

Running head: SEXUAL ASSAULT PREVENTION

Sexual Assault Prevention: Changing Explicit and Implicit Cognitions of University Men

by

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Abstract

The first study examined correlations between explicit cognitions, implicit attitudes and self-reported sexual aggression in 70 male university students. Implicit attitudes were measured by the Rape Evaluation Implicit Association Test and the Rape Evaluation Affect Misattribution Procedure. Explicit cognitions were correlated with self-reported sexual aggression. Implicit attitudes were not correlated with self-reported sexual aggression. Explicit cognitions were correlated with implicit attitudes. The second study investigated the effects of three rape prevention videos on self-reported sexual aggression, explicit cognitions, implicit attitudes, and victim empathy in 54 male university students. Compared to a control video, watching rape-prevention videos was not associated with decreased self-reported sexual aggression, watching victim empathy and outcome expectancies videos was associated with decreased explicit rape-supportive cognitions, watching rape myths and victim empathy videos was associated with more negative implicit attitudes toward rape, and watching victim empathy video was associated with more empathy toward victims of rape.

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Sexual Assault Prevention: Changing Explicit and Implicit Cognitions of University Men

Human aggression is a hostile, violent, or destructive behaviour that is meant to cause physical or psychological harm or injury to another person. For the behaviour to be truly aggressive, the aggressor has to believe that the behaviour will be harmful to the victim, and that the victim is motivated to avoid the aggressive act (Anderson & Bushman, 2002; Bushman & Anderson, 2001). There are many subtypes of aggression, including sexual aggression. Abbey and McAuslan (2004) defined rape as “attempted or completed vaginal, anal, or oral sexual intercourse obtained through force, through the threat of force, or when the victim is incapacitated and unable to give consent” (p. 747) and sexual assault as “a more inclusive term that covers a range of sex acts, including physically forced sexual contact (e.g., kissing or touching), verbally coerced intercourse, and any acts that constitute rape” (p. 747). In 2007, over 24,000 sexual assaults were recorded by police in Canada (Brennan & Taylor-Butts, 2008). But official statistics do not provide a correct estimate of the true number of this type of crime because the majority of the victims do not report the crime to the police (Yurchesyn, Keith, & Renner, 1992). A Statistics Canada (2006) survey of violence against women found that less than 10% of victims of sexual assault reported these crimes to the police. Recent surveys have found that 1,977 of every 100,000 Canadian women were victims of sexual assault (Brennan & Taylor-Butts, 2008).

Sexual aggression has serious physical and psychological consequences. In addition to frequent experiences of physical harm, Koss (1993) reported that up to 30 % of victims become infected with sexually transmitted diseases and about 5% of cases result in unwanted pregnancy. Similar to the reactions of people who experienced other forms of violent crime, victims of sexual aggression report feeling numerous negative emotions in response to their victimization,

such as anger, confusion, frustration, shock, disbelief, and fear (Brennan & Taylor-Butts, 2008). Victims of rape report high levels of stress, anxiety, depression and fear that disrupt social, occupational, and sexual functioning; and about 20% of the victims will continue to experience symptoms of PTSD and show significant adjustment difficulties years later (Hanson, 1990). Even after several years since sexual assault, victims are more likely to suffer from major depression, alcohol abuse and dependence, drug abuse and dependence, generalized anxiety, obsessive-compulsive disorder, and post-traumatic stress disorder (Koss, 1993).

Sexual aggression is a serious problem, and it is important to understand the causes of this problem because this understanding can inform interventions and treatments to reduce its occurrence. Many sex offenders, including rapists, hold offense-supportive attitudes, beliefs, and stereotypes. These offense-supportive cognitions are usually targeted in sex offender treatment programs (McGrath, Cumming, Burchard, Zeoli, & Ellerby, 2010). Many sex offenders are also believed to have empathy deficits for their victims (Malamuth, 1988). Victim empathy is currently one of the main treatment targets in almost all programs for adult and adolescent sex offenders (McGrath et al., 2010). The present study focused on the way reports of sexually aggressive behaviours, explicit rape related cognitions (including attitudes), implicit attitudes toward rape, and victim empathy change after different video-based interventions (rape myths video, victim empathy video, outcome expectancies video, and a control condition).

Theoretical Relationship between Attitudes and Behaviour

Attitudes are defined as summary evaluations of psychological objects (associations between an object and an evaluation of that object) that can be measured along such dimensions as positive-negative, pleasant-unpleasant, harmful-beneficial, and likable-dislikable (Ajzen, 2001; Eagly & Chaiken, 1993; Fazio, 2007). Therefore, attitudes toward rape can be

conceptualized as summary evaluations of rape. These evaluations, which come from beliefs, affect, and behavioural information, include analytical judgments as well as affective reactions (Fazio, 2007). Ajzen's (1991) Theory of Planned Behaviour suggests that behaviour is a function of intentions to commit the behaviour and perceptions of control over the behaviour. Intention to commit a behaviour is influenced by attitudes toward the behaviour (e.g., positive attitudes toward rape), the subjective norms surrounding the behaviour (e.g., peer influences that promote sexual assault), and individuals' perceived control in committing the behaviour (Ajzen, 1991).

Attitudes are considered to be relevant for understanding and predicting behaviour (Ajzen, 2001). Glasman and Albarracín (2006) conducted a meta-analysis involving 4, 598 participants and found a large overall attitude-behaviour correlation of .52 (95% CI [.49, .54]). Kraus (1995) reports a meta-analysis of 88 attitude-behaviour studies that show that attitudes significantly predict future behaviour (mean $r = .38$; $p < .01$). In sum, research supports the notion that attitudes are important determinants of behaviour.

Theoretical Relationship between Cognitions and Sexually Aggressive Behaviour

Offense-supportive cognitions are usually described as cognitions that are assumed to cause or contribute to offending (Blake & Gannon, 2008). Rape related cognitions include rape myths, offence supportive beliefs, justifications, rationalizations, and attitudes toward rape. In theory and research on sexual aggression, there is often a lack of clarity and consistency in the definition of different cognitive constructs related to sexual offending. For example, the term "attitude" is often used to refer to other rape-supportive cognitions, such as rationalizations and excuses, which are different from summary evaluations (i.e. attitudes). Rationalizations (excuses) are defined as cognitions that are used to minimize one's responsibility for an act (e.g., by using external attributions as explanations) without denying the wrongfulness of the behaviour (Scott

& Lyman, 1968). Justifications, on the other hand, are used to minimize the wrongfulness of the act without denying one's responsibility for it (Scott & Lyman, 1968). An example of a rationalization is a statement like "I should not be held responsible for this rape, since I was under the influence of alcohol at the time", and an example of a justification is "There is nothing wrong with raping a prostitute, since they sell their bodies for sex all the time anyway". Rape myths are offence supportive beliefs about oneself, women and the world, such as "When a woman gets raped more than once, she is probably doing something to cause it" or "If a person tells himself that he will never rape again, then he probably won't". Because of this inconsistency in the definitions of different rape related cognitions it is often difficult to determine which theories and studies specifically target attitudes and which mislabel other cognitions as "attitudes".

The hypothesis that cognitions are relevant for the understanding of behaviour is present in a number of theories of sexual aggression. The Hierarchical-mediational confluence model (HMC; Malamuth, 1986; Malamuth, 2003) was first created to integrate the attributes of sexual aggressors and included risk factors such as antisocial tendencies, cognitions supportive of violence against women, and hostility toward women (Malamuth, 1986). Predictors were selected based on belief that sexual aggression is caused by multiple factors and interactions among them, some of these factors creating the motivation and opportunity to act and others reducing internal and external inhibitions (Malamuth, 1986). When this model was tested, it was found that risk factors were individually related to sexual aggression, but the interactive combination of the risk factors was even better in predicting sexually aggressive behaviour (Malamuth 1986). These results led to the creation of the more developed HMC model, which emphasized the importance of the interactive confluence of sexual aggression risk factors. The

HCM model was used with criminal and noncriminal samples of sexually aggressive men to find many similar characteristics in both groups, including cognitions supportive of sexual aggression (Malamuth, 2003). This theoretical model is important for the research on rape related cognitions because it mentions cognitions supportive of sexual aggression as important predictors of sexually aggressive behaviours, but also emphasizes the fact that it is not the only risk factor for sexual aggression. Therefore, when studying cognitions and sexual aggression, it is important to remember that this important risk factor will never be the only relevant predictor of sexual aggression.

Another model of sexual aggression, the Judgment Model of Cognitive Distortions (JMCD; Ward, Gannon, & Keown, 2006), is based on the idea that sex offenders' offense-supporting statements are the result of different combinations of three factors: (a) beliefs; (b) values and goals associated with these values; and (c) actions. The JMCD explains how beliefs and values are the basis for sexual offending, and how offense-supporting statements such as "women who get raped get what they deserve", "women like to be dominated and controlled" or "women cannot be trusted" reflect different combinations of these beliefs, values, and actions (Ward et al., 2006). Judgments made by individuals about the meaning of observed events, goals that are worth pursuing, and the meaning of one's own and others' actions, lead to the development of persistent beliefs and values, which in turn influence future judgments about the social world (Ward et al., 2006). Value judgments are evaluations (e.g., positive vs. negative) of the world and people, that reveal what the individual believes to be of worth (or of little value) and what goals are considered worth seeking (Ward et al., 2006). This description of value judgments is very similar to the definition of attitudes as summary evaluations. A statement that women are inferior to men (and are therefore of less value) is an example of a rape-supportive

value judgment or a negative attitude toward women (Ward et al., 2006). These value judgments are very important as they are linked to a person's goals and everyday behaviours (Ward et al., 2006). For example, if a person believes that sexual gratification through rape is a worthy behaviour that will be beneficial, this person has a higher chance of pursuing sexual gratification through rape. Sexually aggressive behaviour, even though caused by many interacting factors, can be the result of a person's judgments, beliefs and values that are distorted or irrational (Ward et al., 2006). Ward and colleagues (2006) argue that beliefs and values are key elements that underlie sexual offenders' decisions regarding sexually aggressive actions. There is a general consensus among researchers that such offence-supporting attitudes and beliefs which reflect sex offenders' thoughts about women, themselves, and the world appear to facilitate and maintain sexually aggressive behaviour (Ward et al., 2006). This is an important theory of sexual aggression because it explains the pathway from one's judgments to the development of persistent beliefs and attitudes, and how these cognitions are linked to one's goals and behaviours.

Explicit and Implicit Attitudes

There are two distinct types of attitudes: implicit and explicit attitudes. Implicit attitudes are automatic, spontaneous evaluations of the attitude object, which do not require an intention to evaluate an object, whereas explicit attitudes are effortful, deliberative, self-reported evaluations of the attitude object (e.g., Gawronski & Bodenhausen, 2006; Olson & Fazio, 2009). The distinction between implicit and explicit attitudes has been described as the difference between unconscious and conscious, spontaneous and deliberate, unobtrusive and obtrusive, and automatic and controlled (Payne, 2009).

Explicit Attitudes and Sexual Aggression

Although a lot of research has been done with self-report measures of general rape-supportive cognitions, not a lot of studies have focused specifically on explicit attitudes toward rape. Because of the lack of clarity and consistency in the definition of different cognitive constructs related to sexual offending most studies that claim to examine attitudes actually look at other rape related cognitions, such as rape myths. Bouffard (2002) conducted one of the few studies that focused only on explicit attitudes toward rape without combining beliefs, justifications, rationalizations and other rape-supportive cognitions under the same label. Bouffard (2002) looked at the relationship between expected outcomes of rape and likelihood to rape in a sample of 129 male undergraduate criminology students. Bouffard (2002) examined outcome expectancies, which are believed to be a reasonable measure of attitudes, because attitudes toward a behaviour are believed to be based on the aggregate valence of the expected outcomes of that behaviour (Fishbein & Ajzen, 1975). According to Fishbein and Ajzen (1975), a person's attitude toward an object can be determined by one's set of beliefs about that object. Specifically, a person's attitude toward a certain behaviour is related to one's beliefs that performing this behaviour will lead to certain consequences and one's evaluation of those consequences (Fishbein & Ajzen, 1975). Bouffard (2002) found that sexual coercion likelihood was significantly correlated with the reported certainty ($r = -.25$), severity/value ($r = -.17$), and salience ($r = -.21$) of negative outcomes of rape. Sexual coercion likelihood was also significantly correlated with the reported severity/value ($r = .21$) and salience ($r = .17$) of positive outcomes of rape.

Nunes, Hermann, and Ratcliffe (2011) also examined the relationship between explicit attitudes and sexual aggression in a sample of 86 male university students. Nunes et al. (2011)

also used outcome expectancies as the measure of attitudes toward sexual aggression. A measure of outcome expectancies for rape (Rape Outcome Expectancies (ROE) Scale), similar to a measure developed by Bouffard (2002) was used for the study. This measure was used to measure the evaluation of rape outcomes (ROEEVAL) and both likelihood and evaluation of outcomes (ROE Scale). This measure was shown to be significantly correlated ($r = .31$ for ROE and $r = .28$ for ROEEVAL) with more pure measures of attitudes (rape semantic differentials) (Nunes & Pettersen, 2011). Nunes et al. (2011) found that the evaluation ratings from the ROE Scale (ROEEVAL) were correlated with both self-reported likelihood to rape ($r = .45$) and past sexual coercion ($r = .21$).

Overall, research suggests that explicit attitudes toward sexual aggression are associated with sexually aggressive behaviour. However, because of a limited number of studies that specifically focus on attitudes toward sexual aggression, more research is needed to better understand the specific role of attitudes in sexual aggression.

Explicit Cognitions and Sexual Aggression

In contrast to research examining the relationship between explicit attitudes and sexual aggression, a lot of studies focused on different explicit rape-supportive cognitions and sexual aggression. Some studies focused on finding the differences between rapists, child molesters and violent non-sex offenders. Bumby (1996) compared rape myths acceptance in three groups of offenders (25 rapists, 44 child molesters and 20 violent non-sex offenders). Significant differences were found between rapists and violent offenders, with rapists endorsing more cognitive distortions (Bumby, 1996). However, some studies were unable to find significant differences between groups. For example, Feelgood, Cortoni, and Thompson, (2005) examined rape myths in 25 rapists, 36 child molesters, and 25 violent offenders from Australia, but were

unable to find significant differences, even though the results were in the predicted direction with rapists reporting more rape myths than other groups. The Bumby Rape Scale (Bumby, 1996) is currently a popular measure of rape myths and it was used in the present study.

Other studies focused on the relationship between rape supportive cognitions and self-reported sexual aggression. Murnen, Wright, and Kaluzny (2002) conducted a meta-analysis of thirty nine studies looking at the associations between rape-supportive cognitions and self-reported past sexually aggressive behaviour and future likelihood to rape. The self-reported past sexually aggressive behaviour was measured by the Sexual Experiences Scale (SES; Koss & Gidycz, 1985; Koss & Oros, 1982) and the Coercive Sexuality Scale (CSS; Rapaport & Burkhart, 1984). The future likelihood to rape was assessed by the Likelihood to Rape (LR) Scale created by Malamuth (1981). Murnen et al.'s (2002) meta-analysis revealed that Adversarial Sexual Beliefs (Burt, 1980), $r = .19$; Attitudes Toward Women (Spence, Helmreich, & Stapp, 1975), $r = .20$; Rape Myth Acceptance (Burt, 1980), $r = .22$; Acceptance of Interpersonal Violence (Burt, 1980), $r = .25$; Hostility Toward Women (Check, 1985), $r = .26$; dominance/power measures, $r = .27$; Malamuth's combined attitudinal measure of Hostile Masculinity (e.g., Malamuth, 1989), $r = .28$; and Hypermasculinity (Mosher & Sirkin, 1984), $r = .29$ were associated with sexual aggression.

There have been a couple of longitudinal studies examining offence supportive cognitions and sexual assault perpetration in college and university men. Loh, Gidycz, Lobo, and Luthra (2005) looked at the collective ability of variables, previously linked to sexual aggression in retrospective studies, to predict future sexual aggression in a sample of 215 undergraduate male students. Loh et al. (2005) prospectively evaluated risk factors for sexual assault perpetration, including beliefs about sexuality, gender roles and relationships at three time

periods (pretest, 3-month follow-up, and 7-month follow-up). Before conducting prospective analyses, Loh et al. (2005) performed correlational analyses and found significant correlations between different rape supportive cognitions, such as beliefs in the adversarial nature of male-female relationships and rape myths acceptance. Prospective analyses revealed that beliefs in the adversarial nature of the male-female relationships, measured at baseline, were predictive of sexual aggression during the 7-month follow-up period (Loh et al., 2005).

Guided by the Theory of Planned Behaviour (TPB), Thompson, Koss, Kingree, Goree, and Rice (2010) looked at prospective connections between beliefs, norms, and control with sexual aggression perpetration in a sample of 652 male students. The TPB would predict that changing an individual's beliefs about sexual aggression is one of the prerequisites for changing sexually aggressive behaviours (Thompson et al., 2010). Thompson et al. (2010) showed in their study that rape supportive beliefs were prospectively linked to sexual aggression. Beliefs were also shown to mediate prospective links between sexual aggression and its well known risk factors. Thompson et al. (2010) also showed that rape-supportive beliefs were prospectively linked to more severe and frequent sexually aggressive behaviours.

Meta-analyses also examined the offence supportive cognitions as a recidivism risk factor for sex offenders. Hanson and Morton-Bourgon (2004) conducted a meta-analysis of 95 studies examining the recidivism risk factors for mixed groups of sexual offenders. These 95 studies had a combined sample of 31,216 sex offenders and produced 1,974 overall effect sizes (750 effects for sexual recidivism, 307 for violent non-sexual recidivism, 412 for violent recidivism and 505 for any recidivism). Results showed that rape supportive cognitions were predictors of sexual ($d = .16$), violent non-sexual ($d = .17$), any violent ($d = .14$), and general recidivism ($d = .24$) (Hanson & Morton-Bourgon, 2004). Mann, Hanson, and Thornton (2010) also conducted a meta-analytic review (97 studies included) of the risk factors that are associated with sex offender recidivism,

and found that offence-supportive cognitions have a small ($d = .22$) but statistically significant relationship with sexual recidivism. Overall, research suggests that various explicit cognitions supportive of sexual aggression play a role in the initiation and maintenance of sexually aggressive behaviour. The focus placed on cognitions in sex offender treatment (McGrath et al., 2010) also shows that these constructs are generally believed to be important in sexually aggressive behaviour.

Implicit Attitudes and the Implicit Association Test (IAT)

As was mentioned earlier, there are two types of attitudes: explicit and implicit attitudes. Different measures are used for assessing these two distinct types of attitudes. Past research on attitude-behaviour relationships established methods that reliably produced at least moderate correlations between explicit attitudes and behaviours (Greenwald, Uhlmann, Poehlman, & Banaji, 2009). However, implicit attitudes, for which people may have limited awareness, cannot be assessed by self-report measures used for explicit attitudes. There is an important difference between explicit and implicit measures of attitudes. On explicit measures participants intend to express an attitude, and on implicit measures they do not. The Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998) is currently one of the most commonly used measures designed to study implicit attitudes.

The IAT is a method for indirectly assessing the strengths of associations among concepts. The task asks participants to sort words from four concepts using just two response options, each of which is assigned to two of the four concepts. The logic of the IAT is that this sorting task should be easier and quicker when the two concepts that share a response key are strongly associated than when they are weakly associated (Nosek, Greenwald, & Banaji, 2007). Therefore, the strength of automatic associations between a concept (e.g., rape) and an attribute

(e.g., bad) is concluded from the speed with which one sorts stimulus words into categories. A difference score is calculated from the average response latencies of combined tasks and it allows researchers to determine participants' implicit attitudes. For someone who views rape negatively, response speed should be quicker when *RAPE* and *bad* share the same response key than when *RAPE* and *good* share the same response key. For someone who views rape positively, the reverse would be predicted.

