Published in final edited form as:

J Sex Res. 2014 ; 51(2): 221–233. doi:10.1080/00224499.2012.724119.

Applying a Pattern-Centered Approach to Understanding How Attachment, Gender Beliefs, and Homosexuality Shape College Men's Sociosexuality

Jerel P. Calzo

Division of Adolescent and Young Adult Medicine, Boston Children's Hospital Department of Pediatrics, Harvard Medical School

Abstract

Although early research and the popular press have characterized college men as universal beneficiaries of uncommitted sex, emerging research notes considerable variability in men's sociosexuality (i.e., uncommitted sexual beliefs, desires, and behaviors). This study examined how diversity in sociosexuality is tied to the ways in which attachment orientations, conformity to masculinity norms, and homosocial engagement (i.e., non-romantic same-sex bonds) are organized across individuals. Latent profile analysis of 495 college males (ages 17–25, 62% White, 83.5% Heterosexual) detected five subgroups: Fully Unrestricted (10% of sample; high on sociosexuality and conformity to masculinity norms); Cognitively Unrestricted (36%; comparable to Fully Unrestricted, but low on sociosexual behavior), Fully Restricted (30%; opposite on all constructs when compared to Fully Unrestricted); Avoidant (16%; similar to Fully Restricted, but with greater attachment avoidance); and Discrepant (8%; above average on sociosexual behavior, but discordant within and across constructs). There were notable demographic, personality, and behavioral differences between the subgroups (e.g., nearly 50% of the Discrepant self-identified as sexual minorities, Fully Restricted were the most religious, Avoidant were the most shy). Findings indicate that college men's sociosexuality is highly nuanced and suggest the need for additional work to understand how attachment, masculinity norms, and homosexuality shape men's sexual relationships.

Keywords

Uncommitted/Nonrelational sex; Attachment; Masculinity; Peers; College Students

Survey research indicates that nearly 75% of college students hook up at least once before they graduate (i.e., engage in a sexual encounter with a stranger or brief acquaintance with no expectation of emotional commitment) (Epstein, Calzo, Smiler, & Ward, 2009; Glenn & Marquardt, 2001; Paul, McManus, & Hayes, 2000), leading some social scientists to conclude that uncommitted sex has become the norm among contemporary American college students (Bogle, 2008; England & Thomas, 2006; Regnerus & Uecker, 2011). Initial qualitative and quantitative data found that college men initiate hook ups more than women, are more satisfied after hooking up, and that hook ups generally enhance men's social status while bringing down women's reputations (Denizet-Lewis, 2004; Hermann & Rackl, 2005; Paul & Hayes, 2002). Such findings are consistent with well-documented gender differences in sociosexuality (defined by Kinsey as the orientation towards uncommitted sex) (Kinsey,

Pomeroy, & Martin, 1948) and reify the popular perception that “men want sex and women want relationships” (Twenge, 1997).

But is college men's sexuality really this straightforward? A growing body of work suggests that men's views on uncommitted sex are complex and diverse. Although previous research has found that sociosexuality shows one of the largest gender differences in psychology (Hyde, 2005), more recent estimates drawing from both convenience and population-based studies reveal that gender differences in sociosexuality have either decreased or are smaller than earlier studies indicate (Petersen & Hyde, 2010). In their integration of research and theory on sexual strategies, Gangestad and Simpson (2000) found that gender accounts for only 16% of the variance in preference for short-term sexual partners. In addition, approximately 30% of adult men express views about uncommitted sex that are *less favorable* than the median attitudes of women (Gangestad & Simpson, 2000). Researchers have also identified that there is substantial *within* gender variability in sociosexuality that requires further research (Giordano, Longmore, Manning, & Northcutt, 2009; Manning, Giordano, & Longmore, 2006; Regnerus & Uecker, 2011).

As college students and emerging adults, college men's sociosexual beliefs, desires, and behaviors may be highly variable as they gain experience with both committed and uncommitted relationships, develop a sense of their sexual and relationship preferences (e.g., monogamy vs. non-monogamy), and learn how to manage physical and emotional intimacy (Arnett, 2000; Brown, 1999, 2004; Diamond & Savin-Williams, 2009). The goals of the current study were to explore diversity in college men's sociosexuality and to investigate intra-psychic and contextual factors that may lead some men to endorse, desire, and engage in uncommitted sex more so than others. In particular, the study focused on the diverse ways in which college men's sociosexuality is organized by the complex combination of three factors: their internal working models of themselves in close relationships (attachment), their socially constructed beliefs about masculinity, and their level of social engagement with other men (homosociality) who may reinforce masculinity norms.

From an early age internalized models of trust, intimacy, and relationships may constrain men's preferences for and engagement in uncommitted sex. According to attachment theory, early experiences with caregivers serve as a model for intimate relationships across the lifespan (Ainsworth & Bowlby, 1991; Hazan & Shaver, 1987). This internalized model, or attachment orientation, consists of two dimensions—avoidance and anxiety (Brennan, Clark, & Shaver, 1998). Attachment anxiety represents one's need for approval from others and fear of rejection; avoidance represents fear of intimacy and dependence and denial of attachment needs. Those who exhibit high attachment anxiety have been found to engage in sex in order to establish intense closeness, to affirm self-worth, and to cope with insecurities about abandonment (Cooper et al., 2006; Davis, Shaver, & Vernon, 2004; Impett & Peplau, 2002). High attachment avoidance has been linked with less enjoyment of affectionate pre-intercourse activities (e.g., touching, kissing, caressing), less frequent discussion of sexual histories with partners (Davis, et al., 2004; Fraley & Shaver, 2000; Schachner & Shaver, 2004), but also more lifetime sexual partners, one-night stands, sex with strangers, and extra-dyadic sexual relationships (Birnbaum, 2007; Feeney, Peterson, Gallois, & Terry, 2000; Schachner & Shaver, 2004). Thus, young men's attachment anxiety and avoidance may impact their relationship attitudes and motivations to engage in uncommitted sex in college.

Beyond attachment orientation, men's propensity to engage in uncommitted sex may be modified by their masculinity ideologies. Masculinity ideologies represent beliefs about the importance of men's adherence to culturally defined standards of male behavior (Pleck, Sonenstein, & Ku, 1993). Much research has focused on one particular construction of

masculinity that is widely prevalent in the contemporary United States, termed “traditional” masculinity ideology (TMI) due to its similarity to the patriarchal and rigid gender role norms of 1950s America (Brannon, 1976; Levant, 1992; Pleck, 1976). Key dictates of TMI include homophobia, stoicism, risk-taking, promiscuity, competitiveness, and self-reliance (Mahalik et al., 2003; Mooney-Somers & Ussher, 2010; Philaretou & Allen, 2001). To fulfill these components, men are socialized to be tough and aggressive, to dominate in any competition or hierarchy, to restrict their emotions, to have sex with as many partners as possible, and to avoid doing anything that may be perceived as feminine or “gay” (O’Neil, 2008). By promoting promiscuity and engagement in uncommitted sex, the socialization of TMI may impede the acquisition of skills needed to build and maintain long-lasting romantic relationships (Good & Sherrod, 1997; Philaretou & Allen, 2001). Furthermore, conformity to the competitive norm of TMI may motivate men to engage in uncommitted sex frequently to enhance their social status among male peers (Kimmel, 2008).

