

“Hooking Up” Among College Students: Demographic and Psychosocial Correlates

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Abstract This study investigated 832 college students’ experiences with hooking up, a term that refers to a range of physically intimate behavior (e.g., passionate kissing, oral sex, and intercourse) that occurs outside of a committed relationship. Specifically, we examined how five demographic variables (sex, ethnicity, parental income, parental divorce, and religiosity) and six psychosocial factors (e.g., attachment styles, alcohol use, psychological well-being, attitudes about hooking up, and perceptions of the family environment) related to whether individuals had hooked up in the past year. Results showed that similar proportions of men and women had hooked up but students of color were less likely to hook up than Caucasian students. More alcohol use, more favorable attitudes toward hooking up, and higher parental income were associated with a higher likelihood of having hooked up at least once in the past year. Positive, ambivalent, and negative emotional reactions to the hooking up experience(s) were also examined. Women were less likely to report that hooking up was a positive emotional experience than men. Young adults who reported negative and ambivalent emotional reactions to hooking up also reported lower psychological well-being and less favorable attitudes toward hooking up as compared to students who reported a positive hooking up experience. Based on these

findings, suggestions for psychoeducational programming are offered. Additionally, directions for future research are provided.

Keywords Hooking up · Interpersonal relationships · Casual sex · Ethnicity

Introduction

One of most significant recent changes in the culture of late adolescence and young adulthood is that there are no longer clear steps, stages, or statuses in dating relationships (Stanley, 2002). What once were emblems of commitment between partners and to outsiders, such as “going steady” or wearing his class ring, have been largely replaced by ambiguity about boundaries and commitment. In this landscape, the term “hooking up” has emerged to reference physically intimate behaviors—ranging from passionate kissing and petting to oral sex or intercourse—that occur outside the context of a relationship with defined commitment or an intended future (Bisson & Levine, *in press*; Glenn & Marquardt, 2001; Paul & Hayes, 2002; Paul, McManus, & Hayes, 2000). Glenn and Marquardt (2001) argued that “...the ambiguity of the phrase ‘hooking up’ is part of the reason for its popularity” (p. 5), suggesting that young adults prefer the vagueness that “hooking up” implies, likely both in terms of what the physical encounter entailed and with regard to whether there will be future encounters or any ongoing relationship. The lack of expectations for the future separates hooking up from another popular (and similarly ambiguous) relationship among college students: “friends with benefits” (see Bisson & Levine, *in press*).

The hooking up culture of young adults has taken center stage in the popular press (e.g., *Unhooked*; Stepp, 2007) and

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in research over the past decade (e.g., Grello, Welsh, Harper, & Dickson, 2003; Paul et al., 2000). The research on hooking up builds on earlier casual sex research. The casual sex literature demonstrates that casual sex, defined as intercourse outside of a committed relationship, often occurs in the context of social drinking (e.g., Desiderato & Crawford, 1995; Leigh & Schafer, 1993) and sometimes has negative emotional consequences (Grello, Welsh, & Harper, 2006). Research on hooking up expands this literature by studying a broader range of physically intimate behaviors and by relying on young adults' own terminology. Using terminology to which young adults relate seems especially important because research demonstrates that young adults hold widely divergent views on what behaviors define "sex" (Sanders & Reinisch, 1999).

Among college students, 50–75% report hooking up in the past year (Glenn & Marquardt, 2001; Paul et al., 2000) and many studies have shown that hooking up is associated with mental and physical health risk factors (e.g., depressive symptoms, sexually transmitted infections; Grello et al., 2006; LaBrie, Earleywine, Schiffman, Pedersen, & Marriot, 2005; Paul et al., 2000). Despite the high prevalence and associated risks, only a limited number of studies have explored emotional reactions to hooking up (for exceptions, see Glenn & Marquardt, 2001; Paul & Hayes, 2002), the relationship between relationship attitudes and hooking up, and the generalizability of this phenomenon to college students of color (Paul et al., 2000).

The purpose of the current study was to address these gaps in the literature. It is likely the most comprehensive study to date on the topic because of the depth and breadth of variables included. Some of them (e.g., gender, alcohol use, parental divorce, and attachment) have been examined in previous research on hooking up, but others (e.g., ethnicity, parental income, family environment, and religiosity) have not been fully explored. Further, this study measured not only behavior, but also attitudes towards hooking up and emotional reactions to having hooked up.

Demographic Factors Related to Hooking Up

In national samples of adolescents and young adults, men typically report hooking up more than women (e.g., Grello et al., 2003; Manning, Longmore, & Giordano, 2005), though this finding has not always been replicated (e.g., Feldman & Cauffman, 1999; Paul et al., 2000). Gender differences in reactions to hooking up, particularly the experience of regret, have yielded more similarities than differences between men and women (Grello et al., 2006), but little is known about possible positive reactions to hooking up and how they might be linked to gender. In one nation-wide sample of college women, Glenn and Marquardt (2001) found that the two most commonly endorsed reactions

to hooking up were feeling "awkward" (64% of women who hooked up) and "desirable" (62% of women who hooked up), suggesting both positive and negative reactions. This sample, however, did not include men. In a qualitative study, Paul and Hayes (2002) found that men and women reported a mix of positive and negative experiences and emotional reactions to hooking up. The current study examined differences between men and women's experiences with hooking up, their emotional reactions to hooking up, and possible differential associations between these constructs and other individual characteristics (e.g., psychological well-being, attachment style).

