

Published in final edited form as:

*Psychol Violence*. 2012 January ; 2(1): 1–15. doi:10.1037/a0026346.

## Patterns of Sexual Aggression in a Community Sample of Young Men: Risk Factors Associated with Persistence, Desistance, and Initiation Over a One Year Interval

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### Abstract

**Objective**—The goal of this study is to distinguish risk factors associated with young men's self-reports of continuing (persistence), stopping (desistance), and starting (initiation) sexual aggression against women over a one year time period. This study fills gaps in the literature not addressed in other studies by examining a wide range of predictor variables prospectively in a community sample.

**Method**—Single men age 18 to 35 were recruited through telephone sampling in a large metropolitan region. In person audio computer-assisted self interviews were completed at baseline and one year later ( $n = 423$ ).

**Results**—By the follow-up interview, half of the participants reported engaging in some type of sexual activity with a woman when they knew she was unwilling. Discriminant function and analysis of variance demonstrated that persistent sexual aggressors had the most extreme scores on many baseline and follow-up measures including childhood victimization, social deviance, personality traits, frequency of misperception of women's sexual intent, and expectancies about alcohol's effects. At follow-up, desisters had fewer sexual partners than did persisters. Also at follow-up, initiators misperceived more women's sexual intentions, had stronger alcohol expectancies, drank more alcohol in sexual situations, and were with women who drank more alcohol as compared to nonperpetrators.

**Conclusions**—Given the extremely high rates of self-reported sexual aggression, universal prevention programs are needed. Targeted interventions should focus on youth who were victimized in childhood, engage in delinquent behavior, are narcissistic and unconcerned about others, enjoy impersonal sex, drink heavily, and believe that alcohol enhances sexuality.

### Keywords

sexual aggression; sexual assault; perpetration; etiology; prospective design

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Many theories have been developed to explain sexual assault etiology in incarcerated and nonincarcerated samples (Gannon, Collie, Ward, & Thakker, 2008; Malamuth, Linz, Heavey, Barnes, & Acker, 1995; Seto & Barbaree, 1997). There is consensus among theorists that sexual assault perpetrators are heterogeneous in regards to motives and offense

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style, with no one set of risk factors explaining most perpetrators' behavior. Although there is a large literature focused on recidivism among convicted rapists, few researchers have tried to identify patterns of sexual aggression over time (Cale, Lussier, & Proulx, 2009; Lalumiere, Harris, Quinsey, & Rice, 2005; Seto & Barbaree, 1997). The goal of this study is to distinguish risk factors associated with young men's self-reports of continuing (persistence), stopping (desistance), and starting (initiation) sexual aggression against women over a one year time period.

The terms sexual aggression and sexual assault are used interchangeably in this paper and are defined as the use of any tactic to obtain some type of sexual activity from someone who is unwilling or unable to consent (Abbey, Parkhill, Clinton-Sherrod, & Zawacki, 2007; Koss, Gidycz, & Wisniewski, 1987; White & Smith, 2004). Although women can be sexually aggressive, the vast majority of perpetrators are male (Tjaden & Thoennes; 1998). This study focuses on perpetration by young, unmarried men because most sexual assaults are committed by young men and marital rape is distinctive in its chronicity and co-occurrence with other forms of violence (Bureau of Justice Statistics, 2008; Mahoney, 1999; Martin, Taft, & Resick, 2007; Stermac, Del Bove, & Addison, 2001).

### **Prospective Studies of Sexual Assault Perpetration**

Longitudinal research that examines sexual assault perpetration across multiple time points is relatively rare (Abbey & McAuslan, 2004; Ageton, 1983; Hall, DeGarmo, Eap, Teten, & Sue, 2006; Loh, Gidycz, Lobo, & Luthra, 2005; Malamuth et al., 1995; McWhorter, Sandler, Merrill, Thomsen, & Milner, 2009; White & Smith, 2004). In a 3-year longitudinal study conducted with a nationally representative sample of male adolescents age 11 to 17, Ageton (1983) found that the only predictor of future sexual assault perpetration was involvement in a network of peers who supported unconventional, antisocial behavior. White and Smith (2004) collected information across four years of college from three incoming classes of male college students. At the start of college, 22.4% reported committing at least one sexually aggressive act in adolescence. Approximately 12–13% reported sexual aggression each year of college, for a cumulative total of 34.5% by the end of the study. Childhood sexual abuse, physical abuse, and witnessing parental domestic violence predicted sexual assault perpetration in adolescence. In subsequent years, past perpetration was the only significant predictor of recent perpetration. Loh et al. (2005) found that almost one-third of the male college students in their study reported committing an act of sexual aggression since age 14 at the initial assessment, with 12% reporting an act of sexual aggression over the 7 month follow-up interval. Past perpetration and adversarial sexual beliefs predicted later perpetration.

### **Developmental Models of Delinquency**

Several sexual assault theorists have used criminological models of delinquency to explicate the development of sexually aggressive behavior (Abbey & McAuslan, 2004; Lalumiere et al., 2005; Seto & Barbaree, 1997), both because delinquency is a consistent predictor of sexual aggression and because there is a large delinquency literature which examines different trajectories of antisocial behavior from childhood into middle adulthood (Lansford, Rabiner, Miller-Johnson, Golonka, & Hendren, 2003; Moffitt, Caspi, Harrington, & Milne, 2002; Piquero, Farrington, Nagin, & Moffitt, 2010). Moffitt and colleagues (Moffitt et al., 2002; Piquero et al., 2010) have argued that there are two primary patterns of male antisocial and delinquent behavior: life-course persistent and adolescent-limited. Life-course persistent offenders are “few, persistent, and pathological” (Moffitt et al., 2002, p. 180). Early developmental factors, including the child's difficult temperament and caregivers' poor coping skills, initiate a cascade of negative experiences that escalate into increasing levels of antisocial behavior and violence over the life course. In contrast, adolescent-limited

offenders are “common, relatively temporary, and near normative” (Moffitt et al., 2002, p. 180). These researchers argue that the gap between puberty and adult responsibilities in modern society creates a time period during which it is normative for young men to engage in experimentation, rebellion, and exploration of different identities. Risky and reckless behaviors peak during the adolescent and emerging adult years (Arnett, 2000; Bradley & Wildman, 2002). Most youth desist from these activities as they take on adult responsibilities in late adolescence and early adulthood.

