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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.

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**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.<sup>1</sup> Couples with infertility have significantly more anxiety, depression, and stress than some studies have found could contribute to marital distress and divorce.<sup>2–5</sup> 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.<sup>6</sup> However, the marital relationship of couples undergoing fertility treatment is clearly complex and some studies have actually shown that infertility can strengthen their relationship.<sup>7,8</sup> In light of the complex marital relationships of couples seeking fertility treatment, it is important to understand the sexual impact of infertility.

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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.<sup>6,9–12</sup> Similarly, it has been established that those with secondary infertility have more sexual dysfunction compared with those with primary infertility.<sup>10,12</sup> 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.<sup>13</sup> 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  $\chi^2$  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

less than or equal to .2 at bivariate analysis. Respondent's age, duration of infertility, and infertility etiology met these inclusion criteria and therefore were included in the multivariable analysis. Linear variables such as duration of infertility were grouped to make all variables categorical for the regression analysis. In addition, we included duration of marriage and previous biological child because those have been shown to affect sexual well-being.<sup>10,12,14</sup> Although actual and perceived infertility etiologies were statistically different from each other ( $\chi^2 = 214$ ,  $P < .01$ ), we judged that the perceived infertility etiology might better reflect the psychosocial state of the participant and therefore be a better predictor of sexual impact. We further stratified the multivariate analysis by secondary and primary infertility to explore the role that having a prior child plays in sexual well-being. Statistical significance was set at a  $P$  level less than .05. All statistical analysis was completed using STATA 12.0 (StataCorp, College Station, TX, USA).

## RESULTS

In total, 809 women met the inclusion criteria, of whom 437 agreed to participate. In total, 396 female respondents completed baseline questionnaires querying medical and surgical histories, socioeconomic and demographic characteristics, prior pregnancies, and psychosocial state at the time of study enrollment, and 382 completed the sexual impact items (47.2% of original population).

Of the respondents, 43.4% were married at least 5 years and 23.2% were married no longer than 1 year (Table 1). Most participants (75.5%) reported having no prior children. More than two thirds of respondents (71.9%) had at least a college degree. Most respondents were Christian (62.5%), but there were many who identified as atheist or agnostic (20.5%). Respondents underwent different treatments before entry into the study, including oral medications (65%), injectable fertility drugs (25%), and intrauterine insemination with the partner's sperm (34%) or donor sperm (1.5%). Most patients had been seen by a reproductive endocrinologist (92%) or gynecologist (75%). Most (58.8%) attributed infertility to only female factors, 30.4% attributed infertility to a combination of male and female factors, 7.3% attributed infertility to only male factors, and 3.5% reported the etiology had not been determined.

Overall, women in couples seeking infertility treatment had an average sexual impact score of 38 (range = 0–90, SD = 19.3). At reliability testing, the sexual impact scale had a Cronbach  $\alpha$  of 0.87, showing very high internal consistency. When the results of male respondents were compared with the results of female respondents, women overall had a significantly higher impact score than men (mean = 38 and 25, respectively, standard error [SE] = 1.4,  $P < .01$ ).

Univariate and multivariate analyses were performed (Tables 1 and 2, respectively). In the multivariate analysis, we controlled for age, duration of infertility, previous biological children, and