Research on the experiences of students of color is notably absent in the literature on hooking up (Paul et al., 2000). There are, however, reasons to suspect that individuals with different ethnic backgrounds might have different experiences with hooking up. For instance, some research has found that, on average, Asian Americans are less likely to engage in casual sexual behaviors than people with other ethnicities (Feldman, Turner, & Araujo, 1999; Markus & Kitayama, 1991), and African Americans have been found to report more permissive attitudes toward casual sexual behaviors compared to Caucasians (Weinberg & Williams, 1988). Further, it has been noted that many studies on sexual behaviors and attitudes do not even include Asian Americans (McLaughlin, Chen, Greenberger, & Biermeier, 1997). Because the existing literature is so lacking and inconsistent with regard to ethnicity, we made no specific predictions about possible differences in hooking up behavior or emotional reactions in the current study.

Although there may be something specific about one's culture or ethnicity that relates to his or her experiences with hooking up, Feldman et al. (1999) argued that other socio-demographic variables may account for the variance in relationship behaviors across groups. For instance, financial resources might increase the availability of environments that promote hooking up; however, this has not been formally tested in college samples (Grello et al., 2006). More financial resources during college may provide more free time allowing young adults to attend more social gatherings or to gain easier access to alcohol, a common correlate of hooking up. On the other hand, research with younger, adolescent samples has demonstrated that lower parental income is associated with more casual sex behaviors and increased risk for teen pregnancy (Miller, Benson, & Galbraith, 2001). Adding to the inconsistencies, Manning et al. (2005) found no relationship between family income and hooking up in a sample of adolescents. Based on this research, the present study examined not only ethnicity, but also parental income and their associations with hooking up behavior and emotional reactions.

Another demographic characteristic that warrants investigation is religiosity, for it is clear that religiosity relates to

other early relationship behaviors. For example, people who are more religious tend to have fewer sexual partners (Uecker, 2008) and they are less likely to cohabit premaritally (Stanley, Whitton, & Markman, 2004). Given these links and the importance of religious beliefs in some students' lives, we assessed religiosity and hooking up experiences.

Psychosocial Factors Related to Hooking Up

There is also evidence that several family of origin and attachment characteristics may relate to college students' hooking up behavior. Glenn and Marquardt (2001) found that, among college women, those with divorced parents were more likely to report having hooked up. Additionally, in a study of adolescents, Manning et al. (2005) found that parental divorce was associated with a higher likelihood of sexual behavior with a non-romantic partner. More broadly, research suggests that young adults with divorced parents tend to view commitment more skeptically, approach relationships more cautiously, and experience sexual intercourse at an earlier age than those with non-divorced parents (Amato & DeBoer, 2001; D'Onofrio et al., 2006; Weigel, Bennett, & Ballard-Reisch, 2003). Given the lack of relationship investment in hooking up encounters, young adults who have little faith in committed relationships may be drawn to hooking up and view it more favorably. Consistently, parents' marital conflict has also been linked with offspring relationship patterns, particularly levels of relationship happiness and conflict (Amato & Booth, 2001), but no research, to our knowledge, has examined how family environment (e.g., conflict) might relate to hooking up experiences.

The family environment can be formative for students' relational styles and general relationship attitudes. One theory of relational styles, adult attachment theory, asserts that people have internal working models, based on early experiences with caregivers, that regulate their reactions and needs for interpersonal closeness, security, and intimacy with others (Collins & Read, 1990; Hazen & Shaver, 1987). Secure attachment is thought to reflect comfortableness in close relationships while insecure attachment is associated with either anxiety about becoming close to others or the avoidance of close relationships altogether. Gentzler and Kerns (2004) found that individuals with insecure attachment were more likely to report having hooked up than those with more secure attachment. Similarly, family background has been linked with general attitudes about relationships. For example, parental divorce is associated with less commitment to the institution of marriage (Amato & DeBoer, 2001), but little research has examined attitudes about hooking up and family characteristics or even how attitudes relate to behavior and reactions. In one longitudinal study of adolescents, having positive attitudes about hooking up was associated with subsequent hooking up behavior (Manning et al., 2005).

However, there is little evidence about normative attitudes about hooking up in college samples and no evidence about the relationship between attitudes and reactions to hooking up.

Beyond family of origin factors, research generally suggests that hooking up is associated with more psychological distress. In longitudinal studies, young adults who initially reported more psychological distress were more likely to hook up over the next year than young adults with less psychological distress (Longmore, Manning, Giordano, & Rudolph, 2004). Similar results have been found in correlational studies (Paul et al., 2000). However, this pattern has been linked to gender (Grello et al., 2006; Walsh, 1991). Specifically, Grello et al. (2006) found that women who reported *higher* levels of distress and men who reported *lower* levels of distress were more likely to hook up.