Although Moffitt and colleagues found strong support for their model in large, longitudinal studies that followed youth into middle adulthood (Moffitt et al., 2002; Piquero et al., 2010), two pathways are insufficient to explain the many patterns of violent behavior exhibited over the life course (Cale et al., 2009; Laub, Sampson, & Sweeten, 2006). Some individuals start early but desist and others start late and escalate. Major life changes such as the development or loss of a close, supportive relationship can alter individuals' trajectories at any age (Lansford et al., 2003; Laub et al., 2006). Also, “snares” such as being arrested or becoming a substance abuser can put an adolescent-limited individual on the life-course persistent path (Moffitt et al., 2002).

### **Studies Which Distinguish Different Patterns of Sexual Aggression Over Time**

Applying these criminological models of delinquency to sexual aggression has led to the hypothesis that there may be two similar primary patterns of sexual aggression over time (Lalumiere et al., 2005; Seto & Barbaree, 1997). Seto and Barbaree (1997) suggested that the types of sexual aggression identified through self-report surveys in college and community samples are typically committed by time-limited, opportunistic offenders, although other researchers have argued that a subset of these perpetrators are persistent, violent offenders (Lisak & Miller, 2002; McWhorter et al., 2009). Lalumiere et al. (2005) argued that desisting, adolescent-limited sexual assault perpetrators go through a stage in which they feel intense competition with other men to have many sexual partners, and this competition motivates them to use coercive tactics to obtain what they want sexually from women.

Abbey and McAuslan (2004) conducted a preliminary study of patterns of sexual aggression over time with 197 male college students who completed two surveys, one year apart. They distinguished four mutually exclusive groups: no perpetration at the initial or follow-up (nonperpetrators, 59%), perpetrated at initial interview only (adolescent limited/stopped/desisted, 26%), perpetrated at follow-up only (new/initiated, 6%), and perpetrated at initial and follow-up (early onset/repeat/persisted, 9%). As hypothesized, persistent offenders had more extreme scores at the initial assessment than men in the other three groups on many risk factors, including hostile attitudes about women, heavy alcohol consumption, and acceptance of coercive tactics to obtain sex. Furthermore, persistent and desisting perpetrators differed from nonperpetrators by having sex at an earlier age, more dating and sexual partners, and engaging in more delinquent activities in adolescence. Desisters also reported misperceiving more women's sexual intentions at the initial assessment than did men in any other group, suggesting that they lacked dating and social skills in adolescence which they later developed. Men who committed sexual aggression for the first time between the two interviews stood out on one measure: they had the most sexual partners in the year between the two interviews. New perpetrators might have been slow to sexually mature; thus they did not find opportunities to sexually aggress until the later timepoint.

Hall et al. (2006) replicated and extended Abbey and McAuslan's (2004) study with a sample of 266 Asian American and 299 European American male college students. They formed the same four groups and found similar rates of sexual assault perpetration, with 63% of the sample classified as nonperpetrators, 21% as desisters, 7% as initiators, and 9%

as persisters. There were no ethnic differences in assault group status. Persisters scored significantly higher than nonperpetrators on measures of delinquency and hostile masculinity. There were no significant differences between groups on frequency of childhood family physical violence.

In summary, several researchers have found evidence for different patterns of sexual assault perpetration over time in nonincarcerated samples. Men who persistently commit sexual assaults over time stand out by having the most deviant, aggression-facilitating personality, attitudes, and past experiences (Abbey et al., 2007; Lisak & Miller, 2002; Merrill et al., 2009; Ouimette, 1997). In contrast, men who commit sexual assault in adolescence and/or young adulthood but then stop are likely to have done so as part of a larger pattern of acting out behavior that diminishes when they take on adult responsibilities (Cale et al., 2009; Moffitt et al., 2002; Seto & Barbaree, 1997). Men who are part of a peer group that accepts patriarchal norms about women and encourages rebellion, heavy drinking, and casual sex are likely to feel pressure to obtain sex from as many women as possible regardless of what tactics are required (Ageton, 1983; Kanin, 1985). Most perpetrators commit their first sexual assault in adolescence (Bureau of Justice Statistics, 2008; White & Smith, 2004), thus men who initiate sexual aggression in adulthood are relatively rare. Initiators may be exhibiting some of the experimentation typically seen in adolescence, but at a somewhat older age.

### Current Study's Goals and Hypotheses

The goal of this study is to find risk factors that distinguish men's patterns of sexual aggression over a one year time interval. It replicates and extends the Abbey and McAuslan (2004) and Hall et al. (2006) studies by examining a wider range of predictor variables in a community sample of young adult men. Neither of the past studies included personality measures; this study includes a measure of subclinical psychopathy intended for use in nonclinical samples (Williams, Paulhus, & Hare 2007). Abbey and McAuslan did not assess childhood factors and Hall et al. only measured physical violence in childhood; this study includes a measure of childhood sexual abuse, as well as a measure of childhood physical and emotional abuse. The inclusion of a broad array of established risk factors should aid in the identification of different patterns of sexual aggression over time. Another strength of this study is the use of a community sample. The vast majority of cross-sectional and prospective studies have used college samples; thus this study provides important information regarding the extent to which past findings can be generalized beyond college students.

Based on the theories and literature reviewed above, we developed hypotheses about each perpetration group. The first hypothesis is that persistent sexual aggressors will have more extreme scores on common risk factors for sexual aggression (including childhood victimization, adolescent delinquency, risk taking, personality traits related to psychopathy, stereotypic attitudes about women, impersonal sex, and alcohol) as compared to nonperpetrators; with initiating and desisting perpetrators' scores typically falling in between (exceptions described below). Also, as compared to other perpetrators (who reported sexual aggression at only one interview), persistent perpetrators were expected to have committed more acts of sexual aggression and more severe acts (e.g., more likely to commit rape). The second hypothesis is that desisters will have scores similar to those of persisters and different from those of initiators and nonperpetrators on baseline measures of adolescent delinquency, risk taking, attitudes about casual sex, frequency of misperception of women's degree of sexual interest, number of sex partners, beliefs about alcohol's effects on their sex drive, and heavy drinking by themselves and by their partners in sexual situations. The third hypothesis is that initiators will differ from other participants by increasing their sexual activity and alcohol consumption in sexual situations between the two interviews. As compared to nonperpetrators and desisters, initiators were expected to report more frequent

misperception of women's sexual intentions, more sexual partners, and more drinking in sexual situations at the follow-up interview.

