

Heterosexual Young Adults' Interest, Attitudes, and Experiences Related to Mixed-Gender, Multi-Person Sex

Ashley E. Thompson¹ · E. Sandra Byers²

Received: 13 April 2015 / Revised: 12 January 2016 / Accepted: 15 January 2016 / Published online: 4 March 2016
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Abstract There has been little research on threesomes, a form of multi-person sex that involves sexual activity with two other people simultaneously. Therefore, we examined young adults' attitudes toward, interest in, and experiences with one form of threesome, mixed-gender threesomes (MGTs), defined as sexual activity involving three people where at least one member of each gender is present. Participants were 274 (202 women, 72 men) heterosexual young adults who completed an online survey. Overall, 13 % of participants (24 % of men and 8 % of women) reported experience and 64 % reported some interest in engaging in an MGT. However, the overall level of interest was quite low and varied according to contextual variables (i.e., what other persons were involved). Men's interest remained unaffected by third person status as long as the MGT involved familiar others (friends and acquaintances) rather than strangers, whereas women preferred familiar others only for MGTs with which they were the third person, not for those involving a romantic partner. Participants also reported fairly neutral attitudes toward MGTs. Compared to the women, the men reported significantly more positive attitudes and greater interest, and were more likely to report MGT experience. In addition, attitudes, interest, and experience were all positively associated with each other. Taken

together, these results suggest that young people are not judgmental about others engaging in MGTs but are not highly motivated to do so themselves. Implications for researchers and sexual health educators are discussed.

Keywords Multi-person sex · Threesomes · Sexual attitudes · Sexual interests · Sexual experience

Introduction

Research suggests that the sexual attitudes of young adults in Western cultures are becoming increasingly permissive and non-traditional (Fielder & Carey, 2010a; Garcia, Reiber, Massey, & Merriwether, 2012; Paul, McManus, & Hayes, 2000). In particular, fewer young adults view appropriate sexual activity as limited to penile–vaginal intercourse in marriage or other committed relationships, and acceptance of and interest in casual sex has increased (Gagnon, Kolata, Laumann, & Michael, 1994; Garcia et al., 2012; Paul et al., 2000). Further, most young adults have engaged in sexual activity with a casual partner (Fielder & Carey, 2010b; Garcia et al., 2012; Heldman & Wade, 2010; LaBrie, Hummer, Ghaidarov, Lac, & Kenney, 2014).

Although there has been considerable research on casual sex, little is known about young adults' views, interest in, and/or experiences with other non-traditional or unconventional sexual activities such as multi-person sex. Such an understanding is important in and of itself. In addition, because multi-person sex is often considered to be a higher risk behavior, there are important implications for researchers and health educators if these activities are a common part of young adults' cognitive and performative sexual scripts. Therefore, the purpose of the current study was to examine one form of multi-person sex, engaging in a threesome—that is, sexual activity with two simultaneous partners.

✉ Ashley E. Thompson
thompsae@uwosh.edu

¹ Department of Psychology, University of Wisconsin Oshkosh, 800 Algoma Blvd., Oshkosh, WI 54901, USA

² Department of Psychology, University of New Brunswick, POB 4400, Fredericton, NB E3B 3A1, Canada

In addition, to gain a more comprehensive understanding, we assessed three aspects of threesomes: attitudes, interest, and experiences because a review of the literature revealed no studies that have examined all three of these dimensions in the same sample. Based on past related research that has shown a link between sexual attitudes and sexual behavior (Hatfield, Hutchinson, Bensman, Young, & Rapson, 2012; Ku et al., 1998; Shaughnessy, Byers, & Walsh, 2011; Yost & Zurbriggen, 2006), it is likely that attitudes toward, interest in, and experiences with threesomes would be positively associated with each other.

Attitudes Toward Threesomes

Only one study has examined attitudes toward any form of multi-person sex at length (some studies have included individual items in scales assessing interest in unconventional sex). Jonason and Marks (2009) assessed young adults' attitudes toward individuals engaging in a threesome using hypothetical scenarios. Participants were randomly assigned to one of four different scenarios in which the type of threesome (two males and one female [MMF] or two females and one male [FFM]) and the gender of the target person in the scenario were manipulated. Participants were instructed to rate the target on six favorable (e.g., "confident," "horny," "outgoing," "lucky") and 35 derogatory (e.g., "sinful," "desperate," "cocky," "dirty") adjectives using a 5-point scale from "not at all" to "very much." Participants then rated two different scenarios depicting a male or a female target having dyadic sex with their mixed-sex romantic partner using the same favorable and derogatory adjectives. Jonason and Marks found that derogatory ratings were significantly higher and the favorable ratings significantly lower for targets who had hypothetically engaged in a threesome as compared to those who had engaged in dyadic sex. Nonetheless, attitudes toward the target in the threesome scenarios were fairly neutral on both dimensions, suggesting that young people do not stigmatize people who engage in threesomes. Compared to the women, the men reported less derogatory and more favorable attitudes toward those engaging in a threesome.

