

INVESTIGATING THE NEED TO EDUCATE THE SWINGING POPULATION
ABOUT THEIR HIGH-RISK STATUS FOR CONTRACTING AND SPREADING
SEXUALLY TRANSMITTED INFECTIONS

by

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Submitted in partial fulfillment of the
requirements for Departmental Honors in
the Department of Psychology
Texas Christian University
Fort Worth, Texas

December 6, 2013

AT RISK OF SEXUALLY TRANSMITTED INFECTIONS:
SWINGERS AN OVERLOOKED POPULATION
A RESEARCH BASED REPORT

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ACKNOWLEDGEMENTS

First, I would like to thank God for refining my faith in Him throughout this project. This document summarizes the past two years' efforts, challenges, and achievements. There are several people with whom I am grateful for their support and contribution in the research and writing process.

I would like to thank my family for all your love, support, and encouragement throughout my college career. Dad, thank you for all the late night calls where you pushed me with your words of comfort and wisdom to keep going. I would like to thank my mom, Melanie, Brad, and Sophie for laughing and crying with me during all the memorable moments of this thesis and for always affirming that I could do this.

I would like to express my sincere gratitude to Dr. Vanessa Miller for encouraging creativity in choosing my thesis topic, being a mentor throughout this project, and enduring all the ups and downs of the research and writing process with me. Thank you for all the time you spent and for not allowing me to stop when things became challenging. Thank you for your patience, guidance, and for developing me into a researcher. I could not have done this without you.

Thank you to Dr. Sarah Hill and Dr. Jeannine Gailey for your kindness and for accepting to help me with my thesis. I am grateful for your guidance, wisdom, and experience in the fields of psychology and sociology, respectively. It has been a privilege to work with both of you.

I would like to give an extra special thank you to Donna Schonerstedt for telling me about the Honors College, senior honors thesis, and for showing me that it was possible for me to complete one, even if it was late in the game. Thank you for your late-

night edits on this paper and always being a strong supporter of my academic endeavors.

You are the best academic advisor and a wonderful, generous, and caring person.

INTRODUCTION

Reducing the spread of sexually transmitted infections (STI's) begins with informing individuals of the behaviors that put them at risk of contracting an STI. Physicians play a pivotal role in informing individuals about what STI's they are at risk for, how to treat them, and how to reduce the spread of STI's. However, physicians often neglect to gain a full sexual history of their patients or are uninformed about groups that are at the greatest risk of acquiring STI's. One such group is swingers, which are defined as male-female couples having sex with other individuals and/or couples as part of their relationship (Dukers-Muijers, Niekamp, Brouwers, & Hoebe, 2010). However, swinging can also include woman to woman sexual contact or man to man sexual contact (www.sdc.com).

Recent research demonstrates that swingers are at greater risk of STI's than heterosexual monogamous individuals and may be contributing to the spread and continual increase of STI's (Dukers-Muijers et al., 2010). This paper will reveal the number of swingers in the United States, explain why swingers are at such a high risk for contracting STI's, and provide suggestions for decreasing the spread of STI's within this group. This paper will end with a discussion regarding the negative implications associated with STI's—such as increasing the risk of infertility, harmful effects on newborns, the possibility of death, and psychological distress—and discuss the role physicians have in reducing the spread of STI's.

The majority of the literature on swingers to date discusses their characteristics and sexual practices (Walshok, 1971; Dukers-Muijrs, Niekamp, Brouwers, and Hoebe, 2010). The general consensus in the swinger literature is that they are primarily white,

middle class, above average in education, and the majority fall within the age range of 28 to 45 years (Jenks, 1985; Walshok, 1971; Dukers-Muijers, NIekamp, Brouwers, and Hoebe, 2010). Jenks (1985) built off the demographic literature and went on to explore the perceptions non-swingers have of swingers. He interviewed swingers to identify if there was any truth behind the non-swingers' view of swingers. Jenks (1985) used the labeling theory as the foundation for his study. Labeling theory claims that when a person is assumed to have one deviant trait, then the person is also assumed to have many other deviant traits. To test whether this theory applied to non-swingers' perception of swingers, Jenks (1985) interviewed 342 swingers and 134 non-swingers.

From his study, Jenks (1985) found that 48.5% of non-swingers believed swingers were in need of counseling, but that only 26.3% of swingers had ever been to counseling. Non-swingers also overestimated the number of swingers who did drugs. Non-swingers also predicted that 74.7% of swingers were liberal, when in reality only 26.9% were liberal. The non-swingers viewed swingers as being significantly more tolerant of prostitution, homosexuality, and pre-marital sex than the non-swingers. Overall, Jenks (1985) found that labeling theory did apply to his study. Although swingers were only significantly different than non-swingers in respect to their sexual lifestyle, they were viewed as different in areas not related to sex as well.

More recently, the swinger literature has shifted away from characteristics of swingers and begun to examine STI rates in swingers. The few articles that have examined STI rates in swingers have shown that they are a high risk group (based on their low use of condoms, rapid partner changes, close network of sexual partners, and other reasons that will be discussed later) who are often unidentified by the medical

community (Dukers-Muijrs, Niekamp, Brouwers, and Hoebe, 2010). As such, swingers are not provided with the knowledge to reduce the spread of STI's or the proper treatment (Dukers-Muijrs, Niekamp, Brouwers, and Hoebe, 2010). Without this knowledge, it would be logical to assume that STI rates as well as the rates of swinging will continue to increase. However, future research is necessary to determine if this is the case.

