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Rape Myth Acceptance in Convicted Rapists: A Systematic Review of the Literature

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Abstract

Aim: The review examines studies on rape myth acceptance (RMA) within populations of convicted sexual offenders, changes in RMA due to interventions, comparisons between sexual offenders and community controls, comparisons within the offending population, and relationships between RMA and other psychological constructs linked to criminogenic need.

Method: The search employed electronic databases, OvidSP, Web of Science, and Proquest; hand searching reference lists; and contacting 35 experts in the field. Inclusion/exclusion and quality appraisal criteria were applied to each study.

Results: Eight studies met the inclusion criteria. Results highlighted differences in subgroups of rapists for different aspects of RMA; while rapists can be distinguished from non-offenders and non-sexual offenders on measures of RMA, they cannot be significantly discriminated from child molesters; rapists and sexual murders cannot be distinguished using RMA scores; RMA was not found to be a significant predictor of sexual or violence recidivism; and significant positive change in RMA was reported after sex offenders completed treatment programs.

Conclusions: Differences in scores on RMA subscales among rapists' typologies were discovered, which may indicate differences in beliefs within each type. Implications for practice are discussed.

Keywords: rape myth acceptance, rapist typology, rapists, sex offending, offence-supportive attitudes.

1 Introduction

Sexual offending research is often heavily weighted in the topic of child sexual abuse. Rape is underrepresented in the literature, resulting in limited knowledge and inefficient treatment. Often, sexual offenders will receive a generic treatment program despite it being important to separate treatment needs for those that differ in their criminogenic needs (Reid, Wilson, & Boer, 2011). Helmus, Hanson, Babchishin, and Mann (2013) note that cognitive distortions, specifically “attitudes supportive of sexual offending”, are a risk factor that have predictive validity for sexual recidivism. Rape myth acceptance has been identified as one of these cognitive distortions and will be the topic of this review.

1.1 Rape myths and rape myth acceptance

Martha Burt first introduced and subsequently defined the concept of rape myths in 1980 as “prejudicial, stereotyped, or false beliefs about rape, rape victims, and rapists” (p. 217). In later years, Lonsway and Fitzgerald (1994) went on to expand on the definition, stating that rape myths are “attitudes and beliefs that are generally false but are widely and persistently held, and that serve to deny and justify male sexual aggression against women” (p. 134). For example, women “ask for rape” and rape is a result of the “uncontrollable” male sex drive (Payne, Lonsway, & Fitzgerald, 1999), shifting the blame for the crime towards the victim (Chapleau & Oswald, 2010; Gray, 2006). Rape myths influence attitudes towards victims on a social level. High levels of rape myth acceptance (RMA) are strongly associated with rape proclivity – one’s likelihood or tendency to choose to rape (Chapleau & Oswald, 2010; Chiroro, Bohner, Viki, & Jarvis, 2004; Edwards, Turchik, Dardis, Reynolds, & Gidycz, 2011; Gray, 2006). Rape myths are thought to reduce the expectation of negative outcomes or consequences in sexual offenders (Chapleau & Oswald, 2010). There is evidence of RMA amongst convicted rapists, using myths to rationalize their behaviors

(Chiroro et al., 2004). Rape myth acceptance has been a major topic in rape literature and research has identified the devastating impact of RMA across a variety of settings.

1.2 Measures of rape myth acceptance

There are a wide range of instruments designed to assess constructs related to rape myths. However, it should be noted that within the literature what defines a “rape myth” will vary across authors. Some experts state that the term “rape myth acceptance” is now interchangeable with “offence supportive attitudes” or “rape supportive attitudes” (C. Hermann, personal communication, May 4th, 2015; J. W. Van den Berg, personal communication, April 28th 2015). Alternatively, these terms could be viewed, arguably more appropriately, as overarching terminology under which “rape myth acceptance” falls as a subcategory. The varied literature on the topic looks at rape attitudes, knowledge on rape, empathy towards rape, and rape aversion (Lonsway & Fitzgerald, 1994).

Before the official introduction of the term “rape myths” by Burt in 1980, Feild (1978) developed the Attitudes Toward Rape Scale (ATR). The researcher found that counsellors differed from police, citizens, and rapists in their beliefs about rape, with citizens and the police being most similar. However, the scale failed to discriminate between rapists and police on approximately half of the attitudinal dimensions. As a result, many studies after this have chosen to utilize other tools for measuring rape myth acceptance or to pull aspects from the ATR and combine these with items that better discriminate rapists from non-offenders.

Arguably, the most widely used measure of rape myths is the Rape Myth Acceptance Scale developed by Burt (1980). The Rape Myth Acceptance Scale measures distorted beliefs around the sexual assault of adult women. This was the introductory measure for rape myth terminology. Research with the scale has found that men who are sexually aggressive toward

adult women endorse more of these distorted beliefs about rape than do non-sexually aggressive men (Burt, 1980; Muehlenhard & Linton, 1987). Bumby (1996) noted that approximately a third of the scale's items do not specifically measure rape myths. Rather, he explained, the Rape Myth Acceptance Scale appeared to reveal how peoples' biases regarding age, race, and gender affect their likelihood of believing an allegation of rape.

Bumby (1996) felt that Burt's scale was highly susceptible to socially desirable responding and that there was weak evidence of its ability to discriminate between offenders and non-offenders. In response, he created the Bumby RAPE scale and found that it could discriminate between sex offenders and controls, but could not discriminate amongst sex offenders (i.e. separate rapists from child sex offenders). However, the RAPE scale has been discounted as well as a measure of rape myth acceptance and seen as a measure overall of sexual-assault-supportive attitudes (W. Murphy, personal communication, April 27th, 2015).

Also, building on Burt's scale, and attempting to enhance it, Payne, and colleagues (1999) created the Illinois Rape Myth Acceptance Scale to assess myths about female victims of rape, male perpetrators, and rape as a violent crime by examining gender-role stereotyping, adversarial sexual and heterosexual beliefs, hostility towards women, and acceptance of interpersonal violence.

Many researchers have developed extended or modified versions of Burt's RMAS and others have developed scales that are conceptually similar (see Lonsway and Fitzgerald (1994) for a comprehensive list of measures relating to rape myth acceptance and rape-supportive attitudes).

1.3 The current review

There is evidence to suggest that addressing rape myth acceptance is a relevant treatment need for adult male rapists but the research is mixed on this matter and a systematic

review looking specifically at convicted offenders has yet to be carried out. To understand sexually aggressive behaviors, it is critical to understand the cognitive associations of sexually aggressive men and it is important that this research be done with the criminally convicted. Studying rape proclivity, though beneficial, may lose the cognition inherent in a criminal that may not be present in members of the general population. Also, from a rehabilitative and reintegration standpoint, it is more appropriate to target those needing rehabilitation. Helmus et al. (2013) carried out a meta-analysis on offence-supportive attitudes as a risk factor in sexual offending as an update to Hanson and Morton-Bourgon's (2004) analysis. They looked at the role of cognition in sexual offending, however, they do not consider offence-specific justifications (e.g. rape myth acceptance in rapists) which is a gap in the literature that this review will attempt to fill. The review examines studies on rape myth acceptance within populations of convicted sexual offenders and will review literature around changes in RMA due to interventions, comparisons made between sexual offenders and community controls, comparisons made within the offending population and relationships found between RMA and other psychological constructs linked to criminogenic need.

1.4 Aims and objectives

The aim of this systematic review was to explore rape myth acceptance as a criminogenic need for adult males who have committed sexual assaults against adult women.

The specific objectives of the review were:

- To determine if adult, male rapists can be distinguished from adult, male child molesters, non-sexual offenders, or non-offenders on measures on RMA

- To determine if there are differences in levels of RMA between different sub-groups of rapists, for example, those motivated by sex versus those motivated by anger
- To determine if difference in levels of RMA can discriminate between rapists who reoffend (recidivists) and those who do not
- To establish if RMA is responsive to sex offender treatment programs

2 Method

2.1 Scoping exercise

An electronic search of the Centre for Reviews and Dissemination (DARE), the Campbell Corporation, the Cochrane Database of Systematic Reviews, and the International Prospective Register of Systematic Reviews (PROSPERO) was performed to establish whether reviews of a similar or identical nature had been completed or planned. No existing or planned reviews were identified.

2.2 Overview of search strategy

The search for this review occurred in three stages. First, three electronic platforms (OvidSP, Web of Science, and Proquest) were searched for articles published before May 9th 2015 – the final day of the literature search. Within the OvidSP platform the following databases were searched: Books@Ovid, CAB Abstracts, Embase, Embase Classic, HMIC Health Management Information Consortium, Journals@Ovid Full Text, Ovid MEDLINE® In-Process & Other Non-Indexed Citations and Ovid MEDLINE®, PsycARTICLES Full Text, PsycINFO, and Social Policy and Practice). Second, the reference list of the full text articles – those which met the inclusion and exclusion criteria – and Helmus and colleagues' (2013) meta-analysis were hand searched for relevant articles which could potentially be included in the review. Third, 35 recognized experts in the field of sex

offender research and rape-supportive attitudes were contacted and queried about any relevant and pertinent studies (published or unpublished) that could be included. Twenty-one experts responded.

