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Investigating the Implicit Theories of Rape Prone Men using an Interpretative Bias task

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Abstract

Ward (2000) has hypothesised that sexual offenders hold offence supportive Implicit Theories (ITs) or Schemata. The present research aims to determine whether rape prone men hold the same offence supportive ITs as those that have been identified in rapists. This study adopts both an explicit measure of ITs and also an implicit measure of ITs (an interpretative bias task). In the implicit task, participants read 48 ambiguous sentences that can be interpreted in either a rape supportive manner, or a non-rape supportive manner. Participants are told that they will be tested on their memory of these sentences. After a short filler task (used to wipe iconic memory) the participants are presented with new sentences that are either rape supportive or non-rape supportive interpretations of the original sentences and asked to indicate whether they recognise the meaning of these sentences from earlier. We predicted that men higher on proclivity to rape–who presumably hold strong mental representations of rape supportive themes–would make more positive recognitions of rape supportive sentences relative to non-rape supportive sentences compared to men lower on rape proclivity. Using multiple regression to determine the relative contributions of both explicit and implicit measures for predicting rape proclivity, we found that only the explicit self report questionnaire and one of the ITs (as measured by the interpretative bias task), was significantly related to a person’s rape proclivity score.

Investigating the offence supportive schemata of rape prone men using an interpretative bias task

A great number of researchers and clinicians have noted that sexual offenders frequently make comments or statements that appear to support or justify either sexual offending in general, or their own sexual offending behaviour. These statements—often termed “cognitive distortions” (CDs) in the literature—are hypothesised to play some role in the offence process (REF). However, despite the significant research interest in this area, there is much conjecture about the exact definition of CDs. The pioneers of the investigation in CDs in child molesters, Abel, Becker and Cuningham-Rathner (1984), defined CDs as belief systems that support sexual offences and also as justifications, perceptions and judgments that may be used by the offender to rationalise their offending behaviour. For example, during discussions with offenders, Abel and colleagues found that offenders would often spontaneously make offence supportive statements such as “Women who get raped get what they deserve” and “Men get overpowered by their urges and cannot control their feelings”. However, other researchers propose that CDs might not be reflecting a belief system, and instead may merely be statements that are made after the offence, in an attempt to either justify, excuse or rationalise behaviour to others (see Maruna & Mann, 2006), or themselves, in an attempt at self deception (Gannon & Polaschek, 2006). Until relatively recently researchers have attempted to assess CDs using self report measures such as The Abel and Becker Cognitions Scale: ABCS, 1989). However, this methodology can not differentiate between offence supportive beliefs held by offenders, or statements that are made in an attempt to rationalise behaviour, making it difficult for researchers to draw firm conclusions about the role CDs play in the offence process. Thus, despite the large research interest into CDs, we still know relatively little about the underlying mechanics of CDs, which is problematic considering challenging such cognitions has become obligatory for therapists treating sexual offenders. Ward (2000) sought to rectify this deficit by proposing a new theory using information processing theory as a basis for explanation.

Information processing theory postulates that differences in the way information is stored and organised in individuals’ long term memory (as schemata) biases attention, encoding and retrieval of new information, therefore affecting subsequent behaviour. The way that information is stored and organised in memory depends on early life experiences, and will vary between individuals. Ward suggested that schemata should be regarded as causal theories that interact with information from personal experiences to form coherent cognitive structures that are used to both explain and predict our own behaviour, and that of others. Ward termed these theories ‘implicit theories” (ITs), and with colleagues, began to examine the possibility that offenders hold specific offence supportive schema that may explain offending behaviour (Polaschek & Ward, 2002; Ward & Keenan, 1999). In this context, the term implicit refers to an unconscious process that predominantly takes place outside of an individual’s awareness. In this way, the ITs held by offenders are proposed to affect the way offenders attend to, encode and interpret information in the social world.