RATES OF SWINGING

Research done in 1971, 1974, and 1983 (Bartell, 1971; Cole & Spaniard, 1974; Weiss, 1983) reported that 1% of couples in the United States (U.S.) swing on a regular basis. About a decade later, it was reported that 15% of couples in the U.S. had experimented with swinging (North American Swing Club Association [NASCA], 1997). One of the largest dating websites for swingers (Swingers Date Club; <http://www.sdc.com>) claims there are 3 million swingers on their website. The numbers of swingers seem to be growing each year (<http://www.sdc.com>). Although it is possible that some of the people on swingers' websites may not engage in swinging, the emergence of more swingers clubs indicates that individuals are leaving their computers to engage in swinging or at least go to a location where others do. According to SDC, there are 15 swinger clubs in the DFW area and even more house parties every week (<http://www.sdc.com>). When comparing Google searches from a year ago to today, it seems that the number of swinger websites is increasing.

SWINGERS AS A RISK GROUP FOR STI'S

Dukers-Muijrs et al. (2010) were the first researchers to point out the need to identify swingers as a high-risk group for STI's. To support their hypothesis, Dukers-Muijrs et al. (2010) collected data on 8,965 patients throughout South Limburg Public

Health Services from January 2007 through December 2008. For the study, an STI was defined as those with a positive test for Chlamydia trachomatis (CT) or Neisseria gonorrhea (NG). The researchers used univariate and multivariate logistic regression analyses to assess nationality, risk category and age, as predictors for STI's (Dukers-Muijers et al., 2010). For their study, Dukers-Muijers et al. (2010) defined swingers as people who self-identify as heterosexual and as a couple have sex with other heterosexuals. From their study, they found that the number of swingers with STI's is comparable to men who have sex with men (MSM).

When Dukers-Muijers et al. (2010) began their study, swingers were not internationally considered a risk group for STI's. Dukers-Muijers et al. (2010) proposed that swingers do need to be identified as a high-risk group because of their multiple sex partners, concurrent partnerships, and risk behavior practices. Researchers hypothesized that by creating better prevention and enhanced STI screening, this would help reduce STI's at the individual, population and economic level (Dukers-Muijers et al., 2010). The increase in STI's is in large part likely due to many individuals being uniformed of risk behaviors, their current STI status, and the multiple ways STI's can be spread.

In 2007, Dukers-Muijers et al. (2010) began tracking data on individuals who visited an STI clinic in South Limburg, The Netherlands. Each person that visited the clinic was categorized as a swinger, high-risk individual, or low-risk individual. High-risk individuals were defined as individuals that have frequent partner changes, concurrent partners and less contact with the healthcare system. People visiting the Clinic received a free Chlamydia trachomatic (CT) and Neisseria gonorrhea (NG) test (Dukers-Muijers et al., 2010).

For statistical analysis, Dukers-Muijers et al. (2010) filed individuals hierarchically into variable risk categories from heterosexual, female prostitute, MSM to swinger. The data from January 2007 through December 2008 were analyzed in order to identify risk groups and ages of those at risk (Dukers-Muijers et al., 2010). Dukers Muijers et al. (2010) defined an STI as a positive CT and/or NG diagnosis. The researchers used univariate and multivariate logistic regression analysis to assess nationality, risk category, and age as predictors of STI's (Dukers-Muijers et al., 2010).

Dukers-Muijers et al. (2010) examined 8,965 consultations and found of those individuals, the majority, 60%, were between 20 and 35 years old. 11.6% of individuals were swingers with an average age of 43 years. 74.8% of individuals were heterosexuals, 9.6% MSM, and 4% were prostitutes (Dukers-Muijers et al., 2010). In the category of individuals over the age of 45 years, 13.7% of swingers and 14.6% of MSM had STI's, whereas only 2.9% of heterosexuals and 2.9% of prostitutes had STI's. The fact that swingers have more STI's than MSM and are still not widely recognized as a high-risk group is reason enough for concern. In the younger age group under 45 years, heterosexuals had the largest number of STI's (Dukers-Muijers et al., 2010). In the older group, swingers and MSM had the largest numbers of STI's (Dukers-Muijers et al., 2010). This is probably the case because individuals often do not begin swinging until they are older, [the average age is 38 according to Jenks (1985)] so there were not many swingers in the younger age group and therefore, swingers did not account for the majority of STI's in the younger age group.

One of the primary reasons swingers have recently become an interest group in the field of STI control is that researchers, such as Dukers-Muijers et al. (2010), have

found swingers to be at a higher risk for such STI's as gonorrhea, Chlamydia, and syphilis than monogamous individuals (Simms et al., 2005). In order to address why swingers are at such a high risk of acquiring an STI, O'Byrne and Watts (2011) ran a pilot study to identify the sexual norms of swingers, and how and why these norms put them at a higher risk for acquiring an STI.