There are several limitations to the Jonason and Marks' (2009) study. First, the list of adjectives on which participants rated the targets was quite uneven. This provided more opportunity for participants to rate the targets negatively. Second, the targets were rated separately on separate "favorable" and "derogatory" dimensions rather than on negative to positive dimensions. As a result, it is difficult to determine the overall valence of participants' attitudes. Lastly, Jonason and Marks assessed attitudes toward an individual involved in the threesome. However, people's attitudes toward an individual who engages in specific behaviors may differ from attitudes toward the activity in general (Kite & Whitley, 1996).

Interest in Threesomes

Only two studies have assessed interest in engaging in a threesome (Armstrong & Reissing, 2014; Hughes, Harrison, & Gallop, 2004). As part of a larger study on mating strategies, Hughes et al. investigated interest in engaging in a threesome among heterosexual young adults in the U.S. using the dichotomous item "Would you ever engage in a threesome sexual situation?" Overall, 78 % of the men and 32 % of the women reported that they would engage in a "threesome sexual situation." Participants who expressed an interest in engaging in a threesome then indicated their preferred type of threesome (FFM or MMF); 97 % of the men but only 27 % of the women reported greater interest in an FFM threesome, whereas 53 % of the women but less than 1 % of the men reported greater interest in an MMF threesome. The remaining participants indicated greatest interest in a threesome with two other members of their sex or no preference. In a more recent study examining attitudes toward bisexuality broadly, Armstrong and Reissing assessed interest in participating in a threesome involving a bisexual partner and another person, both of the other sex. The men reported significantly greater interest in participating in a threesome than did the women. Men also more strongly endorsed the statement that they found the "idea/fantasy of threesomes arousing." On both items, men's scores were above the midpoint ($M = 4.48/6$; indicating interest), whereas women's scores were below the midpoint ($M = 1.62/6$; indicating disinterest).

These studies had several limitations. First, Hughes et al. (2004) assessed interest in engaging in a threesome using a dichotomous variable, making it impossible to determine the extent of people's interest. Second, neither study provided participants with information regarding contextual variables that might affect interest in engaging in a threesome, such as their relationship with each of the other members of the threesome. Researchers have shown that people report greater interest in engaging in both casual sex and cybersex with a friend as compared to a stranger (Furman & Shaffer, 2011; Grello, Welsh, & Harper, 2006; Shaughnessy & Byers, 2014). Therefore, it is likely that interest in engaging in a threesome differs depending on whether the partners are close friends, acquaintances, or strangers. In addition, it is likely that interest in engaging in a threesome is affected by whether it is with their romantic partner and a third party or they are the third person.

Experience With Threesomes

We could find only one study that examined experiences with threesomes; however, it was limited to experiences involving a bisexual partner. Armstrong and Reissing (2014) found that men reported more experience with threesomes involving a bisexual partner and a member of the other sex than did women (10 vs. 2 %). Other researchers have assessed experiences

with multi-person sex, broadly. For example, Häggström-Nordin, Hanson, and Tydén (2005) found that 11 % of the Swedish adolescent boys and 7 % of the adolescent girls they surveyed reported that they had experienced multi-person sex. Similarly, Rothman et al. (2012) studied adolescent girls (ages 14–20) recruited from sexual health clinics in the U.S. and found that 7 % reported having experienced multi-person sex. However, none of these researchers assessed experiences with MMF and FFM separately.

Gender

According to script theory (Gagnon & Simon, 1973; Tomkins, 1987), boys and girls experience different gender role socialization resulting in gendered sexual scripts (defined as “norms that people use to guide and evaluate social and sexual interactions;” Rose & Frieze, 1993, p. 499). In particular, throughout Western cultures, boys and men are socialized to value short-term relationships and a pleasure-oriented approach to sexuality; women are socialized to prefer long-term/commitment-oriented relationships with an emotional/relational approach to sexuality (Bowleg, Lucas, & Tschann, 2004; Byers, 1996; Frith & Kitinger, 2001; Tolman, 2002). Researchers have shown gender differences in sexual attitudes, interests, and experiences that match these gender role expectations. For example, compared to women, men have more permissive attitudes, greater interest, and more experience with casual sex (Clark & Hatfield, 1989; Conley, Ziegler, & Moors, 2013; Petersen & Hyde, 2010; Schmitt, 2003). Furthermore, according to traditional gender roles, women more often report wanting sexual contact to express love and commitment, whereas men more often report desiring sex as an end goal in itself (Missildine, Feldstein, Punzalan, & Parsons, 2005). Thus, it is likely that, compared to women, men have more positive attitudes as well as more overall interest and experience in threesomes. However, based on the findings of Hughes et al. (2004), these gender differences likely relate to the type of threesome. In particular, men likely have a greater interest in FFM than in MMF threesomes, whereas women have a greater interest in MMF than in FFM threesomes.

