

7-28-2016

# Intentional and Unintentional Misreporting on Self-Report Measures of Sexually Aggressive Behavior

Emily Strang

*University of Missouri-St. Louis*, [etstz8@mail.umsl.edu](mailto:etstz8@mail.umsl.edu)

Follow this and additional works at: <https://irl.umsl.edu/dissertation>



Part of the [Education Commons](#)

---

## Recommended Citation

Strang, Emily, "Intentional and Unintentional Misreporting on Self-Report Measures of Sexually Aggressive Behavior" (2016). *Dissertations*. 100.

<https://irl.umsl.edu/dissertation/100>

This Dissertation is brought to you for free and open access by the UMSL Graduate Works at IRL @ UMSL. It has been accepted for inclusion in Dissertations by an authorized administrator of IRL @ UMSL. For more information, please contact [marvinh@umsl.edu](mailto:marvinh@umsl.edu).

Intentional and Unintentional Misreporting on Self-Report Measures of  
Sexually Aggressive Behavior

**Emily Strang,**

M.A., Clinical Psychology, University of Missouri – St. Louis, 2011

M.A., General Psychology, Brandeis University, 2008

B.S., Psychology, Duke University, 2007

Dissertation Submitted to The Graduate School at the University of Missouri – St. Louis  
in partial fulfillment of the requirements for the degree  
Doctor of Philosophy in Clinical Psychology with an Emphasis in Gender Studies

August 2015

Advisory Committee

Zoë D. Peterson, Ph.D.  
Chairperson

Ann M. Steffen, Ph.D.  
Committee Member

Brian R. Vandenberg, Ph.D.  
Committee Member

Kristin Carbone-Lopez, Ph.D.  
Committee Member

## Abstract

The development of effective sexual aggression prevention programs for men relies on data garnered from perpetration research. However, few studies have focused on understanding and improving self-report measures of sexual aggression perpetration (Kolivas & Gross, 2007). The current studies explored the impact of men's intentional and unintentional misreporting on two measures of sexual aggression perpetration (SES-LFP: Koss et al., 2007; SSS: Peterson, et al., 2010). Study 1 (N=93) used a Bogus Pipeline (BPL) methodology to determine if men intentionally underreport their use of aggressive strategies on traditionally administered measures of perpetration. Compared to men in a control condition, men in the experimental BPL condition, designed to promote honest responding, were significantly more likely to acknowledge experiences with using sexually aggressive strategies, specifically strategies consistent with sexual assault. Study 2 (N=34) used semi-structured interviewing to explore the nature and frequency of unintentional over-reporting and underreporting on measures of sexual aggression perpetration. Item misinterpretation led to both over-reporting and underreporting of sexual aggression, although underreporting was more common. Men's interpretations of items, decision making processes, and reasons for producing discrepant reports across measures were analyzed and discussed.

*Keywords: Sexual assault, verbal coercion, perpetration, self-report measurement, Bogus Pipeline*

Intentional and Unintentional Misreporting on Self-Report Measures of  
Sexually Aggressive Behavior

**The Importance of Accurate Measurement**

Over the past 30 years, sexual aggression researchers have worked to refine self-report measures of women's sexual victimization (Fisher, Daigle, & Cullen, 2010; Kolivas & Gross, 2007; Koss, 2011). Far less research has focused on understanding and improving self-report measures of sexual aggression perpetration (Cook, 2002; Kolivas & Gross, 2007). A lack of confidence in current measurement tools may deter some researchers from committing to perpetration research programs. Concerted efforts to improve measurement tools may encourage more social scientists interested in addressing the rape problem to focus on understanding men who engage in sexual aggression. This task is challenging but achievable. Indeed, social scientists have enjoyed success in refining self-report measures of other sensitive experiences, like sexual victimization (Fisher, Cullen, & Daigle, 2005; Koss et al., 2007) and unreported criminal delinquency (Thornberry & Krohn, 2000).

The development of effective sexual aggression prevention programs for men relies on data garnered from perpetration research. The most helpful data will emerge from investigations that accurately identify and group men who have used aggressive sexual strategies (e.g., verbal pressure and manipulation, taking advantage of intoxication and/or incapacitation, and use of threats or force) and men who have *not* used these strategies. Increased understanding and refinement of perpetration measurement, therefore, will advance perpetration research (Cook, 2002; Kolivas & Gross, 2007; Ouimette, Shaw, Drozd & Leader, 2000; Porter & Critelli, 1992) and, ultimately,

prevention programs that reduce the use of sexually aggressive strategies (Strang, Peterson, Hill, & Heiman, 2013).

### **Self-Report Measures of Sexual Coercion and Aggression**

Popular self-report measures of sexually aggressive behavior include, but are not limited to, the Sexual Experiences Survey (SES; Koss & Oros, 1982; Koss, Gidycz, & Wisniewski, 1987; Koss et al., 2007), the Coercive Sexuality Scale (CSS; Rapaport & Burkhart, 1984), the Post-Refusal Persistence Scale (PRPS; Struckman-Johnson, Struckman-Johnson, & Anderson, 2003), the Sexual Strategies Scale (SSS; Peterson et al., 2010; Strang et al., 2013), the Conflict Tactics Scale–Revised (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996), and the Severity of Violence Against Women Scales (SVAWS; Marshall, 1992). These self-report measures of sexually aggressive behavior share several characteristics: They employ behaviorally specific language (i.e., describe the act using operational definitions rather than asking explicitly about “sexual coercion,” “sexual assault,” or “rape”) and they provide participants with descriptions of non-consent, sexual acts, and sexual strategies or tactics (Cook, 2002).

### **Shared Characteristics**

The use of behaviorally specific language is an important shared feature of most commonly-used sexual aggression measures. Research consistently demonstrates that more explicit and specific item wording results in more acknowledgment of sexually aggressive behavior (Cook, 2002; Koss et al., 2007; Strang et al., 2013). Koss and colleagues have been instrumental in demonstrating the importance of behavioral specificity, in terms of inquiring, in detail, about each type of unwanted sexual act and sexual strategy/tactic experienced by a respondent (e.g., Koss et al., 2007; Koss, 1993).

In their development the original SES (Koss & Oros, 1982), Koss and colleagues were among the first researchers to use behaviorally specific wording (e.g., asking about sex “when she didn’t want to”; p. 456), rather than asking respondents explicitly about experiences with “rape.” Since the original 1982 version, Koss and colleagues have modified the SES twice (Koss, et al., 1987; Koss et al., 2007). The bulk of these revisions involved changes in wording aimed at increased clarity. For example, the 1982 version of the SES used the potentially ambiguous term “sexual intercourse” to inquire about unwanted penile-vaginal intercourse. The most recent SES-LFP (2007) presents a series of more specific items, including detailed, behaviorally specific sexual acts. One item reads, “I put my penis into a woman’s vagina, or inserted fingers or objects...” compared to the somewhat ambiguous terminology, “sexual intercourse,” in the original SES (see Koss et al., 2007, for complete discussion of revisions). In part because of the work of Koss and colleagues, other measures of sexually aggressive behavior also utilize behaviorally specific language (Kolivas & Gross, 2007).

Self-report perpetration measures typically use behaviorally specific language to assess for three key components of sexually aggressive behavior: sexual acts, non-consent, and sexual strategies (Cook, 2002). That is, all measures ask participants to report on three elements of a sexual experience: (a) whether or not they have engaged in a specific sexual act (b) without the target’s consent (c) by using a specific sexual strategy. Across measures, participants are asked to indicate whether or not they have or have not had an experience consistent with each survey item.

### Differences Across Measures

Self-report measures of sexually aggressive behavior can differ substantially across several dimensions. Whereas all commonly-used measures use behaviorally specific language, different measures employ different language to describe non-consent, sexual acts, and sexual strategies. For example, in terms of descriptions of sexual acts, the SES-LFP (Koss et al., 2006) employs very specific language to describe vaginal penetration: “I put my penis...or I put my fingers or objects...into a woman’s vagina...”; in contrast, the SSS (Strang et al., 2013) asks about “vaginal intercourse” (p. 469). Language around non-consent and sexual strategies also vary. The SES-LFP (Koss et al., 2006) asks about sexual experiences that occurred “without their consent,” whereas the original SES asks about sexual experiences “when she didn’t want to” (SES: Koss & Oros, 1982; p. 456), and the SSS inquires about sexual experiences that occurred “after she initially said ‘no’” (SSS: Strang et al., 2013; p. 469). Different measures use different language to inquire about similar sexual strategies, like employing verbal pressure: The SES-LFP asks about experiences in which men obtain sex by “continually verbally pressuring them after they said they didn’t want to” (Koss et al., 2006), whereas the SSS inquires about “asking her repeatedly to have sex” (Strang et al., 2013, p. 469). Data suggest that different measures produce discrepant reports of sexual aggression in samples of male participants (Buday & Peterson, in press; Cook, 2002; Strang et al., 2013). What remains unclear, however, is (a) the degree to which differences in language employed across measures are the source of discrepant responding and (b) the extent to which differences in language may influence the accuracy of men’s self-report.

Self-report measures also differ in response format, structure, and length (Strang et al., 2013). Some measures require participants to simply indicate whether or not they have ever used a specific form of sexual coercion or aggression, whereas others ask participants to indicate how many times they have used a specific strategy to engage in a specific non-consensual sexual act. Some measures are brief, whereas others require more reading and time to complete. Lastly, some measures present aggressive behaviors hierarchically from least to most severe, whereas others present these behaviors randomly.

### **Accuracy of Men's Self-Reports of Perpetration**

“Sexual aggression,” as used in this paper, refers to a complex and heterogeneous set of behaviors that range from verbal pressure to the use of a weapon to obtain sexual access. Labeling a sexual experience as coercive, aggressive, or consensual depends on subjective experience, perception and interpretation of others' behavior and intent, and personal schema or “scripts” for what sexual aggression looks like (Carroll & Clark, 2006). It is possible for one individual to experience a sexual experience as aggressive, while another individual involved in the same sexual encounter perceives the experience as consensual. Indeed, data suggest that many women who report having an experience consistent with researchers' operationalization of sexual victimization do not, themselves, conceptualize the experience as aggressive (Abbey, Parkhill, BeShears, Clinton-Sherrod, & Zawacki, 2006; Peterson & Muehlenhard, 2011). It is likely that perpetrators of sexual aggression might have even greater difficulty recognizing or acknowledging their own aggressive behavior. In this paper, “accuracy” in men's reporting is conceptualized as



the degree to which a man's self-report of his behavior is consistent with the behavioral operationalization of sexual aggression employed in a measure.

### **Prevalence Rate Discrepancies**

The sexual aggression literature evidences a dearth of research focused on understanding and improving perpetration measures; however, available data suggest that current self-report measures may fail to accurately classify a substantial number of men as either having used or not having used sexually aggressive strategies (Cook, 2002; Kolivas & Gross, 2007; Strang, et al., 2013). First, data show a consistent prevalence rate discrepancy between women's reports of rape victimization and men's reports of rape perpetration.

Women's victimization reports yield higher rape prevalence rates than estimates garnered from men's rape perpetration reports. Approximately 15% of women report experiencing an event consistent with legal rape, whereas approximately 5% of men report an experience consistent with perpetrating a rape (see Kolivas & Gross, 2007 and Spitzberg, 1999, for reviews). To date, samples of undergraduate men supply the vast majority of perpetration prevalence rates (Abbey et al., 2006; Abbey & McAuslen, 2004; Lisak & Miller, 2002, Porter & Critelli, 1992). Data available from non-college, community samples of men may produce perpetration prevalence rates slightly less discrepant with women's reports of victimization (Abbey et al., 2006).

Researchers have offered three hypotheses for the observed rape prevalence rate discrepancy. First, a minority of individuals argue that measures of sexual victimization inflate the number of "true" rapes and sexual assaults. The primary critique here is that victimization measures identify many women as victims who do not perceive themselves

as victims, due to the use of operational definitions rather than asking women whether they have experienced “rape” (Gilbert, 1991; 2007; Rophie, 1993). However, this argument is not particularly convincing, because these claims often involve gross misrepresentations of research findings and because use of operational definitions is standard in scientific research (Muehlenhard, Sympson, Phelps, & Highby, 1994). A rich literature empirically investigates unacknowledged rape victims and women’s behavior and motivation surrounding non-labeling of sexual assault experiences. These motivations include, but are not limited to, attempts to maintain a favorable opinion of the perpetrator, efforts to avoid being perceived as a victim, and a desire to avoid more feelings of blame and guilt (e.g. Peterson & Muehlenhard, 2011).

A second hypothesis asserts that rape victimization and perpetration estimates are accurate, and the victimization-perpetration discrepancy reflects that a small number of men perpetrate the majority of sexual assaults reported by victims (Spitzberg, 1999). Indeed, some data from non-incarcerated men demonstrate that many men, who use rape as a sexual strategy, tend to use this strategy repeatedly (Lisak & Miller, 2002; Peterson, Janssen, & Heiman, 2010).

A third hypothesis, and the one that is explored in this paper, is that under-reporting from men and measurement insensitivity—the suboptimal detection of true positives—accounts for the bulk of the discrepancy (Cook, 2002; Kolivas & Gross, 2007; Koss et al., 1987; Strang et al., 2013). More research investigating measurement accuracy is needed to gain a clearer understanding of factors driving the rape prevalence rate discrepancy.

Discrepancies between men and women's reports of sexual coercion (use of verbal pressure or manipulation) are less discussed than discrepancies in self-reports of rape (sex obtained through intoxication, incapacitation, threats, or force). Available data, however, suggest that women's reports of being sexually coerced (24.93%) closely mirror men's reports of sexual coercion perpetration (24.09%), suggesting much smaller discrepancies than in rape reports (see Spitzberg, 1999, for a meta-analysis). These data lead to several possible conclusions about the reporting of sexual coercion versus the reporting of rape behavior. One, measures of sexual coercion, as opposed to measures of legal rape, may more accurately capture and describe men's experience of perpetration and thus may facilitate more accurate responding. That is, men may be able to identify and report their sexually coercive behavior as coercive but may have more difficulty identifying behavior consistent with rape perpetration. Given that coercion is less violent and less "deviant" than rape, men may also feel more comfortable disclosing coercion perpetration than rape perpetration. Alternatively, men's reports of sexual coercion and rape behavior may both be accurate, with sexually coercive behavior being employed by a substantial number of men, while rape behavior is repeatedly employed by a much smaller proportion of men.

### **Within-Subject Discrepancies**

Data comparing men's self-reports across different perpetration measures also suggest that measures may not accurately identify men who have had experiences consistent with researchers' operationalization of sexual aggression perpetration. As discussed, self-report measures of perpetration vary in terms of wording, length, and structure, but they similarly operationalize sexual aggression as involving non-consent,

specific sexual acts, and specific aggressive strategies (Strang et al., 2013). Thus if researchers assume measures accurately detect sexual aggression perpetration experiences, regardless of structure and wording, one would expect relatively consistent reports across measures.

Cook (2002) examined the self-reports of 160 incarcerated men (not necessarily incarcerated for sexual crimes) across three measures of sexual aggression perpetration: the Sexual Experiences Scale (SES; Koss et al., 1987), the Conflict Tactics Scale–Revised (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996), and the Severity of Violence Against Women Scales (SVAWS; Marshall, 1992). Results indicated that men responded inconsistently across these three measures, such that each scale identified a unique group of men as sexually aggressive, with minimal overlap. Cook suggested that discrepant responding likely resulted from differences in scales' operational definitions of sexually aggressive behavior.

In response to Cook's (2002) call for further investigation, Strang et al. (2013) compared 184 non-incarcerated men's self-reports across two measures of sexual aggression perpetration: the revised Sexual Experiences Survey (SES-LFP; Koss et al., 2007) and the Sexual Strategies Scale (SSS; Peterson et al., 2010). These researchers chose to compare the SES-LFP and the SSS, rather than measures selected by Cook (2002), because these scales employ more similar language to describe non-consent and sexually aggressive strategies. Of the 95 men who endorsed behavior consistent with verbal coercion on at least one scale, only 22% reported this behavior on both scales. Of the 39 men who endorsed rape through intoxication/ incapacitation on at least one scale, only 36% reported this behavior on both scales. Of the 12 men who endorsed rape

through threat/force on at least one scale, only 2 men (17%) endorsed this behavior on both scales. As an illustration of the types of discrepancies that occurred, one 23-year-old participant endorsed verbal coercion and use of force on the SSS by reporting use of the following tactics: “Telling her lies (e.g., saying “I love you” when you don’t)” and “Using restraint” to “convince a woman to have sex (oral, anal, or vaginal intercourse) after she initially said ‘no.’” On the SES-LFP, this same participant did not endorse having any sexual contact with any woman “without her consent” by “Telling lies...” or by “Using force, for example holding her down with your bodyweight, pinning her arms, or having a weapon” (Strang et al., 2013, unpublished raw data). These data demonstrated that men respond inconsistently to different measures of perpetration intended to measure similar sexually aggressive behavior. However, these data cannot speak to the source or cause of within-subject discrepancy. It is likely that some reporting discrepancies result from inaccurate responding on the part of participants, whereas other discrepancies result from accurate responding that reflects minor, but critical, differences in item presentation and wording.

Inaccuracy in self-reports of sexually aggressive behavior results from instances of misreporting, in which a man endorses sexual aggression when the experience in question is, in fact, incongruent with the item (i.e., false positive) *or* when a man fails to report an episode of sexual aggression that is consistent with the item (i.e., false negative). There are four possible kinds of misreporting on measures of sexually aggressive behavior. Men may a) intentionally over-report, b) intentionally underreport, c) unintentionally over-report, and/or d) unintentionally underreport sexual aggression.