A correlation between swinging and STI transmission provides nurses and doctors little knowledge to help their clients who are swingers (O'Byrne and Watts, 2011). Doctors and nurses made assumptions as to how and why swingers' sexual norms lead to greater STI transmission, but this kind of speculation does not lead to STI prevention. In order to have successful STI interventions, the Global HIV Promotion Working Group suggests there needs to be in-depth knowledge of the target-population and their norms (as cited in O'Byrne & Watts, 2011). No such knowledge existed, until O'Byrne and Watts (2011) ran their pilot study involving descriptive, non-experimental cross-sectional investigation that also used direct observation.

O'Byrne and Watts (2011) decided to observe a swingers club after speaking with the owner of a swingers club who said that sophisticated understanding of swingers' clubs and their practices required on-site presence and that previous research was merely based on second-hand data. The researchers administered surveys at one swingers' club on two different occasions (O'Byrne & Watts, 2011). The surveys were administered to everyone who entered the venue between 8p.m. and midnight. Each couple that entered the club were told the purpose of the study and asked to participate. For confidentiality, the couples could drop their surveys off in a locked drop-box located next to the researcher.

O'Byrne and Watts (2011) began their study by administering surveys to the couples who agreed to participate. The surveys asked about demographics, sexual practices, and STI health-care-seeking behavior. Then researchers collected observational data about the venue, people's behavior, and interaction between the men and women. The researchers reported that the first floor of the venue was dark and where people could talk, dance, drink, and meet other couples to determine if they wanted to go any further sexually with them. The second floor was brighter and more open with six different rooms: four bedrooms, a living room, and a shower room. While the researchers reported that there were lubricated condoms in each room, they also reported that there was no safe-sex information posted or visible on either floor of the club.

One hundred one individuals attended the swingers club on the two separate occasions and 17 of those individuals came on both data collection nights (O'Byrne & Watts, 2011). Of the 84 couples that attended, 72 agreed to take the survey, which is a response rate of 85.7%. Respondents reported between one and 25 sexual partnerships within the past 6 months, with a mean of 5. 98.6% reported practicing oral sex and 78.9% of those individuals reported never using condoms when receiving oral sex and 80.3% reported never using condoms when performing oral sex. Only 2.8% of individuals reported using condoms for both receiving and performing oral sex. 98.6% of individuals reported having vaginal sex and of those, 15.5% said they never used condoms. Only 39.4% of couples reported always using condoms for vaginal sex. 54.2% of couples reported engaging in anal sex and 30.8% said they never use condoms for this practice, while no one reported always using condoms for this practice. Only 7.7% of people who practice anal sex reported using condoms half the time with a new sexual

partner.

Regarding STI's, 48.6% of participants reported that they received regular STI testing and 18.1% of participants reported that they previously had been diagnosed with an STI (O'Byrne & Watts, 2011). Of those with STI's, the majority had genital warts (8.3%), Chlamydia (6.9%), genital herpes (4.2%) or gonorrhea (4.2%). Only 1.4% had ever been diagnosed with syphilis. It would be logical to predict that these rates have increased because swingers have such a heterogeneous distribution of sexual partners, elevated mean number of sex partners, have concurrent partnerships, use condoms inconsistently, and display low levels of STI health service use. However, it is important to develop empirical evidence to determine if this is truly the case and at present there is no such study.

FACTORS CONTRIBUTING TO AN INCREASE IN STI TRANSMISSION

Through their pilot study, O'Byrne and Watts (2011) discovered what practices are norms for swingers. They found that swingers frequently practice male-female oral and vaginal sex and anal intercourse between men and women is also fairly common. O'Byrne and Watts (2011) also found that certain factors could have contributed to the spread of STI's. One factor is the group's heterogeneous distributing of the number of sexual partnerships. Some other factors were the group's high number of sex partners on average, rate of concurrent sexual partnerships (primary and swinger partners), high rates of unprotected sex and the group's low rates of seeking health care to determine STI status--less than half had routine testing even though 1/5 had previously been diagnosed with an STI.

The first factor contributing to increased transmission of STI's, heterogeneous

distribution of sexual partner, means that a few swingers had many sex partnerships with other swingers, thus linking the group together (O'Byrne & Watts, 2011). From an STI perspective, this means that the few individuals with many partners connect many people within the group and therefore facilitate a rapid spread of STI's.

The second factor contributing to an increase in the spread of STI's, elevated mean number of sex partners, means that by having a rather large number on average of sex partners, this increases STI transmission (O'Byrne & Watts, 2011). Even though each individual has not had sex with everyone in the group of swingers, each person has had a sufficient number of sexual partners on average to link most members together. Consequentially, as the number of links between partner's increases, so does the number of routes for STI transmission.

The third contributing factor to the transmission of STI's is concurrent sexual partnerships (O'Byrne & Watts, 2011). O'Byrne and Watts (2011) point out that concurrency between an individuals' primary partner and their swinger partners is an integral part of the swinger lifestyle and the primary relationship. Research by Garnett and Morris revealed that if the number of concurrent sexual partnerships is high enough, then group density will increase so much that no other transmission factor would be necessary to speed up STI transmission (as cited in O'Byrne & Watts, 2011). O'Byrne & Watts (2011) point out that the reason concurrency is such a contributing factor to STI transmission is because it decreases the time between partnerships. Without time between partnerships, symptoms might not have time to develop, which would make routine screening, and partner follow-up less likely. This factor alone could explain why swingers have higher STI rates than monogamous individuals.

