

## Short Communication

# Examining Self-Reported STI Rates among an International Sample of Swingers

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- Safe sex strategies
- Swinging satisfaction

**Abstract**

Swingers have been identified as one of the at-risk groups for STI transmission. Although swinging has grown in popularity in recent years, there is still little information regarding the rates of STIs among swingers, especially viral STIs. An international sample of 2,695 swingers, recruited through several swingers' websites, completed a survey regarding demographics, self-reports of lifetime prevalence of STIs acquired via swinging, and current self-reported STIs. Chi Squares analyses revealed that nearly twice as many women as men (11.5% vs 6%) reported contracting an STI during swinging activities,  $\chi^2(1, N=2,7695) = 22.76, p < .001$ . Viral infections were more common than bacterial infections, but the highest rates were for other sex-related infections such as Vaginitis, Yeast Infections, and Bladder Infections. Further research is needed to evaluate safe sex practices and longitudinal data to determine incidence, and prevalence, of STIs among this population. This study has important implications for public health.

**INTRODUCTION**

Transmitted sexual infections (STIs) have been a concern to most societies in terms of the health cost to the population, mostly so since the risk of HIV transmission via sexual contact has been determined to affect the young and the old alike, of all genders and in all communities.

The World Health Organization [1] has identified STIs as one of the most common causes of illness throughout the world and estimates that about 340 million cases of curable STIs occur every year [1]. CDC's new estimates show that there are about 20 million new infections in the United States each year. In 1990, WHO reported thirty million new cases of human papilloma virus (HPV) and twenty million new cases of genital herpes worldwide, and 2007 WHO proposed that over 4.9 million people were newly infected with HIV each year /AIDS and that approximately 40.3 million people are presently infected with the virus worldwide. In 2019, CDC's analysis [2] suggested that there were more than 110 million STIs overall among men and women nationwide. This estimate includes both new and existing infections. Some prevalent infections – such as HSV-2 and HIV – are treatable but are still lifelong infections. The estimates are based on national surveys, nationally notifiable disease case reports, and data from special projects. The primary data source used to estimate the number of most prevalent infections was the National Health and Nutrition Examination Survey [3]. Further, the annual number of new infections is roughly equal among young women and young men (49 percent of incident STIs occurs among young men, vs. 51 percent among young women).

**Swinging and STIs**

Among the "at risk" groups are Swingers. Swingers are part of a consensual non-monogamy sub-cultural movement that has increased its numbers throughout the world [4] Swinging involves extra-dyadic, non-monogamous sexual behavior by individuals who are either married or in a committed, emotional relationship [4-6]. Swingers are the largest group among other consensual non-monogamies (CNM), which include Polyamory, Open Marriages, and other non-traditional relationship arrangements. However, in spite of their high numbers, it is estimated that 5% to 8% of the population engages in swinging activities [6] and perceived at risk status, research on the rates of STIs and safe sex practices among the swinging population is practically non-existent [5,6].

In a recent study conducted in the Netherlands at the South Limburg Public Health Services in Geleen, swingers were among some of the high-risk groups presenting with STIs infections, [7]. Microbiologic diagnostics were carried out locally at laboratories related to the STD centers in accordance with standard procedures established in a STD screening protocol. Attendees were offered testing for chlamydia, gonorrhea, and syphilis. Hepatitis B and HIV testing were optional. Women accounted for 49% of consultations, heterosexual men for 37%. Swingers comprised a substantial proportion of STI consultations. A higher prevalence of STIs was reported among swingers (13.7%) as compared to other groups. This was the case for both men and women, although older female swingers had the highest prevalence (17.9%) when compared to male swingers (10.4%).

Among swingers, reported prevalence of Chlamydia was 6.4%, Gonorrhea 4.3%, and combines ratios of both 10.4%. Presently, in the United States, the rates of STIs per category are as follows: Hepatitis B:19,000 ; HIV:41,400 ; Syphilis: 55,400 ; Gonorrhea: 820,00 ; Trichomoniasis: 1,090,000 ; Chlamydia: 2,860,00 ; HPV: 14,1000,00 [8].

