The effect of an infertility diagnosis on the distress, marital and sexual satisfaction between husbands and wives in Taiwan

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BACKGROUND: Few studies have explored the effect of a gender-specific infertility diagnosis on the responses of couples in Taiwan. The purpose of this research was to compare the differences in distress, marital and sexual satisfaction in husbands and wives based on an infertility diagnosis. METHODS: Three structured questionnaires were used. RESULTS: Female members of couples in which both partners were infertile expressed less marital and sexual satisfaction than their husbands. No differences in marital and sexual satisfaction were found between wives and husbands with unexplained infertility. Only wives with a diagnosed female infertility expressed higher distress to infertility than their husbands. Although no differences in psychosocial responses were found among husbands, regardless of the diagnosis, wives with a diagnosed female infertility experienced higher distress in self-esteem and less satisfaction in acceptance by in-laws than wives experiencing a diagnosed male infertility. CONCLUSIONS: These findings suggest that the diagnosis of infertility is an important factor in assessing the differences in infertility distress and marital and sexual satisfaction between husbands and wives. Health professionals can explain the gender differences when counselling infertile couples and encourage them to share each other’s feelings, which may help couples to cope with the communication problems they may experience.

Key words: husbands/infertility diagnosis/psychosocial/wives

Introduction

The fact that women show significantly higher levels of psychosocial distress to infertility than men has been well proven by a large body of research (Phipps, 1993; Abbey et al., 1994; Inhorn, 1996; Demyttenaere et al., 1998; Beutel et al., 1999; Glover et al., 1999; Jordan and Revenson, 1999; Adashi et al., 2000). Some studies have examined the impact of infertility on marriage and sex between couples (Burns and Covington, 1999; Read, 1999). Most of these works indicate that infertility affects women more than men (Keye et al., 1995; Boxer, 1996). The majority of couples reported conflict, communication problems, disagreements over medical treatment, lack of empathy, and differential investment in the infertility treatments process (Andrews et al., 1991; Berg and Wilson, 1991). However, several couples reported that the crisis of infertility enhanced intimacy and improved couple communication (Burns and Covington, 1999).

A South African study reported that 43% of women felt that their inability to conceive had serious negative effects on their lives, particularly their sexual relations (Van Zyl, 1987). Fertility-problem stress was found to have a stronger negative impact on a woman’s sense of sexual identity and self-efficacy than on a man’s (Andrews et al., 1991). Another study found that although couples were generally satisfied with their sexual relationship, advanced-stage (assessed by the duration of infertility) patients experienced lower levels of sexual satisfaction than either early- or intermediate-stage patients (Berg and Wilson, 1991).

Recently, the research focus has been on how the diagnosis of a specific infertility factor affects both men and women psychosocially. Like many women, men also suffer from low self-esteem, anxiety, isolation, blame, and greater sexual inadequacy when they are struggling with male infertility (Lee, 1996; Webb and Daniluk, 1999; Sandlow, 2000). A study examining the sexual function of infertile couples in which the husbands received an azoospermia diagnosis found that more than half of the men experienced a period of impotence following the diagnosis (Berger, 1980). One study showed that men with a diagnosed male infertility expressed more negative emotional responses than men without a diagnosed male infertility with respect to feelings of stigma, loss and self-esteem (Nachtgall et al., 1992). This study also reported that the gender identity for all women, regardless of the presence or absence of diagnosed female infertility, was negatively
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affected. In addition, another study reported that individuals with diagnosed male infertility reported greater sexual concern than those with either idiopathic or female infertility (Newton, 1999). Due to the absence of an interaction effect between gender and the infertility diagnosis, gender was ignored in this study. The relatively few reports in this field indicate that further studies are needed.

Chinese society places great emphasis on fertility. Childbearing is an important goal for a marriage (Lee and Kuo, 2000). Not being able to have children may cause marriage impairment (Wright et al., 1991). The diagnosis of male factor infertility would be a terrible shock for any Chinese man who would feel ashamed to face his parents and ancestors. This may lead to a deep sense of guilt and self-blame. Previous research by the authors found that infertile Chinese wives experienced less satisfaction with marriage and sexual life than their partners (Lee and Sun, 2000). However, the effect of a gender-specific infertility diagnosis on the response of husbands as compared with the wives was not examined. This research extended previous work to compare differences in distress to infertility, marital and sexual satisfaction in husbands and wives based on an infertility diagnosis.