In addition to attachment and gender ideologies, changes in peer contexts—such as those that accompany entry into the college environment—may further shape men’s sexual and relationship strategies. Because most incoming college men leave their high school social networks behind and must build new social networks, they may engage in a range of behaviors—such as drinking alcohol, partying, and engaging in uncommitted sex—in order to be accepted by their male peers (Kimmel, 2008). Although sometimes referred to in slang as “bro-time” and “bromances,” homosociality (i.e., non-sexual same-sex-focused social bonds) (Bird, 1996) may be one of the strongest predictors of conformity to TMI. Men’s expression of gender may largely be a homosocial enactment in which “manhood” is performed in front of and granted by male peers. Homosociality may be manifested in multiple ways, such as forming predominantly male social networks, joining intramural or organized sports teams, joining fraternities, or majoring in and taking coursework in subjects in which men are overrepresented (e.g., engineering). Rich qualitative work has explored how homosociality organizes young men’s sexual relationships. In his interviews with 18- to 26-year-old men in Australian colleges, youth centers, and military academies, Flood (2008) found that men’s relationships with other men control their sexual relationships with women in four ways. First, male-male friendships take priority over male-female relations; male-female friendships are viewed as feminizing. Second, male peers become the audience and jury of men’s sexual performances. Third, homosociality reinforces men’s sociosexuality through sharing stories of past sexual experiences, an act which allows men to transmit sexual expectations and attitudes (Flood, 2008; Wight, 1996). Fourth, activities focused on obtaining or glorifying sex (e.g., collectively gazing, engaging in sexual harassment, visiting strip clubs together, telling sexist jokes, and sharing sexual media) can often serve as the medium through which male bonding is enacted.

Attachment, masculinity ideologies, and homosociality may each independently influence men’s sociosexual beliefs, desires, and behaviors. However, examining the individual contributions of each factor to the different dimensions of sociosexuality obscures the fact that these are separate, co-existing facets of an individual that may covary or diverge in different ways for different individuals. Within-person variability in the organization of attachment, masculinity ideologies, and homosociality may account for the existence of diverse sociosexual subgroups among college men. In the current study it was hypothesized that at least one subgroup of college men would be identified who exhibited high levels of attachment avoidance, conformity to traditional masculinity norms, homosociality, and high levels of uncommitted sexual beliefs, desire, and behavior. It was also hypothesized that at least one additional subgroup would emerge that exhibited low levels across all constructs, and at least one subgroup that exhibited discrepant endorsement across constructs (e.g., high sociosexual behavior, low homosociality). A secondary goal of the current study examined the extent to which subgroup membership was associated with known correlates of young

adult sexual behavior. Such results could identify factors that may underlie sociosexual variability above and beyond attachment, TMI, and homosociality. Whereas correlates such as high religiosity, being a virgin, being in a committed relationship, shyness, and low levels of self-perceived attractiveness were hypothesized to predict membership to subgroups characterized by restricted sociosexuality (i.e., low sociosexual endorsement, desire, and behavior), correlates such as older age, high levels of engagement in binge drinking and attending parties were hypothesized to predict membership to subgroups characterized by unrestricted sociosexuality (i.e., high sociosexual endorsement, desire, and behavior) (Asendorpf, 2000; Bogle, 2008; Diamond & Savin-Williams, 2009; Guo et al., 2002; Halpern, Waller, Spriggs, & Hallfors, 2006; Paul, et al., 2000; Penke & Asendorpf, 2008).

Method

Participants and Procedure

Participants were recruited from October 2009 through January 2010 from a large, Midwestern public university, and were invited to participate in an online survey of college men's experiences with sex and relationships. Participants were predominantly recruited via introductory psychology subject pools (43%) and registrar office e-mail solicitation (44%). An additional 13% were recruited from respondent-driven sampling to over-sample sexual minorities (i.e., participants who identified as “mostly heterosexual”, “bisexual”, or “gay”) for a separate study.¹ Subject pool participants received course credit for their participation, and participants recruited via e-mail were compensated with \$10 iTunes gift cards. Of the 558 men who initiated the survey, 23 were excluded for terminating participation after the consent page; 3 were excluded for exhibiting response bias (i.e., selecting the same column throughout the study); 4 were excluded for finishing the survey at an impossible rate (e.g., less than 5 minutes); 16 were excluded for violating survey instructions or providing erroneous responses to quality control questions; and 17 were excluded for being older than the age cut-off of 25 years old. Participants excluded for being older than the age cut-off did not differ from the analysis sample in demographic characteristics or their dating and sexual behaviors. The study sample consisted of 495 undergraduate college men aged 17–25 ($M = 19.28$, $SD = 1.46$). Approximately 32% of the sample was first-year college students, 38% self-identified as ethnic minorities (20% Asian/Pacific Islander, 7% Black, 4% Latino, 7% Bi/Multi-Racial), and 16.5% self-identified as sexual minorities.

Measures

Table 1 displays sample descriptive statistics for the measures used in this study.

Sociosexuality—*Sociosexual behavior* was measured as the sum of two items adapted from the revised Sociosexual Orientation Inventory (SOI-R) (Penke & Asendorpf, 2008). The SOI-R defines uncommitted sexual behavior as a latent construct measurable by such indicators as number of one-time-only sexual partners and past year sexual partners. Because one-time-only sexual experiences typical among college students (i.e., hook ups) do not necessarily include vaginal intercourse (Paul, et al., 2000), “sexual activity” was defined broadly to include oral sex, vaginal sex, or anal sex. Participants indicated the total number of partners with whom they had engaged in sexual activity (1) on only one occasion and (2) in the past 12 months.² Initial descriptive statistics indicated that the behavior variables were

¹Participants recruited from registrar office e-mail solicitation were significantly older and more likely to be racial/ethnic minorities than participants recruited from the psychology subject pools. The respondent-driven sample was also significantly older than the subject pool sample. However, method of recruitment was not significantly related to subgroup membership.

²Although it is possible that these values overlap, together they provide an estimate of level and frequency of uncommitted sex and new sex partners. The structure of this measure is similar to other measures used to assess discrete risk behaviors, such as alcohol consumption (e.g., Johnston et al., 2008).

positively skewed, with 17 participants indicating very high (but not implausible) total numbers of past-year partners. Rather than excluding these participants from the data, total numbers of one-time sex partners and recent sex partners were restricted to 12 (which corresponded to the number of partners that was two standard deviations above the means for one time and recent sex partners in the sample). This modification allowed for the data to approximate a normal distribution and to proceed with structural equation modeling techniques. *Sociosexual beliefs* were measured by the sum of two items taken from the SOI-R (e.g., “Sex without love is OK”). Participants indicated level of agreement with each statement on a nine-point scale (1 = Strongly disagree to 9 = Strongly agree). *Sociosexual desire* was assessed by the sum of three items from the SOI-R (e.g., “How often do you have fantasies about having sex with someone with whom you do not have a committed romantic relationship?”), each measured on a nine-point scale (anchored at 1 = Never and 9 = At least once a day).

Attachment avoidance and anxiety—Participants provided information about their attachment-related *anxiety* and *avoidance* using the two 18-item sub-scales from the Experiences in Close Relationships measure (ECR) (Brennan, et al., 1998). Each item assesses how participants feel in romantic relationships in general, not just what may be occurring in a current relationship (e.g., “I prefer not to be too close to romantic partners”). Participants indicated their level of agreement with each item on a seven-point scale (1 = Disagree Strongly, to 7 = Agree Strongly). Avoidance and anxiety scores consisted of the mean of each subscale.

Traditional Masculinity Ideologies—Masculinity ideologies were assessed using two subscales from the Conformity to Masculinity Norms Inventory (CMNI; Mahalik et al., 2003): *Winning* (the competitive norm; 10 items, e.g., “Winning isn't everything, it's the only thing”) and *Playboy* (the casual sex norm; 12 items, e.g., “If I could, I would frequently change sexual partners”). Participants rated their agreement with how truly each item describes them on a four-point scale (0 = Strongly disagree, to 3 = Strongly agree). Items within each subscale were averaged to score men's level of conformity on each dimension.

