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Time Costs of Fertility Care: The Hidden Hardship of Building a Family

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Abstract

Objective—To determine the time infertile couples spend seeking and utilizing fertility care.

Design—Prospective cohort.

Setting—8 community and academic infertility practices.

Patients—319 couples presenting for a fertility evaluation.

Interventions—Face-to-face and telephone interviews and questionnaires.

Main Outcome Measures—Participants recorded diaries of time spent on provider visits, travel, telephone, and miscellaneous activities. Participants also recorded time off of work due to the physical and mental stress related to fertility care. Linear regression was used to assess relationship between fertility characteristics and time spent pursuing care.

Results—Diaries were completed by 319 subjects. Over an 18 month time period, the average time spent on fertility care was 125 hours, equating to 15.6 days, assuming an 8 hour work day. For couples utilizing cycle-based treatments (CBT), overall time spent pursuing care averaged 142 hours versus 58 hours for couples using other therapies, with the majority of time spent on provider visits (73 hours). After multivariable adjustment for clinical and sociodemographic characteristics, possessing a college degree and intensity of fertility treatment were independently associated with increased time spent pursuing fertility care. Furthermore, couples that spent the most time on care were significantly more likely to experience fertility related stress.

Conclusions—Over the course of 18 months of observation, couples pursuing fertility treatment dedicated large amounts of time to attaining their family building goals. This burden on couples adds to the already significant financial and emotional burdens of fertility treatment and provides new insight into the difficulties these couples face.

Keywords

fertility; time cost; burden; infertility

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Introduction

The average cost to couples undergoing in-vitro fertilization (IVF) approaches $25,000 (1). While this cost alone may already be prohibitive for many US households, time spent pursuing care is an additional source of potential financial burden by way of lost wages and other economic hardships. Time spent on care may also represent a significant social and mental burden. These costs are directly felt by the couple and may not be mitigated by insurance coverage or other external assistance (2).

The financial burden of fertility care has been previously well characterized as a possible barrier to treatment. Individual income significantly affects the probability of seeking fertility care (3), with patients of higher socioeconomic status (SES) more likely to seek treatment for infertility, even in states with comprehensive insurance coverage for such services (4). Once fertility treatment is initiated, SES is independently associated with the amount of money one will spend on their care (5). The impact of time costs have been previously investigated as an assessment of how travel time impacts decision making (6), and how time costs in a French population impact couples' impressions and satisfaction (7). However, time costs have not been previously evaluated prospectively over time.

In contrast, time spent pursuing care for other conditions have been measured. Yabroff et al. reviewed the time costs associated with 11 of the most common types of cancer in the United States and found that time costs ranged from 18 to 368 hours during initial treatment and 99 to 512 hours during end-stage treatment. Based on the median wage of $15.23, time spent pursuing initial cancer care translated to an estimated $2.3 billion of lost wages (8).

In a cohort of couples seeking fertility care prospectively followed for 18 months, diaries were used to estimate the time spent pursuing reproductive health care, the primary components of this time, and the degree to which fertility-related stress was associated with time spent pursuing care. Using multivariable regression modeling we estimate the independent factors associated with time spent pursuing care and fertility-related stress, hypothesizing that time spent on fertility care will be associated with type of treatment, socioeconomic factors, and fertility-related stress.

Methods

Cohort Description

A detailed description of the cohort and methods has been previously published (1). Briefly, women were recruited into the study from 8 participating reproductive endocrinology clinics after the female partner presented for fertility treatment, and were followed for 18 months. Of 809 women who met inclusion criteria, 437 (54%) agreed to participate. Women included were heterosexual, English-speaking, and were attending their first visit to the recruiting reproductive endocrinology clinic. Women were excluded if they had prior IVF, hysterectomy, sterilization procedure, or were seeking consultation for recurrent miscarriages. Women receiving other prior treatments for infertility were not excluded. Among this group, 319 (73% retention) completed diaries detailing the time spent pursuing fertility care. Only women with compete data regarding demographics, diagnosis, treatment, outcome, and time costs were included in the analysis. The Institutional Review Board at the University of California, San Francisco approved the study protocol; all subjects provided written consent.

Variables Primary Outcomes

Time spent pursuing fertility treatment was directly determined by patient responses in diaries, and includes time spent by both male and female partners. Subjects were asked how many hours they spent on the following tasks: visits or procedures with doctors or other providers, traveling, telephone calls (making appointments, getting test results, talking with insurance companies) and other tasks (including picking up drugs, recovery time, attending support group meetings and internet searches).