Material and methods

Sample characteristics

A total of 138 infertile couples (276 participants), who were patients at a medical centre in Taipei, Taiwan, participated in this study. In 43 couples, there was only diagnosed male infertility. In 53 couples, there was only male factor infertility. In 21 couples, both a male and female factor were identified. The remaining 21 couples were diagnosed as unexplained. The average age of the husbands and wives, respectively, was 34.9 and 32.1 years. Fifty-eight per cent of the couples had education beyond college, 35% had a high school education and 7% had less than a high school education. These couples had been married 4.8 years, on average. They were in treatment for infertility disorders for 2.8 years, on average. The vast majority of these couples (93.5%) experienced primary infertility. The remainder had one living child. No differences were found between the husbands and wives with regard to age, education, years of marriage, years in treatment, and number of children. The causes for male factor infertility included varicocele (n = 34), genital tract obstruction (n = 8), infection (n = 3), and ejaculatory dysfunction (n = 8). The causes for female factor infertility included ovulation (n = 30), blocked Fallopian tubes (n = 10) and cervical factor (n = 3) disorders. The diagnostic tests that these couples were subjected to included semen analysis, endocrine tests (FSH, LH and testosterone), testicular biopsy (for azoospermic patients), sperm penetration assay (for unexplained infertility), the occurrence of ovulation, and hysterosalpingogram. The treatments received included: ovulation induction, ovarian stimulation and artificial insemination with the husband's spermatozoa, IVF and embryo transfer, gamete intra-Fallopian transfer and intracytoplasmic sperm injection (ICSI).

Assessment measures

Three measures were used. Three distress level categories were measured using the Chinese version of the Infertility Questionnaire (CIFQ) (Lee et al., 1995): self-esteem (eight items), blame/guilt (five items), and sexual impairment (eight items). Each of the 21 items was rated from 1 to 5. Each subsection was scored separately, with any score greater than three representing distress. The Chinese IFQ version has been tested by several Chinese investigators and proven to have a high degree of validity and reliability (Lee et al., 1995). In this study, the internal consistency coefficient (Cronbach’s alpha) was 0.84 for husbands and 0.87 for wives.

Items in the Marital Satisfaction Questionnaire (MSQ) and Sexual Satisfaction Questionnaire (SSQ) were designed specifically for infertile patients to obtain information on couples’ marital and sexual satisfaction (Lee and Sun, 2000).

The 16 items in the MSQ measured the extent of agreement within couples on their marriage. MSQ factor analysis produced three factors. Satisfaction with a childless marriage (eight items) is the degree of satisfaction the couple has with a childless marital relationship. Acceptance by in-laws (six items) is the degree to which the in-laws accepted the couple’s childlessness. Affection related to infertility (two items) is the degree to which the couple is satisfied with their expressed affection level. An example of an item is ‘I think our marriage failed because of infertility’. In this study, this measure was scored such that higher scores reflected higher levels of marital dissatisfaction. Possible scores ranged from 16 to 80.

The seven SSQ items were grouped into two subscales. General sexual satisfaction (four items) is the degree of satisfaction with orgasm frequency, coital frequency, sex drive, and the mate might be showing concern during intercourse. Sex on demand pressure (three items) is the degree to which the couple experiences intercourse pressure at the time of ovulation. Responses were made on a 5-point Likert scale, with higher scores indicating higher sexual dissatisfaction.

The psychometric properties of the MSQ and SSQ were previously evaluated and it was demonstrated that these two scales are reliable and valid measures. Preliminary evidence for construct and concurrent validities was obtained (Lee and Sun, 2000). In this sample, Cronbach’s alphas for the MSQ were 0.89 for husbands and wives. Cronbach’s alphas for the SSQ were 0.70 for husbands and 0.76 for wives. These scores suggest adequate internal consistency.