The IAT has been applied in a diverse array of disciplines including social psychology, cognitive psychology, clinical psychology, developmental psychology, neuroscience, health psychology, forensic psychology, and market research (Nosek et al., 2007). A valuable characteristic of the IAT is its believed resistance to faking (Greenwald et. al, 2009). For example, Egloff and Schmukle (2002) found that a faking instruction (to appear low on anxiety) led to non-significant effects on the IAT measure of anxiety, whereas on the self-report measure of anxiety participants were able to easily alter their true responses and to display lower explicit anxiety scores in the faking condition compared to the control condition. Similarly, participants instructed to fake positive attitudes toward homosexuality were able to fake explicit attitudes measured by a self-report questionnaire, but not implicit attitudes on a homosexual-heterosexual attitude IAT measure (Banse, Seise, & Zerbes, 2001). These results show that the IAT is significantly less affected by conscious distortions than the explicit measures.

Reliability of the IAT.

Internal and test-retest reliability.

Reliability of the IAT measures has been investigated in the past. Hofmann, Gawronski, Gschwendner, Le, and Schmitt (2005) conducted a meta-analysis and found a mean reported internal reliability of .79 ($n=50$) and a mean reported test-retest reliability of .51 ($n=11$).

Therefore, the IAT measures appear to have good internal reliability and moderate test-retest reliability.

Validity of the IAT.

Convergent validity.

Hofmann et al. (2005) conducted a meta-analysis of 126 studies with a total sample size of 12,289 participants examining the correlations between the IAT measures and self-report measures used to assess the same underlying construct. The average population correlation was .24, with population correlations ranging from .01 to .47. These results suggest that explicitly and implicitly assessed constructs are related to one another, but there is considerable variability across correlations. Hofmann and colleagues (2005) also examined the correlations between the IAT measures and self-report measures of intentions to engage in a behaviour by looking at 4 studies. The average population correlation was found to be .22. The correlations between the IAT measures and retrospective reports of behaviour were also examined by looking at 15 studies. The average population correlation was .26. Further analyses revealed that approximately half of the variability across correlations can be attributed to increasing spontaneity of self-reports and increasing conceptual correspondence between measures (Hofmann et al., 2005). As the spontaneity of self-report measures and the conceptual correspondence between self-reports and IAT measures increased, correlations between explicit self-report measures and IAT measures also increased. Overall, these results suggest that the IAT measures and the self-report measures assess similar but distinct constructs.

Discriminant validity.

Hofmann et al. (2005) provided evidence for the discriminant validity of the IAT measures in their meta-analysis. The correlations between the IAT measures and the non-

corresponding explicit measures were examined in 10 studies. An average correlation of .03 was found, suggesting that the IAT measures generally have good discriminant validity.

Known-groups validity.

Greenwald et al. (1998 [Experiment 2]) provided evidence of known-groups validity by having Americans of Korean and Japanese origin classify Korean and Japanese names and positive and negative words in a racial preference IAT. Both groups were found to have negative implicit attitudes of each other and to exhibit a preference for their own ethnic group (Greenwald et al. (1998). Another study by Banse et al. (2001) examined implicit attitudes toward homosexuality by using the IAT measure and found evidence for known-group validity. More positive implicit attitudes toward homosexuality were found in homosexuals than in heterosexuals (Banse et al., 2001). Overall, research suggests that the IAT measures have good known-groups validity.

Predictive validity.

A meta-analysis by Greenwald and colleagues (2009) examined the predictive validity of the IAT measures. Greenwald et al. (2009) reviewed 122 research reports (184 independent samples, 14,900 participants) and found a mean correlation of .27 for prediction of behavioural, judgment, and physiological measures by IAT measures, providing the evidence for the predictive validity of the IAT measures.

Implicit Cognitions (Measured by the IAT) and Sexual Aggression

Even though crime-supportive cognitions are believed to be some of the best predictors of antisocial behaviour (Andrews & Bonta, 2006), almost all research focusing on such cognitions has been done using explicit measures. Implicit measures of antisocial cognitions are

seldom used, therefore little is known whether explicit or implicit cognitions are more closely associated with antisocial behaviours (Polaschek, Bell, Calvert, & Takarangi, 2010).

Several studies have used the IAT measures to look at the implicit associations between concepts believed to be relevant for child sexual abuse. Gray, Brown, MacCulloch, Smith, and Snowden (2005) compared offenders with no conviction for offending against children ($n=60$) and child sex offenders ($n=18$) using the IAT and found that control offenders showed faster reaction times when Adult and Sex concepts were paired, but child sex offenders had faster reaction times when Child and Sex concepts were paired. Nunes, Firestone, and Baldwin (2007) tested several IATs examining possible cognitive distortions in 27 child molesters, and found that child molesters responded faster when Child and Sexy concepts shared the same response button, and control offenders ($n=29$) responded faster when Adult and Sexy concepts shared the response button.

Not a lot of studies have been done to date that examined implicit attitudes toward sexual aggression, particularly toward rape. Nunes et al. (2011) examined the relationship between self-reported likelihood of sexual aggression and implicit attitudes toward rape in a sample of 86 male university students. Researchers focused specifically on attitudes toward rape rather than on the broader range of rape-supportive cognitions. The Rape Evaluation IAT (RE-IAT) was designed specifically for the study to measure implicit attitudes toward rape. The RE-IAT categories were *rape*, *not rape*, *good*, and *bad*. The RE-IAT was significantly correlated with likelihood to rape (Nunes et al., 2011). These preliminary results suggest that implicit attitudes toward rape are associated with self-reported likelihood of sexual aggression.

Implicit Attitudes and the Affect Misattribution Procedure (AMP)

People have a tendency to misattribute the causes of their thoughts and feelings. Payne, Cheng, Govorun, and Stewart (2005) conceptualized misattribution as “mistaking an effect of one source for the effect of another” (p. 278). In psychology, misattributions have been used in the past to explain biases like heightened attraction to a female experimenter after crossing a fear-arousing bridge (Dutton & Aron, 1974) or the tendency to report greater happiness and life satisfaction on sunny days than on rainy days (Schwarz & Clore, 1983). People making misattributions can be said to be confused about what they feel, why they feel that way, and what these feelings mean for the way they should act in the future (Payne, Hall, Cameron, & Bishara, 2010). These misattributions that people make about their thoughts and affective states can be used to measure implicit attitudes (Payne et al., 2005).

Payne et al. (2005) created a new measure of implicit attitudes by combining the ambiguous interpretations of classic projective tests with the precision of priming experiments. The Affect Misattribution Procedure (AMP; Payne et al., 2005) is based on asking people to make evaluative judgments in ambiguous judgment situations. For each judgment, participants are shown an attitude object (a prime) that will lead to a positive or negative evaluative reaction. Participants are later presented with an abstract ambiguous judgment target, such as a Chinese symbol. Participants are instructed to not pay any attention to the prime, and only to evaluate the symbol. However, the prime will still bias their evaluations of the symbol, leading them to misattribute their reactions from the attitude object to the symbol (Payne et al., 2005). From the positive or negative evaluations of symbols that are shown after the primes, we can infer a positive or negative attitude toward a prime. The AMP measure is generally reported to have high internal consistency of .81 to .90 (Payne et al., 2005).

Recently, Payne and colleagues (2010) proposed a multinomial process model of affect misattributions, which described three processes. Payne et al. (2010) state that any misattribution involved three elements: the actual cause of the feeling or thought, the apparent cause, and the mistaking of an apparent cause for the real one. The AMP is based on the fact that people often have trouble disentangling their reactions to two events that occur in close proximity (Payne et al., 2010). The model claims that when people successfully disentangle their reaction to the prime from their reaction to the abstract symbol, the response will be driven by their evaluation of the symbol (Payne et al., 2010). However, when people are not able to disentangle their reactions, the response will be driven by the reaction to the prime, and a misattribution will occur (Payne et al., 2010). This model has been validated by researchers using the AMP (Payne et al., 2010).

The AMP is an implicit measure of attitudes because it is both an indirect measure (participants are not directly asked to report their attitudes), and because it measures the influence of attitudes on behaviour that persists against participants' intention to report them (participants are unable to control the expression of their attitudes) (Payne et al., 2005). Studies using the AMP as an implicit measure of attitudes show that the affective valence of primes influences participants' judgments of the abstract symbols (participants are more likely to judge the symbol as pleasant following a pleasant prime, and unpleasant following an unpleasant prime) even when participants are given a clear warning about a possibility that their judgments may be biased by the primes (Payne et al., 2005).

Another experiment attempted to see whether the AMP would correlate with explicit political attitudes and participants' intentions to vote for one or the other candidate (Payne et al., 2005). The results showed that the AMP provided a reliable and valid measure of political

attitudes, correlated strongly with explicit political attitudes, and predicted intentions to vote (Payne et al., 2005). However, it was probably possible to observe strong correlations between implicit and explicit political attitudes, because participants were not motivated to hide their attitudes. Payne and colleagues (2005) conducted another experiment to see whether the AMP will detect biases in racial attitudes, which is a more socially sensitive topic. Participants showed a pattern of in-group bias (White participants showed an anti-Black bias and Black participants showed a tendency toward an anti-White bias) (Payne et al., 2005). The implicit and explicit attitudes were strongly correlated, but the relationship was moderated by the motivation to control prejudice, just as expected by researchers (Payne et al., 2005). Evidence for the construct validity of the AMP comes from the results showing that the AMP is significantly related to explicit attitude measures, but only when people are not motivated to hide their attitudes (Payne et al., 2005). Predictive validity was established in studies showing that the AMP can predict judgments and behaviours after controlling for explicit measures in studies of alcohol drinking (Payne, Govorun, & Arbuckle, 2008) and smoking (Payne, McClemon, & Dobbins, 2007).

The AMP measures have not yet been used in forensic psychology. This study is the first one to use the AMP in measuring implicit and explicit attitudes toward rape. The AMP measure used in the present study was created based on the recommendations by Payne et al. (2005). In the present study, the subject first see a prime (e.g., word “rape”), then they see an ambiguous symbol (Chinese symbol), and then they have to judge how pleasant that ambiguous symbol is. The prime word they see is an actual cause, the Chinese symbol is an apparent cause, and if a word shown before the symbol will affect their judgment of the symbol they can be said to misattribute the apparent cause for the real cause.

Explicit and Implicit Measures

Teige-Mocigemba, Klauer, and Sherman (2010) state that researchers assessing core psychological processes with implicit measures no longer encounter two key issues associated with explicit measures, namely introspective limits and socially desirable responding. Socially desirable responding is an especially big issue in forensic psychology research, where even when participants are aware of certain attitudes and beliefs they endorse, they may decide not to report them honestly due to perceived social pressure to be politically correct, due to fear of being misunderstood, ridiculed, or bullied for having such attitudes and beliefs, or because having certain cognitions may have a damaging effect on their career and social status. Offenders can be especially motivated to hide their true thoughts, intentions, and past behaviours because being “honest” can sometimes have detrimental effects on their chances of being paroled or released from treatment. Therefore, it is not surprising that offenders (and sex offenders especially) might minimize, deny, or distort their responses on explicit measures. Gudjonsson and Sigurdsson (2000) found that compared to violent offenders, child molesters show higher levels of socially desirable responding. However, there are differences in socially desirable responding between different types of sex offenders. Nugent and Kroner (1996) found significant differences in social desirability between rapists and child molesters. They found that child molesters scored higher on the Impression Management and the Denial scales than rapists, suggesting that presenting oneself in a positive light might be more important to child molesters than to rapists (Nugent & Kroner, 1996).

The assumption that offenders tend to consistently employ socially desirable responding when completing self-report measures is widely held. On the other hand, some research suggests that social desirability is not necessarily as big a threat to validity as often assumed (Mills &

Kroner, 2006). There is evidence that self-report measures can predict violent and nonviolent recidivism in offenders (Kroner & Loza, 2001). In research with sex offenders, self-report measures are useful in the assessment process (Worling, 2006) and in classification (Laws, Hanson, Osborn, & Greenbaum, 2000).

Similarly, while some studies show that the IAT measures are resistant to faking (e.g., Egloff and Schmukle, 2002; Banse, Seise, & Zerbies, 2001), others suggest that participants are able to fake responses on certain IAT measures (e.g., McDaniel, Beier, Perkins, Goggin, & Frankel, 2009; Steffens, 2004). McDaniel and colleagues (2009) compared the fakeability of the IAT measures of personality with self-report measures of personality, using the Big Five factor model of personality (Goldberg, 1990), in 29 university students. Results showed that participants were able to fake an IAT measure of Extraversion, but not an IAT measure of Conscientiousness (McDaniel et al., 2009). It was also suggested that some IAT measures might be susceptible to faking, when participants have prior experience with the IAT measures (McDaniel et al., 2009). Overall, the IAT measures are still considered less susceptible to faking than self-report measures (McDaniel et al., 2009; Steffens, 2004).

Overall, research suggests that measures of explicit and implicit cognitions are both able to predict important outcomes, but they appear to contribute independent information that may provide a more comprehensive understanding of the phenomena of interest (Hofmann, Gawronski, Gschwendner, Le, & Schmitt, 2005; Nunes, Hermann, & Ratcliffe, 2011). Implicit and explicit measures show increased predictive validity when used with each other (Greenwald et al., 2009). Thus, it is important to examine both implicit and explicit cognitions.

Sexual Offender Treatment

Currently, most treatment programs for sexual offenders are designed to address sexual functioning, normal and deviant activities and fantasies, empathy, offence supportive cognitions, denial, minimizations, dysfunctional attitudes, social skills, self-esteem, substance use, anger, and development of relapse-prevention strategies (Marshall, 1999). In 2009, the ninth survey of sexual abuser treatment programs and models conducted by the Safer Society Foundation (SSF) found that cognitive-behavioural model is the most commonly used treatment model, followed by relapse prevention, and the self-regulation and good lives models (McGrath et al., 2010). For the treatment targets, offense responsibility and victim empathy were reported to be the targets in almost all programs for adult and adolescent abusers (McGrath et al., 2010). Offense-supportive cognitions were also reported to be highly used treatment targets (McGrath et al., 2010). Consistent with theory and research, the focus on offence-supportive attitudes and cognitions in sex offender treatment shows that they are considered important determinants of sexually aggressive behaviour.

Generally, there is a lack of agreement about whether sex offender treatment works. Some researchers argue that the available evidence does not demonstrate that treatment is effective (e.g., Marques, Wiederanders, Day, Nelson, & van Ommeren, 2005; Rice & Harris, 2003), while others argue that it does (e.g., Hanson et al., 2002; Lösel & Schmucker, 2005). Marques et al. (2005) conducted a longitudinal investigation of the effectiveness of cognitive-behavioural treatment with sexual offenders (both rapists and child molesters). The study was a randomized clinical trial that examined the re-offense rates of offenders treated in an inpatient relapse prevention (RP) program in comparison to the re-offense rates of offenders in two untreated control groups in prison. Marques et al. (2005) found no significant differences

between the three groups in their rates of sexual and violent reoffending over an 8-year follow-up period. This study in particular and the employment of the Random Controlled Trial (RCT) in general were later criticized by Marshall and Marshall (2007), who concluded that the RCT design is not appropriate for deciding the effectiveness of such treatments.

A meta-analysis by Lösel and Schmucker (2005) examined 69 studies containing 80 independent comparisons between treated and untreated sex offenders. They concluded that there was a positive treatment effect on recidivism rates. The mean rate of sexual recidivism was 11.1% in the treatment group and 17.5% in the control group. This is equivalent to the reduction of 37% when the low base rate of sexual recidivism is accounted for (Lösel & Schmucker, 2005). A meta-analysis conducted by Hanson et al. (2002) also found positive effects of treatment. Averaged across the different types of treatments, the sexual recidivism rate was 12.3% for the treated sex offenders and 16.8% for the untreated ones. A meta-analysis by Hanson et al., (2002) was later criticized by Rice and Harris (2003), who concluded that the available evidence does not yet demonstrate the effectiveness of treatment for sex offenders. Overall, the debate about whether sex offender treatment works continues to this day.

In a non-offender population, such as male university students, the focus has been on changing rape supportive cognitions and there is evidence that certain interventions might change beliefs about sexual assault. For example, Lonsway and Kothari (2000) evaluated the First Year Campus Acquaintance Rape Education (FYCARE) program for first year undergraduate students. The 2-hour FYCARE program evaluated by Lonsway and Kothari (2000) was designed to be representative of a typical rape prevention workshop and included lecture and discussion of cultural rape myths, interactive participation, use of media presentations, focus on the idea that rape is an expression of power and control, and avoidance of

confrontational techniques which can alienate participants. The FYCARE program was presented in three segments. The first segment included a discussion of statistics and laws related to sexual assault, followed by a video depicting an acquaintance rape scenario from the perspectives of both the victim and the perpetrator. The second segment separated men and women into separate groups. Women discussed vulnerability factors, safety measures, escape strategies and victim blame. Men discussed consent and strategies for an intervention in ambiguous date rape situations. During the third segment, groups reconvened to discuss strategies for ending sexual aggression, available services on campus, and how to be supportive of a rape survivor. Lonsway and Kothari (2000) found that FYCARE participants reported greater sexual assault knowledge, less support for rape myths, and less rape-supportive judgments in a hypothetical scenario immediately following the program compared to students who did not attend a FYCARE program. The increase in sexual assault knowledge was found to remain most stable over time (Lonsway & Kothari, 2000).

Stephens and George (2009) looked at the effectiveness of a rape prevention intervention with 146 university men. Participants were randomly assigned to either treatment or control condition. The treatment condition involved watching a 50-minute intervention video. The video consisted of four parts: (a) an introduction of the topic of sexual aggression and the need for men to be educated about the ways to prevent rape and help the women they know who experienced it; (b) a videotaped program "How to Help a Sexual Assault Survivor: What Men Can Do", which involves a description of a male police officer's rape by two heterosexual men; (c) a discussion on alcohol and rape; (d) Dr Jackson Katz's interview regarding alcohol and rape on university campuses. The control condition involved watching a 50-minute video from two Discovery programs titled "Around the Galaxy" and "Cosmic Odyssey". Stephens and George

(2009) found positive outcomes for rape myth acceptance and victim empathy compared to control group. These positive outcomes were sustained at the 5-week follow-up (Stephens & George, 2009).

O'Donohue, Yeater, and Fanetti (2003) evaluated the effectiveness of a video-based rape prevention program in 102 university males which focused on modifying rape myths, increasing victim empathy, and identifying negative outcomes of rape for the perpetrators. Rape prevention expert consultants evaluated the content validity of the video and three focus groups, two of which included university-age males and one of which included university-age women, assessed consumer acceptability of the program. This intervention was compared to the alternative video program judged to be representative of a "typical" rape prevention program, which included definitions of rape, conceptualization of rape as violence rather than sex, and identification of social forces that support sexual violence in our culture (O'Donohue et al., 2003). The experimental video-based intervention resulted in greater changes on measures of rape myth acceptance, acceptance of interpersonal violence, adversarial sexual beliefs, attraction to sexual aggression (one of the items in this measure asked about future self-reported likelihood of sexual coercion), rape empathy, and self-efficacy ratings, compared to the alternative control program (O'Donohue et al., 2003).

