Community males show multiple-perpetrator rape proclivity: Development of an interest

scale

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Abstract

The literature on Multiple Perpetrator Rape (MPR) is scant, however, a significant proportion of sexual offending involves multiple perpetrators. This signifies the need to conduct research with members of the general public in addition to apprehended offenders. Recent advances in the literature have led to the development of self-report proclivity scales. These scales have enabled researchers to conduct evaluative studies sampling from members of the general public who may be perpetrators of sexual offenses and have remained undetected, or at highest risk of engaging in sexual offending. The current study describes the development and preliminary validation of the Multiple-Perpetrator Rape Interest Scale (M-PRIS), a vignette-based measure assessing community males' sexual arousal to MPR, behavioral propensity towards MPR and enjoyment of MPR. The findings show that the M-PRIS is a reliable measure of community males' sexual interest in MPR with high internal reliability and temporal stability. In a sample of university males we found that a large proportion (66%) did not emphatically reject an interest in MPR. We also found that rape-supportive cognitive distortions, antisocial attitudes, and high-risk sexual fantasies were predictors of sexual interest in MPR. We discuss these findings and the implications for further research employing proclivity measures referencing theory development and clinical practice.

Keywords: multiple perpetrator rape, rape proclivity, sexual offending, deviant sexual interest

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In England and Wales, over three million women have been victims of sexual assault in their lifetime (Smith, Coleman, Eder, & Hall, 2011). Yet the majority of sexual offences are not reported (Fisher, Daigle, Cullen, & Turner, 2003; Smith, et al., 2011; Wallby & Allen, 2004). Thus, a substantial proportion of sexual offenders are not apprehended (Smith, et al., 2011; Wallby & Allen, 2004). Researchers have introduced innovative self-report methods to test propensity to engage in sexual offending among the general public (e.g., Blake & Gannon, 2010; Bohner, et al., 1998). To date, these sexual offender proclivity measures assess self-reported sexual interest in rape by lone perpetrators (e.g., Bohner, et al., 1998) and sexual interest towards children (e.g., Briere & Runtz, 1989; Gannon & O'Connor, 2011). This innovative form of measurement enables further research to be conducted on offence-supportive cognition by arguably providing access to an offending population that has gone undetected (e.g., Blake & Gannon, 2010). However, little is known about rape involving multiple perpetrators and these rapes account for approximately one in every four reported rapes (Horvath & Kelly, 2009). The current study presents the newly developed Multiple-Perpetrator Rape Interest Scale and the first ever reported prevalence of sexual interest towards multiple perpetrator rape within a university sample of men.

Before we begin, it is paramount to operationalize the social phenomenon we intend to study empirically. Oftentimes the terms *multiple perpetrator rape*, *gang rape*, and *group rape* are used interchangeably in the research literature despite subtle, yet significant, differences in their meaning (Harkins & Dixon, 2010; Horvath & Kelly, 2009). For the purpose of clarity and consistency, the term multiple perpetrator rape (MPR) will be used throughout this manuscript. We define MPR as "any sexual assault which involves two or more perpetrators" (Horvath & Kelly, 2009, p. 94).

Past MPR Research

The MPR literature predominantly consists of studies drawn from criminal records (Hunter, Hazelwood, & Slesinger, 2000), case reports (Horvath & Kelly, 2009), victim statements (Chambers, Horvath, & Kelly, 2010), and apprehended offenders (Kjellgren, Wassberg, Carlberg, Långström, & Svedin, 2006). Such studies have been particularly informative on the characteristics and contexts of MPR. For example, perpetrators of MPR are typically younger than those who offend alone (Horvath & Kelly, 2009; Porter & Alison, 2006) and the number of perpetrators in MPRs are most likely between two and four (Horvath & Kelly, 2009; Kelly, Lovett, & Regan, 2005; Porter & Alison, 2006). MPRs, as opposed to lone rapes, involve an additional element whereby social and group processes prescribe perpetrator involvement and motivation. That is, perpetrators may be motivated to participate in MPR to build a reputation, avoid shame and ostracism, as a form of sexual deviance or to be accepted into a group (see Harkins & Dixon, 2010, for a review).

Multiple perpetrators engage in sexual offending in a variety of contexts. For example, sexual violence is pervasive during armed conflict whereby groups of soldiers use women as sex slaves, or use rape as a form of punishment and torture (Wood, 2006). MPR is not, however, restricted to instances of armed conflict. Reports of MPR have been documented at fraternity parties, prison establishments, and as a result of human trafficking (Harkins & Dixon, 2010). A context most commonly associated with MPR is situated within the urban setting of street gangs. Although a considerable amount of gang-related crime is non-sexual violence (Klein & Maxson, 2006), recent literature tells us that in addition to the non-sexual violent offending, gang members prey on young women and girls and commit sexual offences such as multiple perpetrator rape (Harkins & Dixon, 2010; Horvath & Kelly, 2009). There are two underlying motives found in MPRs committed within the contexts of street gangs (Moore & Hagedorn, 2001) and others such as armed conflict (Wood, 2006),

they are initiation and intimidation. Gang members have been found to use MPR as a form of *initiation* for incoming members and/or *intimidation* to perhaps silence witnesses or retaliate against rival gangs (Moore & Hagedorn, 2001). The literature also suggests that when MPR becomes *physically* violent, its meaning is more ritualistic than instrumental (Porter & Alison, 2006). So, arguably within gang culture, MPR, especially when physically violent, is typically enacted as part of a ceremony, such as an initiation of a new member.

