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ORIGINAL RESEARCH

Sexual Quality of Life and Association With HIV and Sexually Transmitted Infections Among a Cohort of Heterosexual Couples in Kenya

Supriya D. Mehta, PhD,[1] Rachel K. Nordgren, MS,[1] Walter Agingu, MS,[2] Fredrick Otieno, PhD,[2] Winnie Odongo, BSN,[2] Finch Odhiambo, BA,[2] and Robert C. Bailey, PhD[1]

ABSTRACT

Introduction: Sexual quality of life (SQoL) is a critical component of sexual health and is understudied in Sub-Saharan African settings with endemic HIV and sexually transmitted infection (STI).

Aim: We sought to assess SQoL among heterosexual couples in Kisumu, Kenya, and how this was associated with HIV status, STIs, and sexual practices.

Methods: This was a prospective cohort study of community-recruited couples. SQoL, HIV status, herpes simplex virus (HSV)-2 status, bacterial vaginosis (BV), sexual practices, and sociodemographics were measured at baseline, 6 months, and 12 months. Multivariable linear regression with random intercept was fitted separately for females and males, accounting for partner characteristics.

Main Outcome Measure: SQoL was assessed with an 18-item female and 11-item male survey.

Results: From April 2014 through July 2016, 252 couples were enrolled, and followed up through September 2017. At baseline, women were median age 23 years, 10% HIV positive, 53% HSV-2 seropositive, and 22% with BV. At baseline men were median age 26 years, 12% HIV positive, 47% HSV-2 seropositive, and 56% circumcised. Mean SQoL was higher for men (88) than women (78), with consistent scores over time. In multivariable analysis ($P < .05$ each), SQoL Questionnaire—Female (SQoL-F) score was reduced with: male partner report that sex felt rougher than he would have liked (9.5-point decrease), female HSV-2 seropositivity (5.15-point decrease), female reported having dry vaginal sex (5.27-point decrease); among women with BV, SQoL-F score declined with recent sexual activity (8.27-point decrease) and increasing age (0.75-point decrease per 1 year increase in age). Age and recent sex did not affect SQoL-F for women without BV. SQoL Questionnaire—Male score was decreased 4.99 points if male was employed, 4.52 points if male reported multiple recent sex partners, and 29.5 points for HIV positive men whose female partner reported having sex when not in the mood. Men's SQoL increased by 0.84 points for each 1-U increase in female partner body mass index and 17.6 points for HIV positive men whose female partner reported recent sex with him.

Clinical Implications: Within sexual partnerships, men had greater SQoL than women, and the adverse impact of BV and STIs on SQoL was greater for women than men.

Strength & Limitations: Research is needed to ensure relevant domains are measured in settings where measure of SQoL has not been validated, along with robust measures of physiologic and psychologic correlates.

Conclusion: More attention to SQoL as an outcome may strengthen interventions aimed at preventing HIV and STIs and improving sexual health holistically. **Mehta SD, Nordgren RK, Agingu W, et al. Sexual Quality of Life and Association With HIV and Sexually Transmitted Infections Among a Cohort of Heterosexual Couples in Kenya. J Sex Med 2018;XX:XXX–XXX.**

Key Words: Sexual Quality of Life; Sexually Transmitted Infections; HIV; Kenya; Couples; Bacterial Vaginosis

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[1]Division of Epidemiology and Biostatistics, University of Illinois at Chicago School of Public Health, Chicago, IL, USA;

[2]Nyanza Reproductive Health Society, Kisumu, Kenya

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INTRODUCTION

Sexual health encompasses physical well-being and a positive approach to sexuality and sexual relationships, including pleasurable sexual experiences.[1] Sexual quality of life (SQoL) is a multidimensional construct, encompassing physical, social, emotional, and psychological dimensions,[2] and is postulated to be more sensitive to evaluate declines in sexual health, than measures of sexual functioning alone.[3] Poor SQoL has been associated with concomitant increases in anxiety and depression, and relationship disruptions.[4] Further, SQoL is part of, and associated with overall health-related quality of life.[5] Factors associated with SQoL have largely been studied among elderly populations and those with illness. Factors associated with decreased sexual functioning and SQoL include physiologic, medical, and psychological factors, such as medication use,[4] depression and substance abuse,[6] herpes simplex virus (HSV)-2 infection,[7,8] and HIV infection.[9]