Procedure

Permission to complete this study was obtained from an institutional review board. The criteria for selection were: (i) being married, (ii) having at least 6 years of education, and (iii) having been diagnosed with infertility for at least 1 year. The subjects volunteered as participants after one of the investigators informed them that this research project was being undertaken at the medical centre. Of the 205 couples invited into the study, 138 (67.3%), completed the study questionnaires and are included in this report. Sixty-seven couples (32.7%) refused to participate. No reason was given. There was no difference on diagnosis of infertility between couples who completed the study and those who did not. The purpose of this study and the degree of participation were explained to the couples. Once agreed, a consent form was signed by the subjects. Subjects were assured that anonymity and confidentiality would be maintained and that they could refuse to participate or withdraw from the study at any time. Husbands and wives answered the questionnaires separately in the waiting room, before their medical appointment.

Statistics

Two-tailed, paired t-tests were conducted to determine the similarity in infertility distress, marital and sexual satisfaction between husbands and wives. One-way analysis of variance (ANOVA) and Duncan’s tests were conducted to compare the effect of different diagnoses on husbands’ and wives’ responses respectively. The level of significance was set at alpha = 0.05.
Results

Group assignment (male, female, mixed, unexplained) was based on self-report data. Most couples had known the diagnosis for at least 1 year and some for considerably longer. The agreement regarding cause of infertility between self-reports and the medical charts was almost complete. In each group of couples, paired t-tests were computed to examine differences in responses between husbands and wives. The result indicated that women of couples in which both partners were infertile had a tendency to express less marital and sexual satisfaction than their husbands. No differences in marital and sexual satisfaction were found between husbands and wives with unexplained infertility. Only wives with a diagnosed female infertility expressed higher distress to infertility than their husbands (Table I).

Gender differences in infertility distress, marital and sexual satisfaction of infertile couples with a male factor only

In infertile couples with only male factor infertility, the wives appear to experience a similar infertility distress as their husbands on the Infertility Questionnaire total score and the three subscales. However, gender differences were revealed on the measures of marital and sexual satisfaction. Wives [Mean (M) = 32.56] expressed less satisfaction than their husbands (M = 29.19) on the MSQ total score (P < 0.05) and two of the subscales: satisfaction with a childless marriage (M for wives = 15.08, M for husbands = 13.26, P < 0.05) and affection related to infertility (M for wives = 4.14, M for husbands = 3.61, P < 0.05). The wives also expressed less satisfaction than their husbands on the SSQ total score (M for wives = 16.22, M for husbands = 14.63, P < 0.01) and one of the subscales: general sexual satisfaction (M for wives = 10.06, M for husbands = 8.83, P < 0.01).

Gender differences in infertility distress, marital and sexual satisfaction for infertile couples with a female factor only

When the infertility cause was female factor only, the wives (M = 2.52) appeared to experience significantly more distress than their husbands (M = 2.20) on the CIFQ total score (P < 0.01) and two of the subscales: self-esteem (M for wives = 2.49, M for husbands = 2.02, P < 0.01) and guilt/blame (M for wives = 2.32, M for husbands = 1.95, P < 0.05). In addition, wives scored significantly higher on the MSQ (M for wives = 36.77, M for husbands = 32.46, P < 0.05) and SSQ scales (M for wives = 17.63, M for husbands = 15.50, P < 0.01) compared to their husbands, indicating that the wives were less satisfied than the husbands with their marriage and sexual life. On the two MSQ subscales (satisfaction with childless marriage and acceptance by in-laws) and one SSQ subscale (general sexual satisfaction), the wives also scored significantly higher than their husbands.

Gender differences in infertility distress, marital and sexual satisfaction for infertile couples with mixed male and female factors

When the infertility cause was a mixed factor, there were no significant differences on the CIFQ total scores, the three subscales, the MSQ scores, and the three MSQ subscales scores between husbands and wives. However, significant differences existed on the scores for the SSQ (M for wives = 16.71, M for husbands = 14.24, P < 0.05) and one of the SSQ subscales, general sexual satisfaction (P < 0.05), indicating that wives were less satisfied with their sexual life than their husbands.

Gender differences in infertility distress, marital and sexual satisfaction for infertile couples with unexplained infertility

When the infertility cause was unexplained, there were no significant differences on the CIFQ, MSQ, and SSQ scales and subscales scores between husbands and wives.

The effect of an infertility diagnosis on the responses of infertile husbands and wives

A one-way ANOVA was carried out on the CIFQ, MSQ, and SSQ scores to identify differences in relation to the diagnoses of infertility. The ANOVA was computed separately for husbands and wives. If a result was significant, Duncan’s post-hoc comparison was computed.