These findings have been collated from instances where the perpetrators were apprehended, yet many perpetrators of rape—including MPR—remain undetected. This could be, in part, due to the group element of MPRs and the subsequent difficulties of identifying multiple perpetrators (Chambers, et al., 2010). The group dynamic added to the already pervasive rape myths increases the likelihood of multiple perpetrators remaining undetected (Woodhams, Hollin, Bull, & Cooke, 2011).This signifies a need to conduct research with members of the general public rather than solely apprehended individuals. We can learn more about the psychological characteristics of perpetrators of MPR who are successful at evading arrest and prosecution, and we can make valuable comparisons between those who are apprehended and those who are not. This information is needed to enhance current and future education/prevention strategies.

The Link Between Sexual Interest and Offending

Cognitions are considered to be thought processes that initiate, support, and maintain behavioral choices (Palmer & Hollin, 2004). Thus, offending behavior is facilitated by cognitive processes that enable and direct behavioral responses. The same processes are evident in sexual offending. For example, an examination of rape-supportive cognition shows that deviant sexual interest (i.e., offence-consistent sexual interest; Hanson & Morton-Bourgon, 2005), cognitive distortions (i.e., belief systems that support offending; Ward & Beech, 2006) and antisocial orientation (i.e., a willingness to harm others; Firestone,

Bradford, Greenberg, & Serran, 2000) are the most significant predictors of rape. Also, high-risk sexual fantasies are fundamental in the acquisition and maintenance of deviant sexual interest (Laws & Marshall, 1990), and increase the likelihood of sexual offending behavior (see Bartels & Gannon, 2011). These findings suggest that endorsements of rape-supportive cognition (i.e., deviant sexual interest, cognitive distortions, and antisocial orientation) will represent an appropriate indicator of likelihood to engage in sexual offending. Therefore, we argue that rape-supportive cognitive constructs would predict an endorsement of rape.

Measures of Deviant Sexual Interest

One of the first scales developed to measure deviant sexual interest was designed to assess sexual interest in children. Briere and Runtz (1989) distinguished respondents as those who emphatically expressed no endorsement of sexual interest towards children (i.e., scored '0' on every item) and those who showed *some* endorsement of sexual interest towards children (i.e., scored >0 on any item). In their sample of male university students they found that 21% admitted to having some attraction to children, 9% admitted to fantasizing about having sex with a child, 5% admitted to masturbating to their child sexual fantasies, and 7% admitted that they would consider having sex with a child if they could get away with it (Briere & Runtz, 1989).

Proclivity measures have since adopted motor imagery in their designs (Jeannerod & Frak, 1999) whereby participants are instructed to *imagine* themselves engaging in the offending behavior. For example, the sexual harassment scale (Pryor, 1987; Pryor & Stoller, 1994) instructs participants to imagine themselves in situations where they can sexually exploit women. More recently, scenario-based scales have emerged where participants read a series of scenarios depicting the offending behavior and are instructed to imagine themselves as the protagonist. In Bohner and colleagues' (1998) study, participants were instructed to read scenarios depicting lone-rape incidents and imagine themselves as the protagonist. After

each scenario they were asked, "If you could be assured that no one would know and that you could in no way be punished for engaging in the following acts how likely, if at all, would you be to commit such acts?" They were presented with two items: (1) "forcing a woman to have sexual intercourse against her will" (1 = *not at all likely* to 5 = *very likely*); and (2) "forcing a female to do something sexual she didn't want to do" (1 = *not at all likely* to 5 = *very likely*). Bohner and colleagues (1998) found that 63% of participants did not emphatically reject the likelihood of committing such acts. In other words, participants scored greater than 1 (not at all likely) on either item indicating some endorsement of lone-perpetrator rape. Further research employing the Rape Proclivity Scale has lead to developments in the sex offending literature concerning rape-supportive implicit theories (Blake & Gannon, 2010), rape-supportive cognitive distortions (e.g., Bohner, Siebler, & Schmelcher, 2006), and motivations to commit rape (i.e., perceived dominance and anticipated sexual arousal; Chiroro, Viki, Frodi, Muromo, & Tsigah, 2006).