Homosociality—Four variables assessed dimensions of homosociality. *Male peer sex norms* were measured with five questions regarding participants' beliefs about the percentage of same-aged males in the United States who have engaged in each of five sexual behaviors (e.g., have had sex on a hook up with a person they just met; 0 = 0% to 10 = 100%). Items were summed to compute a male peer sex norms score, with higher values indicating perceptions of high peer sexual experience. Involvement in *traditional male contexts* was measured with five (Y/N) questions regarding whether participants are currently or have been members of a fraternity (19.6%), an all male sports team during adolescence or in college (59.0%), the military (e.g., junior or college level reserve officer training corps, enlisted in the military; 1.4%), or whether they attended an all male high school (6.6%). A count of the items was used to assess involvement in traditional sex-segregated all-male contexts. *Homosocial time* -- a measure created for this study -- was assessed via how many different non-romantic male acquaintances (e.g., coworkers, teammates, classmates) and close friends participants hang-out with in sex-segregated contexts (defined as in the absence of female friends, or in which few female friends are present or actively involved in the activity) on a regular basis (defined as at least twice a week). Participants also indicated how often they generally “hang out” with those acquaintances/close friends (three-point scale, 1 = Twice a week, 2 = 3–4 times a week, 3 = Nearly every day). The number of acquaintances and close friends were multiplied by the frequencies of hanging out, and then combined as a measure of homosocial time. To measure *sexual storytelling* in homosocial contexts participants indicated how often they

discuss three different topics with close male friends: (1) desire to have sex, (2) past sexual experiences, and (3) people they find attractive (e.g., ogling or “checking out” passersby). To ensure that storytelling across multiple contexts was assessed, participants indicated how often they discussed each topic in each of the following five contexts: with a close male friend, group of male friends or acquaintances, male classmates, coworkers, or colleagues within an organized sport or activity. Participants were reminded that these instances could include discussion of their own experiences or those of others. Frequency for each storytelling topic for each type of audience was assessed on a four-point scale (0 = Never to 3 = All the time). Items across contexts and topics were summed.

Correlates—Eight variables were examined as correlates of subgroup membership. The average *religiosity* of the sample was based on an average of three items each scored 0–5 that assessed self-perceived religiosity, frequency of prayer, and frequency of religious attendance. *Current relationship status* was assessed by asking participants whether they are currently dating someone exclusively (i.e., longer than 3 months) (Y/N). Self-report of *vaginal or anal sex experience* was used as a proxy measure of sexual/coital experience (i.e., virginity status).³

Binge drinking was assessed using two items taken from the Monitoring the Future Study (Johnston, O'Malley, Bachman, & Schulenberg, 2008). Participants were first asked, “Have you ever had any alcoholic beverage to drink-more than just a few sips?” (Y/N). Those who respond, “Yes” were then asked “How many times have you had five or more drinks in a row in the last two weeks? (A ‘drink’; is a bottle of beer, a glass of wine, a wine cooler, a shot glass of liquor, or a mixed drink)”; 0 = None, to 5 = 10+ times. *Partying* was measured using seven items focused on how often participants typically attend several types of parties (e.g., fraternity and/or sorority parties, house party) or party contexts (e.g., dance clubs, bars) during a school year. Participants indicated level of attendance to each item/party context on a six-point scale (1 = Hardly ever, to 6 = More than once a week). The sum of the individual party scores indicated overall partying behavior.

Participants' *shyness* was assessed using the Revised Cheek and Buss Shyness Scale (Cheek & Buss, 1981). Participants indicated the extent to which each of 13 different statements was characteristic of their feelings and behavior (e.g., “I feel tense when I'm with people I don't know well,” rating 1= Very uncharacteristic or untrue, to 5 = Very characteristic or true). To account for self-perceived attractiveness and desirability to partners, participants' *self-perceived market value* was assessed based on participants' responses to 12 items regarding how they see themselves in comparison to other young adults of their age and gender (ranked on a nine-point scale, –4 = Much less than average, to 4 = Much more than average). Seven items assess physical attractiveness (e.g., “Has an attractive face”), and five items assess sex appeal (e.g., “Someone who has had extensive sexual experience”). Items were summed and averaged to produce a self-perceived market value score. Market value scores were significantly correlated with overall level of dating experience ($r(397) = .25, p < .001$) and total lifetime number of male and female sex partners ($r(405) = .41, p < .001$). Finally, due to the sensitive nature of the study topics, participants completed the Strahan-Gerbasi Social Desirability Scale (SDS) to account for *social desirability* in survey response (Strahan & Gerbasi, 1972). The SDS consists of 10 true/false statements that describe culturally approved behaviors with low actual probabilities of occurrence (e.g., “I am always willing to admit it when I make a mistake”). A count of the items marked as “true” indicated

³This conceptualization may not accurately reflect the level of sexual experience for sexual minority participants who, for multiple reasons, might not engage in vaginal or anal sex. However, because virginity status is used here as a correlate and not a central behavioral outcome, this conceptualization does not represent a significant limitation.

each participant's SDS score, with higher scores representing a higher degree of likelihood of providing socially desirable responses.

Analysis Plan

A pattern-centered approach (latent profile analysis [LPA]) was employed to identify subgroups within the sample regarding sociosexuality, homosociality, masculinity ideologies, and attachment. LPA utilizes a probabilistic grouping procedure to sort participants into groups of individuals who are similar to each other on the indicators of interest and different from participants in other groups (Muthen & Muthen, 2000; Pastor, Barron, Miller, & Davis, 2007). The distributions for sociosexuality, homosociality, masculinity, and attachment were first examined for normality, kurtosis, and skewness and were found to be within acceptable ranges for latent variable modeling techniques (Kline, 1998). The variables were then standardized prior to LPA because of scaling differences. Two- to seven-latent profile solutions were estimated to determine the optimal number of subgroups. LPA provides fit indices to help evaluate the fit of different solutions to the data, including the Akaike and Bayesian Information Criteria (AIC, BIC, and BIC *N*-adj.), the Lo-Mendell-Rubin (LMR) fit index, and the bootstrap likelihood ratio test (BLRT). Lower AIC, BIC, and BIC *N*-adj. values and significant LMR and BLRT values are indicative of better model fit (Henson, Reise, & Kim, 2007; Lo, Mendell, & Rubin, 2001; McLachlan & Peel, 2000). However, because previous research cautions against the use of goodness-of-fit indices alone to determine the appropriate number of subgroups (Marsh, Hau, & Grayson, 2005; Nylund, Asparouhov, & Muthen, 2007), the final number of subgroups analyzed in the study was also based on interpretability and relevance, and homogeneity and separation. Homogeneity refers to the property in which a particular item response characterizes individuals in a subgroup (e.g., high sociosexual desire); separation is the property by which an item distinguishes individuals across at least one pair of subgroups (Collins & Lanza, 2010). LPA provides a modal class membership variable for each participant based on the subgroup to which they are most likely to belong. Comparisons were then made using multinomial logistic regression to identify correlates of subgroup membership. All analyses were conducted in MPlus Version 5.21 (Muthen & Muthen, Los Angeles CA, 2007). Missing data were accounted for using full information maximum likelihood estimation (a description of missing data analyses is available by request from the author).

Results

Identifying Subgroups

Fit indices for the estimated models are displayed in Table 2. The five-profile solution was accepted because of the better distribution of participants across subgroups, the interpretability and relevance of the solution (i.e., the emergence of an Avoidant subgroup, described below), and subgroup homogeneity and separation. Figure 1 illustrates the five subgroups identified through LPA with scores on the key constructs represented in standard deviation units ($M = 0$). As expected, one subgroup emerged that was above average on all dimensions of sociosexuality, homosociality, TMI, and attachment avoidance ($n = 49$). Due to this subgroup's high sociosexuality, homosociality, masculinity, and avoidance scores, this subgroup was labeled *Fully Unrestricted*. In contrast to the Fully Unrestricteds, one subgroup (the second largest in the sample) also emerged that was consistently below average on all constructs ($n = 149$; 30%). Due to their overall restricted sociosexual profile (below average sociosexual beliefs, desire, and behavior), this subgroup was labeled *Fully Restricted*.