The fourth factor that elevates the rate of STI transmission is unprotected sexual contacts (O'Byrne & Watts, 2011). If swingers wore condoms consistently and properly, the transmission of gonorrhea and Chlamydia would be minimal. Syphilis would be the most likely to occur because syphilis has the highest rates of transmission via oral sex and the majority of swingers do not use condoms for oral sex.

The final factor contributing to the spread of STI's is the low levels of STI health-service utilization (O'Byrne & Watts, 2011). STI testing identifies those in need of treatment and those who need to be tested in order to prevent further transmission. If swingers received testing for STI's regularly, then they could significantly lower the group-level STI transmission rates. Also, the fact that the swinger network is so connected, it would not be difficult to go back to the club to inform partners that they need to get tested. There is room for improvement in using health-services by swingers, so this alone could help in reducing the spread of STI's among this population.

In addition to O'Byrne & Watts research on risk factors for swingers, Ripley (2011) identified some other factors that put an individual at risk of acquiring an STI. These factors include sex during menstruation, sharing sex toys, oral sex, and rimming (mouth to anus). McNair pointed out that not washing sex toys between partners and not using condoms on the toys increases the risk of transmitting STI's because the vaginal and cervical secretions are spread between partners (as cited in Ripley, 2011). Bailey et al., McNair, and Bannerman and Proom discuss that women who have oral sex with other women are not completely safe from STI's (as cited in Ripley, 2011). They suggest that women use dental dams to reduce the spread of STI's such as herpes simplex virus (HSV) type 1, which can be transmitted via oral sex to the genitals.

CURRENT MISCONCEPTIONS

There are currently three main misconceptions involving STI's that pertain to swingers--women are not at a risk of transmitting an STI, group sex events are only dangerous for MSM and adolescents, and swingers have less STI's than the general population (Ripley, 2011; Singh, Chin, Brown, & Glezen, 2006; Friedman, Bolyard, Khan, Maslow, Sandoval, Mateu-Gelabert, Krauss, & Aral, 2008). After the HIV/AIDS scare in the 1980's, considerable research and funding was provided towards gay men's health, but not towards other groups such as women who have sex with women (WSW) (Singh et al., 2006). Due to the lack of funding and research over WSW, there has been a common misconception that sex between women is safe from STI transmission. This has also been the case for swingers, who frequently claim that they have less STI's than the general population (Leo, 1978; Smith, 2008).

The first misconception is that WSW are safe from STI transmission. This belief may lead women involved in a swinger relationship to engage in less safe sexual practices with other women and not seek testing after sexual involvement with other women. While there is not any literature currently on STI beliefs for WSW in a swinger relationship, the knowledge obtained from research on lesbians can assist in understanding this misconception in swingers since they frequently participate in women having sex with other women (<http://www.sdc.com>).

Singh et al. (2006) did a study that addressed the issue of perceptions of STI risk among lesbian women versus reality of STI risk. For their study, Singh et al. (2006) did in-depth interviews and focus group discussions. They interviewed 12 participants for 45

minutes to an hour and a half and used both structured and spontaneous questions for the interview. Two focus groups were held with 6-12 individuals per group, tape-recorded and later transcribed.

The interviews revealed that half the women said they lacked knowledge about STI's (Singh, 2006). Most of the women interviewed reported that they never discuss sexual health with their doctors. They believe STI do not apply to them. These beliefs were reinforced by one woman's physician who told her that the only reason she would need to worry about STI's is if she has sexual encounters with men or is with a woman that has had sexual encounters with men. In fact, none of the physicians ever told any of the women about safe sex practices and ten out of the twelve women reported they felt no risk of acquiring an STI. This demonstrates a gap in physician knowledge regarding STI's among lesbians and swingers. A recurrent theme among the lesbians was that they only feared contracting an STI if they had previously been with women that had sex with men. When questioned about safe sex, none of the women agreed on exactly what safe sex means (Singh, 2006).

In contrast to the women's views regarding their risk of acquiring an STI, Marrazzo, Coffey, & Bingham point out that WSW can still get STI's and need to be tested (as cited in Singh et al., 2006). Fethers et al., Marrazzo, and Smart also point out that the rates of bacterial vaginosis (BV) are higher among lesbians than heterosexual women (as cited in Singh et al., 2006). Berger et al. and Marrazo et al. found that BV among lesbians was 18-36% and only 16% among pregnant women (as cited in Singh et al., 2006). Another study by Bailey et al. of 127 lesbian and bisexual women found three of the women who had only had sex with women in their life had genital warts, HSV, and

Trichomonas vaginalis (as cited in Ripley, 2011). The importance of these finding in relation to swingers is that swingers that limit their sexual activities to just watching the women play are not eliminating their risk of getting an STI.