The current study also examined college students' alcohol use. More alcohol use is consistently associated with more hooking up behavior for both men and women (Cooper & Orcutt, 1997; Desiderato & Crawford, 1995; Feldman et al., 1999; Grello et al., 2006; Paul et al., 2000). Presumably, consuming alcohol makes sexual behavior more likely because of its disinhibiting effects. Alcohol could also be used to cope with the related consequences of doing things one otherwise might not have done due to their values (e.g., excuse making).

Hypotheses

The present study tested several hypotheses and research questions that were based on the previously described literature. We examined how demographic and psychosocial factors relate to whether college students had hooked up in the past 12 months and to their emotional reactions to having hooked up. Emotional reactions were coded as either positive, negative, or ambivalent.

Demographic Factors

Regarding gender, we hypothesized that men would be more likely to report having hooked up than women (Hypothesis 1a) and that men would be more likely to report positive emotional reactions to hooking up than women (Hypothesis 1b). We did not make specific predictions about the likelihood of hooking up or about reactions to hooking up across ethnicity. Regarding parental income, we hypothesized that higher parental income would be associated with a greater likelihood of hooking up behavior (Hypothesis 2a), but we made no specific predictions about income and reactions to hooking up. Another demographic factor we examined was religiosity. We predicted that higher religiosity would be associated with less hooking up behavior (Hypothesis 3a) and

a lower likelihood of having a positive emotional reaction to having hooked up (Hypothesis 3b).

Psychosocial Factors

With regard to our psychosocial variables, we expected that gender would moderate the association between hooking up behavior and psychological well-being, such that it would be associated with a higher likelihood of hooking up for men and lower likelihood for women (Hypothesis 4a) and that higher psychological well-being would be associated with a lower likelihood of having a positive emotional reaction to having hooked up (Hypothesis 4b). Further, we expected that more alcohol use would be associated with a greater likelihood of having hooked up (Hypothesis 5a) and a lower likelihood of having a positive emotional reaction to having hooked up (Hypothesis 5b). For the family and attachment constructs, we hypothesized that having divorced parents and a more negative family environment would be associated with a greater likelihood of hooking up (Hypothesis 6a) and a higher likelihood of having a positive emotional reaction to having hooked up (Hypothesis 6b). We also predicted that insecure attachment would be associated with a greater likelihood of hooking up behavior (Hypothesis 7a) and a lower likelihood of having a positive emotional reaction to having hooked up (Hypothesis 7b). Lastly, we hypothesized that more permissive attitudes toward hooking up would be associated with a greater likelihood of hooking up within the past year (Hypothesis 8a) and with a higher likelihood of having a positive emotional reaction to the experience (Hypothesis 8b).

Method

Participants

Data from 832 undergraduate students from two large public universities located in the western ($N = 332$) and southeastern United States ($N = 500$) were used in the current study. A total of 578 participants were female, 247 were male, and 7 did not indicate their sex. The sample was, on average, 20 years old ($SD = 2.85$; range, 17–54). The majority of the students were juniors (39.4%) followed by sophomores (34.1%), freshman (19.5%), and seniors (5.4%); less than 1% did not indicate their grade level. Participants were 62.5% Caucasian, 11.1% Asian American, 9.8% African American, 7.1% Hispanic, and 6.3% Multi-ethnic; 3.3% did not indicate race or ethnicity. Regarding sexual orientation, 93.4% indicated that they were heterosexual, 2.4% identified as bisexual, 3.2% as gay or lesbian; 1.0% did not respond.

A larger sample ($N = 1,223$) was initially recruited, but those who did not respond to our measure of hooking up

experiences ($n = 15$) and participants who were in relationships that had lasted 12 months or longer ($n = 376$) were excluded from the current study. The reason we excluded individuals who were in relationships that had lasted a year or longer was because our measure of hooking up measured only behavior in the past year. Those in long-term relationships would not have had the same opportunity for hooking up behavior that the rest of the sample had. A sizeable portion of them (20%) reported having hooked up during the past year, but given the context of their committed relationships, this hooking up behavior was likely infidelity. Hooking up when committed to another relationship likely has a very different meaning than hooking up when not already in a committed relationship, so we excluded these participants from the final sample.

Procedure

At the southeastern university, participants were recruited through an introductory course on families across the lifespan that fulfills a social studies requirement and therefore attracts students from across the university. Students were offered multiple options to obtain extra credit for the class, one of which comprised the survey used in this study (99% of the class decided to participate in the study). They completed informed consent and were told how to access the on-line survey. They were given a 5-day window in which to complete the survey. At the western university, there was no parallel class, so we recruited students through an email sent to third year undergraduate students. Participants were offered the chance to win \$100 in five random drawings. We estimated a response rate for the western university based on the number of emails sent (2,949) and the number of completed surveys (485). This 18% is a very conservative estimate since it is unknown how many students actually received the email. Interested individuals then completed informed consent and survey on their own via the internet. For both samples, the study was approved by the Institutional Review Boards of the respective universities.