## Swinging Research

The research on swinging in North America has lagged well behind other at risk groups, perhaps because swinging still remains an unexplored topic with scarce empirical information, little theoretical perspectives and understanding by the general population [5,6]. This lack of research may be due in part to the secrecy that still surrounds the swinging population and the difficulty of conducting research with this population. Swingers are overall heterosexual couples that practice mate swapping and are connected along networks consisting of multiple sex partners, they are at a higher risk for STIs [7].

One of the major concerns regarding research on Swinging is the lack of a theoretical frameworks, or perspectives that could be applied to this population. Consequently, there isn't much prior information, theoretical or otherwise, that would provide a model to evaluate swingers and STIs.

## Present Study and Research Questions

In this study, we examine self-reported rates of ever contracting an STI during swinging and rates of current infections as a whole and also separately by type (bacterial, viral, and infections). No study on STIs among swinger has examined rates in these ways. We also examine differences in rates by sex and age (whether being over age 45 since this has been reported in the literature).

The research questions are: 1) what are the STI rates among an international sample of swingers and do the rates differ by type of STI and/or specific STI? 2) are there sex differences in rates of infection? and 3) are swingers over the age of 45 more likely to report STIs than those under age 45?

## METHOD

### Participants

Although a total of 3,044 people entered the survey, 349 cases were deleted due to missing data on at least one of the four main variables being assessed, leaving a final sample of 2,695 participants. Of the remaining participants 1,992 (74%) were males and 703 (26%) were females. Racially, 82% of the sample identified as Caucasian, 9% as Latino, 4 % as Black, 1% as Asian, 0.6% as Native American, and 2% as other. The age of respondents was normally distributed with 2% selecting "under 25" range, 19% "26-35 range", 40% "36-45 range", 28% "46-55 range", 10% "56-65 range" and 2% "Over 65 range"; therefore, 60% were reportedly age 45 or under. Most respondents reported being married (71%), 13% were cohabiting, 7% were single, 5% divorced, 0.6% widowed, 2% "other"; 3% did not respond to this question.

### Procedure

This study used an online survey (SurveyMonkey) and

advertised in 15 of the most popular swingers' dating websites, as well as online swingers' social clubs. Participants were provided with a consent form at the beginning of the survey. No financial compensation was provided for completing the survey. The research was approved by the IRB at Barton College, and conformed to the federal ethical guidelines.

## Instrument

As part of a larger study, the researchers developed a 20-item survey divided into demographic items (e.g., sex, sexual orientation, age, race, relationship status, length of present relationship, and number of marriages (where appropriate), reasons for swinging, swinging frequency, swinging sexual activities, and safe-sex practices. Regarding STIs, participants were asked whether they had ever contracted an STI while engaging in swinging activities. Those who responded "yes" were then provided a list of 10 STIs which included 3 bacterial STIs (Chlamydia, Gonorrhea, and Syphilis), 3 viral STIs (HIV, HPV, and Herpes), and 4 sex-related infections (Vaginitis, Yeast Infection, Bladder Infection and Kidney Infection) and asked to indicate which one(s) they had contracted and were told to check all that apply. Next participants were asked whether they currently have an STI and, if so, to indicate which one(s) using the same list.

## Data analysis

The data on sex and age differences were analyzed using a series of Chi Squares tests, first on the 2 overall variables (ever contracted or currently have any STI), and then broken down by type of STI, and then by specific STI. Bonferroni correction was used to control for multiple comparisons to reduce family-wise error rates.

## RESULTS

### Overall STI Rates

In the overall sample, a total of 201 (7.5%) participants reported that they had ever contracted an STI during swinging; by STI type, 2.9% reported ever contracting at least one bacterial STI, 2.6% a viral STI, and 3.9% a sex-related infection. Regarding current STI status, 0.2% reported having a bacterial STI, 4.0% a viral STI, and 0.2% a sex-related infection.