**Table 1.** Demographic characteristics of respondents (N = 396)

Characteristic	Frequency, n (%)
Age (y)	
20–29	42 (10.6)
30–34	116 (29.2)
35–39	149 (37.5)
40–45	78 (19.7)
>45	12 (3.0)
Race	
White	279 (70.5)
Non-white	117 (29.5)
Duration of marriage (y)	
<5	225 (56.5)
5–10	127 (31.9)
>10	44 (11.1)
Unknown	2 (0.5)
Duration of infertility (mo)	
<6	23 (5.8)
6–48	293 (73.6)
48–60	13 (3.3)
>60	19 (4.8)
Unknown	50 (12.6)
Household income (annual)	
<\$100,000	245 (66.2)
\$100,000–\$199,999	94 (25.4)
≥\$200,000	31 (8.4)
Education level	
No college degree	110 (28.1)
College or graduate degree	281 (71.9)
Religion	
Christian—Protestant	72 (18.2)
Christian—Catholic	121 (30.6)
Jewish	28 (7.1)
Christian—Orthodox	54 (13.7)
Hindu	12 (3.0)
Mormon	6 (1.5)
Atheist or agnostic	81 (20.5)
Other	21 (5.3)
Previous pregnancy	
Yes	176 (46.1)
No	206 (53.9)
Previous biological children	
Yes	97 (24.5)
No	299 (75.5)
Actual cause of infertility*	
Male factor only	29 (7.3)
Male and female factors	121 (30.4)
Female factor only	234 (58.8)
Unexplained	14 (3.5)
Perceived cause of infertility*	
Male factor only	44 (11.1)
Male and female factors	42 (10.6)
Female factor only	181 (45.5)
Unexplained	127 (31.9)
Unknown	4 (1.0)

\*Difference between perceived and actual causes of infertility ( $P < .01$  by  $\chi^2$  test).

**Table 2.** Impact of infertility in female respondents, unadjusted model

Characteristic	Sexual impact (n = 382)*			
	Mean	CI	SE	P value
<b>Actual infertility etiology</b>				
Male factor only	30	22–36	3.7	ref
Male and female factors	35	27–43	4.2	.19
Female factor only	40	32–47	4.0	.01
Unexplained	38	25–51	1.2	.22
<b>Perceived cause of infertility</b>				
Male factor only	29	23–35	3.1	ref
Male and female factors	40	31–48	4.4	.01
Female factor only	38	31–45	3.4	<.01
Unexplained	39	31–46	3.5	<.01
<b>Age (y)</b>				
<40	39	37–41	1.2	ref
≥40	33	28–37	2.4	.01
<b>Race</b>				
Non-white	37	33–40	1.9	ref
White	38	33–42	2.2	.62
<b>Household income (annual)</b>				
<\$100,000	38	35–40	1.3	ref
\$100,000–\$199,999	36	31–41	2.4	.39
≥\$200,000	38	30–45	3.8	.99
<b>Education level</b>				
No college degree	38	35–42	2	ref
College or graduate degree	37	32–42	2.3	.50
<b>Duration of marriage (y)</b>				
<5	38	35–40	1.4	ref
5–10	38	33–42	2.2	0.94
>10	36	30–43	3.4	0.68
<b>Duration of infertility (mo)</b>				
<6	29	21–37	4.2	ref
6–48	38	30–46	4.4	.03
48–60	29	14–43	7.3	.98
>60	39	27–52	6.3	.10
Unknown	37	27–47	5.1	.10
<b>Previous pregnancy</b>				
No	38	35–41	1.4	ref
Yes	37	33–41	2.0	.69
<b>Previous biological children</b>				
No	37	35–39	1.2	ref
Yes	39	34–43	2.3	.51

ref = referent; SE = standard error.

\*Number of women with sexual impact scores. Sexual impact is a composite score of 7 questions divided by 28 and multiplied by 100. Questions about sexual impact were originally taken from the Fertility Problem Inventory. Higher scores represent greater impact.

perceived infertility diagnosis (Table 3). Women with perceived male factor only infertility had the lowest sexual impact score, whereas those with male and female factor, female factor only, or unexplained infertility reported higher sexual impact scores (mean = 21, 34, 32, and 32, respectively,  $P \leq .01$ ). Age remained a significant predictor of impact scores in the

**Table 3.** Impact of infertility in female respondents, adjusted model

Characteristic	Sexual impact (n = 382)		
	Mean	SE	P value
<b>Perceived infertility etiology*</b>			
Male factor only	21	5.2	ref
Male and female factors	34	4.4	.01
Female factor only	32	3.4	<.01
Unexplained	32	3.5	<0.01
<b>Age (y)*</b>			
<40	21	5.2	ref
≥40	14	2.5	<.01
<b>Duration of infertility (mo)*</b>			
<6	21	5.2	ref
6–48	13	4.4	.05
48–60	21	7.4	.98
>60	32	6.3	.10
Unknown	30	5.0	.09

ref = referent; SE = standard error.