2.3 Search terms

The following search terms were used along with the Boolean operators ‘AND’ (to combine the search concepts), ‘OR’ (to combine synonyms) and ‘NOT’ (to eliminate particular terms) where necessary. Search terms and operators were modified to accommodate the different search conventions requisite for different databases and platforms. The terms and operators were as follows: [rape myth* OR rape myth accept* OR cognit* distort* OR attitud* OR attitud* adj/3 towards women OR rape adj/3 support* attitude* OR victim* adj/2 blam* OR attribut* adj/3 blam*] AND [rapist* OR sex* offend* OR Convict* rapist* OR convict* sex* offend* OR incarcerate* sex* offend* OR incarcerate* rapist* OR sex* aggress* OR sex* molest* OR sex* assault*] NOT [rape propensity OR rape proclivity].

2.4 Inclusion/Exclusion Criteria

This review is predominantly exploratory and is not making a specific attempt to evaluate intervention efficacy and as such, some components of the Population, Intervention, Comparators, Outcome, Study design (PICOS) framework were not deemed relevant to this review. Cooke, Smith, and Booth (2012) developed an alternative framework used for qualitative and mixed methods studies referred to as SPIDER (Sample, Phenomenon of Interest, Design, Evaluation, Research type). This review utilized aspects of both frameworks to best capture all angles of the review questions and these were incorporated into the screening and selection process. Studies were eligible for the systematic review if: (a)

participants were adult (older than 18), male rapists; (b) the phenomenon of interest was rape myth acceptance (as operationalized by Burt in 1980 and extended by Lonsway and colleagues in 1999); and (c) the study used any of the following comparators: non-offenders (community controls), non-sexual offenders (e.g. violent offenders), other categories of sexual offender (e.g. child molester, recidivists and non-recidivists, or participants pre- and post-intervention. Furthermore, only quantitative studies were included in this review.

Exclusion criteria consisted of the following: (a) studies looking only at rape proclivity (i.e. utilizing a non-clinical sample in which no one has been convicted of a rape); (b) studies that did not utilize measures that were specifically used for the measurement of RMA; (c) studies that relied solely on qualitative measures. Additionally, studies that were not in English were not included in this review. It is noteworthy that in applying the inclusion/exclusion criteria, there were studies that utilized the Bumby RAPE scale as a measure of RMA. However, when discussed with experts, the decision was made to exclude these studies as experts could not come to an agreement on whether the Bumby RAPE scale *specifically* measure rape myth acceptance versus general rape-supportive attitudes (J. Abracen, personal communication, April 24th, 2015; K. Nunes, personal communication, April 24th, 2015; W. Murphy, personal communication, April 27th, 2015). Eight studies in total were included in this systematic review. These were: Beech, Oliver, Fisher, and Beckett (2006), Cohen (2012), Marshall and Hambley (1996), Olver, Nicholaichuk, and Wong (2014), Overholser and Beck (1986), Pithers (1994), Stefanska, Carter, Higgs, Bishopp, and Beech (2015), and Webster et al. (2004).

2.5 Screening and selection of studies (applying the inclusion/exclusion criteria)

Of the above searches, 2,686 hits were returned from OvidSP, 1,747 from Web of Science, and 24 from Proquest. First, duplicate references were removed from OvidSP

($n=892$). Second, all titles, abstracts, and sources of the remaining articles in OvidSP ($n=1,794$), Web of Science and Proquest were screened. Those which did not meet the inclusion criteria were removed. Third, full text copies were obtained for all citations that remained ($n=15$). The inclusion and exclusion criteria was applied to each paper. Fourth, the criteria were applied to the papers obtained from hand searching references, this returned 4 articles. Lastly, the articles acquired from experts in the field were also scrutinized using the inclusion/exclusion criteria; from this, four articles were obtained. Figure 1 shows a diagrammatic representation of this process.

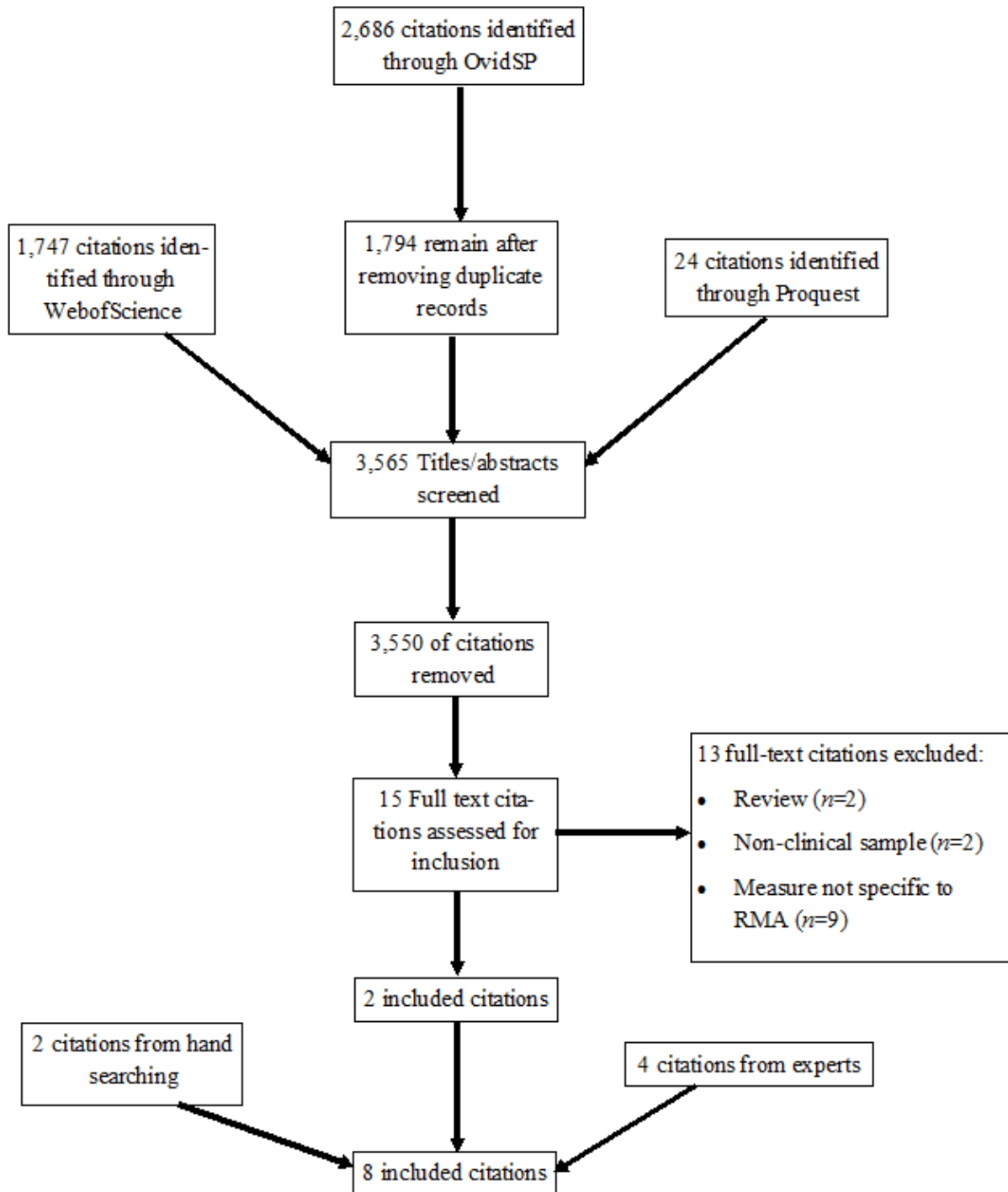


Figure 1. Flowchart of the study selection process.

2.6 Quality assessment

Due to the large variance in study design across the eight articles, quality assessment tools that cater to specific study designs were deemed inappropriate and would not provide the flexibility required to assess the methodological rigor of the studies in this review. The

Cochrane Collaboration recommends using a domain-based evaluation which is neither a scale nor a checklist that is used to make critical assessment separately for different domains (of bias; Higgins & Green, 2011). Consequently, the Cochrane Collaboration's tool for assessing risk of bias was used for this review. Its application to the eight studies can be seen in Appendix A. Assessment of overall risk of bias for each study was informed by the empirical evidence of bias, likely direction of bias, and likely magnitude of bias as guided by the Cochrane Collaboration's Handbook (Higgins & Green, 2011). This was carried out by two independent assessors. No "cut-off point" for exclusion was applied, due to the small number of studies ($n=8$) that were included in the review and the sparse amount of literature in this specific topic area.

2.7 Data extraction

The following data were extracted: general information (date of extraction, reference citation, study author contact details, publication type); study characteristics (methods, participants, and other pertinent information, e.g. any conflicts of interest); and key conclusions. Study characteristics such as the type of study, type of intervention, comparison groups, and outcome measures were all recorded during screening and selection of the studies and thus were not repeated in data extraction.

3 Results

3.1 Overview of studies

Table 1 depicts a summary of the synthesized data for the 13 studies, allowing for evaluation of how rape myth acceptance is measured amongst rapists. The comprehensive information on each study along with their risk of bias forms can be found in Appendix A.

3.2 Methodological and study characteristics

There was some variability in the studies regarding countries. Four countries were represented in the data: The United Kingdom, the United States of America, Canada, and Israel. There was also variability in the dates of the studies with the oldest study being published 29 years ago (Overholser & Beck, 1986), and the most recent having been published within the last two years (Stefanska, Carter, Higgs, Bishopp & Beech, 2015). Study design was also quite varied with three studies using a before-and-after observational design; one study was a case control (controlled observational) study; two utilized a cross-sectional (observational) design; one study was a case series (observational); and the final study used a quasi-experimental design.