Three additional subgroups constituting 60% of the sample displayed incongruency across constructs, thus revealing additional variability in sociosexuality that may be linked to

different organizations of attachment, TMI, and homosociality. The largest subgroup in the data set ($n = 180$, 36% of the sample) exhibited a similar pattern to the Fully Unrestricted in terms of sociosexual beliefs and desire, homosociality, TMI, and attachment avoidance, but also displayed less than average levels of sociosexual behavior. This subgroup was labeled *Cognitively Unrestricted* given their high endorsement of sociosexuality and sociosexual desire, but low level of sociosexual behavior. A second subgroup emerged that was low on all constructs, but exhibited greater than average attachment avoidance (*Avoidant*, $n = 79$, 16%). The last subgroup to emerge exhibited wide variability and seeming inconsistency across constructs (*Discrepant*, $n = 38$, 8%).

Correlates of Subgroup Membership

The second set of analyses examined correlates of subgroup membership. Table 3 displays the demographic, behavioral, and personality characteristics of each subgroup with analyses of variance to compare between-subgroup differences on continuous variables. Focusing first on demographics, there were significant age differences whereby Discrepant were significantly older than those in the other subgroups. The subgroups varied in ethnic diversity, with Fully Unrestricteds being the least ethnically diverse subgroup (84% White), whereas approximately 40% of the members each of the other subgroups were ethnic minority participants. With regards to sexual orientation, almost half of the Discrepant subgroup self-identified as sexual minorities (although only 20% of the sexual minorities in the overall sample were classified to this subgroup). All the participants generally reported low levels of religiosity, but participants in the Fully Restricted and Avoidant subgroups were more religious.

Focusing next on behavioral data, Fully Unrestricteds reported binge drinking and partying the most, followed by the Cognitively Unrestricteds and Discrepant (who did not differ significantly from each other). Nearly all of the participants in the Fully Unrestricted and Discrepant subgroups reported having engaged in vaginal or anal sex. Focusing on current relationship status, the percentage of Discrepant dating someone exclusively at the time of the survey was comparable to the Fully Restricteds (approximately 40%), and more than the Fully Unrestricteds, Cognitively Unrestricteds, and Avoidants. Such a finding suggests that exhibiting a history of many uncommitted sexual partners and engaging in committed relationships are not necessarily incompatible. The Avoidant participants reported the lowest levels of dating and sexual experience. Only 10% of the Avoidants were currently involved in a relationship at the time of the survey, and nearly 75% did not report vaginal or anal sex experience. With regards to personality characteristics, Fully Unrestricteds reported the highest self-perceived market value. Avoidants reported the highest levels of shyness. Cognitively Unrestricteds reported the lowest scores on the social desirability questionnaire.

Next, multinomial logistic regressions tested whether the previously described demographic, behavioral, and personality differences actually distinguish between membership to different subgroups. Because the Fully Restricted subgroup was both large and uniformly low on all of the key constructs, they were an ideal comparison group for the analysis and were set as the referent group. Due to multi-collinearity between age and grade level (i.e., variance inflation factor > 5), freshman status was dropped from the model. Table 4 displays the results from the multinomial logistic regression with statistically significant odds ratios in bold. Focusing first on the Fully Unrestricteds, being an ethnic minority and being in a relationship at the time of the survey were associated with dramatically reduced odds of being in the Fully Unrestricted subgroup versus the Fully Restricted subgroup. However, each unit increase in age was associated with nearly a 50% increase in the odds of being in the Fully Unrestricted subgroup versus the Fully Restricted subgroup. Additionally, binge drinking and partying were associated with 64% and 31% increased odds of being in the

Fully Unrestricted subgroup versus the Fully Restricted subgroup. With regards to sexual experience, participants with vaginal or anal sex experience had over 16 times the odds of being in the Fully Unrestricted subgroup versus the Fully Restricted subgroup. Finally, each unit increase in self-perceived market value was associated with a three-fold increase in the odds of being in the Fully Unrestricted subgroup versus the Fully Restricted subgroup.

For Cognitively Unrestricteds, binge drinking and partying were associated with greater odds of being in the Cognitively Unrestricted subgroup versus the Fully Restricted subgroup, whereas currently dating was associated with reduced odds of being in the Cognitively Unrestricted subgroup. Consistent with apparent religiosity differences, being more religious was associated with reduced odds of being in the Cognitively Unrestricted subgroup versus the Fully Restricted subgroup. Few variables predicted membership to the Avoidant subgroup versus the Fully Restricted subgroup, however, religiosity and currently dating were each associated with reduced odds of being in the Avoidant subgroup versus the Fully Restricted subgroup. Additionally, each unit increase in shyness was associated with a slight increase in the odds of being in the Avoidant subgroup versus the Fully Restricted subgroup. In distinguishing the Discrepant from the Fully Restricted, each unit increase in age was associated with a 60% increase in the odds of being in the Discrepant subgroup versus the Fully Restricted subgroup. In addition, being a sexual minority was associated with more than a threefold increase in the odds of being in the Discrepant subgroup versus the Fully Restricted subgroup. As was the case with the Fully Unrestricteds, binge drinking increased the odds of being in the Discrepant subgroup versus the Fully Restricted subgroup, and having vaginal or anal sex experience was associated with nearly a 30-fold increase in the odds of being in the Discrepant subgroup versus the Fully Restricted subgroup.

Secondary logistic regressions—Given the similarities between the Fully Unrestricteds and Cognitively Unrestricteds across nearly all constructs, and the similarities between the Discrepant and Fully Unrestricteds on sociosexual behavior, additional logistic regressions were run comparing membership to the Fully Unrestricteds subgroup vs. Cognitively Unrestricted subgroup, and membership to the Discrepant subgroup vs. Fully Unrestricted subgroup. In distinguishing the Fully Unrestricteds from the Cognitively Unrestricteds, ethnic minority identification was associated with dramatically reduced odds of being in the Fully Unrestricted subgroup versus the Cognitively Unrestricted subgroup ($B = -2.61, p < .01, O.R. = .07, 95\% C.I. = .02, .27$). Being a sexual minority was associated with a five-fold increase in the odds of being in the Fully Unrestricted subgroup versus the Cognitively Unrestricted subgroup ($B = 1.73, p < .05, O.R. = 5.66, 95\% C.I. = 1.48, 21.67$). With regards to behavioral and personality predictors, partying was associated with 12% increase in the odds of being Fully Unrestricted versus Cognitively Restricted ($B = .11, p < .01, 95\% C.I. = 1.05, 1.18$), vaginal or anal sex experience with 12.47 times the odds of being Fully Unrestricted versus Cognitively Unrestricted ($B = 2.52, p < .01, 95\% C.I. = 2.97, 52.32$), and each unit increase in self-perceived market value with 3.66 times the odds ($B = 1.30, p < .001, 95\% C.I. = 2.02, 6.64$) of being a Fully Unrestricted versus a Cognitively Unrestricted. In distinguishing the Discrepant participants from the Fully Unrestricteds, the only significant predictor was ethnic minority status, which was associated with a 26-fold increase in the odds of being Discrepant versus Fully Unrestricted ($B = 3.26, p < .01, 95\% C.I. = 4.19, 161.79$).

Discussion

The goals of the current study were to explore the diversity in college men's sociosexuality and to investigate how attachment, conformity to traditional masculinity ideologies, and homosocial bonds may shape men's endorsement, desire, and engagement in uncommitted sex. Attachment avoidance, TMI, and homosociality generally covaried with sociosexuality

in the expected directions, although discrepancies within and across constructs (e.g., evidenced by the Cognitively Unrestricted, Avoidant, and Discrepant subgroups) indicate that college men's sexuality is much more variegated and nuanced than the “men want sex and will do anything to get it” portrayal. Only 10% of the men in this study (i.e., Fully Unrestricted) presented data that may be consistent with this stereotypical portrayal. However, the largest subgroup of the sample was Cognitively Unrestricted, thus suggesting that although not all college men engage in high levels of sociosexual behavior, a notable portion of men may aspire to it at some point in college. The second and third largest subgroups in the sample (Fully Restricted and Avoidant) were generally below average in their sociosexuality and on all other constructs, indicating that nearly half of the men in the sample abstain from or do not engage in high levels of uncommitted sex. The diversity of subgroups provide potential evidence of developmental equifinality (i.e., multiple pathways to restricted and unrestricted patterns) in college men's sociosexuality. For example, the restricted sociosexual orientation among the Fully Restricteds may be a result of a preference for committed relationships, and the restricted sociosexual orientation among the Avoidants may be a result of fear of intimacy (i.e., high attachment avoidance) or shyness. That the Discrepants exhibited high levels of sociosexual behavior in the absence of commensurate sociosexual beliefs and desires, or consistently high homosociality, TMI, and attachment avoidance, indicates that unrestricted sociosexuality may stem from motivational and contextual states not assessed or conceptualized in this study.