Some men may not misreport at all, whereas other men may misreport in a variety of ways.

### **Intentional Misreporting**

#### **Intentional Over-reporting**

Available data and common sense suggest that men rarely intentionally over-report, or fabricate, perpetration of sexual aggression in research settings (Kolivas & Gross, 2007). Several studies comparing men's pencil-and-paper self-reports with interviewer-assisted self-reporting yield no evidence of fabrication (Koss & Gidycz, 1985; Koss et al., 1987; Ouimette, et al., 2000; Ross & Allgeier, 1996). That is, men do not appear to knowingly and purposely inflate their use of sexually aggressive behavior. Indeed, given that sexual aggression is a conventionally undesirable behavior, there would seem to be little motivation for men to intentionally over-report perpetration to researchers.

#### **Intentional Underreporting**

Perpetration research seems intuitively threatened by intentional underreporting, given that measures assess for particularly sensitive behaviors, which are sexual and sometimes illegal. Reasons to intentionally underreport sexual aggression include social desirability, social anxiety, fear of consequences, and personal embarrassment. Thus some men who have used aggressive sexual strategies may remain fearful of social judgment and negative consequences associated with accurate reporting, despite guarantees of confidentiality or anonymity (Cook, 2002; Heilbrun & Loftus, 1986; Ouimette, et al., 2000; Strang et al., 2013).

Socially desirable responding refers to the tendency toward strategic self-reporting “for the purpose of looking good” (Meston et al., 1998, p. 148). Intuitively, one might suspect that social desirability affects sexual aggression reporting, but the existing literature offers inconsistent data on this relationship (Cook, 2002; Porter, Critelli, Tang, 1992; Strang et al., 2013; Strang & Peterson, 2013; Walker, Rowe, & Quinsey, 1993). Some data demonstrate a significant relationship between social desirability and reporting of sexual aggression (e.g. Porter et al., 1992). A substantial number of investigations have found, however, that socially desirable responding, as assessed by existing self-report measures, does not significantly impact men’s reporting of sexual aggression (Cook, 2002; Strang et al., 2013; Strang & Peterson, 2013; Walker, et al., 1993).

### **The Bogus Pipeline and Intentional Misreporting**

Beginning in the 1970s, social psychologists developed the Bogus Pipeline (BPL; Jones & Sigall, 1971) procedure as a laboratory tool to increase honesty in self-reporting, particularly for opinions or behaviors generally perceived as socially undesirable or unfavorable. In this procedure, participants are led to believe they are being monitored by a device, resembling a lie detector, which can determine a participant’s truthfulness in responding. A BPL condition creates a demand for honest, self-aware reporting that surpasses the demand for socially desirable responding. That is, an individual who believes his/her responses are being monitored for truthfulness will complete measures and questionnaires more honestly to avoid perceptions that he/she is lying or self-unaware. Data demonstrate that the BPL procedure reliably reduces socially desirable responding and increases honesty, especially for issues of fact, like the presence or

absence of specific behaviors (Roese & Jamieson, 1993; Tourangeau, Smith, & Rasinski, 1997).

Several studies demonstrate that a BPL condition affects self-reporting of sexual behavior (Alexander & Fisher, 2003; Fisher, 2013; Tourangeau et al., 1997). Women, presumably influenced by cultural expectations of female chastity and sexual passivity, report significantly less sexual behavior than men in classic paper-and-pencil questionnaires. Men and women report similar engagement in sexual activity, however, when researchers employ a BPL condition. That is, women's self-reports of socially undesirable sexual activity increases significantly when the BPL condition increases demand for honesty (Alexander & Fisher, 2003; Fisher, 2013). The effects of the BPL condition on increasing women's reports of sexual behavior appear especially strong for sexual behaviors that are typically gendered masculine, like masturbation and viewing erotic materials (Alexander & Fisher, 2003). With respect to coercive sexual behaviors, researchers have used the BPL procedure to investigate cognitive distortions held by men who have sexually abused children; the manipulation resulted in increased endorsement of offense-supporting beliefs for men in the BPL condition compared to standard conditions (Ganon, Keown, & Polaschek, 2007).

The first study of this dissertation employed the Bogus Pipeline procedure to explore men's honesty in self-reporting on measures of sexually aggressive behavior. Men were randomly assigned to a BPL condition or control (CTL) condition and completed two different self-report perpetration measures (SES-LFP: Koss et al., 2007; SSS: Peterson, et al., 2010). Men in the BPL condition were told that their responses on the measures will be monitored for dishonesty by a device "similar to a polygraph or lie



detector test,” whereas men in the control condition were not primed or encouraged to give honest reports. Comparable numbers of men classified as coercive/aggressive and as non-coercive/aggressive across conditions would suggest that intentional deception does not significantly impact self-reports of perpetration. Alternatively, significantly fewer men classified as sexually coercive/aggressive in the control (CTL) condition versus the BPL condition would suggest that deception may threaten the accuracy of men’s perpetration reports on traditionally administered surveys.

### **Unintentional Misreporting**

In addition to intentional misreporting, men may also *unintentionally* produce over-reports and/or underreports of perpetration. Whereas deception represents the sole pathway to intentional misreporting, unintentional misreporting of sexual aggression may occur for a variety of reasons. Men may unknowingly fail to accurately report due to item ambiguity, item misinterpretation, lack of recall, or lack of insight (Koss et al., 1987; Kolivas & Gross, 2007; Strang et al., 2013). Unfortunately, studies of men’s understanding and interpretation of survey items are rare. To date, only two published studies have focused on exploring men’s interpretation of perpetration items (Buday & Peterson, 2013; Ross & Allgeier, 1996).

### **Unintentional Over-reporting**

Unintentional over-reporting refers to instances in which men identify a sexual experience as aggressive when, in fact, that experience does *not* correspond with the operationalization of that particular coercive or aggressive behavior, as intended by the measure. Unintentional over-reports, or false positives, are a manifestation of a measure’s lack of specificity.

Data suggest that alcohol and drug related perpetration items represent the largest threat to the specificity of sexual aggression perpetration measures (Gyls & McNamara, 1996; Kolivas & Gross, 2007). To illustrate, in follow-up interviews, some men who endorsed rape through intoxication items on the original SES described behavior more consistent with sexual coercion rather than legal “rape” (Ouimette et al., 2000). The revised SES-LFP (Koss et al., 2007) attempts to clarify language associated with alcohol and drug related items; however, men’s interpretations of the SES-LFP perpetration items have not been investigated.

Recently collected qualitative data demonstrate that some men’s endorsement of the items on the SES-LFP (Koss, et al., 2007) constitute false positives (Buday & Peterson, in press). Participants (both male and female) were asked to complete the SES-LFP, and participants who endorsed an item on the measure were asked to provide a written description of the event that corresponded to that item. Open-ended descriptions suggested that some men (and women) who endorsed items on the SES-LFP described behaviors that did not seem to fit with the intended meaning of those items. It seems likely that these false positive reports represent instances of unintentional over-reporting, given that the men willingly described the event. Notably, though, in most of those instances of false positives, the men described a behavior that was coercive in some way, even though it was not consistent with the particular SES-LFP item endorsed. Interestingly, women were much more likely to produce false positive endorsements of sexual aggression perpetration than men (Buday & Peterson, in press). The Buday and Peterson (in press) study was limited in its ability to detect false positive responses, because most participants who endorsed an SES-LFP item did not provide adequate

written descriptions to determine if the behavior was consistent with the item; face-to-face interviews may allow for more in-depth exploration of item interpretation.

Ross and Allgeier (1996) gathered qualitative interview data on men's interpretation of four, original SES coercion items. Data illustrated that men often interpreted survey items in multiple and unintended ways. Based on their results, the authors concluded that men's interpretations of items can lead to "inaccurate labeling" by both "overestimating or underestimating a man's level of coerciveness" (p. 1611). For example, the 1982 SES asks, "Have you ever obtained intercourse by saying things you didn't mean?" (Koss & Oros, 1982, p. 456). Men interpreted the phrase "saying things you didn't mean" in several different ways, including exaggerating their emotional investment, threatening to end the relationship, using flattery or acting nicer than usual, and saying things he didn't mean for the woman's benefit "to make it more special" for her. Some of men's interpretations were consistent with the intent of survey items; however, a few men's interpretations did not fit with the items' intent, resulting in false positive reports of coercion. Given the paucity of available data, the extent to which item misinterpretation results in unintentional over-reports remains unclear.

### **Unintentional Underreporting**

Unintentional underreporting refers to instances in which men unknowingly fail to report a sexual experience that is consistent with a sexually aggressive behavior operationalized by an item. Several researchers in the field opine that this type of misreporting may represent the largest threat to the validity of perpetration measures (Kolivas & Gross, 2007; Koss, 1993; Strang et al., 2013).

As discussed, item misinterpretation may result in unintentional over-reports and underreports of sexual aggression. Although the source of misinterpretation is unclear, some men fail to endorse applicable questionnaire items but then willingly describe experiences consistent with coercion or aggression. For example, in order to detect instances of unintentional underreporting, Buday and Peterson (in press) administered the SES-LFP, and when participants denied engaging in a particular behavior described on the scale, the participants were asked if they had ever experienced anything “similar to” the behavior described in the item. If the participant endorsed experiencing something “similar,” they were asked to describe the behavior. A few men provided open-ended responses that seemed to fit the behavioral definition described in the item, even though they did not endorse the item. To illustrate, one male participant wrote, “I haven't forced anyone to have sex if they didn't want to but I have told lies, made promises etc. to convince them to do it” but did not endorse items related to the use of verbally coercive strategies (Buday & Peterson, 2013). Ross and Allgeier (1996) also reported that some male participants described sexual experiences consistent with verbal coercion but failed to endorse items inquiring about such sexually coercive behavior.

Unintentional underreporting of sexually aggressive behavior can also result from a lack of memory or insight (Kolivas & Gross, 2007). In terms of correct recall, the experience of using an aggressive sexual strategy (unlike the experience of being victimized by sexual aggression) may not be salient enough to be recalled readily, especially if a man does not recognize that his actions were aggressive. In addition to remembering the event, an individual must be able and willing to identify his behavior as aggressive in order to accurately report it. As reviewed, perpetration measures ask men

about a variety of strategies for obtaining sex without consent or agreement, including verbal pressure, taking advantage of intoxication, threats, and physical force. In some instances, men may not believe their actions fall into any of these “strategic” categories, even though their victim may perceive them as behaving aggressively. Take, for instance, a situation in which a man repeatedly questioned the commitment of his partner, became increasingly upset and angry after she refused to engage in intercourse, and then the woman and man eventually had sexual intercourse. Although the woman in this situation may have felt verbally pressured, the man may not perceive his behavior as consistent with “verbal pressure.”

Unintentional underreporting may also result from men interpreting a sexual situation as consensual, despite the fact that consent or agreement was not communicated or had been explicitly denied. Consent is difficult to define, and individuals express consent and non-consent in myriad ways (Beres, 2007). In addition, dominant U.S. culture endorses sexual scripts in which women are expected to offer “token resistance,” or initial refusal of sexual activity, and then ultimately “give in” (Muehlenhard & Hollabaugh, 1988). Interpreting silence as consent can cause a man to misperceive non-consensual sex as consensual. To effectively answer questions about perpetration, men must be able to accurately evaluate whether the woman in the situation consented to the sex and/or whether she felt pressured or forced into sex. Failure to interpret women’s non-consent as non-consent can result in a failure to report instances of aggression.

### **Semi-Structured Interviews and Unintentional Misreporting**

Researchers advocating for improved measurement of sexually aggressive behavior suggest a qualitative approach (Cook, 2002; Koilvas & Gross, 2007; Ouimette

et al., 2000; Ross & Allegier, 1996; Strang et al., 2013). Semi-structured interview-based research can provide information that is not accessible through quantitative methods. This approach allows researchers to explore participants' interpretation of items and the meaning they attach to survey wording (Banyard, Plante, Cohn, Moorehead, Ward, & Walsh, 2005). As reviewed, qualitative approaches to understanding measurement of sexually aggressive behavior are lacking (see Buday & Peterson, in press and Ross & Allegier, 1996, for exceptions).

The second study of this dissertation gathered qualitative data, through semi-structured interviews, on several dimensions of men's interpretation of self-report items that potentially contribute to unintentional over-reporting and under-reporting of perpetration. Interview questions elicited information about men's interpretation of survey items, decision-making processes, and endorsement/non-endorsement of items. Interviewing around discrepant responding across measures allowed for an understanding of how differences in language affect endorsement.

### **The Present Studies**

Together, the current studies explored the impact of men's intentional and unintentional misreporting on two measures of sexual aggression perpetration. Study 1 used a Bogus Pipeline (BPL) methodology to determine if men intentionally underreport their use of aggressive strategies on traditionally administered measures of perpetration. Specifically, the BPL procedure is designed to reduce intentionally inaccurate, socially desirable responding. It was hypothesized that men in the BPL condition would be significantly more likely to acknowledge experiences with using sexually aggressive strategies, compared to men in the control (CTL) condition.

Study 2 explored the nature and frequency of unintentional over-reporting and underreporting on measures of sexual aggression perpetration. Men from the control condition in Study 1 completed a follow-up semi-structured interview. The semi-structured interview asked men open-ended questions about their interpretation of items and their (non)endorsement of items. Interview questions were designed to understand men's interpretation of non-consent language used in the measures and to determine the frequency of men's false positive (over-reports) or false negative (underreports) reports on the self-report surveys. The interview also aimed to determine whether men's within-subject discrepancies, or inconsistencies, in reporting across the two measures of perpetration reflected differences in the scales (Accurate Discrepancy) or men's reporting error (Inaccurate Discrepancy).

## Study 1

### Study 1 Method

**Participants.** Unmarried men, ages 18 to 30 inclusive, who self-identified as sexually attracted to women, and who reported some sexual experience (i.e., vaginal, oral, and/or anal intercourse) with a woman were eligible for participation. These inclusion criteria were selected because most male-on-female sexual aggression occurs within a dating context, and young adults are the age group at the highest risk for sexual aggression victimization and perpetration (Koss et al., 1988; Teten, Hall, & Capaldi, 2009). Participants were recruited from the greater St. Louis community and from the University of Missouri-St. Louis campus. Fliers, internet ads, and a newspaper ad invited men to participate in a study of sexual experiences and offered \$20 for participation.

A total of 249 men made initial contact with the researcher. Of these contacts, 12 individuals did not meet inclusion requirements, 109 men did not follow-up to schedule an appointment, and 30 men no-showed or cancelled their appointment. Ninety-eight men completed the study. Of these 98 men, two declined permission to use their data after learning of the deception in this study, one indicated he was older than 30-years-old, one failed to provide his age, and one was removed due experimenter error in randomization. Thus our final Study 1 sample consisted of 93 men. Thirty-five men were randomized into the control condition (CTL) and 58 men were randomized into the Bogus Pipeline condition (BPL).

The mean age of the men in the study was 25.2 years ( $SD = 3.0$ ). Eighty-eight participants identified as heterosexual, 4 identified as bisexual, and 1 participant labeled his sexual orientation as “undecided.” Forty-seven participants identified as White (50.5%), 39 participants identified as Black (41.9%), and 7 (7.5%) participants identified as bi/multiracial. Participants reported an average of 14.1 years of school ( $SD=2.4$ ), and 28% ( $N=26$ ) reported current enrollment in a college or university. Twenty-eight participants (30.1%) were in a monogamous, romantic or sexual relationship. Demographics are presented in Table 1.



Table 1.

*Demographic Information, N=93*

	M	SD
Age	25.2	3.0
Years of Education	14.1	2.4
	N	%
<b>Sexual Orientation</b>		
Heterosexual	88	94.6
Bisexual	4	4.3
Undecided	1	1.1
<b>Race</b>		
White	47	50.5
Black	39	41.9
Bi/Multiracial	7	7.5
<b>Ethnicity</b>		
Hispanic	6	6.5
Non-Hispanic	87	93.5
<b>Highest Degree Earned</b>		
High School Diploma/ GED	82	88.2
Associate's Degree	19	20.4
Bachelor's Degree	27	29.0
Master's Degree	5	5.4
Doctorate Degree	1	1.1
Current University/College Student	26	28.0
<b>Current Employment</b>		
Full-time	22	23.7
Part-time	31	33.3
Temporary/seasonal	16	17.2
Unemployed	24	25.8
<b>Income Level</b>		
Less than \$15, 000/year	25	26.9
\$15,000-\$29,999/year	31	33.3
\$30,000-\$59,999/year	20	21.5
\$60,000-\$99,999/year	8	8.6
\$100,000-\$149,999/year	6	6.5
More than \$150,000	3	3.2
<b>Relationship Status</b>		
Monogamous relationship	28	30.1
Non-monogamous/Dating	44	47.3
Not dating	21	22.6

**Measures. *Demographics questionnaire.*** Participants completed a demographic questionnaire, which collected relevant personal information such as age, race and ethnicity, relationship status, and years of education.