Table 1. Characteristics and overall risk of bias scored for the eight included studies

Author & year [Study ID]	Aims of study & design	Population	Intervention	Comparison/Control	Measure of RMA	Findings (in relation to RMA)	Overall risk of bias
Beech, Oliver, Fisher, and Beckett (2006) [Beech 2006]	Commissioned by Home Office and Her Majesty's Prison Service to evaluate prison and probation treatment services for sexual offenders; specifically, the CORE Sex Offender Treatment Programme (SOTP) and its appropriateness for use with rapists and sexual murderers. Used psychometrics to highlight criminogenic needs of sexual offenders as well as investigate the immediate or short-term effects of the treatment programs. Observational (before-and-after).	112 rapists and 58 sexual murderers involved in the CORE SOTP from 1998-2002.	CORE SOTP	Pre- and post-intervention results	Burt's Rape Myth Acceptance Scale (RMAS; 1980) Cronbach's alpha: .88	Pre-treatment: no significant differences found between rapists and sexual murderers re: RMA. Post-treatment: no differences found between rapists and sexual murderers and no overall change in RMA in rapists or in sexual murderers; within rapists typologies: groups differed significantly on their scores for the 'adversarial sexual beliefs' subscale of Burt's RMAS and the 'sexually motivated' offenders were found to score higher on the 'sex role stereotyping' subscale than non-sexual violent offenders and community non-offending males.	High

<p>Cohen (2012) [Cohen 2012]</p>	<p>Investigated the existence of the "uncontrollability" and "entitlement" schemata rapists and child molesters purportedly hold, as well as the schema of "sexy children" in child molesters using an emotional Stroop task (ES) and lexical decision task (LD). Additionally, the author measures cognitive distortions using the Burt RMAS and the Hanson Sex Attitude Questionnaire and social desirability using the Marlowe-Crowne Social Desirability Scale (MCSDS).</p> <p>Controlled observational (case control).</p>	<p>44 sex offenders in community-based treatment program in Israel</p>	<p>N/A</p>	<p>44 undergraduate students</p>	<p>Burt's RMAS</p>	<p>No difference in cognitive distortion levels between sex offenders and students, but social desirability was not a factor in this finding. Overall, found that cognitive distortions are present in both sex-offenders and non-offenders. However, in sex offenders they interact with lack of sex-role satisfaction, high trait anger and trait anxiety, lending them an emotional salience not present in non-offenders. Cognitive distortions manifest in high risk situations for offenders but not for non-offenders</p>	<p>High</p>
<p>Marshall and Hambley (1996) [Marshall 1996]</p>	<p>Examined the relationship among rapists of their responses to measures of loneliness, intimacy, rape myth acceptance, and hostility toward women.</p> <p>Observational (cross-sectional).</p>	<p>27 incarcerated male rapists</p>	<p>N/A</p>	<p>N/A</p>	<p>Burt's RMAS</p>	<p>All expected relationships between variables confirmed through correlational analyses. Results suggest rape is a function of hostility toward women combined with the acceptance of rape myths, which are also related to intimacy and loneliness deficits among sex offenders. It was found that the link with intimacy was stronger than the link with loneliness in this group of offenders.</p>	<p>Low</p>

Olver, Nicolaichuk, and Wong (2014) [Olver 2014]	Examined sex offenders' risk and treatment change based on a battery of psychometric assessment measures followed up an average 18 years post-release. Observational (case series).	276 federal sex offenders	Clearwater Programme (High intensity Sex Offender Treatment Programme)	Pre- and post-intervention; with follow up	Burt's RMAS	The mean Rape Myth Acceptance (RMA) score was approximately one full standard deviation below the normative mean for both offenders and non-offenders (Burt, 1980) at pre-treatment, and approximately two-thirds of a standard deviation lower at post treatment. There was a significant decrease in rape myths endorsed within the sample from pre- to post-treatment.	High
Overholser and Beck (1986) [Olverholser 1986]	Assessed rapists, child molesters, and three control groups on five potentially relevant variables: heterosocial skills, social anxiety, hostility, impulsivity, and attitudinal variables. Quasi-experimental.	12 rapists 12 child molesters	N/A	1. 12 prisoners who were non-sex offenders 2. group of 12 community-based low socioeconomic status (SES) men 3. group of 12 "minimal-dater" college students	Burt's RMAS	No significant effect was found on the Rape Myth Acceptance Scale. A significant main effect for group was found for the Sex Role Stereotyping scale, $F(4, 55) = 4.00, p < .01$. A Newman-Keuls analysis indicated that child molesters displayed significantly higher levels (more conservative) of sex role stereotyping than did both the community-based low-SES men and the minimal-dater college students.	High

<p>Pithers (1994) [Pithers 1994]</p>	<p>Carried out a process evaluation to assess the extent to which a specialized treatment group might enhance the offenders' empathy for sexual abuse survivors.</p> <p>Observational (before-and-after)</p>	<p>20 convicted males: 10 pedophiles, 10 rapists</p>	<p>Survivor empathy group (as part of Vermont Treatment Program for Sexual Aggressors; Pithers, Martin & Cumming, 1989)</p>	<p>Pre- and post-intervention</p>	<p>Burt's RMAS</p>	<p>Results suggest the intervention results in decreased endorsement of cognitive distortions predisposing rape.</p> <p>Pedophiles and rapists did not differ in pre-treatment or post-treatment endorsement of cognitive distortions hypothetically related to or rape. Scores on Burt's Rape Myth Acceptance Scale, which would be expected to reveal deficits in the rapists, did not discriminate these samples of child abusers and rapists.</p>	<p>High</p>
<p>Stefanska, Carter, Higgs, Bishopp, and Beech (2015) [Stefanska 2015]</p>	<p>Aimed to examine pathways to sexual killing while also separating sexual killers based on whether they had a previous conviction for rape. Consideration was then given to whether the pathways to offending differ based on this distinction.</p> <p>Observational (cross-sectional).</p>	<p>150 sexual murderers</p>	<p>N/A</p>	<p>N/A</p>	<p>The Rape Myths Scale (Offending Behaviour Programmes Unit - now known as Operational Services & Intervention group [OS&IG], 1995)</p>	<p>Rape myths were not analyzed in isolation. However, upon reading the results tables, it is shown that of the men in the <i>high problem</i> group (offenders who were likely to report high levels of sexual entitlement beliefs, rape myths, have problems with being open to others and tend to believe that women are deceitful) 35% ($p < .001$) were found to endorse rape myths, whereas in the <i>low problem</i> group (those who did not report problems in the aforementioned areas), 13% ($p < .001$) endorsed rape myths.</p>	<p>Unclear</p>

<p>Webster, Akhtar, Bowers, Mann, Rallings, Marshall (2004)</p> <p>[Webster 2004]</p>	<p>Explored the impact of the Prison Service CORE Sex Offender Treatment Programme (SOTP) upon Black sexual offenders as compared with White sexual offenders.</p> <p>Observational (before-and-after).</p>	<p>52 Black sexual offenders</p>	<p>CORE SOTP</p>	<p>52 White sexual offenders</p> <p>Pre- and post-intervention</p>	<p>Burt's RMAS</p>	<p>Groups significantly improved on the RMAS post-treatment. There were no other significant within-subjects main effects or interactions. *It should be noted that when reviewing the statistics, it would appear that child molesters had significant change in their RMAS post-treatment as compared to the rapists that seem to exhibit very little/no change at all. Additionally, an interaction seems to be apparent here where the White rapists experienced a positive change in RMAS post treatment. As this was not the main focus of the study, the in-depth statistics for these were not reported.</p>	<p>Low</p>
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3.3 Participants and recruitment

Participants ranged in age from 31.22 to 35.38 years. However, it should be noted that this range in mean ages were from within the same study (Webster et al., 2004) and does not include the mean age of 25.87 in Stefanska et al.'s (2015) study as this mean was an average of ages taken at the time of the offenders' index offence whereas the other studies reported the mean age at the time of assessment. Sample sizes were quite reasonable for most studies with the smallest being reported in Pithers (1994) where process evaluation of a specialized treatment program was carried out with 10 rapists and 10 pedophiles. The study with the largest sample size was of a case series design (Olver, Nicholaichuk and Wong, 2014) and examined risk and treatment change in 276 federal sex offenders. The locations from where participants were recruited varied with individuals drawn from prisons, psychiatric facilities and treatment centers, community-based programs, and probation departments. Control groups, where applicable, were recruited from universities and community-based organizations. Due to the design of a few studies (e.g. case series) an active "recruitment" process was not required. In these cases, researchers gathered information on participants from national databases and criminal justice records.

3.4 Study focus and aims

There were no studies included in this review that had rape myth acceptance as the only variable to be examined; however, one study did have RMA as one of its main variables under investigation and explored the relationship RMA had to loneliness, intimacy, and hostility toward women among rapists (Marshall and Hambley, 1996). Four studies included an RMA measure in a battery of psychometric assessment measures to evaluate risk and change in offenders as a means of some form of process or treatment program evaluation (Beech, Oliver, Fisher, & Beckett, 2006; Olver et al., 2014; Pithers, 1994; Webster et al.,

2004). In the remaining three studies, rape myth acceptance fell under the category of some all-encompassing attitudinal variable that was just one factor amongst many under investigation.

