ORIGINAL RESEARCH—EPIDEMIOLOGY

The Impact of Sexual Orientation on Sexuality and Sexual Practices in North American Medical Students

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ABSTRACT

Introduction. There has been limited investigation of the sexuality and sexual dysfunction in non-heterosexual subjects by the sexual medicine community. Additional research in these populations is needed.

Aims. To investigate and compare sexuality and sexual function in students of varying sexual orientations.

Methods. An internet-based survey on sexuality was administered to medical students in North American between the months of February and July of 2008.

Main Outcome Measures. All subjects provided information on their ethnodemographic characteristics, sexual orientation, and sexual history. Subjects also completed a series of widely-utilized instruments for the assessment of human sexuality (International Index of Erectile Function [IIEF], Female Sexual Function Index [FSFI], Premature Ejaculation Diagnostic Tool [PEDT], Index of Sex Life [ISL]).

Results. There were 2,276 completed responses to the question on sexual orientation. 13.2% of male respondents and 4.7% of female respondents reported a homosexual orientation; 2.5% of male and 5.7% of female respondents reported a bisexual orientation. Many heterosexual males and females reported same-sex sexual experiences (4% and 10%, respectively). Opposite-sex experiences were very common in the male and female homosexual population (37% and 44%, respectively). The prevalence of premature ejaculation (PEDT > 8) was similar among heterosexual and homosexual men (16% and 17%, $P = 0.7$, respectively). Erectile dysfunction (IIEF-EF < 26) was more common in homosexual men relative to heterosexual men (24% vs. 12%, $P = 0.02$). High risk for female sexual dysfunction (FSFI < 26.55) was more common in heterosexual and bisexual women compared with lesbians (51%, 45%, and 29%, respectively, $P = 0.005$).

Conclusion. In this survey of highly educated young professionals, numerous similarities and some important differences in sexuality and sexual function were noted based on sexual orientation. It is unclear whether the dissimilarities represent differing relative prevalence of sexual problems or discrepancies in patterns of sex behavior and interpretation of the survey questions. **Breyer BN, Smith JF, Eisenberg ML, Ando KA, Rowen TS, and Shindel AW. The impact of sexual orientation on sexuality and sexual practices in North American medical students. J Sex Med 2010;7:2391–2400.**

Key Words. Homosexual; Bisexual; Medical Student; Female Sexual Function; Male Sexual Function; Heterosexual

Introduction

Homosexual men and women have received limited attention in the sexual medicine literature despite constituting a substantial minority of the population (estimated at 4–5% and 2–3% for male and female, respectively) [1–3]. Nonheterosexual orientation is an exclusion criterion in many large scale studies in sexual medicine [4,5]. Although the exclusion of homosexuals from these studies is grounded in the need for a homogenous study population for optimization of scientific

rigor rather than prejudice, the end result is that homosexual people are often excluded from important clinical trials [4,5]. Furthermore, the majority of instruments for the assessment of sexual problems have not been validated in homosexual patients and feature language oriented towards heterosexual people [6,7].

Much of the biomedical literature on these sexual minority groups is centered on high-risk sexual behaviors and sexual dysfunction in HIV-positive men [8,9]. However, recent normative sexual dysfunction research in homosexual subjects has provided interesting preliminary data. An internet-based survey of 7001 men who have sex with men found that 79% of men reported one or more sexual dysfunction symptoms [10]. The most common problems were low sexual desire, erection problems, and performance anxiety [10]. In addition, a report on Chinese men who have sex with men also found a relatively high incidence (around 43%) of sexual concerns. In this population, there was an association between social support/acceptance of sexual orientation from associates and sexual dysfunction, HIV-risk-related behaviors, and sociocultural factors [11]. Bancroft and colleagues analyzed a large convenience sample of gay men (N = 1,196) and age-matched heterosexual men (N = 1,558) for erectile dysfunction and ejaculatory problems. Problems with erection over the past 3 months were reported by 43% of gay men compared with 31% of heterosexual men; a problem with erectile function at some point in life was reported by 58% of gay men and 46% of heterosexual men. These differences were statistically significant, leading the authors to speculate that either erectile dysfunction is more common in homosexual men and/or that erectile function plays a more critical role in the sexual lives of gay men [12].

It is implied that sexual dysfunction may impact sexual minority groups in ways that are different from what is observed in heterosexuals. Our research team recently surveyed sexuality and sexual practices of medical students enrolled in osteopathic and allopathic medical schools in North America. We subsequently conducted a cross-sectional subset analysis stratifying sexual practice and dysfunction by sexual orientation. We hypothesized that heterosexual, homosexual and bisexual medical students would have differing sexual repertoires and experiences and that the rate of sexual problems might differ significantly between individuals of different sexual orientations.

Methods

Study Population

Medical students in North America were invited to participate in a cross-sectional internet-based survey of sexual practices and dysfunction. Invitations were extended via postings on the American Medical Student Association list-serves, the Student-Doctor Network, and a news story posted on Medscape.com. The survey was administered through QuestionPro.com (Survey Analytics LLC, Seattle, WA, USA) and was available from February 22, 2008 to July 31, 2008. Approval for this study and the survey instrument was given by our Institutional Committee for Human Research. Implied consent was assumed by subject participation in, and completion of, the survey instrument.

Exposure Variables

Primary Outcome Variable

Students were asked "What is your sexual orientation?" and given the option of selecting "heterosexual", "homosexual", "bisexual", "asexual", or "other". We defined heterosexuality and homosexuality as attraction to members of the opposite or same gender, respectively. We defined bisexuality as attraction to both genders with no or only slight preference for one gender over the other. Asexuality was defined as lack of attraction to members of either gender.

Socio-Demographic

The survey gathered demographic characteristics such as age (continuous), gender (male/female/other) sexual relationship status (yes/no), and prior maternity/paternity (yes/no).

Sexual Experience

Subjects were asked their age at first intercourse as defined by the individual (continuous), number of lifetime and recent partners (categorical), and whether or not the subject had engaged in several specific sexual acts (listed in Figure 1).

Sexual Quality of Life Instruments

Gender specific sexual function instruments were utilized to screen for sexual problems. Male subjects completed the International Index of Erectile Function (IIEF), a 15-item instrument assessing male sexual function (desire, erectile function, intercourse satisfaction, orgasmic function, and overall satisfaction) [6]. The erectile function domain (IIEF-EF) consists of 6 questions (score range 5–30); cut-off scores were used to classify ED (≥26 = no ED, 22–25 = mild ED, 17–21 =