 |
| M | 10 | Y | 18 |
| M | 4 | Y | 21 |
| M | 2.5 | N | 21 |
| M | 10 | Y | 21 |
| M | 7.5 | N | 21 |
| M | 9 | N | 18 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | AVERAGE | YES = 8 | AVERAGE |
| M = 15 | 8.767 | NO = 7 | 20.4 |
| | | | |

Instrument

The demographic data collected for this correlational study consisted of sex, ethnic origin, number of years married, education, economic status, number of careers in the household, religious affiliation, counseling treatment, health problems, treatment for infertility, and insurance to cover the costs of treatment (See Appendix A).

The Kansas Marital Satisfaction Scale [KMS] (See appendix B) was developed in 1986, by Walter R. Schumm, Lois A. Paff-Bergen, Ruth C. Hatch, Felix C. Obiorah, Janette M. Copeland, Lori D. Meens, and Margaret A. Bugaighis. Its purpose is to measure marital satisfaction (Fischer and Corcoran, 1994). It was designed from the "theoretical comments of Spanier and Cole (1976) and looks at the conceptual differences between questions of spouse, marriage, and marital relationship satisfaction" (1986, p. 381). This instrument consists of three items. The subjects recorded answers to questions such as: How satisfied are you with your marriage? How satisfied are you with your husband/wife as a spouse? How satisfied are you with your relationship with your husband/wife? (See Appendix B) The subject recorded the answers on a seven point Likert scale. The scale has a numeric value from 1 to 7, with a 1 extremely dissatisfied and a 7 being extremely satisfied. At the end of the instrument each scale is added together to produce a score ranging from 3 to 21. The higher the score the higher the marital satisfaction level. The

KMS has excellent concurrent validity, and it significantly correlates with the Dyadic Adjustment Scale and the Quality of Marriage Index. KMS also is correlated with a measure of Marital Social Desirability, which suggests some degree of bias in responses. The KMS reliability has an excellent internal consistency for a short scale. (i. e. alpha is .93.) "There is no test-retest data available with the KMS scale" (1994, p. 125).

Procedure

This study took place in St. Louis, Missouri. The subjects of this study were derived from two sources, a sample of convience taken from a mail survey and participants in a local support group of couples experiencing infertility. The individuals participating in the survey are in different stages of infertility testing, treatment or adjustment to the results found. The ethnic origin data consists of 35 white, non-Hispanic and 1 Asian participant.

In addition to the questionnaire, the Kansas Marital Satisfaction Scale [KMS] (see Appendix B) was administered. Each couple completed the questionnaire and KMS. The KMS measures three interval variables for each participant. They are satisfaction with marriage, spouse and relationship (Schumm, et. al, 1986).

Data Analysis

This study examined the Pearson correlation between gender and marital satisfaction. It also looked at the correlational relationship between fertility treatment and marital satisfaction.

# CHAPTER 4

## RESULTS

Descriptive statistics for the sample are displayed below in Table 2. The means reflect the average years married for the sample was 8.319 years. The maximum years married was 33 years with a minimum or 1.5 years making the range 31.5 years. The standard deviation for the years married is 7.417 which indicates a wide distribution along the bell curve.

This samples education mean demonstrated an education level of college graduate. Education was answered on a scale of 0 - 5 with 0 representing high school non-graduate and 5 representing a masters degree and higher. Based on these values the sample had a minimum education of high school graduate and maximum education of masters plus. There were two Phd's that participated. Education had a standard deviation of .979 which indicates a small distribution.

Income level for the sample was answered on the same 0 - 5 scale as education. The 0 value represented income of $10,000 and below and 5 represented $50,001 and above. The mean for the sample of subjects presented an average income of $40,001 - $50,000. In this sample the maximum was $50,001 and above and the minimum was $10,001 - $20,000. The standard deviation was 1.290 which is a moderate distribution.

Infertility treatment was answered with 1 = yes and 2 = no. The mean for the sample was 1.306 which demonstrates there were more yes

answers than no answers for undergoing treatment. Infertility treatment has a standard deviation of .467 which indicates a small distribution.