Table II presents the responses of husbands and wives in the study in relation to whether or not a male, female, mixed,
or unexplained infertility was present. No differences were found among the husbands on their infertility distress, marital, sexual satisfaction and each of the subscales regardless of a male or female infertility factor.

Wives with a female factor \((M = 2.52)\) expressed more distress to infertility than wives with a male factor \((M = 2.24, P < 0.05)\). In the self-esteem subscale of the CIFQ, wives with a female factor \((M = 2.49)\) also scored significantly higher for impairment than wives with a male factor \((M = 2.12, P < 0.05)\). For blame/guilt and sexuality, the infertility factor difference was not statistically significant.

No significant differences were apparent among wives in their global scores for MSQ and SSQ regardless of a female infertility factor. However, a difference was found on the acceptance by in-laws subscale for the MSQ. Wives with a female factor \((M = 15.47)\) scored significantly less satisfaction than wives with a male factor \((M = 13.22, P < 0.05)\).

### Discussion

The findings that wives expressed more infertility, childless marriage and sex impairment than their spouses have been reported by a large body of studies (Inhorn, 1996; Demyttenaere et al., 1998; Beutel et al., 1999; Glover et al., 1999; Adashi et al., 2000). The locus of the infertility was not controlled. The purpose of this study was to compare the differences in distress to infertility, marital and sexual satisfaction in husbands and wives based on the infertility diagnoses.

The findings from this study suggest that wives in couples with a female infertility factor experienced higher global and self-esteem distress and guilt/blame than their spouses. At the same time, wives with female factor infertility reported higher distress in the global distress and distress in self-esteem than wives with male factor. Wives with male factor, mixed factor, and unexplained infertility reported no differences from their spouses in the global distress and distress in self-esteem, guilt/blame or sexuality. Wives with both male and female factor infertility expressed less marital satisfaction than their husbands. When the cause of infertility was mixed or unexplained, no differences were found between wives and husbands for satisfaction in marriage. Wives with female factor infertility were less satisfied with acceptance by in-laws than wives with male factor infertility. However, no difference in satisfaction with acceptance by in-laws was found between wives with male factor and their infertile husbands. Considering responses in the SSQ, wives expressed less satisfaction with sex than their husbands in three groups. Contrary to our expectation, no differences in distress, satisfaction in marriage and sex were found among husbands, regardless of the diagnosis.

Motherhood is believed to be the most important role for women and the perceived essence of a woman’s identity. Infertility undermined a woman’s relationships with others. Infertility represented a potent threat to their social well being and security (Woods et al., 1991). Many infertile women question their self-worth and their identity as an infertile woman often receives more emotional investment than anything else in their lives (Woods et al., 1991). Furthermore, in Chinese culture, a woman is positioned in the genealogical tree as a member of the husband’s family (Lee et al., 1995). Women are honoured primarily for their ability to produce sons.
Although today there are a lot of Chinese with high-education, Chinese women and men are still subject to traditional ways of thinking (Lee and Kuo, 2000). Therefore, if the hope of becoming a mother ends in disappointment, not only the individual but also her parents would feel ‘faceless’ and ashamed to face the husband’s family. It is not surprising to find that wives with female factor infertility expressed more distress than their fertile husbands. In addition, wives with male factor or female factor infertility expressed less satisfaction with marriage and sex than their husbands.

It is noteworthy that no differences existed in the total CIFQ and three subscale scores between wives with male factor infertility and their husbands. An early investigation of couples with male factor infertility echoed similar findings which reported that wives did not express significant psychological distress following the diagnosis when their husbands did not experience erectile dysfunction (Berger, 1980). However, these findings are inconsistent with those of recent studies which reported that women felt guilty (Inhorn, 1996) and were more likely to be labelled by themselves and by others as responsible (Beutel et al., 1999), regardless of which partner was actually infertile. Prior research has shown that investigators more often frame their questions around women’s experiences (Boivin et al., 1999). The women are more often likely to participate in infertility research when asked (Wright et al., 1991). Thus, the common finding that women are more distressed may be overstated (Jordan and Revenson, 1999). Additionally, most of these studies conducted independent-sample t-tests to compare differences between men and women. Calculating independent-sample t-tests risks over-estimating significant gender differences (Jordan and Revenson, 1999).

