The Sexual Impact of Infertility Among Women Seeking Fertility Care

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ABSTRACT

Introduction: Infertility affects approximately 6.7 million women in the United States. Couples with infertility have significantly more anxiety, depression, and stress. This is compounded by the fact that almost 40% of couples undergoing assisted reproduction technology still cannot conceive, which can have an ongoing effect on quality of life, marital adjustment, and sexual impact.

Aim: To assess the sexual impact of infertility in women undergoing fertility treatment.

Methods: This study is a cross-sectional analysis of women in infertile couples seeking treatment at academic or private infertility clinics. Basic demographic information was collected. Respondents were surveyed regarding sexual impact and perception of their infertility etiology. Multivariate regression analyses were used to identify factors independently associated with increased sexual impact.

Main Outcome Measure: Sexual impact of perceived fertility diagnosis.

Results: In total, 809 women met the inclusion criteria, of whom 437 (54%) agreed to participate and 382 completed the sexual impact items. Most of the infertility was female factor only (58.8%), whereas 30.4% of infertility was a combination of male and female factors, 7.3% was male factor only, and 3.5% was unexplained infertility. In bivariate and multivariate analyses, women who perceived they had female factor only infertility reported greater sexual impact compared with woman with male factor infertility ($P = .01$). Respondents who were younger than 40 years experienced a significantly higher sexual impact than respondents older than 40 years ($P < .01$). When stratified by primary and secondary infertility, respondents with primary infertility overall reported higher sexual impact scores.

Conclusion: In women seeking fertility treatment, younger age and female factor infertility were associated with increased sexual impact and thus these women are potentially at higher risk of sexual dysfunction. Providers should consider the role young age and an infertility diagnosis plays in a women's sexual well-being.

Key Words: Infertility; Female Sexual Impact; Female Infertility

INTRODUCTION

Infertility affects approximately 6.7 million women in the United States and the prevalence of infertility has increased from approximately 8.5% of the reproductive-age population in the 1980s to 11% in 2010.[1] Couples with infertility have significantly more anxiety, depression, and stress that some studies have found could contribute to marital distress and divorce.[2–5] This is compounded by the fact that almost 40% of couples undergoing assisted reproduction technology still cannot conceive, which can have an ongoing effect on quality of life, marital adjustment, and sexual impact.[6] However, the marital relationship of couples undergoing fertility treatment is clearly complex and some studies have actually shown that infertility can strengthen their relationship.[7,8] In light of the complex marital relationships of couples seeking fertility treatment, it is important to understand the sexual impact of infertility.

Received January 5, 2016. Accepted April 3, 2016.

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http://dx.doi.org/10.1016/j.esxm.2016.04.001

During the past decade, there has been a tremendous expansion in knowledge about female sexuality and many factors are known to have a strong impact on sexual dysfunction. In light of this new knowledge, it is not surprising that there has been an increased awareness of female sexual dysfunction and the development of novel approaches to treatment. Numerous studies have demonstrated that infertile couples have significantly higher rates of sexual dysfunction than healthy controls.[6,9–12] Similarly, it has been established that those with secondary infertility have more sexual dysfunction compared with those with primary infertility.[10,12] To date, however, no studies have stratified the sexual impact of infertility by demographic or clinical characteristics, including infertility etiology. We explored these relationships and examined the sexual impact of female vs male factor infertility. The ultimate objective of this study was to identify patients for whom infertility might have a greater sexual impact and therefore might warrant further screening for sexual dysfunction. Our hypothesis was that infertility would have the greatest sexual impact on those least likely to be successful with fertility treatment and therefore we would expect a strong relation between sexual impact and age, duration of infertility, and parity. Perhaps in patients for whom fertility rates are lowest, penile-vaginal intercourse starts to carry a significance that might not be seen in patients who have a good chance of successful fertility treatment. Similarly, we hypothesized that patients with female factor infertility would report a higher sexual impact of infertility because penile-vaginal intercourse becomes so inherently tied to fertility.

METHODS

Participants

Couples for the study were recruited into the cohort from eight participating private practice and academic reproductive endocrinology clinics in the greater San Francisco Bay Area when they presented for an initial infertility appointment. Inclusion criteria included heterosexual couples seeking infertility treatment, spoke English, had no prior in vitro fertilization treatment, had no prior sterilization or hysterectomy, lived near one of the participating centers to continue care, and could schedule an initial home visit interview within 6 weeks of the index visit. The questionnaire was initially developed through small focus groups of patients with infertility. The questionnaire was reviewed by experts from psychometrics, clinical psychology, and reproductive health. The completed questionnaire was pilot tested in a smaller cohort of patients. Problematic items were revised or discarded. Interviewers received extensive training, interviewers were audiotaped during the study, and a random 10% were reviewed for accuracy and appropriate implementation of the study protocol. The institutional committee on human research approved this protocol and all participants provided written consent.

Measures

The main outcome measure was sexual impact, which is a seven-item scale taken from the Fertility Problems Inventory and included items about level of sexual enjoyment, perceived attractiveness to partner, inability to have sex because of fertility problems, and persistent thoughts about having a child during intercourse (Appendix 1). The Fertility Problem Inventory is a reliable measurement of perceived infertility-related stress. Responses were made on a five-point scale from "very negative effect" (0) to "very positive effect" (4). To simplify interpretation across the scale, scores were transformed to a scale of 0 to 100, with higher scores representing greater sexual impact. We previously used these data to analyze male respondents from this same cohort and a fuller explanation of the scale is presented in the previous study.[13] Participant age (<40 vs ≥40 years), race (white vs non-white), household income (<$100,000, $100,000–$199,999, or ≥$200,000), education level (no college degree vs college degree), duration of marriage (<5, 5–10, or ≥10 years), duration of infertility (<6, 6–48, 48–60, >60 months, or unknown), previous pregnancy (yes vs no), previous biological children (yes vs no), and perceived cause of infertility (male factor only, male and female factors, female factor only, or unexplained) were determined by answers to questionnaires administered at enrollment. Although the conventional definition of infertility is the inability to conceive after 12 months of unprotected intercourse, for women at least 35 years old, inability to conceive after 6 months is generally considered infertility. We did not use this limited definition of infertility because we wanted to capture a population that was worried about fertility problems and assess the sexual impact of a represented population that might present for fertility care. Race was dichotomized to white vs non-white from broader racial and ethnic categories because of the small samples in subgroups. Duration of infertility was determined by the time from the couples' first attempt to achieve a pregnancy to their study initial evaluation. The presence or absence of male and female factor infertility also was determined from the enrollment interview. During this interview, the woman was asked in an individual interview if she knew the reason for their "problem having a baby." Four exposure categories were possible: female factor infertility, male factor infertility, concurrent male and female factor infertility, or unexplained infertility. The actual infertility etiology was determined by review of the medical chart at the conclusion of the 18-month study period.

Statistical Analysis

Descriptive statistics were used to characterize the study sample. Bivariate comparisons were made between variables for sexual impact with χ^2 analysis for categorical variables. Then, multivariate linear regression analysis was performed by incorporating relevant demographic variables to identify independent correlates of sexual impact. In the multivariate analysis, we constructed a model to include those variables that had a P value