Even if swingers limit their practices to the men watching the women engage with other women in body rubbing and no penetration via fingers, body parts, or objects, the women can still contract an STI. Clutterbuck et al. and Dunne et al. reported that any skin-to-skin contact could result in transmitting an STI such as human papilloma virus (HPV) and HSV (as cited in Ripley, 2011). In addition, Clutterbank states that any sexual act can increase the transmission rate if the resulting trauma is great (as cited in Ripley, 2011). Such acts include fisting, digital stimulation (fingering), and sex toys. Kwakwa and Ghobrial found that sex toys have also been associated with increasing the rate of transmitting STI's, including human immunodeficiency virus (HIV) (Ripley, 2011).

The second commonly held misconception that pertains to swingers is that STI's are only really transmitted at group sex events (GSE) when the event participants are MSM or young adolescents having sex with other adolescents (Friedman, Bolyard, Khan, Maslow, Sandoval, Mateu-Gelabert, Krauss, & Aral, 2008). Friedman et al. (2008) conducted a study to assess what groups of people participate in GSE, the prevalence of attendance, and STI and HIV transmission rates. 465 individuals 18 years and older were recruited between 2002 and 2004 for the study. Face-to-face structured interviews were done to obtain sociodemographic information on subjects, sexual and drug behaviors, previous sex partners, previous GSE partners and drug partners, and whether they had attended a GSE in the last year (Friedman et al., 2008). Of those who reported having

attended a group sex event in the previous year, researchers then probed further into who their sexual partnerships were with, if condoms were used, and the characteristics of the GSE. There were 3 main GSE types identified: a party with a back room for sex; a threesome or larger gathering strictly for sex; and parties with a sex worker who was paid to have sex with the guests. The researchers also asked whether alcohol or drugs were used and if condoms were made available to the guests. After the structured interviews, 10 mL of blood and 10 mL of urine were obtained from participants to determine if they had HIV, HSV-2, or Chlamydia.

Results showed the mean age of participants was 31 years (Friedman et al., 2008). 10% of participants who attended GSE had HIV, 49% had HSV-2, 7% had Chlamydia, and 58% had any 1 of the 3 STI's. It is important to note; however, that 15% of the participants were MSM in the past, so that could be why HIV was at 10%. Since swinging usually does not involve men having sex with other men, the HIV rates may be lower in swingers. Results also revealed that 36% of the participants had attended at least one GSE in the past year and of those individuals, 11% participated in unsafe sex--defined as not using a condom (Friedman et al., 2008). Friedman et al. (2008) found unsafe sex was highest in GSE that involved threesomes or larger sex gatherings and lowest in the parties that had a back room. More people participated in sex at the threesomes or larger sex gatherings likely because these parties were more intimate gatherings. It is important to note also that the majority of people that attended GSE's were high on drugs and/or alcohol (Friedman et al., 2008). As related to the current paper, a logical assumption is that swingers who attend GSE may also consume large amounts of alcohol and/or drugs, which could impair their judgment on practicing safe

sex. Friedman et al. (2008) reported that condoms were available to guests at GSE parties about 70% of the time.

In regards to STI rates for individuals who attend GSE's, Friedman et al. (2008) found that 61% of the attendees tested positive for at least 1 of the 3 infections; 11% for HIV, 51% HSV-2, and 10% Chlamydia. On average, attendees at the GSE's had more than one partner, which means that STI's could be spread to multiple people at one event. The importance of this study as it applies to swingers is that the misconception that only MSM and young adolescents get STI's at GSE's is false as shown above.

It is important to assess the myths swingers have regarding STI's and provide accurate knowledge on how STI's are spread because STI's are a medical issue that have many negative repercussions for the individual and other's in their life. Each STI has possible medical complications and psychological implications, which will be addressed in the next part of the paper.

IMPLICATIONS OF SOME SELECTED STI'S

Herpes

Genital herpes (HSV) is defined as a chronic and life-long virus (Workowski and Berman, 2010). More than 50 million (>25%) individuals in the United States have genital herpes and this number continues to rise (Donovan, 2004). There are two types of HSV. HSV-1 normally presents itself in the oral region, whereas, HSV-2 is usually manifested in the genital area (Workowski and Berman, 2010). Workowski and Berman (2010) identified that there are at least 50 million people in the United States with genital HSV-2 and the majority of these people are not aware they have the infection because they have mild or unrecognized symptoms. Donovan (2004) explains that the majority of

people with herpes do not know they have it partly because of the way herpes is classically defined. The classic description of genital herpes is “prodromal local itching and tingling followed by a red macule and a distinctive vesicular eruption that ulcerates” (Donovan, 2004). Donovan (2004) further states that this description only matches up with a minority of individuals who have herpes. The more common case of herpes presents itself as minor genital chaffing or fissuring (Donovan, 2004). As a result, most new cases of HSV-2 are contracted from partners that did not know they had the infection or were asymptomatic during intercourse (Workowski and Berman, 2010). This is especially important for swingers, because they have multiple sex partners, to be aware of the fact that a lack of symptoms does not mean that they do not have an STI and to make sure to be tested so as not to continue the spread of the infection. The majority of individuals with herpes who initially do not appear to have any symptoms, but test positive for herpes, if educated to recognize the various symptoms and ways herpes can manifest, are able to identify lesions and do not report that they are asymptomatic anymore (Donovan, 2004). Therefore, the terms unrecognized or undiagnosed are more accurate than the term asymptomatic.