\*Adjusted model includes perceived infertility diagnosis, age, duration of infertility, duration of marriage, and previous biological children.

multivariate analysis and respondents younger than 40 years reported higher impact scores than those older than 40 (mean = 21, SE = 5.2 and mean = 14, SE = 2.5, respectively,  $P < .01$ ). In the univariate model, respondents with 6 to 48 months of infertility reported a higher sexual impact than those with less than 6 months of infertility, whereas in the multivariable analysis, respondents with 6 to 48 months of infertility reported the lowest impact scores (mean = 21, SE = 5.2 and mean = 13, SE = 4.4, respectively,  $P = .05$ ).

We also stratified results by primary and secondary infertility. In this multivariate analysis, we similarly controlled for age, duration of infertility, duration of marriage, and perceived infertility diagnosis (Table 4). We observed persistently higher sexual impact scores for women with perceived female factor infertility, regardless of whether they reported primary or secondary infertility ( $P = .4$ , SE = 4 and  $P = .01$ , SE = 6.5, respectively). Interestingly, age showed an association with sexual impact scores only for respondents with primary infertility but not secondary infertility. Of respondents with primary infertility, those older than 40 years had lower impact scores compared with those younger than 40 (mean = 15, SE = 2.9 and mean = 24, SE = 3.9, respectively,  $P < .01$ ). For duration of infertility, impact scores were highest for those with longer than 60 months of infertility in this stratified analysis ( $P = .03$ ).

## DISCUSSION

The aim of this study was to identify women for whom infertility had the greatest sexual impact using the Fertility Problem Inventory, which is a validated instrument specifically for the measurement of infertility-related stress. Stress is a known

**Table 4.** Impact of infertility in female respondents, adjusted model, stratified by primary and secondary infertility\*

Characteristic	Sexual impact (n = 382)		
	Mean	SE	P value
<b>Primary infertility</b>			
Perceived infertility etiology			
Male factor only	24	3.9	ref
Combined	35	4.8	.02
Female factor only	32	4	.04
Unexplained	33	4.1	.14
Age (y)			
<40	24	3.9	ref
≥40	15	2.9	<.01
Duration of infertility (mo)			
<6	24	3.9	ref
6–48	33	5.1	.09
48–60	25	7.9	.90
>60	40	7.1	.03
<b>Secondary infertility</b>			
Perceived infertility etiology			
Male factor only	13.2	1.3	ref
Combined	35	12	.07
Female factor only	30	6.5	.01
Unexplained	25	7	.07
Age (y)			
<40	13.2	1.3	ref
≥40	9	4.7	.42
Duration of infertility (mo)			
<6	13.2	1.3	ref
6–48	20	8.7	.4
48–60	7	14.5	.64
>60	40	7.1	.03

ref = referent; SE = standard error.

\*Adjusted model controls for perceived infertility diagnosis, age, duration of infertility, and length of marriage.

risk factor for female sexual dysfunction<sup>15</sup> and therefore we hypothesized that respondents who reported a greater sexual impact on the Fertility Problem Inventory would be at higher risk for sexual dysfunction. In women with infertility, those who perceived the etiology to be female in origin reported higher sexual impact. In addition, younger age and duration of infertility were associated with higher sexual impact.

Smith et al<sup>13</sup> previously reported on the sexual impact scores for the male partners of our cohort and showed similar trends. We also found a propensity of female respondents feeling responsible for their infertility given the difference in perceived vs actual diagnosis of infertility etiology in our cohort. This self-blame and internalized stress might explain in part the greater sexual impact in these women. This is especially interesting because there is some preliminary evidence that seems to suggest stress can actually affect infertility.<sup>16–18</sup>

Although our findings are similar to prior studies that have shown a correlation between infertility and sexual dysfunction,<sup>19,20</sup>

our study is unique in that the results were stratified according to various demographic characteristics including the perceived etiology of infertility. Prior studies often have been limited by uncontrolled social and relationship variables.<sup>21,22</sup> Our hope is that by analyzing individual demographic characteristics, we can further understand why previous studies have shown conflicting results.