Although findings from intervention studies suggest that it is possible to change rape-related cognitions, results do not indicate that these changes result in less sexual aggression. This is why it is very important to conduct more prospective studies that look at the associations between different sexual aggression risk factors, including rape-related cognitions, and future behaviour. Alternatively, asking participants about their present and future likelihood of perpetrating sexual aggression can provide greater insight into changes that result from these

interventions. O'Donohue and colleagues (2003) included a behavioural item in one of their measures, but because it was embedded with other unrelated items we cannot interpret their results as suggesting a change on self-reported likelihood to rape.

Empathy

The concept of empathy was developed from two different theoretical frameworks (Regehr & Glancy, 2001). From a cognitive perspective, empathy is defined as “the ability to develop an accurate perception of others”, an intellectual understanding of another person’s thoughts, attitudes, and emotions (Regehr & Glancy, 2001). Another framework views empathy as a “vicarious emotional process”, a skill that must involve the ability for emotional response, the ability to respond compassionately to the feelings and experiences of other people (Regehr & Glancy, 2001). Recently, it became apparent that empathy can only be fully understood by joining two frameworks together and a movement toward combining cognitive and emotional definitions of empathy began (Regehr & Glancy, 2001).

There is a focus on the construct of empathy and its relation to sexual aggression in both sex offender research and treatment. In past research, empathy has been described as a mediator for prosocial behaviour (Moore, 1990) acting as a facilitator of positive responses and as an inhibitor of aggressive responses toward others (Miller & Eisenberg, 1988). It is believed that sex offenders are able to carry out their crimes, in spite of seeing pain and distress caused to their victims, because they lack empathy for them (Malamuth, 1988). It is also proposed that sex offenders deliberately suppress empathy toward their victims in order to achieve their goals (Marshall, Hudson, Jones, & Fernandez, 1995). Marshall et al. (1995) suggested that sexual offenders may not show generalized empathy deficits, but instead only show a lack of empathy toward those that are representative of their victim choice (e.g., women for rapists), only toward

those who are victims of sexual crimes (i.e., other perpetrator's victims), or only toward their own victims. Marshall and colleagues (1995) suggest that we generally should not expect general empathy deficits in sex offenders in nonsexual-offence-related circumstances, except in those with high psychopathy scores.

Marshall and Moulden (2001) examined empathy and hostility toward women, comparing three groups of men (32 incarcerated rapists, 28 incarcerated violent non-sex offenders, and 40 non-offenders recruited from community), and found that rapists showed significantly lower levels of empathy toward women who were sexually assaulted and they were more hostile toward women than the other two groups. Rapists were also shown to be significantly less empathetic toward their own victims than toward women who were sexually assaulted by other people or who were hurt a car accident, and this low level of empathy toward their own victims was significantly associated with greater hostility toward women (Marshall & Moulden, 2001). Marshall and Moulden (2001) suggest that a lack of empathy is a risk factor that allows rapists to sexually assault women. The lack of empathy can function as a disinhibitor of social norms against rape, allowing hostility toward women to be expressed in sexual assaults (Barbaree, 1990). Marshall and Moulden (2001) findings support the use of current cognitive-behavioural programs with sex offenders and agree that enhancing victim empathy is an important target in the treatment of rapists.

Recidivism studies generally find that victim empathy is unrelated to sexual recidivism but can be related to other types of recidivism (e.g., Hanson & Morton-Bourgon, 2004). Hanson and Morton-Bourgon (2004) conducted a meta-analysis of examining the recidivism risk factors for sexual offenders. Sexual recidivism, violent non-sexual recidivism, any violent recidivism (sexual and non-sexual), and any recidivism (violent and non-violent) were examined. Lack of

victim empathy was not significantly related to sexual recidivism ($d. = -.08$) and any violent recidivism ($d. = .03$) (Hanson & Morton-Bourgon, 2004). Lack of victim empathy showed a weak significant relationship with violent non-sexual recidivism ($d. = .19$) and general recidivism ($d. = .12$) (Hanson & Morton-Bourgon, 2004). Mann, Hanson, and Thornton (2010) also provided a review of the psychologically meaningful risk factors that are associated with sex offender recidivism and reported that poor victim empathy was unrelated to sexual recidivism. However, it was mentioned that for some individuals poor victim empathy may be a symptom of a more general lack of concern for others (Mann et al., 2010). Lack of concern for others characterized by egocentricity, engagement in instrumental rather than affective relationships, poor empathy and lack of sympathy predicted sexual recidivism ($d = .29$) (Mann et al., 2010). It is currently unclear whether victim empathy by itself is predictive of sexual recidivism. Studies generally show that victim empathy is unrelated to sexual recidivism (Hanson & Morton-Bourgon, 2004). However, victim empathy as a component of a more general construct of lack of concern for others is associated with sexual recidivism (Mann et al., 2010).

Victim empathy is currently targeted in almost all programs for sex offenders (McGrath et al., 2010). Theoretically, it is believed that sex offenders may have empathy deficits because they cannot correctly understand the experiences and feelings of others, and therefore cannot understand the negative impact of sexual assault (Regehr & Glancy, 2001). Sex offenders may engage in rationalizing and justifying their behaviours, and thus denying the victims' suffering and minimizing the harm done to the victims. For those who are unable to accurately identify the experiences and consequences of victimization, interventions involving victim accounts of sexual assault and explaining the harm and consequences of sexual assault might be an eye opening experience. Marshall and colleagues (1995) suggest that recognition of harm is an

important step toward developing empathy. Victim empathy remains to be one of the most endorsed treatment targets in sex offender programs despite the lack of evidence that increasing victim empathy results in reduced recidivism (McGrath et al., 2010).

Outcome Expectancies

Most of the current sex offender treatments and rape-prevention programs focus on offence-supportive cognitions and victim empathy. However, interventions focusing on self-serving motivations of individuals, explaining the positive reinforcements that come from a social lifestyle and/or detailing negative consequences that result from getting caught might also be effective. Motivation is generally defined as an internal force which initiates and directs behaviour, and drives a person toward achieving a certain goal. Self-serving motivations are those that serve one's own interests, especially without concern for the needs, interests or feelings of others. Focusing on these self-serving motivations can, in theory, stop some of the individuals from breaking the law or re-offending.

These ideas are consistent with the deterrence and rational theories of crime. According to the deterrence theory, the threats of punishment and negative consequences would be able to prevent crimes before they occur (Siegal & McCormick, 2006). Deterrence theory would predict that the motivation to commit a sexual assault, just like any other crime, would be influenced by the perceived costs of the crime. Therefore, people will be less likely to commit sexual assaults if they know that they will experience negative consequences and be penalized as a result of their actions. This idea is based on the assumption that crime is rational and is connected to the rational choice theory, which suggests that potential offenders are influenced by the consideration of costs and benefits of the crime (Siegal & McCormick, 2006). According to the rational choice theory, before choosing to commit a crime, the potential offender would evaluate

the risk of apprehension, the seriousness of consequences, the potential value of the criminal act, and the need for criminal gain (Siegal & McCormick, 2006).

Both the deterrence and the rational theories were criticized in the past because they fail to consider the role of a person's morality (Etzioni, 1988). People might refrain from offending not only because they fear the negative consequences, but also because they see the criminal act as morally wrong. However, some individuals, who are less morally inhibited (i.e., those with higher psychopathy scores), may need the restraint provided by the threat of consequences.

In the past, studies provided support for the deterrence theory. Bachman, Paternoster, and Ward (1992) conducted a study with male college students examining how the threat of formal sanctions would affect the self-reported likelihood of sexual aggression. Bachman and colleagues (1992) found that, consistent with the deterrence theory, perceived risk of formal sanctions had a significant effect on the likelihood of committing a sexual assault. The more certain the participants were that a sexual assault would result in being dismissed from school or being arrested, the less likely they were to say that they would commit a sexual assault (Bachman et al., 1992). O'Donohue and colleagues (2003) showed that a video-based rape prevention program, which partly focused on the negative consequences of rape for the perpetrators, produced changes on the measures of acceptance of interpersonal violence, adversarial sexual beliefs, and attraction to sexual aggression.

Conclusion

The review of the literature showed that rape-supportive cognitions, including attitudes, are related to sexually aggressive behaviour. However, to date there has been a limited number of studies that specifically examined rape-supportive attitudes. The review of the literature also showed that it is important to consider both explicit and implicit measures of the attitude

construct, as they appear to contribute independent information and to provide a more comprehensive understanding of attitudes. It was noted that most of the current sex offender treatment programs target empathy, even though there is a lack of evidence that an increase in victim empathy reduces sexual recidivism.

The purpose of the first study was to examine the correlations between explicit rape-supportive cognitions (including explicit attitudes) and sexual aggression, implicit attitudes and sexual aggression, and implicit attitudes and explicit cognitions. The study also tested a new measure of implicit attitudes (the Rape Evaluation Affect Misattribution Procedure (RE-AMP)) which was created for this study. The RE-AMP measure is based on the Affect Misattribution Procedure (AMP) measure created by Payne and colleagues (2005). In sum, the first study looked at the explicit rape-supportive cognitions, implicit attitudes toward rape and self-reports of sexual aggression in a sample of male undergraduate students.

The purpose of the second study was to examine the influence of rape myths video, victim empathy video and outcome expectancies video interventions (used in a study by O'Donohue et al., 2003) on university male students' self-reported sexually aggressive behaviours, explicit and implicit attitudes toward rape, rape-supportive cognitions and victim empathy. The study also further tested a new measure of implicit attitudes (the RE-AMP). In sum, the second study examined the influence of three video-based interventions on sexual aggression, explicit and implicit rape-supportive cognitions, and victim empathy.

Research Hypotheses

The first study had four hypotheses. The first hypothesis was that explicit rape-supportive cognitions (including explicit attitudes) will be correlated with self-reports of sexually aggressive behaviours. The second hypothesis was that implicit attitudes will be correlated with self-reports

of sexually aggressive behaviours. The third hypothesis was that implicit attitudes will be correlated with explicit cognitions. The fourth hypothesis was that various explicit cognitions will be correlated with each other.

The second study had four hypotheses. The first hypothesis of the study was that watching rape-prevention videos (compared to a control video) will be associated with decreased sexual aggression (sexual aggression was measured by the behavioural proxy measures of sexual aggression). The second hypothesis was that watching rape-prevention videos (compared to a control video) will be associated with decreased rape-supportive explicit cognitions. The third hypothesis was that watching rape-prevention videos (compared to a control video) will be associated with more negative implicit attitudes toward rape. The fourth hypothesis was that watching victim empathy video (compared to a control video) will be associated with more empathy toward victims of rape.

Study 1

The first study looked at the explicit rape-supportive cognitions and implicit and explicit attitudes toward rape in a sample of male undergraduate students. This study was conducted to test a new measure of implicit attitudes toward rape (i.e., Rape Evaluation Affect Misattribution Procedure) which was created for the purposes of this study. The purpose of the first study was also to examine the extent to which measures of rape-supportive cognitions and explicit and implicit attitudes are associated with self-reported sexual aggression and how these measures are associated with each other.

Method

Participants.

Participants were 70 male undergraduate students recruited through SONA from Carleton University. Overall, 86 participants participated in the study, but 16 participants were excluded because they reported homosexual or bisexual sexual orientation ($n=6$), ability to understand Chinese ($n=5$), they were younger than 18 years old ($n=2$) or they responded faster than 300ms on more than 10% of trials on the IAT measure ($n=4$). None of the participants reported an inability to understand English. However, one more participant was further excluded because information about his age, sexual orientation, ability to understand English and ability to understand Chinese was missing. Participants who reported homosexual or bisexual sexual orientation were excluded to control for sexual orientation and eliminate the potential confounding effects of this variable. Participants who reported an ability to understand Chinese were excluded because the Rape Evaluation Affect Misattribution Procedure (RE-AMP) uses Chinese symbols and these symbols should be ambiguous to participants. Participants who responded faster than 300ms on more than 10% of trials on the IAT measure were excluded based on a recommendation for the IAT scoring procedure by Greenwald, Nosek and Banaji (2003). The majority of participants were 18 (41.4%) or 19 (21.4%) years old, with 91.4% of participants between the ages of 18 to 23 years old. Only 7.1 % were 24 to 29 years old, and 1.4% were 30 and older.

Measures.***Demographic Questions.***

Demographic questions asked participants about their gender, age, current marital status, sexual orientation, and ability to understand English and Chinese (Appendix B). This information was collected to exclude those participants that did not meet the characteristics for

the study, to examine potential demographic differences between groups and to look for potential relationships between variables.

Implicit Measures.

Rape Evaluation Implicit Association Test (RE-IAT).

The RE-IAT (Nunes, Ratcliffe, Babchishin, & Kessous, 2008) is a measure that is based on the Implicit Association Test (IAT) (Greenwald et al., 1998), which involves the categorization of stimulus words into various categories. The RE-IAT has been developed to assess the implicit evaluation of rape. In the RE-IAT, the strength of automatic associations in memory is inferred from the speed with which one sorts stimulus words into categories. Participants sort each stimulus word into one of four categories (i.e., rape, consenting sex, positive, and negative) by pressing one of two keys on a computer keyboard (Figure 1). Two of the categories are indicated by one key and the other two categories are indicated by the other key. Response speed is expected to depend on the extent to which the categories that share one key are associated in one's memory.

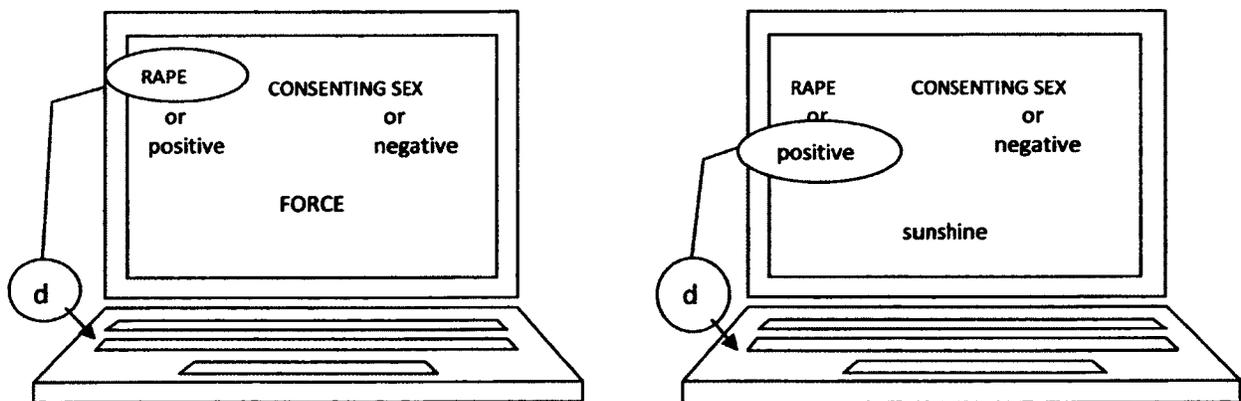


Figure 1. Example of trials in the Rape Evaluation Implicit Association Test (RE-IAT).

The four categories (i.e., rape, consenting sex, positive and negative) and stimulus words that fall under each of these categories used in the present study are presented in Table 1. These words were used in a number of previous studies which examined implicit attitudes toward rape (i.e., Malcom et al., 2009; Hermann, 2010). The block order and number of trials of the RE-IAT was constructed based on the format recommended in Nosek et al. (2007). The RE-IAT consisted of seven blocks, each categorizing either concept words (e.g., *rape words* or *consenting sex words*), attribute words (e.g., *positive words* or *negative words*), or both concept and attribute words (i.e., the combined task). Each block has a specific number of trials, with some trials serving as practice trials and others being used to score the RE-IAT responses (i.e., the combined tasks).

Table 1

RE-IAT Categories and Stimulus Words

<i>Rape</i>	<i>Consenting Sex</i>	<i>Positive</i>	<i>Negative</i>
Force	Consent	Vacation	Rotten
Violent	Mutual	Rainbow	Poison
Rape	Willing	Smile	Sickness
Violate	Permission	Sunshine	Vomit
Assault	Agreement	Paradise	Cancer
		Freedom	Evil

Four out of seven blocks are used to score the RE-IAT. Two of the blocks represent pairings that are compatible for participants who view rape negatively (e.g., *rape words* paired with *negative words*, *consenting sex words* paired with *positive words*). The other two blocks represent pairings that are compatible for those who view rape positively (e.g., *rape words* paired with *positive words*, *consenting sex words* paired with *negative words*). For someone who views

rape negatively the responses should be quicker when *rape words* are paired with *negative words*, and *consenting sex words* are paired with *positive words*. For someone who views rape positively, the response speed should be quicker when *rape words* are paired with *positive words*, and *consenting sex words* are paired with *negative words*. The difference between two types of blocks shows which blocks are more compatible for the participants, with higher scores indicating more positive attitudes toward rape. The order and content of the RE-IAT blocks is presented in Table 2.

Table 2

RE-IAT Trial Blocks (Nunes et al., 2008)

Block	Number of Trials	Left Key Categories	Right Key Categories
B1	20	<i>Rape</i>	<i>Consenting Sex</i>
B2	20	<i>Positive</i>	<i>Negative</i>
B3	20	<i>Rape and Positive</i>	<i>Consenting Sex and Negative</i>
B4	40	<i>Rape and Positive</i>	<i>Consenting Sex and Negative</i>
B5	40	<i>Consenting Sex</i>	<i>Rape</i>
B6	20	<i>Consenting Sex and Positive</i>	<i>Rape and Negative</i>
B7	40	<i>Consenting Sex and Positive</i>	<i>Rape and Negative</i>

Note. Blocks 3 and 4 are counterbalanced with Blocks 6 and 7 and Blocks 1 and 5 are counterbalanced with each other, between participants.

Regarding psychometric properties, little is known about psychometric properties of the RE-IAT measure. However, one study provides evidence that the RE-IAT is a valid measure of implicit attitudes toward rape (Nunes et al., 2011). The RE-IAT measure was found to significantly correlate with Likelihood to Rape question and ROE Scale, suggesting that the construct measured by the RE-IAT is associated with sexually aggressive behaviour and rape-related cognitions. Internal consistency of the RE-IAT was also examined by past studies. Hermann (2010) reports the internal consistency of the RE-IAT as .73. Nunes et al. (2011) report the internal consistency of .63.

Rape Evaluation Affect Misattribution Procedure (RE-AMP).

I have developed the Rape Evaluation Affect Misattribution Procedure (RE-AMP) to assess implicit and explicit evaluations of rape and consenting sex. The RE-AMP is based on the AMP measure created by Payne et al. (2005). On a RE-AMP trial, first a prime word (e.g., rape) is flashed for 200 milliseconds, followed by a blank screen for 125 milliseconds. Then a Chinese symbol is flashed for 100 milliseconds, followed by a pattern mask. Subjects then evaluate whether the Chinese symbol is positive or negative (compared to the “average” symbol), producing an indirect measure of attitudes toward the word flashed as a prime. The logic of this measure is based on the fact that the prime (e.g., word *rape*) will bias the participants’ evaluations of the ambiguous Chinese symbol, leading them to misattribute their reactions from the word to the symbol (Payne et al., 2005). From the positive or negative evaluation of the symbol, researchers are able to infer an attitude toward the prime. Sexually coercive men are expected to judge the symbol as more positive following the presentation of rape words compared to not sexually coercive men. The proportion of rape prime words rated as positive on the RE-AMP (RE-AMPR), the proportion of consenting sex prime words rated as positive on the

RE-AMP (RE-AMPCS), and the proportion of neutral prime words (colours) rated as positive on the RE-AMP (RE-AMPN) are calculated. Higher scores indicate a more positive rating within a category.