The Current Study

The primary objective of the current study was to advance the literature on unconventional sexual behaviors by assessing attitudes toward, interest in, and experiences with mixed-gender threesomes (MGTs). An MGT is a sexual activity involving three people where at least one member of each gender is present (Jonason & Marks, 2009). We made the decision to focus exclusively on MGTs in order to ensure that our measure of attitudes toward and interest in threesomes was less influenced by attitudes toward and interest in same-sex sexual behavior. Although there is still the possibility of same-sex interactions present in MGTs, the sexual activities are not exclusively between three

members of the same sex. We recruited only heterosexual participants for the same reason.

To overcome limitations associated with previous research, we comprehensively assessed attitudes, interest, and experiences with MGTs. Attitudes toward MGTs were measured using bipolar items relating to threesomes broadly (rather than to an individual engaging in the behavior). We also adopted a more nuanced assessment of young men’s and women’s interest in MGTs by examining familiarity (close friend, acquaintance, stranger) and third person status (engaging in a threesome if their romantic partner or as a third person).

Based on past research, we developed the following hypotheses:

H1 Compared to women, men would have more accepting attitudes, greater levels of interest, and more experience with MGTs. More men than women would express interest in engaging in an MGT.

H2 Men would have greater interest in FFM than in MMF MGTs and women would have a greater interest in MMF than in FFM MGTs.

H3 Young adults were expected to be most interested in participating in a threesome with a close friend, followed by an acquaintance, and then by a stranger.

H4 Young adults would be more interested in participating in a threesome that involves their romantic partner than in which they are the third party with another couple.

H5 Attitudes, interest, and experience would be moderately positively correlated. In addition, because research suggests that, although individuals may have positive attitudes toward or interest in a behavior (i.e., MGTs), they likely have not had, pursued, or accepted the opportunity to experiment with it (Fishbein, 2000; Fishbein et al., 2001). Thus, we expected that the correlation between attitudes and interest would be significantly greater than the correlations between attitudes and experience and between interests and experience.

Method

Participants

A total of 291 self-identified heterosexual university students agreed to participate in the study. Of these, 17 were removed from the data set: 3 who reported no oral, anal, and/or vaginal sexual partners and 14 who were missing a substantial amount of data due to attrition (>20 %). In addition, missing data were examined at the case and item level from our final sample according to the procedures outlined by Tabachnick and Fidell (2013). There were no participants missing more than 3.0 % of their data and missing values across individual items varied from 0.0 to 1.4 %. Because

of the relatively small amount of missing data, all missing values were deleted listwise. Thus, our final sample size consisted of 274 young adults (202 women, 72 men) ranging in age from 18 to 24 ($M = 19.9$ $SD = 2.04$). Participants primarily identified as Caucasian/White (91.1 %) and English speaking (93 %). Most (62 %) indicated that they were in an exclusive romantic relationship. On average, participants had had five sexual partners (defined as oral, anal, or vaginal sex) and were 16 years of age at first oral, anal, or vaginal sexual experience.

Measures

Demographic Questionnaire

Participants provided basic demographic information including their age, gender, relationship status, sexual identity (to ensure that all participants identified as heterosexual), and sexual history.

Mixed-Gender Threesomes Scale (MGTS)

The MGTS was developed for the current study because a review of the literature did not reveal any comprehensive questionnaires that assessed attitudes toward, interest in, and/or experience with MGTs. The initial items for the scale were drawn from related measures (Armstrong & Reissing, 2014; Bailey, Gaulin, Agyei, & Gladue, 1994; Hughes et al., 2004) and expanded upon in consultation with a team of researchers working in the area of sexuality and intimate relationships. The final scale consisted of three subscales assessing attitudes, interest, and experiences, respectively. Before completing the MGTS, MGTs were defined for participants as “threesomes, or a sexual act involving three people where at least one member of each gender is present.” The scale was then piloted using a small sample ($N = 10$) of volunteer young adults to ensure clarity and conciseness in wording, items and instructions (see Appendix for final MGTS).