## Method

### Participants

At baseline, participants were required to be between the ages of 18 and 35, single (i.e., not currently married, engaged, or cohabitating), and to have dated a woman in the past two years. [See Abbey, Jacques-Tiura, & LeBreton (2011) and Abbey & Jacques-Tiura (2011) for information about the baseline procedures and findings.] One year follow-up interviews were completed with 90.4% of the 470 baseline participants ( $n = 425$ ). There were 27 participants who told the interviewer they did not want to participate, 7 who had another person refuse for them, and 14 who repeatedly missed appointments or made excuses to delay the interview. Twelve participants were ineligible for the follow-up interview because they had moved too far away to be interviewed in person ( $n = 10$ ), were incarcerated ( $n = 1$ ), or were hospitalized for an extended time ( $n = 1$ ). The remaining 6 participants could not be located despite numerous attempts using the contact information they provided for themselves and two friends or family members. Two participants skipped large sections and had long strings of identical responses. Their data were deleted, leaving a final sample size of 423.

### Procedures

Data collection was completed under contract by the Survey Research Center at the University of Michigan. The institutional review boards at both universities approved the study's procedures. A commercial landline telephone list that had a high probability of including 18 to 35 year old men living in the Detroit Metropolitan statistical region provided the sampling frame (Groves et al., 2009). This tri-county region of more than 4 million residents includes a broad range of suburban and semi-rural communities, as well as the city of Detroit.

Potential participants were recruited by telephone for a study of men's dating and sexual experiences. Among eligible participants who met the age and relationship criteria described above, 89% agreed to be interviewed. Professionally trained interviewers conducted in-person interviews at a mutually agreeable location selected for quiet and privacy. Audio computer-assisted self-interviewing (ACASI) procedures were used. The interviewer orally administered the first few sections, which contained the least sensitive questions. The computer was then handed over to participants who wore headphones so that they could hear each question read aloud by a male voice as they read along on the computer screen. Participants used the keyboard to type their answers; most questions only required the use of the number keys. Past research demonstrates that people are more willing to disclose extremely sensitive information in computer-assisted self-interviews as compared to paper and pencil or telephone interviews (Turner et al., 1998). Participants were paid \$50 at baseline and \$60 at follow-up to compensate them for their time; both interviews took approximately one hour.

### Measures

**Sexual aggression**—A modified 16-item version of the Sexual Experiences Survey (Koss et al., 1987) was used at both timepoints (Abbey, Parkhill, BeShears, Clinton-Sherrod, & Zawacki, 2006). This measure uses behaviorally-specific language to assess a range of sexual activities (e.g., sexual touching; oral, vaginal, and anal intercourse) that happened against the woman's wishes through the use of verbal pressure, physical force, or when the woman was too impaired to consent. At baseline, participants were asked to think about

situations since age 14 when they were with a woman, or if thinking back to their teen years, with a girl about their age. At the follow-up they were asked about situations that occurred since the last interview. The original and modified versions of this instrument have demonstrated good internal consistency, test-retest, and criterion validity in past research (Abbey et al., 2007; Bernat, Stolp, Calhoun, & Adams, 1997; Koss & Gidycz, 1985). Responses were made on 6-point scales with options ranging from 0 (*never*) to 5 (*five or more times*). When responses to the items were summed, Cronbach's coefficient alpha was .84 at baseline and .92 at the follow-up.

**Childhood victimization**—At baseline, parents' or caregivers' emotional (e.g., ignore, ridicule) and physical (e.g., spank, kick) abuse of participants as a child was assessed with 9 items from Bremner, Bolus, and Mayer's (2007) Early Trauma Inventory. Responses were made on 5-point scales with options ranging from 1 (*never*) to 5 (*very often*) and Cronbach's alpha was .75. Sexually abusive childhood victimization was assessed at baseline with 7 questions that asked about various sexual activities (e.g., exposure, sexual touching, sexual intercourse) that occurred before age 14 with someone who was at least 5 years older (Abbey et al., 2006). Responses were made on 5-point scales with options ranging from 1 (*never*) to 5 (*10 or more times*) and Cronbach's alpha was .84.

**Social deviance**—At baseline, Williams, Paulhus, and Hare's (2007) Self-Report Psychopathy III (SRP-III) scale was used to assess behavior and personality traits associated with subclinical levels of psychopathy. This measure was designed to be used with nonclinical populations and has demonstrated good internal consistency and predictive validity in college samples (Williams et al., 2007). The two 10-item subscales that assess delinquent behavior prior to age 18 and general risk-taking and impulsivity are often combined to measure social deviance. The delinquency items ask about “misbehavior” during the teenage years and include shoplifting, cheating, joyriding, and vandalizing. One item that asked about forced sex was deleted to avoid making participants feel that questions were being repeated. A sample risk-taking item is, “I've often done something dangerous just for the thrill of it.” Responses were made on 5-point scales with options ranging from 1 (*disagree strongly*) to 5 (*agree strongly*). Cronbach's alpha for the combined measure was .84.

**Personality traits related to psychopathy**—Also included at baseline were the other two 10-item SRP-III subscales which assess personality traits associated with subclinical levels of psychopathy: callous affect/lack of empathy and interpersonal manipulation. A sample callous affect item is, “It bothers me to see children or animals in pain” (reversed). A sample interpersonal manipulation item is, “It's amusing to see other people get tricked.” Responses were made on 5-point scales with options ranging from 1 (*disagree strongly*) to 5 (*agree strongly*). Cronbach's alpha for the combined measure was .78.