Polaschek & Ward (2002) proposed five specific ITs for rapists; “*Women are unknowable/dangerous*” (beliefs that women are different from men, and because of this men can not understand how a woman’s mind works), “*Women are sex objects*” (beliefs that the only purpose of women is to please a man sexually), “*Male sex drive is uncontrollable*” (beliefs that men have no control over their sexual arousal, and need to be satisfied sexually when this happens), “*Entitlement*” (beliefs that all men are entitled to sex), and “*Dangerous world*” (beliefs that the world is full of danger, and hostile individuals). According to schema theory, these ITs may create processing biases when an individual encounters a scenario that is inconsistent with the stored knowledge of the schema—or is outside of their own previous experience. In these situations it is suggested that the information is encoded, processed and interpreted in accordance with the schema, and not the actual events. For example, the IT *women are sex objects* may bias the information interpreted during an interaction with a female. If, due to past experiences of overtly sexual women, an individual holds the beliefs that women are sex objects, whose role is to provide sex for men, then an encounter with a friendly women may be interpreted as sexually receptive, because any information received during that interaction is modified through cognitive processing to be consistent with the *women are sex objects* IT. Polashek & Ward (2002) propose that individual’s holding these beliefs may be prone to misattributing sexual intent to non-sexual behaviour. For example, a woman may be seen as dressing in a particularly way specifically to attract sexual invitations, creating a dangerous situation in terms of potential sexual offending.

Ward and colleagues proposal that schema theory can be used to explain the role of offence supportive cognition in offending behaviour provides an excellent framework for investigation in this area. If, as proposed by Ward and colleagues, offenders hold specific offence supportive schema, that they use to interpret the world around them, then it should be possible—through the use of cognitive methods—to implicitly examine the way these individual’s attend, encode and interpret social information they receive. A large proportion of studies that have attempted to examine rapists’ beliefs were designed before the proposal of IT theory, and as such use explicit measures. Such studies typically ask rapists to rate their agreement with a range of beliefs deemed to be rape supportive. Unfortunately, however, research using this method has been disappointing (Sattem, Savells, & Murray, 1984; Segal & Stermac, 1984) with researchers unable to differentiate rapists from controls using these methods. More recently, Bumby (1996) developed a more generic scale of rape-supportive beliefs (*Rape Scale*) and found that rapists’ responses on this scale did differentiate them from offenders who had not sexually offended. There is also a small body of research using samples of rapists or rape prone men, that has been more successful in identifying ITs (e.g. Polaschek & Gannon, 2004; Polaschek & Ward, 2001). For example, Polaschek and Gannon (2004) analysed the offence accounts of 37 convicted rapists and found strong evidence for all five ITs, the most prevalent being “*women are sexual objects”*, “*entitlement”* and “*women are unknowable/dangerous”* occurring in 70%, 68% and 65% of interview transcripts respectively. “*Male sex drive is uncontrollable”* and “*dangerous world”* also occurred in a minority of cases. This study is an important first step in the investigation of ITs in rapists, but the data collected relies on self report information from the offenders, which is open to social desirability bias. Furthermore we can not draw any conclusions about the role these IT play in the offence process, as we can not distinguish the root cause of these statements, that is, we do not know if the statements are generated as a result of a belief system, or if the offender is making these statements in an attempt to justify their offences. By simply recording such offence supportive statements, we are unable to decipher whether rape supportive cognition plays an aetiological role in rape.

As mentioned previously, employing information processing measures— implicit measures—may be useful in this domain. There are two advantages to using implicit measures. First, this methodology does not directly ask the participant for information, therefore eliminating social desirability biases. Second, such a methodology can measure attitudes or processes that the participants themselves are not consciously aware of, which is of particular use when investigating such concepts as ITs. For a discussion on the use of implicit measures see Fazio and Olson (2003).

*Rape Proclivity*

In studying factors that contribute to the aetiology of rape, researchers have recognised the need to study not only incarcerated rapists, but also men in the community who can be identified as having some propensity to commit acts of sexual aggression. Several self-report questionnaires have been designed to measure the extent to which men demonstrate a proclivity to rape – that is, a likelihood to rape (e.g. T*he Likelihood to Rape index*, Malamuth, 1981; *The Attraction to Aggression Scale*, Malamuth, 1989; *The Sexual Experiences Survey*, Koss, Gidycz & Wisniewski, 1987; and *The Rape Proclivity Measure*, Bohner et al. 1998). Studies have shown that men high on Rape Proclivity tend to endorse more myths or beliefs that are accepting of rape (see Bohner et al., 1998; Malamuth & Check, 1985).