Measures

Hooking Up Behavior

Participants were provided with a broad definition of hooking up: “an event in which two people are physically intimate outside of a committed relationship without the expectation of future encounters.” This definition is consistent with a national study that consisted of in-depth interviews with 62 students and surveys of over 1,000 college students (Glenn & Marquardt, 2001). The students in that study commonly defined hooking up as: “when a girl and a guy get together for a physical encounter and don’t expect anything further” (p. 4).

In the current study, participants indicated how many times they had hooked up over the past 12 months. The distribution was skewed with 48% of the sample reporting that they had not hooked up ($n = 399$), 24.4% reporting that they hooked up 1 or 2 times ($n = 203$), and 27.6% reporting hooking up 3 or more times ($n = 230$) (range, 0–10 or more times). This distribution was more skewed for some ethnicities, particularly Asian Americans. As such, participants were coded as *no hook ups* ($n = 399$, 48%) or *one or more hook ups* ($n = 433$, 52%).

Emotional Reactions to Hooking Up

We devised a measure about reactions to hooking up that expanded on Glenn and Marquardt's (2001) work. Participants who had hooked up in the past 12 months could endorse up to nine emotional adjectives. There were four positive emotions (e.g., desirable, pleased) and five negative emotions (e.g., empty, confused). These emotional adjectives have high face validity, are commonly used emotional adjectives for adjective checklists, and have been used to adequately differentiate emotional reactions to hooking up (see Glenn & Marquardt, 2001). Participants who only endorsed positive adjectives were coded as having a "positive reaction" ($n = 136$), participants who only endorsed negative adjectives were coded as having a "negative reaction" ($n = 165$), and participants who endorsed both positive and negative adjectives were coded as having an "ambivalent reaction" ($n = 99$). Thirty-three participants were removed from analyses examining emotional reactions to hooking up due to not listing any reactions.

Adult Attachment Scale

The Adult Attachment Scale (AAS; Collins & Read, 1990) has three subscales with six items each rated on a 5-point Likert scale ranging from "Not at all characteristic" to "Very characteristic". Two subscales reflect general avoidance of relational attachment: comfort with being emotionally close to others (Close scale) and ease with trusting and depending on other people (Depend scale). The other subscale reflects fears or anxiety about abandonment (Anxious scale). This scale was developed based on the theoretical assumptions of child attachment theory, and has shown adequate reliability and validity as the AAS predicts affect regulation, interpersonal disclosures, approaching others for support, and providing support in previous studies (Collins & Feeney, 2000; Collins & Read, 1990; Shaver, Belsky, & Brennan, 2000). To represent the theoretical position that attachment represents two dimensions (i.e., avoidance and anxious attachment; see Collins & Feeney, 2004), we combined the Depend and Close subscales into a single measure of avoidant attachment

($\alpha = .78$) and used the Anxious scale ($\alpha = .73$) as an indicator of anxious attachment. In previous studies, these two dimensions have demonstrated high correlations (e.g., $r_s > .65$) with other self-report measures of prototype attachment styles (see Collins & Feeney, 2000, 2004).

Items from the Alcohol Use Disorders Identification Test

The current study used the first two items from the *Alcohol Use Disorders Identification Test* (AUDIT; Saunders, Aasland, Babor, de la Fuente, & Grant, 1993) for a quantity-frequency index of alcohol use. The first question assessed frequency of alcohol use ("How often do you have a drink containing alcohol?") and the second question assessed quantity of alcohol use ("How many drinks containing alcohol do you have on a typical day when you are drinking?"). There was a large correlation between these items ($r = .61$), so we used an average score in our analyses.

Religiosity

Religiosity was assessed by asking: "All things considered, how religious would you say you are?" Responses were given on a 7-point scale ranging from "Not at all religious" to "Very religious." This item has been used in several studies as an indicator of religiousness and is related to relationship constructs in theoretically consistent ways (e.g., Rhoades, Stanley, & Markman, 2006; Stanley et al., 2004).

Family Environment

Family environment was assessed by three items about participants' experiences in their family of origin: "We fought a lot in our family"; "I often saw my parents arguing"; and "My parents provided a good role model for marriage" (Cronbach's $\alpha = .79$). The first two items were adapted from Kline, Wood, and Moore (2003) who showed that the full measure was strongly associated with other measures of family functioning. The third item was developed for this study. All items were rated on a 7-point scale and coded such that higher scores indicate a more positive family environment.

Parental Divorce and Income

Parental divorce was assessed by "Have your biological parents ever been divorced from each other?" with response categories "yes" or "no." Combined parental income was assessed on an 8-point scale increasing by \$10,000 increments from under \$10,000 to over \$70,000.