Participants first completed the MGT Attitudes subscale consisting of 10 7-point semantic differential items (e.g., “pure-dirty,” “desperate-fulfilled”). Possible mean scores ranged from 1 to 7 with higher scores indicating more permissive attitudes toward MGTs. The MGT Attitudes subscale had high internal consistency ($\alpha = .95$).

Next, participants completed the 8-item MGT Interest subscale. The first two items assessed interest by varying the gender of the participants (e.g., “If presented with the opportunity, how interested would you be in engaging in a threesome if it involved: two males and a female?”). Each item was rated on a 7-point scale ranging from “not open at all” (1) to “very open” (7). These two items were combined to determine the percentage of participants who reported interest in MGTs (no interest/interest). Participants who reported a rating of “1” on both items were placed in the No Interest Group, whereas those

who reported a rating of “2” or greater on either item were placed in the Interest Group. Questions 3 through 8 differed on two dimensions: the relationship with other participants (familiarity) and whether the MGT was with their partner or if the participant was a third person with a couple (third person status). In terms of familiarity, participants indicated their interest in engaging in a threesome with “a close friend (future contact with them), a casual acquaintance (no future contact with them), and a stranger.” In terms of third party status, participants indicated their interest in engaging in a threesome that “involved you and your romantic partner and a romantic couple’s threesome.” For example, the item that assessed a friend and being the third person asked: “How interested would you be in being the third person in a romantic couple’s threesome, if the couple are your close friends (future contact with them)?” Each item was rated on the same 7-point scale used for Questions 1 and 2. Responses to these individual items were used to determine the influence of familiarity and third party status on interest in MGTs. Finally, in order to determine the overall extent of interest in engaging in threesomes, responses to all the subscale items (i.e., Question 1 through 8) were averaged to create the MGT Interest subscale, with higher scores reflecting more interest in engaging in an MGT. The internal consistency for the MGT Interest subscale was high ($\alpha = .92$).

Finally, participants completed the MGT Experiences subscale. It comprised two dichotomous questions (yes/no) regarding previous experience with MGTs that differed only on the gender of the participants (e.g., “Have you ever participated in a threesome: with two males and one female?”). Three dichotomous variables were created using the responses from the MGT Experiences subscale items: MMF experience, FFM experience, and any experience.

Procedure

After receiving approval from the university Research Ethics Board, heterosexual undergraduate students from a midsize eastern Canadian university were recruited from Introductory Psychology courses using the Academic Pool Scheduler (resulting in approximately 36.5 % of the sample) and from the general university population using advertisements placed in the electronic student newsletter (resulting in the remaining 63.5 %). Recruitment advertisements indicated that those interested would be asked to “participate in a research study on attitudes and experiences related to a variety of sexual activities.” All participants completed the survey online through a secure web server. Introductory Psychology students completed the online survey in a laboratory while being supervised. Other participants were provided with the URL for the study and instructed to complete the study online at a private location of their choice. All participants completed a consent form, the demographics questionnaire, the MGTS, and some other measures not relevant to the current study. Finally, participants

were directed to a debriefing form that explained the purpose of the study. The entire survey took approximately 45 min to complete. Participants were compensated for their participation either by receiving extra credit in their Introductory Psychology course or by being entered into a draw with a 1 in 25 chance to win a \$50 Visa gift card.

Results

Attitudes Toward Mixed-Gender Threesomes

The participants reported fairly neutral overall attitudes toward MGTs, as indicated by a mean score of 3.52 ($SD = 1.25$). However, mean scores ranged from 1 to 6.5 suggesting that there was a large amount of variability in how these young adults evaluated MGTs. Results from a between-subject ANOVA revealed that the men reported significantly more permissive attitudes toward MGTs ($M = 4.33, SD = 0.93$) than did the women ($M = 3.24, SD = 0.12$), $t(273) = 6.72, p < .001, d = 1.65$ (H1).

Interest in Engaging in Mixed-Gender Threesomes

Overall, 64 % of participants indicated some interest in engaging in an MGT (Interest Group). However, participants' mean level of interest in MGTs was quite low ($M = 2.92, SD = 1.90$). Significantly more men (82 %) than women (31 %) reported interest in MGTs, $\chi^2(1) = 17.85, p < .001, \phi = 0.26$ (H1).

