PLURALISTIC IGNORANCE AND SEXUAL BEHAVIORS: A COMPARISON BETWEEN HETEROSEXUAL AND HOMOSEXUAL MEN

by

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ABSTRACT

Researchers examined perceptions of the amount and the level of comfort with hook-ups between heterosexual and homosexual males using pluralistic ignorance. Pluralistic ignorance is a social psychological theory in which a person of a group perceives the other members as different from them (Allport, 1924; 1933). Previous literature focused on the perceptions of hooking-up between men and women; however, the current research extended the theory by comparing heterosexual and homosexual men. The findings only supported a difference between the amount of times heterosexual and homosexual men have engaged in hook-ups, but not in how they perceive each other. Exploratory analyses revealed support for pluralistic ignorance for various sexual behaviors that could occur during a hook-up, with more comfort perceived by one orientation over another depending on the behavior. Researchers argue that pluralistic ignorance may not be supported when comparing sexual orientation because men are socialized the same to initiate and have sex, which may lead males to believe their male peers are similar (Howard & Perilloux, 2016).

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CHAPTER I

Pluralistic Ignorance and Sexual Behaviors: A Comparison Between Heterosexual and Homosexual Men

"Hooking-up" is a term that is loosely defined as engaging in heavy petting, oral sex, and sexual intercourse without the presence of a committed relationship and without the intention of forming one (Lambert et al., 2003; Owen, Rhoades, Stanley, & Fincham, 2010; Reiber & Garcia, 2010). Previous reported rates of hooking up from 2000 until 2014 have varied from 78% in 2000 (Paul, McManus, & Hayes, 2000), 53% in 2006 (Grello, Welsh, & Harper, 2006), 64% in 2008 (Garcia & Reiber, 2008), 81% in 2010 (Reiber & Garcia, 2010), and 64% in 2014 (Hoffman, Luff, & Bernston, 2014). While rates have varied over time, the findings reflect that this activity is relatively common. The appeal of hook-ups for students has been associated with the non-committal characteristic of the relationship, allowing individuals to have sex without the customary expectations or trapping of relationship norms (Owen et al., 2010). Other explanations for the behavior have included alcohol consumption (Owen et al., 2010), behavioral impulsivity (Paul et al., 2000), and psychological theories including evolution (Reiber & Garcia, 2010). One theory that shows promise in explaining hook-up motivations is pluralistic ignorance, a theory that argues perceptions of others influence our behavior (Lambert et al., 2003; Reiber & Garcia, 2010).

Pluralistic Ignorance

Pluralistic ignorance, coined by Allport (1924; 1933), is a social psychological theory that postulates an individual within a group having a different private attitude or behavior than members of that group, even when the members of the same group publicly hold a similar attitude or engage in a behavior like the individual. Pluralistic ignorance suggests that the

perception between the individual and their peers is incorrect, and the individual will act in accordance with the misperception rather than the group's public belief or behavior. The individual, who wants to be viewed as a desirable group member to their peers, will engage in behaviors because of the belief that their peers are engaging in the same behaviors. Even if members have vocalized dissenting opinions to the norm, the individuals will conform because they believe their group members agree privately (Lambert et al., 2003; Prentice & Miller, 1993; Reiber & Garcia, 2010). For example, researchers have examined the role of pluralistic ignorance with alcohol consumption, where participants perceived their peers as being more comfortable with drinking than participants self-reported. The researchers found that the students' overestimation may ultimately lead to the participants engaging in risky drinking patterns too (Prentice & Miller, 1993). Pluralistic ignorance has wide applicability, including drinking habits (Prentice & Miller, 1993), sexual infidelity (Boon, Watkins, & Sciban, 2014), and health risk behaviors (Hines, Saris, & Throckmorten-Belzer, 2002). One area of considerable research is in the domain of sexual behaviors for both committed dating (Cohen & Shotland, 1996) and hook-ups (Lambert et al., 2003; Reiber & Garcia, 2010). Each of these studies is addressed in detail below.

Boon and colleagues (2014) explored attitudes toward infidelity among college students. Researchers found participants perceived other students as having more permissive attitudes toward infidelity when compared to self-reports. Participants perceived their peers having engaged in infidelity more often than was self-reported (Boon et al., 2014). These results all derived from the participants thinking their peers were engaging or supporting the respective norm.

Research has also confirmed that pluralistic ignorance can be used to help understand motivations around sexual behaviors. Cohen and Shotland (1996) used pluralistic ignorance to identify motivators for the first experience of sexual intercourse for individuals who were dating. Participants were asked two questions. first, participants were asked to self-report when they believed sexual intercourse was acceptable after the participants started dating. Second, participants were asked to estimate when their peers would want to start engaging in sexual intercourse. Results revealed that men expected sexual intercourse around 10 dates, but believed that their peers would want sex earlier, at about three to four dates. Women demonstrated the same discrepancy, with female participants reporting that their peers would expect sexual intercourse much earlier than female research participants. The discrepancy was demonstrative of pluralistic ignorance (Cohen & Shotland, 1996).

Lambert and colleagues (2003) wanted to evaluate the effect of pluralistic ignorance and sexual behaviors by extending Cohen and Shotland's (1996) study to apply to hook-ups. When the participants were asked to self-report frequency of hook-ups and the level of comfort for hook-ups while estimating both for their peers, pluralistic ignorance was demonstrated. The participants believed their peers were more comfortable, especially the opposite gender, than what the participant self-reported. Thus, on average, men reported that women were more comfortable engaging in hook-ups than women reported (Lambert et al., 2003). Reiber and Garcia (2010) found the same results as previous studies, including gender differences. Participants again overestimated how comfortable their peers were with hook-ups. Additionally, men overestimated how comfortable women were with hook-ups (Reiber & Garcia, 2010).

While studies are available that examine the difference in perception of hooking up between men and women, few studies have examined differences in sexual orientation on

hooking up. It is important to understand how behaviors between heterosexual and homosexual persons might be similar and different. Findings have generally indicated that homosexual men have a greater number of sexual partners and have more frequent sex than heterosexual men (Oswalt & Wyatt, 2013). Homosexual men have also reported engaging in a greater variety of sexual activities. Dodge and colleagues (2016) used the 2009 National Survey of Sexual Health and Behavior to look for differences on performing (or receiving) various sexual behaviors between heterosexual, homosexual, and bisexual men. Findings revealed homosexual men typically reported higher sexual behaviors for things that heterosexual and homosexual men had in common (e.g., masturbation). Additionally, self-identified homosexual men reported higher rates of sexual behavior, excluding vaginal intercourse and oral sex with or on a woman, in comparison to self-identified heterosexual peers (Dodge et al., 2016). Finally, homosexual men hooked up at higher rates than heterosexual men (42% to 32% respectively) (Hall, Knox, & Shapiro, 2017). Findings from this thesis will add to the existing body of literature for pluralistic ignorance but will bring more information about the hook-up patterns between heterosexual and homosexual men. Having participants estimate not only a peer of the same sexual orientation, but a peer of a different orientation, helps establish the perceptions they have for another sexual community. Thus, while several differences have been identified between heterosexual and homosexual men, no study has attempted to test pluralistic ignorance as a potential explanation for the difference; therefore, the following research study proposed the following hypotheses:

H1: Men will estimate a higher frequency and a higher level of comfort for their same and different orientation peers than their own self-reports regardless of sexual orientation.

H2: There will be a difference in the self-reported frequencies provided by each orientation with homosexual men reporting higher frequencies.

H3: There will be a difference in the self-reported level of comfort provided each orientation with homosexual men reporting a higher level of comfort.

H4: Men will report a higher frequency and level of comfort for peers of a different orientation when compared to the estimations they make about their same orientation peers.

Method

Participants

A power analysis using g*power was conducted to find the sample size necessary for this study. With an aspirational level of power set at .8 and an anticipated small effect size (.1), 164 participants were identified as the necessary size of the sample. To get more equal conditions, researchers estimated having at least 82 heterosexual male participants and 82 homosexual male participants.

Inclusion criteria. Participants were included in the study if they identified as heterosexual or homosexual, identified as male, and reported they were currently in college for an undergraduate career. Participants had reported engaging in a hook-up as defined by the researchers. Researchers asked that participants be within 18 to 23 years of age.

Exclusion criteria. If a participant identified as female or if the participant reported that they were not enrolled in college, the participant was notified that they were ineligible to participate in the study. If participants reported having no hook-up, they were not eligible to complete the study.

Both heterosexual and homosexual male participants were recruited through the Research Participation Scheduling System (SONA) from a mid-sized university in the Southeastern United States. In addition to this sampling pool, in order to obtain an appropriate sample of homosexual men, a chain sampling method was implemented. The chain sampling included contacting LGBT

resource centers on college campuses, posting on social media, utilizing listservs, and asking the participants to forward the recruitment invitation onto others, if they desired.

Two-hundred nineteen people completed the survey, with 66 participants (30.1%) removed due to ineligibility for reporting their gender as female, being older than 23 years old, or for reporting that they had never hooked-up before. Of the 66 participants, 29 (44.0%) participants were removed for having too much missing data by not answering either the demographics, the self-reports, or not answering either peer estimation. The final sample consisted of 153 undergraduates. Participants' age range was 18-23 with an average age of 20 years (M = 20.27). For the sample, 127 (83%) participants identified as heterosexual and 26 (17%) homosexual. Reported gender of the participants was 149 (97.4%) male and 4 (2.6%) FTM transmale. Additionally, biological sex was reported as 147 (96.1%) male, 4 (2.6%) female, and two participants did not report their sex (1.3%).

Year in school included 41 (26.8%) first-years, 35 (22.9%) second-years, 26 (17%) third-years, 43 (28.1%) fourth-years, and 8 (5.2%) reported being within their undergraduate career longer than 4 years. There were 92 (60.1%) participants that reported being currently single, 58 (37.9%) were recorded as being in a relationship, 1 (.7%) was engaged, and 2 (1.3%) reported their current relationship status as "other." Recorded family incomes were as follows: 71 (46.4%) stated as having a family income of $100,000 or more; 25 (16.3%) between $76,000-99,999; 21 (13.7%) $46,000-75,999; 22 (14.4%) $19,000-45,999; 11 (7.2%) $9,000-18,999; and 3 (2%) stated their family as making less than $9,000. Race/Ethnicities included 14 (9.2%) African American/Black, 1 (0.7%) American Indian or Alaska Native, 2 (1.3%) Asian Indian, 10 (6.5%) Chinese, 1 (0.7%) Filipino, 2 (1.3%) Japanese, 1 (0.7%) Korean, 2 (1.3%) Vietnamese,

98 (64.1%) White, and 12 (7.8%) reported that they were of mixed races/ethnicities. For a more comprehensive report of all demographic information, see Table 1.

Table 1

Participant Demographics (N= 153)

	N	**%**
Age		
18	23	15
19	30	19.6
20	34	22.2
21	27	17.6
22	27	17.6
23	12	7.8
Biological Sex		
Female	4	2.6
Male	147	96.1
Missing	2	1.3
Gender		
Male	149	97.4
FTM Transmale	4	2.6
Sexual Orientation		
Heterosexual	127	83.0
Homosexual	26	17.0
Relationship Status		
Single	92	60.1
In a Relationship	58	37.9
Engaged	1	0.7
Other	2	1.3
Year in School		
First-year	41	26.8
Second-year	35	22.9
Third-year	26	17.0
Fourth-year	43	28.1
Longer than 4 years	8	5.2
Family Income		
$100,000 or more	71	46.4
$76,000-99,999	25	16.3
$46,000-75,999	21	13.7
$19,000-45,999	22	14.4
$9,000-18,999	11	7.2
Less than $9,000	3	2.0
Race/Ethnicity		
African American, Black	14	9.2
American Indian or Alaska Native	1	0.7
Asian Indian	2	1.3
Chinese	10	6.5
Filipino	1	0.7
Japanese	2	1.3

Korean	1	0.7
Vietnamese	2	1.3
White	98	68.5
Mixed race/ethnicity	12	7.8
Missing	10	6.5

Measures

Participants were asked to provide demographics, including age, biological sex, gender identity, sexual orientation, current relationships status, highest degree earned, social class, and race. Researchers used the item models created by Prentice and Miller (1993), Lambert and colleagues (2003), and Reiber and Garcia (2010). In an attempt to limit copying effects, filler questionnaires were placed between the self-report items and each peer estimation.

Frequency of activity for self. Participants self-reported their frequency of hook-ups by answering the following item: "How many partners have you had a hook-up with? (hook-up is defined as engaging in heavy petting, oral sex, and/or sexual intercourse without the presence of a committed relationship and without the intention of forming one. This definition includes multiple times with the same partners)". To answer, participants either used a dropdown response box with numerous non-grouped answer responses or a fill-in-the-blank.

Frequency of other. For participants to be able to estimate the frequency of hook-ups for their peers, the following items were used: "Think about an average heterosexual male, how many hook-up partners do you think he has had?" and "Think about an average homosexual male, how many hook-up partners do you think he has had?" The first set of estimations were for the sexual orientation the participant had identified as. The second set were for the sexual orientation they did not identify as. A heterosexual participant would be asked to estimate another heterosexual male, then a homosexual male.

Comfort of self. Participants were asked to self-report their level of comfort with various hook-up behaviors using the following statement: "Rate how comfortable *you* are with the following behaviors during a hook-up." Participants were given a numerical rating scale that ranged from -5 (very uncomfortable) to 0 (neutral) to +5 (very comfortable). This rating scale was used by Reiber and Garcia (2010) in a similar study examining hook-ups, pluralistic ignorance, and evolutionary theory. For each of the following behaviors the participant was asked to apply the -5 to +5 numerical scale. The following behaviors were associated with the items: (a) sexual touching above the waist, (b) sexual touching below the waist, (c) oral sex receiver, (d) oral sex performer, (e) intercourse where the participant is being penetrated, and (f) intercourse where the participant penetrates another person.

Comfort of other. Finally, participants were asked to estimate how comfortable their peers may be with the same above behaviors. The behaviors were (a) sexual touching above the waist, (b) sexual touching below the waist, (c) oral sex receiver, (d) oral sex performer, (e) intercourse where the participant is being penetrated, and (f) intercourse where the participant penetrates another person. The item read: "Rate how comfortable you think an average heterosexual male is with the following behaviors during a hook-up," or "Rate how comfortable you think an average homosexual male is with the following behaviors during a hook-up."

Procedure

Participants were able to access Qualtrics, an online survey system, through SONA (for Radford University students) or an anonymous link (for individuals who are not Radford University students) sent to them by the researchers. Participants were then taken to an informed consent page that included the purpose, risks, and other information about the study with a

forced answer response of "Yes" to be able to continue. If participants selected "No," they were then directed to the end of the survey.

After providing consent, the participants began reporting their demographics, self-reporting sexual history, level of comfort with sexual behaviors during a hook-up, and then estimations of both sets of peers (same-orientation peers and different-orientation peers). Finally, they were taken to the debriefing form. If the survey was completed using SONA, participants were given research credit for completing the study. However, all participants were able to enter their names and emails in a drawing for two $50 Amazon gifts cards. The researchers ensured the information for the drawing would not be connected to the reported data by the participant.

Results

To test all four hypotheses, a 2 (between-subjects: sexual orientation- heterosexual or homosexual) x 3 (within-subjects: target-self, same sexual orientation, different orientation) mixed model ANOVA was conducted. It was predicted that regardless of sexual orientation, participants would self-report lower levels of hook-ups and comfort when compared to peers of their same orientation. The test of first hypothesis was not significant as there was no main effect for sexual orientation, $F(1,143) = .700$, $p = .404$, $\eta_p^2 = .005$ and no main effect for target, $F(2,142) = 0.096$, $p = .908$, $\eta_p^2 = .001$, and finally, no interaction between sexual orientation or target, $F(2,142) = 1.866$, $p = .159$, $\eta_p^2 = .026$. Heterosexual participants reported lower estimations of comfort for hook-ups for both their same orientation peers ($M = 2.81$, $SD = 1.13$) than their self-reports ($M = 2.99$, $SD = 1.62$) and homosexual peers ($M = 3.16$, $SD = 1.78$). Homosexual self-reports ($M = 2.72$, $SD = 1.61$) were not significantly different from estimations for their homosexual peers ($M = 2.94$, $SD = 1.03$) and their heterosexual peers ($M = 2.72$, $SD = 0.97$).

Additionally, for sexual orientation and same peer frequency estimations, there was a main effect for sexual orientation $F(1,131) = 9.718$, $p = .002$, $\eta p^2 = .069$, but no main effects for target $F(2,130) = 1.210$, $p = .301$, $\eta p^2 = .018$, nor any interaction between sexual orientation and target estimations $F(2,130) = .020$, $p = .980$, $\eta p^2 < .001$. For frequency, heterosexual men reported hooking-up more ($M = 11.19$, $SD = 18.37$) than what they believed their heterosexual peers were ($M = 8.06$, $SD = 5.91$) and homosexual peers ($M = 8.24$, $SD = 6.53$). Homosexual men followed the same patterns between their self-reports ($M = 17.59$, $SD = 19.34$) and their estimations of other homosexual men ($M = 14.91$, $SD = 14.02$) and heterosexual peers ($M = 15.36$, $SD = 13.34$).

For the second hypothesis, the researchers predicted there would be a difference between the number of hook-ups reported between heterosexual and homosexual men. This hypothesis was supported as heterosexual men reported hooking up less ($M = 11.19$, $SD = 18.37$) than when compared to homosexual men ($M = 17.59$, $SD = 19.34$), $F(1,131) = 9.718$, $p = .002$, $\eta p^2 = 0.69$. The third hypothesis was not supported as heterosexual men did not report being significantly different ($M = 2.99$, $SD = 1.62$) from their homosexual peers ($M = 2.72$, $SD = 1.61$) on levels of comfort with hook-up behaviors, $F(1,143) = .700$, $p = .404$, $\eta p^2 = .005$.

The final hypothesis was not supported by the data. For frequency, heterosexual participants did not estimate their heterosexual peers ($M = 8.06$, $SD = 5.91$) and homosexual peers ($M = 8.24$, $SD = 6.53$) as being different on the amount of times they hook-up. For the same hypothesis, a similar pattern was found for homosexual participants. Homosexual participants did not, on average, estimate their homosexual peers ($M = 14.91$, $SD = 14.02$) as hooking-up any different from their heterosexual peers ($M = 15.36$, $SD = 13.34$), $F(2,130) = 1.210$, $p = .301$, ηp^2

= .018. For level of comfort, heterosexual participants had no significant differences between their estimations for heterosexual peers (M = 2.81, SD = 1.13) and their homosexual peers (M = 3.16, SD = 1.78). Additionally, homosexual participants had the same pattern in which their estimations for homosexual peers (M = 2.94, SD = 1.03) were not significantly different from their estimations for heterosexual peers (M = 2.72, SD = 0.97), $F(2,142) = 0.096$, $p = .908$, $\eta p^2 = .001$.