Narcissism was assessed at baseline with modified versions of the 5-item exploitativeness and 6-item entitlement subscales from the Narcissistic Personality Inventory (Raskin & Terry, 1988). A sample exploitativeness item is, “I can make anybody believe anything I want them to.” A sample entitlement item is, “I insist upon getting the respect that is due me.” Responses were made on 5-point scales with options ranging from 1 (*not at all*) to 5 (*very much*). Cronbach's alpha for the combined measure was .85.

**Stereotypic attitudes about women that justify forced sex**—At baseline, a subset of Payne, Lonsway, and Fitzgerald's (1999) and Bumby's (1996) rape myth acceptance items were combined to form a 9-item measure. This measure was pilot tested with undergraduates and had good internal consistency reliability. A sample item is, “If a woman goes to a man's home on a date, she is implying that she wants to have sex.” Responses were

made on 7-point scales with options ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Cronbach's alpha was .85.

**Positive attitudes about casual sex**—At baseline, a subset of 7 items from Hendrick, Hendrick, and Reich's (2006) Brief Sexual Attitudes Scale was used to assess participants' attitudes about casual sexual relationships. This scale has strong internal consistency reliability and construct validity (Hendrick et al., 2006). A sample item is, "I would like to have sex with many partners." Response options ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). Cronbach's alpha was .88.

**Misperception of women's sexual intent**—Four questions assessed misperception of women's sexual intent (Abbey, McAuslan, & Ross, 1998; Jacques-Tiura, Abbey, Parkhill, & Zawacki, 2007). Participants were asked about lifetime experiences at baseline and since the last interview at the follow-up. The first question asked participants how many times they had misperceived a woman's friendliness as a sexual come on. The next three questions asked specifically about the number of times misperception of sexual intent had occurred with acquaintances, friends, and romantic interests. Responses to the four open-ended questions were averaged. Cronbach's alpha was .76 at baseline and .77 at follow-up.

**Sexual behavior**—At baseline, participants were asked open ended questions about the number of women with whom they had consensual sexual intercourse during their lifetime and the number with whom they had consensual sexual intercourse on just one occasion. At the follow-up interview, they were asked to respond to the same questions regarding their total number of partners and one-time partners since the last interview.

**Alcohol expectancies about own sex drive**—At baseline and follow-up, participants' belief that alcohol increased their sex drive was assessed with a 5-item scale that demonstrated excellent internal consistency reliability and discriminant validity in past research (Abbey, McAuslan, Ross, & Zawacki, 1999). A sample item is, "If I were under the influence of a moderate amount of alcohol, I would have a strong sex drive." Responses were made on 5-point scales with options ranging from 1 (*not at all*) to 5 (*very much*). Cronbach's alpha was .92 at baseline and .93 at follow-up.

**Alcohol consumption in sexual situations**—Participants reported how often they consumed alcohol in consensual sexual situations and the amount of alcohol they typically consumed in these situations at baseline and follow-up (Abbey et al., 1998). Response options for how often they drank in these situations ranged from 0 (*never*) to 5 (*nearly every time or every time*). Response options for the number of drinks consumed in these situations ranged from 0 (*none*) to 7 (*thirteen or more drinks*). Frequency and quantity were multiplied to assess the total amount of alcohol consumed by the participant in sexual situations. A parallel set of questions asked about alcohol consumption by the women with whom they were in these sexual situations. A measure of total alcohol consumption was also formed for partners.

## Results

### Preliminary Data Analyses

There was very little missing data (less than 0.5%), thus mean substitution was used. Variables with skew statistics greater than 2.0 were winsorized (Tabachnick & Fidell, 2007): baseline and follow-up number of misperceptions and number of consensual sexual partners, as well as participants' and partners' baseline and follow-up alcohol consumption in sexual

situations. The total number of sexually aggressive acts reported was skewed and kurtotic, thus it was transformed using the natural logarithm (Tabachnick & Fidell, 2007).

The physical and emotional abuse measure was combined with the childhood sexual abuse measure to form a general measure of childhood victimization. These two measures used different response scales; thus, z scores were formed and then the two scales were summed. Callous affect, interpersonal manipulation, and narcissism were combined to form a measure of personality traits related to psychopathy (z scores summed). Delinquency and risk-taking/impulsivity were combined to form an indicator of social deviance. Preliminary analyses confirmed that for each of these constructs, the individual measures showed the same relationship to perpetration status as did the combined measure (described in later section).

### Descriptive Information about Prevalence of Perpetration

Forty-three percent of participants who completed both interviews reported that they had perpetrated some type of sexual aggression since age 14 at the initial interview (this is the same percentage found using the full baseline sample; see Abbey et al. [2011] for additional baseline findings). At the follow-up interview, 25.5% of participants reported that they had perpetrated some type of sexual aggression since the last interview one year earlier. Using the mutually exclusive severity categories that are commonly formed with this instrument (Koss et al., 1987), 8% indicated that forced sexual contact was the most serious form of sexual aggression they had committed in the past year, 10.7% committed verbally coerced sexual intercourse, 1.4% committed attempted rape, and 5.4% committed completed rape, usually when the victim was unable to consent due to extreme impairment.

To evaluate this study's hypotheses, participants were divided into four mutually exclusive groups based on their sexual assault perpetration status at both timepoints. Persisters ( $n = 76$ , 18.0%) reported one or more acts of sexual aggression at both interviews; desisters ( $n = 107$ , 25.3%) reported one or more acts of sexual aggression at the initial interview, but none at the follow-up; initiators ( $n = 32$ , 7.5%) did not report any acts of sexual aggression at the initial interview but reported at least one at the follow-up; and nonperpetrators ( $n = 208$ , 49.2%) did not report any acts of sexual aggression at either interview.