The main aim of half of the studies included in this review ($n=4$) was to evaluate the impact of treatment on sexual offenders utilizing a set of psychometrics as pre- and post-intervention measures of risk and change. Two of these studies were evaluating the CORE Sex Offender Treatment Programme in the UK (Beech et al., 2006; Webster et al., 2004), however, in addition to pre- and post-treatment scores, Webster and colleagues were focusing particularly on any differences that occurred across ethnic backgrounds (i.e. Black sexual offenders versus White sexual offenders); one study evaluated the “Clearwater Programme” a high intensity sex offender treatment program run in a maximum-security forensic psychiatric facility in Saskatoon, Saskatchewan, Canada (Olver et al., 2014); and Pithers (1994) carried out a process evaluation of the Vermont Treatment Program for Sexual Aggressors, focusing specifically on the survivor empathy group. Two studies utilized control groups – a non-offending population (Cohen, 2012; Overholser and Beck, 1986). Cohen (2012) compared 44 sex offenders in a community-based treatment program to 44 undergraduate students to explore, firstly, whether the “uncontrollability” and “entitlement” schemata rapists and child molesters purportedly hold existed, as well as the schema of “sexy children” in child molesters; and secondly, whether these cognitive distortions were absent in the control group or no difference existed between sex offenders and controls. Overholser and Beck (1986), on the other hand, wanted to investigate whether heterosocial skills, social anxiety, hostility, impulsivity, and attitudinal variables differed between sex offenders and non-sex-offenders as well as community controls. It should be noted, however, that Beech et al. (2006) carried out a post-hoc comparison between the main study sample and a sample of non-violent offenders and community non-offending males (data for the comparator sample was gathered from an

older study: Beazley Richards, 2000). This data will be discussed in section 3.7. The final two studies carried out cross-sectional investigations. Marshall and Hambley (1996), looked at a single group of incarcerated rapists exploring their responses to measures of loneliness, intimacy, rape myth acceptance, and hostility toward women and the relationship between these. Stefanska and her colleagues (2015) explored the pathways to offending in sexual killers and whether there was a distinction between those who had a previous conviction of rape versus those who did not.

3.5 Measures of RMA

There was virtually no variability in terms of the type of measures used to evaluate RMA. In fact, all studies used Burt's Rape Myth Acceptance Scale (1980) to measure RMA, with the exception of one study (Stefanska et al., 2015). Stefanska and colleagues utilized the Rape Myths Scale developed by the Offending Behaviour Programmes Unit (now known as the Operational Services and Intervention group; 1995) in the National Offender Management Service.

Burt's Rape Myths Acceptance Scale is a 19-item self-report measure that assesses the extent to which respondents endorse false beliefs about the rape of adult women that tend to externalize blame. The scale includes 11 items which are related to victim blaming and justification for rape and eight additional items that relate to false accusations and the likelihood that the respondent believes individuals' claims of rape. Each item is scored on a 7-point Likert scale ranging from 1 = "strongly disagree" to 7 = "strongly agree". A higher score is an indication of a greater acceptance of rape myths. Burt (1980) reported initial validation studies in a sample of 598 US adults as a Cronbach's alpha of .88 and item-to-item correlations of between .27 and .62. However, research on the scale's discriminant validity or the effect of social desirability on the scale is still mixed (Bumby, 1996; Lonsway &

Fitzgerald, 1995). It should be mentioned that Beech et al. (2006) report using a 23-item version of this scale. It is also worth noting that in Cohen's (2012) study, an extended version of Burt's Rape Myth Acceptance Scale was utilized which was not used in any of the other studies (or not specified). This version contains 55 items scored on the same 7-point Likert scale as the 19-item and 23-item versions. Cohen provides details of this extended scale, stating that the inventory includes 6 subscales relating to sexual behavior: Adversarial Sexual Beliefs, Sex Role Satisfaction, Rape Myth Acceptance, Sex Role Stereotype, Sexual Conservatism, and Acceptance of Interpersonal Violence. The Adversarial Sexual Beliefs subscale refers to the core belief that sexual relationships are fundamentally exploitative and contains 9 items. Sex Role Satisfaction refers to "familial, work, and interpersonal role elements relevant to sex role stereotyping" (Burt, 1980, p. 219). The scale contains 10 items, asking the respondent to rate how satisfied they are with their "competence and skillfulness", "amount of socializing", etc. The Rape Myth Acceptance scale contains the first 11 items as in the 19-item scale which target false beliefs about rape, rapists, and rape victims. The Sex Role Stereotype scale contains 9 items which reflect the respondent's endorsement of stereotyped sex roles for men and women. The Sexual Conservatism scale contains 10 items which reflect "restrictions on the appropriateness of sexual partners, sexual acts, conditions or circumstances under which sex should occur" (Burt, 1980, p. 219). The final scale, Acceptance of Interpersonal Violence, contains 6 items which refer to the notion that force and coercion are legitimate ways to gain compliance, especially in sexual relationships (Cohen, 2012, p.50).

Not much could be uncovered for this review on the properties of the Operational Services and Intervention Group's Rape Myths Scale as it appears to be integrated into Her Majesty's Prison Service's Sex Offender Treatment Programme psychometric battery which remains unpublished. Stefanska et al. (2005) offer a brief outline. The Rape Myths Scale is a

17-item measuring externalization around rape and a higher score indicates a greater acceptance of justifications for rape. A good internal consistency ($\alpha = .83$) and test re-test reliability ($r = .85$) were reported.

3.6 Risk of bias ratings of included studies

The risk of bias ratings across studies included in the review varied extensively. Two studies had what was deemed the least amount of bias, which can be judged to equate to a higher quality, with overall ratings of “low risk” of bias (Marshall and Hambley, 1996; Webster et al., 2004). On the other hand, five studies were rated as being at an overall “high risk” of bias (Beech et al., 2006; Cohen, 2012; Olver et al., 2014; Overholser and Beck, 1986; Pithers, 1994) for the following reasons: incomplete outcome data (Beech et al., 2006; Cohen, 2012; Olver et al., 2014; Overholser and Beck, 1986; Pithers, 1994); no blinding of the participants and/or personnel (Beech et al., 2006; Cohen, 2012; Olver et al., 2014; Overholser and Beck, 1986; Pithers, 1994); no blinding of the outcome assessment (Beech et al., 2006; Cohen, 2012; Olver et al., 2014; Pithers, 1994); lack of random sequence generation (Cohen, 2012; Overholser and Beck, 1986); lack of allocation concealment (Overholser and Beck, 1986); selective reporting (Pithers, 1994); and other biases (Cohen et al., 2014, Olver et al., 2014; Pithers, 1994).

3.7 Narrative data synthesis and key findings

The data extracted from the studies varied in aims, methodology, and participant group and consequently, the results of the studies are not homogenous. As such, it was deemed inappropriate to combine the results and evaluate them as part of a meta-analysis. Alternatively, a narrative data synthesis will be carried out for this review, highlighting key findings of the studies in relation to the aims outlined in the introduction.

3.7.1 Can adult, male rapists be distinguished from adult, male child molesters, non-sexual offenders, or non-offenders on measures on RMA?

Two studies in this review explicitly compared rapists with non-rapists. Both studies employed Burt's Rape Myth Acceptance Scale as a measure of RMA with Cohen (2012) utilizing the 55-item scale. Overholser and Beck (1986) did not specify the number of items in the scale used, however, the results reported an effect on the "Sex Role Stereotyping Scale" (p. 686) and it may be reasonable to assume that the researchers used a similar scale to Cohen.

Cohen (2012) reported that for most measures of offence-related cognition non-offenders scored similarly to sexual offenders. However, on the measure of rape myth acceptance, sex offenders reported a significantly *lower* level of rape myth acceptance than non-offenders. They found that this response could not be attributed to social desirability, at least not in that particular study, any more than could be attributed to social desirability in non-offenders. Overall, Cohen (2012) found that cognitive distortions were present in both sex offenders and non-offenders. However, in sex offenders they found that these distortions interact with lack of sex-role satisfaction (a subscale of the Burt Rape Myth Acceptance Scale), high trait anger and trait anxiety, lending them an emotional salience not present in non-offenders. The study found that cognitive distortions manifest in high risk situations for offenders but not for non-offenders.

Overholser and Beck (1986) did not find any significant effect on Burt's Rape Myth Acceptance Scale, however they did find a significant main effect for group on the Sex Role Stereotyping subscale. Further analysis showed that child molesters displayed significantly higher levels of sex role stereotyping (i.e. more conservative) than did both the community

control groups, however, the rapists did not appear to be distinguishable from the child molesters.

Although a comparison group was not included in the main study, Beech et al. (2006) compared their results to those of a similar study by Beazley Richards (2000) whose sample consisted of UK male non-offender employees of a civil engineering company and UK male non-sexual violent offenders. Beech and colleagues found that sexually motivated offenders (those who were primarily motivated to have sex and have used some form of force or violence against the victim to achieve this aim) scored higher on the Sex Role Stereotyping subscale than non-sexual violent offenders and community non-offending males.

Even though comparison between rapists and non-rapists was not the focus of the study, Pithers (1994) reported that Burt's Rape Myth Acceptance Scale did not discriminate between child abusers and rapists.