With the previous literature focusing on comparing men and women, the comparison between sexual orientation is a novel extension by controlling for gender and with inconsistent patterns of averaging the level of comfort items throughout previous literature, exploratory analyses were conducted on each level of comfort item. These analyses revealed some statistical differences that support pluralistic ignorance. A 2 (between-subjects: sexual orientation- heterosexual or homosexual) x 3 (within-subjects: target- self, same sexual orientation, different orientation) mixed model ANOVA was used to conduct these analyses. When asked how comfortable they were with sexual touching above the waist, there was no main effect for the target $F(2,141) = .190$, $p = .601$, $\eta p^2 = .023$, no main effect for sexual orientation $F(1,142) = .001$, $p = .971$, $\eta p^2 < .001$, and no interaction $F(2,141) = 1.680$, $p = .190$, $\eta p^2 = .023$. Heterosexual self-reports (M = 4.11, SD = 1.68) were not significantly different from their estimations of heterosexual peers (M = 4.11, SD = 1.38) and homosexual peers (M = 3.54, SD = 2.27). Homosexual self-reports (M = 3.92, SD = 1.85) were not significantly different from their estimations of homosexual peers (M = 3.81, SD = 1.63) and heterosexual peers (M = 4.00, SD = 1.44) on level of comfort for sexual touching above the waist.

When asked about sexual touching below the waist, there was no main effect for the target $F(2,142) = .322$, $p = .725$, $\eta p^2 = .005$, no main effect for sexual orientation $F(1,143) =$

1.322, $p = 252$, $\eta p^2 = .009$, and no interaction $F(2,142) = 1.068$, $p = .346$, $\eta p^2 = .015$. Self-reports for heterosexual men ($M = 4.04$, $SD = 1.64$) were not significantly different when compared to their estimations for heterosexual peers ($M = 4.08$, $SD = 1.16$) and homosexual peers ($M = 3.80$, $SD = 1.92$). Similarly, self-reports for homosexuals ($M = 3.42$, $SD = 2.64$) were not significantly different from their estimations for homosexual peers ($M = 3.73$, $SD = 1.28$) and heterosexual peers ($M = 3.92$, $SD = 1.35$) on levels of comfort for sexual touching below the waist.

For performing oral sex, there was no main effect for sexual orientation $F(1,133) = .650$, $p = .422$, $\eta p^2 = .005$, but there was a main effect for the target $F(2,132) = 5.609$, $p = .005$, $\eta p^2 = .078$. Additionally, there was a significant interaction between sexual orientation and target $F(2,132) = 22.679$, $p < .001$, $\eta p^2 = .256$. Researchers tested the significance of target as a main effect. Results indicated that self-reports ($M = 2.87$) were higher overall compared to same-peer ($M = 1.86$) and different peer ($M = 1.60$) estimations. Researchers used a paired samples t-test to further test the interaction between sexual orientation and target. For heterosexual participants, there was a significant difference when comparing their self-reports ($M = 2.37$, $SD = 2.93$) to their same peer estimations ($M = 0.83$, $SD = 2.81$), $t(119) = 4.915$, $p < .001$. There was also a significant difference in their estimations between their same orientation peers ($M = 0.83$, $SD = 2.76$) when compared to their different orientation peers ($M = 2.59$, $SD = 2.54$), $t(114) = -7.14$, $p < .001$. However, there was no difference between their self-reports ($M = 2.32$, $SD = 2.90$) and their different orientation estimations ($M = 2.60$, $SD = 2.55$), $t(112) = -0.85$, $p = .396$.

For homosexual males, they reported their different peers ($M = 0.61$, $SD = 2.44$) as being less comfortable than their self-reports ($M = 3.39$, $SD = 2.46$), $t(22) = 5.53$, $p < .001$. Additionally, there was a significant difference in their estimations for their same orientation

peers (M =2.79, SD = 1.84) and different orientation peers (M =0.54, SD = 2.41), t(23) = 4.50, p < .001. In contrast, there was no difference between their self-reports (M = 3.32, SD = 2.48) and their same peer estimations (M =2.76, SD = 1.85), t(24) = 1.14, p = .268.

On level of comfort for receiving oral sex, there was no main effect for sexual orientation $F(1,143) = 1.304$, $p = .255$, $\eta p^2 = .009$ and no main effect for target $F(2.142) = 1.939$, $p = .148$, $\eta p^2 = .027$. Contrasting to the main effects, a significant interaction was found between sexual orientation and target $F(2,142) = 9.115$, $p < .001$, $\eta p^2 = .114$. A paired samples t-test was conducted to further test the interaction between sexual orientation and target. Heterosexual males reported being less comfortable (M = 3.89, SD = 2.11) when compared to their same orientation peers (M = 4.41, SD = 1.02), t(125) = -2.84, p = .005. Additionally, heterosexual males estimated their same orientation peers as being more comfortable (M = 4.40, SD = 1.04) than their different orientation peers (M = 3.80, SD = 1.92), t(118) = 4.06, p < .001. However, there was no difference between the heterosexual self-reports (M = 3.87, SD = 2.14) and their estimations for their difference orientation peers (M = 3.80, SD = 1.92), t(118) = 0.325, p = .746.

The responses did not differ between homosexual male self-reports (M = 3.23, SD = 2.39) and their same orientation peers (M = 3.54, SD = 1.36), t(25) = -0.589, p = .561. Homosexual males estimated their different orientation peers as being more comfortable (M = 4.38, SD = 0.80) as compared to their self-reports (M = 3.23, SD = 2.39), t(25) = -2.26, p = .033. Comparatively, homosexual males reported their different orientation peers as being more comfortable (M = 4.38, SD = 0.80) than their same orientation peers (M = 3.54, SD = 1.36), t(25) = -3.28, p = .003.

Engaging in sexual intercourse where the participant is penetrating someone else had a significant main effect for sexual orientation $F(1,141) = 24.68$, $p < .001$, $\eta p^2 = .149$, a significant

main effect for target $F(2,140) = 10.217$, $p < .001$, $\eta p^2 = .127$, and a significant interaction $F(2,140) = 29.83$, $p < .001$, $\eta p^2 = .299$. Main effects testing for sexual orientation indicated that heterosexual males reported higher levels of comfort across all three targets ($M = 3.87$) when compared to homosexual males ($M = 2.44$). For target, participants rated their different peers as having the highest level of comfort ($M = 3.77$) when compared to their same peer estimations ($M = 3.27$) and self-reports ($M = 2.41$). A paired samples t-test was conducted to further test the interaction between sexual orientation and target. There was no difference between heterosexual self-reports ($M = 4.05$, $SD = 1.91$) and how they estimated their same orientation peers ($M = 4.11$, $SD = 1.67$), $t(125) = -.323$, $p = .747$. The heterosexual self-reports were rated as more comfortable ($M = 4.02$, $SD = 1.97$) when compared to their different peer estimations ($M = 3.43$, $SD = 1.93$), $t(116) = 2.51$, $p = .013$. Heterosexual males reported their same orientation peers as more comfortable ($M = 4.15$, $SD = 1.48$) than their different orientation peers ($M = 3.43$, $SD = 1.93$), $t(116) = 4.65$, $p < .001$.

There was no difference between the homosexual self-reports ($M = 0.81$, $SD = 3.56$) and their same peer estimations ($M = 2.38$, $SD = 1.79$), $t(25) = -1.84$, $p = .078$. Homosexual male self-reports indicated being less comfortable ($M = 0.81$, $SD = 3.55$) when compared to their estimations for their different orientation peers ($M = 4.12$, $SD = 1.37$), $t(25) = -4.33$, $p < .001$. Finally, homosexual males reported their same orientation peers as being less comfortable ($M = 2.38$, $SD = 1.79$) than their different orientation peers ($M = 4.11$, $SD = 1.37$).

The final item, engaging in sexual intercourse where the participant is being penetrated by someone else revealed a significant main effect for sexual orientation $F(1,72) = 6.21$, $p = .015$, $\eta p^2 = .079$, no main effect for target $F(2,71) = 0.578$, $p = .564$, $\eta p^2 = .016$, and a significant interaction $F(2,71) = 39.098$, $p < .001$, $\eta p^2 = .524$. After testing the main effect for

sexual orientation, it was revealed that homosexual males reported higher levels of comfort across all three targets (M = 0.18) when compared to heterosexual males (M = -1.33). A paired samples t-test was conducted to further test the interaction between sexual orientation and target. Heterosexual participants did not report a difference between their self-reports (M = -3.18, SD = 3.13) and their same peer estimations (M = -2.72, SD = 3.26), t(56) = -1.22, p = .230. However, heterosexual males reported their different orientation peers as being more comfortable (M = 1.90, SD = 3.00) than their self-reports (M = -3.54, SD = 2.91), t(66) = -11.02, p < .001. Comparatively, heterosexual males reported their same orientation peers as being less comfortable (M = -2.81, SD = 3.18) when compared to their different orientation peers (M = 1.43, SD = 3.10), t(76) = -9.52, p < .001.

Similarly, homosexual males did not reveal a difference between their self-reports (M = 1.72, SD = 3.65) and same orientation peers (M = 1.36, SD = 2.33), t(24) = 0.480, p = .636. Homosexual males reported themselves as more comfortable (M = 1.70, SD = 3.92) when compared to their different orientation peers (M = -2.30, SD = 2.92), t(19)= 4.60, p < .001. Additionally, homosexual males reported their same orientation peers as more comfortable (M = 1.15, SD = 2.41) than their different orientation peers (M =-2.30, SD = 2.92), t(19) = 4.62, p < .001.

Discussion

Support of Original Hypotheses

Only one hypothesis was supported by the data. This hypothesis included a difference between the amount of hook-ups heterosexual and homosexual males self-reported, and previous literature has found support for that difference also (Dodge et al., 2016; Hall et al., 2017; Oswalt

& Wyatt, 2013). The other three hypothesis, relating to the theoretical application of pluralistic ignorance, were not supported.

Exploratory analyses revealed a trend on the level of comfort items between heterosexual and homosexual males. For sexual touching above and below the waist, there were no differences between the males. However, performing oral sex showed a difference between the peers and self-reports, and receiving oral sex showed a difference between sexual orientation and peer estimations. The self-reports were lower in comfort than the peer estimations, this pattern is similar to other previous literature (Lambert et al., 2002; Reiber & Garcia, 2010).

Similarly, the last two items regarding sexual intercourse also followed patterns of pluralistic ignorance. When asked how comfortable the participant would be with sexually penetrating someone else during a hook-up, homosexual males reported both their heterosexual and homosexual peers as being more comfortable than they were. Heterosexual males reported being less comfortable than their heterosexual peers but more comfortable than their homosexual peers. This discrepancy supports pluralistic ignorance since the participants report their peers as being more and less comfortable than they are, which has been found in previous literature (Lambert et al., 2002; Reiber & Garcia, 2010). Reporting their comfort with being penetrated during sexual intercourse again revealed a pattern similar to pluralistic ignorance. Heterosexual males reported being less comfortable than both of their peers and homosexual males reported being more comfortable than both of their peers. The results on the sexual intercourse items could be from the differences in sexual activity between the two sexual orientations. Heterosexual males are typically penetrating the other person in heterosexual intercourse while homosexual males can either penetrate or be penetrated by their partner.

Similarity of Results

Finding differences between the self-reported frequency of hook-ups between heterosexual and homosexual men has been found by other previous researchers as well (Dodge et al., 2016; Hall et al., 2017; Oswalt & Wyatt, 2013). Finding limited support for pluralistic ignorance was unexpected as several previous researchers found a difference in general topics, sexual behaviors, and hook-ups (Boon et al., 2014; Cohen & Shotland, 1996; Hines et al., 2002; Lambert et al., 2002; Prentice & Miller, 1993).

Interpretation

Previous literature focused on comparing across gender (Cohen & Shotland, 1996; Lambert et al., 2002; Reiber & Garcia, 2010) instead of sexual orientation, so researchers could only predict the outcome based on gender, instead of sexual orientation which may explain the lack of support. Previous researchers have stated that men are more likely to engage in sexual encounters because they are more socialized to initiate sex and can become more easily aroused. Therefore, participants may report similar estimations because they are still of the same gender instead of estimating for women who are socialized for sex differently and have different gender roles (Gotta et al., 2011; Howard & Perilloux, 2016). Howard and Perilloux (2016) additionally argued from an evolutionary perspective, women would limit heterosexual sexual contact because of the risk involved whereas two men would be more likely to engage because of the low risk. Comparatively, a recent study (Hall et al., 2017) found that there was no difference between heterosexual and homosexual males on whether they "would" hook-up. One result that was interesting to the researcher was the support for pluralistic ignorance receiving oral sex but not performing oral sex. Literature has shown a difference between male and female oral sex during a hook-up. England, Shafer, and Fogarty (2007) reported that for participants who had

hooked-up, only forty-percent of both men and women received oral sex while women only receiving oral sex was sixteen-percent as compared to forty-percent were men were only receiving oral sex during a hook-up. This finding, suggests that heterosexual men do not perform oral sex during a hook-up as often and therefore, are less comfortable with it when compared to receiving oral sex.

Generalizability

Considering the unsupported findings of pluralistic ignorance, researchers do not believe it can be repeated by others without getting the same result. However, researchers can acknowledge the lack of literature between pluralistic ignorance and sexual orientation. Any similar research conducted in a non-academic setting may not yield the same results but could be a result of misperception of other settings for other people. If the setting of the research, for example, the current research used college undergraduates, is not controlled, then there could be a discrepancy from someone not within the setting who may be asked to report on the students.

Implications

Limitations to the study include the sample size and the novelty of the comparison topic. There was a small number of homosexual males to compare against heterosexual males, which could have led to non-significant findings. Having a small number between the two may not be able to reveal any differences between them. However, with the small reported effect sizes, the researchers speculate that having more participants would make the findings significant but would still have a small effect. Future directions could sample more males, have the participants estimate only one peer instead of two to reduce any similarity because of repeated questioning, and/or make the hook-up items more general instead of specific to sexual orientation.

Pluralistic ignorance is a social psychological theory in which a person of a group perceives the other members as different from them and has been applied to a variety of topics, including sexual behaviors (Boon et al., 2014; Cohen & Shotland, 1996; Lambert et al., 2002). Although all previous literature compared across gender, this research sought to extend previous literature by using sexual orientation as a comparison. The yielded results only supported a difference in the amount each orientation engage in a hook-up, but not in how they perceive their peers. Future research may ask the participants to estimate for a single peer or for more general sexual behaviors.

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CHAPTER II

REVIEW OF THE LITERATURE

This chapter begins with prevalent information regarding hook-ups, including prevalence rates, reasons for studying, and a definition drawn from previous researchers. A review is then provided surrounding pluralistic ignorance and its application to drinking and drug habits (Hines, Saris, & Throckmorton-Belzer, 2002; Prentice & Miller, 1993), prejudice (Bowen & Bourgeois, 2001; O'Gorman, 1975), infidelity (Boon, Watkins, & Sciban, 2014), dating habits (Cohen & Shotland 1996), and hook-ups (Lambert, Kahn, & Apple, 2002). After the review, gaps within the literature are highlighted. Finally, hypotheses are proposed for the study.

Pluralistic Ignorance Overview

Pluralistic ignorance is a theory used to predict how individuals perceive the beliefs or actions of other group members. Allport (1924; 1933) first developed the theory after questioning prejudice between White fraternity members and possible Black pledges to a fraternity (Katz & Allport, 1931). The theory postulates that individuals within a group have different private attitudes or behaviors than other members of the same group, even when the other members act the same way publicly. Therefore, an individual will agree with or continue to participate in a group norm, thinking the majority are in support when the majority are not (Garcia & Reiber, 2008; Hines et al., 2002; Miller & McFarland, 1987; Prentice & Miller, 1993).

Application of pluralistic ignorance. O'Gorman (1975) surveyed White individuals to determine if they supported racial segregation and their beliefs regarding African American/black individuals. O'Gorman (1975) studied estimations of White support for racial segregation, how the individuals obeyed racial segregation, and how misperceptions fueled the exclusion of Black individuals from white neighborhoods. Researchers asked participants if they

preferred desegregation, strict segregation, or a compromise between the two options. Following the participants' preferred policy, participants were asked to estimate the number of white individuals within their area that would support a strict segregation policy. O'Gorman (1975) discovered that most white individuals did not support racial segregation with percentages ranging from 7% to 32%, depending on the state of residence. However, individuals believed that others supported racial segregation at least twice as often as the surveyed individual, if not more. This kind of false consensus of racial segregation could have aided in the continuance of it, fueled by pluralistic ignorance (O'Gorman, 1975).

One highly cited example of pluralistic ignorance was found by Prentice and Miller (1993), who observed how pluralistic ignorance contributed to alcohol consumption on college campuses. The researchers wanted to measure how group members affected by pluralistic ignorance would respond to social norms if the individual believed they were the only one not wanting to engage in the social norm. Specifically, researchers wanted to examine if students believed their peers consumed more alcohol or were more comfortable consuming alcohol than themselves. After participants reported their level of comfort with alcohol use, the researchers asked participants to estimate how comfortable they believed their peers were with alcohol consumption. The results indicated participants' private attitudes as less comfortable than what was believed for their peers. This not only revealed that individuals privately felt they were the only ones not supporting alcohol use, but also suggested a universal belief among their peers that they were more comfortable with alcohol use than the participants self-reported. This type of belief supported pluralistic ignorance (Prentice & Miller, 1993).

Hines and colleagues (2002) extended the work of Prentice and Miller (1993) to see if pluralistic ignorance would be demonstrated for smoking, illegal drug use, drinking patterns, and

some sexual behaviors. Participants were asked to self-report how comfortable they were with their own drinking habits, illegal drug use, sexual behaviors, and smoking. Researchers then asked participants to report how comfortable they believed their peers to be with the same behaviors. Finally, participants were asked how frequently the habits were portrayed by the media, how comfortable the participants were with the portrayals, and how comfortable the participants believed their peers were. Results revealed pluralistic ignorance among smoking, illegal drug use, sexual behaviors, and drinking habits. Hines and colleagues (2002) suggested a general misperception between individuals' private attitudes and their groups'. Participants reported other students as being more comfortable with all examined behaviors at a significantly higher level of comfort when compared to the participants' self-reports. Alcohol use had the lowest amount of discrepancy between the self-report and peer estimation when compared to illegal drug use and sexual behaviors. Because more students publicly viewed others engaging in alcohol use, they could be able to estimate their peers as closer to their own self-reports than the other behaviors. Hines and colleagues (2002) further concluded that pluralistic ignorance may pressure students to conform to perceived social norms, increasing the frequency of the behaviors.

Complementing the findings of Prentice and Miller (1993) and Hines and colleagues (2002), Miller and McFarland (1987) proposed pluralistic ignorance as a part of social inhibition and fear of embarrassment. In Experiment 1, researchers questioned if individuals' actions or beliefs would conform due to feelings of social inhibition or embarrassment in front of their peers. Participants were given 20 trait adjectives that reflected social inhibition and asked how those traits described them and how well the trait described an average student using a 9-point

Likert scale. Findings suggested that participants reported being more bashful, self-conscious, and more hesitant than other individuals, which could fuel pluralistic ignorance.

After collecting results from Experiment 1, Miller and McFarland (1987) extended their findings by having students read a difficult article on self-concept and then telling them to see the experimenter if they had difficulty in understanding the article. Using an 11-point scale, participants were asked how well they understood the article, how well they perceived their peers to have understood the article, and what percentage of peers would seek help. Participants indicated their peers to be less likely to understand the article and more likely to seek help from the experimenter. However, none of the participants sought help from the experimenter, demonstrating pluralistic ignorance. Testing the effect further, researchers completed the same experiment as before; however, half of the participants were told not to seek help with understanding the article. The other half of participants were able to seek help, but the participants risked embarrassment if they did request assistance. No participants sought help in either condition; however, the participants that were told they could not seek help rated themselves as more knowledgeable on the article when compared to those who could seek help but risked embarrassment (Miller & McFarland, 1987). Continued examination of pluralistic ignorance and beliefs have been conducted, including with prejudice (Bowen & Bourgeois, 2001; Katz & Allport, 1931; O'Gorman, 1975).