### Demographic Differences in STIs rates

Table 1 presents rates of STIs, overall, by type, and by specific STI by sex. Based on 14 tests examining sex differences in STI rates (overall, each type, and each specific STI), the Bonferroni Correction suggests an alpha of .003 for statistical significance. Regarding reports of having ever contracted an STI during swinging activities, nearly twice as many women responded "yes" compared to men, which was statistically significant,  $\chi^2(1) = 22.76, p < .001$ . Although women generally reported higher rates of bacterial and viral STIs, none of these differences were statistically significant. Regarding other sex-related infections, nearly five times as many women reported having ever contracted at least one during swinging,  $\chi^2(1) = 80.64, p < .001$ . For specific STIs, women's self-reported rates for Vaginitis and Yeast Infections were 5 more times the rates reported by men and nearly 7 times the rate reported by men for Bladder infections, each of which was statistically significant (all  $p$ 's  $< .001$ ).

**Table 1:** Percentage of men (n = 1992) and women (n = 703) who reported ever contracting an STI during swinging and current status.

	Ever contracted during swinging		Currently have	
	Men	Women	Men	Women
<b>Any STI</b>	<b>6.0%<sup>a</sup></b>	<b>11.5%<sup>a</sup></b>	<b>3.8%</b>	<b>5.3%</b>
<b>Any Bacterial</b>	<b>2.8%</b>	<b>3.3%</b>	<b>0.2%</b>	<b>0.3%</b>
Chlamydia	1.9%	3.0%	0.2%	0.3%
Gonorrhoea	1.0%	0.3%	0.1%	0%
Syphilis	0.1%	0.1%	0%	0%
<b>Any Viral</b>	<b>2.3%</b>	<b>3.6%</b>	<b>3.7%</b>	<b>5.0%</b>
HPV	1.3%	2.4%	0.8% <sup>b</sup>	2.4% <sup>b</sup>
Herpes	1.2%	1.4%	2.8%	2.6%
HIV	0%	0%	0.1%	0%
<b>Any other infection</b>	<b>1.9%<sup>c</sup></b>	<b>9.5%<sup>c</sup></b>	<b>0.2%</b>	<b>0.3%</b>
Vaginitis	0.7% <sup>d</sup>	5.1% <sup>d</sup>	0.1%	0%
Yeast Infection	1.0% <sup>e</sup>	5.5% <sup>e</sup>	0.1%	0.3%
Bladder Infection	0.5% <sup>f</sup>	3.6% <sup>f</sup>	0%	0%
Kidney Infection	0.2%	0.4%	0.1%	0%

Note: \* Values with the same superscript are significantly different using a Chi Square test and alpha set at .005.

We next examined current STI status using the same set of analyses. Although women reported higher levels of currently having an STI than men (5.3% vs 3.8%), the difference was not statistically significant. In fact, the only significant difference in rates was that a larger percentage of women reported currently having HPV compared to men (2.4% vs 0.8%),  $\chi^2(1) = 11.21$ ,  $p = .001$ .

Finally, we examined differences in STI rates by age (45 or younger vs over 45), using the same set of analyses described above. None of the Chi Squares analyses were statistically significant; all  $p$ 's .05 or greater.

## DISCUSSION

The present study sought to examine self-reported rates of STIs among an international sample. We separately examined rates for those that were contracted during swinging, and currently have. We also examined the STI rates at three different levels (overall, by type, and by specific STI). We also examined whether sex and age affected rates. Overall, we found relative low rates of ever having contracted an STI during swinging and even much lower rates of currently having an STI among this sample of swingers. Moreover, we found that women were more likely to report having ever contracted an STI during swinging, which were mainly attributed to "other infections", which are generally infections that are more likely to affect women than men in the general population. Regarding current STI rates, the only gender difference was that women were more likely to report having HPV than men. Finally, there were no differences based on being over age 45 vs younger.

The present study was the first to examine self-reported rates of STIs among an international sample of swingers. Previous studies have either examined people who are attending an STI clinic [7]. The present sample comprised people who identify as swingers. It is possible that these participants did not want

to present swinging in a negative light. It is also possible that swinging is an institution that has an unwritten set of rules, such as that passing an STI is reason for exclusion from the community. Future research should examine ways that swingers, even though they are considered an "at risk" group due to higher numbers of partners than the average person, are able to avoid contracting STIs.