A large amount of research has been conducted with rape prone men (e.g. Bohner et al. 1998; Bohner, Siebler & Schmelcher, 2006; Malamuth, 1981; Malamuth and Check, 1980; Malamuth, Haber & Feshbach, 1980) which has provided evidence suggesting that these men share similar characteristics to convicted rapists. For example, rape prone men have been found to exhibit high levels of hostility towards women (Malamuth, 1986), experience feelings of anger towards women (Lisak & Roth, 1988), perceive dominance as a motive for sexual behaviour (Malamuth, 1986) and experience high levels of arousal in response to forced sex depictions (Malamuth & Check, 1980). This body of research offers support for the theory that data collected on rape prone men can be applied or generalised to convicted rapists. As mentioned previously, although some studies have begun to examine rapists’ ITs using self report measures (e.g., Polaschek & Gannon, 2004), there has been little attempt to investigate the presence of these ITs using implicit, cognitive experimental methodology. However, there have been some useof these methods to examine ITs in child molesters, such as utilisation of the lexical decision task paradigm (Kamphuis, De Ruiter, Janssen & Spiering, 2005; Keown, Gannon, & Ward, 2008) and use of Implicit Association Tests (Mihailides, Devilly & Ward, 2004; Gray, Brown, MacCulloch, Smith, & Snowden, 2005). We believe that these cognitive methods are more appropriate for use in this domain than the self report measures previously employed to investigate rape supportive cognitions as they are not open to social desirability biases. Therefore it is useful for us to use such techniques to investigate the cognitions and motivations of rape prone men, as we may be able generalise these findings to convicted rapists who can be a difficult sample population to obtain. We previously made an attempt to examine the five ITs thought to be held by rapists in a sample of rape prone men. We (Blake & Gannon, 2010), used a lexical decision task (LDT) to investigate whether men who score higher on Bohner et al.’s (1998) Rape Proclivity measure were quicker to respond to rape supportive, IT consistent words, compared to men obtaining lower scores on the Rape Proclivity measure. In this study we predicted that response times from the LDT would be more representative of the presence of ITs—if they are in fact held by rape prone men as in rapists—because an implicit, cognitive measure of ITs should, theoretically, be more appropriate for examining ITs than explicit methods such as self reports, due to the implicit nature of the ITs themselves. To test this hypothesis we attempted to measure the presence of ITs through the LDT and also through an explicit measure (The Rape Scale: Bumby, 1996) in order to calculate the relative predictive utility of each method using regression analysis. Although the regression model was significant, only 13% of variability in Rape Proclivity score could be predicted from the independent variables (Rape Scale score, and the five ITs as measured by the LDT.) Furthermore, scores on the Rape Scale were the only significant predictor, indicating that contrary to our expectations, the explicit measure was more successful at measuring rape supportive beliefs than the implicit method. This result meant we were unable to draw any firm conclusions about the ITs or rape supportive beliefs in rape prone men. The moderate correlation between Rape Scale score and Rape Proclivity (r=.42, P<.001) does indicate that on a conscious level rape prone men do endorse more rape supportive beliefs than non rape prone men, but whether they hold the fives ITs or not is still unknown. Either rape prone men do not hold the same ITs as rapists—which is plausible considering these men have never (to our knowledge) been convicted of any sexual offences—or the LDT methodology employed did not tap into the ITs as expected. The Rape Scale contains items that refer to more generalised rape supportive beliefs than the ITs, so it could be that rape prone men hold more of these general views. For example, the Rape Scale contains several statements that refer to rape victims being to blame, or responsible for the offence, and also several that describe women as falsely accusing men of rape. However, these kinds of beliefs are not specifically represented within the ITs proposed for rapists, so were not being measured through the LDT.