Table 2

Descriptive Statistics

(N = 36)

| Descriptives | Ave | Max | Min | Range | Standard Deviation |
|---|---|---|---|---|---|
| Years Married (in years) | 8.319 | 33.0 | 1.5 | 31.5 | 7.417 |
| Education (in college years) | 3.111 | 5.0 | 1.0 | 4.0 | .979 |
| Income (in $10,000 increments) | 4.222 | 5.0 | 1.0 | 4.0 | 1.290 |
| Infertility Treatment (yes or no) | 1.306 | 2.0 | 1.0 | 1.0 | .467 |
| KMS Scale | 19.278 | 21.0 | 12.0 | 9.0 | 2.537 |

Scores on the KMS are shown above in Table 2. The mean score was 19.278 which would place the sample in the very satisfied category on the instrument. The maximum score for the sample was 21 and the minimum score was 12. Scores for the KMS had a standard deviation of 2.537 which is a moderate distribution.

Other information gathered in the survey about the sample is 50% of the males were college graduates and 57% of the females were college graduates. There was 75% of the sample that came from dual careered homes. Of the sample 33% is Catholic and 31% Baptist the remaining 36% were a variety of religious orientations. When asked if religion helped with the problem of infertility, 72% said yes.

The following Table 3 statistics describes the relationship between the variables of gender and infertility treatment and the KMS. The r statistic describes the magnitude or the degree and the direction of the relationship between two variables. The $r^2$ is the value that can be viewed as a percentage that the two variables share in variability.

The alpha value of .05 is used in the discussion of these statistics and the hypothesis testing.

Table 3

Correlation of Study Variables

| Correlation | Gender | Infertility Treatment |
|---|---|---|
| KMS | r = -.3792 | r = .11921 |
| | $r^2$ = .14379 | $r^2$ = .01421 |
| | sig = .0226 | sig = .4886 |

** $p \leq .05$

Looking at the correlation of KMS to gender and infertility treatment the strongest relationship is found to be significant between KMS and gender (.0226). The results indicate that r = -.3792. Thus, females reported a lower level of marital satisfaction than did males for this study. The $r^2$ value was .14379 or 14.38% of shared varibility between the variables of KMS and gender. A correlational analysis was run on KMS and infertility treatment and the significance level is .4884. At the .05 alpha level there is no relationship between KMS and infertility treatment.

## Chapter 5

## Discussion

As a consequence of the study one must reject the first null hypothesis that there is no relationship between gender and marital satisfaction in individuals with fertility problems. The second null hypothesis must be accepted as there is no relationship between fertility treatment and marital satisfaction in individuals with fertility problems.

The relationships described above seem to be supported by the literature. Leiblum (1993) found that infertility is a significant source of stress for women and a somewhat lower stress for men and that although it has some negative impact on marital satisfaction, it does not appear to be a major cause of separation or divorce. His explanation is that the majority of infertile couples are happily married and have successfully weathered the "crisis of infertility". This study supports the above as the average score on the KMS was 19.278 which is in the "very satisfied" category. One possible explanation for these findings may be Leiblum's discovery that couples develop the attitude of "we against them" which tends to enhance their sense of special closeness and understanding (p.111).

Also supported by the study was that the female suffers more ridicule by being called "barren or "sterile" where as men in this study had little or no stress (Freeman and Bullough, 1993). This study also supports the view that infertility is a personal problem. Many couples were reluctant to participate in the study (Miall, 1994). It would seem there is still a

stigma involved with infertility. As Peck and Senderwiz stated society is still pro-parent and still exalts the role of parenthood (Miall, 1985).

Obtaining data for this study was difficult. The majority of participants in a support group for infertile couples failed to participate. This experience lends itself to the literature which also says that there is a stigma to the experience of infertility. Many people do not want to acknowledge that they are having problems conceiving.

Limitations and Recommendations

With regard to future studies and weaknesses, the following ideas are offered. In a future study it is recommended that some connection to a doctor or doctors might be beneficial as the sample might be more easily obtained. It also has been difficult due to obtain a wide range of data due to the privacy of the individuals and their lack of willingness to share their experiences.

Another recommendation for future study would be to look at the length of marriage and infertility. It would be interesting to see if there is a significant relationship between marital satisfaction and the variables of infertility and years married.