In this study, the sample consisted of equal numbers of men and women, and gender differences in distress and marital and sexual satisfaction were examined using more appropriate analyses, the paired t-tests, for dependent data. Infertility is a ‘couple problem’, data analysed using paired t-tests might reflect the true characteristics of men and women who are married to each other. Accordingly, it is not surprising to find that wives with female factor infertility reported higher distress in the global distress and distress in self-esteem than wives with male factor infertility, since the latter expressed similar distress to their husbands.

Similar effects existed in assessing satisfaction with acceptance by in-laws. No differences were found between wives with male factor infertility and their infertile husbands, while wives with female factor infertility were less satisfied with acceptance by in-laws than wives with male factor infertility. A possible reason could be that the family is the centre of Chinese society (Lee et al., 1995), where in-laws play an important part in a marriage, especially from the husband’s side. If a wife is responsible for the infertility, she could be extremely apprehensive of the responses from people in the husband’s family, especially when her husband is the oldest or the only son. If the husband were responsible, his family would not mention it to avoid embarrassing their son. Consequently, the husbands’ parents, especially the mother, would not aggressively demand that the daughter-in-law take infertility treatments, knowing that the childlessness is not her responsibility. Instead, they would appreciate it if the daughter-in-law were willing to receive intensive and complex treatments to continue their family line. In comparison, members of the wife’s family rarely make problems for infertile husbands, although they feel sorry for their daughter’s suffering from infertility tests and treatments.

Another noteworthy finding was the similarity between husbands from four different infertility diagnoses in the scores on the three scales. This finding was inconsistent with those from previous studies which reported more negative feelings about infertility and more psychiatric distress among men with male factor infertility compared to men in couples receiving other diagnoses (Connolly et al., 1992; Nachtigall et al., 1992; Newton, 1999). The absence of differences in responses among these four groups may be due to the fact that most of our patients with male infertility had treatable conditions (Trounson and Gardner, 2000). The advances in assisted reproduction treatment could allow them to impregnate their wives through AIH with ovarian stimulation, IVF or ICSI (Keye et al., 1995). Their problems are seen as more amenable than the intractable infertility problems thought to be associated with azoospermia. Therefore, the feeling of loss and hopelessness that would normally accompany a male factor infertility was less pronounced in this sample. Similarly, a study reported that the psychological reactions of men undergoing ICSI or IVF did not differ due to their optimism for the possibility of conceiving a child (Boivin et al., 1998). A qualitative study also reported that subfertile men did not describe a negative self-image (Phipps, 1993) because, unless a man is azoospermic, there is always a chance for a child since conception requires only one spermatozoon (Givens, 2000). Another plausible explanation could be the fact that the majority of couples received an average of 2.8 years of treatment. A study (Berg and Wilson, 1991) evaluated couples across different stages of the infertility investigation (years 1, 2 and 3) and found that emotional strain was moderately elevated among first year patients and was markedly increased in those in treatment 3 or more years. Marital adjustment and sexual satisfaction deteriorated after the third year, with men reporting less ability to control ejaculation and less satisfaction with their sexual performance in general. In the current study, it is possible that the husband’s psychosocial impairment from infertility will more likely be found to be associated with an advanced stage of treatment (Berg and Wilson, 1991; Beutel et al., 1999) or when treatment proves unsuccessful (Newton, 1999).

In conclusion, this study suggests that the infertility diagnosis is an important factor in assessing the differences in infertility distress and marital and sexual satisfaction between husbands and wives. In general, wives with both male and female infertility expressed less marital and sexual satisfaction than their husbands. No differences in marital and sexual satisfaction were found between wives and husbands with unexplained infertility. Only wives with a diagnosed female infertility expressed higher distress to infertility than their husbands. Although no differences in psychosocial responses were found among husbands, regardless of the cause of infertility, wives with female factor infertility experienced higher self-esteem...
distress and less satisfaction in acceptance by in-laws than wives with male factor infertility. The results of this study can provide useful information for health professionals who work with infertile couples. However, considering the small sample size and the short stages of treatment, future studies on the psychosocial reactions of wives and husbands with a specific infertility diagnosis should be replicated by enlarging the sample size and including advanced-stage couples.

References


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