More recently, Gannon and O'Connor (2011) developed the Interest in Child Molestation Scale based on Bohner et al.'s (1998) template. The scale included five scenarios depicting instances of child molestation where participants are asked to *imagine* themselves as the protagonist. Following each scenario participants were asked to respond to the following three items: (1) "In this situation, how sexually aroused would you be?" (1 = *not at all sexually aroused* to 7 = *very strongly sexually aroused*); (2) "In this situation, would you have done the same?" (1 = *would definitely not have done the same* to 7 = *would definitely have done the same*); and (3) "In this situation, how much would you enjoy getting your way?" (1 = *would not enjoy it at all* to 7 = *would greatly enjoy it*). These items provided overall measures for sexual arousal, behavioral propensity, and enjoyment. Gannon and O'Connor (2011) found that 57% of their sample indicated some endorsement of the scenarios depicting child molestation. In other words, 57% of participants did not

emphatically reject an interest in child molestation (i.e., indicated some sexual arousal, behavioral propensity and/or enjoyment). Their findings suggest that a majority of men who hold some sexual interest in children have successful inhibitory mechanisms (Hall & Hirschman, 1992) stopping them from acting out sexually with children. These scales progress the sexual offending literature by arguably providing access to an offending population that has remained undetected, and allowing us to study risk factors and protective factors that can then be used to better current treatment programmes.

Our Study

The current study addresses MPR that, until recently, has been neglected in the literature. Considering the high proportion of MPRs that are not reported and the distinct characteristics of MPR when compared to lone-rape discussed previously, there is a clear need for a measure that would enable MPR research to be conducted in the general public. To this end, the current study has three main aims: (1) to develop the Multiple-Perpetrator Rape Interest Scale (M-PRIS) to measure the prevalence of sexual interest in MPR in a university sample of men; (2) to examine the psychometric properties of the newly developed scale; and (3) to determine whether the scale relates to measures of rape-supportive cognition that we would expect to be predictors of MPR behavior.

Method

Participants

Participants for the current study were recruited from the student population at a University in the South East of England. The study consisted of completing questionnaires at two different time points at least two weeks apart. Eighty male students completed the study at time one and were between 19 and 33 years of age ($M = 22.97$, $SD = 2.77$). More than half (58%) of the participants were White British, the remainder described themselves as Black-African (8%), Indian (6%), Pakistani (5%), Chinese (11%), and Other (12%). Of the 80

participants who completed the Multiple-Perpetrator Rape Interest Scale (M-PRIS) and additional related measures, just over half ($n = 45$) returned a minimum of two weeks later to complete the M-PRIS at Time 2. Participants who completed questionnaires at time one and time two received £5 compensation.

Measures

The Multiple-Perpetrator Rape Interest Scale (M-PRIS)

We designed the M-PRIS based on Bohner et al.'s (1998) Rape Proclivity Scale and the MPR literature. Six hypothetical scenarios were constructed, all depicting heterosexual scenarios of MPR (i.e., male perpetrators and a female victim). Based on the literature reviewed, two types of scenarios were devised. Three of the scenarios depicted MPR involving the *initiation* of a new member to the group. For example:

> A member of your group has started a relationship with a girl from the same area. You and your friends think she would make a fine addition to your group. So, at a house party you make a move to kiss her, she backs away. Your friends grab hold of her as she tries to fight back and you take her clothes off. One by one you and your friends have sex with her.

Three of the scenarios depicted MPR intended to *intimidate* the victim. For example:

> You and your group of friends are hanging out on the street corner. You see a girl you like walking past so you ask her for her number. She turns and gives you the finger and this irritates the group. All of you follow her down the street and corner her. When she tries to push her way through, your friends grab hold of her and rip off her clothes then each of you have sex with her.

Participants were presented each scenario and asked to *imagine* themselves as the protagonist in the situation presented. Each scenario was followed by three questions where

the participants had to respond on a 7-point Likert-type scale. Based on Bohner et al.'s (1998) Rape Proclivity Scale, participants were asked: (1) "In this situation, how sexually aroused would you be?" (1 = *not at all sexually aroused* to 7 = *very strongly sexually aroused*); (2) "In this situation, would you have done the same?" (1 = *would definitely not have done the same* to 7 = *would definitely have done the same*); and (3) "In this situation, how much would you enjoy getting your way?" (1 = *would not enjoy it at all* to 7 = *would greatly enjoy it*). In parallel with past literature (i.e., Bohner, et al., 1998; Gannon & O'Connor, 2011), these three questions measure *sexual arousal* to the scenarios, *behavioral propensity*, i.e., likelihood to engage in similar behaviors, and *enjoyment* of these scenarios. To summarize, the M-PRIS provides the following scores:

1. *Sexual arousal* to the initiation scenarios (*range* = 3 – 21);

2. *Sexual arousal* to the intimidation scenarios (*range* = 3 – 21);

3. *Behavioral propensity* towards the initiation scenarios (*range* = 3 – 21);

4. *Behavioral propensity* towards the intimidation scenarios (*range* = 3 – 21);

5. *Enjoyment* of the initiation scenarios (*range* = 3 – 21);