### Descriptive Information about Participants who Completed Both Interviews

Demographics were not expected to vary based on perpetration status. This expectation was confirmed through analyses of variance (ANOVA) and contingency table analyses with the four group perpetration status measure as the independent variable. There were no significant differences in participants' age, ethnicity, education, occupation, religion, or strength of religious beliefs. Participants were 23 years old on average at baseline ( $SD = 4.95$ ),  $F(3, 417) = 1.51$ ,  $p = .21$ . Seventy-two percent of participants self-identified as White, 17% as Black, 5% reported mixed ethnicity, and no more than 1% reported any one other racial or ethnic background,  $\chi^2(6, N = 423) = 3.81$ ,  $p = .70$ . Ninety-four percent of participants had graduated from high school and 13% had a bachelors degree,  $\chi^2(12, N = 423) = 17.02$ ,  $p = .15$ . Twenty-six percent of participants reported that their primary occupation was being a student, 21% had a job in the service industry, 18% were laborers of some type, 16% had office jobs, 13% were professionals, and 6% were unemployed,  $\chi^2(15, N = 423) = 18.92$ ,  $p = .22$ . Thirty-seven percent of participants reported being Protestant or another Christian denomination, 33% were Catholic, 26% had no religious preference, 2% were Jewish, and 2% had other religious affiliations,  $\chi^2(15, N = 423) = 10.65$ ,  $p = .78$ . On average, participants reported having moderately weak religious beliefs ( $M = 2.62$ ,  $SD = 1.26$ ),  $F(3, 417) = 0.65$ ,  $p = .58$ . Participants were required to be single at the baseline interview. At the follow-up, 21 were engaged and 5 were married. Relationship status did not vary as a function of perpetration status,  $\chi^2(12, N = 423) = 12.94$ ,  $p = .37$ .



## Relationship of Predictor Variables to Perpetration Status

Perpetration group membership was predicted with simultaneous entry discriminant function analysis (DFA), with prior probabilities of group membership taken into account (Klecka, 1980; Tabacknick & Fidell, 2007). Two significant functions emerged. The first function had a Wilk's lambda of .68 with  $\chi^2(51, N = 423) = 156.61, p < .0001$  and accounted for 68% of the total discriminating power. The second function had a Wilk's lambda of .88 with  $\chi^2(32, N = 423) = 53.37, p < .01$  and accounted for 20% of the total discriminating power. Examination of the group centroids indicated that the first function primarily distinguished between persistent sexual aggressors and nonperpetrators; whereas the second function primarily distinguished between desisters and initiators.

Multivariate and univariate analyses of variance were then computed to aid in the interpretation of the DFA findings (Klecka, 1980). A MANOVA was conducted in which the independent variable was participants' perpetration group and all the predictor variables in Table 1 were included as dependent measures. The MANOVA was significant, Pillai's  $F(51, 1215) = 3.11, p = .0001$ . Table 1 includes the means and standard errors for the four perpetration groups,  $F$  values and  $p$  values from the ANOVAs, post hoc mean comparisons, and the correlations between the predictor variables and the two significant functions.

The first hypothesis focused on participants who reported committing an act of sexual aggression at both timepoints. As hypothesized, persistent sexual aggressors had significantly more extreme scores on every risk factor included in Table 1 as compared to nonperpetrators. Furthermore, as compared to other perpetrators (desisters and initiators), persistent sexual aggressors had higher baseline levels of childhood victimization, social deviance, and psychopathy-related personality traits; had more lifetime and past year misperceptions of women's sexual intentions, had a larger number of total sex partners and one-time sex partners between the two interviews, and had stronger beliefs about alcohol's effects on their sex drive at both timepoints. As can be seen in Table 1, for many of these variables, persisters' scores were significantly different from those of all other groups; although initiators (the group with the smallest sample size) had nonsignificant trends for many variables. Not surprisingly, persisters committed more sexual assaults and more severe assaults than did other perpetrators. These two variables were not included in the DFA because nonperpetrators have no variance in their scores.

The second hypothesis focused on participants who reported committing an act of sexual aggression at baseline but not at follow-up. As hypothesized, desisters had significantly higher scores than nonperpetrators on the following baseline measures: social deviance, positive attitudes about casual sex, lifetime frequency of misperception of women's sexual intentions, lifetime number of sex partners, lifetime one-time sex partners, alcohol expectancies about sex drive, participants' drinking in sexual situations, and partners' drinking in sexual situations. They also unexpectedly had significantly higher scores than nonperpetrators on psychopathy-related personality traits. Desisters did not differ from nonperpetrators at follow-up on number of misperceptions, total sex partners, or one-time sex partners since the last interview, which supports the argument that their interactions with women changed between the two interviews.

The third hypothesis focused on participants who did not report committing an act of sexual aggression at baseline but did report one at follow-up. Unexpectedly, initiators had significantly higher levels of psychopathy-related personality traits and stereotypic attitudes toward women than did nonperpetrators. As hypothesized, in comparison to nonperpetrators at follow-up, initiators reported that they misperceived significantly more women's sexual intentions, more strongly believed that drinking increased their sex drive, drank more in

sexual situations, and were with women who drank more in these situations between the two interviews.

Classification rates were examined to determine how well this set of predictors discriminated between the perpetration groups (Stephens, 1996). Overall, 57.2% of participants were correctly classified which significantly improved upon a chance rate of 34.4%,  $z(423) = 10.07, p < .001$ . The predictor variables correctly classified 83.7% of nonperpetrators, 43.4% of persistent sexual aggressors, 30.8% of desisting sexual aggressors, and 6.3% of initiating sexual aggressors, all of which were significant improvements over the chance rate,  $z$ 's = 20.03; 19.77; 10.31; 4.30 respectively;  $p$ 's < .001. Initiators were most likely to be misclassified as nonperpetrators.

## Discussion

One-quarter of these young adult men made a woman engage in some type of sexual activity against her wishes over a one year time interval. Eighteen percent had previously been sexually aggressive and 7.5% were sexually aggressive for the first time. The authors are not aware of other studies that followed a community sample of adult men over time to assess rates of sexual aggression. When discussing these alarmingly high rates of sexual aggression, it is important to acknowledge that these acts ranged in severity from forced sexual touching to forced sexual intercourse, with verbal coercion as the most common tactic. Many of these acts would not constitute criminal sexual conduct; however, past research has demonstrated that sexual victimization can have a lasting negative impact on survivors' psychological, physical, and social well-being, regardless of perpetrators' tactics (Livingston, Buddie, Testa, & VanZile-Tamsen, 2004; Zweig, Crockett, Sayer, & Vicary, 1999).