The Schwartz Outcome Scale-10

The Schwartz Outcome Scale-10 (SOS-10; Blais et al., 1999) is designed to assess psychological well-being through 10 items on a 7-point scale (ranging from “Never” to “All or nearly all the time”). The SOS-10 has been used with clinical college student samples, inpatient/outpatient samples, and non-clinical community and non-clinical college student samples (Blais et al., 1999; Hilsenroth, Ackerman, & Blagys, 2001; Owen, Devdas, & Rodolfa, 2007; Young, Waehler, Laux, McDaniel, & Hilsenroth, 2003). The measure has shown excellent reliability (average $\alpha = .91$) and has moderate to high correlations in the predicted directions with other depression and psychological well being scales (see Blais & Baity, 2005). In the current study, Cronbach’s $\alpha = .91$.

Attitudes about Hooking Up

A five-item measure to assess attitudes about hooking up was created for the current study. These items reflect attitudes about engaging in various aspects of hooking up. The five items were: “I would have sex with someone that I had no plans to ever talk to again,” “I think it’s okay to have ‘friends with benefits,’” “I feel more comfortable hooking up with someone than talking about my feelings with them,” “I feel that that ‘friends with benefits’ is a natural step to develop a committed relationship,” and “I feel that hooking up is a normal activity for college students.” These items were rated on a 7-point scale ranging from “Strongly Agree” to “Strongly Disagree.” Higher scores on this scale reflect more favorable attitudes about hooking up. Cronbach’s α was .80.

Results

Testing Hypotheses about Hooking Up Behavior

Our first hypothesis was that men would be more likely to report having hooked up (hypothesis 1a). Contrary to our hypothesis, the proportions of men and women who had hooked up were not significantly different, $\chi^2(1, N = 825) < 1$. A total of 284 women (49.1%) and 112 men (45.3%) reported not having had any experience in hooking up in the past year. Next, we tested for possible differences across ethnicities in hooking up behaviors and reactions. We had not made formal predictions about such differences. The results of a chi-square test comparing ethnicities was statistically significant, $\chi^2(4, N = 807) = 42.35, p = .0001$ (see Table 1). As compared to Caucasian students, students from all other ethnicities, except those who identified themselves as Multi-ethnic, were significantly less likely to have hooked up, all $ps < .05$.

Table 1 Percentage of participants who endorsed hooking up in the past year by ethnicity

Ethnicity	Did not hook up Percentage (N)	Did hook up Percentage (N)
African American	64.6 (53)	35.4 (29)
Asian American	69.1 (65)	30.9 (29)
Caucasian	39.8 (208)	60.2 (314)
Hispanic	57.6 (34)	42.4 (25)
Multi-ethnic	52.0 (26)	48.0 (24)

We tested our predictions regarding Hypotheses 2a–8a that related to hooking up status (hooked up in the past 12 months or not) using both univariate and multivariate methods. Initially, we conducted a series of point-biserial correlations (r_{pb}) for hooking up status and parental income (Hypothesis 2a), religiosity (Hypothesis 3a), psychological well-being (Hypothesis 4a), alcohol use (Hypothesis 5a), family conflict (Hypothesis 6a) attachment style (Hypothesis 7a), and attitudes about hooking up (Hypothesis 8a) (see Table 2). For both men and women, hooking up was related to higher parental income (supporting Hypothesis 2a), using more alcohol (supporting Hypothesis 5a), and having more favorable attitudes about hooking up (supporting Hypothesis 8a). There was no support for predictions regarding attachment style (Hypothesis 7a) and family environment (Hypothesis 6a). Partial support was found the hypothesis about hooking up with psychological well-being (Hypothesis 4a) in that higher psychological well-being was associated with hooking up for men; there was not a significant association for women. Additionally, hooking up was correlated with religiosity for women but not men (Hypothesis 3a). Finally, because parental divorce (Hypothesis 6a) was a dichotomous variable we tested its association with hooking up behavior using a chi-square test. There was no significant association between parental divorce and hooking up status for women, $\chi^2(1, N = 550) < 1$, or men, $\chi^2(1, N = 233) < 1$.

We also tested whether correlates of hooking up remained significant when considered in the context of other variables. This was done by conducting a binary logistic regression to predict hooking up status using only the variables that were significantly correlated with hooking up in the univariate analyses for either men or women ($p < .01$). Thus, in this analysis, hooking up in the past year (yes or no) was the criterion variable and gender, ethnicity, parental income, psychological well-being, alcohol use, attitudes about hooking up, and religiosity were the independent variables. For the initial model, we included interaction terms for all independent variables with gender and ethnicity, separately, to determine if there were any gender or ethnicity differences in the results. There were no significant interaction effects ($ps > .05$), so we eliminated them for the final model. Fifty

Table 2 Point-biserial and Pearson correlations for hooking up status and other variables by gender