6. *Enjoyment* of the intimidation scenarios (*range* = 3 – 21);

7. An *overall* multiple-perpetrator interest score (*range* = 6 – 126).

Bumby's Rape Questionnaire (Bumby, 1996)

Bumby's (1996) 36-item Rape Questionnaire measures the extent to which men endorse rape-supportive cognitive distortions (e.g., "When women wear tight clothes, short skirts, and no bra or underwear, they are asking for sex"). Participants indicate their response on a 4-point Likert-type scale ranging from *strongly agree* to *strongly disagree*. When compared with similar scales, such as the Abel-Becker Cognition Scale (Abel, Becker, & Cunningham-Rathner, 1984) or the Burt Rape-Myth Acceptance Scale (Burt, 1980), Bumby's

(1996) Rape Questionnaire holds superior psychometric properties (α = 0.97; see Arkowitz &

Vess, 2003; Bumby, 1996; Grady, Brodersen, & Abramson, 2011).

Measure of Criminal Attitudes and Associates-Part B (Mills, Kroner, & Forth,

2002)

The MCAA-Part B measures attitudes towards crime and consists of four subscales:

violence (12 items; e.g., "Someone who makes you very angry deserves to be hit"),

entitlement (12 items; e.g., "Stealing to survive is understandable"), *antisocial intent* (10

items; e.g., "For a good reason, I would commit a crime"), and *associates* (10 items; "I know

several people who have committed crimes"). Participants respond to each statement using an

agree/disagree response format. The psychometric properties of the MCAA-Part B are well

established (i.e., MCAA-Part B overall, α = 0.90; violence subscale, α = 0.80; entitlement

subscale, α = 0.63; antisocial intent subscale, α = 0.84; associates subscale, α = 0.82; Mills, et

al., 2002).

Wilson's Sexual Fantasy Questionnaire (SFQ; Wilson, 1988)

Wilson's (1988) SFQ is a measure of sexual desires, preferences and experience. The

SFQ asks respondents to consider sexual fantasies across four subscales: *exploratory* (10

items; e.g., "Mate-swapping"), *intimate* (10 items; e.g., "Having intercourse with a loved

partner"), *impersonal* (10 items; e.g., "Intercourse with an anonymous stranger"), and *sado-*

masochistic[1]. For the purpose of the current study, we only collected data on the daytime

fantasies of the participants. Participants indicated how often they fantasized about the items

with the following options: 0 = *never*, 1 = *seldom*, 2 = *occasionally*, 3 = *sometimes*, 4 = *often*,

and 5 = *regularly*. The psychometric properties of the SFQ are well established (i.e., SFQ

overall, α = 0.95; exploratory subscale, α = 0.86; intimate subscale, α = 0.92; impersonal

subscale, α = 0.83; Baumgartner, Scalora, & Huss, 2002).

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[1] Sado-masochistic sex has not been associated with the MPR literature and so we did not include this subscale
in our study.

Paulhus Deception Scales (Paulhus, 1998)

The Paulhus (1998) Deception Scales are measures of social desirability responding and consist of two subscales: *impression management* (20 items; e.g., "I always obey laws even if I'm unlikely to get caught") and *self-deceptive enhancement* (20 items; e.g., "I never cover up my mistakes"). Participants indicate their response on a 5-point Likert-type scale ranging from *not true* to *very true*. Paulhus (1998) conducted extensive psychometric testing with a variety of samples (i.e., general population, college students, prison inmates, and military recruits) and established fairly high internal reliabilities across all scales (i.e., impression management, αs > 0.81; self-deceptive enhancement, αs > 0.70; and overall, αs > 0.83).

Procedure

The study was approved by the School of Psychology Ethics Committee. Questionnaires were administered in a testing room on the university campus and participants completed the questionnaires individually. Participants were instructed that the questionnaires measured "various attitudes and beliefs about sex, social behaviors and relationships" in order to avoid response bias. Participants were asked to return in at least two weeks to complete the second part of the study. The M-PRIS was the only measure that was administered twice with a two-week interval in order to test temporal stability of the new scale. However, participants were not informed that the same scale would be administered twice, again to avoid response bias. Participants were asked to return and complete the second part of the study in order to receive the £5 compensation. Each participant created their own unique code (i.e., last two digits of their mother's maiden name and the first two digits of their date of birth) so that their responses could be matched up at both time points while also maintaining anonymity.

At Time 1, all participants ($N = 80$) completed the M-PRIS, Bumby's (1996) Rape Questionnaire, the MCAA (Mills, et al., 2002), and Wilson's (1988) SFQ. Once completed, they were instructed to place their responses into an envelope and seal it, then post the envelope into a sealed box within the testing room. They received a debriefing sheet that stated the purpose of the study which was "to examine the perceptions of males from the general public on group-based sexual interactions." This was to avoid response bias at time 2. At Time 2, 45 participants returned to complete the M-PRIS alone. Once completed, they received the same instructions as in Time 1. Participants received a full debriefing sheet once they posted their envelope into the box.