Strengths of this study include the prospective design, use of telephone sampling to obtain a large representative sample of young single men from a large metropolitan area, and the high initial and one year follow-up response rates. Also, a broad range of risk factors were measured with well-validated scales. Most sexual aggression research with nonincarcerated samples relies on college students, thus studies with community samples provide important information regarding the extent to which risk factors identified in college populations also apply to the general population.

The baseline and one year prevalence rates found in this study are fairly comparable to those reported in previous longitudinal studies with male college samples (Loh et al., 2005; White & Smith, 2004). As compared to the two college studies which examined the same four perpetration subgroups (Abbey & McAuslan, 2004; Hall et al., 2006), participants in this study were somewhat less likely to be nonperpetrators and somewhat more likely to be persistent sexual aggressors. Substantial variability has been found in rates of self-reported sexual aggression based on the precise questions asked, participants' sense of privacy when completing the questionnaire, and confidence that their responses will remain confidential (Abbey, Parkhill, & Koss, 2005). State-of-the-art survey research procedures were used in this study to maximize participants' sense of privacy and confidentiality. We also included a broad range of questions to assess sexual aggression, based on past research which demonstrates that behaviorally-specific examples improve recall (Fricker, Smith, Davis, & Hanson, 2003). Some authors have argued that college environments are particularly high risk for sexual aggression (Koss et al., 1987; Loh et al. 2005); these findings suggest that community environments can also be high risk (cf. Buddie & Testa, 2005).

Overall, the findings support our three initial hypotheses. The strongest pattern that emerged from the discriminant function analysis and follow-up comparison of subgroup means was

the distinction between persistent sexual offenders and nonperpetrators. In support of Hypothesis 1, men who committed acts of sexual aggression at both timepoints had the most extreme scores on baseline measures of childhood emotional, physical, and sexual victimization; social deviance, which included delinquency in adolescence and a general proclivity for risk-taking; psychopathy-related personality traits including callous affect, interpersonal manipulation, and narcissism; stereotypic attitudes about women that encourage forced sex; misperception of women's sexual intentions; and beliefs about alcohol's enhancement of their sex drive.

These findings support the conclusion that a sizable subset of nonincarcerated sexually aggressive men have a constellation of early childhood experiences, personality traits, and attitudes about women that can encourage treating women as sexual commodities. Their narcissism, lack of empathy, and stereotypic beliefs about women and sex enable them to use a variety of coercive strategies to make women fulfill their sexual needs. Intoxication increases these men's likelihood of being sexually aggressive because beliefs about alcohol and cognitive impairments induced by alcohol work in concert to focus potential perpetrators' attention on their own sexual arousal and to ignore women's signs of distress (Abbey, 2002).

The second strongest pattern was associated with men who reported acts of sexual aggression only at the initial interview. In support of Hypothesis 2, desisters were relatively similar to persisters and different from nonperpetrators on baseline measures of social deviance, positive attitudes about casual sex, frequency of misperception of women's sexual interest, total number of sex partners and number of one-time sex partners, beliefs about alcohol's effects on their sex drive, and alcohol consumption in sexual situations. Also as hypothesized, desisters differed from persisters and were similar to nonperpetrators on measures of frequency of misperception of women's sexual interest between the two interviews and number of sex partners between the two interviews. Thus, by the second interview, these men's sexual behavior was similar to that of nonperpetrators.

This pattern of results supports the hypothesis that men who commit sexual assault in adolescence and/or young adulthood but then stop are likely to have done so as part of a larger pattern of acting out and sexual experimentation that diminishes with time. Masculine identity formation in adolescence often involves treating sex as a game or competition in which women are primarily viewed as sexual objects and trophies (Korobov & Bamberg, 2004). Ott (2010) described how young men often feel tension between masculinity and relationship development goals and frequently feel pressured to demonstrate their sexual prowess to their male peer group. Seduction and rape scripts have significant overlap; both include men's use of verbal manipulation and alcohol to achieve sex with a reluctant partner (Littleton & Axsom, 2003). Young men with little sexual experience who are highly motivated to have sex with many women may have a particularly difficult time recognizing the line between seduction and coercion. This in no way excuses their use of coercive tactics to obtain sex, but suggests that these behaviors may diminish over time as they focus their energies on forming mutually satisfying relationships with women rather than impressing other men.

As anticipated, this set of risk factors did not do a particularly good job of predicting initiator group membership. In support of Hypothesis 3, initiators misperceived more women, more strongly believed that alcohol increased their sex drive, consumed more alcohol in sexual situations, and were with women who consumed more alcohol between the two interviews as compared to nonperpetrators. Contrary to expectation, initiators more strongly endorsed psychopathy-related personality traits and stereotypic attitudes about

women that encourage forced sex at baseline as compared to nonperpetrators, suggesting that they have some characteristics that predispose them to be sexually aggressive.

These findings suggest that initiators may be experimenting with “hooking up,” which is typically defined as spontaneous sex with a casual partner, often with little or no conversation, and usually when intoxicated at a party or bar (Stinson, 2010). Although both women and men report seeking out and enjoying “sex without strings;” there is also evidence that women and men frequently approach these situations with different motives and experience different outcomes. Women are more likely than men to report that they do not want to engage in sexual intercourse as part of a hook up and to experience negative emotions after hooking up (Fielder & Carey, 2010; Owen, Rhoades, Stanley, & Fincham, 2010). Flack et al. (2007) found that 78% of the sexual assaults experienced by the college women in their study occurred during hook ups in which the man forced a higher level of sex than the woman wanted. These different expectations set the stage for misperception and, among men who believe common rape myths, they provide a justification for forcing sex. Our study was not designed to test detailed hypotheses about hook ups and casual sex; however, these results suggest that more research is needed that examines specific forced sex situations so that the interplay between expectations, misperception, and intoxication can be better understood.

### Limitations

It is important to replicate this study's findings with an independent sample, including the discriminant function analyses. By including men age 18 to 35 and demonstrating that age was not associated with perpetration status, we increased the generalizability of the findings beyond the 18 to 22 year old age group used in most past research. A limitation of this broad age range is that it encompasses several developmental stages and our sample size was not large enough to compare them. As more of the population attends college and delays marriage and parenting, there is more variability in the timing of major life milestones in adulthood (Arnett, 2000). Thus, age alone cannot be used to determine life stage. Future sexual aggression research would benefit from prospective studies that follow men from adolescence into middle adulthood.