Fertility stress was measured with four questions asking participations to rate how stressful each of the following had been over the past 18 months: discussing fertility treatments with their partner, dealing with fertility treatments, overall how stressful as an individual, and overall how stressful as a couple. Each item was rated on an 11-point scale from 0 (not at all stressful) to 10 (most stressful thing in the past 18 months). The mean of the four items was used as an indicator of fertility stress (Cronbach's alpha = 0.85).

Predictor Variables

Fertility treatment use was categorized based on the highest treatment intensity utilized: no treatment, ovulation induction medications only, intrauterine insemination (IUI) with ovulation induction only, and in vitro fertilization (IVF) (9). Couples transitioning from a lower intensity of treatment to a higher intensity were included in the highest intensity treatment group. Couples were also divided by those receiving cycle-based therapy (CBT) and those receiving non-CBT. Couples receiving non-CBT included those that were treated with expectant management, behavioral modification, or a one-time surgical procedure, such as laparoscopy for treatment of endometriosis or hysteroscopy for uterine fibroids. Additionally, in cases of male factor infertility, male partners may have received interventions including medications or surgery, but these data were not available.

Female highest level of education, employment status, annual household income, female age, female race/ethnicity, previous child, duration of infertility, previous treatment, marital status, and insurance coverage for fertility services was determined through questionnaires. Education was dichotomized to less than college graduate or college graduate. Household income was categorized as <$60,000/year, $60,000–$99,999, $100,000–$149,999, $ $150,000/year, and refusal to declare income. Because of low numbers of subjects in the lowest 2 income subgroups, we combined these groups for regression models. Race and ethnicity were determined by female partner self-report and categorized to white, black, Hispanic, Asian, and other, according to US Census guidelines (10). Due to low numbers in several racial and ethnic minority groups, race was dichotomized to white or non-white. The etiology of infertility was obtained through medical record abstraction and classified as no known etiology, male factor only, female factor only, and both male and female factors.

Data Analysis

Descriptive statistics were used to summarize cohort characteristics. Linear regression was used to explore bivariate relationships between predictor variables and outcomes. Multivariable linear regression analysis was performed to determine the independent effect of age, marital status, race, education, income, previous child, duration of infertility, employment status, insurance coverage for fertility care, and infertility diagnosis on the time spent pursuing fertility treatment. An additional multivariable linear regression model was developed to determine the relationship between time spent pursuing fertility care and fertility stress. Number of treatment cycles was excluded from these models due to collinearity with treatment intensity. All p-values were based on two-tailed tests, with statistical significance indicated by $p < 0.05$ (95% confidence interval excluding zero for

linear regression models). STATA 11 (Statacorp, College Station, TX, USA) was used for all analyses.

Results

Demographic, socioeconomic, diagnostic, and treatment characteristics of the cohort and their associated time spent over the 18-months study period are shown in Table 1. The mean time spent on fertility care for all subjects was 125 hours (SD: 128, range: 2 – 751 hours). The average age of the cohort was 35.6 years old (+/– 4.8), 89% were married, 72% were Caucasian, 76% had a college degree, 76% had no previous children, 71% had been treated previously and 60% were employed full time. Time spent on fertility care did not significantly differ by patient age, marital status, household income, insurance coverage, employment status, previous treatment, the duration of infertility, or by male or female factor.

In initial bivariate comparisons, patients with a college degree spent significantly more time pursing treatment versus those without a degree (139 hours vs. 82 hours, p <0.001). Additionally, patients with a previous child spent significantly less time on treatment compared to those without a previous child (133 hours vs. 98 hours, p=.04).

Among all members of the cohort, 80% pursued CBT, with 53% of the cohort using IVF, 23% IUI, and 4% ovulation induction methods. Couples utilizing CBT spent significantly more time pursuing fertility treatment, averaging 142 hours, versus 58 hours for non -CBT couples (p<0.001). Increasing number of cycles was associated with increasing time spent on fertility care: couples using 1–2 cycles averaged 110 hours, those using 3–4 cycles averaged 153 hours and those using over 5 cycles averaged 175 hours (p<0.001). Time spent also differed based on the highest level of fertility treatment utilized: couples using ovulation induction medications averaged 61 hours compared to 107 for IUI, and 162 hours for IVF (p<0.001).