Using pluralistic ignorance and contact hypothesis, students' comfort with LGB individuals was measured among students living in two residence halls on a single campus. Residence halls have individuals randomly assigned to room and roommates, allowing for a closer to random sample (Bowen & Bourgeois, 2001). Participants were asked how comfortable they were with LGB individuals, how a friend would respond to the same question, and how a

typical student would respond. The participants also reported if they knew any LGB individuals, how well the participants knew them, and estimates of how many LGB individuals lived in their residence hall. Findings revealed that participants' self-reported higher levels of comfort with LGB individuals than they perceived their friends to have, and additionally estimated that their friends would be more comfortable with an LGB individual than a typical student. Researchers found that those who had previously known an LGB individual were more likely to be comfortable with them (Bowen & Bourgeois, 2001). Although pluralistic ignorance has been supported for various behaviors and beliefs, additional research has examined its effects on sexual behaviors specifically.

Pluralistic ignorance and sexual behaviors. Pluralistic ignorance has been examined as a motivator for engaging in individual behavior. Researchers have considered how this might affect sexually aggressive behaviors and sexual harassment (Flezzani & Benshoff, 2003; Halbesleben, 2009). To demonstrate pluralistic ignorance, male college students were asked how common they believed various negative behaviors were on campus and how likely they would be to engage in sexually aggressive behaviors. Researchers suggested that having higher pluralistic ignorance increased the amount of sexually aggressive behaviors because those surveyed believed their peers were accepting of the behaviors (Flezzani & Benshoff, 2003). Because sexually aggressive behaviors were examined, research has extended to sexual harassment (Halbesleben, 2009).

Arguing that workplace-based sexual harassment is common, Halbesleben (2009) examined the frequency of sexual harassment and how often it was reported. Workplace climate may be misperceived as being more accepting of sexually harassing behaviors. Because employees believed they would be deviating from their organization, the employees may support

a false majority even if they personally reject it. Using sexist jokes, Halbesleben (2009) asked participants to self-rate their level of comfort with them and how funny the participants thought the jokes were. The participants were then asked to estimate the level of comfort with the jokes and how funny they believed their coworkers would find the jokes to be. When participants estimated other people as more comfortable or thought the joke was funnier than the participants' self-report, pluralistic ignorance was demonstrated. The researchers concluded that pluralistic ignorance and social comparison affected whether the individual would report the behaviors, or the joke based on how they perceived their coworkers. Individuals who thought others were accepting of the behaviors would be less likely to report (Halbesleben, 2009). Moving from aggressive behavior and harassment, more researchers began to consider how pluralistic ignorance may affect other sexual behaviors.

Researchers have considered how pluralistic ignorance impacts relationships and infidelity. Because American social norms suggest infidelity is not approved, Boon and colleagues (2014) investigated whether the engagement in infidelity was partly fueled by a person's perception that the cheating behavior of others was justification for their own cheating. This perception is an example of pluralistic ignorance. Surveying undergraduate students, the researchers asked the participants how acceptable they felt infidelity was in a committed relationship. The participants then reported how accepting they believed their peers to be of the same behavior. Additionally, participants reported how often they had been cheated on and how often they believed their peers had been cheated on. Participants reported being less permissive about infidelity than they perceived their peers to be, and they reported higher frequencies of infidelity for their peers when compared to the participants' self-reports. The discrepancy

between peer attitude/frequency when compared to the self-reports further supports pluralistic ignorance as a possible explanation for social behavior (Boon et al., 2014).

Cohen and Shotland (1996) examined at what time men and women were willing to engage in sexual intercourse for the first time while dating. The researchers asked their participants how many dates would occur before they were comfortable with engaging in sex, to estimate when their same sex peers would be comfortable in the same scenario, and to estimate when the participants believed the opposite sex would be interested in engaging in sex. Results indicated a disparity between the point in the relationship in which men and women believed they should start engaging in sexual intercourse while dating. On average, men reported that women would want sex earlier when compared to the times reported by women, showing a false estimation of the opposite sex. However, when participants were asked to estimate when their same gendered peers wanted sex, estimations were significantly lower than what the participants self-reported (Cohen & Shotland, 1996). The disparity between the same-gendered peer estimations and self-reports revealed a difference between the group and the private attitude of the members (Cohen & Shotland, 1996).

Similarly, Chia and Lee (2008) studied stages of dating and comfort with sexual intercourse among college students in Singapore. Pluralistic ignorance still demonstrated participants perceiving their peers as more comfortable having sexual intercourse earlier in a relationship than their self-reports (Chia & Lee, 2008). Research on pluralistic ignorance and sexual behavior has extended past typical dating patterns. Newer patterns of sexual behaviors, such as hook-ups, have been validated with the theory as well.

Hook-up Overview

Bogle (2007) and Owen, Rhoades, Stanley, and Fincham (2010) suggested that "dating" has changed as a construct, as well as how we use the word. Owen and colleagues (2010) argued that traditional dating includes clear steps or stages, but that casual dating removes these steps. Previous researchers (Epstein, Calzo, Smiler, & Ward, 2009) conducted qualitative research to help formulate a general definition of what hooking-up means by asking an all-male sample to categorize a hook-up. The researchers found three consistent themes: (a) there is a variety of behaviors that can occur during a hook-up; (b) there is no established committed relationship when the encounter occurs; and (c) there is no intention of creating a committed relationship in the future (Epstein et al., 2009). Although Uecker and colleagues (2015) had some participants report wanting to hook-up with the intent to start a relationship, the information was vague. A participant may wish to start a romantic relationship after hooking-up, but the other person may not. Additionally, Epstein and colleagues' (2009) qualitative data revealed "no intention" as more consistent in contrast to the motivations reported by Uecker and colleagues (2015). This definition has been consistent with those of previous researchers and has helped formulate the following definition for this research project. A "hook-up" is defined by the current researchers as heavy petting/making out, oral sex, and/or sexual intercourse without any commitment and/or without the intention of forming one in the future (Lambert et al., 2003; Paul, McManus, & Hayes, 2000).

Previous research has included the degree to which the participant knew the person well before engaging in a hook-up (Paul & Hayes, 2002), but the current researchers believed the term "hook-up" is more encompassing and better at catching multiple kinds of encounters. The term hook-up is not dependent on how well the individuals know one another. For example, if

two individuals know each other well, or are friends, then the uncommitted sexual encounter may be considered a "friends with benefits" encounter. However, the concept of a "hook-up" is broader than friends with benefits. The term hook-up includes friends with benefits as well as uncommitted sexual encounters with strangers or acquaintances.

Hook-ups have been studied within numerous psychological topics. Researchers have studied the emotional aspects of hook-ups, such as regret or depression (Grello, Welsh, & Harper, 2006), while others have focused on gender differences (Garcia & Reiber, 2008). Some researchers have focused on predictors of hook-ups, including alcohol use, self-esteem, religion, and psychological theories that suggest humans have a need for sexual interaction (Fielder & Carey, 2010; Garcia & Reiber, 2008; Woods, Ryan, & Robinson, 2016).

Frequency of hook-ups. Owen and colleagues (2010) suggested that hook-ups are popular among college students, with some studies revealing up to 81% of their participants reporting engaging in at least one hook-up and other researchers reporting between 50% to 80% (Garcia & Reiber, 2008; Grello et al., 2006; Hoffman et al., 2014; Paul et al., 2000; Reiber & Garcia, 2010). Although previous researchers have argued that casual dating without commitment has become more popular, particularly among college students (Bogle, 2007; Glenn & Marquardt, 2001), previous rates have varied across time: 78%in 2000 (Paul et al., 2000), 53% in 2006 (Grello et al., 2006), 64% in 2008 (Garcia & Reiber, 2008), 81% in 2010 (Reiber & Garcia, 2010), and 64% in 2014 (Hoffman et al., 2014).

Why people hook-up. Some theorists propose that higher rates of hook-up are due to the ability to have sexual needs met without having to invest in a relationship (Garcia & Reiber, 2008; Garcia, Reiber, Massey, & Merriwether, 2012; Grello, Welsh, Harper, & Dickson, 2005; Lambert et al., 2003; Paul et al., 2000). Some casual sexual encounters include sexual

intercourse, while other casual sexual encounters may only include making out or heavy petting; the commonality between them is the lack of commitment between the people. The lack of commitment defines the encounter as "casual" instead of a sexual encounter between people in a committed relationship. Researchers found that the lack of commitment was a motivator for engaging in hook-ups, with half of those participants surveyed having reported hooking-up because of the emotional thrill and lack of a dating scene. Even though participants reported that having the absence of an emotional commitment was a motivator to engage in the activity, other findings have suggested that individuals engage in hooking-up in hopes of starting a romantic relationship (Uecker, Pearce, & Andercheck, 2015).

Pluralistic Ignorance and Hook-ups

Because hook-up rates have remained steady, if not slightly increased, it may be perceived by people as more of a social norm than typical dating (Hines et al., 2002). Researchers believed pluralistic ignorance could lead to an increase in frequency of hook-ups and a rise in undesirable consequences of hook-ups, such as STIs or sexual assault. Some individuals may feel pressured to engage in hook-ups because they believe their peers do so, not because they truly want to (Lambert et al., 2003). Wanting to extend Cohen and Shotland's (1996) research to determine if there would be an effect for more sexual behaviors than just sexual intercourse, Lambert, Kahn, and Apple (2003) asked participants to self-report frequency of hook-ups, how comfortable they were with the number of hook-ups that occur on that campus, then rate how comfortable they were with various sexual behaviors that could occur during a hook-up. Those behaviors included heavy petting, making out, oral sex, and sexual intercourse (Lambert et al., 2003). Men self-reported lower levels of comfort than what they believed their peers experienced and reported higher levels of comfort for females than what females self-

reported. Similar results were reported for female self-reports compared to their estimations for peers and men (Lambert et al., 2003).

In the same study, Lambert and colleagues (2003) suggested individuals feel pressured to engage in hook-ups because the individuals perceived their peers as enjoying them. The results of Lambert and colleagues (2003) further support the idea that increased frequency of hook-ups is linked to perceived peer enjoyment, even if the individual privately disagrees with the behavior. In comparison to the frequency of hook-ups reported by Lambert and colleagues (2003), Reiber and Garcia (2010) reported a similarly high frequency supporting hook-ups as becoming more culturally pervasive. Reiber and Garcia (2010) modified the response scale of Lambert and colleagues (2003) from an all-positive numbered scale to a negative and positive. Using a negative-to-positive numbered answering scale better reflects a visual representation of the participants' discomfort. More information is in the materials section. To gather more information on how pluralistic ignorance related to hook-ups, Hoffman, Luff, and Berntson (2014) explored three different types of hook-ups.

Although most previous researchers examined how pluralistic ignorance affected a more general definition of a hook-up, other researchers specified the definition into making out only, oral sex only, and full sexual intercourse (Hoffman et al., 2014). The researchers wanted to examine if different kinds of hook-ups, based on their definitions, would affect predictors and pluralistic ignorance differently. Participants' self-reported frequency for each type of hook-up, estimated frequency for a close friend, and estimated frequency for a typical student at the same university. Most of the participants indicated they had never engaged in a hook-up involving oral sex or sexual intercourse. However, participants believed their close friends hooked-up more frequently and estimated that a typical student was even more likely to have engaged in a hook-

up when compared to a close friend. The findings further demonstrated pluralistic ignorance between self-reports, close friend estimation, and typical student estimation (Hoffman et al., 2014).

Hook-up Differences between Homosexual and Heterosexual Men

Researchers have studied differences of hook-up patterns for individuals of different sexual orientations. Hall, Knox, and Shapiro (2017) sampled participants from 2009-2015 and collected data on what they called a "hookup profile." The profile asked participants to answer if they had hooked-up, would be willing to hook-up, or would not be willing to hook-up. Findings indicated that men were more likely to engage in a hypothetical hook-up when compared to women. When comparing heterosexual and homosexual men, homosexual men had engaged in a hook-up more frequently (32% to 42% respectively). However, besides frequency, identifying as homosexual had no sign of their hookup profile (Hall et al., 2017).

Other sexual behavior differences between homosexual and heterosexual men.

Previous literature has outlined the following differences between heterosexual and homosexual men. On average, gay men reported higher frequencies for sexual encounters, higher number of partners, higher levels of STIs, higher likelihood of having sex outside of a relationship, and higher frequencies for partnered and solo masturbation for both lifetime and the last 30 days when compared to heterosexual men, even when both heterosexual and homosexual men are single (Dodge et al., 2016; Gotta, Green, Rothblum, Solomon, Balsam, & Schwartz, 2011; Howard & Perilloux, 2016; Oswalt & Wyatt, 2013). Each of these areas is addressed in further detail in the following paragraphs.

Some studies have questioned the impact of sexual orientation on sexual behavior, using mating psychology, self-reporting, and national samples. Gotta and colleagues (2011) studied

differences between heterosexual and homosexual couples. Exploring dating types, the researchers suggested that homosexual male couples have more sex when compared to heterosexual and lesbian couples because women are less likely to initiate sex and may take longer to reach sexual arousal. Gotta and colleagues (2011) found that in contrast to women, men were more socialized to initiate sex and had a quick and almost immediate arousal when compared to women. Gotta and colleagues (2011) further suggested that homosexual men are traditionally more accepting of non-monogamous encounters and see sexual encounters as more recreational rather than an intimate part of a committed relationship.

Comparing archival data from 1975 to data collected in 2000, Gotta and colleagues (2011) analyzed generational differences between heterosexual couples and homosexual couples. Researchers examined if monogamous relationships created agreements for having sex outside of the relationship. Gay men reported the highest levels of acceptance for sex outside of their relationships, in certain pre-agreed circumstances. Out of the three groups, gay men also had the lowest agreement when discussing that under no circumstances would sex outside of the relationship be acceptable. When the researchers explored frequency of sex, all three relationship types decreased, but gay male relationships did not decrease as significantly as heterosexual and lesbian relationships. After reporting frequencies for having sex outside of a relationship, gay men reported the highest percentage when compared to lesbian and heterosexual individuals. Since gay men reported the highest percentage of sex outside of a relationship, data suggested an increase in the frequencies of their sexual encounters. These findings suggest that gay men are more likely to have sex outside of their relationship when compared to heterosexual couples and lesbian couples (Gotta et al., 2011). Moving from archival research, other researchers used national samples to identify trends and differences.

Questioning the differences in sexual patterns among college students, Oswalt and Wyatt (2013) used a U.S. national sample to evaluate sexual health for individuals of different sexual orientations. Authors separated data by sexual orientation (heterosexual, gay/lesbian, bisexual, or unsure) while examining sexual frequency, practices for safe sexual behaviors, and sexual health diagnoses/outcomes. Researchers believed that transitioning to college could be detrimental to the development and sexual health of college students. They wanted to create prevention plans to be able to reinforce safer sexual tips and help reduce the amount of sexual risk individuals engage in to try to further explain the differences between heterosexual and homosexual individuals (Oswalt & Wyatt, 2013).

Oswalt and Wyatt (2013) asked participants to report on their engagement in numerous sexual behaviors over the last 30 days, the last 12 months, and over their lifetime. They found that gay men reported more sexual partners, on average, than heterosexual men in the last 12 months. Additionally, gay men had engaged in more oral and anal sex in the last 30 days when compared to heterosexual men. In the last 30 days, heterosexual men engaged in vaginal sex at a higher percent when compared to homosexual men. However, over their lifetime, heterosexual men engaged in vaginal sex only at 4% higher than homosexual men. Sexual health followed similar patterns. Gay males reported higher levels of contraceptive use for oral sex, vaginal sex, and anal sex in the last 30 days than heterosexual males. Finally, gay men reported higher levels of STIs compared to heterosexual men. The results from Oswalt and Wyatt (2013) further support the trend of increased sexual activity of gay men in comparison to heterosexual men. More researchers began to use national sample data to not only find levels of sexual health and clinical implementations of interventions, but to further find more support of the sexual behavior differences between heterosexual and homosexual males.

Dodge and colleagues (2016) used data from a national sample and gained more intricate information about homosexual and heterosexual males in relation to their sexual behaviors. These behaviors included general sexual behavior, solo masturbation, partnered masturbation, oral sex with men, oral sex with women, genital-genital contact, vaginal intercourse, and anal intercourse. Participants categorized the behaviors as something they had engaged in during the last 30 days, 90 days, 12 months, more than 12 months, or had never performed. Categorizing sexual activity within a relative time frame, Dodge and colleagues (2016) were able to account for age bias in participants. Homosexual males who did not have a partner reported a higher percentage of sexual encounters over the past year than heterosexual males who were also single. For solo and partnered masturbation, homosexual males reported higher levels of performing in both lifetime and in the last 30 days compared to heterosexual males (Dodge et al., 2016). For oral sex with a man or a woman, the percentage of behavior was more aligned with the sexual orientation of the individual. Homosexual men reported higher frequency of oral sex with or on a man whereas heterosexual men reported higher frequency of oral sex with or on a woman (Dodge et al., 2016). However, the pattern observed for oral sex was not reflected in reported vaginal and anal intercourse (Dodge et al., 2016). Comparing across partner genders, homosexual males reported engaging in oral sex with women more frequently than heterosexual males reported engaging in oral sex with a man. Homosexual males additionally reported higher levels of genital-genital contact for both the last 30 days and lifetime. Vaginal intercourse was more orientation respective, with heterosexual males reporting a higher frequency. Homosexual males reported a higher frequency of anal sex. Much research has been done to support the differences in sexual behavior between homosexual and heterosexual males. Some researchers have considered why that might be occurring.

Rather than using national samples or archival data, Howard and Perilloux (2016) used a mating psychology framework to study whether biological sex of the individual or their preferred partner's sex was more connected to frequency or engagement in sexual behaviors. Mating psychology is more supportive of a reproductive motivation for sex. This means that men would be more likely to have casual encounters to increase offspring, while women would be more selective and desirous of a long-term commitment. Howard and Perilloux (2016) examined sociosexual orientation, or the degree to which the individual engages or would like to engage in hook-up behaviors. While surveying both heterosexual and homosexual participants, the researchers gathered data on sociosexual orientation, attachment to sexual partners, intent for commitment, how often they had sexual encounters with strangers, and their frequency of sexual partners (Howard & Perilloux, 2016).

Authors suggested that mating psychology was more in line with the biological sex of the individual instead of the preferred partner's sex. Results revealed that sexual orientation itself may not influence sexual behavior, but the sex of the individual could. The researchers stated that men, regardless of sexual orientation, had more sexual partners than women, but further went on to claim that because homosexual encounters involve both men, they would occur more often. Their rationale goes back to mating psychology where men are more easily aroused and are more likely to engage in casual relationships (Howard & Perilloux, 2016).

Differences between heterosexual and homosexual males have been noted within previous literature. Howard and Perilloux (2016) suggested men as more likely to engage in casual encounters; however, gay men engaged in more sexual encounters, including hook-ups, when compared to heterosexual men (Hall et al., 2017). Although gay men reported a lower frequency for vaginal intercourse, as compared to heterosexual men, gay men continued to report

higher frequencies for oral and anal sex (Dodge et al., 2016). This thesis intended to find hook-up differences between heterosexual and homosexual males, and test how pluralistic ignorance might affect the previously noted differences.

Pluralistic ignorance has been used to examine relationships with numerous variables. However, pluralistic ignorance has not been used to study the differences between individuals of different sexual orientations. Given that differences between heterosexual individuals and homosexual individuals have been documented within literature, hypotheses were proposed.