Many studies of sexual assault perpetrators rely on convenience samples. Thus a strength of this study was the use of random digit dialing to identify a sample of young men living in one large metropolitan area. However, the use of a nationally representative sample would increase confidence in the generalizability of the findings. Future studies need to include cell phone samples, given the steady increase in the proportion of the population no longer using a landline.

It is possible that completion of the baseline questionnaire sensitized participants to the issue, which could have influenced their willingness to report acts of sexual aggression at the follow-up as well as their actual behavior. More research is needed that carefully examines the effects of different measurement approaches on reports of sexually aggressive behavior.

### Research Implications

Developmental models of delinquency provided a useful framework for this study's hypotheses. Their focus on criminal behavior, however, is limiting when studying sexual aggression in the general population. The findings for desisters and persisters highlight the importance of including models of masculinity, sexuality, communication, and identity and relationship development. Some sexual aggressors appear to be primarily motivated by stable personality characteristics and attitudes toward women. Other sexual aggressors

appear to be primarily motivated by more malleable attitudes and situational pressures including peer norms and heavy drinking in situations that encourage casual sex. Many men have difficulty recognizing the line between acceptable forms of romantic seduction and sexual coercion, particularly when they are intoxicated (Littleton & Axson, 2003). More nuanced theories are needed to explain the diversity in sexual aggressors' motives and offense styles, as well as the specific circumstances in which they are most likely to engage in sexual aggression.

These theories need to be evaluated using both survey and experimental designs. Surveys of potential perpetrators need to include questions about the circumstances in which sexual aggression occurred, so that the field develops a better understanding of potential triggers for violence among men predisposed to be sexually aggressive. Experiments can complement survey research by examining the types of situational triggers described in perpetrators' narratives (e.g., alcohol, peer behavior) under controlled conditions with proxy outcome measures. Situational factors that emerge from both survey and experimental research are good candidates for inclusion in interventions.

Perpetrators who use different types of tactics (e.g., verbal coercion, the victim's impairment, physical force) may have somewhat different risk profiles (Abbey & Jacques-Tiura, 2011; Abbey et al., 2007; Lisak & Miller, 2002; McWhorter et al., 2009). Relatedly, the number and types of sexual assaults committed at different life stages may be associated with different risk profiles. Etiologic surveys with large samples are needed to tease apart different patterns of perpetration over time. Furthermore, the examination of trajectories requires at least three timepoints.

### **Clinical, Prevention, and Policy Implications**

Across the two interviews, half of the young men in this community sample reported engaging in some type of sexual activity with a woman when they knew she was unwilling since age 14, primarily through verbal and alcohol-facilitated tactics. Although on average the persistent perpetrators committed the largest number of sexually aggressive acts and the most severe acts, desisting and initiating perpetrators also on average committed multiple acts of sexual aggression. Thus, evidence-based universal prevention programs are needed that address cultural norms and policies that tolerate sexual aggression (McMahon, 2000). Americans are bombarded with explicit sexual images in a variety of media that portray women as sexual objects and perpetuate double standards regarding women's and men's sexual behavior and alcohol consumption. Youth need to learn a sense of ethics from parents, teachers, friends, other role models, and public service campaigns that counteract these messages. These prevention messages should emphasize that verbal aggression can be as harmful as physical aggression and the use of any strategy to obtain sex from someone who does not want to engage in that sexual behavior is wrong. Youth need to learn from an early age to feel comfortable talking about sex with potential partners, to recognize signs of discomfort, and to stop if they have any doubt about their partner's active consent.

Targeted interventions are also needed for at risk youth that have been sexually, physically, or emotionally victimized in childhood; who are engaging in various forms of delinquent behavior; who are narcissistic and unconcerned about the effects of their actions on others; who enjoy impersonal sex; who drink heavily; and who believe that alcohol enhances sexuality. Based on the findings from this study (and others described in the literature review), these individuals are at heightened risk of perpetrating sexual aggression. One important lesson to be learned from delinquency research is that youth can change their trajectories (Cale et al., 2009; Laub, Sampson, & Sweeten, 2006). Early onset perpetrators can recognize the harm they are causing to others and stop. Adolescent onset perpetrators can get caught in a snare (e.g., arrested) that puts them on the persistent offender path.

Researchers, clinicians, and interventionists need to work together to develop a large toolbox of intervention strategies that can be used in prevention and treatment programs to reduce the high rates of sexual violence against women.

## Acknowledgments

This research was funded by a grant from the National Institute on Alcohol Abuse and Alcoholism to the first author (R01 AA016338).

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**Table 1**  
 Predictors of Patterns of Sexual Aggression Over Time: Means, Standard Errors, Analysis of Variance and Discriminant Function Analysis Results