Sociosexual Variability and College Men's Sexual Development

Are Cognitively Unrestricted men just Fully Unrestricted men in the making? Although this study was cross-sectional in design, the subgroups detected map onto existing research regarding the development of men's sexual and romantic relationship experiences in emerging adulthood. Indeed, it is possible that some of the subgroups detected are actually men at different stages of development. One common Western social script of emerging adulthood is that it is acceptable to “sow one's wild oats” before settling down later in life (Regnerus & Uecker, 2011). For men who endorse this script, uncommitted sex may be viewed as both normative and time-limited, and may not necessarily compete with the eventual goal of entering a committed relationship. In his model of the development of romantic relationship experience, Brown (1999) notes that individuals must develop a sense of their sexual selves and how to approach partners, and that relationships become more committed as individuals develop comfort with intimacy. Brown recognizes that relationships also have a peer component, and proposes that concerns regarding peer approval may shape the types of relationships individuals pursue, particularly among adolescents and young adults who have limited sexual and romantic relationship experience.

Consistent with this model, Cognitively Unrestricted participants were the youngest, had relatively high involvement in homosocial relationships, and endorsed and desired uncommitted sex to approximately the same degree as the Fully Unrestricted participants. It is possible that building and maintaining homosocial bonds at the beginning of college may play a key role in shaping Cognitively Unrestricted participants' sociosexuality. Previous research indicates that some college men prioritize building and maintaining friendships in college over pursuing committed relationships (Bogle, 2008). Time with an exclusive partner could interfere with social network building in a way that hooking up does not. Indeed, in certain peer contexts (e.g., fraternities) hooking up may even increase the esteem one receives from one's peers or serve as a shared activity that builds social connections (Kimmel, 2008). Perhaps the shared activities and the composition of the homosocial networks of Fully and Cognitively Unrestricted participants vary in ways that differentially influence sociosexuality. The Cognitively Unrestricted participants also reported lower levels of self-perceived physical attractiveness and were less engaged in party contexts than

the Fully Unrestricted participants. Thus, in addition to being younger and not having enough “college experience” to accrue uncommitted sexual experience, it is also possible that Cognitively Unrestricted participants lack sufficient social skills or capital (i.e., have the looks or “game” to attract partners; have connections to party contexts) that could facilitate obtaining the uncommitted sex they desire.

The identification of Fully Restricted and Avoidant subgroups indicate that attachment, masculinity norms, and homosocial bonds may also shape unrestricted sociosexuality, and that patterns of unrestricted sociosexual behavior may also be determined by volitional and circumstantial processes. Fully Restricted and Avoidant participants were the least conforming to the promiscuous sex and competitive norms of TMI, and were the least engaged in homosocial contexts and relationships (which, depending on the norms of those relationships, could reinforce TMI and uncommitted sex). The analysis of correlates of subgroup membership also indicated that Fully Restricted and Avoidant men could represent individuals who reject or diverge from the “sowing wild oats” social script for multiple reasons, including currently being in a monogamous relationship, religious conviction, or because of traits that impede meeting partners or maintaining connections. Being in a relationship predicted membership to the Fully Restricted subgroup. By contrast, shyness—a potential impediment to both dating and sexual experience, and a potential predictor of abstention from party contexts (Asendorpf, 2000)—predicted membership to the Avoidant subgroup.

The identification of the Discrepant subgroup further indicates that sociosexual behavior can occur in the absence of high levels of sociosexual endorsement or desire, and that men who exhibit high levels of sociosexual behavior are not necessarily less likely to report having committed, romantic relationship experience. Previous cross-sectional research suggests that hooking up is common at the beginning of college (as students take advantage of the opportunities afforded by many potential partners), less common in the middle of college as students pursue romantic relationships, common again prior to graduation (because graduation is a deterrent from pursuing longer-term relationships), then less common post-college as social demands and expectations make committed relationships more desirable (Bogle, 2008). Consistent with this prior research, Discrepant participants were the oldest participants in the sample and reported high sociosexual behavior, although the proportion in committed relationships was comparable to the Fully Restricted subgroup. Future longitudinal research can examine whether subgroups differ in their sociosexual orientations post-college, and if the subgroups represent stages in a sociosexual developmental process.

Variability by Ethnicity and Sexual Minority Identity

One criticism of research on college student sociosexuality is the reliance on data from predominantly White and heterosexual samples (Bogle, 2008; England, Shafer, & Fogarty, 2008). The results regarding the effects of ethnicity and sexual orientation on subgroup membership were complex and require deeper investigation. Previous researchers have found evidence of ethnic group differences in male college student hook up experiences, with Black/African-American college males often reporting the most hook up partners and Asian/Pacific Islander college males reporting the least (England, et al., 2008). Unfortunately, due to the small number of ethnic minority participants across subgroups, it was not possible to enter individual ethnic subgroups as predictors in the regression models. The aggregate “Ethnic Minority” variable used in the regression models may have obscured variance in the effects of different ethnic subgroup identities. In this study, ethnic minority participants were less likely to be classified to the Fully Unrestricted subgroup relative to Fully Restricted subgroup. More research is required to investigate whether intrapsychic and contextual factors shape sociosexuality differently for students of different ethnic or cultural backgrounds.

Previous research has found that sexual minority males may report having more uncommitted sexual partners than heterosexual males (England, et al., 2008; England & Thomas, 2006; Goodreau & Golden, 2007), thus suggesting that sociosexuality may be manifested or develop differently in sexual minority male college students. Sexual minority identity distinguished the Discrepant from the Fully Restricteds, but it did not distinguish the Discrepant from the Fully Unrestricteds. This is surprising given that 46% of the Discrepant participants (versus 27% of the Fully Unrestricteds) self-identified as a sexual minority. It is possible that the Discrepant subgroup consisted of a higher within-group proportion of sexual minority participants because sexual minority individuals are generally less gender-conforming than heterosexuals (Rieger, Linsenmeier, Gygaz, & Bailey, 2008; Valentova, Rieger, Havlicek, Linsenmeier, & Bailey, 2011). It is also possible that more sexual minority participants were in the Discrepant profile as an artifact of sampling (i.e., the respondent-driven sample was significantly older than the subject pool recruitment group). However, method of recruitment was not significantly related to subgroup membership. Descriptive analyses indicated that sexual minority participants were generally dispersed evenly across profiles. Overall, the results are intriguing because they suggest that sexual minority participants may be more similar than different to heterosexual participants with regards to variability in the organization of sociosexuality, attachment, gender ideologies, and homosociality.