***The Sexual Experiences Survey-Long Form Perpetration (SES-LFP).*** The SES-LFP (Koss et al., 2007) includes a total of twenty questions. The first 10 items inquire about sexualized behaviors such as exposing oneself and filming a non-consenting person; these behaviors, although coercive, do not involve direct sexual contact. Thus those items were not used in this study. The SES-LFP then presents seven items with thirteen sub-questions per item, inquiring about sexual strategies used within the context of a specific sexual act: attempted and completed non-penetrative sexual contact, oral sex, vaginal penetration by a penis or object, and anal penetration by a penis or object. For the current study, men completed SES-LFP items 11-15, which inquire about completed acts of non-penetrative sexual contact, oral sex, vaginal penetration by a penis or object, and anal penetration by a penis or object. The published SES-LFP asks about perpetration in the last year and since age 14; in this study, men were asked only about perpetration since age 14. Additionally, the published SES-LFP uses gender neutral language; given the focus of this study, the pronouns were changed to ask only about perpetration by a man against a woman.

The SES-LFP asks men to report their engagement in coercive and aggressive sexual behavior with any woman “without her consent.” Sexual strategies for each sexual act include verbal coercion, taking advantage of someone who is drunk or high, physical threats, and physical force; strategies are arranged in a hierarchy from least

(verbal coercion) to most severe (physical force). The SES-LFP asks participants whether they have engaged in each act *0, 1, 2, or 3 or more times*. See Appendix A.

***The Sexual Strategies Scale (SSS)***. The SSS (Peterson et al., 2010; Strang et al., 2013) asks participants, “In the past, which if any of the following strategies have you used to convince a woman to have sex (oral, anal, or vaginal intercourse) *after she initially said ‘no’?*” Participants may check any of 22 sexually coercive and aggressive strategies they have used to obtain sex. This scale is a revision and extension of the Postrefusal Persistence Scale developed by Struckman-Johnson et al. (2003). The strategies listed in the scale reflect varying levels of sexual aggression; however, they are arranged in a consistent but random order (rather than in a hierarchy from least to most severe). The five levels of strategies include (a) use of enticement (three items; e.g., “continuing to touch and kiss a woman in the hopes that she will give in to sex”); (b) verbal coercion (eight items; e.g., “Telling her lies [e.g., saying “I love you” when you don’t],” “Asking her repeatedly to have sex,” and “Questioning her sexuality [e.g., calling her a lesbian]”); (c) use of older age or authority (two items; e.g. “Using your older age to convince her”); (d) use of intoxication (three items; e.g., “Taking advantage of the fact that she is drunk/high”); and (e) threats or force (six items; e.g., “Blocking her if she tries to leave the room,” “Using physical restraint,” and “Threatening to harm her physically if she doesn’t have sex”). See Appendix B.

***Balanced Inventory of Desirable Responding (BIDR)***. The BIDR (Paulhus, 1991) measures social desirability with two subscales—Self-Deception (i.e., the tendency to deny psychologically threatening thoughts or feelings) and Impression Management (i.e., the tendency to over-report socially desirable behaviors and under-report socially

undesirable behaviors). The BIDR has demonstrated good internal consistency ( $\alpha = .83$  for overall measure;  $\alpha = .75 - .86$  for the impression management scale; and  $\alpha = .68 - .80$  for the self-deception scale), good test-retest reliability ( $r = .65$  for the impression management scale;  $r = .69$  for self-deception scale), and good concurrent validity based on its correlations to other measures of social desirability (Paulhus, 1991). In the current study, Cronbach's alphas for the BIDR were 0.85 for the overall measure, 0.75 for the Self-deception subscale, and 0.78 for the Impression Management subscale.

**Brief Sexual History Questionnaire.** This series of questions was created for the purposes of the current study. Participants were asked two key questions: (a) "Do you think you may have ever verbally coerced a woman into oral, vaginal, or anal sex?" and (b) "Do you think you may have ever raped or sexually assaulted a woman?" These questions were embedded in a list of several other questions about sexual history (e.g., age at first intercourse, frequency of masturbation, etc.). See Appendix C.

**Filler measures.** Two filler measures of consensual sexual behavior were included with the goals of disguising the purpose of the study and reducing the potential for participants' negative emotional response as a result of answering many similar questions about sexually aggressive behavior. The Sexual Risk Survey (Turchik & Garske, 2009) was designed to measure risky but consensual sexual behaviors in college students, and the Sexual Inhibition/Sexual Excitation –Short Form (Carpenter, Janssen, Graham, Vorst, & Wicherts, 2010) measures individuals' tendency toward sexual excitation and arousal inhibition.

**Posttest Questionnaire.** A Posttest Questionnaire, taken from Fisher (2013), inquired about participants' beliefs about the legitimacy of the Bogus Pipeline equipment

and its effects on their reporting. Men were asked to answer the following four questions with a 5-point Likert scale with lower scores indicating lower likelihood, lower influence, or lower pressure: (a) “How likely do you think it is that the equipment could be used to assess your anxiety level?”; (b) “How likely do you think it is that the equipment could be used to assess your honesty level?”; (c) “How much influence did the equipment have on your responses to the questions you answered?”; and (d) “How much pressure did you feel from the equipment to answer the questions honestly?” See Appendix D.

**Procedure.** Interested prospective participants contacted the researcher through a laboratory email account to receive more information about the study. Men were told that they would be answering questions about sexual experiences and that, during a portion of their visit to the laboratory, they would “be hooked up to a device designed to measure physiological responses.” If interested and eligible, men scheduled an appointment for participation.

Procedures for this study were modeled after those used in Fisher (2013). When men arrived at their individually scheduled appointment, they were greeted by a male research assistant in a lab coat. After they had arrived, participants were randomly assigned to either the BPL ( $n = 58$ ) or CTL condition ( $n = 35$ ) via a randomization computer program. The male research assistant presented and reviewed an informed consent statement, which explained the maintenance of confidentiality and informed the participant of potential risks of participation in the study, including the possibility for emotional discomfort.

**BPL condition.** After men assigned to the BPL condition gave informed consent, the research assistant positioned the participant at a computer and informed the

participant that he would be attached to a physiological measurement device that is “similar to a polygraph or lie detector test.” The participant was told that the machine was being attached to encourage honest responding and that his responses to individual questions may be compared to his physiological output to determine the accuracy of his answers. The research assistant then attached functioning electrodes to the participant’s wrist and ankle and a heart monitor to his fingers, and the participant was temporarily able to see his physiological reactivity (heart rate and skin conductance) on the computer screen. The research assistant then moved the physiological measurement screen out of participant’s view into the adjacent room. The research assistant told the participant to look at the computer screen on the desk in front of him and provide an inaccurate response to the first question on the screen (“Are you in Seattle?”) and a truthful response to the second question on the screen (“Are you in the St. Louis metropolitan area?”) to “calibrate” the machine. The participant was then left alone in the room to complete the questionnaires administered on the computer. The participant’s physiological responses were not actually recorded during the questionnaire completion.

All participants first completed the Demographics Questionnaire. The order of the SES-LFP, SSS, BIDR, and two filler measures were randomized. Participants completed the brief sexual history questionnaire last. Then, the participants were unhooked from the BPL machine. Lastly, participants completed a manipulation check--the Posttest Questionnaire (Fisher, 2013).

Men in the BPL condition were then debriefed. Men were asked if they had any prior knowledge about the nature of the study or any suspicion about the purpose of the device. No participant reported knowledge or suspicion. They were informed about the

deception used in the study, as well as the function of this deception. Participants were informed that, after learning this information, they had the right to refuse the use of their data. One participant in the BPL condition elected to withdraw his data.

***Control condition.*** In the control condition, after giving informed consent, the research assistant positioned the participant at a computer and informed the participant that he would be attached briefly to a physiological measurement device designed to “determine your level of anxiety prior to starting the questionnaire.” Men in the CTL condition were then briefly attached to the same machine used in the BPL condition. This procedure provided a control for the experimenter contact involved in hooking up the BPL machine in the experimental condition and is consistent with the procedure used by Fisher (2013). The research assistant attached functioning electrodes to the participant’s wrist, ankle, and fingers, and the participant temporarily viewed his physiological reactivity (heart rate and skin conductance) on the computer screen. The research assistant then moved the physiological measurement screen out of the participants’ view, and informed the participant that the machine would take a reading for one minute. After one minute, the researcher detached the participant and instructed him to begin the questionnaires on the computer. The research assistant then left the participant alone in the room.

As in the BPL condition, participants in the CTL condition first completed the Demographics Questionnaire. The SES-LFP, SSS, BIDR, and filler measures were presented in random order. Participants then completed the brief sexual history questionnaire. Lastly, participants completed the Posttest Questionnaire.

All participants in the CTL condition were then offered the opportunity to participate in a follow-up study (Study 2), which would explore the participant's responses from the current study. If the participant agreed, he participated in Study 2 and was debriefed after Study 2. If the participant was not interested, he was debriefed immediately. Following debriefing, one participant in the CTL condition elected to withdraw his data.

### **Study 1 Results**

**Data cleaning.** Two measures in the battery—the Sexual Experiences Survey-Long Form Perpetration (SES-LFP; Koss et al., 2007) and the Balanced Inventory of Desirable Responding (BIDR; Paulhus, 1991)—had missing values. The SES-LFP is a behavioral sampling measure of coercive and aggressive behavior and does not produce a meaningful total summed or averaged score; therefore, the 15 missing values on the SES-LFP were treated as non-endorsement. No single participant was missing more than three values on the measure. Men in the BPL condition produced 12 missing data points (13.8% of men in BPL were missing at least one data point), and men in the CTL condition produced 3 missing data points (8.6% of men in the CTL condition were missing at least 1 data point). Results of Fisher's Exact Test suggested that condition (BPL or CTL) had no significant effect,  $p > .05$ , OR = 3.03, on participants' likelihood of skipping a sexual aggression item. However, the effect size for this analysis was moderately strong and suggested that, although the difference in missing items was not statistically significant, the odds of BPL men skipping an item on the SES-LFP were 3.03 times greater than the odds of CTL man skipping an item on the SES-LFP.



Missing data on the Balanced Inventory of Desirable Responding (BIDR; Paulhus, 1991) were replaced using mean imputation. There were a total of 12 imputed values, with 11 participants missing one data point out of 40 and one participant missing two data points out of 40. Nine men from the BPL condition and three men from the CTL condition had one or more missing values. Results of Fisher's Exact Test suggested that condition (BPL or CTL) had no significant effect,  $p > .05$ , OR = 1.96, on participants' failure to answer BIDR items.

One reading check item was embedded in the SES-LFP ("If you are reading this, please select 3+ for this item") and in the SSS ("If you are reading this, please check this box"). Sixteen men in the BPL condition (27.6%) and 15 men in the CTL condition (42.9%) missed the SES-LFP reading check. Eight men in the BPL condition (13.8%) and six men in the CTL condition (17.1%) missed the SSS reading check. Tendency to fail these reading checks was not significantly different across conditions. The reading check items were designed to explore men's attentiveness to individual items. Participants were not excluded for missing reading checks. Instead, these reading check items were included to assess whether men's attentiveness to items differed across the two conditions.

**Manipulation check.** Two manipulation checks—a measure of socially desirable responding (BIDR; Paulhus, 1991) and questions specifically about the impact of the physiological equipment (Posttest Questionnaire)—were incorporated into the protocol to confirm that the Bogus Pipeline procedure had an impact on men's reporting in the expected direction. Scoring for the BIDR followed standard procedures outlined by Paulhus (1991). BIDR Self-Deception subscale scores ranged from 0 to 17, ( $M=6.44$ ,

SD=3.75) and BIDR Impression Management subscale scores ranged from 0 to 15, (M=4.64, SD=3.50) out of a maximum possible score of 20, with higher scores indicating more socially desirable responding. Data were normally distributed, as evaluated by skewness and kurtosis and required no transformation (Self-Deception subscale: skewness=.827, kurtosis=.259; Impression Management subscale: skewness=.882, kurtosis=.500). There was a significant difference in Self-Deception scores for men in the BPL condition (M=5.81, SD=3.46) versus the CTL condition (M=7.49, SD=4.02), and the effect size was medium,  $t=-2.12$ ,  $p=.04$ ,  $d=.44$ . There was also a significant difference in Impression Management scores for men in the BPL condition (M=4.06, SD=3.20) versus the CTL condition (M=5.60, SD=3.84), and the effect size was medium,  $t=-2.08$ ,  $p=.04$ ,  $d=0.44$ .

Men in both conditions completed the Posttest Questionnaire, in which they reported on their beliefs about the legitimacy of the Bogus Pipeline equipment and its effects on their reporting. Men were asked to answer the following four questions with a 5-point Likert scale: (a) “How likely do you think it is that the equipment could be used to assess your anxiety level?”; (b) “How likely do you think it is that the equipment could be used to assess your honesty level?”; (c) “How much influence did the equipment have on your responses to the questions you answered?”; and (d) “How much pressure did you feel from the equipment to answer the questions honestly?” Results from a MANOVA indicated a statistically significant difference in reporting between in the BPL condition and the CTL condition in the expected direction, Wilk’s  $\Lambda = 0.78$ ,  $F(4, 88) = 6.10$ ,  $p < .001$ , partial  $\eta^2 = 0.22$ . See Table 2 for descriptive statistics by condition (BPL v. CTL) and follow-up univariate tests of significance for each item. Compared to men in the

CTL condition, men in the BPL condition were significantly more likely to report that the machine “influenced” their responding,  $F(1, 91) = 17.10, p < .001$ , partial  $\eta^2 = 0.16$ , and that they felt more “pressure” to respond honestly,  $F(1, 91) = 13.79, p < .001$ , partial  $\eta^2 = 0.13$ .

Table 2.

*Descriptive Statistics and ANOVA Results for Posttest Manipulation Check Items by Condition, N=93*

Posttest Items	Condition		<i>F</i>	$\eta_p^2$
	<u>CTL</u> <u>M</u> <u>(SD)</u>	<u>BPL</u> <u>M</u> <u>(SD)</u>		
1. How likely do you think it is that the equipment could be used to assess your anxiety level?	3.77 (1.09)	3.59 (1.03)	0.68	.07
2. How likely do you think it is that the equipment could be used to assess your honesty level?	3.09 (1.27)	3.52 (1.03)	3.21	.08
3. How much influence did the equipment have on your responses to the questions you answered?	1.37 (0.88)	2.40 (1.30)	17.10*	.16
4. How much pressure did you feel from the equipment to answer the questions honestly?	1.43 (0.95)	2.43 (1.42)	13.79*	.13

*Note.* \* =  $p < .001$ . Scores range from 1 to 5 with lower scores indicating less agreement.

**Descriptive statistics.** Table 3 presents percentages of endorsement, by condition (BPL and CTL), of sexual aggression involving oral, anal, and vaginal sex. These percentages are organized by tactic, condition, and measure. Endorsement of items on

the two measures of sexual aggression (SES-LFP and SSS) is presented both separately and combined for three distinct tactics: verbal coercion, use of drugs and/or alcohol, and force. Given the low reporting rate for use of force, as well as the lack of legal distinction between the use of drugs and/or alcohol and force to overcome non-consent, tactics of using drugs and/or alcohol and force were combined into a composite “sexual assault” tactic for the purpose of hypothesis testing.

Table 3.

*Percentage of Men Endorsing Sexual Aggression by Condition and Measure, N=93*

	Measure and Tactic											
	<u>SES-LFP and SSS Combined</u>				<u>SES-LFP</u>				<u>SSS</u>			
	VC	D/A	F	SA	VC	D/A	F	SA	VC	D/A	F	SA
Condition												
CTL	60.0	25.7	8.6	28.6	22.9	8.6	5.7	8.6	60.0	25.7	2.9	28.6
BPL	67.2	51.7	17.2	53.4	41.4	36.2	6.9	37.9	58.6	44.8	13.8	46.6

*Note.* SES-LFP = The Sexual Experiences Long Form Perpetration (Koss et al., 2007). SSS= The Sexual Strategies Scale (Peterson et al., 2010). VC = verbal coercion. D/A = use of drugs or alcohol. F = use of force. SA = sexual assault tactic (use of drugs/alcohol and use of force tactics combined).

**Endorsement rates on the SES-LFP vs. SSS.** Overall, men were significantly more likely to report using verbal coercion strategies on the SSS (59.1%) compared to the SES-LFP (34.4%),  $p < .001$ , OR= 6.36; similarly, men were significantly more likely to report using sexual assault strategies on the SSS (39.8%) compared to the SES-LFP (26.9%),  $p < .001$ , OR= 17.06. This pattern of reporting behavior was demonstrated by

men in both conditions: Men in the BPL condition were significantly more likely to report using verbal coercion strategies on the SSS (58.6%) compared to the SES-LFP (41.4%),  $p=.014$ ,  $OR= 4.81$ , as well as more likely to report using sexual assault strategies on the SSS (46.6%) compared to the SES-LFP (37.9%),  $p<.001$ ,  $OR= 13.50$ . Men in the CTL condition were significantly more likely to report using verbal coercion strategies on the SSS (60.0%) compared to the SES-LFP (22.9%),  $p=.012$  ( $OR$  could not be calculated due to a cell with a 0 value, however  $Risk\ Difference=.481$ ,  $95\% CI [.326-.712]$ ). Men in the CTL condition were also significantly more likely to report using sexual assault strategies on the SSS (28.6%) compared to the SES-LFP (8.6%),  $p=.018$ ,  $Risk\ Difference=.219$ ,  $95\% CI [.114-.421]$ .