Results

Self-Reported Sexual Interest in MPR

We examined participants' responses on the M-PRIS according to whether or not they emphatically rejected an interest in multiple perpetrator rape. This method is consistent with previous research on deviant sexual interest (e.g., Briere & Runtz, 1989; Gannon & O'Connor, 2011). When using this method we found that 66.3% ($n = 53$) of participants showed at least *some* endorsement of the MPR scenarios. That is, when asked to imagine themselves engaging in forceful sex with multiple perpetrators 66.3% ($n = 53$) of participants reported experiencing some form of sexual arousal, behavioral propensity, and/or enjoyment (see Table 1 for all means and standard deviations for the M-PRIS). The distribution of participant responses on the M-PRIS overall and each subscale is presented in Table 2.

Insert Table 1 about here

Initiation scenarios

A large proportion of the sample (65%; $n = 52$) did not emphatically reject an interest in the initiation scenarios (i.e., scored >9 on the initiation scenarios overall). When we

examined the sexual arousal, behavioral propensity, and enjoyment subscales independently, we found that 63% (*n* = 50) reported that they would have experienced some *sexual arousal* to MPR involving the initiation of a new member to their group; 30% (*n* = 24) reported that they would have *engaged* in a MPR to initiate a new member; and 48% (*n* = 38) reported that they would have *enjoyed* a MPR that involved initiating a new member. We conducted further analyses to examine the pattern of responding within participants who showed some endorsement of the initiation scenarios. Of the 52 participants who showed some endorsement, 46% (*n* = 24) made some endorsement across all three subscales (i.e., sexual arousal, behavioral propensity, and enjoyment), 23% (*n* = 12) made some endorsement of the sexual arousal and enjoyment subscales, 27% (*n* = 14) made some endorsement of the sexual arousal subscale, and 4% (*n* = 2) made some endorsement of the enjoyment subscale alone.

Intimidation scenarios

Just over a third of the sample (34%; *n* = 27) did not emphatically reject some sexual interest in the intimidation scenarios (i.e., scored >9 on the intimidation scenarios overall). When we examined the sexual arousal, behavioral propensity, and enjoyment subscales separately, we found that 34% (*n* = 27) reported that they would have experienced some *sexual arousal* to MPR intended to intimidate the victim; 23% (*n* = 18) reported that they would have *engaged* in a MPR intended to intimidate the victim; and 31% (*n* = 25) reported that they would have *enjoyed* a MPR as a form of intimidation. We conducted further analyses to examine the pattern of responding within participants who showed some endorsement of the initiation scenarios. Of the 27 participants who showed some endorsement, 46% (*n* = 12) made any endorsement across all three subscales (i.e. sexual arousal, behavioral propensity, and enjoyment), 26% (*n* = 7) made some endorsement of the sexual arousal and enjoyment subscales, and 7% (*n* = 2) made some endorsement of the sexual arousal subscale.

Patterns of responding

The proportion of participants who showed some endorsement of the initiation scenarios was larger than the proportion of participants who showed some endorsement of the intimidation scenarios. We wanted to see whether the participants who endorsed intimidation scenarios were also the same participants who endorsed initiation scenarios. We found that 100% of participants who showed some endorsement of the intimidation scenarios (i.e., 34%, $n = 27$) also showed some endorsement of the initiation scenarios. This was also found with the subscales. That is, 100% of participants who reported that they would have experienced some *sexual arousal* to MPR intended to intimidate the victim (34%, $n = 27$) also would have experienced *sexual arousal* to the initiation scenarios. All of the participants who reported that they would have *engaged* in the intimidation scenarios (23%, $n = 18$) also would have *engaged* in the initiation scenarios. And, all of the participants who reported that they would have *enjoyed* the intimidation scenarios (31%, $n = 25$) also would have *enjoyed* the initiation scenarios. Overall, it appears that all participants who endorse intimidation scenarios also endorse initiation scenarios, but not all participants who endorse initiation scenarios endorse intimidation scenarios.

Insert Table 2 about here

Psychometric Properties

Reliability analyses were conducted on the overall M-PRIS measure and each of the constituent sub-scales. The test-retest reliabilities of the scale and subscales were measured over an approximate two week interval. The analyses showed high internal consistency of the scale and subscales overall (all α coefficients >0.75, and all test-retest correlations >0.77). See table 1 for the α coefficients and test-retest reliabilities. We also examined whether drop-out bias may have influenced the test-retest reliabilities by comparing the Time 1

responses of the participants who returned for the second administration with participants who dropped out. We found no significant differences on the M-PRIS and its subscales (see table 1 for the means and standard deviations of the respondents who dropped out and those who completed the retest).

The α coefficients calculated for all other measures were good and are presented in table 3 along with associated means and standard deviations).