Limitations

Although this study breaks new ground by highlighting the nuance and diversity of college men's sociosexual embodiments, there are several limitations that future research should address. The participants were recruited from the same large, public, Midwestern university with a thriving Greek and athletic system. The findings might not generalize to the experiences of college men from other regions of the US, from different college types (e.g., liberal arts, private, religiously affiliated), of different demographic backgrounds (i.e., ethnic minorities, different socio-economic status), or men who do not attend college. However, previous research has identified that the sociosexual climates of small and large colleges and universities are generally similar (Bogle, 2008). Although established scales were used when possible, several measures were modified to broaden the scope of the behaviors assessed (e.g., SOI-R) or were developed to assess novel constructs generally studied via qualitative methodologies (i.e., homosociality). The measures had adequate internal consistency and face validity, but additional research must be completed to evaluate the psychometric properties of these measures, their internal and external validity, and reliability. During class enumeration, the five-class solution was selected over the four-class solution even though indices of fit indicated that the five-class solution was not significantly better than the four-class solution. It is possible that a larger sample size would allow for the detection of significant differences between the five- vs. the four-class solution. The benefits of selecting the five-class solution in the current study were that it allowed for better homogeneity and separation and permitted the emergence of the Avoidant subgroup, which was substantively relevant. A larger sample size might also improve the quality of estimates when comparing classes, given that several distinguishing factors were significant, but produced large confidence intervals (e.g., sexual experience, ethnicity). Additional limitations of the current study are the convenience sampling and cross-sectional design. Beyond the variability within profiles, it is possible that there are additional subgroups that were not captured in the current sample, or that men may shift between subgroups across college.

Conclusions and Future Directions

The results from this study suggest that there is considerable heterogeneity in college men's sociosexuality and that this variability is matched by variance in attachment, conformity to masculinity norms, and homosocial engagement. The five sociosexual subgroups of men

detected in this study have heuristic appeal in that they were further associated with demographic, behavioral, and personality characteristics identified in the existing literature. The results provide novel empirical support to previous theoretical work regarding the development of uncommitted and committed sexual experience in men across late-adolescence and emerging adulthood (Arnett, 2000; Brown, 1999; Diamond & Savin-Williams, 2009; Good & Sherrod, 1997). Longitudinal research can further examine whether the subgroups detected capture men on different trajectories of development with regards to uncommitted and committed sexual experience. The findings also serve as the impetus for in-depth qualitative research to examine the validity of the subgroups identified and the complex processes by which attachment orientations, gender beliefs, and homosocial bonds shape sociosexuality as men traverse their college years. For example, to what extent do subgroups represent distinct, stable sociosexual identities? Do men select into peer groups that are consistent with their sociosexual orientations, or does exposure to different types of men lead to the socialization of sociosexual beliefs, desire, and behavior across time? Longitudinal and mixed-methods research can further examine how sociosexuality is contextualized by the multiple developmental tasks of adolescence and young adulthood. Such research can also explore how participation or avoidance of uncommitted sex throughout college is associated with future desire for and success in building and maintaining relationships post-college.

Acknowledgments

Acknowledgements: Dr. Calzo is supported by National Research Service Award F32HD066792 from the Eunice Kennedy Shriver National Institute of Child Health & Human Development (NICHD) and a National Institutes of Health (NIH) Pediatric Loan Repayment Program award. The content is solely the responsibility of the author and does not necessarily represent the official views of NICHD or NIH. Dr. Calzo would like to thank Drs. L. Monique Ward, John Schulenberg, Robin Edelstein, and Karin Martin for their mentorship on this research, Corissa Carlson for her assistance in data collection and management, and all of the participants in the study for making this research possible.

References

- Ainsworth M, Bowlby J. An ethological approach to personality development. *American Psychologist*. 1991; 46(4):333–341.
- Arnett JJ. Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*. 2000; 55(5):469–480. doi: 10.1037//0003-066x.55.5.469. [PubMed: 10842426]
- Asendorpf, J. Shyness and adaptation to the social world of university. In: Crozier, W., editor. *Shyness: Development, Consolidation and Change*. Routledge; New York, NY: 2000.
- Bird S. Welcome to the men's club: homosociality and the maintenance of hegemonic masculinity. *Gender & Society*. 1996; 10(2):120–132.
- Birnbaum G. Beyond the borders of reality: attachment orientations and sexual fantasies. *Personal Relationships*. 2007; 14:321–342.
- Bogle, K. *Hooking Up: Sex, Dating, and Relationships on Campus*. William Morrow; New York: 2008.
- Brannon, R. The male sex role: our culture's blueprint for manhood, what it's done for us lately. In: David, D.; Brannon, R., editors. *The Forty-Nine Percent Majority: The Male Sex Role*. Addison-Wesley; Reading, MA: 1976.
- Brennan, K.; Clark, C.; Shaver, P. Self-report measurement of adult attachment. In: Simpson, J.; Rholes, W., editors. *Attachment Theory and Close Relationships*. Guilford Press; New York: 1998.
- Brown, B. You're going out with who?: peer group influences on adolescent romantic relationships. In: Furman, W.; Brown, B.; Feiring, C., editors. *The Development of Romantic Relationships in Adolescence*. Cambridge University Press; New York: 1999.
- Brown, B. Adolescents' relationships with peers. In: Lerner, RM.; Steinberg, L., editors. *Handbook of Adolescent Psychology*. Wiley; New York, NY: 2004.

- Cheek J, Buss A. Shyness and sociability. *Journal of Personality and Social Psychology*. 1981; 41:330–339.
- Collins, L.; Lanza, S. *Latent Class and Latent Transition Analysis*. John Wiley & Sons; Hoboken, NJ: 2010.
- Cooper, M.; Pioli, M.; Levitt, A.; Talley, A.; Micheas, L.; Collins, N. Attachment styles, sex motives, and sexual behavior: evidence for gender-specific expressions and attachment dynamics. In: Mikulincer, M.; Goodman, G., editors. *Dynamics of Romantic Love: Attachment, Caregiving, and Sex*. Guilford; New York: 2006.
- Davis D, Shaver P, Vernon M. Attachment style and subjective motivations for sex. *Personality and Social Psychology Bulletin*. 2004; 30(8):1076–1090. [PubMed: 15257790]
- Denizet-Lewis, B. Friends, friends with benefits and the benefits of the local mall. *New York Times Magazine*. 2004. Retrieved from <http://www.nytimes.com/2004/05/30/magazine/30NONDATING.html>
- Diamond, LM.; Savin-Williams, RC.; Steinberg, L. Adolescent sexuality. In: Lerner, RM., editor. *Handbook of adolescent psychology* (3rd ed., Vol. 1. Individual bases of adolescent development, pp. 479-523). Wiley; New York, NY: 2009.
- England, P.; Shafer, E.; Fogarty, A. Hooking up and forming romantic relationships on today's college campuses. In: Kimmel, M.; Aronson, A., editors. *The Gendered Society Reader*. 3rd ed.. Oxford University Press; New York: 2008.
- England, P.; Thomas, R. The decline of the date and the rise of the college hook up. In: Skolnick, A.; Skolnick, J., editors. *Families in Transition*. 14th Ed. Allyn and Bacon; Boston: 2006.
- Epstein M, Calzo JP, Smiler AP, Ward LM. “Anything from making out to having sex”: men's negotiations of hooking up and friends with benefits scripts. *Journal of Sex Research*. 2009; 46(5): 414–424. [PubMed: 19253134]
- Feeney J, Peterson C, Gallois C, Terry D. Attachment style as a predictor of sexual attitudes and behavior in late adolescence. *Psychology and Health*. 2000; 14:1105–1122. [PubMed: 22175265]
- Flood M. Men, sex, and homosociality: how bonds between men shape their sexual relations with women. *Men and Masculinities*. 2008; 10(3):339–359.
- Fraley R, Shaver P. Adult romantic attachment: theoretical developments, emerging controversies, and unanswered questions. *Review of General Psychology*. 2000; 4(2):132–154.
- Gangestad S, Simpson J. The evolution of human mating: trade-offs and strategic pluralism. *Behavioral and Brain Sciences*. 2000; 23:573–644. [PubMed: 11301543]
- Giordano P, Longmore M, Manning W, Northcutt M. Adolescent identities and sexual behavior: an examination of Anderson's player hypothesis. *Social Forces*. 2009; 87(4):1813–1844.
- Glenn, N.; Marquardt, E. *Hooking Up, Hanging Out, and Hoping for Mr. Right: College Women on Mating and Dating Today*. Institute for American Values; New York: 2001.
- Good, G.; Sherrod, N. Men's resolution of non-relational sex across the lifespan. In: Levant, R.; Brooks, G., editors. *Men and Sex: New Psychological Perspectives*. Wiley; New York: 1997.
- Goodreau SM, Golden MR. Biological and demographic causes of high HIV and sexually transmitted disease prevalence in men who have sex with men. *Sexually Transmitted Infections*. 2007; 83(96): 458–462. [PubMed: 17855487]
- Guo J, Chung I-J, Hill KG, Hawkins JD, Catalano RF, Abbott RD. Developmental relationships between adolescent substance use and risky sexual behavior in young adulthood. *Journal of Adolescent Health*. 2002; 31(4):354–362. doi: 10.1016/s1054-139x(02)00402-0. [PubMed: 12359381]
- Halpern CT, Waller MW, Spriggs A, Hallfors DD. Adolescent Predictors of Emerging Adult Sexual Patterns. *Journal of Adolescent Health*. 2006; 39(6):e1–e10. doi: 10.1016/j.jadohealth.2006.08.005. [PubMed: 17116527]
- Hazan C, Shaver P. Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*. 1987; 52:511–524. [PubMed: 3572722]
- Henson J, Reise S, Kim K. Detecting mixtures from structural model differences using latent variable mixture modeling: a comparison of relative model fit statistics. *Structural Equation Modeling: A Multidisciplinary Journal*. 2007; 14:202–226.