| Variables   | Time 1 to Time 2 Perpetration Pattern |        |                     |        |                     |        |                        |        |          |       | DFA <sup>a</sup> |      |
|---|---------------------------------------|--------|---------------------|--------|---------------------|--------|------------------------|--------|----------|-------|------------------|------|
|   | Persist (n = 76)                      |        | Desist (n = 107)    |        | Initiate (n = 32)   |        | None (n = 208)         |        | F(3,417) | P     | F1               | F2   |
|   | M                                     | SE     | M                   | SE     | M                   | SE     | M                      | SE     |          |       |                  |      |
| <b>Early Experiences and Individual Differences</b>         |                                       |        |                     |        |                     |        |                        |        |          |       |                  |      |
| Childhood Victimization (T1)                                | 0.54 <sub>a</sub>                     | (0.17) | -0.04 <sub>b</sub>  | (0.14) | 0.17                | (0.26) | -0.20 <sub>b</sub>     | (0.10) | 4.95     | .002  | .34              | .15  |
| Social Deviance (T1)  | 2.87 <sub>a</sub>                     | (0.07) | 2.57 <sub>b,c</sub> | (0.06) | 2.50 <sub>b</sub>   | (0.11) | 2.37 <sub>b,d</sub>    | (0.04) | 13.39    | .0001 | .58              | -.04 |
| Psychopathy-Related Personality Traits (T1)                 | 1.29 <sub>a</sub>                     | (0.26) | 0.01 <sub>b,c</sub> | (0.22) | 0.34 <sub>b,e</sub> | (0.39) | -0.53 <sub>b,d,f</sub> | (0.15) | 12.68    | .0001 | .56              | .15  |
| <b>Sexual Attitudes and Behavior</b>                        |                                       |        |                     |        |                     |        |                        |        |          |       |                  |      |
| Stereotypic Attitudes About Women (T1)                      | 2.97 <sub>a</sub>                     | (0.13) | 2.32 <sub>b</sub>   | (0.11) | 2.73 <sub>c</sub>   | (0.19) | 2.09 <sub>b,d</sub>    | (0.08) | 13.27    | .0001 | .55              | .25  |
| Positive Attitudes About Casual Sex (T1)                    | 3.13 <sub>a</sub>                     | (0.10) | 3.07 <sub>a</sub>   | (0.09) | 2.79                | (0.16) | 2.55 <sub>b</sub>      | (0.06) | 12.28    | .0001 | .49              | -.47 |
| Lifetime Misperceptions of Sexual Intent (T1)               | 3.45 <sub>a</sub>                     | (0.23) | 2.39 <sub>b,c</sub> | (0.20) | 2.01 <sub>b</sub>   | (0.36) | 1.90 <sub>b,d</sub>    | (0.14) | 11.09    | .0001 | .52              | .03  |
| Misperceptions of Sexual Intent (T2)                        | 1.40 <sub>a</sub>                     | (0.10) | 0.75 <sub>b</sub>   | (0.09) | 0.99 <sub>b,c</sub> | (0.16) | 0.63 <sub>b,d</sub>    | (0.06) | 14.15    | .0001 | .57              | .34  |
| Lifetime Number of Sex Partners (T1)                        | 12.51 <sub>a</sub>                    | (1.39) | 11.23 <sub>a</sub>  | (1.17) | 5.25 <sub>b</sub>   | (2.15) | 7.96 <sub>b</sub>      | (0.84) | 4.70     | .003  | .27              | -.28 |
| Number of Sex Partners (T2)                                 | 2.91 <sub>a</sub>                     | (0.26) | 2.17 <sub>b</sub>   | (0.22) | 2.12                | (0.40) | 2.01 <sub>b</sub>      | (0.16) | 2.94     | .033  | .26              | .10  |
| Lifetime Number of One-Night Stands (T1)                    | 4.17 <sub>a</sub>                     | (0.53) | 4.14 <sub>a</sub>   | (0.44) | 2.13 <sub>b</sub>   | (0.81) | 2.44 <sub>b</sub>      | (0.32) | 5.08     | .002  | .28              | -.38 |
| Number of One-Night Stands (T2)                             | 1.30 <sub>a</sub>                     | (0.16) | 1.01                | (0.13) | 0.97                | (0.24) | 0.73 <sub>b</sub>      | (0.09) | 3.61     | .013  | .30              | -.05 |
| <b>Alcohol Beliefs and Consumption in Sexual Situations</b> |                                       |        |                     |        |                     |        |                        |        |          |       |                  |      |
| Alcohol Expectancies About Own Sex Drive (T1)               | 3.08 <sub>a</sub>                     | (0.11) | 2.89 <sub>c</sub>   | (0.09) | 2.56 <sub>b</sub>   | (0.17) | 2.44                   | (0.07) | 10.77    | .0001 | .49              | -.34 |
| Alcohol Expectancies About Own Sex Drive (T2)               | 2.82 <sub>a</sub>                     | (0.10) | 2.54 <sub>b,c</sub> | (0.09) | 2.64 <sub>e</sub>   | (0.16) | 2.32 <sub>b</sub>      | (0.06) | 6.90     | .0001 | .41              | .02  |
| Own Drinking During Sexual Situations (T1)                  | 4.50 <sub>a</sub>                     | (0.51) | 4.51 <sub>a</sub>   | (0.43) | 4.13                | (0.79) | 2.85 <sub>b</sub>      | (0.31) | 4.66     | .003  | .29              | -.29 |
| Own Drinking During Sexual Situations (T2)                  | 4.38 <sub>a</sub>                     | (0.52) | 4.07 <sub>a</sub>   | (0.44) | 5.06 <sub>a</sub>   | (0.80) | 2.56 <sub>b</sub>      | (0.31) | 5.86     | .001  | .31              | -.13 |
| Partner's Drinking During Sexual Situations (T1)            | 4.12 <sub>a</sub>                     | (0.47) | 3.75 <sub>a</sub>   | (0.40) | 4.11                | (0.72) | 2.64 <sub>b</sub>      | (0.28) | 3.66     | .013  | .27              | -.12 |
| Partner's Drinking During Sexual Situations (T2)            | 3.20 <sub>a</sub>                     | (0.39) | 3.10 <sub>a</sub>   | (0.33) | 4.35 <sub>a</sub>   | (0.61) | 2.17 <sub>b</sub>      | (0.24) | 5.11     | .002  | .24              | -.07 |
| <b>Perpetration History - Not Included in DFA</b>           |                                       |        |                     |        |                     |        |                        |        |          |       |                  |      |
| Total Number of Sexual Assaults (T1-T2)                     | 8.88 <sub>a</sub>                     | (0.47) | 4.71 <sub>b,c</sub> | (0.40) | 2.28 <sub>b,d</sub> | (0.73) | N/A                    |        | 36.41    | .0001 |                  |      |
| Severity of Worst Assault (T1-T2)                           | 2.63 <sub>a</sub>                     | (0.12) | 2.10 <sub>b</sub>   | (0.10) | 1.94 <sub>b</sub>   | (0.18) | N/A                    |        | 8.25     | .0001 |                  |      |

*Note.* Means in the same row with a and b, c and d, and/or e and f are significantly different from each other using the least significant difference test at a  $p < .05$  level. <sup>†</sup>Two functions were significant in the DFA analysis. The 2 columns of DFA results show the pooled within-group correlations between the discriminating variables and standardized canonical discriminant functions. T1 indicates measured at Time 1. T2 indicates measured at Time 2 with time frame of "since the last interview." T1–T2 indicates combined score across the two timepoints.