STI rates for types of STIs and specific STIs are consistent with previous studies that have used assay results, as opposed to self-reports (e.g., [7]). CDC numbers suggest that the two most common STIs are HPV and Chlamydia, followed by Herpes and Gonorrhoea, and HIV and Syphilis. The same basic pattern was reported by the present sample. The CDC does not report rates for the other sex-related infections that we assessed for. It should be noted that these rates were much higher than the viral or bacterial STIs and accounted for more than half of all STIs reportedly contracted during swinging. It is also important to note that very few participants reported current Bacterial STIs and other sex-related Infections (0.3% or less for each) and that current Viral STI rates are higher than those for ever contracted during swinging suggesting that many Viral STIs may have been contracted outside of swinging.

With regards to swinging and incidence of STI we found that our results did not find a positive relationship between being male and over 45 and a higher incidence of STI, as suggested by the results of the Dutch study. Although more men than women reported being over 45, the results for STI status did not show any significant difference, and there was no indication that men over 45 years of age were more likely to contract an STI during swinging than those under 45. There were also no age differences in risk factors for STI between men and women. It is possible that the population and context in the Dutch study differed from the sample used in our study. The Dutch study recorded answers on a health questionnaire and classified individuals as swingers based

either on self-report and sexual heterosexual sexual activities, meaning people either identified themselves as swingers or were classified as swingers. Also, our study relied on self-report, specifically when inquiring about STI while in the Dutch study the presence of an STI was determined by a serological test of individuals that were seeking treatment, meaning, we have no way of verifying the STI status of the respondents in our sample, and it is possible that there was response bias and that reports of STI or exposure to infection were minimized or underreported.

Quantitative analyses revealed that more women than men reported having acquired a sexually transmitted infection through swinging activities (11.5% of the women and 6% of the men) and currently being infected (5.4% vs 3.8%). Bacterial infections were most commonly reported for both men and women with yeast infection, vaginitis, bladder infection, gonorrhoea and chlamydia being the most common albeit Herpes, HPV were also reported. It is possible that some of the yeast infections and bladder infections may not necessarily be related to the swinging sexual activities but that the individual may already been unknowingly infection during those activities. Nevertheless, lack of knowledge of infection status could lead to propagation of the infection through contact with potential sexual partners. Information programs regarding STI should be proposed to swinging clubs and web sites. However, married women had the lowest rate of STI when compared with other women.

## CONCLUSION

Overall, swingers showed low rates of ever contracting STIs during swinging and even lower rates of currently having STIs in spite of the fact that their lifestyle is based around engaging in consensual non-monogamous sexual behaviors with multiple partners. Women were more likely than men to report ever

having contracted an STI during swinging, but this is mainly based around other sex-related infections. Age did not appear to affect STI rates overall or for most STIs. Future research should focus on other predictors of STI transmission among swingers (e.g., number of partners, frequency of STI testing, risk taking tendencies), as well as protective factors that may limit transmission (e.g., expectation for testing, limiting sexual activity outside of swinging, more consistent condom use, "blacklisting" those who transmit STIs from the local community).

## REFERENCES

1. World Health Organization, Department of Reproductive Health and Research. Global strategy for the prevention and control of sexually transmitted infections: 2006 - 2015. 2019.
2. Centers for Disease Control and Prevention. Sexually Transmitted Disease: Fact Sheet. 2019.
3. National Health and Nutrition Examination Survey (NHANES, 2019-2020). 2020.
4. Barker MD. Langdridge. Introduction. In Understanding nonmonogamies, ed, 3-8. New York: Routledge. 2010.
5. Bergstrand C, Williams JB. Today's alternative marriage styles: The case of swingers. *Electronic Journal of Human Sexuality*. 2000.
6. Fernandes E. The Swinging Paradigm: An evaluation of the Marital and Sexual Satisfaction of swingers. *The Electronic Journal of Human Sexuality*. 2009; 12.
7. Dukers-Muijers NDTM, Niekamp A, Brouwers. Older and swinging; need to identify hidden and emerging risk groups at STI clinics. *Journal of Sexually Transmitted Infections*. 2010; 86: 315-317.
8. Centers for Disease Control and Prevention. Incidence, Prevalence, and Cost of Sexually Transmitted Infections in the United States. 2013.

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