**Hypothesis testing.** It was hypothesized that men in the BPL condition would acknowledge significantly more experiences with using sexually aggressive strategies, compared to men in the control (CTL) condition. Fisher's Exact Tests were used to determine if men in the BPL condition were more likely to endorse the use of sexually aggressive behavior than men in the CTL condition across sexual tactic (verbal coercion and sexual assault) and across measure (SES-LFP and SSS). Six separate Fisher's Exact Tests were performed. The independent variable for each of the Fisher's Exact Tests was the condition--BPL or CTL. The dependent variables were the dichotomous endorsement or non-endorsement of (1) any verbal coercion items on either scale, (2) any sexual assault (use of drugs or alcohol and/or force) items on either scale, (3) any verbal coercion items on the SES-LFP, (4) any sexual assault items on the SES-LFP, (5) any verbal coercion items on the SSS, and (6) any sexual assault items on the SSS. Because the sample size was relatively modest, odds ratios ( $OR$ ) were calculated for each analysis

to determine the relative odds of endorsement of sexual aggression for the BPL versus CTL participants. See Table 4 for results.

With SES-LFP and SSS collapsed, inconsistent with expectations, men in the BPL condition were not significantly more likely to report verbal coercion (67.2%) compared to men in the CTL condition (60.0%) and the effect size was small,  $p > .05$ ,  $OR = 1.37$ . Consistent with expectations, men in the BPL condition were more likely to report use of sexual assault tactics (53.4%) than men in the CTL condition (28.6%),  $p = .03$ ,  $OR = 2.87$ , such that the odds of men in the BPL condition reporting sexual assault tactics were 2.87 times greater than the odds of men in the CTL condition reporting sexual assault tactics.

On the SES-LFP, counter to predictions, men in the BPL condition were not significantly more likely to report verbal coercion (41.4%) compared to men in the CTL condition (22.9%),  $p > .05$ ,  $OR = 2.38$ ; although the difference in reporting rates was not statistically significant, the odds of BPL men reporting verbally coercive tactics on the SES-LFP were 2.38 times greater than the odds of men in the CTL reporting verbally coercive tactics. Consistent with predictions, men in the BPL condition were more likely to report use of sexual assault tactics (37.9%) than men in the CTL condition (8.6%) on the SES-LFP,  $p = .002$ ,  $OR = 6.53$ , such that the odds of BPL men reporting sexual assault tactics were 6.53 times greater than the odds of men in the CTL reporting sexual assault tactics on the SES-LFP.

On the SSS, contrary to expectations, men in the BPL condition were not significantly more likely to report verbal coercion (58.6%) compared to men in the CTL condition (60.0%) and the effect size was near zero,  $p > .05$ ,  $OR = 0.94$ . Also contrary to

expectations, men in the BPL condition were not significantly more likely to report use of sexual assault tactics (46.6%) than men in the CTL (28.6%) on the SSS,  $p>.05$ , OR= 2.18; even though the relationship did not reach the level of statistical significance, the odds of BPL men reporting sexual assault tactics on the SSS were 2.18 times greater than the odds of men in the CTL reporting sexual assault tactics.

Table 4.

*Significance Testing for Sexual Aggression Reporting by Condition, N=93*

	Condition		<i>Fisher's Exact Test (p)</i>	Odds Ratio
	% CTL	% BPL		
Verbal Coercion tactics, SES-LFP and SSS, combined	60.0	67.2	.51	1.37
Sexual Assault tactics, SES-LFP and SSS, combined	28.6	53.4	.03	2.88
Verbal Coercion tactics, SES-LFP	22.9	41.4	.08	2.38
Sexual Assault tactics, SES-LFP	8.6	37.9	.002	6.52
Verbal Coercion tactics, SSS	60.0	58.6	1.00	0.94
Sexual Assault tactics, SSS	28.6	46.6	.13	2.18

Items on the SES-LFP and SSS inquire about sexual aggression tactics in behaviorally specific language that do not contain the terms “coercion,” “rape,” or “sexual assault.” Toward the end of the survey, for exploratory purposes, participants were asked two explicitly worded questions about their sexual aggression history: In

response to the question, “Do you think you may have ever verbally coerced a woman into oral, vaginal, or anal sex?” 69.0% of men in the BPL condition and 57.1% of men in the CTL condition answered “yes.” This difference in reporting was not significant,  $p > .05$ ,  $OR = 1.67$ . Men were also asked, “Do you think you may have ever raped or sexually assaulted a woman?” Three men in the BPL condition answered “yes,” whereas zero men in the CTL condition positively endorsed this question. Given the minimal endorsement of this item, no statistical tests were performed.

**Exploratory analyses.** Men in both conditions completed the Brief Sexual History Questionnaire and the Sexual Risk Scale (SRS). Comparisons of men’s responses to these measures were conducted between men in the BPL and CTL conditions to examine whether the between-condition differences observed in men’s reports of nonconsensual sexual behavior extended to the men’s reports of consensual sexual behavior. Raw counts of selected SRS items produced by participants’ were recoded consistent with procedures outlined in Turchik and Garske (2009): 0=0; 1=approximately 40% of non-zero responses; 2=approximately 30% of non-zero responses; 3=approximately 20% of non-zero responses; and 4=approximately 10% of non-zero responses. Rather than analyzing a total SRS score, BPL and CTL participants were compared across items deemed to be particularly indicative of risky and generally stigmatized consensual sexual behavior (e.g. sex without protection, sex with strangers).

There were no statistically significant differences in BPL and CTL men’s reports of the following sexual history questions: age at first fellatio, cunnilingus, vaginal sex, or anal sex; age at first masturbation; frequency of masturbation; ability to get an erection; number of sexual partners; frequency of unprotected cunnilingus, vaginal sex, and anal



sex; drug and alcohol use before sex; frequency of sex with strangers; and frequency of sex that is regretted. There was a statistically significant difference between men in the BPL and CTL for frequency of unprotected fellatio,  $t(91)=-1.99$ ,  $p=0.05$ ,  $d=0.42$ . This reporting difference was in the opposite direction predicted by the Bogus Pipeline manipulation, such that men who did not believe they were being monitored for truthfulness (CTL condition) reported more unprotected fellatio compared to men who believed they were being monitored for truthfulness (BPL condition). Missing values were excluded pairwise from each item comparison. See Table 5 for results.

Table 5.

*Reported Sexual History by Condition*

	n	Condition		<i>t</i>	<i>d</i>
		<u>CTL</u> M (SD)	<u>BPL</u> M (SD)		
<u>Brief Sexual History Questionnaire</u>					
Age at First Fellatio	93	16.3 (3.07)	16.5 (3.09)	0.16	-0.06
Age at First Cunnilingus	91	17.5 (3.2)	17.3 (4.0)	-0.29	0.06
Age at First Vaginal Sex	92	16.4 (2.7)	16.2 (3.2)	-0.24	0.07
Age at First Anal Sex	81	15.6 (9.1)	15.5 (9.3)	-0.06	0.01
Age at First Masturbation	93	12.5 (2.7)	12.3 (2.6)	-0.34	0.08
Frequency of Masturbation <sup>a</sup>	93	3.1 (1.4)	3.0 (1.5)	-0.18	0.07
Ability to Get Erection <sup>b</sup>	93	1.9 (0.4)	2.0 (0.7)	1.16	-0.18
<u>Sexual Risk Scale<sup>c</sup></u>					
Number of Sexual Partners	93	2.06 (1.11)	1.80 (1.02)	-1.17	0.24
Frequency of Fellatio with No STI Protection	93	1.51 (1.34)	0.98 (1.19)	-1.99*	0.42
Frequency of Cunnilingus with No STI Protection	93	1.83 (1.22)	1.54 (1.23)	-1.18	0.24
Frequency of Vaginal Sex with No STI Protection	93	1.69 (1.30)	1.64 (1.35)	-0.17	0.04
Frequency of Anal Sex with No STI Protection	93	0.46 (0.98)	0.62 (0.97)	0.78	0.16
Frequency of Sex with Drug and/or Alcohol Use	88	1.70 (1.19)	1.69 (1.19)	-0.05	0.01
Frequency of Sex with Stranger	92	1.29 (1.05)	0.93 (1.05)	-1.58	0.34
Frequency of Sex that is Later Regretted	93	1.11 (1.13)	1.53 (1.29)	1.59	0.35

Note. \* = *t*, *p* < .05

<sup>a</sup>1= More than once per day, 2= Once per day, 3= Several times per week, 4= Once per week, 5= 2-3 times per month, 6= Fewer than once per month, 7= Never

<sup>b</sup>1= No sexual activity, 2= Almost always or always, 3= Most times (much more than half the time), 4= Sometimes (about half the time), 5= A few times (much less than half the time), 6= Almost never or never

<sup>c</sup> Raw data from Sexual Risk Scale were recoded consistent with procedures in Turchik & Garske, 2009: 0=0; 1=approximately 40% of non-zero responses; 2=approximately 30% of non-zero responses; 3=approximately 20% of non-zero responses; and 4=approximately 10% of non-zero responses.

### **Study 1 Discussion**

The current study employed the Bogus Pipeline procedure (BPL) to investigate intentional misreporting on two measures of sexual aggression perpetration—the SES-LFP and SSS. I compared the experimental (BPL) and control (CTL) groups' endorsements on these measures, both overall and specific to each measure, to determine if participants' belief that honesty is being monitored appears to reduce intentional misreporting, or lying, about perpetration behavior. Further, if men in the experimental condition were more likely to report sexual aggression, it may be inferred that men completing traditionally administered perpetration measures are likely intentionally underreporting their sexually aggressive behavior.

The two selected measures—the SES-LFP and SSS—were alike in that they asked participants to report on instances of sexually aggressive experiences, specific to certain sexual acts, in the context of non-consent, and by specific sexual strategies or tactics. These two measures differed, however, in terms of language and structure. It was hypothesized that men in the experimental, BPL condition would be significantly more likely to acknowledge experiences with using sexually aggressive strategies, compared to men in the control condition (CTL).

**Manipulation check.** Prior to discussing the results, a brief discussion of the manipulation checks and inferred success of the BPL manipulation is warranted. I

employed two manipulation checks, a social desirability measure (BIDR; Paulhus, 1991) and the Posttest Questionnaire. Men's responses to the Posttest Questionnaire items, collectively, were significant by condition and appeared to support the success of the manipulation. Across the BPL and CTL conditions, there was no statistical difference in men's belief that the BPL machine could be used to measure someone's anxiety and honesty level; in some ways, these questions are less important because, for example, even if men in the CTL condition believed that the machine could detect honesty, they were not attached to the machine during questionnaire completion. However, as expected, men in the BPL condition were significantly more likely to report that the machine "influenced" their responding and caused them to feel more "pressure" to respond honestly.

The literature on the impact of social desirability, as measured by instruments like the BIDR and Marlowe-Crowne Social Desirability Test (Strahan & Gerbasi 1972), on sexual aggression perpetration self-reporting has yielded mixed and inconclusive results. That is, the association between men's responses on measures of socially desirable responding and men's responses to perpetration measures remains unclear. Some data suggest a relationship between socially desirable responding and perpetration reporting (e.g. Porter et al., 1992); yet several studies have found no such relationship (e.g. Cook, 2002; Strang et al., 2013; Strang & Peterson, 2013; Walker, et al., 1993). With respect to BPL studies and social desirability measures, Fisher and colleagues (2003; 2013) found that, as predicted, participants in the BPL conditions of their studies produced lower social desirability scores on the Marlowe-Crowne Social Desirability Test than participants in the Standard Testing conditions. In a BPL study investigating sexual

offenders in children, men in the experimental, BPL condition demonstrated significantly lower Impression Management subscale scores on the BIDR compared to offenders in the control condition (Ganon, Keown, & Polaschek, 2007). In the current study, consistent with other studies employing the Bogus Pipeline, significant differences were detected between BPL and CTL men's responses to the BIDR, a measure designed to assess for socially desirable responding. On both subscales, Self-Deception and Impression Management, men in the CTL condition produced significantly higher scores, indicating they were producing more socially desirable responses to questionnaire items compared to men in the BPL condition.

Finally, data on men's omission of items may also suggest that the BPL procedure affected responding, as intended. Although not statistically significant, a higher percentage of men in the BPL condition omitted responses (13.6%; 13 total omitted items) on the SES-LFP compared to men in the CTL condition (8.6%; 3 total omitted items). Some men in the BPL condition may have chosen not to answer items rather than endorse perpetration or attempt to lie while their honesty was presumably being monitored, whereas men in the CTL condition, not feeling pressure to respond honestly, simply chose to deny having engaged in the threatening behaviors described in the SES-LFP items.

Given the significant results in the predicted direction for the Posttest Questionnaire, significant differences between groups on a measure of social desirability, and the compelling, significant differences between the BPL and CTL condition on reported sexual aggression (discussed below), I conclude that the manipulation was, in

fact, successful in reducing social desirability and encouraging honest responding in the BPL condition.

**Hypothesis testing.** I will discuss men's reports of verbally coercive sexual strategies followed by a discussion of men's reports of sexual assault tactics. The hypothesis that men in the BPL condition, compared to men in the CTL condition, would be significantly more likely to acknowledge experiences with using verbally coercive strategies was *not* supported. There were no significant differences in BPL and CTL participants' reports for the SES-LFP and SSS collapsed (67.2% vs. 60.0%, respectively), the SES-LFP alone (41.4% vs. 22.9%), or the SSS alone (58.6% vs. 60.0%). This result is, perhaps, not entirely surprising given that verbal coercion strategies are not illegal and are somewhat normalized within the context of consensual heterosexual dynamics (Muehlenhard, & Peterson, 2004). Indeed, cultural expectations of male persuasion and pressure in the face of female resistance are often included in traditional sex and seduction scripts (e.g. Littleton, Axsom, & Yoder, 2006; Wiederman, 2005). The fact that 64.5% of the sample, overall, endorsed the use of verbal coercion on at least one measure demonstrates the normalcy of these tactics. Further, 60 out of the 93 (64.5%) men who participated answered "yes" to the question, "Do you think you may have ever verbally coerced a woman into oral, vaginal, or anal sex?" This suggests that some men are fully aware of and willing to label their own verbally coercive behavior. The current results are also consistent with some older data that show that the victimization-perpetration reporting discrepancy is almost non-existent in reports of verbally coercive experiences (Spitzberg, 1999).

The difference in verbal coercion reporting on the SES-LFP as compared to the SSS is stark and worth noting. I suspect this reporting difference is attributable to language and presentation differences between the scales. The SES-LFP uses the phrase “without her consent” when asking about sexual strategies, whereas the SSS asks about strategies used “after she initially said ‘no.’” It is possible that some men who endorsed verbal coercion on the SSS read the more legalistic terminology (i.e., “consent”) on the SES-LFP and dissociated their behavior from these more “serious” and/or threatening items. In addition, the SSS allows respondents to endorse individual verbal coercion tactics, whereas the SES-LFP lumps eight strategies into two items. It is possible that men who had used only one or several of the tactics listed by the SES-LFP’s verbal coercion items were deterred from endorsing the item, in an effort to avoid over-implicating themselves. This reporting strategy aligns with the observation that significantly fewer BPL participants endorsed verbal coercion on the SES-LFP (41.4%) compared to the SSS (58.6%), but, nevertheless, men in the BPL condition demonstrated a trend toward reporting more verbal coercion on the SES-LFP, as compared to men in the CTL condition.

There is an additional scale and language-based factor that may be responsible for the gap between verbal coercion reporting on the SES-LFP and the SSS. The SSS asks about use tactics, within the context of a specific sexual act and a state of non-consent; however, the scale does not specifically clarify that the tactic must result in actual sexual activity (i.e., “which of the following strategies have you used to convince a woman to have sex”). Alternatively, the SES-LFP is worded such that it clearly asks about incidents that resulted in a completed, sexual act (e.g., I had oral sex with a

woman...without her consent by...”). Based on Study 1 results, it is not possible to determine the number of men who produced two accurate, yet discrepant, reports due to this critical difference in language.

Recall that in this study “sexual assault” tactics included intoxication, incapacitation, threat, and force strategies. The hypothesis that men in the BPL condition, compared to men in the CTL condition, would be significantly more likely to acknowledge experiences with using sexual assault tactics was supported for the combined SES-LFP and SSS reports (53.4% vs. 28.6%, respectively) and the SES-LFP alone (37.9% vs. 8.6%). Not only were these reporting differences statistically significant, the effect sizes, as measured by odds ratios, were medium (in the case of the combined measures) and large (for the SES-LFP alone). However, on the SSS alone, men in the BPL condition were *not* significantly more likely to acknowledge experiences with using sexual assault tactics, compared to men in the CTL condition (46.6% vs. 28.6%, respectively). Although there was a difference in reporting in the expected direction on the SSS, the difference was not statistically significant. This pattern of less impact of the BPL on SSS reports as compared to SES-LFP reports mirrors results from the verbal coercion reports and may reflect differences in the scales’ language and tenor, as discussed.

The hypothesized results, specifically for overall sexual assault reporting and SES-LFP sexual assault reporting, were robust. Men who believed they were being monitored for honesty reported the use of sexual assault tactics at much higher rates than men taking the measures as traditionally administered by researchers. Men in the BPL condition, believing they were hooked up to a “lie detector” device, reported lifetime use



of sexual assault tactics on the SES-LFP (37.9%) at a rate much larger than recent studies using community samples and similar measurement tools. For example, Abbey, Jacques-Tiura, and LeBreton (2011) used a modified version of the original SES (Koss et al., 1987) and found that 7.2% of men endorsed completed oral, vaginal, or anal sex, “usually when the victim was unable to consent due to extreme impairment (p. 457).” In Strang et al. (2013), only 2% of young men (ages 18-30) recruited online reported use of intoxication, threats, or force to obtain oral, anal, or vaginal sex on the SES-LFP. Also using the SES-LFP, Buday and Peterson (in press) found that 0.5% of men reported use of force and 6.2% of men reported use of intoxication to obtain oral, anal, or vaginal sex. It is worth noting that reporting rates in both the BPL and CTL conditions were higher than reporting rates in other studies. The process of completing the measures in a lab with a researcher next door may have served to increase honest responding in and of itself.