I also added another set of trials, where participants evaluate the words that were flashed earlier as prime words (e.g., rape) that are now displayed visibly on the computer screen. Participants have to evaluate how positive or negative these words are. This self-report version of the RE-AMP measure is also based on the general AMP measure created by Payne and colleagues (2005). This trial provides a direct measure of attitudes toward rape (proportion of rape words rated as positive on self-report portion of the RE-AMP (RE-AMPSRR)), consenting sex (proportion of consenting sex words rated as positive on self-report portion of the RE-AMP (RE-AMPSRCS)) and neutral words (proportion of neutral words rated as positive on self-report portion of the RE-AMP (RE-AMPSRN)). The stimulus words, pictographs and mask patterns for the RE-AMP are presented in Appendix D.

Past studies showed that the AMP measuring implicit political attitudes strongly correlated with explicit political attitudes and predicted intentions to vote (Payne et al., 2005). When the AMP was used with more socially sensitive topics (e.g., racial attitudes) the results showed that participants show a pattern of in-group racial bias on this measure (Payne et al., 2005). Evidence for the construct validity of the AMP comes from the studies which showed that the AMP is significantly related to explicit attitude measures, but only when people are not motivated to hide their attitudes (Payne et al., 2005). Predictive validity was established in studies showing that the AMP can predict judgments and behaviours after controlling for explicit measures in studies of alcohol drinking (Payne, Govorun, & Arbuckle, 2008) and smoking (Payne, McClemon, & Dobbins, 2007). However, the psychometric properties for RE-AMP

specifically are unknown, since this is a new measure that was created for this study and is going to be used for the first time.

Explicit Cognitions Measures.

Semantic Differential Measures of Evaluations of Rape and Consenting Sex (SDRAPE and SDCONSENT).

The semantic differential measures of evaluations of rape (SDRAPE) and consenting sex (SDCONSENT) are self-report measures that asked participants to rate both rape and consenting sex on five bipolar scales: negative to positive, bad to good, not enjoyable to enjoyable, wrong to right, and immoral to moral, using a 7-point Likert scale (Appendix E). The scales evaluating rape are averaged, creating a rape mean score (SDRAPE), and the scales evaluating consenting sex are averaged to create a consenting sex mean score (SDCONSENT). Higher SDRAPE scores indicate a more positive evaluation of rape. Higher SDCONSENT scores indicate a more positive evaluation of consenting sex. The SDCONSENT is subtracted from the SDRAPE to create a difference score (SDDIFF), with a positive score reflecting a more positive explicit evaluation of rape relative to consenting sex. This measure has been used in past studies of sexual aggression (e.g., Hermann, 2010).

Rape Outcome Expectancies (ROE) Scale.

The Rape Outcome Expectancies (ROE; Nunes et al., 2008) scale was used to assess expectancies of sexual coercion (Appendix F). Participants are asked to provide three outcomes of sexual assault, rate how likely each outcome is to happen on a 7-point Likert scale (0 *Never Happen* to 6 *Guaranteed to Happen*), and rate the valence of each outcome on a 7-point Likert scale (-3 *Very Negative* to 3 *Very Positive*). The rape outcome evaluation score (ROEEVAL) is calculated by summing the valence of each outcome, with more positive scores indicating more

positive outcomes reported for rape. The total score (ROE) is calculated by summing the likelihood and the valence of each outcome, with more positive scores indicating more positive explicit evaluations of the expected outcomes of rape. This measure has been used in previous studies (e.g., Nunes et al., 2011). Internal consistency cannot be calculated for this measure because the items are not expected to be consistent across participants, since the outcomes are individually generated and can vary in order or might be completely different from one participant to another.

Bumby Rape Scale.

The Bumby Rape Scale (Bumby, 1996; Appendix G) is a self-report measure of rape-supportive beliefs consisting of 36 statements (e.g., *women who get raped probably deserved it*) rated on a 4-point Likert scale (*Strongly Disagree* to *Strongly Agree*). The responses are summed, with higher scores indicating a higher acceptance of rape-supportive beliefs.

The measure appears to be reliable. Chronbach's alpha was .97 and test-retest reliability was .86, indicating excellent internal consistency and good test-retest reliability (Bumby, 1996). The validity of the measure was also examined. Convergent validity of the measure was examined and the Bumby Rape Scale significantly correlated with the Cognitive Distortion/Immaturity subscale and the Justification subscale of Multiphasic Sex Inventory (MSI; Nichols & Molinder, 1984) (Bumby, 1996). The measure is not significantly correlated with the Marlowe-Crowne Social Desirability Scale (MCSDS, Crowne & Marlowe, 1960), suggesting that it is not significantly influenced by socially desirable responding (Bumby, 1996). The Bumby Rape Scale was shown to discriminate between rapists and violent offenders (Bumby, 1996). Rapists endorsed significantly more items on the Bumby Rape Scale than

violent offenders and endorsed more items than child molesters, even though this difference did not reach significance (Bumby, 1996).

Behavioural Proxy Measures of Sexual Aggression.

Coercive Sexuality Scale (CSS).

The Coercive Sexuality Scale (CSS; Rapaport & Burkhart, 1984; Appendix C) is a 19-item scale that assesses participants' past sexually coercive behaviour. Participants indicate the frequency with which they engaged in a variety of different sexually coercive behaviours in the past. Each question is measured on a 9-point Likert Scale (*never to nine times or more*) and the total score is calculated by summing up the responses, with higher scores indicating more past sexually coercive behaviours. This measure has been used in past studies of sexual aggression (e.g., Hermann, 2010).

Date Rape Analogue (DRA).

The Date Rape Analogue (Pullman, 2011) measure was adapted from Bernat, Stolp, Calhoun, and Adams (1997). The Date Rape Analogue is formatted as a story (Appendix H). Participants read a story that describes a date-like interaction between a man and a woman. Participants are asked to put themselves in the position of the male character in the story. As the story progresses the date becomes increasingly sexually coercive. At various points in the story, the woman objects to the man's behaviour and participants choose whether to stop and accept the woman's refusals or to persist despite the woman's objections. Participants do not see the whole script of the Date Rape Analogue unless they choose the coercive option at every choice point. If at any choice point a participant chooses "Stop trying and not try again for the rest of the night", the analogue terminates and a participant will not see the rest of the script. A total score is calculated by summing the number of times a participant chose to persist using sexually coercive

behaviours, with higher scores thus indicating more willingness to engage in sexually coercive behaviour.

Likelihood to Rape Question (LR).

The Likelihood to Rape Question measures self-reported likelihood to rape. Participants respond, on a 5-point Likert scale (*Not at all Likely* to *Very Likely*), to the question from Malamuth (1981): “What is the likelihood that you would rape someone if you could be assured of not being caught and punished?” Higher scores indicate a higher self-reported likelihood to rape. This measure has been used in past studies of sexual aggression (e.g., Nunes et al., 2011).

Procedure

All of the male participants were recruited through SONA (Appendix A) from Carleton University. When the participants showed up, the researcher explained the testing procedure, their rights as participants and confidentiality, and asked participants to read and sign two copies of the consent form (Appendix I). Participants were tested in a testing room one at a time. Participants were asked to complete the measures on the laptop computer in front of them. Participants first completed the demographic questions and the CSS. Participants were then asked to complete the rest of the measures, with most measures being counterbalanced between them. The behavioural proxy measures of sexual aggression (Date Rape Analogue and Likelihood to Rape Question) were always the last to be presented. After they completed all of the measures, they were thanked for their participation, debriefed, and given a debriefing form (Appendix J). All participants were given a bonus credit for their participation in the study.

Results

Data Screening.

Prior to running analyses for Study 1, the data were screened for missing data, restricted range and range accuracy, univariate and bivariate outliers, and violations of statistical assumptions. Any univariate outliers that were present in the data were changed to one unit above or below the next extreme score. Violations of normality were present so the researcher chose to run non-parametric statistical tests.

Descriptive Information.

Descriptive statistics are presented in Table 3. The majority of participants (82.9%) reported no future likelihood to rape (LR). The negative mean on the RE-IAT measure shows that participants generally responded more quickly when rape and negative shared a response key than when rape and positive shared the response key. Therefore, on average, participants had a relatively negative implicit evaluation of rape. Similarly, looking at the three RE-AMP categories (rape, consenting sex and neutral) we can see that the mean proportion of rape words rated as positive is lower than the mean proportions for either consenting sex or neutral words. Mean scores on explicit measures (SDRAPE, SDCONSENT, ROE and ROEEVAL) also indicate relatively negative attitudes and outcome expectancies of rape in this sample.

Internal Consistency.

Internal consistency coefficients (α) are presented in Table 3. Internal consistency was high for SDRAPE, SDCONSENT, Bumby Rape and CSS measures. For the RE-IAT measure, internal consistency was calculated by considering the D scores for Blocks 3 and 6 and Blocks 4 and 7. The internal consistency for RE-IAT was relatively low, however this is consistent with the findings from other studies (Nunes et al., 2011). Internal consistency could not be calculated

for LR because this measure only had one item. Internal consistency could not be calculated for the ROE or the ROEEVAL Scales because the items are not expected to be consistent across participants, since the outcomes are generated by participants themselves and they can vary in order or might be completely different from one participant to another.

Table 3
Descriptive Statistics and Internal Consistency

Scale	M	SD	Mdn	α	Range
CSS	5.39	9.22	2.00	.93	.00-43.00
DRA	1.06	1.91	.00	-	.00-8.00
LR	1.17	.38	1.00	-	1.00-2.00
SDRAPE	1.14	.28	1.00	.89	1.00-2.14
SDCONSENT	6.02	1.53	6.71	.97	1.00-7.00
ROE	-34.23	25.92	-43.00	-	-63.00-48.00
ROEEVAL	-6.60	3.44	-9.00	-	-9.00-3.00
Bumby Rape	65.97	15.28	66.50	.93	38.00-116.00
RE-AMPSRR	.02	.07	.00	-	.00-.25
RE-AMPSRCS	.96	.09	1.00	-	.75-1.00
RE-AMPSRN	.78	.22	.75	-	.25-1.00
RE-IAT	-1.11	.45	-1.13	.57	-2.24(-.05)
RE-AMPR	.20	.21	.13	-	.00-.76
RE-AMPCS	.79	.18	.83	-	.42-1.00
RE-AMPN	.70	.19	.73	-	.21-1.00

Note. $N=70$. CSS = Coercive Sexuality Scale; DRA = Date Rape Analogue; LR = Likelihood to Rape question; SDRAPE = semantic differential measure of evaluations of rape; SDCONSENT = semantic differential measure of evaluations of consenting sex; ROE = Rape Outcome Expectancies Scale; ROEEVAL = evaluation of expected outcomes on the ROE Scale; RE-AMPSRR = Rape Evaluation Affect Misattribution Procedure (proportion of rape words rated as positive on self-report portion of the AMP); RE-AMPSRCS = Rape Evaluation Affect Misattribution Procedure (proportion of consenting sex words rated as positive on self-report portion of the AMP); RE-AMPSRN = Rape Evaluation Affect Misattribution Procedure (proportion of neutral words rated as positive on self-report portion of the AMP); RE-IAT = Rape Evaluation Implicit Association Test; RE-AMPR = Rape Evaluation Affect Misattribution Procedure (proportion of rape prime words rated as positive); RE-AMPCS = Rape Evaluation Affect Misattribution Procedure (proportion of consenting sex prime words rated as positive); RE-AMPN = Rape Evaluation Affect Misattribution Procedure (proportion of neutral prime words rated as positive).

Correlations.***Explicit cognitions and sexual aggression.***

One of the purposes of the present study was to examine the extent to which measures of explicit attitudes and beliefs are associated with self-reported sexual aggression (Table 4). Three measures were used in the present study as proxy measures of sexual aggression. The Coercive Sexuality Scale (CSS) assessed participants' past sexually aggressive behaviours. The Date Rape Analogue (DRA) assessed willingness to engage in sexually aggressive behaviours. The Likelihood to Rape question (LR) assessed participants' future likelihood to rape.

The CSS measure had a significant medium sized correlation with the semantic differential measure of evaluations of rape (SDRAPE) and a small significant correlation with the Rape Outcome Expectancies Evaluation Scale (ROEEVAL). The DRA measure had significant medium sized correlations with SDRAPE and the Bumby Rape Scale (Bumby Rape), and a small significant correlation with the Rape Outcome Expectancies Scale (ROE). The DRA measure was also correlated with the proportion of rape words rated as positive on the self-report portion of the Rape Evaluation Affect Misattribution Procedure (RE-AMPSRR) in the unexpected direction ($r = -.28, p < .05$). The LR question showed significant medium sized correlations with SDRAPE and Bumby Rape. A marginally significant small correlation with the semantic differential difference score (SDDIFF), calculated by subtracting the evaluations of consenting sex from the evaluations of rape, was also present ($r = .21, p = .08$). These results suggested that the explicit measures of rape related cognitions are associated with the behavioural outcome proxy measures of sexual aggression.

Implicit attitudes and sexual aggression.

Another purpose of the present study was to examine the extent to which implicit attitudes are correlated with self-reported sexual aggression. Two measures of the implicit attitudes were used in the present study: the Rape Evaluation Implicit Association Test (RE-IAT) and the Rape Evaluation Affect Misattribution Procedure (RE-AMP). The RE-AMP was a new implicit measure created for this study.

Results show that the RE-IAT measure did not significantly correlate with any of the proxy measures of sexual aggression (Table 4). The RE-AMP measure also did not significantly correlate with any of the proxy measures of sexual aggression. These results suggest that the measures of implicit rape-related attitudes are not associated with behavioural outcome proxy measures of sexual aggression.

Implicit attitudes and explicit cognitions.

The correlations between explicit and implicit measures or rape-related cognitions were also examined (Table 4). The RE-IAT measure of implicit attitudes did not significantly correlate with any of the other measures, however the correlations were marginally significant with the SDDIFF ($r = .20, p = .10$), ROE ($r = .23, p = .06$), and Bumby Rape ($r = .20, p = .09$).

The second measure of implicit attitudes (RE-AMP) used in the present study showed more promising results. The proportion of rape prime words rated as positive on the RE-AMP (RE-AMPR) significantly correlated with the semantic differential measure of evaluations of consenting sex (SDCONSENT) ($r = -.32, p < .01$) and with the SDDIFF ($r = .30, p < .05$). A marginally significant correlation was also present between the RE-AMPR and the proportion of consenting sex words rated as positive on the self-report portion of the RE-AMP (RE-AMPSRCS) ($r = -.23, p = .05$).

The proportion of consenting sex prime words rated as positive on the RE-AMP (RE-AMPCS) also significantly correlated with SDCONSENT ($r = .33, p < .01$) and with SDDIFF ($r = -.33, p < .01$). A marginally significant correlation was also present with the RE-AMPSRCS ($r = .22, p = .07$).

The self-report portion of the RE-AMP was further examined. This portion of the RE-AMP assessed the explicit attitudes toward rape and consenting sex. The proportion of consenting sex words rated as positive on the self-report portion of the RE-AMP (RE-AMPSRCS) showed significant medium correlations with the SDCONSENT and the SDDIFF, and a small significant correlation with ROE in the expected direction. The proportion of neutral words rated as positive on the self-report portion of the RE-AMP (RE-AMPSRN) significantly correlated with the proportion of neutral prime words rated as positive on the implicit portion of the RE-AMP (RE-AMPN).

Correlations between different explicit measures were also examined. The findings, presented in Table 4, show that explicit measures of attitudes, outcome expectancies and rape myths correlated amongst each other, suggesting that these different cognitive constructs are associated with each other. For example, small to medium correlations were found between the Bumby Rape measure of cognitive distortions and the SDRAPE, the SDDIFF, the ROE and the ROEEVAL.

Table 4

Spearman's rho correlations

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.CSS	-	.53**	.10	.46**	.07	.15	.17	.24*	.17	.06	-.04	.13	-.08	-.12	.11	.24*
2.DRA		-	.10	.39**	.09	.12	.24*	.10	.33**	-.28*	.04	.08	.02	.01	.02	-.05
3.LR			-	.32**	-.10	.21	.19	.16	.40**	.10	-.12	.06	.13	.08	-.10	-.05
4.SDRAPE				-	-.02	.36**	.34**	.34**	.48**	-.09	.01	.16	.08	-.02	-.03	.10
5.SDCS					-	-.89**	-.06	-.12	-.18	.05	.44**	.14	-.13	-.32**	.33**	.14
6.SDDIFF						-	.19	.27*	.35**	-.10	-.40**	-.01	.20	.30*	-.33**	-.06
7.ROE							-	.80**	.40**	.04	-.25*	.05	.23	.00	.02	.04
8.ROEEVAL								-	.27*	.14	-.18	.09	.12	.11	.00	.09
9.BRAPE									-	.11	-.14	.09	.20	.14	-.17	-.07
10.AMPSRR										-	.01	.04	.06	.01	.07	.06
11.AMPSRC											-	.08	-.00	-.23	.22	.21
12.AMPSRN												-	-.02	-.07	.04	.38**
13.RE-IAT													-	-.07	.05	.16
14.AMPR														-	-.74**	-.55**
15.AMPCS															-	.50*
16.AMPN																-

Note. $N=70$. CSS = Coercive Sexuality Scale; DRA = Date Rape Analogue; LR = Likelihood to Rape question; SDRAPE = semantic differential measure of evaluations of rape; SDCS = semantic differential measure of evaluations of consenting sex; ROE = Rape Outcome Expectancies Scale; ROEEVAL = evaluation of expected outcomes on the ROE Scale; BRAPE = the Bumby Rape scale; AMPSRR = Rape Evaluation Affect Misattribution Procedure (proportion of rape words rated as positive on self-report portion of the AMP); AMPSRC = Rape Evaluation Affect Misattribution Procedure (proportion of consenting sex words rated as positive on self-report portion of the AMP); AMPSRN = Rape Evaluation Affect Misattribution Procedure (proportion of neutral words rated as positive on self-report portion of the AMP); RE-IAT = Rape Evaluation Implicit Assosiation Test; AMPR = Rape Evaluation Affect Misattribution Procedure (proportion of rape prime words rated as positive); AMPCS = Rape Evaluation Affect Misattribution Procedure (proportion of consenting sex prime words rated as positive); AMPN = Rape Evaluation Affect Misattribution Procedure (proportion of neutral prime words rated as positive).

* $p < .05$. ** $p < .01$.

Discussion

Before conducting the main study, another study which looked at the implicit and explicit rape-related cognitions in a sample of male undergraduate students was run. This study was conducted to test a new measure of implicit attitudes toward rape (i.e., RE-AMP) and to examine the extent to which measures of explicit and implicit attitudes are associated with self-reported sexual aggression and how these measures are associated with each other.

Explicit cognitions and sexual aggression

It was predicted that explicit rape-related cognitions and proxy measures of sexual aggression would be associated with each other. Consistent with this hypothesis, results showed that higher level of past sexually aggressive behaviour, measured by the CSS, was associated with more positive explicit evaluations of rape, measured by the SDRAPE and the ROEEVAL. This shows that people who have been sexually coercive in the past tend to evaluate rape more positively and have more positive attitudes toward rape than people with no or lesser history of sexually coercive behaviours.

Also consistent with this hypothesis, higher scores on the DRA measure were associated with more positive explicit evaluations of rape (measured by the SDRAPE and the ROE) and more rape myths acceptance (measured by the Bumby Rape). The DRA measure assessed participants' willingness to engage in sexually aggressive behaviours. Therefore, participants who are more willing to engage in sexually aggressive behaviours tend to have more positive evaluations of rape, have more positive attitudes toward rape, and believe in more rape myths.

Finally, the higher ratings on the Likelihood to Rape question (LR), which assessed participants' future likelihood to rape, were associated with more positive explicit evaluations of rape (measured by the SDRAPE) and more rape myths acceptance (measured by the Bumby

Rape). Participants who reported some likelihood that they would rape someone in the future tended to have more positive attitudes toward rape and agree with more rape myths.