*The present study*

The present study utilises the interpretative task paradigm (as in Gannon & Rose, 2009) to examine the ITs of rape prone men implicitly. The interpretative task is an adaptation of a memory recognition task that has been used previous in clinical and forensic populations (Copello & Tata, 1990; Eysenck, Mogg, May, Richards & Matthews, 1991; Gannon & Rose, 2009). The main assumption of this paradigm is that ambiguous stimuli will be interpreted and therefore subsequently recognised in a manner consistent with schemata. Thus in this particular task, ambiguous sentences were designed in a way in which they could either be interpreted in an rape supportive manner, or a non-rape supportive manner. The task has two phases, the encoding phase and the recognition phase. In the encoding phase participants are presented with ambiguous sentences one by one on a computer and are asked to remember these sentences. Each of these original sentences has two derivatives, one of these derivatives is a rape supportive interpretation of the original sentence, and one is a non-rape supportive interpretation of the original sentence. After a short filler task, the participants then enter the recognition phase, where they are then presented with one of the two derivatives of the original sentence and are asked whether they recognise this sentence or not, by pressing the appropriate button on the computer keyboard. In line with information processing theory, and Ward’s IT theory, we predict that men scoring high on Rape Proclivity will interpret the original ambiguous sentences in a rape supportive manner, due to the ITs that they hold. Thus, in the recognition phase, they will make greater positive recognitions for the rape supportive sentences than the non-rape supportive sentences. Conversely, men who score low on Rape Proclivity will be more likely to interpret the ambiguous sentences in a non-rape supportive manner, due to a presumed absence of rape supportive ITs. Thus, in the recognition phase these men will make a greater number of positive recognitions for non-rape supportive sentences.

The participants in the present study also completed an explicit self report measure of rape-supportive cognition (Bumby’s Rape Scale).

Based upon the research evidence to-date we make two main predictions. First, we predict that men who score higher on the Rape Proclivity measure will endorse more rape-supportive beliefs on the Rape Scale relative to those who score lower on Rape Proclivity. Second, we predict that men who score higher on the Rape Proclivity measure will show a pattern of greater recognition for rape supportive sentences than non-rape supportive target sentences relative to those obtaining lower scores on the Rape Proclivity measure. Finally, to compare explicit and implicit measures of rape supportive cognitions, we will use a regression model consisting of each participants’ performance on the interpretative bias task and Rape Scale score to assess the relative contribution of implicit and explicit measures for predicting Rape Proclivity score.

Method

*Participants*

Participants were 77 males aged between 18 and 37 (mean age 21.12 years, SD=3.44) who volunteered to take part in a study titled “Memory recall study”. Participants could choose to receive either £5 for taking part, or five credits towards fulfilment of an undergraduate psychology course. Participants were primarily University students. All participants had spent a minimum of 14 years in formal education.

*Materials*

*Rape Proclivity Scale*

The rape proclivity measure was taken from Bohner et al. (1998). As part of this test, participants read five realistic date rape scenarios, and are instructed to imagine themselves in the position of the male protagonist, and to answer the following three questions with respect to each scenario. “In this situation, how aroused would you be?” (1; not at all sexually aroused, to 5; very strongly sexually aroused); “In this situation, would you have done the same?” (1; would definitely not done the same, to 5; would definitely have done the same) and, “In this situation, how much would you enjoy getting your way?” (1; would not enjoy it at all, to 5; would greatly enjoy it). Scores on this scale range from 15 to 75, although Bohner and colleagues sum questions two and three across all five scenarios to create the measure of Rape Proclivity, with a range of 10 to 50. The Cronbach’s alpha of the combination of these two questions, forming a 10 item index of Rape Proclivity, is α > 80. Bohner and colleagues have demonstrated that this measure is unaffected by a response tendency toward social desirability *r* (111) = .05, *p* > .61 and in addition found the measure correlates positively with men’s self reports of past sexual aggression, *r* (112) = .38, *p* < .001.

*Rape Scale*

The Rape Scale (Bumby, 1996), an explicit measure of rape-supportive beliefs, consists of thirty-three statements, each followed by a 4 point Likert scale on which to rate agreement that excludes a ‘neutral’ response option. Examples of questions are “Men who commit rape are probably responding to a lot of stress in their lives, and raping helps to reduce that stress”, “Women who get raped probably deserve it” and “Woman generally want sex no matter how they can get it”. The Rape Scale has excellent psychometric properties (internal consistency α = .96, test-retest reliability *r* = .84; Bumby, 1996). A 5 point Likert scale was used for the purpose of this study to ensure respondents had a neutral response option to rate their responses if required.

*The interpretative bias task*

Additionally, the participants completed a computerised interpretative bias task. The computer task presented participants with 28 sentences and corresponding sentence derivatives in the recognition phase that were designed to represent three of the five ITs identified by Ward and Polaschek (*women are dangerous*, *women as sex objects* and *male sex drive is uncontrollable* plus two additional proposed rape supportive schema “*victim blame*” and “*women falsely accuse*”. We decided to include these additional schema after analysis of the data from our previous study (Blake & Gannon, 2010) revealed that rape prone men tended to endorse items on the Rape Scale that represented these beliefs. In addition, participants were also presented with 10 control sentences, taken from (Gannon & Rose, 2009), that were designed to assess generally negative social interpretations, and a further 10 ambiguous filler sentences (also take from Gannon & Rose, 2009) designed to disguise the true aims of the task.