New cases of genital herpes can cause illness, ulcerations, and neurological problems that last for long periods of time (Workowski and Berman, 2010). Even if an individuals’ first case of herpes is mild, they may later develop prolonged symptoms. Some individuals can have more severe cases of HSV-2 that require hospitalization due to complications such as pneumonitis, hepatitis, or central nervous system complications such as meningoencephalitis. Therefore, it is important for swingers to know that just because herpes presents only minor symptoms for them; it could present severe ailments

in the partner they pass it on to.

The psychological effects of an HSV-2 diagnosis on an individual can range from minimal and transient to intense and long lasting (Workowski and Berman, 2010). The major issue associated with genital herpes for the majority of individuals is psychosocial, leading to lower mental health scores and reduced work effectiveness (Donovan, 2004). Even in individuals with asymptomatic or unrecognized genital herpes, the diagnosis can create anxiety and be quite substantial to the individual in comparison to the actual severity of the infection (Workowski and Berman, 2010). A quick google search of herpes reveals that many people contemplate suicide upon discovering they have the infection (<http://www.healthcentral.com/genital-herpes/c/question/649632/95585>). Even though in most cases genital herpes is not a condition that is medically severe, it can present a more severe problem when a woman decides to have a baby (Workowski and Berman, 2010).

Most mothers who pass on herpes to their infants did not have clinical symptoms that were noticeable before giving birth (Workowski and Berman, 2010). The majority of herpes infected neonates die or have serious neurological deficits, even when given antiviral treatment (Donovan, 2004). There is a 30-50% chance that a mother will transmit genital herpes to the neonate if she acquires genital herpes around the time of delivery and less than a 1% chance that a woman will pass it on to the neonate if she acquired genital herpes prior to pregnancy or during the first half of pregnancy (Workowski and Berman, 2010). Swingers need to be aware of the risk associated with transmitting herpes to their infants and abstain from swinging at least during the third trimester of pregnancy because if the mother acquires HSV during the final trimester,

then her chances of passing the infection to her infant increase substantially.

It is important for swingers to get tested for HSV-1 and HSV-2 because then they can be more knowledgeable of signs that indicate an outbreak and abstain from sex during that time, which will substantially decrease the chances of the infection being spread to a sexual partner (Donovan, 2004). It is also important for swingers to be tested, so that they can begin treatment. Corey, Wald, and Patel (2004), found that suppressive antiviral treatment provided a 77% protection against HSV to their partner over 8 months (as cited in Donovan, 2004).

Chlamydia

Chlamydia trachomatis is the most common bacterial STI and usually affects women who are under 25 years of age (Donovan, 2004). In this age group, Chlamydia normally presents itself with mild symptoms or asymptomatic. The problem with lack of symptoms is that if left untreated, women are at risk for morbidity through pelvic inflammatory disease (PID) (Donovan, 2004). Simms and Stephenson (2000) found that once the fallopian tubes are compromised with endogenous vaginal flora due to PID, a woman might experience chronic pelvic pain, ectopic pregnancy, and infertility (as cited in Donovan, 2004).

Half of men with Chlamydia will have symptoms manifesting as urethritis or epididymitis. Chlamydia is easy to treat, requiring just a single dose of oral azithromycin and doxycycline for one week, but if left untreated, its results could be devastating (Donovan, 2004). Stamm (1999) pointed out that a complication of having Chlamydia is that it can result in Chlamydia conjunctivitis or reactive arthritis (as cited in Donovan, 2004). Both of these complications could result in hospitalization. In addition, Mabey

and Peeling (2002) pointed out that the more severe Chlamydia cases of serovars L1, L2, and L3, cause lymphogranuloma venereum, which can cause genital ulcers, inguinal buboes, rectal strictures, and genital elephantitis (as cited in Donvoan, 2004). It is reported that the more severe cases of Chlamydia lymphogranuloma venereum present in under-served populations (Donovan, 2004). It is important for individuals who have a change in sexual partner or become pregnant to be tested for Chlamydia. It is also recommended that men are tested so that they can be treated and not pass it on to women (Donovan, 2004). Testing for Chlamydia is especially important for swingers then because they have multiple sexual partners and may currently be an under-served population.

Syphilis

Treponema pallidum, commonly referred to as syphilis, typically presents as painless, highly infectious lesions (Donovan, 2004). Syphilis is also known for its propensity for attracting active CD4 lymphocytes, which make it easy to spread HIV. Genc and Ledger (2000) reported that syphilis resulted in fetal wastage and congenital syphilis for the neonates of pregnant women living in sub-Saharan Africa (as cited in Donovan, 2004). Treatment for syphilis requires injectable penicillin-G (Donovan, 2004).

Human Papillomaviruses (HPV)

There are over 100 different types of HPV, which are grouped into high-risk and low-risk types (Donovan, 2004). The low-risk forms of HPV cause anogenital warts and the high-risk forms of HPV can lead to cancer. Stone, Karem, and Sternberg (2002) and Wiley, Douglas, and Beutner (2002) found that even though men typically are at a greater

behavioral risk for HPV, women, including sexually inexperienced women, typically have higher rates of HPV infection (as cited in Donovan, 2004).