In order to examine gender differences in the level of interest in MMFs compared to FFMs (H2), we conducted a 2 (Gender) \times 2 (MGT type) mixed designed ANOVA (see Table 1). The main effects for both gender and MGT type were significant, $F(1, 272) = 28.37, p < .001, \eta^2 = 0.10$ and $F(1, 272) = 87.43, p < .001, \eta^2 = 0.24$, respectively. However, these effects were qualified by a significant interaction effect, $F(1, 272) = 100.42, p < .001, \eta^2 = 0.27$. The means for the interaction effect are shown in Table 1. Mean comparisons revealed that, as predicted, the men reported significantly greater interest in FFM threesomes than in MMF threesomes. Contrary to predictions, the women's interest in FFM threesomes was not significantly different from their interest in MMF threesomes. In addition, the men were significantly more interested in FFM MGTs than were the women. However, the men and women both reported similarly low interest in MMF MGTs; thus, the men's and women's interest in MMF MGTs were not significantly different from one another.

To examine the effects of familiarity (H3) and third person status (H4) on men's and women's interest in MGTs, we conducted a 2 (Gender) \times 3 (Familiarity) \times 2 (Third Person Status) mixed design ANOVA. The familiarity and third person status manipulation were entered as the within-subject variables and gender was entered as the between-subject variable. The results revealed a significant main effect for gender, $F(1,$

$272) = 39.39, p < .001, \eta^2 = 0.13$. The men reported significantly more interest in engaging in an MGT compared to the women. There was also a significant main effect for familiarity, $F(1, 271) = 12.36, p < .001, \eta^2 = 0.03$. Participants reported significantly less interest in engaging in an MGT involving a stranger than an MGT involving an acquaintance or close friend, which did not differ significantly. However, these effects were qualified by a gender by familiarity by third person status interaction, $F(1, 271) = 3.18, p < .05, \eta^2 = 0.10$. All other main and interaction effects were not significant.

The means for the three-way interaction are shown in Table 2. Mean comparisons indicated that the main effect for gender held for all conditions—the men reported significantly more interest than did the women in all types of MGTs. In addition, consistent with the main effect for familiarity, the men reported significantly greater interest in MGTs with a friend or an acquaintance than with a stranger both with their partner and with a third party; this pattern only held for women when they were the third person. However, women's familiarity with the other participants in the MGT did not influence their interest when the MGT was with their partner.

Experience With Mixed-Gender Threesomes

A total of 35 participants (13 %) indicated that they had experienced an MGT at least once. Significantly more men (24 %) than women (8 %) reported experience with MGTs, $\chi^2(1) = 5.69, p < .05, \phi = 0.14$ (H1). Of the 35 individuals who reported having MGT experience, 6 (17 %) reported experiencing only an MMF MGT, 18 (51 %) reported experiencing only an FFM MGT, and 9 (26 %) reported experiencing both an MMF and an FFM MGT. The numbers in some of these cells were too small to test statistically for gender differences (Tabachnik & Fidell, 2013). However, inspection of the data revealed that 18 % of the men reported experience with FFM MGTs and 8 % reported experience with MMF MGTs; 7 % of the women reported experience with FFM MGT and 5 % reported experience with MMF MGT.

Relationships Among Attitudes, Interest, and Experience

To test our prediction (H5) that attitudes, interest, and experience would be moderately but significantly correlated, we examined the zero-order correlations. As predicted, participants with more positive attitudes toward MGTs reported significantly greater interest in MGTs and were significantly more likely to report having experienced an MGT, $r(272) = .69, p < .001$ and $r(272) = .16, p = .009$, respectively. Similarly, individuals with greater interest in MGTs were significantly more likely to report having experienced an MGT, $r(272) = .24, p < .001$. We compared the strength of the correlations

Table 1 Gender difference in level of interest in engaging in an FFM and MMF threesome

Type of threesome	Men, <i>M</i> (<i>SD</i>)	Women, <i>M</i> (<i>SD</i>)
FFM	5.11 _{ab} (2.23)	2.53 _a (1.98)
MMF	2.68 _b (1.96)	2.61 (1.99)

N = 72 men and 202 women. FFM = threesome involving two females and one male; MMF = threesome involving two males and one female. All items were rated on a 7-point scale from *not at all interested* (1) to *very interested*. (7)

Means in the same row or column with the same subscript differ significantly ($p < .05$)

using Fisher's *r-to-z* transformation. As predicted, the correlation between attitudes and interests was significantly greater than the correlations between either attitudes or interests and experience, $z = 8.79$, $p < .001$ and $z = 7.18$, $p < .001$. However, the correlations between attitudes and experience and attitudes and interest did not differ significantly, $z = 1.78$, $p = .076$.