	1	2	3	4	5	6	7	8	9
1. Hooking up status	–	.20*	.16*	.51**	–.04	–.06	–.08	.29**	.04
2. Parental income	.19**	–	–.02	.19*	–.21**	–.13	–.13	–.05	–.03
3. Well-being	–.06	.04	–	.12	–.17*	–.37**	–.37**	.02	.06
4. Alcohol use	.54**	.27**	–.06	–	–.11	–.11	–.11	.26**	–.09
5. Family environment	–.05	–.16**	–.23**	–.07	–	.13	.13	.14	–.12
6. Avoidant attachment	–.04	–.16**	–.42**	–.08	.24**	–	.22**	.12	.02
7. Anxious attachment	.06	–.02	–.42**	.01	.18**	.36**	–	.07	–.02
8. Attitudes	.36**	.07	–.18**	.36**	.04	.16**	.15**	–	–.31**
9. Religiosity	–.16**	–.07	.15**	–.27**	–.02	–.03	–.05	–.30**	–

Notes: * $p < .01$, ** $p < .001$. Hooking up status coded 0, 1 (1 = yes hooked up in the past 12 months, 0 = no). Men's correlations are listed above the diagonal and women's correlations are listed below. *N*s for men range from 240 to 247; they range from 560 to 578 for women

seven participants (7.2% of the total sample) were removed from analyses due to missing data on more than one of the independent variables. The majority of these participants were missing data on parental income ($n = 20$) or religiosity ($n = 17$).

The baseline model, with no predictors, correctly classified 53.2% of the participants. This baseline model was used to contrast the proposed model that included predictors. The model with all seven independent variables correctly classified significantly more participants than the baseline model, $\chi^2(10, N = 775) = 269.55, p < .0001, 76.3%$ correctly classified (Table 3). Of the independent variables, alcohol use and attitudes about hooking up were statistically significant ($p < .01$) predictors of having hooked up in the past year, after controlling for all other variables in the model. Psychological well-being, parental income, religiosity, and ethnicity were not significant predictors in this multivariate model (see Table 3).

Table 3 Summary of logistic regression for hooking up behavior

Predictor	<i>B</i>	SE	Exp(<i>B</i>)	95% CI for Exp(<i>B</i>)
Religiosity	.07	.06	1.07	.96–1.19
Parental income	.10	.05	1.10	1.01–1.21
Psychological well-being	.02	.10	1.02	.85–1.24
Alcohol use	1.10**	.11	3.00	2.42–3.74
Attitudes about hooking up	.60**	.10	1.82	1.50–2.21
Gender	–.43	.21	.65	.43–.98
Ethnicity (comparison group: Caucasian)				
Asian American	.32	.39	1.38	.65–2.95
African American	–.47	.45	.62	.26–1.51
Hispanic	.68	.47	1.97	.78–4.96
Multi-ethnic	.02	.50	1.02	.38–2.70
Constant	–4.22	.74		

Notes: * $p < .01$, ** $p < .001$. Men were dummy coded as 1 and women as 0. Hooking up status coded 0, 1 (1 = yes hooked up in the past 12 months, 0 = no)

Testing Hypotheses for Reactions to Hooking Up

For those who had hooked up in the past year, we examined if there were gender differences in their emotional reactions to hooking up. The overall test for gender differences was statistically significant, $\chi^2(2, N = 396) = 25.02, p = .0001$. For women, 26.4% reported a positive reaction, 48.7% reported a negative reaction, and 24.9% reported an ambivalent reaction. For men, 50.4% reported a positive reaction, 26.0% reported a negative reaction, and 23.6% reported an ambivalent reaction. In support of Hypothesis 1b, there were significant gender differences for the negative and positive reactions (adjusted residuals > 4); however, there was not a significant difference for the ambivalent reaction (adjusted residuals < 1). We also wanted to explore potential differences in reactions to hooking up across ethnicities. There were no statistically significant differences in emotional reactions to hooking up across ethnicity, $\chi^2(8, N = 388) = 8.38$.

We next examined the univariate contributions of demographic and psychosocial variables to the prediction of reactions to hooking up (positive, negative, and ambivalent). To do so, we examined the likelihood-ratio test, which evaluates the independent association between the independent and the dependent variables. As seen in Table 4, gender (supporting Hypothesis 1b), parental income (no hypothesis stated), psychological well-being (supporting Hypothesis 4b), and attitudes about hooking up (supporting Hypothesis 8b) significantly contributed to the prediction of reactions to hooking up. There were no significant associations between hooking up reactions and religiosity (Hypothesis 3b), alcohol use (Hypothesis 5b), family environment or parental divorce (hypothesis 6b), or attachment styles (Hypothesis 7b).