Insert Table 3 about here

Social Desirability and the M-PRIS

The overall M-PRIS measure did not relate to Paulhus' Impression Management subscale ($r = -0.09$, $p = 0.452$), Self-deception Enhancement subscale ($r = -0.02$, $p = 0.847$), or the overall Deception scale ($r = -0.07$, $p = 0.518$). These findings suggest that the M-PRIS is resistant to social desirable responding.

The M-PRIS and Related Measures

Prior to the regression analyses, all of the measures were checked for normal distribution. As a result of this check, the MCAA Violence subscale, MCAA Antisocial Intent subscale, MCAA Associates subscale, and SFQ Impersonal subscale measures underwent a square-root transformation (all of which were positively skewed). The SFQ Exploratory subscale and M-PRIS overall underwent a logarithm transformation (all of which were positively skewed). All other measures (i.e. Bumby's Rape Questionnaire, MCAA Entitlement subscale, and SFQ Intimate subscale) displayed normal distributions.

We conducted a backward linear regression to see which measures of rape-supportive cognition (i.e., cognitive distortions, antisocial orientation, and sexual fantasies) were the strongest predictors of the M-PRIS overall (i.e., a sum score of all the participants' responses on the M-PRIS). We used Bumby's Rape Questionnaire, MCAA Violence subscale, MCAA

Entitlement subscale, MCAA Antisocial Intent subscale, MCAA Associates subscale, SFQ

Exploratory subscale, SFQ Intimate subscale, and SFQ Impersonal subscale as the IVs and

the sum score on the M-PRIS as the DV. Six models were calculated and the following

variables remained as significant predictors: Bumby's Rape Questionnaire, the MCAA

Violence subscale, and the SFQ Exploratory subscale. Results showed a significant model,

$F(3, 71) = 7.65$, $p < 0.001$, which explained 21.2% of the variance. All three predictor

variables were significant (see table 4 for beta coefficients and p values). As expected,

Bumby's Rape Questionnaire, a measure of rape-supportive cognitive distortions, was the

strongest predictor of the M-PRIS overall.

Insert Table 4 about here

Discussion

The current study had three main aims. First, to develop a scenario-based proclivity

scale to measure sexual interest in MPR (i.e., the M-PRIS) and assess the prevalence of such

interest in a university sample of men. The scale consisted of six scenarios describing

contexts where MPR was employed to initiate a new member to a group or MPR was

employed to intimidate a victim. We found that 66% of participants did not emphatically

reject some sexual interest towards MPR overall, 65% of participants did not emphatically

reject to some sexual interest towards the initiation scenarios, and 34% of participants did not

emphatically reject to some sexual interest towards the intimidation scenarios. The second

aim was to assess the psychometric properties of the M-PRIS. We found that the M-PRIS

overall and each of the subscales (i.e., initiation and intimidation) showed high internal

consistency and temporal stability. The third and last aim was to see if the M-PRIS was

related to other relevant measures. Our findings showed that rape-supportive cognitive

distortions, violence-related cognition, and sexual fantasies of an exploratory nature were significant predictors of sexual interest in MPR.

The overall prevalence of participants who showed some endorsement of MPR (66%) is staggeringly high yet comparable to previous studies testing a proclivity towards sexual offending in the general public (e.g., 57% indicated some endorsement of child molestation scenarios, Gannon & O'Connor, 2011; 63% indicated some likelihood of using sexual violence against women, Bohner et al., 1998). This finding supports past literature where men have been found to be aroused by depictions of non-consensual sex with a woman (Malamuth & Check, 1980). Due to the design of this study, we cannot speak to whether participants who show some endorsements of the MPR scenarios will in fact engage in this behavior. However, the literature indicates that men who self-report rape proclivity also share the same rape-supportive attitudes and beliefs found in apprehended offenders (Bohner, et al., 1998; Malamuth & Check, 1980). The literature also supports the premise that findings from studies on men who are *prone* to sexually offending are generalizable to apprehended offenders (Blake & Gannon, 2010). Therefore, a scale such as the M-PRIS has far-reaching implications regarding apprehended and undetected perpetrators of MPR.

The M-PRIS consists of two types of MPR, scenarios depicting MPR as a form of initiation and scenarios depicting MPR as a form of intimidation. We found that participants were almost twice as likely to show some endorsements of the initiation scenarios when compared to the intimidation scenarios. We would argue that the initiation scenarios could be outlining a social context with a set of rules that may in fact indicate a level of consent from all parties involved including the victim. Thus, participants were more likely to report sexual interest in these scenarios because they perceived the victim to be a consenting adult. These perceived cues of consent are evident in the gang literature where some females are expected to engage in sex with multiple perpetrators in order to become members of the gang

themselves (Knox, 2004). Although the women may initially consent, many times this form

of initiation becomes physically violent (Moore & Hagedorn, 2001).

Our findings tell an interesting dual story whereby the difference between the overall

prevalence of the initiation and intimidation scenarios is vast, yet the behavioral propensity

subscale of both scenarios is not (i.e., initiation – behavioral propensity = 30% and

intimidation – behavioral propensity = 23%). What this tells us is that many participants who

report sexual arousal to the initiation scenarios would refrain from engaging in such behavior.