Overall, the results of these studies suggest that rapists may be distinguished from other non-sexual offenders and from community non-offending males on measures of rape myth acceptance, particularly on the sex-role subscales of the Burt Rape Myth Acceptance Scale. It could be that these subscales are more sensitive to differences that separate sexual offenders from non-sexual offenders and non-offenders. However, whether these results are reliable or consistent may be called into question. Furthermore, there still appears to be difficulty in discriminating between child molesters and rapists when relying on rape myth acceptance as the distinguishing factor. Also, an unexpected result was noted in the Cohen study in which sex offenders reported lower acceptance of rape myths than non-offenders.

3.7.2 Are there differences in levels of RMA between different sub-groups of rapists?

Two studies examined sub-groups of rapists. Beech et al. (2006) carried out typological comparisons by categorizing rapists into one of five main types as described by

Knight and Prentky (1990): opportunistic, pervasively angry, vindictive, sexual non-sadistic and sexual sadistic rapists. The researchers found that groups differed significantly on their scores for the Adversarial Sexual Beliefs subscale of Burt's Rape Myth Acceptance Scale. Post-hoc analyses revealed that opportunistic rapists scored significantly higher than both the sexual sadistic and sexual non-sadistic types. Difference in scores between the sexual sadistic and non-sadistic types were not significant. Overall, the sexual non-sadistic rapists had the lowest scores on the scale. This finding may likely reflect that the sexual non-sadistic rapists hold less negative views about sexual relationships when compared to the other groups as Beech and colleagues found no correlation between measures of socially desirable responding and this subscale. Conversely, according to Burt (1980), the opportunistic rapists' scores revealed beliefs that sexual partners are manipulative, cunning, and not to be trusted. Vindictive rapists had the second largest mean scores on the Adversarial Sexual Beliefs subscale. Beech and colleagues (2006) do note, however, that despite these findings, the highest mean score overall ('opportunistic' sub-types: Mean = 22.5) was only .4 of a standard deviation above the mean of 20.6 of a non-offender sample (from Beazley Richards, 2000). On the Acceptance of Interpersonal Violence subscale, the opportunistic rapists scored significantly higher than both the sexual sadistic and non-sadistic types. This time, the opportunistic rapists' mean score was over two-and-a-half standard deviations above the non-offending sample's mean score and 1.3 of a standard deviation above the mean of a sample of incarcerated non-sexual violent offenders. The researchers offer an explanation; this scale reflects the notion that coercion and force are legitimate modes through which to gain compliance in intimate and sexual relationships, versus relationships in general.

Although not explicitly defined as a "subgroup" of rapists, sexual murderers will be included in this section of the review. In regards the sexual murderers, Beech et al. (2006) found no difference in RMA between rapists and sexual murderers.

Stefanska et al.'s (2015) study on sexual murderers' pathways to offending explored potential differences between rapists who were also sexual killers and sexual killers who had never solely committed rape (i.e. without killing the victim). It was difficult to gather data from this study as rape myths were not analyzed in isolation. However, upon reading the results tables, it is shown that of the men in the "high problem" group (offenders who were likely to report high levels of sexual entitlement beliefs, rape myths, have problems with being open to others and tend to believe that women are deceitful) 35% ($p < .001$) were found to endorse rape myths, whereas in the low problem group (those who did not report problems in the aforementioned areas), 13% ($p < .001$) endorsed rape myths. However, this data combines both groups of sexual murderers so it was impossible to extract and separate the data to allow for comparison between the two groups.

3.7.3 Can differences in levels of RMA discriminate between rapists who reoffend (recidivists) and those who do not?

Two studies examined recidivism outcomes (Beech et al., 2006; Olver et al., 2014), however, in the Beech study, recidivism was not explored in terms of RMA. In the Olver study, RMA was not found to be a significant predictor of sexual or violent recidivism nor did the study compare recidivists with non-recidivists.

3.7.4 Is RMA amenable to sex offender treatment programs?

Four studies examined the effect of treatment on rape myth acceptance. Beech et al. (2006) found no main effect of treatment in sexual murderers and no effect in rapists overall. However, when looking at the impact of treatment on typologies, Beech et al. (2006) grouped the Knight and Prentky (1990) typologies into three groups: sexually motivated (opportunistic and sexual non-sadistic rapists), anger motivated (vindictive and pervasively

angry rapists) and sexual sadistic rapists remained a standalone “sadistic” type. Analysis revealed a significant change in scores overall on the Sex Role Stereotyping scale showing scoring actually increasing post-treatment. This is indicative of greater endorsement of stereotypical beliefs. There were no differences found between typologies. A result like this could indicate something inherent in the program that would change these scores for the worse, however it should be noted that Beech et al. (2006) mentioned that quite a few offenders were removed from this sample as they could not be grouped into the categories.

Olver and colleagues (2014) reported that the mean RMA score was approximately one full standard deviation below the normative mean for both offenders and non-offenders (as reported in Burt, 1980) at pre-treatment, and approximately two-thirds of a standard deviation lower at post-treatment. There was a significant decrease in rape myths endorsed within the sample from pre- to post-treatment which would suggest that the Clearwater Programme has the capabilities to effect positive change in cognitive distortions around rape. Similarly, Pithers (1994) reported a significant treatment effect and found that there was a reduction in acceptance of rape myths after completion of the program. This, perhaps, points to some effectiveness of victim empathy programs for use with rapists.

Although the major outcome for Webster et al.’s (2004) study was differences in psychometric data between Black versus White sexual offenders, the researchers did investigate changes in RMA and found that both groups significantly improved on rape myths. However, these data view look at child molesters and rapists combined. Also, it should be noted that when reviewing the statistics, it would appear that child molesters had significant, positive change in their rape myths post-treatment as compared to the rapists that seem to exhibit very little/no change at all. Additionally, an interaction seems to be apparent here where the White rapists experienced a positive change in rape myths post treatment. As this was not the main focus of the study, the detailed statistics for these were not reported.

4 Discussion and Conclusions

4.1 Main findings of the review

This systematic review explored the relevance of rape myth acceptance as a treatment need for rapists. Overall, the literature on rape myth acceptance is quite vast, however, it was surprising how few studies were found that addressed this in rapists ($n=8$) versus the general public. Only studies with identified specific measures of RMA were included in this review, which led to the exclusion of studies solely using the Bumby Rape Scale as there was disagreement amongst experts as to its use as a measure of RMA. Also included, were studies which had convicted rapists as participants. Studies focusing on rape proclivity with non-offending samples only were excluded. Being quite strict with measures of rape myth acceptance may have biased this review in a way as seven out of the eight studies included utilized the Burt Rape Myth Acceptance scale. Perhaps broadening the definition could allow for the inclusion of more studies. It may be worth mentioning that Lonsway and Fitzgerald's (1999) Illinois Rape Myth Acceptance Scale would have been suitable for this review, however, the author could not locate or gain access to studies which examined its use that met the inclusion and exclusion criteria. However, the search carried out was extensive. The search was conducted across three platforms, OvidSP, Web of Science, and Proquest and also included hand searching of the reference lists of included studies and a meta-analysis, and contacting many experts in the field for any published or unpublished literature. The response from experts was remarkable and four additional papers were garnered from this. Overall, there is confidence that most relevant research has been included in this review and that the consequent conclusions are from the synthesis of a solid evidence base.

The results indicate that while rapists can be distinguished from non-offenders and non-sexual offenders on measures of RMA, they cannot be significantly discriminated from

child molesters by relying on these measures. Also, in regards to rapists and sexual murders, the two groups could not be distinguished using RMA scores. In analyzing differences that were found, Cohen (2012) had data in the opposite direction from what is to be expected and reported that sexual offenders scored lower on rape myth acceptance than non-offenders. In terms of differentiating between sub-groups of rapists, Beech et al.'s (2006) findings were quite enlightening. The opportunistic rapists scored higher on the Adversarial Sexual Beliefs subscale with the sexual non-sadistic rapists scoring the lowest. Additionally, the opportunistic rapists as scored the higher on the Acceptance of Interpersonal Violence subscale. Knight and Prentky (1990) posited that the opportunistic rapist views violence as an instrument to be used if needed to succeed in a sexual attack. They are described as taking advantage of an opportune situation and are indifferent to any impact this may have on the victim. Beech et al.'s (2006) study is congruent with this assertion. Studies did not compare recidivists and nonrecidivists, nor was RMA found to be a significant predictor of sexual or violence recidivism (Stefanska et al., 2015). RMA did, however, appear to be affected by sex offender treatment programs in a positive manner. Studies reported significant positive change in RMA after sex offenders completed a treatment program.

4.2 Strengths and weaknesses of the review

The major weakness of this review has been mentioned in 4.1, namely the limitation on measures included in the review. Additionally, the assessment of quality guidelines used to judge the literature was quite strict and as such some of the studies reviewed may be deemed 'poor quality'; this is discussed further 4.3. However, this review employed a comprehensive research strategy guided by the advice of experts within the field. Additionally, new information around the applicability of RMA in rapist typologies has been

introduced and long held assumptions about RMA in sexual offenders versus in the general public have been challenged in this review. The impact for future directions is outlined in 4.3.