The current data suggest that the use of sexual assault tactics may be more normative than is suggested by results from standard self-report procedures. Further, it is evident that the use of a manipulation designed to promote honesty in responding can produce increased reports of sexual assault perpetration. Men in the BPL condition appeared to positively endorse items that they would not have endorsed under normal study conditions (CTL condition). There are several possible pathways to this result. It is likely that, as intended, men in the BPL condition were pressured by the manipulation to endorse items they would have intentionally failed to endorse if they were assigned to the CTL condition. It also may be the case that men’s differences in reporting across conditions resulted from more subtle differences in decision making processes. For

example, men in the BPL condition may employ a responding strategy that errs to the side of over-reporting, whereas men in the CTL condition may err on the side of underreporting for experiences they perceive as “gray” or ambiguous. One can imagine the following scenario: At a house party, a man brought a woman alcoholic drinks to the point where the woman was observably inebriated, as indicated by unsteady walking and slurred speech. The man then encouraged the woman to follow him to a bedroom at the party, and they engaged in vaginal intercourse in the absence of any discussion or verbal agreement but without any clear signs of disagreement. Now imagine the man is presented with the SES-LFP strategy, “Encouraging and pressuring someone to drink alcohol until they were too intoxicated (*drunk*) to give consent or stop what was happening.” It is not entirely clear whether the man’s experience fits the description in this item. Thus, it is possible that the man assigned to the BPL condition, recalling this scenario and the woman’s apparent intoxication and lack of verbal agreement, would, perhaps reluctantly, endorse this item in an attempt to ensure total honesty; whereas, the same man in the CTL condition might not endorse the item because, in the absence of pressure to be totally honest, he focused on the fact that he believed the woman was not “too intoxicated” and that the woman could have stopped the intercourse if she wanted. In both of these cases, the man debated how to answer the item and, in his mind, erred on the side of over-reporting in the BPL condition and underreporting in the CTL condition. Unfortunately, this study cannot lend information on the participants’ decision-making processes in the two conditions, nor can researchers ever determine whether any endorsement is, in fact, an “accurate” report, given that incidents of possible sexual aggression cannot be observed.

One interesting finding emerged from the exploratory analyses on men's responses to the question, "Do you think you may have ever raped or sexually assaulted a woman?" Although approximately 54% of men in the BPL condition endorsed using sexual assault tactics on one or both scales, only three of these men answered affirmatively to the question. Approximately 29% of men in the CTL condition endorsed using sexual assault tactics on one or both scales, but zero men answered affirmatively to the question. Compared to the surprisingly high percentage of men who acknowledged using "verbal coercion," this extremely low level of acknowledgment further suggests that men, especially those not pressured to respond honestly, avoid admitting to "sexual assault." Further, this finding suggests that men may struggle to identify their use of sexual assault tactics as "sexual assault" or "rape," whereas men are able and willing to identify their use of "verbal coercion." This unwillingness and/or inability to recognize one's own use of sexual assault tactics may, thus, represent a key intervention target.

**Limitation and future directions.** Although this study represents an effort to study a diverse group of community men, participants self-selected into the study. It is possible that participants who self-selected into the study represent a subset of the community that is more comfortable discussing "sexual decision-making" and more in need of monetary compensation than community members who did not volunteer. Thus some caution must be used when generalizing results to young men who have sex with women, in general.

The results of this study raise several questions that were further explored in Study 2. This study offered a compelling demonstration that men appear willing and able to report on their use of verbal coercion tactics but may intentionally underreport sexual

assault tactics on traditionally administered measures. This study cannot, however, offer rich information about how and why men endorsed or failed to endorse sexual aggression, nor can it address problems with unintentional misreporting on the measures, as unintentional misreporting would likely not be influenced by the BPL manipulation. Thus, Study 2 allowed for follow-up interviews with the goal of shedding light on men's interpretation of the survey language, the accuracy of men's reports, and the decision-making processes men use to complete these measures of sexual aggression perpetration. Overall, men in both conditions reported more use of sexual aggression on the SSS as compared to the SES-LFP; thus, Study 2 interview data also provided information on how and why men appear more willing to endorse sexual aggression on the SSS as compared to the SES-LFP. Differences in reporting rates on these two scales may represent "accurate" differences in the wording of the scales or "inaccurate" interpretation errors on the part of the participant.

## Study 2

### Study 2 Method

**Participants.** Participants in Study 2 were a subset of Study 1 participants, who were in the CTL condition and agreed to participate in a follow-up semi-structured interview. Only participants in the CTL condition were invited to participate in Study 2. The study was designed to elucidate men's interpretations of and responses to the self-report items when they are answered under standard self-report conditions (as opposed to when participants believed responses were being monitored for honesty). Participants who agreed to participate in the interview were offered an additional \$20 compensation for their time. All 35 men from the CTL condition agreed to participate, but one was unable to participate due to technical difficulty during Study 1. Ultimately, 34 men completed Study 2.

**Measures.** Men's Study 1 responses to the SES-LFP and the SSS were referenced during Study 2. Men participated in a semi-structured interview designed specifically for this study. A copy of the semi-structured interview is provided in Appendix E. Questions were designed to (a) elicit men's understanding of different non-consent language used in the SES-LFP and SSS (e.g. "How is 'without her consent' and 'after she initially said no' different?"); (b) identify instances of unintentional over-reporting—false positives—and unintentional underreporting—false negatives (e.g. "You answered 'yes' to this question: [read question from survey]. Can you tell me about this experience?"; "Have you ever had any experiences that are "almost like" one of the scenarios described in any questions"); and (c) determine the nature (accurate or inaccurate) and source of inconsistent responding across measures (e.g. "You answered

‘yes’ to the question: [read question from SES-LFP] and described the experience for me. You answered ‘no’ to this question: [read similar question from SSS]. Can you tell me about this decision?”).

**Procedure.** After completing Study 1, the male research assistant invited men from the control condition to participate in an interview designed to “better understand men’s interpretation of questionnaire items and their decision-making when answering these questions.” If the participant was interested in participating, the research assistant presented and reviewed informed consent for the second part of the study. After the participant gave consent, the research assistant instructed the participant to take a short break (5-10 minutes). During this break, the research assistant reviewed the participant’s responses to the SES-LFP and SSS to assess for item endorsement and inconsistent responding. This information was used to guide questioning during the semi-structured interview conducted by one of three male research assistants. Interviews ranged from seven minutes, with a reserved participant who endorsed no items, to 82 minutes, with a talkative participant who endorsed many items. In general, the more items an individual endorsed, the longer the interview took to complete. The average length of interview was 32 minutes. At the end of the interview, participants were debriefed on Study 1 and 2. Interviews were audio-recorded and transcribed for coding purposes. Subsequent to transcription, audio files were deleted.

Two coders, the author and the author’s research advisor, evaluated men’s responses to the semi-structured interview to determine (a) men’s opinion of which measure provided a more stringent, definitive, and/or clear conceptualization of non-consent (i.e., “without her consent” on the SES-LFP or “after she initially said ‘no’” on

the SSS); (b) the frequency of false positive and false negative responses to the SES-LFP and the SSS, and (c) the nature and source of discrepant responding across the SES-LFP and the SSS.

## **Study 2 Results**

**Non-consent language.** Men's responses to two semi-structured interview questions (i.e. "How is 'without her consent' and 'after she initially said no' similar?" and "How is 'without her consent' and 'after she initially said no' different?") provided the information used to determine which non-consent language, if any, men perceived to be more clear, stringent, or definitive (SES-LFP: "without her consent" versus SSS: "after she initial said 'no'"). The two coders independently coded the 34 interviews and met to discuss results. Coders determined if (a) a participant clearly indicated that one phrase was perceived as more stringent, (b) a participant clearly indicated that the phrases were deemed "the same," or (c) a participant did not make a clear comparison or statement about the two phrases. Coders initially agreed on 31 of the 34 data points (91% agreement), and disagreements were resolved through discussion. Results are presented in Table 6.

Table 6.

*Men's Comparisons of Non-Consent Language on the SES-LFP and SSS, N=34*

Comparison of Non-Consent Language	N	%
“Without her consent” <sup>a</sup> deemed more stringent and/or clear than “after she initially said no” <sup>b</sup>	19	55.8
“After she initially said no” deemed more stringent and/or clear than “without her consent”	7	20.6
“Without her consent” and “after she initially said no” are deemed the same	4	11.8
No clear comparison made	4	11.8

*Note.* <sup>a</sup>= language used on the SES-LFP, <sup>b</sup>=language used on the SSS

More than half (55.8%) of men indicated during their interview that they interpreted the SES-LFP phrase “without her consent” to be clearer, more definitive, more final, and/or more stringent than the SSS phrase “after she initially said ‘no.’” Some men suggested that a woman’s verbal “no” to sexual activity can be ambiguous, disingenuous, manipulative, or a form of token resistance. For example, a 23-year-old participant stated, “‘No’ can be used just like a tease...kind of a lead on tactic.” He went on to explain that “Without her consent, to me, is more of a serious phrase than “after she said ‘no.’” Similarly, some participants referenced a belief that a woman initially saying “no” implies the existence of “wiggle room” and that “no” can “mean different things” (30-year-old). Other men in this grouping reported that the phrase “after she initially said ‘no’” implies that a man and an ambivalent woman were involved in an ongoing consent negotiation and that the woman *eventually* said or communicated a “yes,” whereas “without her consent” more clearly implies sustained non-consent. A 27-year-old



participant explained, “After she initially said ‘no’ ... she was a ‘no,’ then after a little coaxing or whatnot, then the answer eventually turns to ‘yes’ ... whereas, without her consent is just a steady ‘no.’” Similarly, a 24-year-old said “Without her consent equals rape...but after she initially said ‘no,’ maybe they’re bickering or bantering, back and forth, maybe she’s on the fence, maybe yes, maybe no.”

Approximately 21% of men reported that they interpreted the SSS phrase “after she initially said ‘no,’” to be a clearer, more definitive, more final, and/or more stringent description of non-consent than the SES-LFP phrase, “without her consent.” Most of these men communicated that a verbal “no” represents a clear denial of consent, whereas “without her consent” may describe a situation in which a woman does not explicitly declare affirmative consent but also does not express non-consent. A 25-year-old said, “Without her consent ... doesn’t necessarily mean that she explicitly said ‘no,’ whereas, if she said ‘no,’ then she’s definitely denying consent.” Similarly, a 20-year-old stated, “If she says ‘no,’ there’s no reason to continue the activity at all...without her consent means that she didn’t say ‘yes,’ but her saying ‘no’ means she said ‘no.’” Another participant described a woman’s “no” as a “finalization” of non-consent (26-year-old).

Nearly 12% of men reported that the phrases “without her consent” and “after she initially said ‘no’” have very similar meanings and that they view these phrases, essentially, as two ways to communicate the same concept. For example, a 21-year-old explained, “I guess [the phrases] are the same thing... if she initially said ‘no’ then anything beyond that would be without her consent... I don’t think that there really is a difference between the two.”

The nearly 12% of remaining men did not make clear comparative or contrasting statements about the non-consent language used by the SES-LFP and SSS.

**False Negative and False Positive reports.** Men's responses to two semi-structured interview questions provided the majority of information used to determine the presence of false negative and false positive item responses (i.e., "You answered 'yes' to [this question]. Can you tell me about this experience? [for all positive endorsements]" and "Have you ever had any experiences that are "almost like" one of the scenarios described in any questions. Have you ever had any experiences that made you unsure of whether to answer 'yes' or 'no' to a question? Can you tell me more about this experience?").

Initially, two coders independently reviewed 10 interviews and then met to discuss observations and reach consensus on potential decision points, specific to identifying false negative and false positive reports. Coding guidelines developed after this initial review included, (a) in the absence of interview statements contradicting a man's original report on the scale(s), original endorsements and non-endorsements stand; (b) the wording in the SSS instructions allows for reporting the use of a tactic to obtain sex even if the sexual act did *not* ultimately occur, whereas the SES-LFP items used in this study inquire about only tactics that actually led to sexual intercourse; (c) the phrase "without her consent" in the SES-LFP refers to sexual acts that occurred in the absence of freely-given consent, uninfluenced by the use of a particular tactic (e.g., if a woman said "yes" after being blackmailed, this would still count as sex that occurred without her consent); (d) the SES-LFP items referencing the use of drugs and alcohol as a tactic require men to acknowledge that a woman was, in their judgment, "too intoxicated" at the

time of intercourse (e.g., by reporting that she was unconscious, unable to stand, “out of it,” or severely slurring her speech); and (e) the phrase “finding someone who...” used in several of the SES-LFP items (e.g., “Finding someone who had been taking drugs and was conscious but too incapacitated (out of it) to give consent or stop what was happening”) may refer to coming upon an individual, targeting an individual, or seeking out an individual.

After establishing these guidelines, the coders independently coded the 34 interviews and met to discuss results. There were 56 responses that were initially coded as false negative or false positive endorsements by one or both coders. Of those 56, the coders initially agreed on 36 responses (64% agreement). Disagreements were resolved through discussion.

Table 7 presents results for the frequency of false negative and false positive endorsements based on the resolved codes (i.e., the codes determined following the discussion of coding disagreements). Given that some men endorsed multiple acts of sexual aggression, many false positives and false negatives on individual items did not influence the men’s overall classification as having engaged or having not engaged in Verbal Coercion or Sexual Assault tactics; therefore, the table also summarizes how false negatives and positives impacted men’s final classification as either having used or not having used Verbal Coercion or Sexual Assault tactics. Examples of interview responses suggestive of false negative and false positive responses are presented below, in conjunction with the results related to reporting discrepancies.

Table 7.

*Unintentional False Negatives (Underreports) and Unintentional False Positives (Over-reports) on the SES-LFP and SSS, N=34*

	SES-LFP and SSS Combined		SES-LFP		SSS	
	VC #	SA #	VC #	SA #	VC #	SA #
Total Individual Items Positively Endorsed on Scales	74	67	22	51	52	16
Total False Negative Scale Items Based on Interview	21	11	16	3	5	8
Total False Positives Scale Items Based on Interview	4	11	1	10	3	1
Men Classified as Sexually Aggressive Based on Scales	21	10	8	3	21	10
Of the Classifications Based on Scales, Men Classified as False Negative for Sexual Aggression Based on Interview	2	3	4	3	1	3
Of the Classifications Based on Scales, Men Classified as False Positive for Sexual Aggression Based on Interview	1	0	0	0	1	0
Men Classified as Sexually Aggressive After Adding False Negatives and Removing False Positives from Scale Responses	22	13	12	6	21	13

*Note.* VC = verbal coercion; SA = sexual assault tactic (use of drugs/alcohol and use of force tactics combined).

**Nature and source of within-subject reporting discrepancies.** Men’s responses to one semi-structured interview question provided the majority of information used to determine the presence of accurate and/or inaccurate reporting discrepancies across the SES-LFP and SSS (i.e. “You answered ‘yes’ to [specific question on measure #1] and described the experience for me. You answered ‘no’ to [similar question on the other measure]. Can you tell me about this decision? [for all potential inconsistencies]”). A man’s original report was considered “discrepant” when a participant was positive for use of one or more Verbal Coercion tactics on one measure but negative for use of Verbal Coercion tactics on the other measure *or* when the participant was positive for Sexual Assault tactics on one measure but negative for Sexual Assault tactics on the other measure.

Coders determined whether the discrepancy was an “Accurate Discrepancy” or an “Inaccurate Discrepancy.” Accurate Discrepancies resulted from true differences in the wording of corresponding items on the SES and SSS scales such that, despite the discrepancy in endorsement (e.g. positive for Sexual Assault tactics on SSS, negative on SES), the man’s report was actually accurate on both scales. Inaccurate Discrepancies resulted from participant error—such that the participant either correctly endorsed an item on one scale but incorrectly failed to endorse a corresponding item on the other scale (a false negative) or the participant inaccurately endorsed an item on one scale (false positive) and correctly did not endorse the corresponding item on the other scale. Across the 34 interviews, 17 participants produced a total of 23 discrepancies for reports of Verbal Coercion and Sexual Assault tactics. Coders initially agreed on determinations of Accuracy or Inaccuracy in 21 out of 23 discrepant responses (91% agreement).

To identify the reasons for these Accurate and Inaccurate discrepancies, coders initially read 10 transcripts, brainstormed potential reasons for discrepancies, and generated a list of possible reasons for discrepancies. Then, the coders read through all 34 transcripts and coded for themes. If new themes arose during the coding process, the themes were added to the list, and previously coded transcripts were recoded to evaluate for the presence of newly identified themes. Coders could identify more than one reason for the discrepancy if the participant provided more than one explanation for his reporting decision. One or both coders initially identified 30 reasons for the 23 discrepancies. Of those 30, the coders initially agreed on 24 out of 30 data points (80% agreement). Disagreements were resolved through discussion.

Table 8 presents the frequency and reasons for Accurate and Inaccurate reporting discrepancies. Ten Accurate Discrepancies resulted from accurate endorsement of a tactic on one scale and accurate non-endorsement of tactic on the other scale, due to inherent differences between the scales. Twelve of the 13 Inaccurate Discrepancies resulted from false negative reports on one measure, and one resulted from a false positive endorsement on one measure.