Wallin, Wiklund, and Luostarinen (2002) reported that certain co-factors, such as smoking, long-term oral contraception, and other STI's, combined with HPV greatly increase the risk for acquiring cancer of the cervix (as cited in Donovan, 2004). The only management recommended for high-risk HPV is more frequent exams to identify cancer. The HPV vaccine prevents against the four most common high-risk forms of the infection and treatments can be done to eliminate symptoms, such as genital warts (Donovan, 2004). There is no current public-health requirement for informing partners of an HPV positive status; however, informing sexual partners could be beneficial to get the partner tested for other STI's, which will decrease their risk for cervical cancer (Donovan, 2004). This applies to swingers because they often have multiple sexual partners and by getting tested for HPV and other STI's, they reduce their risk of cervical cancer.

Human Immunodeficiency Virus (HIV)

HIV is an infection that is based on a spectrum (Workowski and Berman, 2010). It can begin with a brief retroviral syndrome, which then transitions to a chronic illness. Without treatment, HIV will progress to a symptomatic, life-threatening immunodeficiency disease—acquired immune deficiency syndrome (AIDS). When left untreated, HIV usually transitions to AIDS after about 11 years. HIV depleted CD4 lymphocytes, which are cells that maintain an effective immune system (Workowski and Berman, 2010). Once an individual receives a positive HIV diagnosis, they are required by law to inform all future sexual partners of their infection. However, this does not always occur. The Centers for Disease Control (CDC) reported that two female swingers

were infected with HIV in a club in 1986 (Dukers-Muijers et al., 2010). In 2007, a swinger man from Frisco Texas was accused and sentenced to life in prison for infecting six women from the Dallas Fort Worth (DFW) area with HIV, resulting in one of the women developing AIDS (Morrow and Mcilwain, 2009). These cases should stand out to swingers, who are putting their lives in another person's hands when they go out and engage in sexual activities with multiple people. The more sexual partners an individual has, the greater their chance of acquiring HIV (Workowski and Berman, 2010).

THE PHYSICIAN'S ROLE IN DECREASING STI'S

In 2009, a group of CDC staff members and STD experts developed clinical guidelines to prevent and control STI's (Workowski and Berman, 2010). They developed five main strategies which included education and counseling for individuals at risk on changes in sexual behaviors and use of prevention services; identification of symptomatic and asymptomatic individuals who are not likely to seek treatment; effective diagnosis, treatment and counseling of those infected; evaluation, treatment, and counseling of sex partners; and pre-exposure vaccination (Workowski and Berman, 2010). The group of specialists determined that physicians play a pivotal role in helping to reduce the spread of STI's because they can obtain sexual histories, educate, test, and counsel patients.

The majority of patients use other methods besides condoms when practicing safe sex including discriminating between sexual partners, self-medication, hygiene, antisepsis, coitus interruptus (withdrawal), and STI testing (Donovan, 2004). While methods such as getting tested for STI's are good practices, they do not prevent contracting an STI. Condoms do help to prevent some STI's, most notably HIV (Donovan, 2004). The more infectious STI's such as herpes and HPV are not prevented

with condom use, so other methods such as partner discrimination would be beneficial. This is where the physician's role in preventing STI's comes in—educating the patient.

The guidelines suggest that physicians obtain a complete sexual history of each patient by asking open-ended questions, such as "tell me about any new sex partners you have had since your last visit" (Workowski and Berman, 2010). This would be especially beneficial to swingers if doctors asked open-ended questions and did not assume that patients are monogamous. This would also likely help swingers not to feel judged and open up more, which would make them more receptive to being educated by the physician on safe sex practices. The guidelines also suggest that doctors inform patients on all STI tests that they are being tested for and which STI's are common, but are not being tested, such as herpes (Workowski and Berman, 2010).

In addition to obtaining a sexual history, the first major strategy also suggests doctors counsel sexually active adolescents and adults at an increased risk for STI's about behaviors that put them at risk (Workowski and Berman, 2010). Donovan (2004) further reports that STI risk assessment should not just include sexual orientation, but also specific behaviors. Donovan's point is that sexual orientation does not tell a doctor if the person is at risk, but behaviors are more telling. This could be applied to swingers as well, by asking about sexual behaviors, rather than what group they belong to. Swingers are frequently not classified as a high-risk group, but research has shown that their behaviors do put them at a high risk of acquiring STI's, therefore, physicians should educate any sexually active individual about high risk behaviors, regardless of perceived risk level at the time (Dukers-Muijers et al., 2010). Some behavioral changes to reduce STI transmission include abstinence or being in a mutually monogamous relationship

with an uninfected partner, condom use, limiting the number of sex partners, modifying sexual practices, and vaccination (Workowski and Berman, 2010).