Overall, the results suggested that explicit rape related cognitions are associated with self-report sexual aggression in the expected direction. These findings are consistent with Ajzen's (1991) Theory of Planned Behaviour which identifies explicit cognitions as important factors influencing behaviour. Past meta-analyses have supported this notion by finding large correlations between cognitions and behaviours (Glassman & Albarracin, 2006; Kraus, 1995).

More specifically, theories of sexual aggression identify offence-supportive cognitions as important predictors of sexually aggressive behaviour. The Hierarchical-Mediational Confluence model (HMC; Malamuth, 1986; Malamuth, 2003) and the Judgment Model of Cognitive Distortions (JMCD; Ward, Gannon, & Keown, 2006), both identify offence-supportive cognitions as the basis for sexual aggression. There is a general consensus among researchers that offence-supporting cognitions are key elements that underlie sexual offenders' decisions regarding sexually aggressive behaviours and that they appear to facilitate and maintain sexually aggressive behaviour (Ward et al., 2006). Murnen, Wright, and Kaluzny's (2002) meta-analysis revealed that different rape-supportive cognitions (e.g., rape myths acceptance) are associated with sexual aggression. Past studies focusing specifically on the relationship between explicit attitudes and sexual aggression also found that the evaluations of rape were significantly associated with both self-reported likelihood to rape and past sexual coercion (Nunes et al., 2011). The findings of the present study provided further support to the notion that explicit offense-supportive cognitions, including attitudes, are associated with past, present, and future self-reported sexual aggression.

Implicit attitudes and sexual aggression

It was predicted that implicit attitudes will be associated with self-reported sexual aggression. However, this hypothesis was not supported. Implicit attitudes, measured by the RE-IAT and RE-AMP, were not associated with behavioural proxy measures of sexual aggression.

Because implicit measures of offence-supportive cognitions are rarely used in studies, little is known whether explicit or implicit cognitions are more closely associated with antisocial behaviours (Polaschek, Bell, Calvert, & Takarangi, 2010). The results of the present study suggest that explicit cognitions are more closely associated with sexually aggressive behaviours. However, more studies are needed. In the past, studies examining implicit offence-supportive cognitions focused more on child sexual abuse as opposed to sexual abuse of women. Past studies using the IAT were able to find differences in implicit cognitions between child molesters and offenders with no history of child sexual abuse (Gray et al., 2005; Nunes et al., 2007). Not a lot of studies have been done to date that examined the relationship between implicit attitudes toward rape and sexual aggression. However, one study that was done by Nunes and colleagues (2011), which used the IAT measure, found that implicit attitudes were associated with self-reported likelihood to rape. Unfortunately, this study was unable to replicate these results. Future studies with larger samples should attempt to clarify this issue.

Implicit attitudes and explicit cognitions

It was predicted that explicit and implicit cognitions would correlate with one another. This hypothesis was partially supported. Implicit attitudes, when measured by the RE-IAT, did not significantly correlate with any of the explicit measures of rape-supportive cognitions. However, the relationship between the RE-IAT and several of the explicit measures approached

significance. This lack of significant findings may be due to a relatively small sample size.

Future studies should explore this with a larger sample.

Implicit attitudes, when measured by the RE-AMP, were associated with evaluations of consenting sex and rape. For example, the proportion of rape prime words rated as positive on the RE-AMP (RE-AMPR) significantly correlated with the evaluations of consenting sex (SDCONSENT) and the difference score between rape and consenting sex evaluations (SDDIFF). Participants showing more positive implicit attitudes toward rape on the RE-AMP measure rated consenting sex more negatively and rape (compared to consenting sex) more positively on explicit measures of attitudes. The proportion of consenting sex prime words rated as positive on the RE-AMP (RE-AMPCS) also significantly correlated with the evaluations of consenting sex and the difference score. Participants reporting more positive implicit attitudes toward consenting sex also reported more positive explicit evaluations of consenting sex and more negative evaluations of rape (compared to consenting sex). The RE-AMP measure of implicit rape-related attitudes was a new measure created for this study. The present results were optimistic.

It was further predicted that explicit measures would be associated with each other. This hypothesis was supported. Explicit measures of attitudes, outcome expectancies and rape myths significantly correlated amongst each other, suggesting that these different cognitive constructs are associated with each other. However, even though different explicit cognitive constructs were correlated, they still remained independent constructs since the correlations were in the small to medium range.

Limitations

This study had several limitations. First, the sample size was relatively small, perhaps limiting the statistical power. Second, violations of normality were present in the data and non-parametric tests had to be conducted. This may have further limited the statistical power. Third, proxy behavioural measures of sexual aggression were used in the present study. Therefore, when talking about sexual aggression, we are not talking about the actual behaviour that was measured, but about the self-report measures of the past, present and future sexually aggressive behaviours. When using self-report measures as proxy measures of an actual behaviour and also when using self-report measures to assess cognitions, socially desirable responding can be a problem. However, some research shows that social desirability is not as big a problem as often assumed (Mills & Kroner, 2006). For example, in sex offender research self-report measures are useful in the assessment process (Worling, 2006) and in classification (Laws, Hanson, Osborn, & Greenbaum, 2000). The procedure used in the present study promoted anonymity of responding and all of the participants were aware that their responses are truly anonymous. Another limitation of the present study has to do with generalizability. University students were used as participants, therefore the results of this study may not generalize to an offender population. However, the results are still relevant to sexual aggression literature, since male students do engage in sexually aggressive behaviours. The fact that explicit and implicit evaluations on RE-AMP did not correlate with each other is another potential limitation. This finding was strange since the implicit evaluations on RE-AMP correlated with other explicit measures. This strange finding can potentially be explained by a small sample size or by the flawed construction of the explicit portion of the RE-AMP. Another limitation is the fact that because the variables were not manipulated, as would be done in a true experiment, and instead correlations between variables

were examined, causality cannot be inferred. Therefore, we can only say that certain variables were associated with one another.

Study 2

The second study focused on the way self-reports of sexually aggressive behaviours, explicit rape related cognitions (including attitudes), implicit attitudes toward rape, and victim empathy change after different video-based interventions (rape myths video, victim empathy video, outcome expectancies video, and a control condition). This study used videos previously used by O'Donohue et al. (2003). The present study added to the study by O'Donohue and colleagues (2003) in a number of important ways. O'Donohue and colleagues (2003) compared the effects of one experimental video (combining rape myths, victim empathy, and outcome expectancies videos) to a control rape-prevention video on explicit rape-supportive cognitions and victim empathy. The present study compared each individual video (rape myths video, victim empathy video, and outcome expectancies video) to a true control video that had nothing to do with sexual aggression. The present study also examined the effects on measures of self-reported sexually aggressive behaviours, explicit attitudes and implicit attitudes, in addition to measures of explicit rape-supportive cognitions and victim empathy.

Method

Participants.

Participants were 54 male undergraduate students recruited through SONA from Carleton University. Overall, 63 participants participated in the study, but 9 participants were excluded because they reported homosexual or bisexual sexual orientation ($n=1$), ability to understand Chinese ($n=6$), or they responded faster than 300ms on more than 10% of trials on the IAT measure ($n=3$). None of the participants were younger than 18 years of age and none

reported inability to understand English. Participants who reported homosexual or bisexual sexual orientation were excluded to control for sexual orientation and eliminate the potential confounding effects of this variable. Participants who reported an ability to understand Chinese were excluded because the RE-AMP uses Chinese symbols and these symbols should be ambiguous to participants. Participants who responded faster than 300ms on more than 10% of trials on the IAT measure were excluded based on a recommendation for the IAT scoring procedure by Greenwald, Nosek and Banaji (2003). The majority of participants were 18 (24.1%), 19 (22.2%) or 20 (20.4%) years old, with 88.9% of participants between the ages of 18 to 23 years old. Only 7.4 % were 24 to 29 years old, and 3.7% were 30 and older.

Measures.

The demographic questions, RE-IAT, RE-AMP (Appendix D), SDRAPE and SDCONSENT (Appendix E), ROE Scale (Appendix F), Bumby Rape Scale (Appendix G), CSS (Appendix C), and DRA (Appendix H), used in the first study were administered to participants (for description of measures refer to Study 1). Additional measures used in Study 2 are described below.

The Likelihood to Rape Questions.

The Likelihood to Rape Questions measure self-reported likelihood to rape. Participants responded, on a 5-point Likert scale (*Not at all Likely* to *Very Likely*), to the question from Malamuth (1981): “What is the likelihood that you would rape someone if you could be assured of not being caught and punished?”(LR2) and to “What is the likelihood that you would rape someone?” (LR1). Higher scores indicate higher self-reported likelihood to rape.

The Rapist Empathy Measure.

A part of the Rapist Empathy Measure (Fernandez & Marshall, 2003) was given to all the participants (Appendix K). The participants were asked to think about an adult woman who has been sexually assaulted by an adult male. The participants were then asked to indicate the degree to which this woman will be experiencing different emotions (e.g., sad), thoughts (e.g., suicidal thoughts), and behaviours (e.g., problems with work). The participants were also asked to indicate how they feel about what this woman has experienced (e.g., devastated).

This measure is divided into two subscales designed to measure the cognitive and affective components of empathy. The first subscale (REM part 1; 30 items) measures the participants' recognition of the woman's experience, and the second subscale (REM part 2; 20 items) measures the participants' own feelings toward the woman. Each item from both subscales is rated from 0 (*not at all*) to 10 (*very much*). Twenty five of the items in REM part 1 are positively scored and five are negatively scored. In REM part 2, 14 items are positively scored and 6 items are negatively scored. Higher scores on each subscale reflect greater empathy. The total score for REM measure (REM total) is calculated by summing up the two subscales, with higher scores reflecting greater empathy. This measure has been used in past studies and was reported to have a satisfactory internal consistency (Fernandez & Marshall, 2003).

Manipulations.***Rape Myths Video.***

The rape myths video used in the present study was a video used in a rape prevention study by O'Donohue and colleagues (2003). The content of the video as described by O'Donohue et al. (2003) is provided in the following section:

The setting depicted in this section of the videotape is a "typical" American college campus. The segment is divided into short clips involving two to four characters each. The characters are discussing a recent alleged rape, in a manner that systematically states, and then debunks, rape myths hypothesized to contribute to sexually coercive behaviour. Arguments and counter arguments are presented in a manner intended to resemble the interactions of contemporary college students. The goal of this segment is to convey the message that believing rape myths is not harmless and may contribute to engaging in sexually abusive behaviour. The section covered a total of 18 common myths (O'Donohue et al., 2003, pp. 519).

Victim Empathy Video.

The victim empathy video used in the present study was a video used in a rape prevention study by O'Donohue and colleagues (2003). The content of the video as described by O'Donohue et al. (2003) is provided in the following section:

This segment provides testimonials of women who have experienced a rape or sexual assault. The script focuses on conveying the short- and long-term consequences of sexual assault. A male and a female commentator guide the viewer through testimonials and discuss the ramifications of rape for the victim. Viewers are then asked to imagine the experience of a loved one being raped. They are also asked to imagine what they would

feel like if another man raped them. The goal is to convey a level of harm caused by rape that evokes empathy (O'Donohue et al., 2003, pp. 519-520).

Outcome Expectancies Video.

The outcome expectancies video used in the present study was a video used in a rape prevention study by O'Donohue and colleagues (2003). The content of the video as described by O'Donohue et al. (2003) is provided in the following section:

This segment provides testimonials of four young men who committed a prior sexual assault. The viewer is guided through the testimonials by a male commentator who also serves as the interviewer to the offenders. Two of the characters are in prison. These men talk about the problems associated with being in prison, including their own sexual victimization and the negative effects of their imprisonment on family members. One character, who has recently been paroled, discusses his inability to find employment because of his prior sexual assault conviction. The fourth character, who was never convicted, reveals the social and educational consequences he experienced as a result of his behaviour. Viewers are then asked to imagine the impact on their parents and friends if they were charged with rape (O'Donohue et al., 2003, p. 520).

Control Condition Video.

During control condition a segment from "Great Northern Forest" video was shown to students. This is a nature video about flora and fauna of the northern forest. This video was chosen because it was a neutral film that has nothing to do with sexual aggression.

Manipulation Check.

Manipulation Check Question asked participants to indicate which video they watched (Appendix O).

Procedure.

All of the male participants were recruited through SONA (Appendix L) from Carleton University. When the participants showed up, the researcher explained the testing procedure, their rights as participants and confidentiality, and asked participants to read and sign two copies of the consent form (Appendix M). Participants were randomly assigned to the rape myths, victim empathy, outcome expectancies or control condition. Participants were tested in a testing room one at a time. All of the measures were presented on a laptop computer. Participants first completed the demographic questions and the CSS. Participants were then presented with the rape myths video, victim empathy video, outcome expectancies video or control video. The four videos are about the same length. Following the presentation of one of the conditions, participants were asked to complete the rest of the measures, with most measures being counterbalanced between them. The behavioural proxy measures of sexual aggression (Date Rape Analogue and Likelihood to Rape Questions) were always the last to be presented. At the end participants completed a manipulation check. After they completed all of the measures, they were thanked for their participation, debriefed, and given a debriefing form (Appendix N). All participants were given a bonus credit for their participation in the study. For overview of Study 2 see Figure 2.

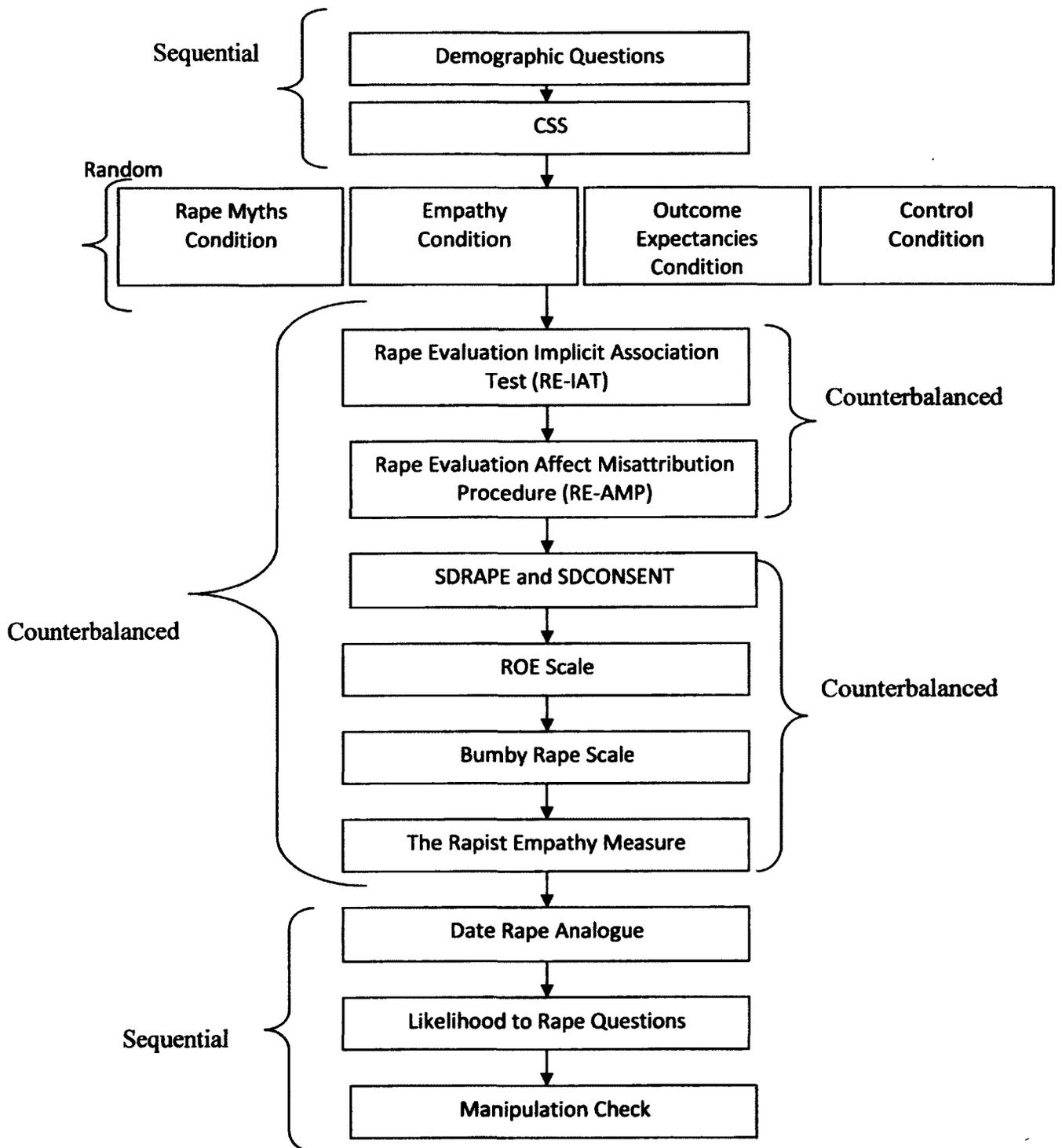


Figure 2. Overview of Study 2

Results

Data Screening.

Prior to running analyses for Study 2 the data were screened for missing data, restricted range and range accuracy, univariate and bivariate outliers, and violations of statistical assumptions. Any univariate outliers that were present in the data were changed to one unit above or below the next extreme score. Violations of normality were present so it was decided that non-parametric statistical tests should be run.

Descriptive Information.

Descriptive statistics are presented in Table 5. The majority of participants (85.2%) reported no future likelihood to rape (LR1). The majority of participants (74.1%) also reported no future likelihood to rape even if they could be assured of not being caught and punished (LR2). The negative mean on the RE-IAT measure shows that participants generally responded more quickly when rape and negative shared a response key than when rape and positive shared the response key. Therefore, on average, participants had a relatively negative implicit evaluation of rape. Similarly, looking at the three RE-AMP categories (rape, consenting sex and neutral) we can see that the mean proportion of rape words rated as positive is lower than the mean proportions for either consenting sex or neutral words. Mean scores on explicit measures (SDRAPE, SDCONSENT, ROE Scale and ROEEVAL Scale) also indicated relatively negative attitudes and outcome expectancies of rape in this sample. Descriptive statistics for each of the video conditions are also presented (Table 6).