Of the 28 sentences designed to assess interpretation of rape supportive schemata, six represented the IT *women are unknowable*, six represented the IT *women are sex objects*, six represented the IT *male sex drive is uncontrollable*, six represented the schema *victim blame* and four represented the schema *women falsely accuse*.

During the encoding phase the presented sentences remained on the screen until the participant pressed the space bar to move on to the next sentence. In the recognition phase, participants were given instructions to read the sentences presented to them and decide whether they recognised the meaning of the sentence from those they had been shown previously.

PLACE TABLE 1 HERE

Stimuli

An ANOVA confirmed that sentence length (number of words per sentence) did not differ significantly across sentence type (original ambiguous sentence, rape supportive sentence derivative and non rape supportive sentence derivative), *F*(2, 111) = 0.27, *p* = .973. In addition ANOVAs were performed individually for each IT and the control sentences. The ANOVAs confirmed that sentence length did not differ significantly across sentence type for *women are unknowable*, *F*(2, 15) = .038, *p =* .963*, women as sex objects, F*(2, 15) = .046, *p* = .955, *male sex drive is uncontrollable, F*(2, 15) = .322, *p* = .730, *victim blame, F*(2, 15) = .023, *p* = .978, *victims falsely accuse, F*(2, 9) = .77, *p* = .927 nor control sentences, F(2,27) = .029, p=.971.Table 2 shows mean sentence length for all sentence types used in the interpretative bias task.

PLACE TABLE 2 HERE

Two versions of the interpretative bias task were implemented—in line with previous research using this procedure (e.g. Copello & Tata, 1990; Gannon & Rose, 2009)—so that participants only saw one derivative of each original sentence. So for example, of the six original sentences representing *Women are unknowable*, each participant would see three rape supportive interpretations and three non-rape supportive interpretations in the recognition phase.

*Apparatus*

The interpretative task was created using the computer software E-Prime. Written instructions and all sentences were presented in black, Times New Roman text on a white background. Participants made their responses using the computer keyboard.

The E Prime programme controlled the random presentation of original ambiguous sentences in the encoding phase, and the sentence remained on the screen until the participant pressed a key to move on to the next sentence. In the recognition phase the e prime programme controlled the random presentation of an even number of rape supportive, and non-rape supportive sentence derivatives. Participants responded to the stimuli by pressing one key if they recognised the sentence meaning, or another key if they did not recognise the sentence meaning. The type of response made (recognised / not recognised) was recorded by the programme.

*Procedure*

Participants were recruited through advertisements on research participant websites and on the University’s student job page. Participants were then invited to a psychology lab where they were given an information sheet to read, which explained what they would be asked to do, and informed them that their responses would be anonymous and that they had the right to withdraw from the study at any time without penalty. Participants who were satisfied with this information signed a consent form to agree to take part and to demonstrate that they understood the procedure. Participants were tested individually. Participants were given verbal instructions on how the session was going to run (i.e., that they would complete questionnaires before the computer task or visa versa). When participants had successfully completed all stages of the experiment they were debriefed. Ethics approval was provided by the authors’ University Ethics Board.

*Results*

Table 2 shows descriptive statistics and correlations for the dependent variable (Rape Proclivity score) and all independent variables.

PLACE TABLE 2 HERE

Rape proclivity was calculated by adding scores for questions 2 and 3 together across all 5 scenarios, as in Bohner et al. (1998). The final score therefore indicated the extent to which participants could imagine themselves acting in the same way as the male protagonist in the date rape scenarios, and how much they would enjoy getting their own way in such a situation. Scores could range from 10 to 50. In this sample the mean score was 17.40 (SD = 6.13) with a range of 10 to 34, indicating slight floor effects, but still representing a sizable range of scores. To test the first hypothesis, that participants who score higher on the Rape Proclivity measure will score higher on rape supportive beliefs as measured by the Rape Scale, relative to lower scorers on the Rape Proclivity measure, we conducted a correlational analysis. As predicted, the two variables were significantly correlated, *r* = .67, *p* < .001.