4.3 Implications for practice and future direction

The review adopts the Cochrane principles of systematic review; however, the randomized control trial is heralded as the belief is held that other types of trial evidence are likely to inflate the positive findings for the intervention (Sackett, Rosenberg, Gray, Haynes & Richardson, 1996). Due to the nature of the research being sought in this review, a completely “randomized controlled trial” would be impossible to attain. Even far more robust reviews struggle with adhering to Cochrane principles for judging sex offender treatment. The Hanson, Bourgon, Helmus and Hodgson (2009) review of 129 sex offender treatment studies could rate none as ‘strong’ according to Collaborative Outcome Data Committee guidelines. For this reason, three quality assessors came to an informed agreement about the risk of bias present in studies. As this review is interested in relevance of an attitudinal variable rather than treatment efficacy or effectiveness as the primary outcome, attaining the “gold standard” as determined by Cochrane is out of reach. So, it is worth noting that for future reviews, studies examining this construct would best not be marked as high risk based on the fact that they are conceptually different from randomized control studies.

Out of the eight studies in this review, the most comprehensive was Beech et al.’s (2006) as it was a part of a large-scale project with the Prison Service. They found differences in scores on RMA subscales among rapists’ typologies, which may be indicative of the differences in beliefs of each of the typologies. If this is the case, then it is important that these differences be identified to develop specific treatment programs to target these beliefs. Sex Role Stereotyping was a subscale on which sexually motivated offenders scored highly on. It could be possible that this stereotyping is linked to the feeling of one’s

entitlement to male dominance or power. It is evident that future work needs to target differentiating amongst sexual offenders and utilizing implicit measures to measure these associations may be a means of overcoming the transparency of using explicit measures alone.

ACCEPTED MANUSCRIPT

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Appendix A

Characteristics of Included Studies (ordered by study ID)

Beech 2006

Methods	<p><u>Design</u>: observational (before-and-after)</p> <p><u>Measure (of interest)</u>: Burt's Rape Myth Acceptance Scale (RMAS; 1980)</p>
Participants	<p><u>Participants</u>: male prisoners incarcerated for rape (n=112) or sexual murder (n=58)</p> <p><u>Sex</u>: all male</p> <p><u>Age</u>: rapists - mean 34.9 (SD 8.4) years; sexual murderers - mean 39.3 (SD 10.5) years</p> <p><u>Setting</u>: 7 prisons</p> <p><u>Inclusion criteria</u>: prisoner with conviction for sexual offence apart from convictions related to consensual sexual behaviour; prisoner falls into medium- or high-risk group as determined by Risk Matrix 2000 (RM2000; Thornton et al., 2003); prisoner with a homicide conviction with a clear sexual element to the homicide</p> <p><u>Exclusion criteria</u>: Psychopathy Checklist - Revised (PCL-R; Hare, 1991) score > 30; IQ < 80; men suffering from current mental illness; men suffering from mental illness/brain damage at time of offence; men deemed 'not ready' for treatment (treatment not suitable for him at this time); total denial of the offence; refusal of treatment; does not speak English; physical disability incl. deafness or blindness; poor literacy; suicidal or self-harming</p>
Interventions	<p>CORE Sex Offender Treatment Programme (SOTP)</p> <p>-average treatment dose in study: 188 hours (94 sessions); two to five sessions per week</p>
Outcomes	<p><u>Difference in RMA</u>:</p> <ul style="list-style-type: none"> •none found between rapists and sexual murderers •no within-group change in pre-treatment to post-treatment for both rapists and sexual murderers •rapists typologies differed on 'Adversarial Sexual Beliefs' subscales scores on RMAS •<i>sexually motivated</i> offenders scored higher of 'Sex Role Stereotyping' subscale of RMAS than non-sexual violent offenders and community non-offending males
Notes	N/A

Risk of Bias

Bias	Author's judgment	Support for judgment
Random sequence generation	Low risk.	There is a clear risk of selection bias when the person recruiting participants knows in advance the clinical characteristics of a participant and which intervention they will receive. However, due to the study design, this is not very feasible to randomise. <i>Decision made to override 'High risk' rating.</i>
Allocation concealment	Low risk.	Lack of concealed randomized allocation increases the risk of selection bias. However, due to the study design, this is not possible to conceal. <i>Decision made to override 'High risk' rating.</i>
Blinding of participants and personnel	High risk.	Participants were not blinded. Personnel were not blinded. All interviews and the treatment program itself were conducted by the investigators.
Blinding of outcome assessment	High risk.	Outcome assessment was not blinded. All interviews and treatment program carried out by the investigators.
Incomplete outcome data addressed	High risk.	<u>Rapists (pre-treatment)</u> : 86/112 completed pre-treatment assessments; of the remaining 16, 14 refused at interview to complete the questionnaires and 12 simply did not fill them out. <u>Rapists (post-treatment)</u> : 65/86 that completed the questionnaires before treatment also completed them afterwards; the remaining 21 failed to complete and return the questionnaires. <u>Sexual murderers (pre-treatment)</u> : 45/58 completed pre-treatment assessments; the remaining 13 either refused or failed to complete and/or return the questionnaires. <u>Sexual murderers (post-treatment)</u> : 40/45 that completed the questionnaires before treatment, completed them after treatment; of the remaining 5, 2 refused to complete them and 3 failed to complete/return them.
Selective reporting	Low risk.	The published report included all expected outcomes, including those that were pre-specified
Other bias	Low risk.	The study appeared to be free of other sources of bias.

Cohen 2012

Methods	<p><u>Design:</u> controlled observational (case control)</p> <p><u>Measure (of interest):</u> Burt's Rape Myth Acceptance Scale (RMAS; 1980)</p>
Participants	<p><u>Participants:</u> Sex offenders (experimental group; $N=46$ initially, $N=44$ final); Non-offender students (control; $N=50$ initially, $N=44$ final)</p> <p><u>Sex:</u> all male</p> <p><u>Age:</u> Offenders - mean 36.3 (SD 14.78) years; Students - mean 27.8 (SD 3.5) years</p> <p><u>Setting:</u> Treatment center in central-Israel and the Probation Department.</p> <p><u>Inclusion criteria:</u> These were not explicitly outlined. However, the following information could be gathered from the article:</p> <p>“sex offender” in Israeli law (someone who has committed an offence according to Chapter 6 of the 1977 Criminal Code. These offences include rape, sodomy, sexual assault without penetration and ‘flashing’. Also included are 'consensual' sexual conduct between an adult and a teenager under 16, between a therapist and a patient, or between an employer and an employee.); physical ability to complete questionnaires; appropriate reading ability; ability to read and comprehend Hebrew</p> <p><u>Exclusion criteria:</u> These were not explicitly outlined. However, the following information could be gathered from the article:</p> <p>student's disclosure of any undetected sexual coercion; does not speak Hebrew; physical disability; poor literacy; colour-blindness</p>
Interventions	N/A

Outcomes	<p>Sex offenders and students had similar scores on the attribution subscale and the whole-form (both combined subscales) of the MCSDS. Sex offenders had significantly lower scores on the denial subscale of the MCSDS. For most inventories dealing with offence-related cognitions, the scores of non-offenders and sex offenders were similar, but sex offenders reported significantly lower levels of rape myth acceptance than did non-offenders. The sex offenders' self-reported levels of sex role satisfaction and sexual entitlement were correlated with measures of social desirability. Participants in both groups showed slower reaction times on the ES and the LD, but no difference in accuracy on the ES in response to "general threat" words compared to neutral words. Non-offenders showed slower reaction times on the ES and LD, but no difference in levels of accuracy on the ES in response to "general threat" words compared to neutral words and "uncontrollability", "entitlement", and "sexy children" words. Sex offenders reacted similarly to "general threat" and to "uncontrollability" and "entitlement", on the ES and LD. Reaction times to these words were slower on the ES and the LD, and but levels of accuracy on the ES did not differ significantly to these words than to neutral words. The Emotional Stroop showed significant differences in response for sex offender-specific words but not "general threat" words and the LD showed a difference for "uncontrollability" words only. Sex offenders who victimized children showed slower reaction times on the LD in response to "sexy children" words than offenders with older victims, but this was not the case for the emotional stroop.</p>
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Notes	N/A
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Risk of Bias

Bias	Author's judgment	Support for judgment
Random sequence generation	High risk.	There is a clear risk of selection bias when the person recruiting participants knows in advance the clinical characteristics of a participant and which intervention they will receive. However, due to the study design, random sequence generation for the offenders was not very feasible. Although, there was some bias in the selection of students as they were only recruited from a particular department.
Allocation concealment	Low risk.	Lack of concealed randomized allocation increases the risk of selection bias. However, due to the study design, this is not possible to conceal.

Blinding of participants and personnel

High risk.

Participants were not blinded. Personnel were not blinded. All interviews and the treatment program itself were conducted by the investigators.

Quote: "Almost all of the sex offenders who participated in the study were in under some form of judicial impetus to participate in this treatment."

"Students were solicited in the usual way, through advertisements on bulletin boards in the Criminology departments. The students participated in the study in return for "signatures" that they partook in an experiment (a requirement for undergraduate students). As not enough respondents were recruited in this way, the author approached a colleague who taught a summer course in Criminology at Bar-Ilan University, and requested that she enlist her students to participate."

Blinding of outcome assessment

High risk.

Outcome assessment was not blinded. All interviews carried out by the investigators.

Incomplete outcome data addressed

High risk.