The greatest weakness of this particular study is the lack of randomness of the sample. The majority of this sample is white middle class. A wider range of socio-economic and ethnic backgrounds might have produced varied results. Also a larger study sample may have given a different result.

Another weakness is the lack of a control group. Since females with fertility problems reported less marital satisfaction it was not possible to determine if this is true of all married females or only those with fertility issues.

## Appendix A
## Demographic Survey

1. Male (1) _____ Female (2) _____

2. What is your ethnic origin:
   American Indian (1) _____
   Black, Non-Hispanic (2) _____
   Hispanic (3) _____
   Asian (4) _____
   White, Non-Hispanic (5) _____
   Other _____ (6) _____

3. Number of years in your current marriage: _____

4. What is your educational background:

| | |
|---|---|
| High school Non-Grad. | (0) _____ |
| High school Grad. | (1) _____ |
| Some College | (2) _____ |
| College Grad. | (3) _____ |
| Masters | (4) _____ |
| Masters + | (5) _____ |

5. Household Income yearly:

| | |
|---|---|
| Below $10,000 | (0) _____ |
| $10,001 - $20,000 | (1) _____ |
| $20,001 - $30,000 | (2) _____ |
| $30,001 - $40,000 | (3) _____ |
| $40,001 - $50,000 | (4) _____ |
| Above $50,001 | (5) _____ |

6. Are you a dual careered household?

| | |
|---|---|
| Yes | (1) _____ |
| No | (2) _____ |

7. What is your religious affiliation?

| | |
|---|---|
| Jewish | (0) _____ |
| Baptist | (1) _____ |
| Catholic | (2) _____ |
| Lutheran | (3) _____ |
| Presbyterian | (4) _____ |
| Methodist | (5) _____ |
| Other _____ | (6) _____ |
| None | (7) _____ |

8. Do you believe that religion has helped you cope with the problems of infertility?

Yes (1) _____
No (2) _____

9. Are you participating in a support group? Yes (1) _____
No (2) _____

10. Are you participating in individual counseling?

Yes (1) _____
No (2) _____

11. Are you participating in marriage counseling?

Yes (1) _____
No (2) _____

12. Do you have any additional medical (health) problems which may be contributing to infertility?

Yes (1) _____
No (2) _____

13. Have you sought treatment for it?

Yes (1) _____
No (2) _____

14. Have you sought treatment for infertility?

Yes (1) _____
No (2) _____

15. Do you have insurance to help cover the cost of infertility treatments?

Yes (1) _____
No (2) _____

16. Do you have children? Yes (1) _____
No (2) _____

17. What is their origin?

Former Marriage (1) _____
Former Relationship (2) _____
Adoption (3) _____
Current Marriage (4) _____

## Appendix B
## Kansas Marital Satisfaction Scale (KMS)

| | Extremely dissatisfied | Very dissatisfied | Somewhat dissatisfied | Mixed | Somewhat satisfied | Very satisfied | Extremely satisfied |
|---|---|---|---|---|---|---|---|
| 1. How satisfied are you with your marriage? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. How satisfied are you with your husband/wife as a spouse? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. How satisfied are you with your relationship with your husband/wife? | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Please circle the answer that fits you best on each question.

Fischer, J. & Corcoran, K. (1994). Measures for clinical practice, a source book (2nd ed., Vols. 1-2). New York: The Free Press.

Appendix C

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Dear Participant:

I am a graduate student at Lindenwood College. I am completing the last requirement, which is a quantitative thesis.

Enclosed is a demographic survey and the Kansas Marital Satisfaction Scale. I would appreciate it if you would take five minutes of your time and complete the forms. The demographic survey you answer as given. The Kansas Marital Satisfaction Scale you circle the appropriate response that fits you. Each of you need to complete three sheets. Once you have completed the forms, please place it in the stamped addressed envelope and return to me.

I thank you for your participation in my research. In order to include you in the study I will need your survey back by April 11, 1997. May God bless you and help you at this time. Even though you are anonymous, my prayers are with you.

God bless you,

C. Huston Mc Comb, Jr.

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