- Hermann A, Rackl L. On college campuses the pressure is intense for one-night hookups, without emotion or commitment -- but some psychologists warn that these young adults are setting themselves up for future relationship troubles. *Chicago Sun Times*. 2005
- Hyde JS. The Gender Similarities Hypothesis. *American Psychologist*. 2005; 60(6):581–592. doi: 10.1037/0003-066x.60.6.581. [PubMed: 16173891]
- Impett EA, Peplau LA. Why some women consent to unwanted sex with a dating partner: insights from attachment theory. *Psychology of Women Quarterly*. 2002; 26:360–370.
- Johnston, LD.; O'Malley, PM.; Bachman, JG.; Schulenberg, J. *Monitoring the Future National Results on Adolescent Drug Use: Overview of Key Findings, 2008*. National Institute on Drug Abuse; Bethesda, MD: 2008.
- Kimmel, M. *Guyland: The Perilous World Where Boys Become Men*. Harper Collins; New York: 2008.
- Kinsey, A.; Pomeroy, W.; Martin, C. *Sexual Behavior in the Human Male*. W.B. Saunders; Philadelphia: 1948.
- Kline, R. *Principles and Practice of Structural Equation Modeling*. Guilford; New York: 1998.
- Levant R. Toward the reconstruction of masculinity. *Journal of Family Psychology*. 1992; 5(3):379–402.
- Lo Y, Mendell N, Rubin DB. Testing the number of components in a normal mixture. *Biometrika*. 2001; 88:767–778.
- Mahalik J, Locke B, Ludlow L, Diemer M, Scott R, Gottfried M, Frietas G. Development of the Conformity to Masculine Norms Inventory. *Psychology of Men & Masculinity*. 2003; 4:3–25.
- Manning W, Giordano P, Longmore M. Hooking up: the relationship contexts of “nonrelationship” sex. *Journal of Adolescent Research*. 2006; 21:459–483.
- Marsh, H.; Hau, K.; Grayson, D. Goodness of fit evaluation in structural equation modeling. In: Maydeu-Olivares; McArdle, J., editors. *Contemporary Psychometrics*. Lawrence Erlbaum Associates, Inc.; Mahway, NJ: 2005.
- McLachlan, G.; Peel, D. *Finite Mixture Models*. Wiley; New York: 2000.
- Mooney-Somers J, Ussher J. Sex as commodity: single and partnered men's subjectification as heterosexual men. *Men and Masculinities*. 2010; 12(3):353–373.
- Muthen B, Muthen LK. Integrating Person-Centered and Variable-Centered Analyses: Growth Mixture Modeling With Latent Trajectory Classes. *ALCOHOLISM: CLINICAL AND EXPERIMENTAL RESEARCH*. 2000; 24(6):882–891.
- Nylund K, Asparouhov T, Muthen B. Deciding on the number of classes in latent class analysis and growth mixture modeling: a Monte Carlo simulation study. *Structural Equation Modeling: A Multidisciplinary Journal*. 2007; 14:535–569.
- O'Neil JM. Summarizing 25 Years of Research on Men's Gender Role Conflict Using the Gender Role Conflict Scale: New Research Paradigms and Clinical Implications. *The Counseling Psychologist*. 2008; 36(3):358–445. doi: 10.1177/0011000008317057.
- Pastor D, Barron K, Miller B, Davis S. A latent profile analysis of college students' achievement goal orientation. *Contemporary Educational Psychology*. 2007; 32(1):8–47. doi: 10.1016/j.cedpsych.2006.10.003.
- Paul E, L. Hayes A. The casualties of ‘casual’ sex: a qualitative exploration of the phenomenology of college students' hookups. *Journal of Social and Personal Relationships*. 2002; 19(5):639–661.
- Paul E, L. McManus B, Hayes A. “Hookups”: characteristics and correlates of college students' spontaneous and anonymous sexual experiences. *Journal of Sex Research*. 2000; 37(1):76–88.
- Penke L, Asendorpf J. Beyond global sociosexual orientations: a more differentiated look at sociosexuality and its effects on courtship and romantic relationships. *Journal of Personality and Social Psychology*. 2008; 95:1113–1135. [PubMed: 18954197]
- Petersen J, Hyde JS. A meta-analytic review of research on gender differences in sexuality. *Psychological Bulletin*. 2010; 136(1):21–38. [PubMed: 20063924]
- Philaretou A, Allen K. Reconstructing masculinity and sexuality. *The Journal of Men's Studies*. 2001; 9(3):301–321.

- Pleck J. The male sex role: definitions, problems, and sources of change. *Journal of Social Issues*. 1976; 32(3):155–164.
- Pleck J, Sonenstein F, Ku L. Masculinity ideology: its impact on adolescent males' heterosexual relationships. *Journal of Social Issues*. 1993; 49(3):11–29. [PubMed: 17165216]
- Regnerus, M.; Uecker, J. *Premarital Sex in America: How Young Americans Meet, Mate, and Think about Marrying*. Oxford University Press; New York: 2011.
- Rieger G, Linsenmeier JA, Gygaz L, Bailey JM. Sexual orientation and childhood gender nonconformity: evidence from home videos. *Developmental Psychology*. 2008; 44:46–58. [PubMed: 18194004]
- Schachner D, Shaver P. Attachment dimensions and sexual motives. *Personal Relationships*. 2004; 11:179–195.
- Strahan R, Gerbasi K. Short, homogenous versions of the Marlowe-Crowne social desirability scale. *Journal of Clinical Psychology*. 1972; 28:191–193.
- Twenge J. Attitudes toward women, 1970–1995: a meta-analysis. *Psychology of Women Quarterly*. 1997; 21(1):35–51.
- Valentova J, Rieger G, Havlicek J, Linsenmeier J, Bailey J. Judgments of Sexual Orientation and Masculinity–Femininity Based on Thin Slices of Behavior: A Cross-Cultural Comparison. *Archives of Sexual Behavior*. 2011; 40(6):1145–1152. doi: 10.1007/s10508-011-9818-1. [PubMed: 21879429]
- Wight, D. Beyond the predatory male: the diversity of young Glaswegian men's discourses to describe heterosexual relationships. In: Adkins, L.; Merchant, V., editors. *Sexualizing the Social: Power and the Organization of Sexuality*. MacMillan; London: 1996.

Figure 1.

Standardized scores for sociosexuality, homosociality, masculinity, and attachment of the five subgroups. *Sociosexuality*: BEHAVE= uncommitted sexual behavior, BELIEF= uncommitted sexual beliefs and attitudes, DESIRE= uncommitted sexual desire; *Homosociality*: NORMS= perceived male peer sex norms, TRADMALE= involvement in traditional male contexts, TIME= homosocial time (time spent with male peers), STORIES= sexual storytelling; *Masculinity*: WINNING= conformity to competitive norm, PLAYBOY= conformity to the uncommitted sex norm; *Attachment*: AVOIDANCE= attachment avoidance, ANXIETY= attachment anxiety.