We found that women with perceived female factor infertility tended to report the highest sexual impact, and that this relation remained statistically significant in the multivariable model and when stratified by primary and secondary infertility. It is not clear whether the higher sexual impact is related to the diagnosis of female factor infertility, the underlying physiologic cause of infertility, or some other factor and further studies looking at couples who have a physiologic cause of infertility who are not actively trying to conceive might be needed.

Interestingly, respondents with perceived unexplained infertility also reported higher sexual impact. Prior studies have come to similar conclusions and a small study of couples in Taiwan demonstrated that the diagnosis of infertility is an important factor in addressing infertility-related distress.<sup>23</sup> In other fields of medicine, patients find great relief when they are given a definitive diagnosis, even when the treatment options or prognosis are poor. The results of this study suggest that a definitive infertility diagnosis can help mitigate the sexual impact and minimize infertility-related stress unless it is found to be solely of female etiology.

Prior research has demonstrated that age has a complex relation with sexual dysfunction. Some studies have found higher rates of sexual dysfunction in younger women,<sup>24</sup> whereas other studies have suggested sexual dysfunction is higher in women during the menopause transition.<sup>25</sup> Overall, it seems that there is a U-shaped association between age and sexual dysfunction, with higher dysfunction in younger women and those closer to the menopausal transition. For example, a study by Jiann et al<sup>26</sup> found that although overall rates of sexual dysfunction were higher for older women owing to lower desire, arousal, and lubrication, sexual satisfaction was actually highest in this same age group. Similarly, Hendrickx et al<sup>27</sup> found that although sexual difficulties and sexual dysfunctions increase with age, sexual distress was actually more common in younger women. Our study did not include a significant number of women at the menopausal transition and therefore there is large variance in the results for those women near menopause. This likely explains why our data show an inverse relation with sexual impact rather than a bimodal distribution because we could not accurately assess the sexual impact scores of women at the menopause transition. The inverse relation between sexual impact and age is particularly interesting in the setting of infertility because increasing age is associated with higher rates of infertility and worse outcomes for assisted reproductive technology. From our study, the pressures associated with conception at an advanced maternal age do not seem to affect the sexual well-being of older patients negatively. More likely, younger women could feel a

different type of emotional response associated with infertility because it is less common in this age group. Therefore, this emotional stress likely has an even more profound sexual impact than for older women.

We observed similar impact scores for women with primary vs secondary infertility. The literature on sexual well-being for women with primary vs secondary infertility has shown conflicting results. Some studies have reported higher levels of sexual dysfunction with secondary infertility<sup>10,12</sup>; however, other studies have reported improved emotional state and better social relationships with secondary infertility.<sup>14</sup> The difficulty in comparing our study with those cited is that many other studies have included broad outcome measurements that take into account the social, marital, and personal impacts of infertility. Our project focused specifically on the sexual impact; perhaps taken in isolation, there is no difference in sexual impact between these two populations. Interestingly, when we stratified our results by primary and secondary infertility, the relation between age and sexual impact was statistically significant only in women with primary infertility. This suggests that a previous pregnancy mitigates the impact of age on the sexual impact of infertility.

When looking at the duration of infertility, sexual impact scores seemed to be highest for respondents with 6 to 48 months of infertility and for respondents with longer than 5 years of infertility. We chose to stratify according to these categories based on when most participants presented for care. In addition, the period of 6 to 48 months is the most likely time for couples to present and we hypothesized that it would be during this time when the impact of the infertility diagnosis would be highest. As stated earlier, many women seek care after 6 months but before 12 months based on their age. Further, we found some women who presented even before 6 months. In the literature, there are limited studies looking at duration of infertility and sexual impact or sexual dysfunction. One study by Iris et al<sup>28</sup> found that all measurements of sexual function decreased with the exception of sexual satisfaction. The fact that this study was performed in Turkey makes it difficult to compare because the social, psychological, and marital implications of infertility differ significantly across different cultures. Based on our results of infertile women in the United States, it might not be until a couple has been trying at least 6 months that their infertility becomes a problem that affects their life, including sexual impact and infertility-related stress. The effect wanes after some time, perhaps as couples seek treatment for infertility and take action to address their problems. However, we found that at 5 years of infertility, the sexual impact starts to increase again. Additional psychosocial factors could come into play as respondents experience treatment failure and begin to exhaust their treatment options.