Gap: Examining Pluralistic Ignorance and Sexual Orientation

With the reported rates of hook-ups (Garcia & Reiber, 2008; Garcia et al., 2012; Grello et al., 2005; Lambert et al., 2003; Paul et al., 2000), pluralistic ignorance was tested to determine if other factors of the individuals were changing the effect of the theory, such as the sexual orientation of an individual. Very few researchers have tested sexual orientation as an influence for hook-ups (Hall et al., 2017). Even fewer have asked participants to directly compare themselves to same gendered peers of another sexual orientation. Differences in sexual patterns between heterosexual individuals and homosexual individuals may help determine the strength of sexual orientation on pluralistic ignorance. Findings from this thesis will add to the existing body of literature for pluralistic ignorance but will bring more information about the hook-up patterns between heterosexual and homosexual men.

Hypotheses

H1: Men will estimate a higher frequency and a higher level of comfort for their same and different orientation peers than their own self-reports regardless of sexual orientation.

H2: There will be a difference in the self-reported frequencies provided by each orientation with homosexual men reporting higher frequencies.

H3: There will be a difference in the self-reported level of comfort provided each orientation with homosexual men reporting a higher level of comfort.

H4: Men will report a higher frequency and level of comfort for peers of a different orientation when compared to the estimations they make about their same orientation peers.

For example, heterosexual participants will overestimate the sexual habits of homosexual men more than their heterosexual peers and vice versa. To demonstrate pluralistic ignorance, there needs to be a statistical significance between all self-reports and peer estimations.

CHAPTER III

METHOD

Within this chapter, participants are described, inclusion and exclusion criterion are defined, measures used are provided, and the completed procedure is documented. This chapter begins with an overview of the participants.

Participants

The following demographics were collected from participants: age, biological sex, gender, sexual orientation, relationship status, education, family income, and race. The researchers asked participants to report both biological sex and gender identity, because if the individual identified as transgender, the individual would be more likely to follow the gender roles of the preferred gender. After being screened, participants then self-reported their frequency of hook-ups and level of comfort for various sexual behaviors that could occur during a hook-up.

Inclusion criteria. Participants were included in the study if they identified as heterosexual or homosexual, identified as male, and reported they were currently in college for an undergraduate career. Participants had reported engaging in a hook-up as defined by the researchers. Researchers asked that participants be within 18 to 23 years of age.

Exclusion criteria. If participants identified as female or if participants reported that they were not enrolled in college, they were notified that they were ineligible to participate in the study. If participants reported having no had no hook-ups, they were not eligible to complete the study.

Sample size. Researchers used g*power to calculate the necessary sample size to find the desired effect size. For a small effect (.1), with a power set at .8, 164 minimum participants were

needed. For more equal conditions of participants, the researchers would require a minimum of 82 heterosexual males and 82 homosexual male participants.

Researchers recruited using a combination of on-campus and off-campus methods. On-campus recruitment included using Radford University's Research Participation Scheduling System (SONA). Researchers used chain sampling for off-campus recruitment to help gain more homosexual participants. The combination of sampling helped ensure that both heterosexual and homosexual males would be sampled. Because chain sampling was used to collect homosexual males, researchers acknowledged possible differences between heterosexual and homosexual participants. Chain sampling included using any social media, contacting LGBT centers on college campuses, and asking participants to pass on the survey if they desired. Since this thesis focused on a specific population, many screening criteria were implemented to ensure that participants would be relevant to the study.

Two-hundred nineteen people completed the survey, with 66 participants (30.1%) removed due to ineligibility for reporting their gender as female, being older than 23 years old, and for reporting that they had never hooked-up before. Of the 66 participants, 29 (44.0%) participants were removed for having too much missing data by not answering either the demographics, the self-reports, or not answering either peer estimation. The final sample consisted of 153 undergraduates. Participants' age range was 18-23 with an average age of 20 years (M = 20.27). For the sample, 127 (83%) participants identified as heterosexual and 26 (17%) homosexual. Reported gender of the participants was 149 (97.4%) male and 4 (2.6%) FTM transmale. Additionally, biological sex was reported as 147 (96.1%) male, and 4 (2.6%) female and two participants did not report their sex (1.3%).

Year in school included 41 (26.8%) first-years, 35 (22.9%) second-years, 26 (17%) third-years, 43 (28.1%) fourth-years, and 8 (5.2%) reported being within their undergraduate career longer than 4 years. There were 92 (60.1%) participants that reported being currently single, 58 (37.9%) were recorded as being in a relationship, 1 (.7%) was engaged, and 2 (1.3%) reported their current relationship status as "other." Recorded family incomes were as follows: 71 (46.4%) stated as having a family income of $100,000 or more; 25 (16.3%) between $76,000-99,999; 21 (13.7%) $46,000-75,999; 22 (14.4%) $19,000-45,999; 11 (7.2%) $9,000-18,999; and 3 (2%) stated their family as making less than $9,000. Race/Ethnicities included 14 (9.2%) African American/Black, 1 (0.7%) American Indian or Alaska Native, 2 (1.3%) Asian Indian, 10 (6.5%) Chinese, 1 (0.7%) Filipino, 2 (1.3%) Japanese, 1 (0.7%) Korean, 2 (1.3%) Vietnamese, 98 (64.1%) White, and 12 (7.8%) reported that they were of mixed races/ethnicities. For a more comprehensive report of all demographic information, see Table 1.

Table 1

Participant Demographics (N= 153)

	N	**%**
Age		
18	23	15
19	30	19.6
20	34	22.2
21	27	17.6
22	27	17.6
23	12	7.8
Biological Sex		
Female	4	2.6
Male	147	96.1
Missing	2	1.3
Gender		
Male	149	97.4
FTM Transmale	4	2.6
Sexual Orientation		
Heterosexual	127	83.0
Homosexual	26	17.0
Relationship Status		
Single	92	60.1
In a Relationship	58	37.9
Engaged	1	0.7
Other	2	1.3
Year in School		
First-year	41	26.8
Second-year	35	22.9
Third-year	26	17.0
Fourth-year	43	28.1
Longer than 4 years	8	5.2
Family Income		
$100,000 or more	71	46.4
$76,000-99,999	25	16.3
$46,000-75,999	21	13.7
$19,000-45,999	22	14.4
$9,000-18,999	11	7.2
Less than $9,000	3	2.0
Race/Ethnicity		
African American, Black	14	9.2
American Indian or Alaska Native	1	0.7
Asian Indian	2	1.3
Chinese	10	6.5
Filipino	1	0.7
Japanese	2	1.3

Korean	1	0.7
Vietnamese	2	1.3
White	98	68.5
Mixed race/ethnicity	12	7.8
Missing	10	6.5

Measures

To measure whether pluralistic ignorance occurred between the individual and their group, the models proposed by Prentice and Miller (1993), Lambert and colleagues (2003), and Reiber and Garcia (2010) were used in the present study. For a list of all items, refer to Appendix A.

Frequency of activity for self. Researchers asked participants to self-report how frequently they engaged in hook-ups using a dropdown question with numerous non-grouped answer responses or a fill-in-the-blank. The item read: "How many sexual partners have you had a hook-up with? (Hook-up is defined as engaging in heavy petting, oral sex, and sexual intercourse without the presence of a committed relationship and without the intention of forming one. This definition includes multiple times with the same partners.)"

Frequency of other. To measure how frequently the participants perceived their peers of a respective or targeted sexual orientation, participants were asked to think about an average homosexual or heterosexual male. The participants would then estimate how frequently the individual engages in hook-ups using the following questions: "Think about an average heterosexual male, how many hook-up partners do you think he has had?" and "Think about an average homosexual male, how many hook-up partners do you think he has had?" The participants were asked to first estimate the sexual orientation they identified as and then the

other orientation. If participants identified as homosexual, they would be asked to estimate for a homosexual male, and later on, a heterosexual male.

Comfort of self. To measure self-reported level of comfort, the current researchers modeled their rating scale from Reiber and Garcia (2010). The item read: "Rate how comfortable *you* are with the following behaviors during a hook-up." Participants were given a numerical scale of -5 (very uncomfortable) to 0 (neutral) to +5 (very comfortable). They rated their level of comfort for the following behaviors: sexual touching above the waist, sexual touching below the waist, oral sex receiver, oral sex performer, intercourse where the participant is being penetrated, and intercourse where the participant penetrates another person.

Comfort of other. For estimating level of comfort for a peer, participants were asked to think about a male of either orientation and rate them with their level of comfort for the same behaviors using the same scale. Those behaviors were sexual touching above the waist, sexual touching below the waist, oral sex receiver, oral sex performer, intercourse where the participant is being penetrated, and intercourse where the participant penetrates another person. They used the same rating scale mentioned previously. This scale ranged from -5 (very uncomfortable) to 0 (neutral) to +5 (very comfortable).

The items were written: "Rate how comfortable you think an average heterosexual male is with the following behaviors during a hook-up," or "Rate how comfortable you think an average homosexual male is with the following behaviors during a hook-up." The blank was filled with the respective sexual orientation.

Since self-report and peer estimations are key to this research, filler questionnaires were placed in-between each targeted section regarding self-reports and estimations of peers to reduce answer bias. When estimating peers, fillers were designed to discourage participants from

copying answers from previous questions. The filler questionnaires included sexual risk and hook-up motivation questions.

Procedure

Researchers used *Qualtrics*, an online survey system, for data collection. The system was accessible through either a recruiting system for Radford University students or through an anonymous link for students at other universities. After using the link, the informed consent page appeared, explaining the details of the study without giving away the true purpose. The true purpose was not initially explained to help avoid any bias. To be able to continue to the demographics portion, participants had to select "Yes" to confirm their agreement to the informed consent.

After reporting their own sexual activity, the participants completed a filler questionnaire regarding personality types. They were asked to estimate for peers of their same sexual orientation and then asked to complete another filler questionnaire that measured their university satisfaction. Finally, the participants were asked to estimate for a peer of a different sexual orientation and then were directed to the debriefing form. The debriefing form provided the participants with information on the researchers and resources for them to use if they had felt any distress or discomfort while answering the survey. The resources included national hotlines and local services, if individuals were Radford University students. Those participants who took the survey received possible compensation. If the participants were Radford University students, they would receive research credit for completing the survey through the online recruiting website. If any participants were eligible for the study and able to complete it, Radford students or otherwise, they were given the chance to enter a drawing for one of two $50 Amazon gift cards.

CHAPTER IV

RESULTS

Within this chapter, results from data collection are stated and displayed with figures and/or tables. This chapter begins by outlining the support or refute of the hypotheses, then discusses exploratory analyses conducted by the researcher. A 2 (between subjects: sexual orientation - heterosexual or homosexual) x 3 (within-subjects: target - self, same sexual orientation peer, or different orientation peer) ANOVA was conducted to test all four predictions.

Hypothesis One

Researchers predicted that regardless of sexual orientation, participants would self-report lower levels of hook-ups and comfort when compared to peers of the same orientation. After conducting the 2 x 3 ANOVA for level of comfort, there was not a main effect for sexual orientation, $F(1,143) = .700$, $p = .404$, $\eta p^2 = .005$, nor a main effect for target, $F(2,142) = 0.096$, $p = .908$, $\eta p^2 = .001$, and no interaction between sexual orientation or target, $F(2,142) = 1.866$, $p = .159$, $\eta p^2 = .026$. Heterosexual participants reported lower estimations of comfort for hook-ups for their same orientation peers ($M = 2.81$, $SD = 1.13$) than their self-reports ($M = 2.99$, $SD = 1.62$) and their estimations for homosexual peers ($M = 3.16$, $SD = 1.78$). Homosexual self-reports ($M = 2.72$, $SD = 1.61$) were not significantly different versus their estimations for their homosexual peers ($M = 2.94$, $SD = 1.03$) and their heterosexual peers ($M = 2.72$, $SD = 0.97$).

For frequency, there was a main effect for sexual orientation $F(1,131) = 9.718$, $p = .002$, $\eta p^2 = .069$, but no main effects for target, $F(2,130) = 1.210$, $p = .301$, $\eta p^2 = .018$, and no interaction between sexual orientation and target estimations, $F(2,130) = .020$, $p = .980$, $\eta p^2 < .001$. For frequency, heterosexual men reported hooking-up more ($M = 11.19$, $SD = 18.37$) than

the frequency they believed their heterosexual peers (*M* = 8.06, *SD* = 5.91) and homosexual peers (*M* = 8.24, *SD* = 6.53) were hooking-up. Homosexual men followed the same patterns between their self-reports (*M* = 17.59, *SD* = 19.34) and their estimations of other homosexual men (*M* = 14.91, *SD* = 14.02) and heterosexual peers (*M* = 15.36, *SD* = 13.34). See Figures 1 and 2 for a visual representation of the main effects and interactions.

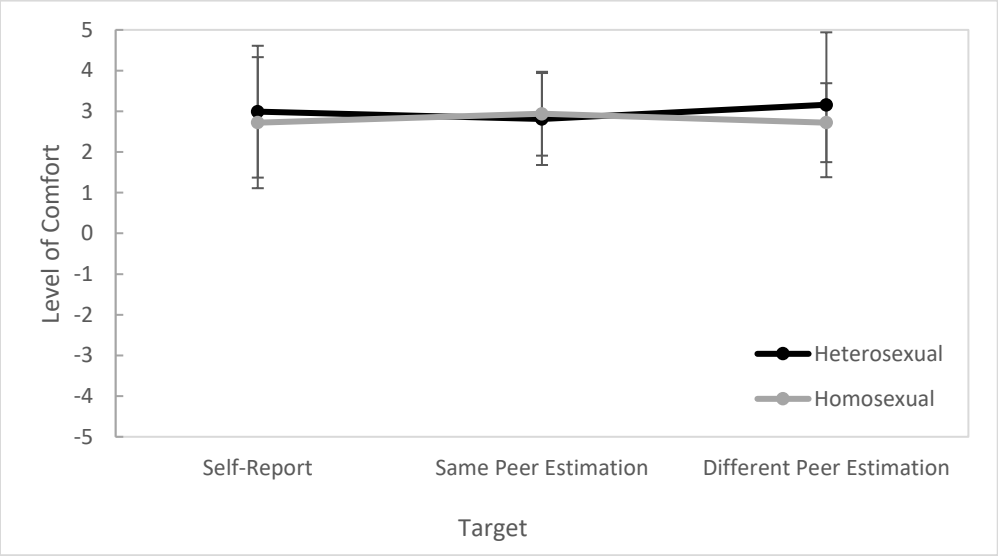

Figure 1. Means for level of comfort for both heterosexual and homosexual participants across all three targets. Higher scores represent being more comfortable.

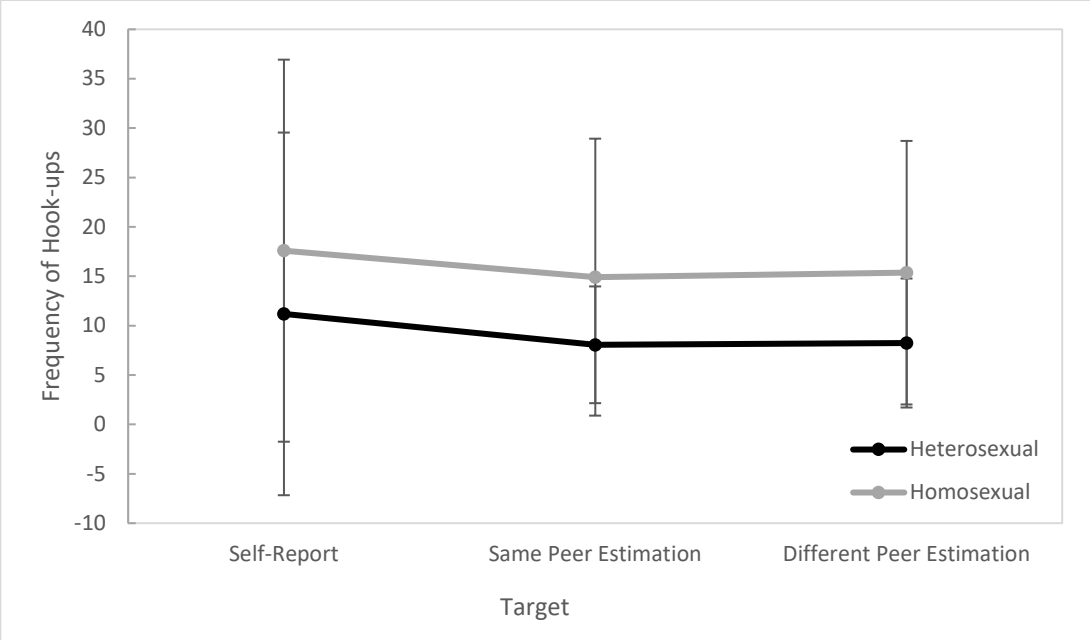

Figure 2. Means for self-reported frequencies of hook-ups and peer estimations. Higher levels represent more hook-ups.

Hypothesis Two

It was predicted that there would be a difference between the number of hook-ups when comparing heterosexual and homosexual men. Findings indicated a significant difference with heterosexual men reporting an average of 11 hook-ups (M = 11.19, SD = 18.37) and homosexual men reporting an average of 17 hook-ups (M = 17.59, SD = 19.34), $F(1,131) = 9.718$, $p = .002$, $\eta p^2 = 0.69$. Figure 3 includes a display of the means and standard deviations for self-reported hook-up frequencies between heterosexual and homosexual males.

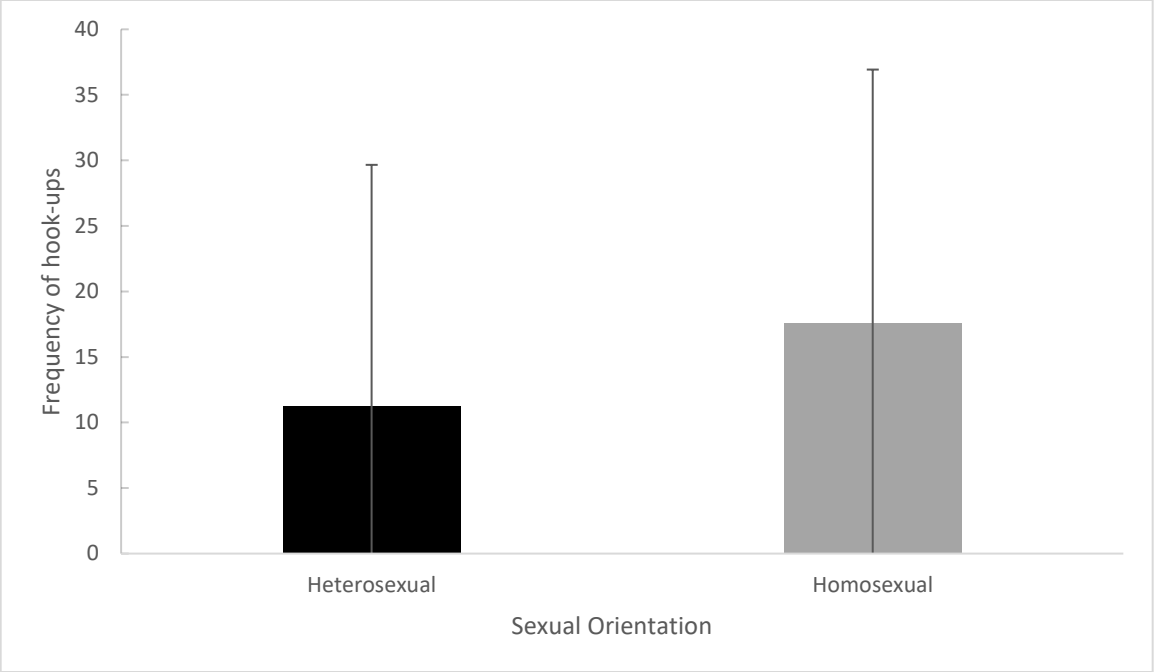

Figure 3. Means for self-reported frequencies of hook-ups between heterosexual and homosexual males. Higher scores indicate more hook-ups.