Table 1

Study Variable Descriptive Statistics

	α	M(SD)	%(n)
Sociosexuality			
Behavior (Total One-Time Only and Past-Year Partners)	.82	7.14 (5.70)	
Beliefs	.66	11.26 (6.12)	
Desire	.86	13.17 (5.79)	
Attachment			
Avoidance	.93	3.06 (.96)	
Anxiety	.94	3.74 (.96)	
Conformity to Traditional Masculinity Ideologies			
Winning (Competitive Norm)	.68	1.79 (.54)	
Playboys (Casual Sex Norm)	.69	1.12 (.70)	
Homosociality			
Perceived Male Peer Sex Norms	.86	27.63 (9.55)	
Involvement in Traditional Male Contexts		1.49 (1.32)	
Homosocial Time		26.26 (15.67)	
Sexual Storytelling		6.08 (3.52)	
Correlates			
Religiosity	.93	2.54 (1.20)	
Currently Dating (In an Exclusive Relationship)			27.2% (114)
Sexual Experience [‡]			55.6% (233)
Binge Drinking		1.40 (1.58)	
Partying		11.99 (7.84)	
Shyness	.84	36.18 (8.80)	
Self-Perceived Market Value	.87	.11 (1.22)	
Social Desirability		4.77 (1.92)	

[‡] Participant reports having engaged in either vaginal or anal sex.

Table 2

Latent Profile Analysis Fit Indices (Chosen Solution is in Bold)

Profiles	No. free parameters	Loglikelihood	AIC	BIC	BIC (N-adj.)	LMR p BLRT p	Entropy	No. profiles with $n < 5\%$ of sample
2	34	-5907.97	11883.93	12021.30	11913.41	.00 .00	.96	0
3	46	-5826.74	11745.48	11931.34	11785.34	.01 .00	.80	0
4	58	-5789.18	11694.37	11928.70	11744.65	.37 .00	.82	0
5	70	-5754.54	11649.08	11931.90	11709.76	.20 .00	.78	0
6	82	-5720.92	11605.84	11937.14	11676.93	.36 .00	.80	1
7	94	-5695.93	11579.85	11959.64	11661.35	.70 .10	.85	1

Table 3
Demographic, Behavioral, and Personality Descriptions of the Five Subgroups (with ANOVA Results for Continuous Variables)

	<i>M(SD) or Column % (N)</i>					Multivariate	
	Fully Unrestricted (N=49)	Cognitively Unrestricted (N=180)	Fully Restricted (N=149)	Avoidant (N=79)	Discrepant (N=38)	df	F
Demographics							
Age	19.63 (1.69) ^a	19.03 (1.22) ^a	19.14 (1.30) ^a	19.41 (1.52) ^a	20.37 (2.07) ^b	4,490	8.23***
1 st Year Student	28.6% (14)	32.4% (58)	35.6% (53)	31.6% (25)	26.3% (10)		
Race/Ethnicity							
White	83.7% (41)	62.8% (113)	57.7% (86)	55.7% (44)	60.5% (23)		
Asian/P.I.	10.2% (5)	17.8% (32)	26.2% (39)	24% (19)	7.9% (3)		
Black	4.1% (2)	6.1% (11)	6% (9)	7.6% (6)	15.8% (6)		
Latino	0% (0)	3.9% (7)	4.7% (7)	2.5% (2)	7.9% (3)		
Bi-/Multi-Racial	2% (1)	9.4% (17)	5.4% (8)	10.1% (8)	7.9% (3)		
Sexual Minority	27.1% (13)	11.2% (20)	10.7% (16)	26% (20)	45.9% (17)		
Religiosity	2.25 (.89) ^a	2.45 (1.07) ^b	2.94 (1.32) ^c	2.27 (1.28) ^c	2.34 (1.17) ^b	4,490	6.87***
Behaviors							
<i>Party Culture</i>							
Binge Drinking	2.82 (1.47) ^a	1.94 (1.54) ^b	.69 (1.25) ^c	.73 (1.33) ^c	1.53 (1.56) ^{bc}	4,439	28.19***
Partying	21.02 (10.86) ^a	14.34 (6.79) ^b	7.87 (5.09) ^c	8.09 (5.52) ^c	14.44 (7.45) ^b	4,465	45.84***
<i>Relationships & Sex</i>							
Currently Dating	14.3% (7)	21.1% (38)	42.3% (63)	10.1% (8)	39.5% (15)		
Sexual Experience [‡]	95.9% (47)	53.9% (97)	43% (64)	25.3% (20)	97.4% (37)		
Personality							
Market Value	1.44 (1.06) ^a	.28 (1.00) ^b	-.23 (1.04) ^c	-.64(1.26) ^c	.62 (1.29) ^b	4,462	35.36***
Social Desirability	4.48 (2.29) ^a	4.35 (1.71) ^b	5.36 (1.80) ^a	4.81 (2.12) ^a	4.86 (1.90) ^a	4,460	5.94***
Shyness	32.14 (8.90) ^a	35.83 (7.42) ^a	36.01 (9.25) ^a	40.74 (8.49) ^b	33.49 (10.16) ^a	4,462	8.74***

*
 $p < .05$,

 $p < .01$,

Calzo

Page 21

 $p < .001$

^aSignificantly different from^{b,c,d},

^b significantly different from^{a,c,d}, etc.

[‡]Participant reports having engaged in either vaginal or anal sex.

Table 4
Multinomial Logistic Regression Results Predicting Profile Membership with the Fully Restricted Subgroup as the Reference Group

Variable	Fully Unrestricted (n=49)			Cognitively Unrestricted (n=180)			Avoidant (n=79)			Discrepant (n=38)		
	B	SE	O.R.	95% C.I.	B	SE	O.R.	95% C.I.	B	SE	O.R.	95% C.I.
Demographics												
Age	.39*	.19	1.48	1.08, 2.02	.06	.12	1.06	.87, 1.29	.23	.12	1.25	1.03, 1.53
Ethnic Minority	-.27***	.70	.08	.03, .27	-.06	.30	.94	.57, 1.56	-.13	.36	.88	.49, 1.58
Sexual Minority	.27	.79	1.31	.36, 4.76	-.53	.50	.59	.26, 1.35	.33	.47	1.39	.64, 3.00
Religiosity	-.44	.25	.64	.42, .97	-.37***	.13	.69	.56, .85	-.35*	.15	.70	.55, .90
Behaviors												
Binge Drinking	.50**	.18	1.64	1.22, 2.20	.30**	.11	1.35	1.12, 1.62	-.00	.16	1.00	.77, 1.29
Partying	.27***	.05	1.31	1.22, 1.41	.17***	.03	1.18	1.22, 1.25	.06	.04	1.06	.99, 1.14
Currently Dating	-.212**	.71	.12	.04, .39	-.144***	.40	.24	.12, .46	-.143**	.55	.24	.98, .59
Sexual Experience [‡]	2.79**	.99	16.27	3.17, 83.46	.33	.36	1.38	.78, 2.50	-.48	.43	.62	.31, 1.25
Personality												
Market Value	1.19***	.30	3.38	2.00, 5.38	.24	.18	1.28	.95, 1.72	.04	.18	1.04	.77, 1.41
Social Desirability	-.12	.16	.88	.68, 1.15	-.26	.08	.77	.67, .88	-.10	.10	.91	.77, 1.06
Shyness	.02	.04	1.02	.96, 1.08	.02	.02	1.02	.99, 1.06	.05*	.02	1.05	1.02, 1.09

Note:

* $p < .05$,

** $p < .01$,

*** $p < .001$

[‡] Participant reports having engaged in either vaginal or anal sex.