One limitation of our study is that we did not use a validated scale to measure risk of sexual dysfunction, such as the Female Sexual Function Index<sup>29</sup> and instead used questions taken from

the Fertility Problems Inventory.<sup>2</sup> However, the Fertility Problem Inventory is a validated measurement of infertility-related stress and assesses stress in five specific domains including sexual concerns. It assesses diminished sexual enjoyment or sexual self-esteem and difficulty with sexual relationships. This scale is unique because it was developed specifically to address infertility-related stress. Therefore, although this scale is not traditionally used in the sexual health literature, our results provide valuable information about the sexual impact of infertility and could provide insight into patients at high risk for sexual dysfunction. As noted earlier, the effects of infertility and male sexual impact using this scale have been published.<sup>9</sup> Another limitation is that our population might be an underrepresentation of patients from lower socioeconomic strata and is from a somewhat limited geographic region. Nevertheless, although not representative of the general public, this population is more likely to present for care and interact with the health care system, and this population is representative of one that would typically be seen in an infertility clinic practice. Our population also had lower rates of male infertility than seen in the general infertility population. Although only 7% of respondents had infertility from male factors only, population-based studies have estimated that male factor infertility accounts for close to one fourth of infertility.<sup>30</sup> Therefore, our population is somewhat skewed from the general population seeking infertility care. We also could not adjust for underlying medical comorbidities such as diabetes or depression, which are known to have significant impact on sexual function, or for the use of medications known to have a negative impact on sexual function.<sup>31–33</sup>

Strengths of this study include its large number of couples from a diverse sample of clinics. Moreover, although participation in our study required fluency in English, studies have estimated that more than 78% of the U.S. population speak English “well” or “very well” and therefore we were able to capture a large segment of the patients from the San Francisco Bay area.<sup>34</sup> We also collected detailed medical and demographic information that allowed for controlling for important confounders.

## CONCLUSION

Overall, women seeking care for infertility who believe they are solely responsible for the couple's infertility perceive a significantly higher sexual impact and thus are potentially at higher risk of sexual dysfunction. We believe these data support the practice of providers screening infertile women for sexual dysfunction, with special focus on those who might be at higher risk, and offering appropriate treatment or referrals to help address these concerns for a woman's overall well-being and for support in her relationship. Providers also should consider the role young age and an infertility diagnosis plays in a woman's sexual well-being. Future directions should include provider education about the importance of sexual health in treating infertile couples and the development of interventions to treat women at highest risk for sexual dysfunction adequately.

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## APPENDIX 1

### Questionnaire

What effect has your fertility problems had on ...

1. How satisfied are you with your partner sexually?
  - a. very negative effect
  - b. negative effect
  - c. no effect
  - d. positive effect
  - e. very positive effect
2. How much do you enjoy sexual relations with your partner?
  - a. very negative effect
  - b. negative effect
  - c. no effect
3. I find I've lost my enjoyment of sex because of our fertility problem.
  - a. strongly disagree
  - b. disagree
  - c. neither agree nor disagree
  - d. agree
  - e. strongly agree
4. I feel just as attractive to my partner as before our fertility problem.
  - a. strongly disagree
  - b. disagree
  - c. neither agree nor disagree
  - d. agree
  - e. strongly agree
5. I don't feel any different from other members of my sex because of our fertility problem.
  - a. strongly disagree
  - b. disagree
  - c. neither agree nor disagree
  - d. agree
  - e. strongly agree
6. I feel that I've failed at sex because I can't get pregnant.
  - a. strongly disagree
  - b. disagree
  - c. neither agree nor disagree
  - d. agree
  - e. strongly agree
7. During sex, all I can think about is wanting a (another) child.
  - a. strongly disagree
  - b. disagree
  - c. neither agree nor disagree
  - d. agree
  - e. strongly agree