However, most participants who are sexually aroused by the intimidation scenarios indicated

that they would in fact behave the same way. Perhaps this finding is an indication of the

underlying motivation that not only arouses participants but also enables the behavior

depicted in the intimidation scenarios, i.e., perceived dominance. Past research supports that

dominance is a motivating factor in acts of rape (Malamuth, 1986), and this perceived

dominance legitimizes a willingness to engage in rape behavior via attitudes, values, and

beliefs embedded within the ingroup (e.g., the street gang; Sidanius & Pratto, 1999),

Therefore, participants who are sexually aroused by the intimidation scenarios indicate a

behavioral propensity because they feel justified by their perceived dominance. Whereas, the

initiation scenarios may be sexually arousing, but the motivation may be implausible and/or

incomprehensible.

Past literature has found that rape-supportive cognition includes deviant sexual

interest (Hanson & Morton-Bourgon, 2005; Ward, Polaschek, & Beech, 2006), cognitive

distortions (Ward & Beech, 2006; Ward et al., 2006) and antisocial orientation (Firestone, et

al., 2000). The final step in the current study was to see whether the M-PRIS related to

measures of these cognitive facilitators. We found that rape-supportive cognitive distortions,

violence-related cognition and exploratory sexual fantasies were significant predictors of

sexual interest in MPR. Since rape-supportive cognitive distortions were the strongest

predictors of some endorsement of MPR, we can argue that participants either demonstrate problematic belief systems that allow them to view the MPR scenarios in a distorted manner, or participants employ these cognitive strategies to justify their endorsement of MPR scenarios, and perhaps counteract any resulting cognitive dissonance. These findings parallel past research on apprehended rapists' cognition (Ward & Beech, 2006).

The current study found that a relationship does exist between exploratory sexual fantasies and sexual interest in MPR. Again, we do not know for certain whether participants who indicated sexual interest in MPR will offend, however, the implications of this finding is worth noting. The literature supports that high-risk sexual fantasies have been found to relate to sexual offending in two ways: (1) by enabling offenders to mentally act out the sexual fantasy before committing the sexual offence; and (2) by enabling offenders to mentally rehearse and prepare modus operandi (Bartels & Gannon, 2011). An example of one of the sexual fantasies found in the SFQ Exploratory subscale is "Participating in an orgy", which could be construed as the type of sexual fantasy depicted in the MPR scenarios. Since it is widely accepted that one of the strongest predictors of sexual offending behavior is deviant sexual interest (Ward et al., 2006; also found in the sexual re-offending literature – Hanson & Morton-Bourgon, 2005), the findings of the current study support the argument that high-risk sexual fantasies and rape-supportive cognitive distortions are inherent components of sexual interest in MPR.

Hanson and Morton-Bourgon (2005) also argued that antisocial orientation is a fundamental component of sexual re-offending. It is particularly interesting to note that of all the MCAA subscales (i.e., violence, entitlement, antisocial intent, and associates), the violence subscale was a significant predictor of sexual interest in MPR. Our finding supports previous research (Firestone, et al., 2000) whereby in order for men to endorse MPR, they must demonstrate a willingness to cause harm. The MPR scenarios depict sexual offences

involving physical force and violence, therefore, this finding supports that the M-PRIS is accessing the relevant construct. Overall, our findings support that the M-PRIS is related to the same rape-supportive cognition found in the literature amongst apprehended sexual offenders (Firestone, et al., 2000; Hanson & Morton-Bourgon, 2005; Ward & Beech, 2006).

The tangible product of the current study is a new scale measuring sexual interest in MPR that can be administered to members of the general public. However, this study is not without its limitations. First, this study collected data from a sample of university students and the findings may not be generalizable to the general public. This study is the first of its kind, i.e., measuring proclivity towards this type of sexual offending and further research is needed using this scale. Yet the findings and previous literature on the characteristics of MPR (Harkins & Dixon, 2010) suggest that the M-PRIS shows promise. Another limitation concerns the self-report method of collecting this type of sensitive data. Since the data were collected solely via self-reports, the findings may have been biased by common method variance (i.e., variance as a result of consistent responding from participants due to the self-report methodology). However, the self-report methodology had two benefits: (1) this method was less invasive and time-consuming than implicit measures, and (2) this method was appropriate for capturing respondents' perceptual and experiential constructs (Chan, 2009). Most importantly, it is important to note that the M-PRIS does not tell us emphatically whether respondents will in fact engage in MPR. The M-PRIS is merely a tool to study members of the general public who think similarly to those who engage in this offending behavior.