Sex offenders: 2/46 removed from study as they were unable to complete both the ES and LD tasks. 44 male sex offenders in the final experimental group. 1/44 refused to provide full demographic information on himself.

Students: 6/50 rejected due to physical problem which affected their performance (3/6), recent immigration to Israel resulting in imperfect command of Hebrew (2/6), and one (1/6) admitted to having physically coerced a woman to have sex.

Selective reporting

Low risk.

The published report included all expected outcomes, including those that were pre-specified.

Other bias

Unclear risk.

Decision to use two implicit tests but in methodologically dissimilar ways.

"The present study used a 'fast' ES task and an untimed LD task, and then compared the results. The decision to use the untimed LD rather than an untimed ES, was based on the necessity to minimize as much as possible the possibility of 'cheating' (e.g., conscious efforts to avoid focusing on word content). Despite the aforementioned difficulty of 'cheating' on the ES, it was decided that an untimed version of that task, which does not necessitate the actual reading of the target word, was more open to manipulation than an untimed LD, in which words must be read. Therefore, an untimed LD was used. While the decision to use the different tests is, I believe, the correct one, the fact that ES and LD do not work in exactly the same way cannot be ignored (for example, LD is more susceptible to variations in word frequency)."

Marshall 1996Design: observational (cross-sectional)Measure (of interest): Burt's Rape Myth Acceptance Scale (1980)

Participants

Participants: male prisoners who had been convicted of sexually assaulting an adult female ($N=27$)Sex: all maleAge: Range: 21-58 years. Mean age: 33.89 (SD 8.31)Setting: Canadian penitentiary unit or Canadian medium-security penitentiary.Inclusion criteria: male; incarcerated; convicted of sexually assaulting an adult female.Exclusion criteria: These were not explicitly outlined.

Interventions

N/A

Outcomes

Loneliness and intimacy scores were negatively correlated with and were found to share more than 60% variance in common. Similarly, hostility toward women and rape myth acceptance were significantly related, sharing 67% of their variance in common. Regarding the relationship between scores on the loneliness and intimacy measures on one hand and scores on the hostility and rape myth acceptance scales on the other: intimacy appeared to be more strongly related to hostility toward women ($r = .79$) than does loneliness ($r = .53$), and intimacy is also more strongly related to the acceptance of rape myths ($r = .68$) than is loneliness ($r = .39$).

Notes

N/A

Risk of Bias**Bias****Author's judgment****Support for judgment**

Random sequence generation

Low risk.

Study design did not allow for random sequence generation. *Decision made to override 'High risk' rating.*

Allocation concealment

Low risk.

Lack of concealed randomized allocation increases the risk of selection bias. However, due to the study design, this is not possible to conceal. *Decision made to override 'High risk' rating.*

Blinding of participants and personnel

High risk.

Neither participants nor personnel could be blinded.

Blinding of outcome assessment	High risk.	Outcome assessment was not blinded. All interviews carried out by the investigators.
Incomplete outcome data addressed	Low risk.	There were no missing outcome data.
Selective reporting	Low risk.	All outcomes reported as pre-specified.
Other bias	Low risk.	The study appeared to be free of other sources of bias.

Olver 2014

Methods	<p><u>Design</u>: observational (case series)</p> <p><u>Measure (of interest)</u>: Burt's Rape Myth Acceptance Scale (1980)</p>
Participants	<p><u>Participants</u>: male federal sex offenders who attended treatment services at a high intensity sex offender treatment program (N=267)</p> <p><u>Sex</u>: all male</p> <p><u>Age (at program admission)</u>: Range: 18-66 years. Mean age: 32.22 (SD 8.99)</p> <p><u>Setting</u>: Maximum-security forensic psychiatric facility in Saskatoon, Saskatchewan, Canada: The Regional Psychiatric Centre (RPC)</p> <p><u>Inclusion criteria</u>: male; one or more index convictions for contact sexual offences</p> <p><u>Exclusion criteria</u>: These were not explicitly outlined.</p>
Interventions	<p>The Clearwater Sex Offender Programme: a cognitive-behaviourally based treatment program, approximately 6-8 months in duration, mandated to target moderate to high risk sex offenders.</p>
Outcomes	<p>The 257 offenders included in outcome analyses were followed up an average of 18.2 years (SD 4.7) post release. Employing a 20-year cap on follow-up time, 73 (27.3%) men were convicted for a new sexual offence and 135 (50.6%) were convicted for any new violent (including sexual) offence.</p> <p><u>Secondary Outcomes</u>: The mean Rape Myth Acceptance (RMA) score was approximately one full standard deviation below the normative mean for both offenders and non-offenders (Burt, 1980) at pre-treatment, and approximately two-thirds of a standard deviation lower at posttreatment. There was a significant decrease in rape myths endorsed within the sample from pre- to post-treatment. Additionally, there was a significant convergent validity correlation pre-treatment between RMA and two of the three VRS-SO factors - criminality ($r = .16, p < .05$) and treatment responsivity ($r = .22, p < .01$). Post-treatment, RMA had no correlation with criminality ($r = .00$) and still, a significant positive correlation with treatment responsivity ($r = .21, p < .01$)</p>

Notes N/A

Risk of Bias

Bias	Author's judgment	Support for judgment
Random sequence generation	Low risk.	Study design did not allow for random sequence generation. <i>Decision made to override 'High risk' rating.</i>
Allocation concealment	Low risk.	Lack of concealed randomized allocation increases the risk of selection bias. However, due to the study design, this is not possible to conceal. <i>Decision made to override 'High risk' rating.</i>
Blinding of participants and personnel	High risk.	Neither participants nor personnel could be blinded.
Blinding of outcome assessment	High risk.	Outcome assessment was not blinded.
Incomplete outcome data addressed	High risk.	Missing outcome data apparent in results table, however, no explanation offered.
Selective reporting	Low risk.	All outcomes reported as pre-specified.

Other bias	High risk.	<p>Quote: "Sexual recidivism was defined as any conviction for a new sexual offence following first release to the community after program participation. Violent recidivism was defined as any conviction for a personinvolved offence (including sexual offences) with the potential for physical or psychological harm (e.g. non-sexual assault and robbery). Both violent and sexual recidivism were coded in a binary manner (i.e., 0*no recidivism; 1*recidivism)."</p> <p>Investigators chose to include sexual offences in violent recidivism results which may lead to skewed finding. For example, in the same offender it would be impractical compare sexual recidivism to their violent recidivism if there is cross-over of offences.</p> <p>Quote: "content of the risk need domains was constrained by the availability of measures used in the sex offender treatment program at the RPC. For instance, a measure of child molester cognitive distortions was not introduced until some years later into the program (Attitudes towards Sex with Children) and could not be included owing to large amounts missing data. As a result, the attitudinal domain in the present study did not contain a measure of child molester cognitive distortions in contrast to other related studies (e.g. Allan et al., 2007; Craig et al., 2007; Thornton, 2002; Wakeling et al., 2013)."</p>
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Overholser 1986

Methods	<p><u>Design</u>: quasi-experimental</p> <p><u>Measure (of interest)</u>: Burt's Rape Myth Acceptance Scale (1980)</p>
Participants	<p><u>Participants</u>: male inmates at a medium-secure prison</p> <p>Experimental: 12 rapists; 12 child molesters</p> <p>Controls: 12 non-sex-offender inmates; 12 community-based low SES men; 12 "minimal-dater" college students</p> <p><u>Sex</u>: all male</p> <p><u>Age</u>: Rapists - $M = 34.5$ (SD 12.2); Child molesters - $M = 38.8$ (SD 6.1); Non-sex-offender prisoners - $M = 37.8$ (SD 9.5); Low-SES volunteers - $M = 33.8$ (SD 8.5); College students - $M = 20.4$ (SD 1.3)</p> <p><u>Setting</u>: Not specified.</p>

Inclusion criteria:

Rapists: male; committed sexual offence involving nonconsensual sexual contact with a female nonrelative who was over the age of 17.

Child molesters: male; committed sexual offence against a female, nonrelative who was under the age of 12; the offender was 18 years of age or older

Non-sex-offender prisoners: male; no prior record of sexual offences; denied ever participating in coercive sexual activity

Community-based men: low SES; (matched to prison participants)

College-students: male; adult; single, no girlfriend; dated less than twice in the past month and less than four times in the past six months; reported feeling at least moderately anxious when in social settings with women

Exclusion criteria: These were not explicitly outlined.

Interventions	N/A
Outcomes	<p>No significant effect was found on the Rape Myth Acceptance Scale. A significant main effect for group was found for the Sex Role Stereotyping scale, $F(4, 55) = 4.00, p < .01$. A Newman-Keuls analysis indicated that child molesters displayed significantly higher levels (more conservative) of sex role stereotyping than did both the community-based low-SES men and the minimal-dater college students.</p> <p>Heterosocial skills deficits were observed in both child molesters and rapists, in comparison with the nonincarcerated control groups, while they participated in the naturalistic controlled interaction and in the role-play scenes. Rapists in the study displayed higher levels of physiological arousal in the assertive role-play scenes than did the other groups. College students who were minimal daters appeared more behaviorally anxious in the role-play scenes than did the other groups. Additionally, behavioural and physiological differences were found among the groups in interactions with the confederate, which suggests that the controlled interaction scene and the role-play scenes still appeared to provide assessments of all subjects' general ability to satisfactorily interact with a woman. Child molesters displayed significantly higher levels of fear of negative evaluations. Hostility and impulsivity as measured in this study did not differentiate child molesters and rapists from the control groups. In general, child molesters and rapists did not appear all that dissimilar on several diverse measures.</p>
Notes	N/A

Risk of Bias

Bias	Author's judgment	Support for judgment
Random sequence generation	High risk.	Person recruiting participants knew in advance the clinical characteristics of]participants and which intervention they will receive.