Hypothesis Three

It was additionally predicted that findings would indicate differences between total level of comfort between heterosexual and homosexual men. There was not a significant difference between comfort for heterosexual men ($M = 2.99$, $SD = 1.62$) and homosexual men ($M = 2.72$, $SD = 1.61$), $F(1,143) = .700$, $p = .404$, $\eta_p^2 = .005$. Figure 4 shows the means and standard deviations for total level of comfort between heterosexual and homosexual males.

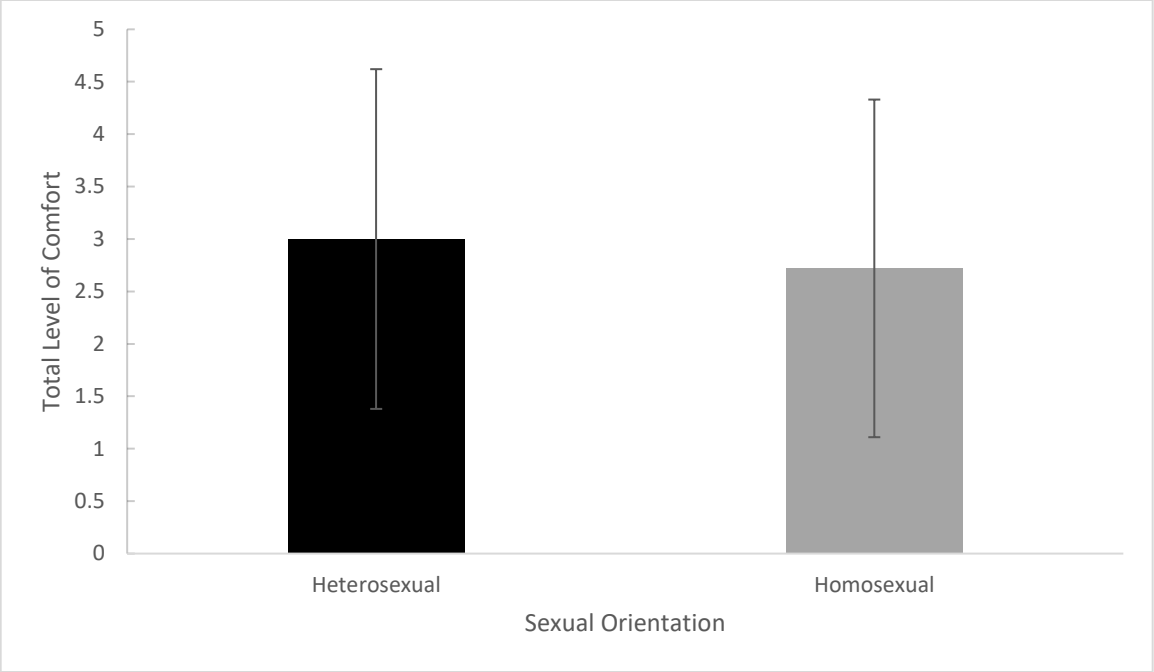

Figure 4. Means and standard deviations for heterosexual and homosexual participants on total level of comfort. Higher scores indicate more feelings of comfort with various sexual behaviors during a hook-up.

Hypothesis Four

Finally, researchers predicted that there would be a difference between the estimations for hook-up frequency and level of comfort when estimating same and different orientation peers. This hypothesis was not supported by the data. Starting with frequency, heterosexual participants did not estimate their heterosexual peers (M = 8.06, SD = 5.91) and homosexual peers (M = 8.24, SD = 6.53) as being different on the amount of times they hook-up. Homosexual participants were similar in estimating that their homosexual peers (M = 14.91, SD = 14.02) do not hook-up any less from their heterosexual peers (M = 15.36, SD = 13.34), $F(2,130) = 1.210$, $p = .301$, $\eta_p^2 = .018$.

For comfort, there were no significant difference for the estimations that heterosexuals made for heterosexual peers (M = 2.81, SD = 1.13) and their homosexual peers (M = 3.16, SD =

1.78). Homosexual participants reported similar estimations for homosexual peers ($M = 2.94$, $SD = 1.03$) and heterosexual peers ($M = 2.72$, $SD = 0.97$), $F(2,142) = 0.096$, $p = .908$, $\eta_p^2 = .001$. Figures 5 and 6 display the means and standard deviations for both level of comfort and frequency respectively.

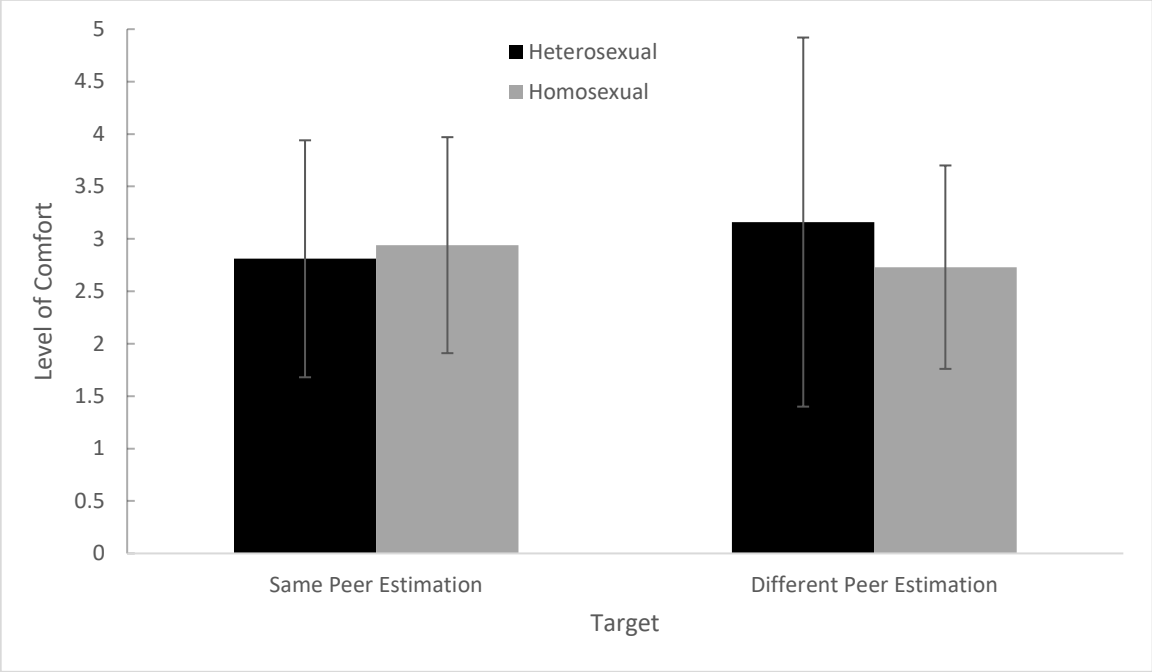

Figure 5. Means and standard deviations for level of comfort estimations between heterosexual and homosexual participants for same and different orientation peers. Higher scores indicate higher levels of comfort.

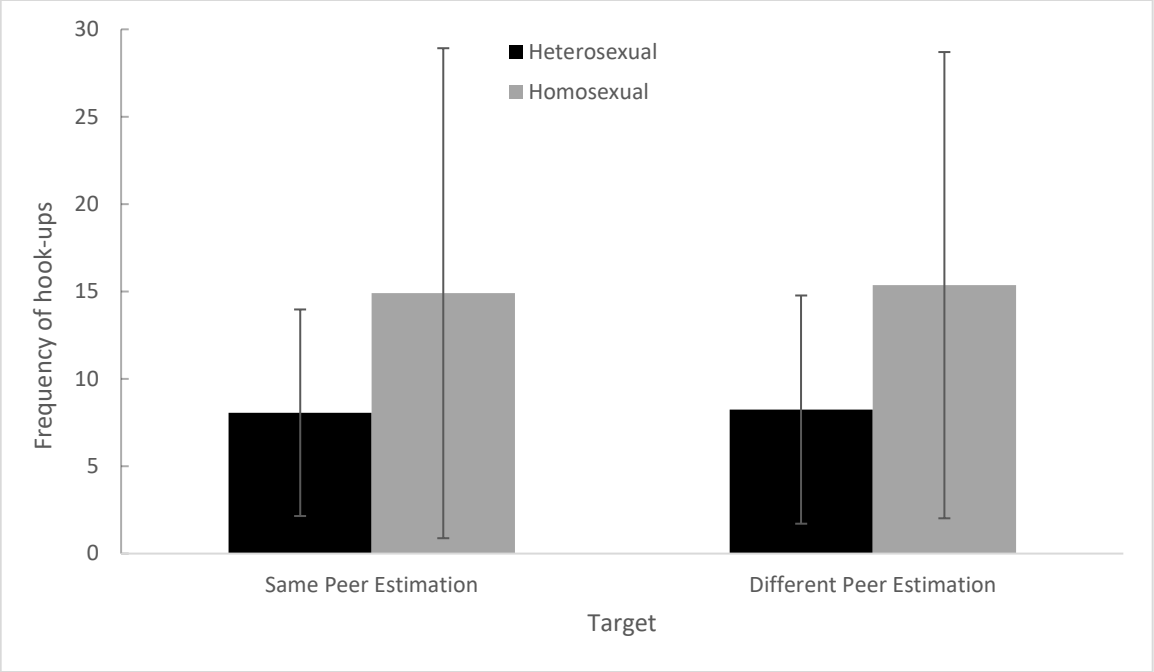

Figure 6. Means and standard deviations for hook-up frequency estimations between heterosexual and homosexual participants for same and different orientation peers. Higher scores indicate higher frequencies of hooking-up.

Exploratory Analyses

Since applying pluralistic ignorance to differences between sexual orientation instead of gender is different than previous literature, researchers looked for a pattern of behavior associated with the level of comfort for various sexual behaviors during a hook-up to find support for pluralistic ignorance. All six items for comfort were separately analyzed using a 2 (between subjects: sexual orientation - heterosexual or homosexual) x 3 (within-subjects: target - self, same sexual orientation peer, or different orientation peer) ANOVA. All of the means for each item are reported in Table 2 below.

Sexual touching above the waist. There was no main effect for target, $F(2,141) = .190$, $p = .601$, $\eta p^2 = .023$, and no main effect for sexual orientation, $F(1,142) = .001$, $p = .971$, $\eta p^2 < .001$. Additionally, there was no interaction between the target and sexual orientation, $F(2,141) =$

1.680, $p = .190$, $\eta p^2 = .023$. Heterosexual participants had self-reported levels of comfort (M = 4.11, SD = 1.68) that were not significantly different from their estimations of heterosexual peers (M = 4.11, SD = 1.38) and homosexual peers (M = 3.54, SD = 2.27). Similarly, the self-reports of the homosexual participants (M = 3.92, SD = 1.85) were not significantly different from the estimations made for their homosexual peers (M = 3.81, SD = 1.63) and heterosexual peers (M = 4.00, SD = 1.44). Figure 7 displays the means on level of comfort for sexual touching above the waist between heterosexual and homosexual participants and their peer estimations.

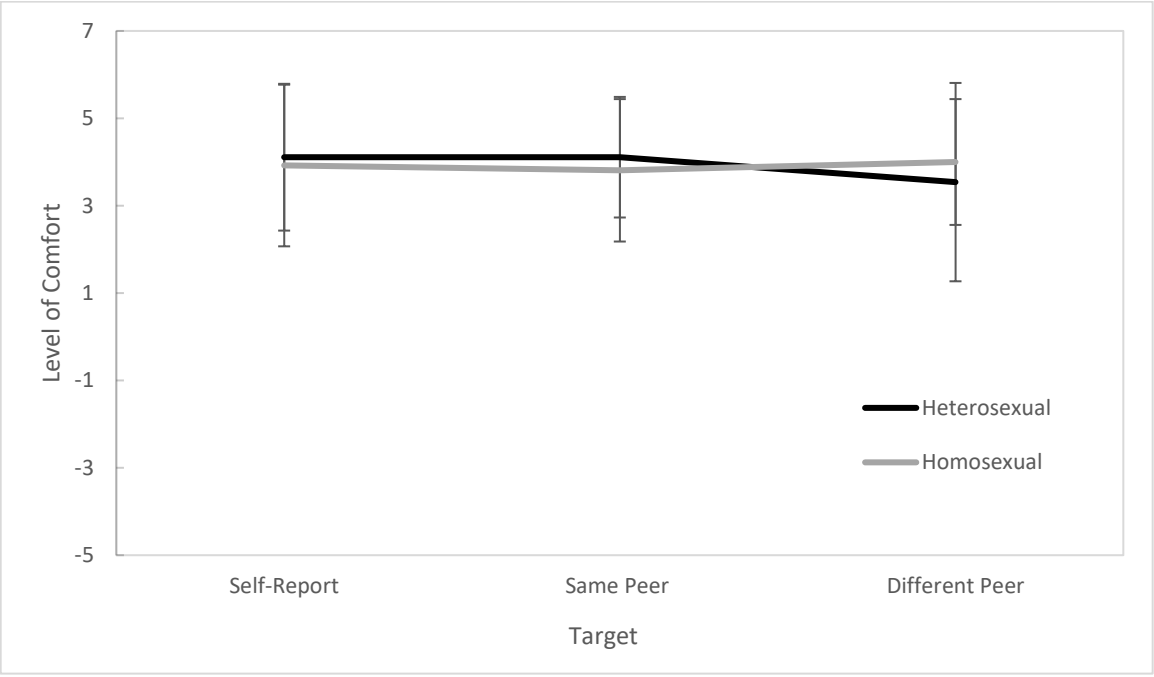

Figure 7. Means on level of comfort with sexual touching above the waist that includes self-reports and peer estimations. Higher scores represent being more comfortable.

Sexual touching below the waist. There was no main effect for target, $F(2,142) = .322$, $p = .725$, $\eta p^2 = .005$, and no main effect for sexual orientation, $F(1,143) = 1.322$, $p = 252$, $\eta p^2 = .009$. Comparatively, there was no interaction between target and sexual orientation either, $F(2,142) = 1.068$, $p = .346$, $\eta p^2 = .015$. The self-reports of heterosexual men (M = 4.04, SD =

1.64) were not significantly different than the estimations reported on their heterosexual peers (*M* = 4.08, *SD* = 1.16) and homosexual peers (*M* = 3.80, *SD* = 1.92). Similarly, the self-reports from the homosexual participants (*M* = 3.42, *SD* = 2.64) were not significantly different from their estimations for homosexual peers (*M* = 3.73, *SD* = 1.28) and heterosexual peers (*M* = 3.92, *SD* = 1.35) on levels of comfort for sexual touching below the waist. Figure 8 presents the means on level of comfort for sexually touching below the waist between heterosexual and homosexual participants, including their reported peer estimations.

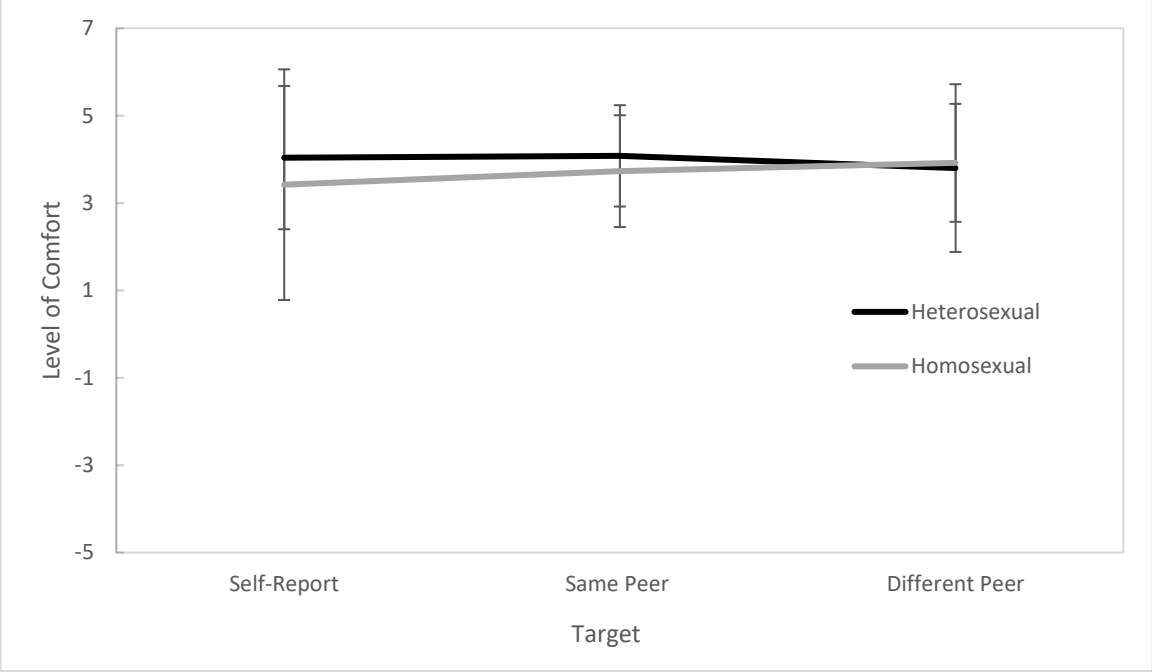

Figure 8. Means on level of comfort with sexual touching below the waist, including self-reports and peer estimations. Higher scores represent being more comfortable.

Performing oral sex. There was no main effect for sexual orientation $F(1,133) = .650$, $p = .422$, $\eta_p^2 = .005$, but there was a main effect for the target $F(2,132) = 5.609$, $p = .005$, $\eta_p^2 = .078$. Additionally, there was a significant interaction between sexual orientation and target $F(2,132) = 22.679$, $p < .001$, $\eta_p^2 = .256$. Researchers tested the significance of target as a main

effect. Results indicated that self-reports (M = 2.87) were higher overall compared to same-peer (M = 1.86) and different peer (M = 1.60) estimations. Researchers used a paired samples t-test to further test the interaction between sexual orientation and target. For heterosexual participants, there was a significant difference when comparing their self-reports (M = 2.37, SD = 2.93) to their same peer estimations (M =0.83, SD = 2.81), t(119) = 4.915, p < .001. There was also a significant difference in their estimations between their same orientation peers (M = 0.83, SD = 2.76) when compared to their different orientation peers (M = 2.59, SD = 2.54), t(114) = -7.14, p < .001. However, there was no difference between their self-reports (M = 2.32, SD = 2.90) and their different orientation estimations (M = 2.60, SD = 2.55), t(112) = -0.85, p = .396.

For homosexual males, they reported their different peers (M = 0.61, SD = 2.44) as being less comfortable than their self-reports (M = 3.39, SD = 2.46), t(22) = 5.53, p < .001. Additionally, there was a significant difference in their estimations for their same orientation peers (M =2.79, SD = 1.84) and different orientation peers (M =0.54, SD = 2.41), t(23) = 4.50, p < .001. In contrast, there was no difference between their self-reports (M = 3.32, SD = 2.48) and their same peer estimations (M =2.76, SD = 1.85), t(24) = 1.14, p = .268. Figure 9 shows the means on level of comfort for performing oral sex during a hook-up between heterosexual and homosexual participants and their peer estimations.