Clearly, more research is needed in the area of MPR. For example, we know very little about the social and psychological factors that put men at risk of engaging in this behavior and/or the factors that inhibit them from offending. Future research also needs to focus on identifying the characteristics of men who endorse MPR and whether these

characteristics are different from the characteristics found in men who endorse lone

perpetrator rape. Furthermore, it is necessary to establish whether the M-PRIS can

distinguish men who will in fact engage in MPR. If we can further our understanding of what

types of men would actually perpetrate MPR then we can move forward towards developing

theory (e.g. Harkins & Dixon, 2010) and developing interventions for apprehended

perpetrators of MPR. Lastly, the development of a tool such as the M-PRIS has significant

implications regarding the prevention of rape. If this tool can identify men who are likely to

be perpetrators, the appropriate intervention and education programmes can be implemented

that address the socio-psychological factors that put them at risk to begin with.

To date, MPR is under-reported (Chambers, et al., 2010) and under-researched

(Harkins & Dixon, 2010). Yet we know that this type of sexual offending constitutes a

significant proportion of adult rapes (Horvath & Kelly, 2009). Future research in this area

will have far-reaching impact across various contexts, e.g., street gangs, fraternities, and

armed conflicts (Harkins & Dixon, 2010). The current study can enable researchers to

conduct extensive research with more readily available samples.

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Table 1

Mean scale and subscale scores

	Cronbach's α	Test-Retest r	Overall Mean (SD)	Drop-Out Mean (SD), N = 35	Completer Mean (SD), N = 45	% indicating any endorsement
Initiation						
Sexual Arousal	0.75	0.78	5.25 (3.18)	5.40 (3.11)	5.14 (3.27)	63
Behavioral Propensity	0.81	0.81	4.23 (2.96)	4.63 (3.87)	3.91 (1.95)	30
Enjoyment	0.75	0.77	4.57 (2.74)	4.80 (2.96)	4.39 (2.58)	48
Total	0.86	0.83	14.05 (7.38)	14.83 (7.58)	13.43 (7.25)	65
Intimidation						
Sexual Arousal	0.88	0.82	4.13 (2.49)	4.11 (2.69)	4.13 (2.36)	34
Behavioral Propensity	0.96	0.77	3.88 (3.14)	4.40 (4.31)	3.47 (1.71)	23
Enjoyment	0.83	0.88	3.94 (2.12)	4.03 (2.41)	3.87 (1.90)	31
Total	0.87	0.86	11.94 (6.00)	12.54 (6.81)	11.47 (5.31)	34
Overall total score	0.92	0.87	26.03 (12.88)	27.37 (13.90)	24.95 (12.05)	66

Table 2

Distribution of responses to each vignette of the M-PRIS

	Definitely negative						Definitely positive
	1%	2%	3%	4%	5%	6%	7%
Vignette 1: Initiation							
Sexual arousal	40	27	9	7	9	5	3
Behavioral propensity	74	11	6	3	4	1	1
Enjoyment	57	20	10	5	3	4	1
Vignette 2: Intimidation							
Sexual arousal	76	9	10	5	0	0	0
Behavioral propensity	87	8	1	0	1	0	3
Enjoyment	75	16	5	3	1	0	0
Vignette 3: Initiation							
Sexual arousal	78	11	3	5	1	1	1
Behavioral propensity	86	6	4	0	0	0	4
Enjoyment	81	10	5	0	3	0	1
Vignette 4: Intimidation							
Sexual arousal	84	7	1	5	0	3	0
Behavioral propensity	90	5	3	0	0	0	2
Enjoyment	85	8	4	1	1	1	0
Vignette 5: Initiation							
Sexual arousal	81	10	3	4	0	1	0
Behavioral propensity	90	3	3	1	0	1	1
Enjoyment	85	8	4	0	1	1	0
Vignette 6: Intimidation							
Sexual arousal	84	9	2	4	0	1	0
Behavioral propensity	89	5	2	0	0	0	4
Enjoyment	86	9	1	1	3	0	0

Table 3

Means, standard deviations, and α coefficients for related measures

	Mean	Standard deviation	Cronbach's α
Deception scale overall	8.53	4.51	0.72
Impression management subscale	5.81	3.21	0.66
Self-deception enhancement subscale	2.71	2.59	0.69
Rape questionnaire	67.65	15.82	0.93
MCAA violence subscale	4.44	2.98	0.70
MCAA entitlement subscale	5.49	2.43	0.59
MCAA antisocial intent subscale	4.99	3.07	0.75
MCAA associates subscale	3.55	2.15	0.65
Sexual fantasy scale overall	45.52	22.53	0.91
WSF Intimate subscale	25.30	11.74	0.91
WSF Impersonal subscale	9.55	6.43	0.67
WSF Exploratory subscale	10.65	7.69	0.78

Table 4

Beta coefficients for related measures predicting sexual interest in MPR

Variables	β	t	p
Bumby's Rape Questionnaire	0.31	2.77	0.007
MCAA Violence subscale	0.25	2.25	0.028
WSF Exploratory subscale	0.26	2.49	0.015

Adjusted $R^2 = 0.21$, $F(3, 71) = 7.65$, $p < 0.001$.