Table 8.

*Reasons for Accurate and Inaccurate Discrepancies in Reporting between the SES-LFP and SSS*

Accurate Discrepancies (N=10)	
<u>Reason for Discrepancy</u>	<u>Frequency</u>
Endorsed SSS item related to “giving her drugs or alcohol” or “taking advantage” of her intoxication, but did not endorse similar SES drug/alcohol items because woman was not determined to be “too intoxicated” to consent	5
Endorsed SSS item(s), but did not endorse similar SES item, because the tactic endorsed on the SSS did not result in sex (or it was unclear from the interview whether sex ultimately occurred)	3
Endorsed SSS tactic of “threatening to harm yourself,” and no similar item is included on the SES	1
Endorsed SSS tactic of “blocking her if she tries to leave the room,” and no similar item is included on the SES	1
Inaccurate Discrepancies (N=13)	
<u>Reason for Discrepancy</u>	<u>Frequency</u>
Endorsed SSS verbal coercion item, but produced a false negative on similar SES verbal coercion item, because the SES verbal coercion items list several tactics per item and the participant did not use all or most of tactics listed in SES item	5
Endorsed SSS verbal coercion item, but produced a false negative on similar SES item, because woman eventually gave “consent” <i>after</i> the coercive tactic was employed	4
Endorsed SSS drug/alcohol item, but produced a false negative on similar SES item, because participant believed he had consent <i>even though</i> he perceived the woman to be “too intoxicated” to consent	1
Endorsed SSS item, but produced a false negative on similar SES item, because wording used to describe behavior on the SES was deemed too extreme, deviant, or “not like me”	5
Endorsed SSS item, but produced a false negative on similar SES item, because participant could not remember which type of sex occurred (i.e., oral, vaginal, anal) so was unclear which of the specific SES items should be endorsed	1
Endorsed an item on either the SES-LFP or SSS, but produced a false negative on similar item on other scale, because the participant simply overlooked or “missed” the item or indicated he made an error	3
Did not endorse SES item, but produced a false positive endorsement on the SSS, because he used the tactic but the woman never said ‘no’	1

*Note.* Participant may have more than one discrepancy and more than one reason for a discrepancy.

The following qualitative illustrations are presented below: (a) Accurate Discrepancies, (b) Inaccurate Discrepancies resulting from false negative reports, and (c) one Inaccurate Discrepancy resulting from a false positive report.

***Accurate Discrepancies.*** Due to differences in language on the SES-LFP and SSS, a man could have accurately endorsed “getting her drunk or high to convince her to have sex” or “taking advantage of the fact that she is drunk or high” on the SSS and also produced an accurate non-endorsement on the SES-LFP because the alcohol and drug-involved items on the SES require that a woman be “too intoxicated” or “incapacitated” to “give consent or stop what was happening.” For example, a 27-year-old described a situation in which he appropriately endorsed “getting her drunk or high” as a tactic on the SSS and did not endorse any alcohol items on the SES-LFP, because he did not perceive his partner as being “too intoxicated.” He explained, “the purpose was to get her loose ... I don’t do the whole get a girl black-out drunk type thing, but if she’s feeling anxiety let’s help with something to lower her inhibitions.”

The SSS asks about use of coercive and aggressive tactics but does not specifically clarify that the tactic must result in sexual activity (i.e., “which of the following strategies have you used to convince a woman to have sex”). Thus Accurate Discrepancies resulted when a participant accurately endorsed an attempt to use sexually aggressive tactics on the SSS and accurately did not endorse a corresponding item on the SES-LFP, which clearly specifies that the tactic must result in sexual activity (e.g., I had oral sex with a woman...without her consent by...). For example, a 26-year-old appropriately endorsed the verbal coercion tactic of “repeatedly asking” a woman to have sex on the SSS, but appropriately did not endorse using verbal pressure on the SES-LFP



because sexual activity ultimately did not occur. He explained, “I kept saying ‘hey do you want to do it? I have a condom,’ yadda yadda...she just said ‘no, no I’m not that type of girl.’ So we kind of left it at that.”

Another Accurate Discrepancy for verbal coercion resulted from a participant reporting the use of a tactic on the SSS, “threatening to harm yourself if she doesn’t have sex,” that is not included in any SES-LFP items. This 30-year-old said that after a night of drinking and drug use he said, “I’m gonna cut myself with these [scissors] if you go” when a girl declined to engage in sexual activity with him. No SES-LFP items reference threats to harm oneself as a tactic.

Finally, one Accurate Discrepancy for the use of a sexual assault tactics resulted from a participant reporting “blocking her if she tries to leave the room” on the SSS; there is no parallel “blocking” item included on the SES-LFP for him to endorse. The 29-year-old said, “I just didn’t want her to leave the bedroom... I just stood in front of the doorway...she probably said ‘no’... I decided I want it right now....I’ll lock the door or whatever and she’ll go lay back down.” No SES-LFP items reference blocking an exit as a tactic.

***Inaccurate Discrepancies resulting from false negative reports.*** Inaccurate Discrepancies were slightly more frequent than Accurate Discrepancies. Whereas each Accurate Discrepancy resulted for only one reason, many men provided multiple explanations for their Inaccurate Discrepancies. Most commonly, Inaccurate Discrepancies resulted from a correct endorsement of verbal coercion on the SSS but a false negative for verbal coercion on the SES-LFP. Men explained this particular discrepancy with one or more of the following reasons: (a) the SES-LFP verbal coercion

items list or “lump” many different tactics in one item, many of which the participant had not done (i.e., “telling lies, threatening to end the relationship, threatening to spread rumors about them, making promising that I knew were untrue, or continually verbally pressuring them”), whereas the SSS lists only one tactic per item, so the participant could select only the specific tactic(s) he used; (b) the SES-LFP items, in contrast to the SSS items, sounded bad or harsh, and/or the participant did not view himself as the kind of man who would use the tactic described on the SES-LFP; (c) the phrase “without her consent” on the SES did not apply to his behavior, because the woman eventually “consented” *after* the tactic was employed (e.g., she initially said “no,” but after verbal coercion, she said “yes”); (d) the participant simply overlooked or “missed” the item and/or acknowledged they made an error by not endorsing the SES-LFP coercion item; and (e) the participant remembered using a tactic but not for which specific sex act, so he endorsed SSS items inquiring about “oral, anal, and vaginal intercourse” but did not endorse SES-LFP items, which inquire about tactics used for specific sex acts.

For example, a 27-year-old endorsed “telling lies” and “repeatedly asking” on the SSS but produced a false negative for a SES-LFP verbal coercion item and invoked reasons (a) *there were many tactics lumped together*, (b) *I’m not that kind of guy*, and (c) *she eventually consented* to explain why he did not endorse verbal coercion on the SES-LFP:

I’ve never tried to like, what is it, blackmail...that’s not gonna get you anywhere good [*reason a*]. Saying something I don’t mean-- that’s not forcing anybody to do anything...[The SES-LFP items] were all “without her consent.” I don’t believe I’ve been violating her will or done anything against her will [*reason c*]. I’m always making sure I can get past it or sway it, but I’ve never violated it to the point...of rape or something [*reason b*].

Another 27-year-old endorsed “repeatedly asking” and “questioning her commitment to the relationship” on the SSS. He described one incident in which, “she say [sic.] “no” [at the] beginning of the night, [I] just keep on her. She ended up eventually giving in.” This participant produced false negatives on the SES-LFP verbal coercion items, however. During the interview, he referenced reasons (b) *I’m not that kind of guy*—“[The SES-LFP item] sounds so bad... ‘continually verbally pressuring her.’ I don’t think I was putting pressure on her, you know... It seemed a little harsh”—and (d) *I just missed it*—“Uh, showing displeasure, yeah. Getting angry... yeah, I think I should have did that one”—to explain why he did not endorse both SES-LFP verbal coercion items.

One 24-year-old participant’s original report resulted in an Inaccurate Discrepancy for sexual assault tactics: He endorsed “getting her drunk or high to convince her to have sex” and “taking advantage of the fact that she is drunk or high” on the SSS, but he produced a false negative for sexual assault tactics on the SES-LFP. He acknowledged that he had used “getting her drunk and high to convince [a woman] to have sex” by buying her alcohol and “ask[ing] her, like, ten times within, like, a 2-hour period” to have sex with him. However, he inaccurately believed he secured consent, saying, “even if she’s really intoxicated, I still got a yes.” This participant also produced an Inaccurate Discrepancy for verbal coercion, due to accurate endorsement on the SSS for “telling lies” and a false negative on the SES-LFP. He reported that he chose not to endorse the verbal coercion item on the SES-LFP, because (a) *there were many tactics lumped together*: “[The SES-LFP item] says more than just telling lies—‘telling lies,

[threatening] to end the relationship, spread rumors’—I didn’t do any of that. I just told lies...I’ve done one, but I haven’t done the rest of that.”

One 29-year-old participant produced an Inaccurate Discrepancy for verbal coercion by endorsing several SSS items and no SES-LFP items for reason *(e) can’t remember specific sex act as required by the SES-LFP*: “I think [the SES-LFP item] was specific to just oral sex. I don’t remember an example of it just being oral sex, like I don’t know... so, I think that’s why I went against that one.” He also indicated that he did not endorse SES-LFP items, because he inaccurately believed *(c) she eventually consented* despite the use of a verbally coercive tactic: “I’ve never actually done anything without her consent... I’ve tried to manipulate to getting her consent...I have lied and definitely tried to make crap up to get in her pants, for sure.”

***Inaccurate Discrepancy resulting from a false positive report.*** The majority of Inaccurate Discrepancies resulted from a false *negative* endorsement on one scale. False *positive* endorsements were less common than false negative endorsements and rarely yielded Inaccurate Discrepancies, because many men who had false positives also accurately endorsed multiple tactics (i.e., they also had correct positives), such that one false positive did not result in misclassifying someone as sexually aggressive. False positive reports occurred when participants misunderstood an item, responded carelessly, or used the tactic, not to get sex, but because the participant had a legitimate question or concern (e.g. sincerely “questioning her commitment to the relationship” rather than using that as a strategy to get sex).

Only one false positive endorsement yielded an Inaccurate Discrepancy for verbal coercion, because the man should not have endorsed any items on either scale. A 26-

year-old produced a false positive for “telling lies” on the SSS. He reportedly told a woman that he loved her when he did not, but the lie was not told for the purposes of securing sex. This man accurately did not endorse verbal coercion items on the SES-LFP, resulting in an Inaccurate Discrepancy. The participant explained why he produced a false positive: “I think I looked at [the SSS verbal coercion item] and... recognized that behavior, and I didn’t associate as much with the [SSS] question [i.e., SSS prompt, which includes the statement “after she initially said ‘no’”].” The interviewer then clarified, “So, it’s not the case that [the lie] was after she initially said ‘no’” to sex?” The participant indicated that the lie was not told after the woman initially said “no” to sex.

### **Study 2 Discussion**

To review, Study 2 was designed to explore men’s interpretations of perpetration measure items, as well as decision making processes employed by men while completing the measures (SES-LFP and SSS). These participants completed the measures under standard conditions; that is, they were not explicitly encouraged or otherwise pressured to produce honest responses. Semi-structured interview questions investigated three areas of interest: (a) men’s opinion of which measure provided a more stringent, definitive, and/or clear conceptualization of non-consent (i.e., “without her consent” on the SES-LFP or “after she initially said ‘no’” on the SSS); (b) the frequency of false positive and false negative responses on the SES-LFP and the SSS, and (c) the nature and source of discrepant responding across the SES-LFP and the SSS. One point about terminology merits clarification: The term “sexual assault tactics” and “strategies” refers to sexual strategies involving taking advantage of intoxication and/or incapacitation, as well as strategies involving threats or physical force. I am not, however, suggesting that all men

who report using sexual assault tactics have behaved in a way that would warrant a legal sexual assault charge.

The SES-LFP and the SSS vary in language used to describe a woman's state of non-consent. Based on coding results, variations in men's interpretations of non-consent language were substantial and appeared to affect men's reporting decisions. Only a small portion of participants (11.8%) reported that the phrases "without her consent" and "after she initially said 'no'" have equivalent meaning, such that any sex occurring after a woman says, 'no' is sex that occurs without her consent. Rather, many men (55.8%) perceived the SES-LFP phrase, "without her consent" as a more stringent, clear, and definitive statement of non-consent than the SSS phrase, "after she initially said 'no.'" Indeed, some men made statements suggesting that a woman's verbal 'no' is, in fact, not always a compelling indication of non-consent or an indication that sexual activity should cease. Given that men tended to perceive the SSS's non-consent language as less stringent and harsh, men's tendency to report more sexual aggression on the SSS follows logically.

Participants' variable interpretations of the measures' non-consent language, as well as their variable understanding of consent as a concept, mirror observations in the literature that "consent" is a poorly understood construct and is often under-operationalized in research (see Beres, 2007 for a review). Some men's interview statements suggest a gap in understanding of consent; more specifically, some conflated consent secured after a using a verbal coercion or sexual assault tactic with freely-given consent. The current results suggest that education about the nature of affirmative and freely-given consent may prove an effective point of intervention. In addition,

researchers may choose to focus on improving descriptions of consent *and* non-consent in their measures to increase clarity and promote accurate reporting. Researchers could investigate the impact of providing a definition or description of affirmative, freely-given consent as part of the measure directions; data from this study suggest this description should emphasize that a woman's agreement to sex or lack of explicit resistance to sex *after* the use of an aggressive tactic is not consent. Additionally, directions could provide examples of sexual partner's behaviors often associated with a lack of consent—for example, facial expressions communicating discomfort, attempts to avoid or block certain touches, and non-responsiveness or lack of reciprocation—as well as behaviors associated with an inability to consent when alcohol/drugs are involved—for example, listlessness, disorientation, confusion, and emesis.

Another aim of Study 2 was to investigate the frequency of and reasons for men's unintentional false negative (underreports) and false positive endorsements (over-reports) on these perpetration measures. False negative reports were more common than false positive endorsements. That is, participants appeared to inadvertently fail to report experiences using sexually aggressive strategies more than inadvertently reporting incidents that were, in fact, not consistent with sexually aggressive behavior. Most false negative reports were detected through querying of discrepant reporting across measures. It is likely that other false negative reports were not detected, however, given that it is difficult to assess incidents that were never initially reported on either scale. False negative reports, which were more common on the SES-LFP compared to the SSS, most often resulted from misunderstanding of consent, misinterpretations of item language, and attempts to avoid endorsing items that were judged to be too harsh or deviant.

Following the identification of men's misreporting on the two distinct measures, coding clarified the nature of inconsistent reports—reports in which similar strategies were endorsed on one measure and denied on the other. The presence of an accurate endorsement on one measure and a false negative endorsement of an analogous item on the other measure resulted in what was termed, an “Inaccurate Discrepancy.” Only one of 13 inaccurate discrepancies resulted from a false positive endorsement. A large portion of inaccurate discrepancies resulted from false negative SES-LFP verbal coercion reports. It appeared that men were more willing and able to recognize coercive tactics as described by the SSS. Some men communicated that they were deterred from endorsing SES-LFP coercion items, because items sounded harsh and/or the items “lumped” too many distinct tactics together. Another sizable portion of inaccurate discrepancies resulted from men who accurately endorsed an SSS item because they employed a sexually coercive tactic or used intoxication after a woman said, ‘no,’ whereas they did not endorse sexual aggression on the SES-LFP because the woman eventually “consented” following the coercive tactic or following the administration of alcohol. Again, this finding suggests that focusing on the meaning of consent and, specifically, the importance of securing affirmative, freely-given consent may be critical to reducing rates of sexual violence and developing effective primary prevention programming. Indeed, in an attempt to curb sexual violence among students, the state of California recently passed legislation requiring state-funded institutions of higher education to adopt an affirmative consent standard (Senate Bill No. 967, 2014).

Nearly half (43%) of across-measure reporting discrepancies resulted from accurate, yet discrepant initial reports. Differences between the scales allowed for



individuals to be correctly classified as positive for sexual aggression on one measure but negative on the other. Recall that SES-LFP items inquiring about sex that was only attempted were not included in this study. The instructions on the SSS, however, allow for accurate reports of aggression in incidents of both attempted and completed sex, because the prompt asks only about the use of the tactic not the outcome. Thus several men produced “Accurate Discrepancies” across measures for the use of tactics that did not ultimately result in sex. Additionally, several discrepancies resulted from tactics listed on the SSS that were not included on the SES-LFP, including blocking an exit and threatening to harm oneself.

The most prevalent accurate discrepancy resulted from differences in the scales’ conceptualization of intoxication/incapacitation strategies. Across the literature, perpetration items related to intoxication/incapacitation have inspired the most controversy and concern about insufficient clarity and the potential for participant misunderstanding (see Kolivas & Gross, 2007). The SSS asks about the alcohol-related strategies—“getting her drunk/high in order to convince her to have sex” and “taking advantage of the fact that she is drunk/high”—employed after a woman “initially said, ‘no.’” The SES-LFP, however, was designed to ask about the use of intoxication/incapacitation strategies that approximate legal rape criteria, including an acknowledgment that the woman was “too intoxicated” or “too incapacitated (out of it) to give consent or stop what was happening.” Nearly 30% of the sample admitted to using alcohol strategies as described by the SSS, whereas less than 10% endorsed an intoxication strategy as described by the SES-LFP. Accurate discrepancies in reporting resulted from men who endorsed using alcohol as a sexual strategy (positive SSS

endorsement) but denied that the woman was rendered unable to give consent (negative SES-LFP endorsement). The SES-LFP language of “too intoxicated” is quite subjective and ambiguous, even to researchers; indeed, the two coders for this study had a difficult time determining whether the men’s descriptions of their experiences fit with these items (i.e., whether the woman involved was “too intoxicated”), and the intoxication items accounted for a large portion of the coding disagreements. Researchers like Koss and colleagues have worked tirelessly to describe tactics and sex acts in behaviorally specific language (Koss et al., 2007). Perhaps, researchers could explore the possibility of operationalizing “intoxication” in behaviorally specific language to reduce the reliance on subjective judgments. Currently, it is difficult to delineate between men who have used alcohol coercively and men who have used alcohol in a way that is consistent with legal rape through intoxication/incapacitation.

