EPIDEMIOLOGY & RISK FACTORS

Predictors of Sexual Intercourse Frequency Among Couples Trying to Conceive



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ABSTRACT

Background: Little is known about the predictors of sexual intercourse frequency (SIF) among couples trying to conceive despite the well-established link between SIF and fecundity.

Aim: To evaluate men's and women's demographic, occupational, and lifestyle predictors of SIF among couples.

Methods: 469 Couples without a history of infertility participating in the Longitudinal Investigation of Fertility and the Environment Study (2005−2009) were followed up for ≤1 year while trying to conceive. At enrollment, both partners were interviewed about demographic, occupational, lifestyle, and psychological characteristics using standardized questionnaires. Multivariable generalized linear mixed models with Poisson distribution were used to estimate the adjusted percent difference in SIF across exposure categories.

Outcomes: SIF was recorded in daily journals and summarized as average SIF/mo.

Results: The median (interquartile range) SIF during follow-up was 6 (4-9) acts/mo. For every year increase in age for women and men, SIF decreased by -0.8% (95% CI -2.5 to 1.0%) and -1.7% (95% CI -3.1 to -0.3%). Women with high school education or less and those of non-white race had 34.4% and 16.0% higher SIF, respectively. A similar trend was seen for men's education and race. Only couples where both partners (but not just 1 partner) worked rotating shifts had -39.1% (95% CI -61.0 to -5.0%) lower SIF compared to couples where neither partner worked rotating shifts. Men's (but not women's) exercise was associated with 13.2% (95% CI 1.7-26.0%) higher SIF. Diagnosis of a mood or anxiety disorder in men (but not women) was associated with a 26.0% (95% CI -42.7 to -4.4%) lower SIF. Household income, smoking status, body mass index, night work, alcohol intake, and psychosocial stress were not associated with SIF.

Clinical Translation: Even among couples trying to conceive, there was substantial variation in SIF. Both partners' age, education, race, and rotating shift work as well as men's exercise and mental health play an important role in determining SIF.

Conclusions: As this was a secondary analysis of an existing study, we lacked information on many pertinent psychological and relationship quality variables and the hormonal status of participants, which could have affected SIF. The unique population-based couple design, however, captured both partners' demographics, occupational characteristics, and lifestyle behaviors in advance of their daily, prospective reporting of SIF, which was a major strength. Important predictors of SIF among couples attempting to conceive include men's exercise and mental health and both partners' age, education, race, and rotating shift work. Gaskins AJ, Sundaram R, Buck Louis GM, et al. Predictors of Sexual Intercourse Frequency Among Couples Trying to Conceive. J Sex Med 2018;15:519—528.

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INTRODUCTION

Sexual intercourse has been positively linked to overall physical and emotional well-being as well as increased relationship satisfaction in both men and women. 1,2 Given the clear associations between sexual activity and quality of life, there has been great interest in identifying the factors that predict sexual intercourse frequency (SIF) but limited actual research. While the research thus far has mostly focused on marriage/cohabitation parameters, age, and race/ethnicity in relation to SIF in older populations, there is increasing interest in the sociodemographic and lifestyle factors that are related to coital frequency in younger age groups.

In reproductive-aged couples, intercourse frequency not only plays a significant role in relationship quality and satisfaction³ but also in determining couple fecundity.⁴ While determinants of fecundity are often thought of exclusively as biological factors affecting ovulation, sperm quality, fertilization, and survival of the fertilized oocyte, behavioral factors, such as libido and SIF, could also play a critical role. At present, it is unknown to what extent differences in patterns of intercourse may exist and may explain associations seen between various demographic, occupational, and lifestyle exposures and markers of fecundity such as time to pregnancy, largely because the necessary data are seldom collected. The identification of such factors would have relevance for pre-conception guidance and general public health guidance.

Thus, using a large prospective cohort of couples without a history of infertility trying to become pregnant, where information on daily frequency of sexual intercourse was collected in journals, we sought to investigate men's and women's demographic, occupational, and lifestyle characteristics associated with frequency of sexual intercourse.

MATERIAL AND METHODS

Study Population

The Longitudinal Investigation of Fertility and the Environment Study is a population-based prospective cohort of 501 couples attempting to conceive in 2 geographic areas (Texas and Michigan) between 2005-2009. Couples were eligible to enroll in the study if they were in a committed relationship; the woman partner was age 18-44 years, had menstrual cycles between 21-42 days, and had no hormonal birth control injections during past year; the man partner was age ≥18 years; and both partners had the ability to communicate in English or Spanish, and had no sterilization procedures or physician-diagnosed infertility. Couples were further excluded if they had been off contraception >2 months. A complete description of the study, including recruitment yield, is presented elsewhere. Briefly, of the 51,715 couples who were screened, 50,527 (98%) were ineligible largely due to age (27%), not being interested in pregnancy (19%), not being in a committed relationship (19%), and planning to move outside the study area (16%). Of the

1,188 eligible couples, 501 (42%) enrolled in the study and were followed for up to 12 months or through pregnancy if pregnancy occurred. The protocol was approved by the institutional review boards at each institution and all participants provided written informed consent before enrollment.

Demographic, Lifestyle, and Occupational Characteristics

Research assistants traveled to couples' homes and completed baseline in-person interviews that were conducted simultaneously but separately with each partner. The baseline interview queried men and women about their demographic and lifestyle characteristics, medical and reproductive history, and occupational activity. Men and women were asked to provide their current age, level of education, ethnicity, race, household income, and their lifetime and current use of cigarettes. Physical activity was assessed by asking participants whether they followed a regular vigorous exercise program in the past 12 months and if so, how many d/wk (open response). Due to the low number of men and women reporting exercise 1 d/wk and >6 d/wk, the following categories were created: 1-2, 3, 4, and ≥ 5 d/wk. Stress was measured using the 4-item Cohen perceived stress scale.⁶ Participants also selfreported a physician diagnosis of anxiety or mood disorders and whether or not they were currently receiving medical treatment for this condition. Men and women were asked if they had consumed ≥12 alcoholic drinks in the past 12 months and if so, how often they consumed alcoholic beverages, how many alcoholic drinks they had on a typical occasion, and whether there was ever a single occasion during which they drank ≥5 alcoholic drinks. For occupational exposures, both partners were asked if they were currently employed and if so whether their current job involved any of the following: night work, rotating shifts, heavy exertion or lifting, or prolonged sitting (men only) or standing (women only). During the in-home interview, all men and women had their weight and height measured using a digital self-calibrating scale and a standardized cloth tape, respectively, after removing shoes and excessive clothing. The nurse was instructed to take 2 measurements and record weight to the nearest pound and height to the nearest 0.5 in.

Sexual Intercourse Frequency

Men and women recorded daily vaginal-penile intercourse frequency in journals. The women also recorded daily information in the journals on bleeding and Clearblue Easy (Swiss Precision Diagnostics Development Company, Geneva, Switzerland) home urinary-based fertility monitor results. The monitor date for menses along with daily journal information was used to establish menstrual cycles. As enrollment occurred on various days of women's menstrual cycles, the length of the first cycle under study was the sum of the prospectively observed portion (median 15, interquartile range 7—22 days) and the time since last menstrual period (reported at enrollment). During follow-up, SIF was summarized as the average SIF/mo, which

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