Discussion

The results of this study extend the literature by providing a comprehensive view of young adults' attitudes toward, interest in, and experiences with MGTs, one form of threesomes. We found that only a minority of the young adults in our study reported experience with MGTs. Nonetheless, they had relatively neutral attitudes toward MGTs and most had some interest, although not strong interest, in engaging in one. Together, these results suggest that young people are not judgmental about others engaging in MGTs but also are not highly motivated to do so themselves. We also found that, compared to the young women, the young men reported greater interest and more positive attitudes toward MGTs and were more likely to report having experienced an MGT. This finding is consistent with the prescribed gender and sexual scripts for men and women as well as with research that has shown that, compared to women, men have less traditional attitudes toward sexuality and report a stronger desire for and more experience with non-traditional sexual behaviors, including casual sex (Byers, 1996; McCormick, 1987; Missildine

et al., 2005; Tomkins, 1987; Petersen & Hyde, 2010). However, the findings extend research on gender differences to MGTs. Consistent with past research examining the links between sexual attitudes and behavior (Guéguen, 2011; Hatfield et al., 2012; Ku et al., 1998; Shaughnessy et al., 2011; Yost & Zurbriggen, 2006), we found that attitudes, interest, and experience were all positively related. The fact that attitudes and interests were more strongly correlated with each other than with behavior is in keeping with research that has documented a discrepancy between sexual attitudes and beliefs and sexual behavior (e.g., Dworkin & O'Sullivan, 2005; Lawrance, Taylor, & Byers, 1996).

Experience With Mixed-Gender Threesomes

We found that 24 % of the young men but only 8 % of the young women reported experience with MGTs. Although this constituted a minority of our participants, these numbers are considerably higher than those found by Armstrong and Reissing (2014) regarding MGTs involving a bisexual partner specifically (10 and 2 %, respectively). The percentage of our male participants who reported MGT experience was also higher than the percent of Swedish boys who reported experience with multi-person sex in the study by Häggström-Nordin et al. (2005) (11 %); however, the percent of our female participants who reported experience with MGT was similar to that found for girls in that study (7 %). Together, these results suggest that multi-person sex generally, and MGTs specifically, is not uncommon but also is not mainstream among youth and young adults.

The percent of young men who reported MGT experience seems quite out of line with the limited amount of previous research on multi-person sexual experiences among young adults (Armstrong & Reissing, 2014; Friedman et al., 2008; Häggström-Nordin et al., 2005). It may be that the current results are accurate and substantial numbers of young men have engaged in an MGT. On the other hand, given that most of these men reported having engaged in an FFM MGT and that there were more FFM than MMF MGTs reported, the difference between the percent of young men and women who reported such experience presents a logical inconsistency—that is, who are these young men engaging in MMF

Table 2 Gender differences in level of interest in MGTs as a function of familiarity and third person status

Familiarity	Men		Women	
	With partner, <i>M</i> (<i>SD</i>)	Third person, <i>M</i> (<i>SD</i>)	With partner, <i>M</i> (<i>SD</i>)	Third person, <i>M</i> (<i>SD</i>)
Close friend	3.39 _{ag} (2.10)	3.11 _{bi} (1.96)	1.93 _a (1.52)	1.88 _{bk} (1.52)
Acquaintance	3.28 _{ch} (1.98)	3.26 _{dj} (2.02)	2.05 _c (1.69)	1.99 _{di} (1.61)
Stranger	2.71 _{egh} (2.04)	2.65 _{fi} (2.01)	1.98 _e (1.68)	1.61 _{fk} (1.34)

N = 72 men and 202 women. All items were rated on a 7-point scale from *not at all interested* (1) to *very interested*

Means in the same row or column with the same subscript differ significantly ($p < .05$)

with? It may be that social desirability related to gender role expectations and the sexual double standard influenced the reporting of MGT experience (Baumeister, Catanese, & Vohs, 2001; Marks & Fraley, 2005; Milhausen & Herold, 1999; Okami & Shackelford, 2001). Some young men may have falsely reported having MGT experience because sexual experience is expected and enhances status for men; or, some young women may have falsely reported not having MGT experience because unconventional sexual activity reduces status for women. This finding is consistent with research by Alexander and Fisher (2003) and Fisher (2007) showing that there are biases in self-reports of number of past sexual partners that are consistent with gender role expectations. Research that uses alternate methods for assessing experience with MGTs (implicit measures, bogus pipeline designs) would provide more accurate estimates of the prevalence of MGT experience for young men and women. It is also possible that the information provided by our male and female participants is accurate, but that the men in this sample engaged in MGTs with women who are not undergraduates and thus not represented in our female sample.