Surprisingly, participants’ misreporting had only a minimal impact on men’s ultimate classification as having used or not having used sexually aggressive tactics. This limited impact on overall dichotomous classification resulted from the fact that many men initially endorsed multiple verbal coercion and/or sexual assault tactics, most of which were deemed accurate. Based on men’s initial reports, 21 were classified as having used verbal coercion tactics and 10 as having used sexual assault tactics on one or both measures. After coding the interviews and correcting for false negatives and false positives, 22 were classified as having used verbal coercion tactics and 13 as having used sexual assault tactics. The SSS classifications, alone, “stood up” to the interviews better than the SES-LFP classification, because it appeared that men were less likely to produce false negative reports on the SSS than the SES-LFP. These results suggest that, although

some men appear to inaccurately report their use of sexual aggression on an item-by-item level, the measures are reasonably successful in categorizing men dichotomously as either having or not having used sexual aggression. However, optimism about current measures' sensitivity and specificity may be premature, given that interviewing may have failed to identify an unknown number of false negative reports.

### **General Discussion and Conclusions**

Together, Study 1 and Study 2 provided data on the accuracy of men's self-reported use of sexual aggression, as well as information about how men interpret and respond to two popular self-report perpetration measures, the SES-LFP and the SSS. Information from the current studies may aid future perpetration research efforts and, ultimately, the refinement of applied prevention programming.

Results of Study 1 demonstrated that participants—men in both the BPL and control conditions—were relatively open and honest in their self-reporting of verbally coercive sexual strategies. However, the same group of men demonstrated substantial intentional underreporting of their use of sexual assault tactics, including their use of intoxication/incapacitation and threats/force to obtain nonconsensual sex. These data yield two important conclusions: (a) Men appear somewhat comfortable disclosing the use of verbal coercion and may view this behavior as qualitatively distinct from the use of more “severe” sexual assault strategies, and (b) Given significant Bogus Pipeline effects, it appears that men are, indeed, able to recognize their use of sexual assault strategies, but that they actively underreport the use of these strategies under standard self-report conditions. Thus intentional underreporting likely contributes substantially to inaccurate perpetration prevalence rates that are based on men's self-reports.

Results of Study 2 provided more information about the extent and nature of unintentional misreporting on measures of self-reported perpetration. Interview data demonstrated that men were much more likely to unintentionally, or accidentally, underreport sexual aggression than over-report it. Unintentional failures to accurately disclose most often occurred due to item misinterpretation; misunderstanding of the concept of affirmative, freely-given “consent”; and reluctance to identify one’s behavior as consistent with item language that sounded “too harsh” or inconsistent with one’s self-perception.

Together, results from Studies 1 and 2 offered information on men’s interpretation of and reporting on the SES-LFP and the SSS. Men across conditions were more likely to report verbal coercion and sexual assault tactics on the SSS compared to the SES-LFP. Based on interview data from Study 2, men appeared more hesitant to report sexually aggressive behavior when the language of “consent” was explicitly referenced, as it is on the SES-LFP, as compared to when the prompt referenced a woman saying ‘no,’ as on the SSS. It is important to note that more endorsement of sexual aggression on the SSS does not necessarily imply that the SSS is a superior scale; in fact, the language of the SSS is quite removed from legal conceptualizations of sexual aggression compared to the SES-LFP, which may be considered a weakness in some research contexts.

The current results support recommendations by a recent measurement-focused perpetration study (Strang et al., 2013) suggesting that major revisions to self-report perpetration measures may be in order. One potential avenue for research may be the development and validation of a hybrid measure of the SES-LFP and the SSS, which could build on each scale’s unique strengths and reduce the negative impact of

weaknesses. More specifically, this hybrid scale could combine the behavioral specificity for sexual acts of the SES-LFP and the behavioral specificity of sexual tactics and streamlined structure of the SSS (Strang et al., 2013). Participants' apparent resistance toward the SES-LFP's description of non-consent, although more consistent with a legal definition of non-consent than the SSS's description, suggests that special attention must be paid to the description of non-consent in any new or revised measures. More qualitative data focused specifically on men's understanding of non-consent and the language commonly used by men surrounding non-consent could aid in a revision of non-consent language.

One important limitation of the current studies is the exclusive focus on male perpetrators and female victims. Fortunately, our culture and the psychology research community is beginning to attend to issues surrounding male victimization, female perpetration, and rape within the LGBT community (e.g. Potter, Fountain, & Stapleton, 2012; Peterson, Voller, Polusny, & Murdoch, 2011). In fact, some recent findings suggest that current perpetration measures may be even less reliable in detecting female perpetrators as compared to male perpetrators (Buday & Peterson, in press), suggesting the need for improved measurement of women's perpetration, as well. Available data suggest, however, that rape by men against women is the most common form of rape (Teten Tharp et al, 2013). It stands to reason, therefore, that this area of research may represent the lowest hanging fruit and an excellent place to begin the hard work of refining perpetration measurement, in general.

Improved perpetration measurement that produces consistent, accurate perpetration prevalence rates may allow for a paradigm shift toward a focus on primary

sexual assault prevention. To date, prevention programs focus primarily on university men and enjoy limited success in reducing participants' actual rape behavior (Teten Tharp et al., 2013; Foubert, 2000). A critical mass of perpetration researchers disseminating quality research can serve two functions. One, perpetration researchers can accelerate social attitude change through media activism and public consciousness raising about some men's rape behavior. Second, perpetration research based on valid measurement will support researchers developing primary prevention programs for men (e.g. Foubert, 2006; Wantland, 2008).

### References

- Abbey, A., Jacques-Tiura, A. J., & LeBreton, J. (2011). Risk factors for sexual aggression in young men: An expansion of the confluence model. *Aggressive Behavior, 37*, 450 – 464. doi:10.1002/ab.20399
- Abbey, A. Parkhill, M. R., BeShears, R. Clinton-Sherrod, A. M., & Zawacki, T. (2006). Cross-sectional predictors of sexual assault perpetration in a community sample of single African American and Caucasian men. *Aggressive Behavior, 32*, 54–67. doi: 10.1002/ab.20107
- Abbey, A. & McAuslan, P. (2004). A longitudinal examination of male college students' perpetration of sexual assault. *Journal of Consulting and Clinical Psychology, 72*, 747–756. doi: 10.1037/0022-006X.72.5.747
- Alexander, M G. & Fisher, T. D. (2003). Truth and consequences: Using the Bogus Pipeline to examine sex differences in self-reported sexuality. *The Journal of Sex Research, 40*, 27-35. doi: 10.1080/00224490309552164
- Banyard, V. L., Plante, E.G., Cohn, E.S., Moorehead, C., Ward, S., & Walsh, W. (2005). Revisiting unwanted sexual experiences on campus: A 12-year follow-up. *Violence Against Women, 11*, 426-446. doi: 10.1177/1077801204274388
- Beres, M. A. (2007). 'Spontaneous' sexual consent: An analysis of sexual consent literature. *Feminism and Psychology, 17*, 93-108. doi: 10.1177/0959353507072914
- Buday, S., & Peterson, Z. D. (In press). Men's and women's interpretation and endorsement of items measuring self-reported sexual aggression. *Journal of Sex Research*.

- Carpenter, D. L., Janssen, E., Graham, C.A., Vorst, H., & Wicherts, J. (2010). The Sexual Inhibition/Sexual Excitation Scales- Short form. In T. D. Fisher, C. M. Davis, W. L. Yarber, & S. L. Davis (Eds.), *Handbook of sexuality-related measures* (3<sup>rd</sup> edition, 236-240. New York, NY: Routledge.
- Carroll, M. H. & Clark, M. D. (2006). Men's acquaintance rape scripts: A comparison between a regional university and a military academy. *Sex Roles, 55*, 469-480. doi: 10.1007/s11199-006-9102-3
- Cook, S.L. (2002). Self-reports of sexual, physical, and nonphysical abuse perpetration. *Violence Against Women, 8*, 541-565. doi: 10.1177/107780102400388425
- Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G\*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39*, 175-191. doi: 10.3758/BF03193146
- Fisher, B. S., Cullen, F. T., & Daigle, L. E. (2005). The discovery of acquaintance rape: The salience of methodological innovation and rigor. *Journal of Interpersonal Violence, 20*, 493-500. doi: 10.1177/0886260504267761
- Fisher, B. S., Daigle, L. E., & Cullen, F. T. (2010). *Unsafe in the ivory tower: The sexual victimization of college women*. Thousand Oaks, CA: Sage Publications.
- Fisher, T. D. (2013). Gender roles and pressure to be truthful: The Bogus Pipeline modifies gender differences in sexual but not non-sexual behavior. *Sex Roles*. Advance online publication. doi: 10.1007/s11199-013-0266-3
- Ganon, T.A., Keown, K., & Polaschek, D. L. L. (2007). Increasing honest responding on cognitive distortions in child molesters: The bogus pipeline revisited. *Sex Abuse, 19*, 5-22. doi: 10.1007/s11194-006-9033-0



- Gilbert, N. (1997). Rape: Are rape statistics exaggerated? In M. R. Walsh (Ed.), *Women, men, and gender: Ongoing debates* (pp. 236-242). Rensselaer, NY: Hamilton.
- Gilbert, N. (1991). The phantom epidemic of sexual assault. *The Public Interest*, 103, 54-65. Retrieved from <http://www.eric.ed.gov>.
- Gyls, J. A., McNamara, J. R. (1996). A further examination of validity for the Sexual Experiences Survey. *Behavioral Sciences & The Law*, 14, 245- 260. doi: 10.1002/(SICI)1099-0798(199621)14:2<245::AID-BSL235>3.0.CO;2-T
- Heilbrun, A. B. & Loftus. M. P. (1986). The role of sadism and peer pressure in the sexual aggression of male college students. *Journal of Sex Research*, 22, 320-332. doi: 10.1080/00224498609551312
- Jones, E. E. & Sigall, H. (1971). The Bogus Pipeline: A new paradigm for measuring affect and attitude. *Psychological Bulletin*, 76, 349-364. doi: 10.1037/h0031617
- Kolivas, E.D. & Gross, A. M. (2007). Assessing sexual aggression: Addressing the gap between rape victimization and perpetration prevalence rates. *Aggression and Violent Behavior*, 12, 315-328. doi: 10.1016/j.avb.2006.10.002
- Koss, M. P. (2011). Hidden, unacknowledged, acquaintance and date rape: Looking back, looking forward. *Psychology of Women Quarterly*, 35, 348-354. doi: 10.1177/0361684311403856
- Koss, M. P., Abbey, A., Campbell, R., Cook, S., Norris, J., Testa, M., ... White, J. (2007). Revising the SES: A collaborative process to improve assessment of sexual aggression and victimization. *Psychology of Women Quarterly*, 31, 357-370. doi: 10.1111/j.1471-6402.2007.00385.x

- Koss, M.P. Abbey, A., Campbell, R., Cook, S., Norris, J., Testa, M., Ullman, S., West, C., & White, J. (2006). The Sexual Experiences Long Form Perpetration (SES-LFP). Tucson, AZ: University of Arizona.
- Koss, M. P., Dinero, T. E., Seibel, C. A., & Cox, S. L. (1988). Stranger and acquaintance rape: Are there differences in the victim's experience? *Psychology of Women Quarterly*, 21, 1-24. doi: 10.1111/j.1471-6402.1988.tb00924.x
- Koss, M. P., Gidycz, C. A., and Wisniewski, N. (1987). The scope of rape: Incidence and prevalence of sexual aggression and victimization in a national sample of higher education students. *Journal of Consulting and Clinical Psychology*, 55, 162-170. doi: 10.1037/0022-006X.55.2.162
- Koss, M. P., & Gidycz, C. A. (1985). Sexual Experiences Survey: Reliability and validity. *Journal of Consulting and Clinical Psychology*, 53, 422-423. doi: 10.1037//0022-006X.53.3.422
- Koss, M. P. (1993). Detecting the scope of rape: a review of prevalence research methods. *Journal of Interpersonal Violence*, 8, 198-222. doi: 10.1177/088626093008002004
- Koss, M. P. & Oros, C. J. (1982). Sexual Experiences Survey: A research instrument investigating sexual aggression and victimization. *Journal of Consulting and Clinical Psychology*, 50, 455-457. doi: 10.1037/0022-006X.50.3.455
- Lisak, D. & Miller, P. M. (2002). Repeat rape and multiple offending among undetected rapists. *Violence and Victims*, 17, 73-84. doi: 10.1891/vivi.17.1.73.33638

- Littleton, H. L., Axsom, D., & Yoder, M. (2006). Priming of consensual and nonconsensual sexual scripts: An experimental test of the role of scripts in rape attributions. *Sex Roles, 54*, 557–563. doi: 10.1007/s11199-006-9017-z
- Marshall, L. L. (1992). Development of the severity of violence against women scales. *Journal of Family Violence, 7*, 103-121. doi: 10.1007/BF00978700
- Meston, C. M., Heiman, J. R., Trapnell P. D. & Paulhus, D. L. (1998). Socially desirable responding and sexuality self-reports. *The Journal of Sex Research, 35*, 148-157. doi: 10.1080/00224499809551928
- Muehlenhard, C. L., & Peterson, Z. D. (2004). Conceptualizing sexual violence: Socially acceptable coercion and other controversies. In A. G. Miller (Ed.), *The social psychology of good and evil* (pp. 240-268). New York, NY: Guilford.
- Muehlenhard, C. L., Simpson, S. C., Phelps, J. L., Highby, B. J. (1994). Are rape statistics exaggerated? A response to criticism of contemporary rape research. *Journal of Sex Research, 31*, 144-146. doi: 10.1080/00224499409551742
- Ouimette, P. C., Shaw, J., Drozd, J. F., & Leader, J. (2000). Consistency of reports of rape behaviors among nonincarcerated men. *Psychology of Men & Masculinity, 1*, 133-139. doi: 10.1037//1524-9220.1.2.133
- Paulhus, D. L. (1991). Measurement and control of response bias. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of personality and social psychology attitudes: Vol 1* (pp. 17-59). San Diego, CA: Academic Press.
- Peterson, Z. D & Muehlenhard, C. L. (2011). A match-and-motivation model of how women label their nonconsensual sexual experiences. *Psychology of Women Quarterly, 35*, 558-570. doi: 10.1177/0361684311410210

- Peterson, Z. D., Janssen, E., & Heiman, J. R. (2010). The association between sexual aggression and HIV risk behavior in heterosexual men. *Journal of Interpersonal Violence, 25*, 538-556. doi: 10.1177/0886260509334414
- Peterson, Z. D., Janssen, E., Heiman, J. R., Goodrich, D., Thigpen, J., & Fortenberry, J. D. (2010, July). *Negative affect and emotion dysregulation as associated with sexual aggression: A study of young men from urban STD clinics*. Paper presented at the annual meeting of the International Academy of Sex Research, Prague, Czech Republic.
- Porter, J. F. & Critelli, J. W. (1992). Measurement of sexual aggression in college men: A methodological analysis. *Archives of Sexual Behavior, 21*, 525–542. doi: 10.1007/BF01542254
- Porter, J. F., Critelli, J. W., Tang, C. S. K. (1992). Sexual and aggressive motives in sexually aggressive college males. *Archives of Sexual Behavior, 21*, 457- 468. doi: 10.1007/BF01542270
- Rapaport, K., & Burkhart, B. R. (1984). Personality and attitudinal characteristics of sexually coercive college males. *Journal of Abnormal Psychology, 93*, 216-221. doi: 10.1037/0021-843X.93.2.216
- Roese, N. J. & Jamieson, D. W. (1993). Twenty years of Bogus Pipeline research: A critical review and meta-analysis. *Psychological Bulletin, 114*, 363-375.  
Retrieved from <http://www.apa.org/pubs/journals/bul/index.aspx>
- Roiphe, K. (1993). *The morning after: Sex, fear, and feminism*. Boston, MA: Little, Brown.