To test the combined contributions of the significant predictors ($p < .05$), we conducted a multinomial logistic regression. The dependent variable was reactions to hooking up (positive, negative, and ambivalent) and the independent variables were psychological well-being, parental income,

Table 4 Summary of univariate predictions for reactions to hooking up

	–2 log likelihood	χ^2
Gender	873.22	9.39*
Parental income	871.60	7.78*
Well-being	878.08	14.25***
Alcohol use	864.87	1.04
Family environment	864.66	.84
Avoidant attachment	869.19	5.36
Anxious attachment	866.68	2.85
Parental divorce	866.46	2.64
attitudes	923.91	60.08***
Religiosity	865.74	1.19

Notes: * $p < .05$, *** $p < .001$. For these multinomial logistic regressions, each variable was entered separately as a predictor of reactions to hooking up

Table 5 Summary of multinomial logistic regression for reactions to hooking up

	<i>B</i>	SE	Exp(<i>B</i>)	95% CI for Exp(<i>B</i>)
<i>Positive versus ambivalent</i>				
Psychological well-being	.51**	.16	1.66	1.22–2.27
Attitudes about hooking up	.27*	.14	.77	.59–.99
Parental income	–.17	.09	.85	.71–1.02
Gender	–1.03**	.31	.36	.19–.66
<i>Negative versus positive</i>				
Psychological well-being	–.41*	.14	.66	.50–.88
Attitudes about hooking up	–.76**	.15	.47	.35–.62
Parental income	–.05	.07	.95	.83–1.09
Gender	.89*	.29	2.44	1.37–4.33
<i>Negative versus ambivalent</i>				
Psychological well-being	.09	.16	1.10	.81–1.49
Attitudes about hooking up	–1.03**	.16	.36	.26–.49
Parental income	–.22*	.09	.81	.68–.96
Gender	–.14	.34	.87	.45–1.68

Notes: * $p < .05$, ** $p < .001$. Men were dummy coded as 0 and women as 1

attitudes about hooking up, and gender (see Table 5). We initially included interaction effects for gender and ethnicity for the independent variables; however, there were no significant interaction effects ($ps > .05$) so we excluded the interaction terms in the final model. Fifteen participants were excluded for missing data on the independent variables.

The baseline model, with no predictors, classified 14.8% of the sample as having ambivalent reactions, 55.8% as having negative reactions, and 29.4% as having positive reactions. The results showed that the overall model was statistically significant, $\chi^2(8, N = 418 = 103.99, p < .001$,

which suggests that the variables collectively added to the prediction of reactions to hooking up. The overall classification success was 55.6%, with 32.6% of the ambivalent reactions, 76.4% of the negative reactions, and 46.5% of the positive reactions being successfully classified by the independent variables. The examination of the individual independent variables is presented as a contrast between the groups after controlling for the variance of the other variables. In comparison to participants who reported a positive reaction, the participants who reported an ambivalent and negative reaction reported statistically significantly lower psychological well-being (supporting Hypothesis 4b) and less favorable attitudes about hooking up (supporting Hypothesis 8b). The participants who reported a negative reaction also had less favorable attitudes toward hooking up and less parental income than the ambivalent reaction participants.

Discussion

The purpose of this study was to investigate young adults' experiences of hooking up. Hooking up was defined as having a physical encounter in which there is no anticipation of a future relationship. Our sample was large enough to examine not only gender differences in such experiences, but also differences across ethnicity. Similar to previous studies, about half of college students had engaged in hooking up behaviors over the past year. However, it appears that hooking up was not an experience that most college students felt positively about, especially women. These findings suggest that women are at substantially more risk than men for feeling upset about the experience. Glenn and Marquardt (2001) similarly found that many women felt hurt after hooking up and confused about their future relations with the men with whom they had hooked up with. It may be the combination of mismatched expectations and the lack of communication about the meaning of the encounter (Bisson & Levine, *in press*) that leads to negative outcomes for some students. Further, for some of these relationships, it could be that the situations were unwanted or forced (Paul and Hayes 2002). Since hooking up has become an ubiquitous college experience, it is potentially problematic that so many students, especially women, are feeling negatively about it afterward.

Students with negative and ambivalent reactions to hooking up also reported lower psychological well-being than those with positive reactions. In like manner, Grello et al. (2006) found that students' feelings of regret after hooking up were related to more depressive symptoms. While we cannot determine the directionality of these effects, our results suggest that either students who had lower psychological well-being were more likely to engage in an

activity that did not benefit their mental health and/or that the encounter contributed to lower psychological well-being. Further, there could be other variables that are associated with lower psychological well-being that we did not directly assess. For instance, it is likely that students who have a negative experience with hooking up may feel that they were not treated fairly by their hooking up partner after the encounter or it may be that one partner did not see the encounter as consensual. These hooking up experiences may be one factor (of many) that contributes to findings that over 90% of students report feeling stressed while in college and that nearly 40% students report being so distressed that it interferes with their academic and social functioning (American College Health Association, 2007; Owen & Rodolfa, *in press*).

Negative emotional reactions were also tied to less general acceptance of hooking up. It may be that holding negative attitudes about hooking up and then doing so anyway creates dissonance that causes a negative emotional reaction; or it could be that having a negative experience results in less accepting attitudes about hooking up. Again, directionality could not be disentangled in this study, but it has been shown in other research that students' attitudes are related to future hooking up behavior (Manning et al., 2005). There are likely bidirectional effects and future research might help us better understand how attitudes and behavior interact and relate to emotional responses.