Components of Time Spent Pursuing Fertility Care

Components of time spent on care, stratified by use or non-use of CBT are shown in Table 2. Couples using CBT consistently spent more time seeking care. Provider visits consumed the most time for both groups (CBT: 73, SD: 69, range: 0.2 – 353 hours), (non-CBT: 26, SD: 35, range: 1 – 170 hours). Travel time was the second largest category for both groups (CBT: 43, SD: 52, range 0 – 300 hours), (non-CBT: 19, SD: 49, range 0 – 305 hours). Provider visits and travel time combined to account for 82% and 79% of time spent for CBT and non-CBT couples, respectively.

Independent Factors Associated with Increased Time Spent Pursuing Fertility Care

Results of multivariable linear regression analysis, adjusting for age, marital status, race, education, income, previous child, previous treatment, duration of infertility, employment status, insurance coverage, and infertility diagnosis are shown in Table 3. After multivariable adjustment, women with college degrees spent on average 49 hours more (95% CI: 14 to 83) pursuing fertility care than those without (p=0.006). Compared to those not undergoing CBT, couples undergoing IUI and IVF spent 40 hours (95% CI: -4 to 83, p=0.07) and 97 hours (95% CI: 60 to 135, p<0.001) more, respectively. When controlling for other variables, previous child was not significantly associated with decreased time spent (p=0.28).

Multivariable Relationship between Time Spent Pursuing Fertility Care and Fertility Stress

Bivariate analysis demonstrated a direct relationship between time spent pursuing fertility care and fertility stress (Table 4A); subjects who spent greater than 160 hours on care were significantly more likely to experience fertility related stress (β= 12.8, 95% CI: 5 to 21, p= 0.002). After adjustment for female age, marital status, race, education, income, insurance, employment status, previous child, previous treatment and treatment type, a significant diminution in the strength of this relationship was observed (β= 7.3, 95% CI -2 to 17, p= .12), primarily mediated by the intensity of CBT utilized (Table 4B). In fact, pursuing IVF was the only factor independently associated with fertility stress, even after full adjustment for sociodemographic characteristics and time spent pursuing care (p= .04).

Discussion

This study prospectively characterizes the time couples spend pursuing fertility care. In this analysis, we observed that patients spent an average of 125 hours pursuing treatment. Cost overall is continually cited as a reason why patients choose not to pursue fertility care or discontinue care prior to achieving pregnancy (11, 12), and this is true even in countries where infertility services are subsidized (13, 14), suggesting a significant impact of indirect and time costs. This phenomenon is not unique to fertility care. A 2007 nationwide survey of cancer sufferers found 8% of all patients and 27% of patients who were ever uninsured delayed or decided not to obtain treatment because of the cost (15). Direct costs to patients for fertility care have previously been investigated, with median per-person costs ranging from $1,182 for medications only to $24,373 and $38,015 for IVF and IVF with donor eggs, respectively (1). When discussing the full potential burden posed by fertility care with patients, a clinician can now, in addition to providing patients a reasonable estimate of the direct costs for different treatment options, also give patients a sense of the time burden posed by various forms of treatment. This information will lead to a greater understanding of the true costs of different treatment modalities and may impact a patient's decision on if and how to proceed.

These data suggest that as the time spent on fertility care increases, there is a trend towards an increase in stress experienced by the patient. Prior studies have found fertility treatment leads to emotional distress, which contributes to high dropout rates among those undergoing CBT (16–18). Additionally, specific diagnosis and prognosis may be related to fertility stress as well, as evidenced by the non-significant trend towards greater fertility stress amongst patients with both male and female factor fertility issues. Our data indicate that this stress may be in part due to the significant time burden faced by these patients. In our bivariate analysis of the relationship between stress and time, those spending over 160 hours pursuing treatment experienced significantly more stress, with an average of 12.8 more stress points in our 100-point scale. This effect on stress appears to reach the criterion of a minimally important difference, using one half standard deviation as an approximation (19).