Client-centered STI prevention counseling is effective in reducing risk behaviors and lowering the acquisition rate for curable STI's including trichomoniasis, Chlamydia, gonorrhea, and syphilis (Workowski and Berman, 2010). This approach involves figuring out behavioral change goals based on the clients' situation. This method would likely be beneficial for swingers because they could identify a goal plan with their doctor that is based on practicing safer sex within their lifestyle of swinging. This could include the doctor educating patients who swing that sex with lesbians or bisexual women does not mean that they will not get an STI and neither does using sex toys rather than body parts. The doctor might instead suggest that the patient use condoms on sex toys and be discriminative about partners they swing with by having them get tested before engaging in sexual practices.

FUTURE RESEARCH WITH SWINGERS

Future researchers could interview swingers to identify if they feel comfortable disclosing information to their primary doctor or would rather have a doctor that specifically worked with swingers. The social stigma associated with STI's and victim blaming has been shown to increase psychosocial morbidity, which then discourages people from getting the care they need (Donovan, 2004). A way to reduce the effects of stigma could be for clinics to open up that specialize with groups in alternative sexual lifestyles, such as the swinging population. It would also be greatly beneficial to work on decreasing the blame the victim mentality and stigma associated with STI's. One way to do this would be through commercials that inform people that certain diseases with no

social stigma, such as Epstein-Barr Virus and adenovirus infections, are actually transmitted sexually (as cited in Donovan, 2004). So the concepts that people with real diseases deserve treatment, funding, and a cure, but those with STI's do not could be disputed. Informing the public to be more aware that they shame people for STI's, but not other diseases, is misinformed because they do not really know how these other diseases were acquired.

DISCUSSION

The purpose of this paper was to bring attention to the fact that swingers are a high risk group for contracting and spreading STI's, discuss the factors that put them at a higher risk than other groups, illustrate some misconceptions swingers have about safe sex and STI's, discuss some of the implications of contracting an STI, and offer some solutions to help decrease the spread of STI's among swingers. The research thus far on swingers has proven scarce and been primarily focused on the characteristics of swingers; the majority of swingers are white, middle class, have an above average education, and fall within the age range of 28 to 45 years (Jenks, 1985; Walshok, 1971; Dukers-Muijers, Niekamp, Brouwers, and Hoebe, 2010). Even fewer studies have looked at the issue of STI's among swingers (Dukers-Muijers et al., 2010; O'Byrne and Watts, 2011).

Dukers-Muijers et al. (2010) found that swingers are a high-risk group for contracting and spreading STI's because of their multiple sex partners, concurrent partnerships, risk behaviors such as not using condoms, and low level contact with the healthcare system. Dukers-Muijers et al. (2010) also found that swingers have more STI's than MSM. It is therefore important for doctors to identify this group as at risk to provide more knowledge to them and suggest the importance of testing and treatment.

O'Byrne and Watts (2011) built off of the Dukers-Muijers et al. (2010) study by doing their own study to identify the sexual norms of swingers that put them at such a high risk for acquiring STI's. What they found was that on an individual level, condom use was low or irregular and testing for STI's was uncommon. The risk factors on a group level were that the group had a heterogeneous distribution of the number of sexual partnerships, the group had a high number of sex partners on average, a high rate of concurrent sexual partnerships (primary and swinger partners), high rates of unprotected sex, and low rates of seeking health care to determine STI status--less than half had routine testing even though 1/5 had previously been diagnosed with an STI (O'Byrne and Watts, 2011).

In addition to specific risk factors contributing to an increase in STI's among swingers, misconceptions keep them from having the knowledge to prevent STI's and the knowledge that STI testing and treatment is important for them. Some of the misconceptions among swingers are that women are not at risk of transmitting an STI, group sex events are only dangerous for MSM and adolescents, and swingers have less STI's than the general public (Ripley, 2011; Singh, Chin, Brown, & Glezen, 2006; Friedman, Bolyard, Khan, Maslow, Sandoval, Mateu-Gelabert, Krauss, & Aral, 2008).

While there are no guidelines at this point specifically geared toward prevention and control of STI's among swingers, there are guidelines for prevention and control of STI's in general. These guidelines were developed in 2009 by a group of CDC staff members and STI experts (Workowski and Berman, 2010). They developed five main strategies, which included education and counseling for individuals at risk on changes in sexual behaviors and use of prevention services; identification of symptomatic and

asymptomatic individuals who are not likely to seek treatment; effective diagnosis, treatment, and counseling of those infected; evaluation, treatment, and counseling of sex partners; and pre-exposure vaccination (Workowski and Berman, 2010). These guidelines could easily be transferred over to apply to swingers. However, more research is needed in the near future to understand how best to implement these treatment techniques among swingers.

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ABSTRACT

This article aims to illustrate how swingers are uninformed about their high-risk status for contracting and spreading sexually transmitted infections (STI's). Data on the prevalence of STI's among swingers in the United States is non-existent, but this paper provides evidence from research done in other countries that the numbers of STI's in the swinger population are significant. This paper also demonstrates that swingers are at a greater risk of transmitting STI's due to multiple factors. They have the potential to spread STI's at a quicker rate and to a larger number of people within a short time-frame. This article discusses various psychological and medical implications associated with a positive diagnosis of various STI's and provides suggestions, based on prior research in other populations, on ways to decrease STI's among swingers. Some of these methods include encouraging frequent and consistent use of sexual health services and having physicians provide information to patients regarding the factors that put them at risk for acquiring an STI.