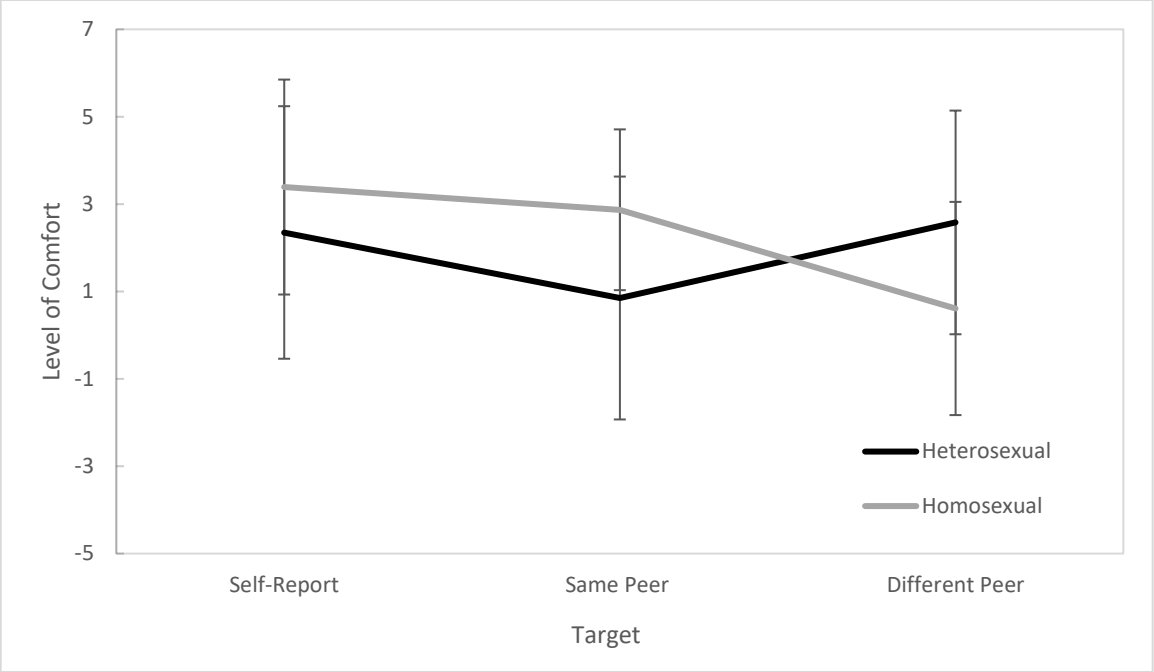

Figure 9. Means on level of comfort for performing oral sex during a hook-up. The figure includes the self-reports and peer estimations from the heterosexual and homosexual participants. Higher scores mean being more comfortable.

Receiving oral sex. There was no main effect for sexual orientation $F(1,143) = 1.304$, $p = .255$, $\eta p^2 = .009$ and no main effect for target $F(2.142) = 1.939$, $p = .148$, $\eta p^2 = .027$. Contrasting to the main effects, a significant interaction was found between sexual orientation and target $F(2,142) = 9.115$, $p < .001$, $\eta p^2 = .114$. A paired samples t-test was conducted to further test the interaction between sexual orientation and target. Heterosexual males reported being less comfortable ($M = 3.89$, $SD = 2.11$) when compared to their same orientation peers ($M = 4.41$, $SD = 1.02$), $t(125) = -2.84$, $p = .005$. Additionally, heterosexual males estimated their same orientation peers as being more comfortable ($M = 4.40$, $SD = 1.04$) than their different orientation peers ($M = 3.80$, $SD = 1.92$), $t(118) = 4.06$, $p < .001$. However, there was no difference between the heterosexual self-reports ($M = 3.87$, $SD = 2.14$) and their estimations for their difference orientation peers ($M = 3.80$, $SD = 1.92$), $t(118) = 0.325$, $p = .746$.

The responses did not differ between homosexual male self-reports (M = 3.23, SD = 2.39) and their same orientation peers (M = 3.54, SD = 1.36), t(25) = -0.589, p = .561. Homosexual males estimated their different orientation peers as being more comfortable (M = 4.38, SD = 0.80) as compared to their self-reports (M = 3.23, SD = 2.39), t(25) = -2.26, p = .033. Comparatively, homosexual males reported their different orientation peers as being more comfortable (M = 4.38, SD = 0.80) than their same orientation peers (M = 3.54, SD = 1.36), t(25) = -3.28, p = .003. Figure 10 represents the means on how comfortable participants were with receiving oral sex during a hook-up and their peer estimations.

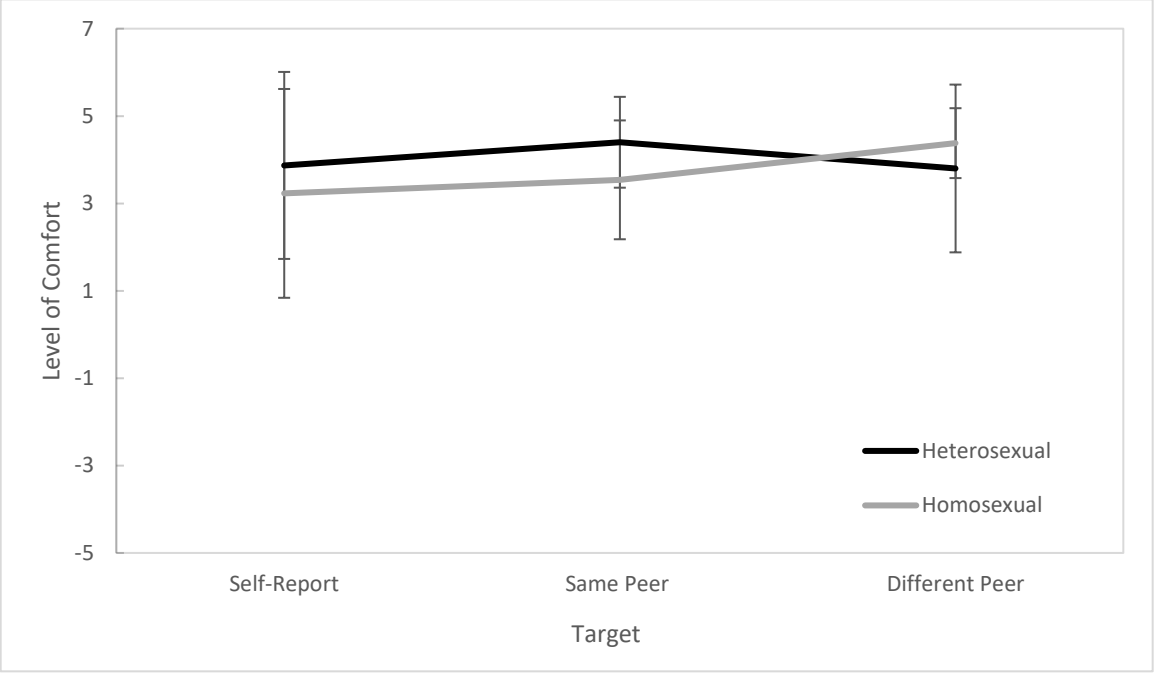

Figure 10. Means on how comfortable the participants are with receiving oral sex during a hook-up. Additionally, the figure includes the peer estimations for how comfortable they believe their peers would be. Higher scores indicate more comfort with the behavior.

Sexual intercourse where the participant is penetrating someone else. There was a significant main effect for sexual orientation and a significant main effect for target $F(2,140)$ = 10.217, $p < .001$, $\eta p^2 = .127$. Comparatively, there was a significant interaction between target

and sexual orientation too, $F(2,140) = 29.83$, $p < .001$, $\eta p^2 = .299$. Main effects testing for sexual orientation indicated that heterosexual males reported higher levels of comfort across all three targets ($M = 3.87$) when compared to homosexual males ($M = 2.44$). For target, participants rated their different peers as having the highest level of comfort ($M = 3.77$) when compared to their same peer estimations ($M = 3.27$) and self-reports ($M = 2.41$). A paired samples t-test was conducted to further test the interaction between sexual orientation and target. There was no difference between heterosexual self-reports ($M = 4.05$, $SD = 1.91$) and how they estimated their same orientation peers ($M = 4.11$, $SD = 1.67$), $t(125) = -.323$, $p = .747$. The heterosexual self-reports were rated as more comfortable ($M = 4.02$, $SD = 1.97$) when compared to their different peer estimations ($M = 3.43$, $SD = 1.93$), $t(116) = 2.51$, $p = .013$. Heterosexual males reported their same orientation peers as more comfortable ($M = 4.15$, $SD = 1.48$) than their different orientation peers ($M = 3.43$, $SD = 1.93$), $t(116) = 4.65$, $p < .001$.

There was no difference between the homosexual self-reports ($M = 0.81$, $SD = 3.56$) and their same peer estimations ($M = 2.38$, $SD = 1.79$), $t(25) = -1.84$, $p = .078$. Homosexual male self-reports indicated being less comfortable ($M = 0.81$, $SD = 3.55$) when compared to their estimations for their different orientation peers ($M = 4.12$, $SD = 1.37$), $t(25) = -4.33$, $p < .001$. Finally, homosexual males reported their same orientation peers as being less comfortable ($M = 2.38$, $SD = 1.79$) than their different orientation peers ($M = 4.11$, $SD = 1.37$). Figure 11 includes the means for how comfortable participants are with engaging in sexual intercourse in which the participant penetrates someone else during a hook-up, including the peer estimations too.

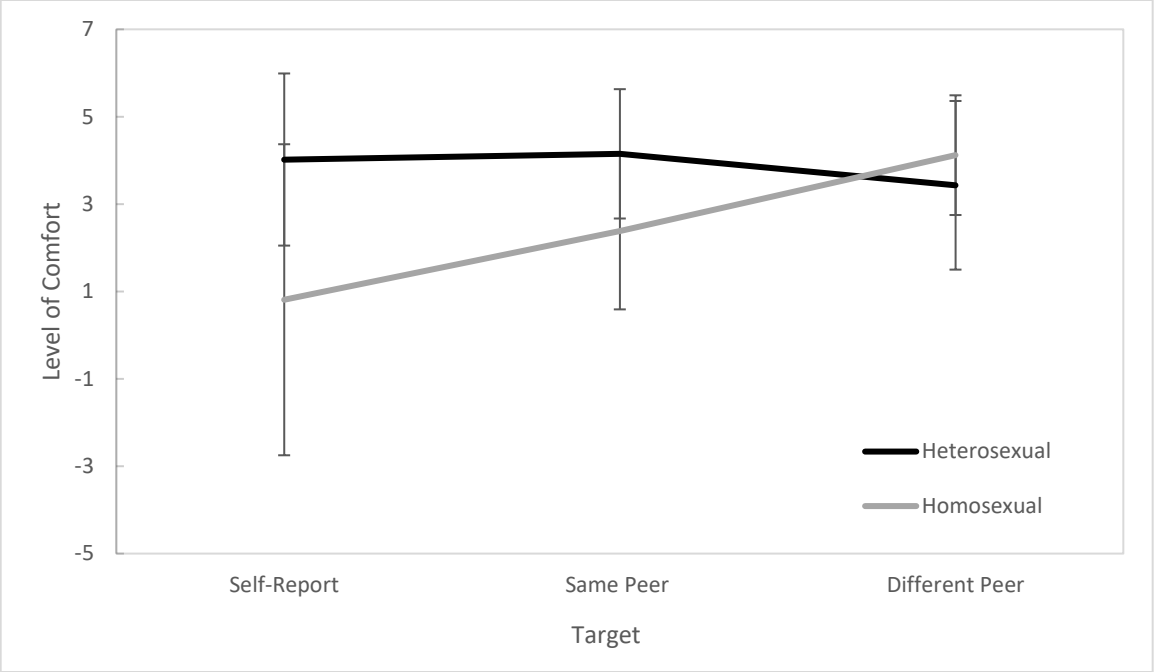

Figure 11. Means self-reported and estimated on how comfortable the participant would be with having sexual intercourse during a hook-up where the participant is penetrating the other person. Higher scores indicate being more comfortable.

Sexual intercourse where the participant is being penetrated by someone else. There was a significant main effect for sexual orientation $F(1,72) = 6.21$, $p = .015$, $\eta p^2 = .079$, but no main effect for the target $F(2,71) = 0.578$, $p = .564$, $\eta p^2 = .016$. However, there was a significant interaction between sexual orientation and the targets $F(2,71) = 39.098$, $p < .001$, $\eta p^2 = .524$. After testing the main effect for sexual orientation, it was revealed that homosexual males reported higher levels of comfort across all three targets ($M = 0.18$) when compared to heterosexual males ($M = -1.33$). A paired samples t-test was conducted to further test the interaction between sexual orientation and target. Heterosexual participants did not report a difference between their self-reports ($M = -3.18$, $SD = 3.13$) and their same peer estimations ($M = -2.72$, $SD = 3.26$), $t(56) = -1.22$, $p = .230$. However, heterosexual males reported their different orientation peers as being more comfortable ($M = 1.90$, $SD = 3.00$) than their self-reports ($M = -$

3.54, *SD* = 2.91), t(66) = -11.02, *p* < .001. Comparatively, heterosexual males reported their same orientation peers as being less comfortable (*M* = -2.81, *SD* = 3.18) when compared to their different orientation peers (*M* = 1.43, *SD* = 3.10), t(76) = -9.52, *p* < .001.

Similarly, homosexual males did not reveal a difference between their self-reports (*M* = 1.72, *SD* = 3.65) and same orientation peers (*M* = 1.36, *SD* = 2.33), t(24) = 0.480, *p* = .636. Homosexual males reported themselves as more comfortable (*M* = 1.70, *SD* = 3.92) when compared to their different orientation peers (*M* = -2.30, *SD* = 2.92), t(19)= 4.60, *p* < .001. Additionally, homosexual males reported their same orientation peers as more comfortable (*M* = 1.15, *SD* = 2.41) than their different orientation peers (*M* =-2.30, *SD* = 2.92), t(19) = 4.62, *p* < .001. Figure 12 represents means on level of comfort for being penetrated by another person during sexual intercourse for a hook-up and the peer estimations reported by the participants.

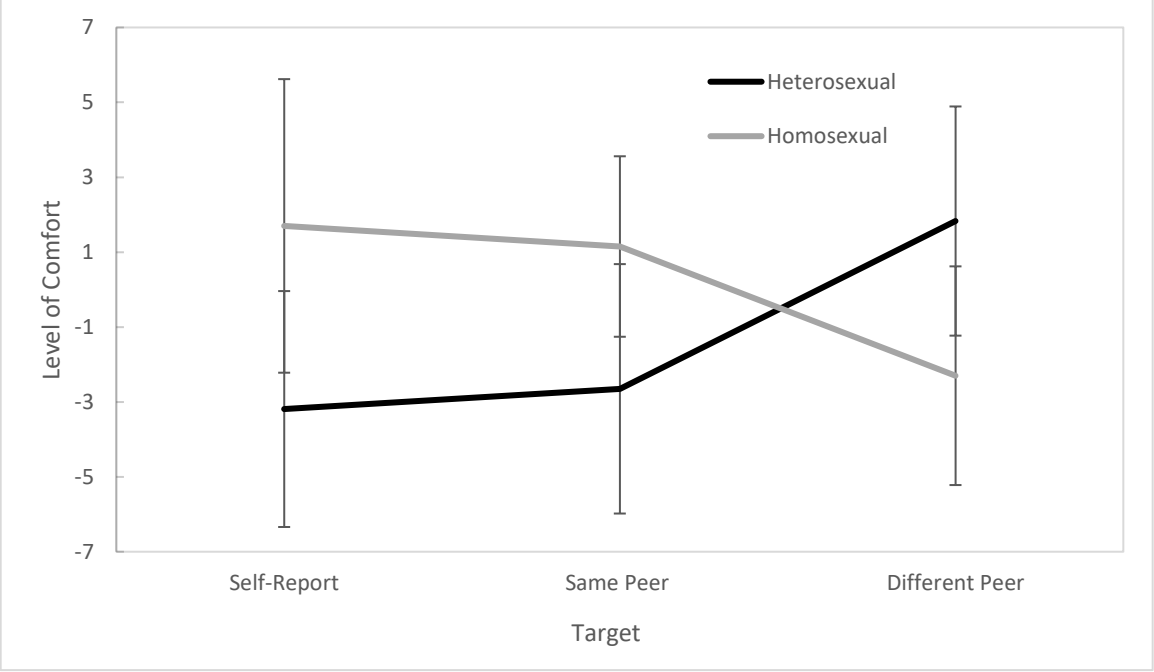

Figure 12. Means for how comfortable the participant would be with being penetrated during sexual intercourse during a hook-up. The figure also contains the peer estimations reported by the participants. Higher scores represent being more comfortable with the behavior.

Table 2

Means for the individual level of comfort items across targets and sexual orientations.

	Target		
Item	Self-Report	Same Peer	Different Peer
Sexual Touching Above Waist			
Heterosexual	4.11	4.11	3.54
Homosexual	3.92	3.81	4.00
Sexual Touching Below Waist			
Heterosexual	4.04	4.08	3.80
Homosexual	3.42	3.73	3.92
Oral Sex Performer			
Heterosexual	2.35	0.85	2.58
Homosexual	3.39	2.87	0.61
Oral Sex Receiver			
Heterosexual	3.87	4.40	3.80
Homosexual	3.23	3.54	4.38
Intercourse, Penetrator			
Heterosexual	4.02	4.15	3.43
Homosexual	0.81	2.38	4.12
Intercourse, Penetrated			
Heterosexual	-3.19	-2.65	1.83
Homosexual	1.70	1.15	-2.30

CHAPTER V

DISCUSSION

This chapter outlines the supported and unsupported hypotheses with an explanation using previous literature to explain the outcome. Then the chapter explains the pattern found in the exploratory analyses. Finally, the chapter concludes with a brief summary of the study.

Support of Original Hypotheses

Hypothesis One, which proposed that men would report higher estimations for both frequency and level of comfort for their same and different orientation peers than their own self-reports regardless of sexual orientation, was not supported by the data. Hypothesis two was the only supported prediction, which proposed that men would report a difference in the amount of self-report hook-up frequencies between heterosexual and homosexual men. Although the participants did not report differences between their self-reports and estimations of their peers, there were differences in the number of hook-ups they reported engaging in between heterosexual and homosexual men. Hypothesis Three, which proposed that there would be a difference in the level of comfort self-reported between heterosexual and homosexual men, was not supported. Finally, Hypothesis Four, which proposed a significant difference between estimations for frequency and level of comfort between the same and different orientation peers, was not supported by the data.

Exploratory analyses. Previous literature has focused on gender as a comparison between the self-reports and estimations for peers but did not take into account the sexual orientation of the individual (Cohen & Shotland, 1996; Lambert et al., 2002; Reiber & Garcia, 2010). Extending from previous literature, the current research wanted to control for gender and use sexual orientation as a comparison to test the effect of pluralistic ignorance. Additionally,

previous authors were inconsistent on whether to average the comfort items to create a total level of comfort or analyze the items separately (Lambert et al., 2002; Reiber & Garcia, 2010). This led the researchers to conduct exploratory analyses to find any patterns between sexual behaviors and sexual orientation that may find statistical significance towards the support of pluralistic ignorance. Sexual touching above the waist and sexual touching below the waist had no differences between sexual orientation for level of comfort, although previous literature has found differences between men and women (Reiber & Garcia, 2010).