There are several limitations to our analysis that are worth noting. While patient reported diaries are an accurate method of obtaining information on time spent on care, patients may neglect to report some aspects of the time they spent pursuing treatment or may overestimate other aspects.. Additionally, 71% of our cohort received previous treatment, and our analysis does not account for this time. Many couples were unsuccessful during the 18 months they were followed, and several of these couples likely continued to pursue additional fertility treatment, and we do not account for this time. We do not account for this time spent pursuing care. Thus, our findings are likely an underestimate of the true time costs associated with fertility care. Also, while we were able to control for which partner carried the infertility diagnosis, we did not control for specific diagnoses within gender, which may carry different time costs. Although a large percentage of couples from the original

infertility cohort completed the cost diaries (73%), it is possible that couples completing cost diaries were more or less likely to report time expenses compared to non-respondents. We do not have direct data to assess this question.

Despite these limitations, we were able to evaluate the time spent pursuing several different treatment options for fertility care. This time represents an important and under recognized burden with stressful consequences for patients. Time spent on care varies significantly and independently by treatment modality and SES factors. These data may provide insight to both clinicians and patients regarding the full financial, mental, and social burden of pursuing fertility treatment.

Acknowledgments

References

1. Katz P, Showstack J, Smith JF, Nachtigall RD, Millstein SG, Wing H, et al. Costs of infertility treatment: results from an 18-month prospective cohort study. Fertil Steril. 2011; 95:915–921. [PubMed: 21130988]

2. Kim P. Cost of cancer care: the patient perspective. J Clin Oncol. 2007; 25:228–232. [PubMed: 17210945]

3. Farley Ordovensky Staniec J, Webb NJ. Utilization of infertility services: how much does money matter? Health Serv Res. 2007; 42:971–989. [PubMed: 17489899]

4. Jain T, Hornstein MD. Disparities in access to infertility services in a state with mandated insurance coverage. Fertil Steril. 2005; 84:221–223. [PubMed: 16009188]

5. Smith JF, Eisenberg ML, Glidden D, Millstein SG, Cedars M, Walsh TJ, et al. Socioeconomic disparities in the use and success of fertility treatments: analysis of data from a prospective cohort in the United States. Fertil Steril. 2011; 96:95–101. [PubMed: 21616487]

6. van Empel IW, Dancet EA, Koolman XH, Nelen WL, Stolk EA, Sermeus W, et al. Physicians underestimate the importance of patient-centredness to patients: a discrete choice experiment in fertility care. Hum Reprod. 2011; 26:584–593. [PubMed: 21227936]

7. Adjiman M, de Mouzon J. Impressions od couples treated with fertilization in vitro of their treatment by the IVF center. Gynecol Obstet Fertil. 2002; 30:696–703. [PubMed: 12448367]

8. Yabroff KR, Davis WW, Lamont EB, Fahey A, Topor M, Brown ML, et al. Patient time costs associated with cancer care. J Natl Cancer Inst. 2007; 99:14–23. [PubMed: 17202109]

9. Smith JF, Eisenberg ML, Millstein SG, Nachtigall RD, Sadetsky N, Cedars MI, et al. Fertility treatments and outcomes among couples seeking fertility care: data from a prospective fertility cohort in the United States. Fertil Steril. 2011; 95:79–84. [PubMed: 20659733]

10. Grieco, E.; Cassidy, R. Overview of Race and Hispanic Origin 2000. Washington, DC: United States Census Bureau; 2001. p. 1-11.

11. Goldfarb J, Austin C, Lisbona H, Loret de Mola R, Peskin B, Stewart S. Factors influencing patients' decision not to repeat IVF. J Assist Reprod Genet. 1997; 14:381–384. [PubMed: 9285321]

12. Eisenberg ML, Smith JF, Millstein SG, Nachtigall RD, Adler NE, Pasch LA, et al. Predictors of not pursuing infertility treatment after an infertility diagnosis: examination of a prospective U.S. cohort. Fertil Steril. 2010; 94:2369–2371. [PubMed: 20471010]

13. Land JA, Courtar DA, Evers JL. Patient dropout in an assisted reproductive technology program: implications for pregnancy rates. Fertil Steril. 1997; 68:278–281. [PubMed: 9240256]

14. Rajkhowa M, McConnell A, Thomas GE. Reasons for discontinuation of IVF treatment: a questionnaire study. Hum Reprod. 2006; 21:358–363. [PubMed: 16269448]

15. [Accessed Aug. 12, 2012] The USA Today/Kaiser Family Foundation/Harvard School of Public Health. National Survey of Households Affected by Cancer. Available at: External link http://www.kff.org/kaiserpolls/upload/7591.pdf