Table 5

Descriptive Statistics and Internal Consistency

Scale	M	SD	Mdn	α	Range
CSS	3.54	4.31	2.00	0.51	.00-14.00
DRA	1.28	1.70	.00	-	.00-6.00
LR1	1.13	.34	1.00	-	1.00-2.00
LR2	1.36	.74	1.00	-	1.00-4.00
SDRAPE	1.09	.24	1.00	0.60	1.00-2.00
SDCONSENT	6.65	.64	7.00	0.92	4.43-7.00
ROE	-40.66	19.33	-45.00	-	-63.00-15.00
ROEEVAL	-7.77	2.14	-9.00	-	-9.00-(-2.00)
Bumby RAPE Scale	64.11	14.27	62.50	0.93	38.00-92.00
RE-AMPSRR	.02	.07	.00	0.79	.00-.25
RE-AMPSRCS	.93	.15	1.00	0.67	.50-1.00
RE-AMPSRN	.82	.22	1.00	0.57	.25-1.00
RE-IAT	-1.04	.41	-.97	0.62	-1.85-(-.14)
RE-AMPR	.24	.22	.17	-	.00-.87
RE-AMPCS	.76	.20	.78	-	.24-1.00
RE-AMPN	.67	.21	.67	-	.05-1.00
REM total	168.57	19.16	168.00	0.87	118.00-203.00
REM part 1	110.76	10.77	109.00	0.79	88.00-130.00
REM part 2	57.81	10.99	59.00	0.81	30.00-76.00

Note. $N=54$. CSS = Coercive Sexuality Scale; DRA = Date Rape Analogue; LR1 = first Likelihood to Rape question; LR2 = second Likelihood to Rape question; SDRAPE = semantic differential measure of evaluations of rape; SDCONSENT = semantic differential measure of evaluations of consenting sex; ROE = Rape Outcome Expectancies Scale; ROEEVAL = evaluation of expected outcomes on the ROE Scale; RE-AMPSRR = Rape Evaluation Affect Misattribution Procedure (proportion of rape words rated as positive on self-report portion of the AMP); RE-AMPSRCS = Rape Evaluation Affect Misattribution Procedure (proportion of consenting sex words rated as positive on self-report portion of the AMP); RE-AMPSRN = Rape Evaluation Affect Misattribution Procedure (proportion of neutral words rated as positive on self-report portion of the AMP); RE-IAT = Rape Evaluation Implicit Assosiation Test; RE-AMPR = Rape Evaluation Affect Misattribution Procedure (proportion of rape prime words rated

as positive); RE-AMPCS = Rape Evaluation Affect Misattribution Procedure (proportion of consenting sex prime words rated as positive); RE-AMPN = Rape Evaluation Affect Misattribution Procedure (proportion of neutral prime words rated as positive); REM total score = total score on the Rapist Empathy Measure; REM part 1 = score on the first subscale of the Rapist Empathy Measure; REM part 2 = score on the second subscale of the Rapist Empathy Measure.

Internal Consistency.

Internal consistency coefficients (α) are presented in Table 5. Internal consistency was excellent for SDCONSENT and Bumby RAPE measures. Internal consistency was good for REM total score, REM part 1, REM part 2, and RE-AMPSRR measures. Internal consistency was questionable for SDRAPE, RE-IAT, and RE-AMPSRCS measures. For the RE-IAT measure, internal consistency was calculated by considering the D scores for Blocks 3 and 6 and Blocks 4 and 7. The questionable internal consistency for RE-IAT is consistent with the findings from other studies (Nunes et al., 2011). Internal consistency was poor for CSS and RE-AMPSRN measures. Internal consistency could not be calculated for LR1 and LR2 because these measures only had one item each. Internal consistency could not be calculated for the ROE or the ROEEVAL Scales because the items are not expected to be consistent across participants, since the outcomes are generated by participants themselves and they can vary in order or might be completely different from one participant to another.

Table 6 (Cont.)

	Rape	Myths	Video	Victim	Emp.	Video	Out.	Expect.	Video	Control	Video	
	n=9			n=17			n=16			n=11		
	M	SD	Mdn	M	SD	Mdn	M	SD	Mdn	M	SD	Mdn
RE-AMPSRN	0.94	0.17	1.00	0.75	0.25	0.75	0.84	0.20	0.87	0.82	0.20	0.75
RE-IAT	-1.22	0.39	-1.33	-1.12	0.43	-1.09	-1.01	0.38	-0.93	-0.82	0.38	-0.92
RE-AMPR	0.26	0.24	0.20	0.15	0.18	0.09	0.28	0.24	0.23	0.32	0.19	0.31
RE-AMPCS	0.75	0.18	0.75	0.79	0.22	0.86	0.72	0.23	0.75	0.78	0.15	0.78
RE-AMPN	0.83	0.18	0.91	0.63	0.19	0.53	0.67	0.22	0.69	0.59	0.21	0.50
REM total	167.89	19.44	167.00	179.17	20.61	182.50	159.50	13.81	156.5	165.00	16.98	166.00
REM part1	110.89	9.75	107.00	117.83	10.48	121.00	104.19	9.03	103.5	108.63	8.06	109.00
REM part2	57.00	13.10	60.00	61.33	11.63	64.00	55.31	8.42	58.00	56.36	11.46	59.00

Note. N=54. Out. Expect. Video = Outcome Expectancies Video; CSS = Coercive Sexuality Scale; DRA = Date Rape Analogue; LR1 = first Likelihood to Rape question; LR2 = second Likelihood to Rape question; SDRAPE = semantic differential measure of evaluations of rape; SDCONSENT = semantic differential measure of evaluations of consenting sex; ROE = Rape Outcome

Expectancies Scale; ROEEVAL = evaluation of expected outcomes on the ROE Scale; RE-AMPSRR = Rape Evaluation Affect Misattribution Procedure (proportion of rape words rated as positive on self-report portion of the AMP); RE-AMPSRCS = Rape Evaluation Affect Misattribution Procedure (proportion of consenting sex words rated as positive on self-report portion of the AMP); RE-AMPSRN = Rape Evaluation Affect Misattribution Procedure (proportion of neutral words rated as positive on self-report portion of the AMP); RE-IAT = Rape Evaluation Implicit Association Test; RE-AMPR = Rape Evaluation Affect Misattribution Procedure (proportion of rape prime words rated as positive); RE-AMPCS = Rape Evaluation Affect Misattribution Procedure (proportion of consenting sex prime words rated as positive); RE-AMPN = Rape Evaluation Affect Misattribution Procedure (proportion of neutral prime words rated as positive); REM total score = total score on the Rapist Empathy Measure; REM part 1 = score on the first subscale of the Rapist Empathy Measure; REM part 2 = score on the second subscale of the Rapist Empathy Measure.

Equivalency of groups.

Before looking at the main results, the equivalency of four groups was examined.

Overall, there were 9 people in rape myths video group, 17 people in victim empathy video group, 16 people in outcome expectancies video group, and 11 people in the control group. It was found that the four groups were equivalent on the CSS measure, indicating that the groups did not differ on past sexual coercion. The groups did not differ on marital status. However, the groups differed on age variable, with participants in outcome expectancies video group being younger than participants in rape myths video group and victim empathy group. None of the three treatment groups differed from the control group on age.

Nonparametric tests.***Rape-prevention videos and sexual aggression.***

One of the purposes of the present study was to examine the extent to which watching rape-prevention videos (compared to a control video) is associated with decreased self-reported sexual aggression. Three measures were used in the present study as proxy measures of sexual aggression. The DRA assessed willingness to engage in sexually aggressive behaviours. The LR1 assessed participants' future likelihood to rape. The LR2 assessed participants' future likelihood to rape if they could be assured of not being caught and punished.

A Mann-Whitney U test was conducted to evaluate the hypothesis that participants who watched the rape myths video, victim empathy video, or outcome expectancies video would score lower on sexual aggression proxy measures, than participants who watched the control video (see Table 7). The one-tailed test results were examined. None of the groups differed significantly from the control group on the DRA, LR1 and LR2 measures. However, participants

who watched the victim empathy video marginally differed from participants who watched the control video on LR2 measure in the expected direction, $z = -1.52$, $p = .064$, $r = -.29$. Participants who watched the victim empathy video had an average rank of 13.15, while participants who watched the control video had an average rank of 16.59. When looking at the experimental conditions, none of the participants who watched the rape myths video, victim empathy video or outcome expectancies video differed from each other on the DRA, LR1 and LR2 measures.

Table 7

Summary of meaningful differences between rape-prevention videos and a control video

	R. M. Video		V.E. Video		O.E. Video	
	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>
LR2	-	-	0.06	-.29	-	-
SDCONSENT	-	-	0.03	-.35	-	-
SDDIFF	-	-	0.02	-.38	0.04	-.34
Bumby Rape	-	-	0.03	-.35	-	-
ROE	-	-	0.10	-.24	-	-
ROEEVAL	-	-	0.03	-.34	0.04	-.35
RE-IAT	0.02	-.45	0.05	-.31	-	-
RE-AMPR	-	-	0.003	-.52	-	-
REM total	-	-	0.02	-.38	-	-
REM part 1	-	-	0.004	-.49	-	-
REM part 2	-	-	0.10	-.23	-	-

Note. $N=54$. p = p-value (significance value); r = effect size; R. M. Video = Rape Myths Video; V. E. Video = Victim Empathy Video; O. E. Video = Outcome Expectancies Video; LR2 =

second Likelihood to Rape question; SDCONSENT = semantic differential measure of evaluations of consenting sex; SDDIFF = difference score between evaluations of rape and consenting sex on the semantic differential measure; ROE = Rape Outcome Expectancies Scale; ROEEVAL = evaluation of expected outcomes on the ROE Scale; RE-IAT = Rape Evaluation Implicit Association Test; RE-AMPR = Rape Evaluation Affect Misattribution Procedure (proportion of rape prime words rated as positive); REM total score = total score on the Rapist Empathy Measure; REM part 1 = score on the first subscale of the Rapist Empathy Measure; REM part 2 = score on the second subscale of the Rapist Empathy Measure.

Rape-prevention videos and explicit cognitions.

Another purpose of the present study was to examine the extent to which watching rape-prevention videos (compared to a control video) is associated with decreased rape-supportive explicit cognitions. The SDRAPE, SDCONSENT, SDDIFF, Bumby Rape, ROE, ROEEVAL, RE-AMPSRR, and RE-AMPSRCS were used as the measures of explicit cognitions.

A Mann-Whitney U test was conducted to evaluate the hypothesis that participants who watched the rape myths video, victim empathy video, or outcome expectancies video would report less rape-supportive explicit cognitions, than participants who watched the control video (see Table 7). The one-tailed test results were examined. None of the groups differed significantly from the control group on SDRAPE, ROE, RE-AMPSRR and RE-AMPSRCS measures. However, participants who watched the victim empathy video marginally differed from participants who watched the control video on ROE measure in the expected direction, $z = -1.30$, $p = .097$, $r = -.24$. Participants who watched the victim empathy video had an average rank of 12.88, while participants who watched the control video had an average rank of 17.00.

Other measures of explicit cognitions showed more promising results (Table 7). Participants who watched the victim empathy video significantly differed from participants who watched the control video on SDCONSENT measure in the expected direction, $z = -1.91$, $p = .028$, $r = -.35$. Participants who watched the victim empathy video had an average rank of 17.11,

while participants who watched the control video had an average rank of 11.55, indicating that participants who watched the victim empathy video had more positive evaluations of consenting sex than people who watched the control video.

Participants who watched the victim empathy video significantly differed from participants who watched the control video on SDDIFF measure in the expected direction, $z = -2.03$, $p = .021$, $r = -.38$. Participants who watched the victim empathy video had an average rank of 12.64, while participants who watched the control video had an average rank of 18.86.

Participants who watched the outcome expectancies video also significantly differed from participants who watched the control video on SDDIFF measure in the expected direction, $z = -1.76$, $p = .039$, $r = -.34$. Participants who watched the outcome expectancies video had an average rank of 11.91, while participants who watched the control video had an average rank of 17.05. This shows that participants who watched the victim empathy video or the outcome expectancies video had a more negative evaluation of rape relative to consenting sex than participants who watched the control video.

Participants who watched the victim empathy video significantly differed from participants who watched the control video on Bumby Rape measure in the expected direction, $z = -1.91$, $p = .028$, $r = -.35$. Participants who watched the victim empathy video had an average rank of 12.64, while participants who watched the control video had an average rank of 18.86, indicating that participants who watched the victim empathy video expressed less rape myths than participants who watched the control video.

Participants who watched the victim empathy video significantly differed from participants who watched the control video on ROEEVAL measure in the expected direction, $z = -1.81$, $p = .035$, $r = -.34$. Participants who watched the victim empathy video had an average rank

of 12.56, while participants who watched the control video had an average rank of 17.50. Participants who watched the outcome expectancies video also significantly differed from participants who watched the control video on ROEEVAL measure in the expected direction, $z = -1.80$, $p = .036$, $r = -.35$. Participants who watched the outcome expectancies video had an average rank of 12.03, while participants who watched the control video had an average rank of 16.86. This shows that participants who watched the victim empathy or outcome expectancies video generated significantly more negative rape outcomes than participants who watched the control video.

It was further examined whether participants from the three experimental conditions differed from each other on the measures of explicit cognitions. A Mann-Whitney U test was conducted to see whether participants who watched the rape myths video, victim empathy video, or outcome expectancies video differed from each other. The two-tailed test results were examined. Participants who watched the rape myths video, victim empathy video or outcome expectancies video did not differ on SDRAPE, SDCONSENT, SDDIFF, ROE, ROEEVAL, RE-AMPSRR, and RE-AMPSRCS measures. However, participants who watched the victim empathy video significantly differed from the participants who watched the outcome expectancies video on the Bumby Rape measure, $z = -2.68$, $p = .007$, $r = -.46$. Participants who watched the victim empathy video had an average rank of 13.19, while participants who watched the outcome expectancies video had an average rank of 22.34, indicating that participants who watched the victim empathy video expressed less rape myths than participants who watched the outcome expectancies video.

Rape-prevention videos and implicit attitudes.

Another purpose of the present study was to examine the extent to which watching rape-prevention videos (compared to a control video) is associated with more negative implicit attitudes toward rape. Two implicit measures, the Rape Evaluation Implicit Association Test (RE-IAT) and the Rape Evaluation Affect Misattribution Procedure (RE-AMP), were used in the present study.

A Mann-Whitney U test was conducted to evaluate the hypothesis that participants who watched the rape myths video, victim empathy video, or outcome expectancies video would show more negative implicit attitudes toward rape, than participants who watched the control video (see Table 7). The one-tailed test results were examined.

Participants who watched the rape myths video significantly differed from participants who watched the control video on the RE-IAT measure in the expected direction, $z = -2.01$, $p = .022$, $r = -.45$. Participants who watched the rape myths video had an average rank of 7.56, while participants who watched the control video had an average rank of 12.91. Participants who watched the victim empathy video also significantly differed from participants who watched the control video on the RE-IAT measure in the expected direction, $z = -1.67$, $p = .047$, $r = -.32$. Participants who watched the victim empathy video had an average rank of 12.41, while participants who watched the control video had an average rank of 17.73. This shows that participants who watched the rape myths or victim empathy video had significantly more negative implicit attitudes toward rape than participants who watched the control video.

Participants who watched the victim empathy video significantly differed from participants who watched the control video on the RE-AMPR in the expected direction, $z = -2.76$, $p = .003$, $r = -.52$. Participants who watched the victim empathy video had an average rank

of 11.06, while participants who watched the control video had an average rank of 19.82, showing that participants who watched the victim empathy video had significantly more negative evaluations of rape than participants who watched the control video. None of the groups differed significantly from the control group on the RE-AMPCS measure.

It was further examined whether participants from the three experimental conditions differed from each other on the measures of implicit attitudes. A Mann-Whitney U test was conducted to see whether participants who watched the rape myths video, victim empathy video, or outcome expectancies video differed from each other. The two-tailed test results were examined. Participants who watched the rape myths video, victim empathy video or outcome expectancies video did not significantly differ on the RE-IAT, RE-AMPR and RE-AMPCS measures. However, participants who watched the victim empathy video marginally differed from the participants who watched the outcome expectancies video on the RE-AMPR measure, $z = -1.84$, $p = .065$, $r = -.32$. Participants who watched the victim empathy video had an average rank of 14.00, while participants who watched the outcome expectancies video had an average rank of 20.19, suggesting that participants who watched the victim empathy video could have more negative implicit attitudes toward rape than participants who watched the outcome expectancies video.

Rape-prevention videos and victim empathy.

The extent to which watching victim empathy video (compared to a control video) is associated with more empathy toward victims of rape was also examined. The Rapist Empathy Measure (REM) was used as a measure of victim empathy. This measure is divided into two subscales. The first subscale measured the participants' recognition of the woman's experience

(REM part 1), and the second subscale measured the participants' own feelings toward the woman (REM part 2).

A Mann-Whitney U test was conducted to evaluate the hypothesis that participants who watched the victim empathy video would show more victim empathy, than participants who watched the control video (see Table 7). The one-tailed test results were examined. Participants who watched the victim empathy video significantly differed from participants who watched the control video on the REM total score in the expected direction, $z = -2.05$, $p = .02$, $r = -.38$. Participants who watched the victim empathy video had an average rank of 17.53, while participants who watched the control video had an average rank of 10.86, indicating that participants who watched the victim empathy video reported more overall victim empathy than participants who watched the control video. None of the other videos differed significantly from the control video on the REM total score.

Participants who watched the victim empathy video also significantly differed from participants who watched the control video on the REM part 1 in the expected direction, $z = -2.63$, $p = .004$, $r = -.49$. Participants who watched the victim empathy video had an average rank of 18.25, while participants who watched the control video had an average rank of 9.68, indicating that participants who watched the victim empathy video reported more recognition of the woman's experience than participants who watched the control video. None of the other videos differed significantly from the control video on the REM part 1 score.

Participants who watched the victim empathy video marginally differed from participants who watched the control video on the REM part 2 in the expected direction, $z = -1.26$, $p = .103$, $r = -.23$. Participants who watched the victim empathy video had an average rank of 16.56, while

participants who watched the control video had an average rank of 12.45. None of the other videos differed significantly from the control video on the REM part 2 score.

It was further examined whether participants from the three experimental conditions differed from each other on the measure of empathy. A Mann-Whitney U test was conducted to see whether participants who watched the rape myths video, victim empathy video, or outcome expectancies video differed from each other. The two-tailed test results were examined.

Participants who watched the victim empathy video differed from the participants who watched the outcome expectancies video on the REM total score, $z = -3.31$, $p = .001$, $r = -.57$. Participants who watched the victim empathy video had an average rank of 22.83, while participants who watched the outcome expectancies video had an average rank of 11.50, indicating that participants who watched the victim empathy video expressed more overall victim empathy than participants who watched the outcome expectancies video.

Participants who watched the victim empathy video differed from participants who watched the rape myths video on the REM part 1 score, $z = -1.96$, $p = .05$, $r = -.38$. Participants who watched the victim empathy video had an average rank of 16.11, while participants who watched the rape myths video had an average rank of 9.78, indicating that participants who watched the victim empathy video expressed more recognition of the woman's experience than participants who watched the rape myths video. Participants who watched the victim empathy video also differed from participants who watched the outcome expectancies video on the REM part 1 score, $z = -3.33$, $p = .001$, $r = -.57$. Participants who watched the victim empathy video had an average rank of 22.86, while participants who watched the rape myths video had an average rank of 11.47, indicating that participants who watched the victim empathy video expressed more recognition of the woman's experience than participants who watched the outcome

expectancies video. Participants who watched the victim empathy video also marginally differed from participants who watched the outcome expectancies video on the REM part 2 score, $z = -1.73$, $p = .083$, $r = -.30$. Participants who watched the victim empathy video had an average rank of 20.28, while participants who watched the outcome expectancies video had an average rank of 14.38.

Discussion

The main study examined the effects of three rape-prevention videos (compared to a control video) on explicit and implicit rape-related cognitions and self-reported sexual aggression in male university students. The rape-prevention videos used in the present study were from O'Donohue and colleagues (2003) and included rape myths video, victim empathy video and outcome expectancies video. A segment of the nature video was used as a control. For a summary of meaningful results see Table 7.

Rape-prevention videos and sexual aggression.

It was predicted that watching rape-prevention videos (compared to a control video) will be associated with decreased sexual aggression. Three measures were used as proxy measures of sexual aggression. The DRA assessed willingness to engage in sexually aggressive behaviours. The LR1 assessed participants' future likelihood to rape. The LR2 assessed participants' future likelihood to rape if they could be assured of not being caught and punished. This first hypothesis was not supported. None of the rape-prevention video groups differed significantly from the control group on the DRA, LR1 and LR2 measures. However, participants who watched the victim empathy video marginally differed from participants who watched the control video on LR2 measure in the expected direction. This lack of significant findings may be due to a small sample size, since the difference between these two groups approached significance. It

was further decided to check whether participants from three different experimental conditions differed from each other. None of the participants who watched the rape myths video, victim empathy video or outcome expectancies video differed from each other on the DRA, LR1 and LR2 measures.