How comfortable the participants were with performing oral sex during a hook-up was significant depending on the peer being estimated, but no significance between sexual orientation. When comparing self-reports from heterosexual males to their peer estimations, their homosexual peers were reported as being as comfortable performing oral sex as their self-reports, but their heterosexual peers were the least comfortable. However, homosexual men reported greater comfort with performing oral sex than both their homosexual and heterosexual peers, while reporting their heterosexual peers as being the least comfortable with performing oral sex during a hook-up.

Results from how comfortable the participants are with receiving oral sex during a hook-up followed a similar pattern to previous pluralistic ignorance literature (Lambert et al., 2002; Reiber & Garcia, 2010). Heterosexual males believed their heterosexual peers were more comfortable with receiving oral sex and homosexual males reported both homosexual and heterosexual peers as being more comfortable when compared to their self-reports. Differences between self-reports and estimations suggest a discrepancy between how an individual feels and how they perceive their peers as feeling.

Comparing men between two different sexual orientations led researchers to change the final comfort question, sexual intercourse, into two and more sexual orientation specific items. The first, engaging in sexual intercourse where the participant is penetrating someone else suggested that heterosexual men were less comfortable than their heterosexual peers but more comfortable than their homosexual peers. Homosexual participants reported results similar to previous pluralistic ignorance literature (Lambert et al., 2002; Reiber & Garcia, 2010). They reported lower levels of comfort with penetrating someone in sexual intercourse during a hook-up when compared to their heterosexual and homosexual peers. Researchers speculate the finding as being more aligned with sexual orientation. When engaging in sexual intercourse, heterosexual males are typically the ones penetrating the female partner while homosexual males can either penetrate their partner or be penetrated by their partner.

The final comfort question was related to sexual intercourse, and to adapt for sexual orientation, it was asked how comfortable the participant was with being penetrated by someone else during a hook-up. As expected, heterosexual males reported feeling less comfortable with being penetrated during sexual intercourse than both their heterosexual and homosexual peers. Homosexual males followed the same pattern, perceiving both of their peers as being less comfortable being penetrated during sexual intercourse than they are. This finding still aligns more with sexual orientation since heterosexual males are not typically penetrated during heterosexual intercourse.

Similarity of Results

Finding limited support for the estimations of hook-up frequency and level of comfort for same and different orientation peers when compared to the self-reports regardless of sexual orientation is unexpected. It is unexpected because previous literature on pluralistic ignorance in

general topics (Hines et al., 2002; Miller & McFarland, 1987; Prentice & Miller, 1993) and for sexual behaviors (Boon et al., 2014; Cohen & Shotland, 1996; Lambert et al., 2002) have found a difference, and more specifically with the self-reports being lower, between the responses self-reported by the participants and their estimations for their peers. For the supported hypothesis, heterosexual males reported having engaged in 11 hook-ups while homosexual males reported having engaged in 17, which aligns with the findings of previous researchers who have found that homosexual men engaged in more hook-ups and sexual behavior when compared to heterosexual men (Dodge et al., 2016; Hall et al., 2017; Oswalt & Wyatt, 2013). Hypothesis three was not supported by the data as well. Using sexual orientation as a comparison between peers instead of gender reveals a discrepancy between the current findings and previous findings. Previous literature has found that level of comfort was different between men and women (Lambert et al., 2002; Reiber & Garcia, 2010) but the current research did not find any overall differences on levels of comfort between heterosexual and homosexual men. However, the researchers performed an exploratory analysis by comparing the comfort items, without averaging them, and found some statistically significant differences that reveal limited support. One result that was interesting to the researcher was the support for pluralistic ignorance receiving oral sex but not performing oral sex. Literature has shown a difference between male and female oral sex during a hook-up. England, Shafer, and Fogarty (2007) reported that for participants who had hooked-up, only forty-percent of both men and women received oral sex while women only receiving oral sex was sixteen-percent as compared to forty-percent were men were only receiving oral sex during a hook-up. This finding, suggests that heterosexual men do not perform oral sex during a hook-up as often and therefore, are less comfortable with it when compared to receiving oral sex.

Interpretation

Using previous literature, current researchers argue that since other authors (Cohen & Shotland, 1996; Lambert et al., 2002; Reiber & Garcia, 2010) used gender as a between-subjects factor instead of sexual orientation, the current findings may be explained with previously mentioned mating patterns. Previous researchers found males as being more likely to engage in sexual encounters because they are more easily aroused and more socialized to initiate sex, and since both participants shared the same gender, the participants may assume that their peers are similar to them in sexual encounters instead of being compared to another gender (female) that have different gender roles (Gotta et al., 2011; Howard & Perilloux, 2016). Howard and Perilloux (2016) also argued that because of mating psychology, men would be more willing to have sex while women are more selective. When males estimated their female peers, a discrepancy revealed pluralistic ignorance, however, when males compared other males, there was no significant difference found. For estimating frequency of peers, Hall and colleagues (2017) were the only previous authors to find no difference in how many hook-ups heterosexual and homosexual males "may" engage in, which could explain the similarity for their self-reports and peer estimations.

There are limitations to this research that may explain the unexpected findings. Limitations of this research include a) sample size, b) the format for some items, c) the exclusion criteria, and d) the novelty of the theory application.

Sample size. A small sample size limits the possibility of finding differences by not having enough participants to find closer and more accurate averages. When there are more participants, the averages of both frequency and comfort can be considered more representative of the population. There was a small sample to compare heterosexual and homosexual males on

the various questions, and while using a college sample, a third of the participants were removed from the sample and of the third, almost half (40.0%) were removed because of missing data that would not allow for a comparison between self-reports or a single peer estimation. Although the sample size was small, the researchers found small effect sizes, suggesting that while obtaining a larger sample may yield a significant difference, the effect size may remain small.

Format of items. For the self-reported frequency item, researchers had an open response box, and some participants had placed a range or an estimate, so the researchers had to average the response to systematically create a more definitive response. Since the sexual intercourse questions of comfort were changed to become more sexual orientation specific, it could have created outliers between the participants. Heterosexual and homosexual men can have different sexual intercourse experiences. While in heterosexual intercourse, the male is typically the one penetrating their female partner, but in homosexual intercourse, either partner can penetrate or be penetrated by their male partner. Since the behaviors are not as typical for each sexual orientation, the reported level of comfort may have created a polarized effect between heterosexual and homosexual responses.

Exclusion criteria. The numerous exclusion criteria created a narrow eligibility for participants, especially homosexual males, which can be a difficult population to sample before adding exclusion criteria that may deter them from participating. Researchers acknowledge that narrowing the eligibility helped control for any extraneous influence (i.e., age, setting, experience), but affected the population that was able to be sampled.

Sexual orientation as a comparison. Finally, using sexual orientation as a comparison created a novel and unknown outcome that could only be predicted from previous literature that used gender to compare.

Generalizability

Findings from this study suggest that using sexual orientation to understand a misconception between individuals and their peers' behaviors may not be found if replicated. Current researchers do acknowledge the lack of literature between pluralistic ignorance and sexual orientation and continual testing of the theory with sexual orientation may result in different results. A different result could reveal itself within another set of groups, settings, or format. If the comparison between the self-reports and peers uses a different variable (i.e., sexual orientation, gender, in-group vs. out-group), different results may be found. If testing outside of the college population, the current results may not generalize to those results. If the questions are less specific or do not include hook-up behaviors, those researchers may find a different result.

Implications

Future directions may use less strict exclusion criteria to create a larger sample population that may help avoid having a low sample size. Having a larger sample size may allow for more differences to reveal pluralistic ignorance. Other researchers may want to compare heterosexual and homosexual males on general sexual behaviors instead of hook-ups. General sexual behaviors could leave a stronger misconception instead of narrowing the behaviors to a hook-up. As well, future researchers may only ask the participants to estimate for one peer instead of two. Having two peers could have led participants to estimate them similarly instead of differently.

Conclusion

Pluralistic ignorance is a social psychological theory in which a person of a group perceives the other members as different from them and has been applied to a variety of topics, including sexual behaviors (Boon et al., 2014; Cohen & Shotland, 1996; Lambert et al., 2002).

Although all previous literature compared across gender, this research sought to extend previous literature by using sexual orientation as a comparison. The yielded results only supported a difference in the amount each orientation engaged in a hook-up, but not in how they perceived their peers. Future research may ask the participants to estimate for a single peer or for more general sexual behaviors.

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Appendix A

Level of Comfort Items

Each item should be rated with an 11-point Likert Scale with anchor points below.
-5 Very uncomfortable
0 Neither comfortable nor uncomfortable
+5 Very comfortable

Self
Prompt:
Rate how comfortable *you* are with the following behaviors during a hook up? (hook-up is defined as engaging in heavy petting, oral sex, and sexual intercourse without the presence of a committed relationship and without the intention of forming one; Includes multiple times with the same partners).

Items:
Sexual touching, above the waist
Sexual touching, below the waist
Oral sex, performer
Oral sex, receiver
Sexual intercourse where you are penetrating
Sexual intercourse where you are being penetrated

Peer
Prompt:
Rate how comfortable you think an average _____ male is with the following behaviors during a hook up. (hook-up is defined as engaging in heavy petting, oral sex, and sexual intercourse without the presence of a committed relationship and without the intention of forming one; Includes multiple times with the same partners).

Items:
Sexual touching, above the waist
Sexual touching, below the waist
Oral sex, performer
Oral sex, receiver
Sexual intercourse where they are penetrating
Sexual intercourse where they are being penetrated

Appendix B

Frequency of Hook-up Items

Each item should have an open answering option for an accurate score.

Self

Prompt:

How many partners have you had a hook-up with? (hook-up is defined as engaging in heavy petting, oral sex, and sexual intercourse without the presence of a committed relationship and without the intention of forming one; Includes multiple times with the same partners).

Peer

Prompt:

Thank about an average _____ male, how many hook-up partners do you think he has had? (hook-up is defined as engaging in heavy petting, oral sex, and sexual intercourse without the presence of a committed relationship and without the intention of forming one; Includes multiple times with the same partners).

Appendix C

Sample Recruitment Email

Hello!

My name is Charles Woods and I am a Master's student in the Experimental Psychology Program at Radford University. I am working with Dr. Tracy Cohn, Associate Professor of Psychology at Radford, and we are examining "Male student profiles". This profile will encompass how men experience university-life, personality, their sexual behaviors, and what they think about others.

To be eligible for participation in the study individuals must:

- Gender identity as male
- Be an undergraduate
- Be between the ages of 18-23
- Identify as heterosexual, homosexual, or bisexual
- Have engaged in at least one hook-up

Study participation is confidential and includes an online survey that will take around 30 minutes to complete. For participating, there is a chance to win 1 of 2, $50 Amazon gift cards!

If you are eligible and would like to participate, please use the link below.

http://radford.qualtrics.com/jfe/form/SV_42Uz72KcCx639vT

IRB Reference Number: FY18-060

If you know of anyone that would qualify with this study and would be interested in participating, please forward the information and link to them!

Any questions regarding the study can be directed to me (cwoods20@radford.edu).

Thank you so much for your time,

Charles Woods

Appendix D

Informed Consent Page

RADFORD UNIVERSITY

You are invited to participate in a research survey, entitled "Male Student Profile." The study is being conducted by Charles Woods, B.A. and Tracy Cohn, Ph.D. of Radford University, PO Box 6946, Radford, VA 24141, 1-540-230-5958, tcohn@radford.edu.

The purpose of this study is to examine different aspects of male students' life. You will be asked questions regarding a variety of topics (personality, university climate, sexual history, etc.) to capture a well-rounded profile. Additionally, there may be some language within questions that participants may find offensive. Those questions are not required to complete the survey, so please skip if there is any discomfort. Your participation in the survey will contribute to a better understanding of male sexual behaviors and sexual risk. We estimate that it will take about 30-45 minutes of your time to complete the questionnaire. You are free to contact the investigator at the above address and phone number to discuss the survey.

Risks to participants are considered more than minimal risk. Participants will encounter questions (i.e., history of sexual behavior, drug use, etc.) that may elicit feelings of discomfort due to the sensitive topic being examined by the researchers. Both Radford University resources and resources for other individuals will be provided to participants at the end of the study, if they feel they need to speak to someone about their feelings or responses. No identifying information will be collected from any participants. A limited number of research team members will have access to the data during data collection.

Your participation in this survey is voluntary. You may decline to answer any question and you have the right to withdraw from participation at any time without penalty. If you wish to withdraw from the study or have any questions, contact the investigator listed above. **To fit the criteria of the study, you must identify as male, identify as either heterosexual, homosexual, or bisexual, must currently be in enrolled in undergraduate college,** *engaged in at least one hook-up,* **and be 18 years to 23 years old.**

At the end of the survey, there is an option to enter your name in for one of two $50 Amazon gift cards. Simply leave your information (it will not be connected to your responses) and the researchers will notify you if you have won. If you are a Radford University student, you will also receive two (2) SONA credits for participation.

If you have any questions, please call **Dr. Tracy Cohn** at **1-540-230-5958** or send an email to **tcohn@radford.edu**. You may also request a hard copy of the survey from the contact information above.

This study was approved by the Radford University Committee for the Review of Human Subjects Research. If you have questions or concerns about your rights as a research subject or have complaints about this study, you should contact Dr. Laura J. Jacobsen, Interim Dean, College of Graduate Studies and Research, Radford University, ljacobsen@radford.edu, 1-540-831-5470.

If you agree to participate, please select the answer option "Yes". If you do not wish to participate, either select "No" or simply close out of the browser window.

Thank you.

Appendix E

Copy of Survey

Male Student Profile

Start of Block: Informed Consent

IC

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If you agree to participate, please select the answer option "Yes". If you do not wish to participate, either select "No" or simply close out of the browser window.

Thank you.

- ○ Yes, I agree to take part of the study
- ○ No, I do not wish to take part in the study

End of Block: Informed Consent

Start of Block: Demographics

Gender Which gender do you identify as?

- ○ Male
- ○ Female
- ○ FTM Transmale
- ○ MTF Transfemale

Age What is your age?

_____

Sex What is your biological sex?

- ○ Male
- ○ Female
- ○ Other

SO What is your sexual orientation?

- ○ Heterosexual
- ○ Homosexual
- ○ Bisexual

CRS What is your current relationship status?

- ○ Single
- ○ In a relationship
- ○ Engaged
- ○ Married
- ○ Divorced
- ○ Widowed
- ○ Other

Degree What year undergraduate studies are you in?

- ○ First-year
- ○ Second-year
- ○ Third-year
- ○ Fourth-year
- ○ Longer than 4 years
- ○ I am not within my undergraduate career

Social What is your family income?

- ○ $100,000 or more
- ○ $76,000-$99,999
- ○ $46,000-$75,999
- ○ $19,000-$45,999
- ○ $9,000-$18,999
- ○ Less than $9,000

Race What is your race? (Check all that apply)

- [ ] White
- [ ] Black, African American
- [ ] American Indian or Alaska Native
- [ ] Asian Indian
- [ ] Native Hawaiian or Pacific Islander
- [ ] Chinese
- [ ] Korean
- [ ] Filipino
- [ ] Vietnamese
- [ ] Other Asian
- [ ] Guamanian or Chamorro
- [ ] Samoan
- [ ] Japanese
- [ ] Other Pacific Islander

HLS Are you of Hispanic, Latino, or Spanish Origin?

- ○ No, not of Hispanic, Latino, or Spanish origin
- ○ Yes, Mexican, Mexican American, Chicano
- ○ Yes, Puerto Rican
- ○ Yes, Cuban
- ○ Yes, another Hispanic, Latino, or Spanish Origin

Page Break

Q71 How many partners have you had a hook-up with? (hook-up is defined as engaging in heavy petting, oral sex, and sexual intercourse without the presence of a committed relationship and without the intention of forming one; Includes multiple times with the same partners)

_____

End of Block: Demographics

Start of Block: Self-Comfort

Self-Comfort Rate how comfortable *you* are with the following behaviors during a hook up? (hook-up is defined as engaging in heavy petting, oral sex, and sexual intercourse without the presence of a committed relationship and without the intention of forming one; Includes multiple times with the same partners)

Very Uncomfortable							Neither Comfortable nor Uncomfortable							Very Comfortable
-5	-5	-4	-4	-3	-3	-2	-2	-1	-1	0	1	1	2	2	3	3	4	4	5

Sexual Touching, Above the waist	
Sexual Touching, Below the Waist	
Oral sex, performer	
Oral sex, receiver	
Sexual intercourse, where you are penetrating	
Sexual intercourse, where you are being penetrated	

End of Block: Self-Comfort

Start of Block: IPIP Part 1

IPIP INST The following pages contain phrases describing people's behaviors. Please use the rating scale under each phrase to describe how accurately each statement describes you. Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same sex as you are, and roughly your same age. So that you can describe yourself in an honest manner, your responses will be kept in absolute confidence. Please read each statement carefully, and then click the circle that corresponds to the accuracy of the statement.Bottom of Form

IPIP1 Am the life of the party.

- ○ Very Inaccurate
- ○ Moderately Inaccurate
- ○ Neither Inaccurate nor Accurate
- ○ Moderately Accurate
- ○ Very Accurate

IPIP2 Sympathize with others' feelings.

- ○ Very Inaccurate
- ○ Moderately Inaccurate
- ○ Neither Inaccurate nor Accurate
- ○ Moderately Accurate
- ○ Very Accurate

IPIP3 Get chores done right away.

- ○ Very Inaccurate
- ○ Moderately Inaccurate
- ○ Neither Inaccurate nor Accurate
- ○ Moderately Accurate
- ○ Very Accurate

IPIP4 Have frequent mood swings.

- ○ Very Inaccurate
- ○ Moderately Inaccurate
- ○ Neither Inaccurate nor Accurate
- ○ Moderately Accurate
- ○ Very Accurate

IPIP5 Have a vivid imagination.

- ○ Very Inaccurate
- ○ Moderately Inaccurate
- ○ Neither Inaccurate nor Accurate
- ○ Moderately Accurate
- ○ Very Accurate

Page Break

IPIP INST The following pages contain phrases describing people's behaviors. Please use the rating scale under each phrase to describe how accurately each statement describes you. Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same sex as you are, and roughly your same age. So that you can describe yourself in an honest manner, your responses will be kept in absolute confidence. Please read each statement carefully, and then click the circle that corresponds to the accuracy of the statement.Bottom of Form

IPIP6 Don't talk a lot.

- ○ Very Inaccurate
- ○ Moderately Inaccurate
- ○ Neither Inaccurate nor Accurate
- ○ Moderately Accurate
- ○ Very Accurate

IPIP7 Am not interested in other people's problems.

- ○ Very Inaccurate
- ○ Moderately Inaccurate
- ○ Neither Inaccurate nor Accurate
- ○ Moderately Accurate
- ○ Very Accurate

IPIP8 Often forget to put things back in their proper place.

- ○ Very Inaccurate
- ○ Moderately Inaccurate
- ○ Neither Inaccurate nor Accurate
- ○ Moderately Accurate
- ○ Very Accurate

IPIP9 Am relaxed most of the time.

- ○ Very Inaccurate
- ○ Moderately Inaccurate
- ○ Neither Inaccurate nor Accurate
- ○ Moderately Accurate
- ○ Very Accurate

IPIP10 Am not interested in abstract ideas.