Interest in Mixed-Gender Threesomes

In line with previous research (Hughes et al., 2004), most of our participants reported some interest in engaging in an MGT. However, we extended past research by showing that, on average, the level of interest was low (below the scale midpoint) for both the young men and the young women. In contrast, Armstrong and Reissing (2014) found stronger interest (i.e., above the scale midpoint) in men (but not in women) for engaging in a threesome with a bisexual partner and a third person of the other gender specifically. Taken together, these results may indicate that many young adults would be open to participating in an MGT if initiated by someone else—presumably someone with a strong interest—but most would not be sufficiently motivated to seek out a threesome themselves. If so, it may be that some individuals who have an interest in MGTs have not engaged in one because they were never in a situation in which another person initiated an MGT opportunity that conformed to the contextual factors of interest (e.g., with a romantic partner and/or friends or acquaintances). Other individuals with interest in MGTs may have had the opportunity but chose not to participate because their interest was countered by inhibition about engaging in an unconventional sexual activity—perhaps due to perceptions of negative social norms or sexual anxiety.

Given that overall the young men had stronger interest in MGTs than did the young women (which was low in all contexts), it is likely that any increase in MGT experience among heterosexuals will be driven by men rather than by women. Again, this is consistent with traditional sexual scripts that cast men as the initiators and promote a double standard that gives men greater sexual freedom and rights of sexual

determination than women (Byers, 1996; McCormick, 1987; Seal & Ehrhardt, 2003) as well as with research that has shown that men initiate sexual activity more frequently than do women (Byers & Heinlein, 1989; O'Sullivan & Byers, 1992; Simms & Byers, 2013). Research that assesses intentions to initiate and/or participate in an MGT would inform our understanding of the extent to which MGTs are likely to become a more common part of the sexual scripts of young adults. Intentions have consistently been shown to be the best predictor of behavior (Fishbein, 2000; Fishbein et al., 2001).

We also extended past research by showing that the MGT context affects the strength of young adults' interest in engaging in an MGT. For example, the young men, but not the young women, were significantly more interested in engaging in an MGT if it involved two other women than if it involved a woman and a man. These results indicate that young men are interested in engaging in FFM MGTs specifically rather than in MGT generally. It may be that it is not the sex of the parties involved so much as the behaviors they imagine would occur during the MGT that accounts for this difference. This interpretation is consistent with heterosexual men's eroticization of sex between two women (Kite & Whitley, 1996; Louderback & Whitley, 1997; Whitley, Wiederman, & Wryobeck, 1999). In fact, it may be that what is of most interest to young men is not multi-person sex generally but rather the erotic potential of watching two women engaging in sexual activity and/or receiving pleasure from two women at the same time. Conversely, it may be that some negative attitudes toward same-sex sexual activity affect some young men's interest in engaging in an MMF—that is, their interest in MGTs is adversely affected by their discomfort with the possibility of interacting sexually with another man (Kite & Whitley, 1996). Qualitative research would shed light on what it is about MMF and FFM MGTs specifically that is attractive and/or unattractive to young men and women.

The young men were more interested in engaging in an MGT if it involved people they knew than with strangers, whether or not their partner was also involved. Similarly, when engaging in an MGT as a third person, young women were more interested if it involved people they knew. These findings replicate past research that has shown that young adults are more interested in casual sex and cybersex with a known partner than with a stranger (Furman & Shaffer, 2011; Grello et al., 2006; Shaughnessy & Byers, 2014). It may be that people prefer engaging in sexual activity with people they know because they feel more comfortable with them. Conversely, this preference may reflect concerns about being stigmatized by others. Of note, young women's generally low interest in engaging in an MGT was even lower when they were the third party with strangers. This is in keeping with the female sexual script that connects sex to love and romance (Byers, 1996; McCormick, 1987)—the pursuit of sexual pleasure is the clear motivation for being a third party with a romantic couple who one does not know.

Attitudes Toward Mixed-Gender Threesomes

Jonason and Marks (2009) showed that, on average, young adults have neutral attitudes toward a hypothetical target individual who engages in an MGT. We extended this research by showing that attitudes toward the activity, not just the person engaging in the activity, are fairly neutral. Similarly, young adults tend to be accepting of a broad range of sexual activities (Fielder & Carey, 2010a; Garcia et al., 2012; Paul et al., 2000). This suggests that young people who choose to engage in an MGT will not be stigmatized by their peers, even peers who are not personally interested in engaging in an MGT. The extent to which this represents a social change is not known because there are no baseline data with which to compare the current results. Nonetheless, the range of attitude scores suggests that some young people remain judgmental about MGTs. It may be that women and individuals who are older and more religious are most likely to have negative attitudes toward MGTs because these characteristics are associated with conservative sexual attitudes (Ahrold, Farmer, Trapnell, & Meston, 2011; Le Gall, Mullet, & Shafiqhi, 2002; Petersen & Hyde, 2011), but this has not been investigated. Our understanding of MGTs would also be enhanced by research that assesses attitudes toward threesomes involving three people of the same gender as well as, given our findings that contextual variables affect interest in MGTs, the association between contextual variables and attitudes toward MGTs.