16. Olivius C, Friden B, Borg G, Bergh C. Psychological aspects of discontinuation of in vitro fertilization treatment. Fertil Steril. 2004; 81:276. [PubMed: 14967357]

17. Verberg MF, Eijkemans MJ, Heijnen EM, Broekmans FJ, de Klerk C, Fauser BC, et al. Why do couples drop-out from IVF treatment? A prospective cohort study. Hum Reprod. 2008; 23:2050–2055. [PubMed: 18544578]

18. Brandes M, van der Steen JO, Bokdam SB, Hamilton CJ, de Bruin JP, Nelen WL, et al. When and why do subfertile couples discontinue their fertility care? A longitudinal cohort study in a secondary care subfertility population. Hum Reprod. 2009; 24:3127–3135. [PubMed: 19783833]

19. Norman GR, Sloan JA, Wyrwich KW. Interpretation of changes in health-related quality of life: the remarkable universality of half a standard deviation. Med Care. 2003; 41:582–592. [PubMed: 12719681]

Table 1

Demographic, Socioeconomic, Diagnostic, and Treatment Characteristics of Infertility Cohort and their Associated Time Spent Pursuing Fertility Care over 18 Months of Observation

		Cohort		Hours Spent Pursuing Treatment (n=319)			
		N	%	Mean	Median	SD	P-Value
Overall		319	100%	124.9	87.0	128.2	N/A
Female age	<35	128	40%	127.9	88.8	132.7	
	35–39	124	39%	138.0	100.8	133.2	
	40+	67	21%	94.8	52.5	105.0	0.08
Married	No	34	11%	131.0	67.3	154.3	
	Yes	285	89%	124.1	90.0	125.1	0.77
White female	No	90	28%	117.7	98.1	98.2	
	Yes	229	72%	127.7	84.7	138.4	0.53
College degree	No	78	24%	81.8	47.6	86.5	
	Yes	241	76%	138.8	97.0	136.3	<0.001
Household income	< $100,000	90	28%	101.6	53.8	103.4	
	$100,000–$149,999	96	30%	137.1	85.5	149.3	
	$150,000	118	37%	133.7	102.0	126.8	
	Unwilling to provide	15	5%	116.8	72.9	121.4	0.22
Insurance coverage for infertility treatment	No	194	61%	124.1	72.6	131.4	
	Yes	125	39%	126.1	99.5	123.6	0.89
Employment status	Full-time work	192	60%	128.5	96.3	124.5	
	Part-time work	49	15%	131.5	84.0	150.3	
	Unemployed	78	24%	111.7	58.1	123.0	0.67
Previous child	No	243	76%	133.1	92.5	132.3	
	Yes	76	24%	98.4	58.8	110.7	0.04
Previous treatment	No	93	29%	113.6	70.3	121.2	
	Yes	226	71%	129.5	92.5	131.0	0.32
Duration of infertility	<1 year	53	17%	111.8	73.5	107.4	
	1–2 years	127	40%	140.6	90.5	155.3	
	2 years	115	36%	118.2	96.5	108.7	

		Cohort		Hours Spent Pursuing Treatment (n=319)			
		N	%	Mean	Median	SD	P-Value
	Unknown	24	8%	102.1	63.3	89.6	0.32
Infertility factor	Male and female factors	102	32%	141.6	97.2	147.8	
	Female factor only	184	58%	117.8	76.6	113.1	
	Male factor only	22	7%	132.7	80.1	161.2	
	No known infertility factors	11	3%	71.9	58.8	81.0	0.23
Any cycle-based fertility treatment	No	64	20%	58.0	32.7	81.6	
	Yes	255	80%	141.6	104.3	132.4	<0.001
Highest level of fertility treatment	No cycle based fertility treatments	64	20%	58.0	32.7	81.6	
	Ovulation induction medications	12	4%	60.6	25.7	69.6	
	Intrauterine insemination	73	23%	107.4	70.0	99.9	
	In vitro fertilization	170	53%	162.0	126.2	142.8	<0.001
Number of cycles	0	64	20%	58.0	32.7	81.6	
	1–2	103	32%	109.5	77.5	98.2	
	3–4	79	25%	152.7	112.3	146.0	
	5+	73	23%	174.9	129.8	149.4	<0.001

Table 2

Components of Time Spent Pursuing Fertility Care Among Couples Using or Not Using Cycle-Based Fertility Treatments