Allocation concealment	High risk.	Lack of concealed randomized allocation increases the risk of selection bias.
Blinding of participants and personnel	High risk.	Participants blinded. Personnel only partially. Quote: "The female confederate was a 22-year-old undergraduate student who knew the purpose of the study but did not know the status of the prisoner subjects. Data from the college students and community men were collected at a university laboratory, and thus the confederate was aware of the status of the two nonprisoner groups."
Blinding of outcome assessment	Low risk.	Quote: "Three undergraduate students, who were naive as to the purpose and types of men in the study, were trained to observe and score the controlled interaction and role-play scenes on the molecular and global ratings of social skills and social anxiety. The observers were trained with practice tapes until their agreement was at least 80%."
Incomplete outcome data addressed	High risk.	There were no missing outcome data.
Selective reporting	Low risk.	All outcomes reported as pre-specified.
Other bias	Low risk.	The study appeared free of other sources of bias.

Pithers 1994

Methods	<u>Design:</u> observational (before-and-after) <u>Measure (of interest):</u> Burt's Rape Myth Acceptance Scale (1980)
Participants	<u>Participants:</u> convicted males ($N = 20$): paedophiles ($n = 10$); rapists ($n = 10$) Paedophiles that abused prepubescent males exclusively ($n=4$) Paedophiles that abused prepubescent females exclusively ($n=4$) Paedophiles that abused children of both genders ($n=2$) All rapists had abused adult females ($n=10$) <u>Sex:</u> all male <u>Age:</u> Rapists - $M = 32.2$ (SD 7.53); Paedophiles - $M = 36.3$ (SD 9.79) <u>Setting:</u> Northwest State Correctional Facility <u>Inclusion criteria:</u> These were not explicitly outlined. <u>Exclusion criteria:</u> These were not explicitly outlined.
Interventions	Survivor empathy group (as part of Vermont Treatment Programme for Sexual Aggressors; Pithers, Martin & Cumming, 1989)

Outcomes

A univariate repeated-measures ANOVA did not identify a significant Group effect, $F(1,18) < 1$, although the Treatment effect was significant, $F(1,18) = 117.47, p < 0.001$. The Group x Treatment interaction was not significant, $F(1,18) < 1$. Thus both groups displayed reduced acceptance of rape myths.

Paedophiles and rapists did not differ in pre-treatment or post-treatment endorsement of cognitive distortions hypothetically related to or rape. Scores on Burt's Rape Myth Acceptance Scale, which would be expected to reveal deficits in the rapists, did not discriminate these samples of child abusers and rapists.

Notes N/A

Risk of Bias

Bias	Author's judgment	Support for judgment
Random sequence generation	Unclear risk.	Insufficient information about the sequence generation process to permit judgment of 'Low risk' or 'High risk'
Allocation concealment	Low risk.	Lack of concealed randomized allocation increases the risk of selection bias. However, due to the study design, this is not possible to conceal. <i>Decision made to override 'High risk' rating.</i>
Blinding of participants and personnel	High risk.	Participants were not blinded. Personnel were not blinded
Blinding of outcome assessment	High risk.	Investigators were not blind to outcome assessment.
Incomplete outcome data addressed	High risk.	There were no missing outcome data.
Selective reporting	High risk.	Did not report relationship between RMAS and established measures of empathy change.
Other bias	High risk.	Used Rape Myth Acceptance Scale as an "indirect measure of empathy" but its use in this manner had not been validated (or there is no mention of its use in this way in the article). But states an alternative use: "or...assess[es] a construct that may be expected to vary as empathy varies".

Stefanska 2015

Methods	<p><u>Design:</u> observational (cross-sectional)</p> <p><u>Measure (of interest):</u> The Rape Myths Scale (Offending Behaviour Programmes Unit, 1995)</p>
Participants	<p><u>Participants:</u> Sexual killers ($N = 150$); sexual killers with previous rape or attempted rape offence ($n=44$)</p> <p><u>Sex:</u> all male</p> <p><u>Age:</u> Range: 18-45 years. Mean age at the time of the offence: 25.87 (SD 7.23)</p> <p><u>Setting:</u> Data retrieved from National Offender Management Service, OASys research database; Sex Offender Treatment Programme (SOTP) database; and Public Protection Unit Database (PPUD)</p> <p><u>Inclusion criteria:</u> These were not explicitly outlined. However, the following information could be gathered from the article:</p> <p>male; sex offender (rapist or child molester); non-serial sexual killers (those convicted of killing one or two victims without an emotional cool-off period, e.g. two victims killed at the same time or within a period indicative of a single event) have been convicted and served or are serving a custodial sentence within HM Prison Service; victims are females aged 14, or older; a sexual killing includes murders and manslaughters where a sexual element and/or a sexual motivation was evidenced, suspected or admitted; completed the SOTP ; appropriate reading ability; ability to read and comprehend English</p> <p><u>Exclusion criteria:</u> These were not explicitly outlined. However, the following information could be gathered from the article:</p> <p>serial sexual killers; sexual murderers of men; sexual murderers of children; does not speak English; physical disability; poor literacy; negative attitude to treatment/low motivation</p>
Interventions	N/A
Outcomes	<p>Rape myths were not analyzed in isolation. However, upon reading the results tables, it is shown that of the men in the high problem group (offenders who were likely to report high levels of sexual entitlement beliefs, rape myths, have problems with being open to others and tend to believe that women are deceitful) 35% ($p<.001$) were found to endorse rape myths, whereas in the low problem group (those who did not report problems in the aforementioned areas), 13% ($p<.001$) endorsed rape myths.</p>
Notes	N/A

Risk of Bias

Bias	Author's judgment	Support for judgment
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Random sequence generation	Unclear risk.	Insufficient information about the sequence generation process to permit judgement of 'Low risk' or 'High risk'
Allocation concealment	Low risk.	Lack of concealed randomized allocation increases the risk of selection bias. However, due to the study design, this is not possible to conceal. <i>Decision made to override 'High risk' rating.</i>
Blinding of participants and personnel	High risk.	Neither participants nor personnel could be blinded.
Blinding of outcome assessment	High risk.	Outcome assessment was not blinded. All interviews carried out by the investigators.
Incomplete outcome data addressed	Low risk.	There were no missing outcome data.
Selective reporting	Unclear risk.	As the study was carried out for exploratory purposes, there were no predetermined hypotheses.
Other bias	Low risk.	The study appeared to be free of other sources of bias.

Webster 2004

Methods	<u>Design</u> : observational (before-and-after) <u>Measure (of interest)</u> : Burt's Rape Myth Acceptance Scale (RMAS; 1980)
Participants	<u>Participants</u> : Black sex offenders (experimental group; N=52); White sex offenders (comparator; N=52) <u>Sex</u> : all male <u>Age</u> : Black SOs - mean 31.22 (SD 12.14) years; White SOs - mean 35.38 (SD 10.54) years <u>Setting</u> : Her Majesty's Prison Service (data retrieved from the national database) <u>Inclusion criteria</u> : These were not explicitly outlined. However, the following information could be gathered from the article: male; sex offender (rapist or child molester); appropriate reading ability; ability to read and comprehend English <u>Exclusion criteria</u> : These were not explicitly outlined. However, the following information could be gathered from the article: does not speak English; physical disability; poor literacy; negative attitude to treatment/low motivation
Interventions	CORE SOTP

Outcomes A main effect was not found for either ethnicity or type of victim. There was also no interaction effect between ethnic group and victim type. Within-subjects analysis showed that the groups significantly improved on rape myths, $F(1,69) = 20.71$, $p < 0.001$. There were no other significant within-subjects main effects or interactions re: RMA.

Notes N/A

Risk of Bias

Bias	Author's judgment	Support for judgment
Random sequence generation	Unclear risk.	Insufficient information about the sequence generation process to permit judgement of 'Low risk' or 'High risk'
Allocation concealment	Low risk.	Lack of concealed randomized allocation increases the risk of selection bias. However, due to the study design, this is not possible to conceal. <i>Decision made to override 'High risk' rating.</i>
Blinding of participants and personnel	Low risk.	Participants were not blinded. Personnel were not blinded. However, the outcome is not likely to be influenced by lack of blinding.
Blinding of outcome assessment	Low risk.	Investigators were blind to outcome assessment.
Incomplete outcome data addressed	Low risk.	There were no missing outcome data.
Selective reporting	Low risk.	The published report included all expected outcomes, including those that were pre-specified.
Other bias	Low risk.	The study appeared to be free of other sources of bias.

Rape Myth Acceptance in Convicted Rapists: A Systematic Review of the Literature**Research Highlights**

- A review of rape myth acceptance (RMA) within convicted sexual offenders
- Explored RMA as a criminogenic need for adult male sexual offenders
- Rapists distinguished from non-offenders, not child molesters or sexual murderers
- RMA is not a significant predictor of sexual or violence recidivism
- RMA is responsive to sex offender treatment programmes

Larissa G. Johnson

Professor Anthony Beech