Studies examining rape prevention in non-offender populations, such as university students, usually focus on the way these rape preventions change participants' rape-related cognitions (e.g., Lonsway & Kothari, 2000; O'Donohue et al., 2003). For example, the study by O'Donohue and colleagues (2003) which used the same rape-prevention videos only looked at various rape-related cognitions. O'Donohue and colleagues (2003) had an item in one of their measures that examined future self-reported likelihood to rape, but they did not examine that one item specifically. Therefore, it remains unknown whether these specific experimental videos can change behaviours of university students.

Rape-prevention videos and explicit cognitions.

It was predicted that watching rape-prevention videos (compared to a control video) will be associated with decreased rape-supportive explicit cognitions. This hypothesis was partially supported. Participants who watched the victim empathy video had more positive evaluations of consenting sex (measured by the SDCONSENT) than people who watched the control video. Participants who watched the victim empathy video or the outcome expectancies video had a more negative evaluation of rape relative to consenting sex (measured by a difference score between rape and consenting sex - SDDIFF) than participants who watched the control video. Participants who watched the victim empathy video expressed less rape myths (measured by the Bumby Rape) than participants who watched the control video. Participants who watched the victim empathy or the outcome expectancies video generated significantly more negative rape

outcomes (measured by the ROEEVAL) than participants who watched the control video.

Participants who watched the victim empathy video also marginally differed from participants who watched the control video on ROE measure in the expected direction, suggesting that they evaluated rape more negatively than participants in the control condition.

These results seem to suggest that the victim empathy video and the outcome expectancies video performed well, but the rape myths video did not. O'Donohue and colleagues (2003) combined all three videos into one rape-prevention video which outperformed the alternative video intervention judged to be representative of a "typical" rape prevention program. Therefore, they were unable to pinpoint which of the three segments of their experimental video intervention were more or less successful. This study suggests that only two of the videos (victim empathy and outcome expectancies videos) outperform the control video in changing explicit rape-related cognitions. This was surprising since it was expected that rape myths video would perform well in changing rape myths.

It was further examined whether participants from the three experimental conditions differed from each other on the measures of explicit cognitions. Only one difference was found, participants who watched the victim empathy video significantly differed from the participants who watched the outcome expectancies video on the Bumby Rape measure, with participants who watched the victim empathy video expressing less rape myths than participants who watched the outcome expectancies video.

O'Donohue and colleagues (2003) showed that a combination of all three videos was more effective in changing rape myths than a typical rape prevention program. The present study adds to their study and to the sexual aggression research by showing that rape-preventions targeting victim empathy and/or outcome expectancies can be successful in changing explicit

attitudes toward rape in university students. More studies are needed to see whether interventions that discuss rape myths can be successful as well.

Rape-prevention videos and implicit attitudes.

It was predicted that watching rape-prevention videos (compared to a control video) will be associated with more negative implicit attitudes toward rape. This hypothesis was partially supported. Participants who watched the rape myths video or the victim empathy video had significantly more negative implicit attitudes toward rape (measured on the RE-IAT) than participants who watched the control video. Participants who watched the victim empathy video had significantly more negative evaluations of rape (measured by the RE-AMP) than participants who watched the control video. Therefore, the rape myths video and the victim empathy video appear to be the most successful at influencing implicit attitudes toward rape.

Studies in the past did not examine the extent to which rape prevention interventions (including rape prevention videos) can change implicit attitudes toward rape in male university students. The present study suggests that video-based interventions targeting rape myths and/or victim empathy can be successful in changing implicit attitudes toward rape. O'Donohue and colleagues (2003) used the same rape prevention videos, but only looked at the change in explicit cognitions. This study extends their research by including implicit attitudes. The present study further extends sexual aggression research by the inclusion of a new measure of implicit attitudes toward rape (RE-AMP) and showing that video interventions focusing on victim empathy could reduce implicit attitudes toward rape measured by the RE-AMP.

It was further examined whether participants from the three experimental conditions differed from each other on the measures of implicit attitudes. No significant differences were found between groups, but participants who watched the victim empathy video marginally

differed from the participants who watched the outcome expectancies video on the RE-AMPR measure. Participants who watched the victim empathy video could have more negative implicit attitudes toward rape than participants who watched the outcome expectancies video. The lack of significant findings can be potentially due to the small sample size.

Rape-prevention videos and victim empathy.

It was predicted that watching the victim empathy video (compared to a control video) will be associated with more empathy toward victims of rape. The Rapist Empathy Measure (REM) was used as a measure of victim empathy. This measure is divided into two subscales. The first subscale measured the participants' recognition of the woman's experience (REM part 1), and the second subscale measured the participants' own feelings toward the woman (REM part 2). Participants who watched the victim empathy video significantly differed from participants who watched the control video on the REM total score in the expected direction, they showed more overall victim empathy than participants who watched the control condition. Participants who watched the victim empathy video also significantly differed from participants who watched the control video on the REM part 1 in the expected direction. Participants who watched the victim empathy video reported more recognition of the woman's experience than participants who watched the control video. Participants who watched the victim empathy video marginally differed from participants who watched the control video on the REM part 2 in the expected direction.

O'Donohue and colleagues (2003) reported that their treatment video outperformed the typical rape prevention video in regards to increasing victim empathy. The present study partly supports their results, by showing that the victim empathy segment might be the one mostly responsible for increasing victim empathy. This was further supported by examining whether

participants from the three experimental conditions differed from each other on the measure of empathy. Participants who watched the victim empathy video differed from the participants who watched the outcome expectancies video on the REM total score. Participants who watched the victim empathy video expressed more overall victim empathy than participants who watched the outcome expectancies video. Participants who watched the victim empathy video differed from participants who watched the rape myths video on the REM part 1 score. Participants who watched the victim empathy video expressed more recognition of the woman's experience than participants who watched the rape myths video. Participants who watched the victim empathy video also differed from participants who watched the outcome expectancies video on the REM part 1 score. Participants who watched the victim empathy video expressed more recognition of the woman's experience than participants who watched the outcome expectancies video. Participants who watched the victim empathy video also marginally differed from participants who watched the outcome expectancies video on the REM part 2 score in the expected direction.

Limitations.

This study had several limitations. First, the sample was relatively small, limiting the statistical power. Second, violations of normality were present in the data, so the non-parametric tests had to be conducted, further limiting the statistical power. Third, proxy behavioural measures of sexual aggression were used in the present study instead of the measurements of actual behaviour. Fourth, because university students were used as participants, the results of this study cannot be generalized to other populations. All of these limitations were present in the first study and discussed in the above section of the discussion. Another limitation, specific to the second study, was the fact that this study did not involve pre- and post- comparisons of participants' scores. Therefore, technically we did not observe a change of rape related attitudes

and cognitions in participants. However, participants from the different video conditions were found to be equivalent on the CSS measure, indicating that the groups did not differ on past sexual coercion. The participants were also randomly assigned to different treatment conditions. Therefore, because the groups were assigned randomly, any differences between them can be attributed to the effects of treatment or control conditions. This design was also selected for the present study because otherwise the study would be too long and participants would probably be tired and bored, having to answer the same questions and complete the same tasks twice.

General Discussion

In sum, the first study showed that explicit offense-supportive cognitions, including attitudes, were associated with self-reported past, present and future sexually aggressive behaviour, that implicit attitudes were not associated with self-reported sexually aggressive behaviour but were correlated with explicit attitudes, and that different explicit cognitions were associated with one another. These results generally fit well with earlier literature, except for the lack of finding significant correlations between implicit attitudes and self-reported sexual aggression.

This study extended earlier research by introducing a new measure of implicit attitudes (the RE-AMP) which outperformed the highly used IAT measure. Future studies should attempt to replicate these results. Future studies should also attempt to see which measure works better, the RE-IAT or the RE-AMP. Future studies should try to generalize the findings to other populations, for example, looking at sex offenders instead of university students, since the RE-AMP measure has not yet been used with any other samples. How well can this implicit measure of attitudes discriminate between rapists, child molesters, non-sex offenders and community men? It would also be interesting to test these explicit and implicit measures with female

samples. Would implicit attitudes toward rape correlate with explicit rape-supportive cognitions, such as rape myths, in females? Also more studies are needed that examine actual behaviour instead of looking at self-report of behaviour or proxy measures. Longitudinal studies that follow university students or offenders over time could shed more light on the relationship between explicit and implicit cognitions and actual behaviour. Finally, this study is one of the few studies that distinguished between attitudes and other cognitions. There is a lack of clarity and consistency in the sexual aggression literature regarding the difference between attitudes and other cognitions, with cognitions such as rape myths, rationalizations and justifications often being labeled as “attitudes” (Nunes et al., 2011). This study is among the few studies that specifically focused on attitudes (summary evaluations), clarifying the specific role of attitudes in sexual aggression. Future studies should be consistent in their definitions of different cognitive constructs and clarify the role that specific cognitions play in sexual aggression.

For the second study, the hypothesis that watching rape-prevention videos (compared to a control video) will be associated with decreased sexual aggression was not supported. The second hypothesis that watching rape-prevention videos (compared to a control video) will be associated with decreased rape-supportive explicit cognitions was partially supported. The third hypothesis predicted that watching rape-prevention videos (compared to a control video) will be associated with more negative implicit attitudes toward rape. This hypothesis was also partially supported. The last hypothesis which predicted that watching the victim empathy video (compared to a control video) will be associated with more empathy toward victims of rape was supported. This hypothesis was supported.

This study extended the research of O’Donohue and colleagues (2003) by including measures of sexually aggressive behaviour and implicit attitudes, in addition to the measures of

explicit cognitions and victim empathy. Future studies should attempt to clarify whether rape prevention in university students can change sexually aggressive behaviours. Most studies examining rape prevention in non-offender populations focus on changing rape-supportive cognitions (e.g., Lonsway & Kothari, 2000; O'Donohue et al., 2003). While changing these cognitions is important, the role various interventions play in changing behaviours remains unclear. Future studies should examine which interventions work best on changing explicit rape related cognitions. For example, in the present study the victim empathy and the outcome expectancies videos were successful in changing explicit cognitions, while the rape myths video was not. Future studies should further investigate changes in implicit attitudes. Most rape prevention studies focus on explicit cognitions and do not investigate how their interventions affect implicit cognitions. The second study showed that some of the rape prevention videos are associated with more negative implicit attitudes toward rape. However, the first study failed to find significant correlations between implicit attitudes and sexually aggressive behaviours. One potential interpretation can be that changing implicit attitudes is irrelevant for changing sexually aggressive behaviours. However, past studies were able to find significant associations between implicit attitudes and sexual aggression (Nunes et al., 2011). Future studies should also attempt to replicate the present study with different populations (i.e., sex offenders) and with bigger samples.

Overall, the current study is the first study which looked at the effects of rape prevention videos on sexually aggressive behaviour, explicit cognitions, implicit attitudes and victim empathy all together. The current findings allow us to better understand the effects of rape prevention interventions on different constructs believed to be relevant for sexual aggression.

Sexual aggression is a serious problem in our society and it is important to understand what causes, maintains and changes this behaviour.

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Appendix A

SONA RECRUITMENT (Study 1)

Study Name: Attitudes towards Sexual Aggression

Abstract: Male participants are asked to answer some questionnaires.

Description: Only male participants can do this study. You will be asked to complete some questionnaires. The questionnaires ask about your beliefs about sexual assault and whether you have been or would be sexually coercive. The questions may be embarrassing or offensive because of the topics covered.

Eligibility Requirements: Male participants only.

Duration: 40 minutes

Percentage: 1 %

Researchers: Julia Berliant

E-mail: jberlian@connect.carleton.ca

Kevin Nunes

E-mail: kevin_nunes@carleton.ca

Participant Sign-Up Deadline: 24 hours before study is to occur.

Participant Cancellation Deadline: 24 hours before study is to occur.

This study has received clearance by the Carleton University Psychology Research Ethics Board (11-087).

Appendix B

DEMOGRAPHIC QUESTIONS

What is your gender?

1. Male
2. Female

How old are you?

1. 18
2. 19
3. 20
4. 21-22
5. 23-24
6. 25-29
7. 30 or older

What is your current marital status?

1. Single
2. In a romantic relationship
3. Living with a romantic partner
4. Married
5. Separated/divorced

Do you understand written English?

1. Yes
2. No

Do you understand Chinese?

1. Yes
2. No

Who are you most attracted to sexually?

1. Women
2. Men

3. Both women and men equally

Appendix C

COERCIVE SEXUALITY SCALE

Response scale:

- 1. Never**
- 2. Once or twice**
- 3. Several times**
- 4. Often**

How many times have you...

Held a female's hand against her will?

Kissed a female against her will?

Placed your hand on a female's knee against her will?

Placed your hand on a female's breast against her will?

Placed your hand on a female's thigh or crotch against her will?

Unfastened a female's clothing against her will?

Removed a female's outer clothing against her will?

Removed a female's underclothing against her will?

Made a female remove her own underclothing against her will?

Touched a female's genital area against her will?

Had sexual intercourse with a female against her will?

Attempted to verbally convince a female to have sex?

Ignored a female's protests before or during sex?

Used verbal threats (i.e., I will leave you if you don't) to try to get sex from a female?

Used physical restraint with a female to get sex from her?

Used threats of aggression (i.e., I will hurt you . . . beat you . . . cause physical pain) with a female to get sex from her?

Used physical aggression with a female to get sex from her?

Threatened to use a weapon on a female to get sex from her?

Used a weapon on a female to get sex from her?

Appendix D

RAPE EVALUATION AFFECT MISATTRIBUTION PROCEDURE (RE-AMP)

Categories and Stimulus Words

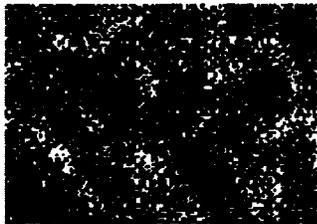
Rape: Force, violent, rape, violate, assault.

Consenting sex: Consent, mutual, willing, permission, agreement.

Pictograph Example

连

Mask Pattern Example



Appendix E
SEMANTIC DIFFERENTIAL SCALES

Raping a woman is:

Negative	Neutral				Positive	
-3	-2	-1	0	1	2	3
Bad	Neutral				Good	
-3	-2	-1	0	1	2	3
Not Enjoyable	Neutral				Enjoyable	
-3	-2	-1	0	1	2	3
Wrong	Neutral				Right	
-3	-2	-1	0	1	2	3

Immoral			Neutral			Moral
-3	-2	-1	0	1	2	3

Having consenting sex with a woman is:

Negative			Neutral			Positive
-3	-2	-1	0	1	2	3

Bad			Neutral			Good
-3	-2	-1	0	1	2	3

Not Enjoyable			Neutral			Enjoyable
-3	-2	-1	0	1	2	3

Wrong			Neutral			Right
-3	-2	-1	0	1	2	3

Immoral			Neutral			Moral
-3	-2	-1	0	1	2	3

Appendix F

RAPE OUTCOME EXPECTANCIES (ROE) SCALE

A person's behaviour can result in a number of possible outcomes - some positive and some negative. For example, watching a movie instead of studying for an important exam could result in many outcomes. Some positive outcomes might be that you would (a) enjoy a good movie, (b) have fun with friends, (c) avoid studying, and (d) relax. Some negative outcomes might be that you would (a) worry about the fact that you're not studying, (b) do poorly on the exam, (c) do poorly in the course, and (d) disappoint your parents.

Some of these outcomes may seem more or less likely to you. For example, you may believe that it is very likely that you are going to enjoy the movie because you've heard that it is excellent from a lot of people. Relatedly, these outcomes may be viewed as positive or negative by you.

For example, enjoying yourself would probably be a positive outcome for you.

Forcing a woman to have sex could also result in a number of possible outcomes. List three things that you think could happen if you were to force a woman to have sex with you. For each outcome, (a) indicate how likely you think that outcome is and (b) indicate how positive or negative that outcome would be for you if it did happen.

Outcome #1 _____

How likely is it that this outcome would happen?

Never happen	Might happen	Guaranteed to happen
-----------------	-----------------	-------------------------

0	1	2	3	4	5	6
---	---	---	---	---	---	---

How positive or negative would this outcome be for you if it did happen?

Very negative				Neutral				Very positive
-3	-2	-1	0	1	2	3		

Outcome #2 _____

How likely is it that this outcome would happen?

Never happen				Might happen				Guaranteed to happen
0	1	2	3	4	5	6		

How positive or negative would this outcome be for you if it did happen?

Very negative				Neutral				Very positive
-3	-2	-1	0	1	2	3		

Outcome #3 _____

How likely is it that this outcome would happen?

Never happen				Might happen				Guaranteed to happen
-----------------	--	--	--	-----------------	--	--	--	-------------------------

0 1 2 3 4 5 6

How positive or negative would this outcome be for you if it did happen?

Very Neutral Very positive
negative

-3 -2 -1 0 1 2 3

Appendix G

BUMBY RAPE SCALE

Response Scale:

1= Strongly Disagree

2

3

4= Strongly Agree

1. Men who commit rape are probably responding to a lot of stress in their lives, and raping helps to reduce that stress.

2. Women who get raped probably deserved it.

3. Women generally want sex no matter how they can get it.

4. Since prostitutes sell their bodies for sexual purposes anyway, it is not as bad if someone forces them into sex.

5. If a women does not resist strongly to sexual advances, she is probably willing to have sex.

6. Women often falsely accuse men of rape

7. A lot of women who get raped had "bad reputations" in the first place.

8. If women did not sleep around so much, they would be less likely to get raped.

9. If a woman gets drunk at a party, it is really her own fault if someone takes advantage of her sexually.

10. When women wear tight clothes, short skirts, and no bra or underwear, they are asking for sex.

11. A lot of women claim they were raped just because they want attention.

12. Victims of rape are usually a little bit to blame for what happens.

13. If a man has sex with a woman before, then he should be able to have sex with her any time he wants.

14. Just fantasizing about forcing someone to have sex isn't all that bad since no one is really being hurt.

15. Women who go to bars a lot are mainly looking to have sex.

16. A lot of times when women say "no" they are just playing are just playing hard to get, and really mean "yes".

17. Part of a wife's duty is to satisfy her husband sexually whenever he wants it, whether or not she is in the mood.

18. Often a woman reports rape long after the fact because she gets mad at the man she had sex with and is just trying to get back at him.

19. As long as a man does not slap or punch or punch a woman in the process, forcing her to have sex is not as bad.

20. When a woman gets raped more than once, she is probably doing something to cause it.

21. Women who get raped will eventually forget about it and get on with their lives.

22. On a date, when a man spends a lot of money on a woman, the woman ought to at least give the man something in return sexually.

23. I believe that if a woman lets a man kiss her and touch her sexually, she should be willing to go all the way.

-
24. When women act like they are too good for men, most men probably think about raping the women to put them in their place.
-
25. I believe that society and the courts are too tough on rapists.
-
26. Most women are sluts and get what they deserve.
-
27. Before the police investigate a woman's claim of rape, it is a good idea to find out what she was wearing, if she had been drinking, and what kind of person she is.
-
28. Generally, rape is not planned- a lot of times it just happens.
-
29. If a person tells himself that he will never rape again, then he probably won't.
-
30. A lot of men who rape do so because they are deprived of sex.
-
31. The reason a lot of women say "no" to sex is because they don't want to seem loose
-
32. If a woman goes to the home of a man on the first date, she probably wants to have sex with him.
-
33. Many women have a secret desire to be forced into having sex.
-
34. Most of the men who rape have stronger sexual urges than other men.
-
35. I believe that any woman can prevent herself from being raped if she really wants to.
-
36. Most of the time, the only reason a man commits rape is because he was sexually assaulted as a child.
-

Appendix H**DATE RAPE ANALOGUE**

After being out on a date with a woman, the two of you go back to your apartment. As you walk in the door you say, "Don't mind my apartment, it's a total mess. It's been a long week, if you know what I mean?"