- Ross, R. R., & Allgeier, E. R. (1996). Behind the pencil/paper measurement of sexual coercion: Interview-based clarification of men's interpretations of sexual experiences survey items. *Journal of Applied Social Psychology, 26*, 1587–1616. doi: 10.1111/j.1559-1816.1996.tb00087.x
- Senate Bill No. 967, Student safety: sexual assault, California Education Code. §§ 748-67386 (2014).
- Spitzberg, B. H. (1999). An analysis of empirical estimates of sexual aggression victimization and perpetration. *Violence and Victims, 14*, 241-260. doi: 10.1177/088626099014001001
- Strahan, R. & Gerbasi, K. C. (1972). Short, homogeneous versions of the Marlowe-Crowne Social Desirability Scale. *Journal of Clinical Psychology, 28*, 191-193. doi: 10.1002/1097-4679(197204)28:2<191::AID-JCLP2270280220>3.0.CO;2-G
- Strang, E., Peterson, Z. D., Hill, Y. N., & Heiman, J. R. (2013). Discrepant responding across self-report measures of men's coercive and aggressive sexual strategies. *Journal of Sex Research, 50*, 458-469. doi: 10.1080/00224499.2011.646393
- Strang, E., Peterson, Z. D., Hill, Y. N., & Heiman, J. R. (2013). [Qualitative data from a study of discrepant with-in subject responding to perpetration measures]. Unpublished raw data.
- Strang, E. & Peterson, Z.D. (2012). The relationships among perceived peer acceptance of sexual aggression, punishment certainty, and sexually aggressive behavior. *Journal of Interpersonal Violence, 28*, 3369-3385. doi: 10.1177/0886260513502126

- Straus, M. A., Hamby, S. L., Boney-McCoy, S., & Sugarman, D. B. (1996). The Revised Conflict Tactics Scales: Development and preliminary psychometric data. *Journal of Family Issues, 17*, 283-316. doi: 10.1177/019251396017003001
- Struckman-Johnson, C., Struckman-Johnson, D., & Anderson, P. B. (2003). Tactics of sexual coercion: When men and women won't take no for an answer. *Journal of Sex Research, 40*, 76-86. doi:10.1080/00224490309552168
- Teten, A. L., Hall, G. C. N., & Capaldi, D. M. (2009). Use of coercive sexual tactics across 10 years in at-risk young men: Developmental patterns and co-occurring problematic dating behaviors. *Archives of Sexual Behavior, 38*, 574-582. doi: 10.1007/s10508-007-9309-6
- Teten Tharp, A., De Gue, S., Valle, L. A., Brookmeyer, K. A., Massetti, G. M., & Matjasko, J. L. (2013). A systemic qualitative review of risk and protective factors for sexual violence perpetration. *Trauma, Violence, and Abuse, 14*, 133-167. doi: 10.1177/1524838012470031
- Thornberry, T. P. & Krohn, M. D. (2000). The self-report method for measuring delinquency and crime. *Criminal Justice, 4*, 33-83. Retrieved from <https://www.ncjrs.gov>
- Tourangeau, R. Smith, T. W., & Rasinski, K. A. (1997). Motivation to report sensitive behaviors on surveys: Evidence from a Bogus Pipeline experiment. *Journal of Applied Social Psychology, 27*, 209-222. doi: 10.1111/j.1559-1816.1997.tb00629.x

- Turchik, J. A., & Garske, J. P. (2009). Measurement of sexual risk taking among college students. *Archives of Sexual Behavior, 38*, 936-948. doi: 10.1007/s10508-008-9388-z
- Walker, W. D., Rowe, R. C., & Quinsey, V. L. (1993). Authoritarianism and sexual aggression. *Journal of Personality and Social Psychology, 65*, 1036-1045. doi: 10.1037/0022-3514.65.5.1036
- Wiederman, M. W. (2005). The gendered nature of sexual scripts. *The Family Journal, 13*, 496-502. doi: 10.1177/1066480705278729

**Appendix A**

**The Sexual Experiences Long Form Perpetration (SES-LFP)**

**Selected Questions**

**(Koss et al., 2007)**

The next set of questions refers to different sexual experiences that you might have had. Each question appears in **bold type**. After each question you will see statements labeled **a** through **m**. For each statement you are asked to indicate how many times that has occurred during the past 12 months. Then select a number to indicate how many times you have had that experience going back to your 14th birthday

		<b>How many times since age 14</b>
1.	<b>I fondled, kissed, or rubbed up against the private areas of a woman’s body (lips, breast/chest, crotch or butt) or removed some of her clothes without her consent (<i>but did not attempt sexual penetration</i>) by:</b>	0 1 2 3+
	a. Telling lies, threatening to end the relationship, threatening to spread rumors about them, making promises about the future I knew were untrue, or continually verbally pressuring them after they said they didn’t want to.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	b. Showing displeasure, criticizing their sexuality or attractiveness, getting angry but not using physical force after they said they didn’t want to.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	c. Giving someone a drug such as Rohypnol, GHB, "fry cigarettes", "ecstasy" or “Ketamine” without their knowledge that made them too incapacitated ( <i>out of it</i> ) to consent or stop what was happening.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>



d.	Finding someone who was asleep or unconscious <i>from drugs</i> and when they came to ( <i>regained consciousness</i> ) they could not stop what was happening.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
e.	Encouraging and pressuring someone to use drugs such as pot, or Valium until they became too incapacitated ( <i>out of it</i> ) to consent or stop what was happening.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
f.	Finding someone who had been taking drugs and was conscious but too incapacitated ( <i>out of it</i> ) to give consent or stop what was happening.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
g.	Serving someone high alcohol content drinks when they appeared to be regular strength drinks until they were too intoxicated ( <i>drunk</i> ) to give consent or stop what was happening.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
h.	Finding someone who was asleep or unconscious <i>from alcohol</i> and when they came to ( <i>regained consciousness</i> ) they could not stop what was happening.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
i.	Encouraging and pressuring someone to drink alcohol until they were too intoxicated ( <i>drunk</i> ) to give consent or stop what was happening.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
j.	Finding someone who had been drinking alcohol and was conscious but too intoxicated ( <i>drunk</i> ) to give consent or stop what was happening.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
k.	Threatening to physically harm them or someone close to them.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
l.	Using force, for example holding them down with my body weight, pinning their arms, or having a weapon.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
m.	Acting as part of a group <i>of two or more people</i> who did these things after someone objected or was unable to give consent.	

	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
--	---

		How many times since age 14
		0 1 2 3+
2.	<b>I had oral sex with a woman or had a woman perform oral sex on me without her consent by:</b>	
	a. Telling lies, threatening to end the relationship, threatening to spread rumors about them, making promises about the future I knew were untrue, or continually verbally pressuring them after they said they didn't want to.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	b. Showing displeasure, criticizing their sexuality or attractiveness, getting angry but not using physical force after they said they didn't want to.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	c. Giving someone a drug such as Rohypnol, GHB, "fry cigarettes", "ecstasy" or "Ketamine" without their knowledge that made them too incapacitated ( <i>out of it</i> ) to consent or stop what was happening.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	d. Finding someone who was asleep or unconscious <i>from drugs</i> and when they came to ( <i>regained consciousness</i> ) they could not stop what was happening.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	e. Encouraging and pressuring someone to use drugs such as pot, or Valium until they became too incapacitated ( <i>out of it</i> ) to consent or stop what was happening.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	f. Finding someone who had been taking drugs and was conscious but too incapacitated ( <i>out of it</i> ) to give consent or stop what was happening.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

<p>g. Serving someone high alcohol content drinks when they appeared to be regular strength drinks until they were too intoxicated (<i>drunk</i>) to give consent or stop what was happening.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>h. Finding someone who was asleep or unconscious <i>from alcohol</i> and when they came to (<i>regained consciousness</i>) they could not stop what was happening.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>i. Encouraging and pressuring someone to drink alcohol until they were too intoxicated (<i>drunk</i>) to give consent or stop what was happening.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>j. Finding someone who had been drinking alcohol and was conscious but too intoxicated (<i>drunk</i>) to give consent or stop what was happening.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>k. Threatening to physically harm them or someone close to them.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>l. Using force, for example holding them down with my body weight, pinning their arms, or having a weapon.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>m. Acting as part of a group <i>of two or more people</i> who did these things after someone objected or was unable to give consent.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

		How many times since age 14			
		0	1	2	3+
3.	<b>I put my penis or I put my fingers or objects into a woman's vagina without her consent by:</b>				
a.	Telling lies, threatening to end the relationship, threatening to spread rumors about them, making promises about the future I knew were untrue, or continually verbally pressuring them after they said they didn't want to.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b.	Showing displeasure, criticizing their sexuality or attractiveness, getting angry but not using physical force after they said they didn't want to.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c.	Giving someone a drug such as Rohypnol, GHB, "fry cigarettes", "ecstasy" or "Ketamine" without their knowledge that made them too incapacitated ( <i>out of it</i> ) to consent or stop what was happening.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d.	Finding someone who was asleep or unconscious <i>from drugs</i> and when they came to ( <i>regained consciousness</i> ) they could not stop what was happening.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e.	Encouraging and pressuring someone to use drugs such as pot, or Valium until they became too incapacitated ( <i>out of it</i> ) to consent or stop what was happening.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f.	Finding someone who had been taking drugs and was conscious but too incapacitated ( <i>out of it</i> ) to give consent or stop what was happening.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g.	Serving someone high alcohol content drinks when they appeared to be regular strength drinks until they were too intoxicated ( <i>drunk</i> ) to give consent or stop what was happening.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

h.	Finding someone who was asleep or unconscious <i>from alcohol</i> and when they came to ( <i>regained consciousness</i> ) they could not stop what was happening.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
i.	Encouraging and pressuring someone to drink alcohol until they were too intoxicated ( <i>drunk</i> ) to give consent or stop what was happening.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
j.	Finding someone who had been drinking alcohol and was conscious but too intoxicated ( <i>drunk</i> ) to give consent or stop what was happening.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
k.	Threatening to physically harm them or someone close to them.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
l.	Using force, for example holding them down with my body weight, pinning their arms, or having a weapon.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
m.	Acting as part of a group <i>of two or more people</i> who did these things after someone objected or was unable to give consent.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

		How many times since age 14
4.	<b>I put my penis or I put my fingers or objects into a woman's butt without her consent by:</b>	0 1 2 3+
a.	Telling lies, threatening to end the relationship, threatening to spread rumors about them, making promises about the future I knew were untrue, or continually verbally pressuring them after they said they didn't want to.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

<p>b. Showing displeasure, criticizing their sexuality or attractiveness, getting angry but not using physical force after they said they didn't want to.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>c. Giving someone a drug such as Rohypnol, GHB, "fry cigarettes", "ecstasy" or "Ketamine" without their knowledge that made them too incapacitated (<i>out of it</i>) to consent or stop what was happening.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>d. Finding someone who was asleep or unconscious <i>from drugs</i> and when they came to (<i>regained consciousness</i>) they could not stop what was happening.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>e. Encouraging and pressuring someone to use drugs such as pot, or Valium until they became too incapacitated (<i>out of it</i>) to consent or stop what was happening.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>f. Finding someone who had been taking drugs and was conscious but too incapacitated (<i>out of it</i>) to give consent or stop what was happening.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>g. Serving someone high alcohol content drinks when they appeared to be regular strength drinks until they were too intoxicated (<i>drunk</i>) to give consent or stop what was happening.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>h. Finding someone who was asleep or unconscious <i>from alcohol</i> and when they came to (<i>regained consciousness</i>) they could not stop what was happening.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>i. Encouraging and pressuring someone to drink alcohol until they were too intoxicated (<i>drunk</i>) to give consent or stop what was happening.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>j. Finding someone who had been drinking alcohol and was conscious but too intoxicated (<i>drunk</i>) to give consent or stop what was happening.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>k. Threatening to physically harm them or someone close to them.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>l. Using force, for example holding them down with my body weight, pinning their arms, or having a weapon.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>m. Acting as part of a group <i>of two or more people</i> who did these things after someone objected or was unable to give consent.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

## Appendix B

### The Sexual Strategies Scale (SSS)

(Peterson et al., 2010)

Based on the Post-refusal Sexual Persistence Scale (Struckman-Johnson et al., 2003)

**Since you were age 14, which if any of the following strategies have you used to convince a woman to have sex (oral, anal, or vaginal intercourse) after she initially said “no”? (check all that apply)**

1.  Continuing to touch and kiss her in the hopes that she will give in to sex.
2.  Telling her lies (e.g., saying “I love you” when you don’t).
3.  Using your older age to convince her.
4.  Getting her drunk/high in order to convince her to have sex.
5.  Threatening to tell others a secret or lie about her if she doesn’t have sex (i.e., blackmail).
6.  Asking her repeatedly to have sex.
7.  Blocking her if she tries to leave the room.
8.  Threatening to harm her physically if she doesn’t have sex.
9.  Taking advantage of the fact that she is drunk/high.
10.  Threatening to harm yourself if she doesn’t have sex.
11.  Using a weapon to frighten her into having sex.
12.  Taking off her clothes in the hopes that she will give in to sex.
13.  Taking off your clothes in the hopes that she will give in to sex.
14.  Using physical restraint.
15.  Threatening to break up with her if she doesn’t have sex.
16.  Questioning her sexuality (e.g., calling her a lesbian).
17.  Using your authority to convince her (e.g., if you were her boss, her supervisor, her camp counselor, etc.).
18.  Harming her physically.
19.  Tying her up.
20.  Questioning her commitment to the relationship (e.g., saying “if you loved me, you would”).
21.  Accusing her of “leading you on” or being “a tease.”
22.  Slipping her drugs (e.g., GHB or “Roofies”) so that you can take advantage of her.
23.  I have never used ANY of the above strategies.



**Appendix C**

**Brief sexual history questionnaire**

1. At what age did you first receive oral sex from a woman?
2. At what age did you first perform oral sex on a woman?
3. At what age did you first have penile-vaginal intercourse with a woman?
4. At what age did you first have penile-anal intercourse with a woman?
5. Have you ever had any consensual same-sex experiences with oral sex?  
 Yes   
 No
6. Have you ever had any consensual same-sex experiences with anal sex?  
 Yes   
 No
7. Do you think you may have ever verbally coerced a woman into oral, vaginal, or anal sex?  
 Yes   
 No
8. Do you think you may have ever raped or sexually assaulted a woman?  
 Yes   
 No
9. At what age did you first masturbate?
10. How frequently do you masturbate?  
 More than once per day   
 Once per day   
 Several times per week   
 Once per week   
 2-3 times per month   
 Fewer than once per month   
 Never
11. When was your last experience with oral, vaginal, or, anal sex?  
 Today or yesterday   
 In the past 7 days   
 In the past 30 days   
 In the past 3 months

- In the past 6 months
- In the past year
- More than 1 year ago

12. Over the last month, how often were you able to get an erection during sexual activity?

- No sexual activity
- Almost always or always
- Most times (much more than half the time)
- Sometimes (about half the time)
- A few times (much less than half the time)
- Almost never or never

**Appendix D**

**Posttest Questionnaire  
Modified slightly from Fisher (2013)**

Please answer the following questions about the physiological equipment to which you were attached:

1. How likely do you think it is that the equipment could be used to assess your anxiety level?

1	2	3	4	5
Not at all Likely	Slightly Likely	Moderately Likely	Very Likely	Extremely Likely

2. How likely do you think it is that the equipment could be used to assess your honesty level?

1	2	3	4	5
Not at all Likely	Slightly Likely	Moderately Likely	Very Likely	Extremely Likely

3. How much influence did the equipment have on your responses to the questions you answered?

1	2	3	4	5
No Influence	Slight Influence	Moderate Influence	Much Influence	Extreme Influence

4. How much pressure did you feel from the equipment to answer the questions honestly?

1	2	3	4	5
No Pressure	Slight Pressure	Moderate Pressure	Much Pressure	Extreme Pressure

Comments:

## Appendix E

### Semi-Structured Interview

I want to thank you doing this interview. We are interested in learning more about men's decision-making and sexual experiences. We are aware that different people interpret survey questions in different ways, so we will be asking you questions about the surveys you just completed. We will ask about your thoughts on the questions themselves, as well as your own responses. There are no right or wrong answers to these questions; we are just interested in hearing your thoughts and opinions. We believe that with your help we can improve our questionnaires and overall research efforts.

[PARTICIPANTS WILL BE PROVIDED WITH BLANK COPIES OF THE QUESTIONNAIRES TO REFERENCE DURING THE INTERVIEW]

Any questions before we get started?"

1. In your own words, what does the phrase "without her consent" mean to you?
2. How do you know if someone has consented to sexual activity?
3. How can you tell if someone has not consented to sexual activity?
4. In your own words, what does "after she initially said no" mean?
5. How is "without her consent" and "after she initially said no" similar?
6. How is "without her consent" and "after she initially said no" different?
7. Tell me about any questions or phrases that were vague, confusing, or unclear
8. How did you feel about answering these questions [point to SES-LFP]? [If needed] "What were you thinking when you read these?"
9. How did you feel about answering these questions [point to SSS]? [If needed] "What were you thinking when you read these?"
10. [Query all positive endorsements for incident details, determination of non-consent, and strategy used] You answered 'yes' to this question: \_\_\_\_\_. Can you tell me about this experience?
11. [Query potential inconsistencies] You answered 'yes' to the question: \_\_\_\_\_ and described the experience for me. You answered 'no' to this question: \_\_\_\_\_. Can you tell me about this decision?

12. Have you ever had any experiences that are “almost like” one of the scenarios described in any questions. [If needed] Have you ever had any experiences that made you unsure of whether to answer ‘yes’ or ‘no’ to a question? [If yes] Can you tell me more about this experience?

13. Do you think you may have ever coerced a woman into sex?

[If yes] What makes you think that?

[If no *and* answered ‘yes’ to SES a-b (questions 2, 3, 4) or SSS 2, 5, 6, 15, 16, 20, 21]  
What makes you experience with \_\_\_\_\_ different from coercion?

14. Do you think you may have ever sexually assaulted or raped someone?

[If yes] What makes you think that?

[If no *and* answered ‘yes’ to SES c-m (questions 2, 3, 4) or SSS 4, 7, 8, 9, 11, 14, 18, 19, 22] What makes you experience with \_\_\_\_\_ different from rape?