- Very Inaccurate
- Moderately Inaccurate
- Neither Inaccurate nor Accurate
- Moderately Accurate
- Very Accurate

Page Break

IPIP INST The following pages contain phrases describing people's behaviors. Please use the rating scale under each phrase to describe how accurately each statement describes you. Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same sex as you are, and roughly your same age. So that you can describe yourself in an honest manner, your responses will be kept in absolute confidence. Please read each statement carefully, and then click the circle that corresponds to the accuracy of the statement.Bottom of Form

IPIP11 Talk to a lot of different people at parties.

- Very Inaccurate
- Moderately Inaccurate
- Neither Inaccurate nor Accurate
- Moderately Accurate
- Very Accurate

IPIP12 Feel others' emotions.

- Very Inaccurate
- Moderately Inaccurate
- Neither Inaccurate nor Accurate
- Moderately Accurate
- Very Accurate

IPIP13 Like order.

- Very Inaccurate
- Moderately Inaccurate
- Neither Inaccurate nor Accurate
- Moderately Accurate
- Very Accurate

IPIP14 Get upset easily.

- Very Inaccurate
- Moderately Inaccurate
- Neither Inaccurate nor Accurate
- Moderately Accurate
- Very Accurate

IPIP15 Have difficulty understanding abstract ideas.

- Very Inaccurate
- Moderately Inaccurate
- Neither Inaccurate nor Accurate
- Moderately Accurate
- Very Accurate

Page Break

IPIP INST The following pages contain phrases describing people's behaviors. Please use the rating scale under each phrase to describe how accurately each statement describes you. Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same sex as you are, and roughly your same age. So that you can describe yourself in an honest manner, your responses will be kept in absolute confidence. Please read each statement carefully, and then click the circle that corresponds to the accuracy of the statement.Bottom of Form

Q112 Keep in the background.

- Very Inaccurate
- Moderately Inaccurate
- Neither Inaccurate nor Accurate
- Moderately Accurate
- Very Accurate

Q113 Am not really interested in others.

- Very Inaccurate
- Moderately Inaccurate
- Neither Inaccurate nor Accurate
- Moderately Accurate
- Very Accurate

Q114 Make a mess of things.

- Very Inaccurate
- Moderately Inaccurate
- Neither Inaccurate nor Accurate
- Moderately Accurate
- Very Accurate

Q115 Seldom feel blue.

- Very Inaccurate
- Moderately Inaccurate
- Neither Inaccurate nor Accurate
- Moderately Accurate
- Very Accurate

Q116 Do not have a good imagination.

- ○ Very Inaccurate
- ○ Moderately Inaccurate
- ○ Neither Inaccurate nor Accurate
- ○ Moderately Accurate
- ○ Very Accurate

End of Block: IPIP Part 1

Start of Block: Peer Rate

Q77 Think about an average heterosexual male, how many hook-up partners do you think he has had? (hook-up is defined as engaging in heavy petting, oral sex, and sexual intercourse without the presence of a committed relationship and without the intention of forming one; Includes multiple times with the same partners)

▼0 ... 100+

Q12 Rate how comfortable you *think* an **average heterosexual male** is with the following behaviors during a hook up. (hook-up is defined as engaging in heavy petting, oral sex, and sexual intercourse without the presence of a committed relationship and without the intention of forming one; Includes multiple times with the same partners)

Very Uncomfortable							Neither Comfortable nor Uncomfortable							Very Comfortable
-5	-5	-4	-4	-3	-3	-2	-2	-1	-1	0	1	1	2	2	3	3	4	4	5

Sexual Touching, Above the waist	
Sexual Touching, Below the Waist	
Oral sex, performer	
Oral sex, receiver	
Sexual intercourse, where they are penetrating	
Sexual intercourse, where they are being penetrated	

Q82 Think about an average homosexual male, how many hook-up partners do you think he has had? (hook-up is defined as engaging in heavy petting, oral sex, and sexual intercourse without the presence of a committed relationship and without the intention of forming one; Includes multiple times with the same partners)

▼0 ... 100+

Q13 Rate how comfortable you *think* an average **homosexual male** is with the following behaviors during a hook up. (hook-up is defined as engaging in heavy petting, oral sex, and sexual intercourse without the presence of a committed relationship and without the intention of forming one; Includes multiple times with the same partners)

Very Uncomfortable								Neither Comfortable nor Uncomfortable								Very Comfortable
-5	-5	-4	-4	-3	-3	-2	-2	-1	-1	0	1	1	2	2	3	3	4	4	5

Sexual Touching, Above the waist	
Sexual Touching, Below the Waist	
Oral sex, performer	
Oral sex, receiver	
Sexual intercourse, where they are penetrating	
Sexual intercourse, where they are being penetrated	

Q83 Think about an average bisexual male, how many hook-up partners do you think he has had? (hook-up is defined as engaging in heavy petting, oral sex, and sexual intercourse without the presence of a committed relationship and without the intention of forming one; Includes multiple times with the same partners)

▼0 ... 100+

Q23 Rate how comfortable you *think* an **average bisexual male** is with the following behaviors during a hook up. (hook-up is defined as engaging in heavy petting, oral sex, and sexual intercourse without the presence of a committed relationship and without the intention of forming one; Includes multiple times with the same partners)

Very Uncomfortable							Neither Comfortable nor Uncomfortable							Very Comfortable
-5	-5	-4	-4	-3	-3	-2	-2	-1	-1	0	1	1	2	2	3	3	4	4	5

Sexual Touching, Above the waist	
Sexual Touching, Below the Waist	
Oral sex, performer	
Oral sex, receiver	
Sexual intercourse, where they are penetrating	
Sexual intercourse, where they are being penetrated	

End of Block: Peer Rate

Start of Block: Student Resources

Q132 How helpful or unhelpful is your academic advisor?

- Extremely helpful
- Moderately helpful
- Slightly helpful
- Neither helpful nor unhelpful
- Slightly unhelpful
- Moderately unhelpful
- Extremely unhelpful

Q133 How easy or difficult is it to obtain the resources that you need from your university library system?

- Extremely easy
- Moderately easy
- Slightly easy
- Neither easy nor difficult
- Slightly difficult
- Moderately difficult
- Extremely difficult

Q134 How useful are the services provided at the on-campus career center?

- Extremely useful
- Very useful
- Moderately useful
- Slightly useful
- Not useful at all

Q135 How helpful or unhelpful is the staff at the on-campus health center?

- ○ Extremely helpful
- ○ Moderately helpful
- ○ Slightly helpful
- ○ Neither helpful nor unhelpful
- ○ Slightly unhelpful
- ○ Moderately unhelpful
- ○ Extremely unhelpful

End of Block: Student Resources

Start of Block: Perception of School Culture/Atmosphere

Q127 How well maintained are the facilities at your university?

- ○ Extremely well
- ○ Very well
- ○ Moderately well
- ○ Slightly well
- ○ Not well at all

Q128 How safe or unsafe do you feel on campus?

- Extremely safe
- Moderately safe
- Slightly safe
- Neither safe nor unsafe
- Slightly unsafe
- Moderately unsafe
- Extremely unsafe

Q129 How crowded are the on-campus dormitories at your university?

- Extremely crowded
- Very crowded
- Moderately crowded
- Slightly crowded
- Not crowded at all

Q130 How good or bad is the quality of the food served at your university?

- Extremely good
- Moderately good
- Slightly good
- Neither good nor bad
- Slightly bad
- Moderately bad
- Extremely bad

Q131 How satisfied or dissatisfied were you with any university sponsored extracurricular activities at your university?

- Very Dissatisfied
- Dissatisfied
- Somewhat Dissatisfied
- Neutral
- Somewhat Satisfied
- Satisfied
- Very Satisfied

End of Block: Perception of School Culture/Atmosphere

Start of Block: Overall satisfaction

Q124 Overall, how satisfied or dissatisfied are you with your experience at your university?

- ○ Very Dissatisfied
- ○ Dissatisfied
- ○ Somewhat Dissatisfied
- ○ Neutral
- ○ Somewhat Satisfied
- ○ Satisfied
- ○ Very Satisfied

Q125 How likely are you to attend your university next year?

- ○ Very Unlikely
- ○ Unlikely
- ○ Somewhat Unlikely
- ○ Undecided
- ○ Somewhat Likely
- ○ Likely
- ○ Very Likely

Q126 How likely are you to recommend your university to friends or colleagues?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

End of Block: Overall satisfaction

Start of Block: Education/Coursework

Q118 Overall, how well do the professors at your university teach?

- Extremely well
- Very well
- Moderately well
- Slightly well
- Not well at all

Q119 How effective is the teaching within your major at your university?

- ○ Extremely effective
- ○ Very effective
- ○ Moderately effective
- ○ Slightly effective
- ○ Not effective at all

Q120 How effective is the teaching outside your major at your university?

- ○ Extremely effective
- ○ Very effective
- ○ Moderately effective
- ○ Slightly effective
- ○ Not effective at all

Q121 How easy or difficult is it to register for courses at your university?

- Extremely easy
- Moderately easy
- Slightly easy
- Neither easy nor difficult
- Slightly difficult
- Moderately difficult
- Extremely difficult

Q122 How fair or unfair are the administrative procedures at your university (e.g., the grading system)?

- Extremely fair
- Moderately fair
- Slightly fair
- Neither fair nor unfair
- Slightly unfair
- Moderately unfair
- Extremely unfair
- Click to write Choice 2

Q123 How reasonable or unreasonable is the cost of courses/tuition at your university?

- ○ Extremely reasonable
- ○ Moderately reasonable
- ○ Slightly reasonable
- ○ Neither reasonable nor unreasonable
- ○ Slightly unreasonable
- ○ Moderately unreasonable
- ○ Extremely unreasonable

End of Block: Education/Coursework

Start of Block: DSO Rate

Q78 Think about an average homosexual male, how many hook-up partners do you think he has had? (hook-up is defined as engaging in heavy petting, oral sex, and sexual intercourse without the presence of a committed relationship and without the intention of forming one; Includes multiple times with the same partners)

▼0 ... 100+

Q15 Rate how comfortable you *think* an **average homosexual male** is with the following behaviors during a hook up. (hook-up is defined as engaging in heavy petting, oral sex, and sexual intercourse without the presence of a committed relationship and without the intention of forming one; Includes multiple times with the same partners)

Very Uncomfortable							Neither Comfortable nor Uncomfortable							Very Comfortable
-5	-5	-4	-4	-3	-3	-2	-2	-1	-1	0	1	1	2	2	3	3	4	4	5

Sexual Touching, Above the waist	
Sexual Touching, Below the Waist	
Oral sex, performer	
Oral sex, receiver	
Sexual intercourse, where they are penetrating	
Sexual intercourse, where they are being penetrated	

Q81 Think about an average heterosexual male, how many hook-up partners do you think he has had? (hook-up is defined as engaging in heavy petting, oral sex, and sexual intercourse without the presence of a committed relationship and without the intention of forming one; Includes multiple times with the same partners)

▼0 ... 100+

Q17 Rate how comfortable you *think* an **average heterosexual male** is with the following behaviors during a hook up. (hook-up is defined as engaging in heavy petting, oral sex, and sexual intercourse without the presence of a committed relationship and without the intention of forming one; Includes multiple times with the same partners)

Very Uncomfortable							Neither Comfortable nor Uncomfortable							Very Comfortable
-5	-5	-4	-4	-3	-3	-2	-2	-1	-1	0	1	1	2	2	3	3	4	4	5

Sexual Touching, Above the waist	
Sexual Touching, Below the Waist	
Oral sex, performer	
Oral sex, receiver	
Sexual intercourse, where they are penetrating	
Sexual intercourse, where they are being penetrated	

End of Block: DSO Rate

Start of Block: SRS

Q45 Please read the following statements and record the number that is true for you over the past 6 months for each question in the blank. If you do not know for sure how many times a behavior took place, try to estimate the number as close as you can.

If the question does NOT apply to you or you have never engaged in the behavior within the question, put a "0" in the blank. Please do NOT leave items blank.

Remember that "sex" is defined as oral, anal, and vaginal intercourse, while "sexual behavior" includes passionate kissing, making out, fondling, petting, oral-to-anal stimulation, and hand to genital stimulation.

Please consider only the last 6 months when answering and please be honest, this information is anonymous.

In the *past 6 months:*

SRS1 How many partners have you engaged in sexual behavior with but not had sex with?

▼0 ... 100+

SRS2 How many times have you left a social event with someone you just met?

▼0 ... 100+

SRS3 How many times have you "hooked up" but not had sex with someone you didn't know or didn't know well?

▼0 ... 100+

SRS4 How many times have you gone out to bars/parties/social events with the intent of "hooking up" and engaging in sexual behavior but not having sex with someone?

▼0 ... 100+

SRS5 How many times have you gone out to bars/parties/social events with the intent of "hooking up" and having sex with someone?

▼0 ... 100+

SRS6 How many times have you had an unexpected and unanticipated sexual experience?

▼0 ... 100+

SRS7 How many times have you had a sexual encounter you engaged in willingly but later regretted?

▼0 ... 100+

Page Break

Q56 Please read the following statements and record the number that is true for you over the past 6 months for each question in the blank. If you do not know for sure how many times a behavior took place, try to estimate the number as close as you can.

If the question does NOT apply to you or you have never engaged in the behavior within the question, put a "0" in the blank. Please do NOT leave items blank.

Remember that "sex" is defined as oral, anal, and vaginal intercourse, while "sexual behavior" includes passionate kissing, making out, fondling, petting, oral-to-anal stimulation, and hand to genital stimulation.

SRS8 How many partners have you had sex with?

▼0 ... 100+

SRS9 How many times have you had vaginal intercourse without a latex or polyurethane condom? Note: includes times when you have used a lambskin or membrane condom

▼0 ... 100+

SRS10 How many times have you had vaginal intercourse without protection against pregnancy?

▼0 ... 100+

SRS11 How many times have you given or received fellatio (oral sex on a man) without a condom?

▼0 ... 100+

SRS12 How many times have you given or received fellatio (oral sex on a woman) without a dental dam or "adequate protection" (please see definition of dental dam for what is considered adequate protection)?

▼0 ... 100+

SRS13 How many times have you had anal sex without a condom?

▼0 ... 100+

SRS14 How many times have you or your partner engaged in anal penetration by a hand ("fisting") or other object without a latex glove or condom followed by unprotected anal sex?

▼0 ... 100+

SRS15 How many times have you given or received analingus (oral stimulation of the anal region, "rimming") without a dental dam or "adequate protection" (please see definition of dental dam for what is considered adequate protection)?

▼0 ... 100+

SRS16 How many people have you had sex with that you know but are not involved in any sort of relationship with (i.e., "friends with benefits", "fuck buddies")?

▼0 ... 100+

SRS17 How many times have you had sex with someone you don't know well or just met?

▼0 ... 100+

SRS18 How many times have you or your partner used alcohol or drugs before or during sex?

▼0 ... 100+

SRS19 How many times have you had sex with a new partner before discussing sexual history, IV drug use, disease status and other current sexual partners?

▼0 ... 100+

SRS20 How many times (that you know of) have you had sex with someone who has had many sexual partners?

▼0 ... 100+

SRS21 How many partners (that you know of) have you had sex with who had been sexually active before you were with them but had not been tested for STIs/HIV?

▼0 ... 100+

SRS22 How many partners have you had sex with that you didn't trust?

▼0 ... 100+

SRS23 How many times (that you know of) have you had sex with someone who was also engaging in sex with others during the same time period?

▼0 ... 100+

End of Block: SRS

Start of Block: HMQ

HMQ1 I hook up because it allows me to avoid being tied down to one person

- Almost never/never
- Some of the time
- Half of the time
- Most of the time
- Almost always/always

HMQ2 Hooking up provides me with "friends with benefits"

- Almost never/never
- Some of the time
- Half of the time
- Most of the time
- Almost always/always

HMQ3 Hooking up provides me with sexual benefits without a committed relationship

- ○ Almost never/never
- ○ Some of the time
- ○ Half of the time
- ○ Most of the time
- ○ Almost always/always

HMQ4 Hooking up enables me to have multiple partners

- ○ Almost never/never
- ○ Some of the time
- ○ Half of the time
- ○ Most of the time
- ○ Almost always/always

HMQ5 I hook up because hooking up is a way to find a relationship

- ○ Almost never/never
- ○ Some of the time
- ○ Half of the time
- ○ Most of the time
- ○ Almost always/always

HMQ6 I hook up because it is the first step in forming a committed relationship

- Almost never/never
- Some of the time
- Half of the time
- Most of the time
- Almost always/always

HMQ7 I hook up because it can help me decide if I want something more serious with my hookup partner

- Almost never/never
- Some of the time
- Half of the time
- Most of the time
- Almost always/always

HMQ8 I hook up because it's fun

- Almost never/never
- Some of the time
- Half of the time
- Most of the time
- Almost always/always

HMQ9 I hook up because it's sexually pleasurable

- Almost never/never
- Some of the time
- Half of the time
- Most of the time
- Almost always/always

HMQ10 I hook up because I'm attracted to the person

- Almost never/never
- Some of the time
- Half of the time
- Most of the time
- Almost always/always

HMQ11 I hook up because it's exciting

- Almost never/never
- Some of the time
- Half of the time
- Most of the time
- Almost always/always

HMQ12 I hook up because it makes me feel good when I'm not feeling good about myself

- ○ Almost never/never
- ○ Some of the time
- ○ Half of the time
- ○ Most of the time
- ○ Almost always/always

HMQ13 I hook up because it makes me feel attractive

- ○ Almost never/never
- ○ Some of the time
- ○ Half of the time
- ○ Most of the time
- ○ Almost always/always

HMQ14 I hook up because it cheers me up when I'm in a bad mood

- ○ Almost never/never
- ○ Some of the time
- ○ Half of the time
- ○ Most of the time
- ○ Almost always/always

HMQ15 I hook up because it helps me feel less lonely

- ○ Almost never/never
- ○ Some of the time
- ○ Half of the time
- ○ Most of the time
- ○ Almost always/always

HMQ16 I hook up because I feel pressure from my friends to hook up

- ○ Almost never/never
- ○ Some of the time
- ○ Half of the time
- ○ Most of the time
- ○ Almost always/always

HMQ17 I hook up because my friends will tease me if I don't

- ○ Almost never/never
- ○ Some of the time
- ○ Half of the time
- ○ Most of the time
- ○ Almost always/always

HMQ18 I hook up because it helps me fit in

- Almost never/never
- Some of the time
- Half of the time
- Most of the time
- Almost always/always

HMQ19 I hook up because I feel I'll be left out if I don't

- Almost never/never
- Some of the time
- Half of the time
- Most of the time
- Almost always/always

End of Block: HMQ

Start of Block: Debriefing

DB Your answers have been recorded. Thank you for your participation. You will receive two (2) SONA credits within 48-72 hours, if applicable. If you have questions or concerns, please contact Tracy Cohn, Ph.D., at tcohn@radford.edu or Charles Woods, B.A., at cwoods20@radford.edu. For Radford University students, assistance is available through the Radford University Counseling Center; please call (540) 831-5226 if you would like to talk with a counselor. Additional resources are listed below. **You may print this page for your records.** You may now exit the survey.

Off-Campus Resources:

NAMI Helpline: 1-800-950-NAMI (6264), Monday-Friday 10am-6pm EST

National Suicide Prevention Lifeline: 800-273-TALK (8255), 24/7

National Domestic Violence Hotline: 800-799-SAFE (7233), 24/7

National Sexual Assault Hotline: 800-656-HOPE (4673), 24/7

Raffle If you would like, please click the link below to enter your email into a drawing for 1 of 2 $50 Amazon Gift Cards:

http://radford.qualtrics.com/jfe/form/SV_cRPuzPptYI2sJU1