In Kenya, HIV prevalence in the general adult population is 5.9%, but 20% in Kisumu County, which borders Lake Victoria in western Kenya.[10,11] Following age-related trends in HIV, in western Kenya HSV-2 prevalence increases dramatically from 10% in 13- to 14-year-old girls to 28% in 15- to 19-year-olds.[12,13] Bacterial vaginosis (BV) affects over 20% of general population women in Kenya[14,15] and up to 40% of women with HIV or in clinic—based settings.[16—18] Given the high burden of HIV and sexually transmitted infection (STIs), SQoL may be adversely affected. Relatively little is known about the SQoL and associated factors among heterosexuals in a Sub-Saharan African setting with endemic rates of HIV and STIs. Understanding the impact of HIV, STIs, and sexual practices on SQoL can inform the development and tailoring of counseling messages to reduce stigma and lessen the potential adverse impacts of these infections. We sought to assess SQoL in a cohort of heterosexual couples in Kisumu, Kenya, and hypothesized it would be negatively associated with HIV and STIs infection, and would vary by sexual practices.

METHODS

This study was approved by the institutional review boards of University of Chicago at Illinois, Maseno University (Kisumu, Kenya), and Rush University (Chicago, IL, USA).

Study Setting

Kisumu is positioned 400 km west of Nairobi, adjacent to Lake Victoria. Kisumu town accounts for 40% of the population of Kisumu County, and is the urban center of the province. The population consists mostly of members of the Luo ethnic group. Kisumu is an impoverished area, with 45% of the county's child population estimated to be socioeconomically deprived.[19] The disease burden typifies rural African communities, with mortality in adolescents and young adults primarily attributed to communicable diseases, injuries, and maternal causes. The practice of polygamy is common (~20%) in Nyanza region.[20,21] In Kisumu County, women's median age of first marriage is 19 years, with median age of first birth 19.6 years, and total fertility rate of 3.6.[20]

Study Design and Participants

This study used data and biological specimens from Afya Jozi, Afya Jamii (Kiswahili for "Healthy Pair, Healthy Community"), a prospective cohort study of heterosexual couples in Kisumu, Kenya, the capital of Kisumu County. Subjects were recruited from public spaces in the community, including bus stops, motorcycle stands, markets, beauty parlors, barber shops, and in central areas of neighborhoods. In public spaces, study staff (usually 1 female and 1 or 2 males, wearing identification badges and collared polo shirts printed with the study name and their employer information) gave brief talks on the importance of HIV and STI counseling and testing. Recruiters then introduced and briefly explained the study. They made themselves available to those who were interested, moving to a more secluded area, away from a crowd. They recorded first names and telephone numbers in their study log books, and then subsequently called those who were interested to schedule screening appointments and arrange transportation. Men and women had to come to the study clinic together for eligibility screening. The eligibility of each member of the couple was assessed separately in a private room. To be eligible, members of couples had to independently confirm they had been in a sexual relationship for at least 6 months' duration, with no plans to move for the duration of the study, and agree to attend all study visits together. We included men aged 18—35 years and female partners aged 16 years and older. After the baseline visit, couples were scheduled for follow-up at 1 month, 6 months, and 12 months. Each member of eligible couples who consented and enrolled received 400 Kenyan shillings (~4 U.S. dollars) compensation for time and travel for each study visit.

Data Collection

Following written informed consent, at each study visit, participants underwent standardized medical history and physical examination, plus a personal interview to obtain sociodemographic information and to assess sexual practices. Gender-matched clinicians (clinical officer or nurse) trained in research and survey administration interviewed participants in their language of choice (English, DhoLuo, or Kiswahili). Sociodemographic data included age, educational attainment, past month income, and current employment status. Sexual practices that were assessed included condom use, having multiple sex partners, and timing of last sexual activity. The recall period for sexual practices was the past 6 months, unless otherwise specified. Women were asked about the frequency of having sex during menses, and having sex when they were not in the mood; women and men were asked the frequency of having sex when your vagina/your partner's vagina was dry, and sex feeling rougher than they would have liked. The response categories to these