She says, "Oh, gosh, don't worry, you should see my place, too".

You ask her if she would like something to drink. She says she would like a glass of wine. While you're in the kitchen getting the wine, she sits on the couch and starts looking at the photographs on your coffee table. She says, "you look really hot in this picture at the beach". "Oh, you think so?" you ask slyly as you walk towards her with two glasses of wine. As you sit down beside her, she looks you in the eyes and says "Yeah, I do".

You lean into each other and start kissing. After kissing a while, you ask, "How about if we lie down?" She says, playfully, "Oh, I don't know. I think we better stay sitting up."

Do you:

- A) Try to convince her to lie down with you
- B) Stop trying and not try again for the rest of the night

If B, end.

If A, Then:

You say, "Well, I have to lie down - old hockey injury." She says laughing, "Well, okay, if it's too painful for you to sit, I can lie down and keep you company".

She lies down with you and you continue kissing. You are caressing her back and neck. You move your hand to her breasts and then start undoing the buttons of her shirt. Startled, she asks, "Hey, what are you doing?"

Do you:

- A) Try to convince her to let you unbutton her shirt
- B) Stop trying and not try again for the rest of the night

If B, end.

If A, Then:

"Just helping you to get more comfortable", you say playfully. "But what about your roommate?" she asks. You assure her that she doesn't have to worry about your roommate because he is away for the weekend. She says, "Well, okay then, just a few buttons." You continue making out, unbuttoning her shirt and caressing her breasts. You eventually reach for the clasp on her bra to undo it. She says, "No, wait maybe we should leave my bra on".

Do you:

- A) Try to convince her to let you take her bra off
- B) Stop trying and not try again for the rest of the night

If B, end.

If A, Then:

You say, "Oh, but you're so hot I have to". She says, "You know, wait. Maybe we should slow down".

Do you:

A) Try again to convince her to let you take her bra off

B) Stop trying and not try again for the rest of the night

If B, end.

If A, Then:

You say, "You can't leave me like this. I'm so hard." She says, "I know, but ...". You say, "C'mon, babe. You know we're gonna do more sooner or later." She says, "Well, I mean that's probably true". You ask, "So, why not tonight?" She says, "I don't know. I'm just not sure right now."

Do you:

A) Try again to convince her to let you take her bra off

B) Stop trying and not try again for the rest of the night

If B, end.

If A, Then:

You say, "You know it feels good. I'm really falling for you". She says, "I know . . . and I'm really attracted to you. But. . ." You say, "I'm incredibly attracted to you, too. This is special." You start kissing again. You say, "Oh, that feels great." You take her shirt and bra off and say, "Oh... man, you look great." She giggles and tells you to take your shirt off, too. As you continue kissing, she says, "I'm really getting turned on". You say, "Me, too. And, I mean, I know you like this, too, right?" You continue kissing and caressing her breasts, back, and ass. You start to undo her skirt, but she says, "Wait, I don't want you to take off my skirt."

Do you:

A) Try to convince her to let you take her skirt off

B) Stop trying and not try again for the rest of the night

If B, end.

If A, Then:

You say, "I have to. I'm so turned on." But she firmly says, "*No. I told you I don't want to have sex!*"

Do you:

A) Try to convince her to have sex with you

B) Stop trying and not try again for the rest of the night

If B, end.

If A, Then:

You say, "If we can't have sex, I don't know what I'll do." She says, "I just don't want to have sex." You ask, "Do you want me to stop seeing you? I know you don't want that to happen. So, let's just do it!" She says, "No! I told you I don't want to sleep with you!"

Do you:

A) Do you try again to take off her skirt?

B) Stop trying and not try again for the rest of the night

If B, end.

If A, Then:

You grab her waist and say, "Then why don't we just take off this skirt because it will make things a lot easier." She says, "Please don't do this. I don't think you understand, but I don't want to have sex with you!" You say angrily, "You're nothing but a big tease!" She says, "You know, I think I better just go now."

Do you:

- A) Do you grab her and threaten to hurt her to get her to have sex?
- B) Stop trying and let her leave your apartment?

If B, end.

If A, Then:

You grab her forcefully. She says, "Ouch.... get your fucking hands off me!" As you slip her skirt off, you say, "You know you want it. Don't push it! If you don't sleep with me, I'm going to have to hurt you!" She screams, "Let go of me! Don't you dare touch me like that!" You say, "Oh, c'mon, I wanna fuck you, babe, I wanna fuck you bad". She yells, "NO! We're not going to do that".

Do you:

- A) Take off her panties?
- B) Let her put her clothes back on and leave your apartment?

If B, end.

If A, Then:

You say, "One way or the other you're going to give it to me!" Crying, she says, "No, stop it. Get off of me. Stop!" You say, "These panties are coming off and you're going to fuck me!" As you pull off her panties, she is crying more now and pleads, "No! Stop it! Stop it! Get off me!"

Do you:

- A) Forcibly put your penis in her mouth, vagina or anus
- B) Get off of her and let her leave your apartment.

END.

Appendix I

Consent Form (Study 1)

Implicit and Explicit Attitudes towards Sexual Aggression: Examining IAT and AMP

Implicit Measures

A consent form tells you what we want you to do as a participant and allows you to make an informed decision about whether you want to participate or not. Consent forms also list any potential bad consequences and they tell you who to contact in case you have any questions or concerns after the research is finished or in case you have any questions or concerns that cannot be answered by the researcher.

The present study is being conducted by Julia Berliant (Masters student, Department of Psychology, Carleton University, 613-520-2600 ext. 2649; jberlian@connect.carleton.ca) under the supervision of Dr. Kevin Nunes (Professor, Department of Psychology, Carleton University, 613-520-2600, ext 1545; kevin_nunes@carleton.ca). If you have any questions or concerns about this study please contact Julia Berliant or Kevin Nunes. If you are concerned about ethics or have any other concerns about this study, please contact Monique Sénéchal, Chair of the Carleton University Ethics Committee for Psychological Research (613-520-2600, Ext. 1155, monique_senechal@carleton.ca) or Dr. Anne Bowker, Chair of the Psychology Department (613-520-2600 ext. 8218; psychchair@carleton.ca).

The purpose of this study is to examine attitudes towards sexual aggression. Participation in this study consists of one session of approximately 40 minutes. You will be asked to complete questionnaires about your background information, your beliefs about sexual assault, and whether you have or would be sexually coercive. You will be asked questions about past history of sexually assaultive behaviour, for example, “How many times have you...kissed a female against her will?” or “How many times have you...used physical aggression with a female to get sex from her?” You will be asked to do a computer task that involves categorizing words that may be offensive to some. You will also be asked to read an analogue which provides a description of a possible scenario of a sexual interaction after a date.

The questions may be embarrassing or offensive because of the topics covered. You are free to stop the project at any time, not participate, and refuse to answer any of the questions **without penalty**.

Your participation is confidential and your responses are **anonymous**, meaning only researchers associated with the research project will know you participated in the study and no one will know how you responded to the questions asked.

The information you provide will be used only for research purposes. In the publication or presentation of study results, you will **NOT** be identified as a participant.

The information collected will be kept in a secure manner at Carleton University for a period of 10 years in a locked filing cabinet and password-protected computer and will be accessible only to the researchers working on this research.

This study has received clearance by the Carleton University Psychology Research Ethics Board (10-xxx).

I have read and understood the information above. My signature indicates that I agree to participate in this study. There are two copies of the consent form, one of which I may keep.

Participant Signature: _____ Date: _____

Experimenter Signature: _____ Date: _____

Appendix J
Debriefing Form (Study 1)

Thank you very much for participating in my study. Without your participation, this research would not have been possible. I hope the following information answers any questions and concerns you may have.

What is sexual assault?

Sexual assault usually involves verbal threats or physical force in order to carry out sexual acts or to get sexual pleasure. Forcing a woman to do sexual things when she does not want to is a crime that causes serious problems for both the man and the woman. For the man, one of the main problems is being arrested and possibly going to prison. For the woman, some of the problems that are linked with being sexually assaulted are anxiety, depression, and relationship problems, not to mention worries about sexually transmitted infections and pregnancy. In sum, forcing sexual activity on a woman against her will not only hurts her, but can also hurt the man.

What Are We Trying to Learn in this Research?

We are examining the explicit and implicit attitudes towards sexual aggression in male university students. The distinction between implicit and explicit attitudes has been described as the difference between unconscious and conscious, spontaneous and deliberate, unobtrusive and obtrusive, and automatic and controlled (Payne, 2008). We are examining the relationship between attitudes and past and future sexual aggression. We are also interested in the relationship among various attitude measures. Our goal was to contribute to the research on the explicit and implicit attitudes towards sexual aggression.

Why Is This Important to Scientists or the General Public?

Sexual assault is a serious violation that has many negative consequences for victims. Studying the factors that affect beliefs about sexual assault increases our understanding of the causes of sexual assault and, ultimately, may help to reduce this harmful behaviour.

Where Can I Learn More?

For an overview of literature on sexual assault you can read:

Gannon, T.A., Collie, R.M., Ward, T., & Thakker, J. (2008). Rape: Psychopathology, theory and treatment. *Clinical Psychology Review*, 28, 982-1008.

You can also visit Carleton University's Equity Services website to learn more about sexual assault:

<http://www2.carleton.ca/equity/sexual-assault-support-services/>

What if I Have Questions Later?

The present study is being conducted by Julia Berliant (Masters student, Department of Psychology, Carleton University, 613-520-2600 ext. 2649; jberlian@connect.carleton.ca) under the supervision of Dr. Kevin Nunes (Professor, Department of Psychology, Carleton University, 613-520-2600, ext 1545; kevin_nunes@carleton.ca). If you have any questions or concerns about this study please contact Julia Berliant or Kevin Nunes. If you are concerned about ethics or have any other concerns about this study, please contact Monique Sénéchal, Chair of the Carleton University Ethics Committee for Psychological Research (613-520-2600, Ext. 1155, monique_senechal@carleton.ca) or Dr. Anne Bowker, Chair of the Psychology Department (613-520-2600, ext. 8218; psychchair@carleton.ca). This study has been approved by the Carleton University Ethics Committee for Psychological Research.

Is There Anything I Can Do if I Found This Experiment to be Emotionally Draining?

If you experience any distress (e.g., feel sad or mad) as a result of this study, please seek help from one of the following resources as soon as possible:

University Health and Counselling Services	613-520-6674
Distress Centre of Ottawa and Region	613-238-3311
Ottawa Police Service Victim Crisis Unit	613- 236-1222, ext. 5822

Thank you very for making this research possible.

Appendix K
Rapist Empathy Measure

In this section I want you to think about an adult woman who has been sexually assaulted by an adult male.

Part 1. Indicate the degree to which you think this woman would be experiencing the following emotions, thoughts, or behaviours.

1. Guilty
2. Sad
3. Angry
4. Self-confident *
5. Nightmares
6. Fearful of close relationships
7. Suicidal thoughts
8. Problems with work
9. Fearful of being hurt
10. Successful at work *
11. Repulsed by sex
12. Well-adjusted attitude to sex *
13. Sleep disturbances
14. Feelings of loneliness
15. Withdrawn from others
16. Tense
17. Relaxed *
18. Has psychiatric problems

19. Has low energy
20. Shows tendency to blame herself for all problems
21. Feelings of helplessness
22. Argues with others
23. Fearful of being alone
24. Tendency to cling to female friends
25. Proud of self *
26. Is in pain
27. Upset
28. Feels sinful
29. Feels dirty
30. Ashamed

Part 2. Now indicate how you feel about what this woman has experienced.

1. Guilty
2. Sad
3. Angry
4. Sexual *
5. Pain
6. Affection *
7. Upset
8. Proud *
9. Devastated

10. Helpless

11. Responsible

12. Sick

13. Good *

14. Frustrated

15. Hopeful *

16. Trusting *

17. Ashamed

18. Disgusted

19. Curious *

20. Shocked

*** Items marked with an asterisk are negatively keyed**

Appendix L**SONA RECRUITMENT (Study 2)**

Study Name: Sexual Behaviours in University Men

Abstract: Male participants are asked to answer some questionnaires.

Description: Only male participants can do this study. You will be asked to watch a short video and complete some questionnaires and tasks. These questionnaires and tasks are designed to measure your beliefs about sexual aggression and whether you have been or would be sexually coercive. Some of these measures are designed to assess your automatic or unconscious thoughts about sexual aggression. Other questionnaires ask about your personality characteristics and general risk-taking, theft, and aggressive behaviour. The videos and questionnaires may be embarrassing because of the topics covered.

Eligibility Requirements: Male participants only.

Duration: 50 minutes

Percentage: 1 %

Researchers: Julia Berliant

E-mail: jberlian@connect.carleton.ca

Kevin Nunes

E-mail: kevin_nunes@carleton.ca

Participant Sign-Up Deadline: 24 hours before study is to occur.

Participant Cancellation Deadline: 24 hours before study is to occur.

**This study has received clearance by the Carleton University
Psychology Research Ethics Board (12-257).**

Appendix M
Consent Form (Study 2)

Sexual Behaviours in University Men

A consent form tells you what we want you to do as a participant and allows you to make an informed decision about whether you want to participate or not. Consent forms also list any potential bad consequences and they tell you who to contact in case you have any questions or concerns after the research is finished or in case you have any questions or concerns that cannot be answered by the researcher.

The present study is being conducted by Julia Berliant (Masters student, Department of Psychology, Carleton University, 613-520-2600 ext. 2649; jberlian@connect.carleton.ca) under the supervision of Dr. Kevin Nunes (Professor, Department of Psychology, Carleton University, 613-520-2600, ext 1545; kevin_nunes@carleton.ca). If you have any questions or concerns about this study please contact Julia Berliant or Kevin Nunes.

If you are concerned about ethics, please contact Monique Sénéchal, Chair of the Carleton University Ethics Committee for Psychological Research (613-520-2600, Ext. 1155, monique_senechal@carleton.ca). If you have any other concerns about this study, please contact Dr. Anne Bowker, Chair of the Psychology Department (613-520-2600 ext. 8218; psychchair@carleton.ca).

The purpose of this study is to examine the effects of different videos on beliefs about sexual aggression. Participation in this study consists of one session of approximately 50 minutes. You will be asked to watch a short (about 15 minutes long) video and complete some questionnaires and tasks. Some of these questionnaires and tasks are designed to measure your beliefs about sexual aggression and whether you have been or would be sexually coercive. Some of the measures are designed to assess your automatic or unconscious thoughts about sexual aggression. Other questionnaires ask about your personality characteristics and general risk-taking, theft, and aggressive behaviour.

The questions may be embarrassing or offensive because of the topics covered. You are free to stop the project at any time, not participate, and refuse to answer any of the questions **without penalty**.

Your participation is confidential and your responses are **anonymous**, meaning only researchers associated with the research project will know you participated in the study and no one will know how you responded to the questions asked. All of the measures will be administered via computer, and you will be alone in the room when you complete the measures. Your name will not be connected to your responses and will not appear anywhere in the data collected.

The information you provide will be used only for research and teaching purposes. In the publication or presentation of study results, you will **NOT** be identified as a participant.

The information collected will be kept in a secure manner at Carleton University for a period of 10 years in a locked filing cabinet and password-protected computer and will be accessible only to the researchers working on this research.

This study has received clearance by the Carleton University Psychology Research Ethics Board (12-257).

I have read and understood the information above. My signature indicates that I agree to participate in this study. There are two copies of the consent form, one of which I may keep.

Participant Signature: _____ Date: _____

Experimenter Signature: _____ Date: _____

Appendix N

Debriefing Form (Study 2)

Thank you very much for participating in my study. Without your participation, this research would not have been possible. I hope the following information answers any questions and concerns you may have.

What is sexual assault?

Sexual assault usually involves verbal threats or physical force in order to carry out sexual acts or to get sexual pleasure. Forcing a woman to do sexual things when she does not want to is a crime that causes serious problems for both the man and the woman. For the man, one of the main problems is being arrested and possibly going to prison. For the woman, some of the problems that are linked with being sexually assaulted are anxiety, depression, and relationship problems, not to mention worries about sexually transmitted infections and pregnancy. In sum, forcing sexual activity on a woman against her will not only hurts her, but can also hurt the man.

What Are We Trying to Learn in this Research?

We are examining the effects of different rape prevention videos on the explicit and implicit attitudes towards sexual aggression in male university students. The distinction between implicit and explicit attitudes has been described as the difference between unconscious and conscious, spontaneous and deliberate, unobtrusive and obtrusive, and automatic and controlled (Payne, 2008). Explicit measures of attitudes and beliefs are self-report measures that directly ask you about your cognitions. In this study, you also completed two implicit (unconscious and automatic) measures. Implicit Association Test (IAT) and the Affective Misattribution Procedure (AMP) are implicit measures of attitudes towards rape.

We are also examining the relationship between attitudes and past sexual aggression, self-reported likelihood of sexual aggression, and the relationship among various attitude and personality measures. Our goal was to contribute to the research on changing the explicit and implicit attitudes towards sexual aggression.

Why Is This Important to Scientists or the General Public?

Sexual assault is a serious violation that has many negative consequences for victims. Studying the factors that affect beliefs about sexual assault increases our understanding of the causes of sexual assault and, ultimately, may help to reduce this harmful behaviour.

Where Can I Learn More?

For an overview of literature on sexual assault you can read:

Gannon, T.A., Collie, R.M., Ward, T., & Thakker, J. (2008). Rape: Psychopathology, theory and treatment. *Clinical Psychology Review*, 28, 982-1008.

You can also visit Carleton University's Equity Services website to learn more about sexual assault:

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What if I Have Questions Later?

The present study is being conducted by Julia Berliant (Masters student, Department of Psychology, Carleton University, 613-520-2600 ext. 2649; jberlian@connect.carleton.ca) under the supervision of Dr. Kevin Nunes (Professor, Department of Psychology, Carleton University, 613-520-2600, ext 1545; kevin_nunes@carleton.ca). If you have any questions or concerns about this study please contact Julia Berliant or Kevin Nunes.

If you are concerned about ethics, please contact Monique Sénéchal, Chair of the Carleton University Ethics Committee for Psychological Research (613-520-2600, Ext. 1155, monique_senechal@carleton.ca). If you have any other concerns about this study, please contact Dr. Anne Bowker, Chair of the Psychology Department (613-520-2600, ext. 8218; psychchair@carleton.ca). This study has been approved by the Carleton University Ethics Committee for Psychological Research.

Is There Anything I Can Do if I Found This Experiment to be Emotionally Draining?

If you experience any distress (e.g., feel sad or mad) as a result of this study, please seek help from one of the following resources as soon as possible:

University Health and Counselling Services	613-520-6674
Distress Centre of Ottawa and Region	613-238-3311
Ottawa Police Service Victim Crisis Unit	613- 236-1222, ext. 5822

Thank you very for making this research possible.

Appendix O
Manipulation Check Question

What was the video you watched about?

1 = An alleged rape that happened on university campus and people's reactions and discussions about it

2 = Rape victims talking about being raped and the negative short- and long-term consequences of rape

3 = The stories of some young men who committed or attempted rape and the negative outcomes associated with their actions, such as going to jail, inability to find a good job, and social rejection

4 = Nature and animals of the northern forest