	Hours Spent Pursuing Treatment Among Couples Using Cycle-Based Fertility Treatments (n=255)				**Hours Spent Pursuing Treatment Among Couples Not Using Cycle-Based Fertility Treatments (n=64)**			
	Range (min, max)		Mean	Median	SD	Range (min, max)		Mean	Median	SD
Provider visits	0.2	352.8	73.3	52.0	68.8	0.8	170	26.3	14.0	34.6
Travel time	0.0	300.3	43.4	29.0	51.7	0.0	305	19.4	6.0	49.2
Other time spent pursuing care	0.0	340.8	12.5	2.0	31.1	0.0	84	6.5	1.9	13.9
Phone calls	0.0	102.5	12.4	6.9	14.9	0.0	33	5.8	2.7	7.6
Overall time spent pursuing care	1.8	750.6	141.6	104.3	132.4	1.2	477.1	58.0	32.7	81.6
Work days (work days = hours / 8)	0.2	93.8	17.7	13.0	16.5	0.1	59.6	7.2	4.1	10.2

Table 3

Multivariable Relationship Between Fertility Treatment Characteristics and Time Spent Pursuing Fertility Care

		Time Spent Pursuing Care[*]		
		β (hours)	95% CI	P-Value
College degree	No	0.0	Ref	Ref
	Yes	48.6	14.3	83.0	< 0.01
Highest level of fertility treatment	No cycle-based fertility treatments	0.0	Ref	Ref
	Ovulation induction medications	9.2	−68.0	86.4	0.82
	Intrauterine insemination	39.7	−3.8	83.1	0.07
	In vitro fertilization	97.4	59.8	134.9	< 0.001

[*]
Adjusted for age, marital status, income, duration of infertility, previous child, previous treatment, employment status, insurance coverage, and infertility diagnosis. All characteristics shown were associated with time spent pursuing fertility treatment at a p-value < 0.2. Number of cycles was excluded from the final model due to collinearity with treatment type.

Table 4

Multivariable Relationship Between Time Spent Pursuing Fertility Care and Fertility Stress

		Fertility Stress**		
A. Bivariable Relationship Between Time and Fertility Stress		β (stress scale units)	95% CI	P-Value
Hours spent pursuing fertility care (percentile)	<35 hours (<25td %)	0.0	Ref	Ref
	35–84 hours (25th–49th %)	1.5	−6.6 9.6	0.71
	85–160 hours (50–74th %)	5.3	−2.7 13.2	0.19
	>160 hours (75th %)	12.8	4.9 20.7	0.002
B. Multivariable Relationship Between Time and Fertility Stress		β (stress scale units)	95% CI	P-Value
Hours spent pursuing fertility care (percentile)	<35 hours (<25th %)	0.0	Ref	Ref
	35–84 hours (25th–49th %)	−2.4	−11.2 6.4	0.59
	85–160 hours (50–74th %)	0.8	−8.4 10.0	0.86
	>160 hours (75th %)	7.3	−1.9 16.6	0.12
Infertility diagnosis	Male and female factors	0.0	Ref	Ref
	Female factor only	−4.9	−11.3 6.4	0.14
	Male factor only	−7.9	−20.1 10.0	0.21
	No known infertility factors	15.4	−31.2 16.6	0.06
Highest level of fertility treatment*	No cycle-based fertility treatments	0.0	Ref	Ref
	Ovulation induction medications	0.0	−17.1 17.5	1.0
	Intrauterine insemination	9.1	−0.2 18.3	0.06
	In vitro fertilization	9.0	0.4 17.7	0.04

*
Adjusted for female age, marital status, race, education, income, insurance coverage, duration of infertility, employment status, previous treatment and previous child. All characteristics shown were associated with fertility stress at a p-value < 0.2. Number of cycles was excluded from the final model due to collinearity with treatment type.

**
Fertility Stress defined as sum of 4 stress related questions assessed at the 18 month follow-up questionnaire and scaled to range from 0–100: (Range 0–100, Mean 51.7, Median 55, SD 24.3)

How stressful has each of the following been for you? (0 not at all stressful, 10 most stressful thing in past 18 months)
Discussing fertility treatment decisions with your partner?
Dealing with fertility treatments
Overall, how stressful has dealing with your fertility problems been?

Individually?
As a couple?

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