Conclusion

The current study had several limitations that must be noted. First, we recruited a convenience sample of heterosexual undergraduate students, resulting in concerns related to the external validity of our sample. In particular, because of the ethnic make-up of our university, our sample identified as largely white. Moreover, because the advertisement identified the study as about sexuality, it is likely that people who are less comfortable with their sexuality and/or have more conservative attitudes were underrepresented in the sample (Wiederman, 1999). Thus, the extent to which our results can be generalized to young adults who are not in school, come from ethnocultural minority communities, identify as a member of a sexual minority, and/or to older adults is not known. Future research should employ more novel and widespread methods for recruiting participants (i.e., those resulting in a random sample) to diversify the sample and obtain a better estimate of actual prevalence of MGT experience. Second, all of our measures were self-report. Thus, demand characteristics and social desirability may have influenced participants' reports of their attitudes, interest, and/or experience (Geer & Robertson, 2005; Thompson & O'Sullivan, 2012; Thompson, O'Sullivan, Byers, & Shaughnessy, 2014). For example, participants may have (consciously or unconsciously) subscribed to attitudes and interests that demonstrate their openness. If so, the

attitudes and interests of young adults toward MGTs may in reality be more negative than found. Research that employs procedures designed to bypass some of these response biases, such as implicit measures or bogus pipeline designs, to assess attitudes, interest, and experiences related to MGTs would shed light on whether this is the case. Third, the Mixed-Gender Threesome Scale was developed for the current study. Thus, its psychometric properties have not yet been demonstrated, although alphas suggest strong internal consistency.

Nonetheless, the results confirmed research in other areas that has documented that young people are generally accepting of a wide range of sexual behaviors (Fielder & Carey, 2010a; Garcia et al., 2012; Paul et al., 2000). Furthermore, even if the data are subject to the social desirability bias, the results indicated that a substantial minority of young adults have experienced an MGT. Thus, to fully assess their sexual experiences, it is important to go beyond asking about the number of sexual partners and include experience with multi-person sex specifically. Our findings that young people are not only accepting of MGTs but that many are interested in engaging in an MGT, coupled with the fact that multi-person sex is likely to be higher risk sexual behavior, suggest that sexual health educators need to incorporate a discussion of multi-person sex into their programs.

Acknowledgments We are grateful for the help of David Howland and Jessica Hersey through the entire research process.

Appendix: MGT Scale

MGT Attitudes Subscale

Engaging in a threesome, or a sexual act involving three people where at least one member of each gender is present, is... [each of the following adjective pairs is rated on a 7-point bipolar scale]

1. Very morally right–Very morally wrong
2. Very bad–Very good
3. Very unpleasant–Very pleasant
4. Very negative–Very positive
5. Very worthless–Very valuable
6. Very normal–Very abnormal
7. Very unhealthy–Very healthy
8. Very helpful–Very harmful
9. Very desperate–Very fulfilled
10. Very pure–Very dirty

MGT Interest Subscale

If presented with the opportunity, how interested would you be to engaging in a threesome (i.e., having sex with two other people) if it involved... [each of the following items is rated on a 7-point bipolar scale]

11. Two males and a female?
12. Two females and a male?

If presented with the opportunity, how interested would you be to engaging in a threesome (i.e., having sex with two other people) that involved.... [each of the following items is rated on a 7-point bipolar scale]

13. You and your romantic partner (spouse/boyfriend/girlfriend) and a mutual friend (with which you will have future contact)?
14. You and your romantic partner (spouse/boyfriend/girlfriend) and a casual acquaintance (with which you will have no future contact)?
15. You and your romantic partner (boyfriend/girlfriend) and a stranger?

If presented with the opportunity, how interested would you be in engaging in a romantic couple's threesome as the third person if.... [each of the following items is rated on a 7-point bipolar scale]:

16. The couple are your close friends (with which you will have future contact)?
17. The couple are casual acquaintances (with which you will have no future contact)?
18. The couple are strangers?

MGT Experiences Subscale

Have you ever participated in a threesome (i.e., having sex with two other people):

19. With two males and a female? Yes ___/No ___
20. With two females and a male? Yes ___/No ___

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