The increased enrollment of ethnic and racial minority students in colleges and universities begets the need for research that mirrors this diversity (Paul et al., 2000). The current study answered this call. Although our sample was not nationally representative, we found that students of color, in general, were less likely to engage in hooking up activities than Caucasian students. These findings were comparable to previous research, which has found that Asian Americans were less sexually active in comparison to young adults from other ethnicities (Cochran, Mays, & Leung, 1991) and especially Caucasian students (Uecker, 2008). In the current study, however, other psychosocial and demographic variables, such as alcohol and attitudes about hooking up, accounted for differences in hooking up behavior across ethnicity. This highlights the importance of understanding the processes and underlying mechanisms in future research on ethnicity and hooking up behavior. For instance, it could be that the degree to which a person identifies with their ethnicity and culture (ethnic pride or belonging) and acculturation may shape their hooking up behaviors and attitudes.

We expected that alcohol use would be related to reactions to hooking up, as it could be used as an excuse for engaging in an uncharacteristic behavior. However, emotional reactions to hooking up were more strongly related to other factors (e.g., psychological well-being and attitudes about hooking up). Greater use of alcohol may make hooking up more likely to

happen, but it is other personal characteristics that frame how that experience is evaluated later. Further exploration of the dynamics awaits future research.

Results of the current study suggest that family dynamics (e.g., divorce, conflict) and attachment styles do not correlate with students' hooking up behaviors, which is notably different from previous research (e.g., Feeney, Peterson, Gallois, & Terry, 2000; Gentzler & Kerns, 2004; Glenn & Marquardt, 2001). While these family dynamics have been shown to shape more skeptical views about commitment in relationships (Amato & DeBoer, 2001), in the current study they were not related to hooking up behaviors and weakly related to attitudes about relationships. Given that hooking up is a common social norm for college students, is a transient encounter, and is generally influenced by alcohol, there is likelihood that family messages may not be very salient for students when considering hooking up. The inconsistencies with prior research for the relationship between attachment and hooking up may be due to differences in sampling or measurement characteristics. For instance, Feeney et al. (2000) sampled primarily Australian born undergraduate students and Gentzler and Kerns (2004) had a primarily Caucasian sample. Further, we utilized the Adult Attachment Scale (Collins & Read, 1990) whereas in other studies the Relationship Scales Questionnaire (Feeney et al., 2000) or the Experiences in Close Relationships Questionnaire (Gentzler & Kerns, 2004) were used to operationalize attachment. Nonetheless, future research should continue to explore potential reasons for the discrepancies in this literature.

Limitations and Implications

This study was the most comprehensive investigation of hooking up behavior and related emotional reactions in a diverse sample; however, it was not without limitations. First, our correlational design does not allow us to draw conclusions about the directionality of the effects; future longitudinal research will be helpful in untangling predictors and outcomes. Second, although our convenience sample was diverse and large, it may include selection bias, as it was not random. Third, we focused on college students, which limited our ability to draw inferences to young adults who do not attend college. This could be a meaningful distinction given that college students typically have more available resources and social support (e.g., counseling centers, student affairs staff members, and peers) that could alter the ways in which they cope with negative experiences. Lastly, although our measure of hooking up behavior mirrored the general ambiguity of the behavior itself, it did not ask or distinguish between specific behaviors (e.g., kissing versus intercourse). Asking about specific behaviors or treating hooking up as a continuous variable in future research may lead to a more

nuanced understanding of hooking up. Moreover, we did not address if the hooking up experience was consensual and this issue should be addressed in the future, as it is likely related to outcomes. It may also be important to understand factors (communication, specific expectations, and consensual agreement) that might explain the positive, negative, and ambivalent reactions students have to hooking up. The intensity of these emotional reactions could also be assessed.

Based on this research and the larger body of literature, it seems important to acknowledge the ubiquity of hooking up behavior across college campuses and to be proactive about the negative impacts. Preventive education programs aimed at helping individuals make healthy relationships decisions could be useful to many college students. Some students may slide into hooking up with little critical thought about the potential consequences; and important relationship transitions characterized by sliding rather than deciding may be a general risk factor for young adults (Stanley, Rhoades, & Markman, 2006). The consequences could indeed be great, including not only the negative emotional reactions measured in this study, but also STIs and unplanned pregnancies. Such programs could help young adults identify their expectations about relationships and hooking up, learn how to define their romantic relationships and communicate about expectations, and monitor barriers to making good relationship decisions (e.g., alcohol use).

In the rather ambiguous dating culture in the United States today, hooking up has emerged as a common pattern, as evidenced here by the high numbers of college students reporting such occurrences. Further, these data strongly suggest that, especially for women (and quite a large number of men), these experiences were associated with negative psychological experiences. We currently know very little about the potential long-term consequences of these casual, physically intimate encounters and this area of research warrants much more attention, especially because it seems clear that various types of risks are associated with hooking up.

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