*Recognition analysis*

We calculated the number of positive recognitions made by participants for each sentence type and then subtracted the number of positive recognitions of non-rape supportive sentences from the number of positive recognitions of rape supportive sentences to give one score that reflected recognition of rape supportive sentences over and above recognition of non-rape supportive sentences. This score was calculated for each IT, meaning each participant had five such scores (plus one score for control sentences).

To test the second hypothesis, that participants who score higher on the Rape Proclivity measure will recognise more rape supportive sentences than non-rape supportive sentences, a standard multiple regression was performed between Rape Proclivity score as the dependent variable and positive recognition to each IT and score on the Rape Scale as independent variables to determine the relative contributions of responses on the interpretative bias task (the implicit measure) and Rape Scale (the explicit measure) at predicting Rape Proclivity scores. The regression model consisted of six independent variables; recognition score for each IT – *women are unknowable, women as sex objects*, *male sex drive is uncontrollable*, *victim blame* and *women falsely accuse* plus the score of rape-supportive cognitions as measured by the Rape Scale. In this method, all independent variables are entered into the regression equation at once. The dependent variable consisted of Rape Proclivity score. Analysis was performed using SPSS REGRESSION and SPSS EXPLORE for evaluation of assumptions.

We predicted that men who obtained higher scores on the Rape Proclivity measure would show a pattern of greater positive recognition for rape supportive sentences than non rape-supportive sentences relative to men obtaining lower scores on the Rape Proclivity measure. However, there was only one significant correlation; a positive recognition score, indicating greater recognition of rape-supportive sentences relative to non-rape supportive sentences, was more common amongst men scoring higher on Rape Proclivity for sentences representing the IT *women are sex objects*. However, for the remaining ITs, the pattern of recognition of rape supportive sentences was not as predicted. A negative recognition score, indicating greater recognition of non-rape supportive sentences relative to rape supportive sentences, was more common amongst men scoring higher on Rape Proclivity (though not significant) for the four remaining ITs (*women are unknowable/dangerous*, *male sex drive is uncontrollable*, *victim blame* and *women falsely accuse*).

PLACE TABLE 3 HERE

Table 3 displays the standardised regression coefficients (*β*), and adjusted *R2*.

*R* for regression was significantly different from zero, *F*(6, 76) = 12.755, *p* < .001, with *R2* at .522. The adjusted *R2* value of .481 indicates that a substantial amount of the variability (48%) in Rape Proclivity score is predicted by the five ITs (as measured by interpretative bias task) and scores on the Rape Scale. Only two regression coefficients differed significantly from zero; Rape Scale (*t* = 7.57, < .001,*Β* = .275) and recognition for *women are sex objects* sentences (*t* = 2.82, *p* < .01, *Β* = 1.34).

Altogether, 48% of the variability in Rape Proclivity was predicted by knowing the score on the Rape Scale and recognition of rape supportive sentences representing the IT *Women are sex objects*. The direction of the relationship indicates that men who score higher on the Rape Proclivity measure are more likely to endorse rape supportive statements as measured by the Rape Scale and interpret ambiguous stimuli as consistent with the IT *Women are sex objects*.

Discussion

It was predicted that men scoring higher on Rape Proclivity would also score higher on the Rape Scale relative to men who obtained lower scores on the Rape Proclivity measure. The significant correlation between these variables confirms that this is the case, indicating that men with a higher proclivity towards committing rape endorse more rape supportive statements as measured by the Rape Scale. This result is in line with previous research indicating that rape prone men endorse rape-supportive statements on questionnaires (Blake & Gannon, 2010; Bohner et al., 1998; Malamuth & Check, 1985).

Further, it was predicted that men who obtained higher scores on the Rape Proclivity measure would show a pattern of greater recognition for rape supportive sentences than non-rape supportive sentences relative to those obtaining lower scores on the Rape Proclivity measure. However, there was only one significant correlation between recognition patterns for ITs and Rape Proclivity for one of the ITs measured—*women are sex objects* (r=.29, p<.05). The pattern of responding to the other four ITs was contrary to predictions, with high scorers on Rape Proclivity more likely to make positive recognitions of non-rape supportive sentences, although these results were not significant.

The regression model was designed to examine whether implicit recognition scores to each individual IT in the interpretative bias task together with the explicit questionnaire measure of rape supportive beliefs could be used to predict an individual’s Rape Proclivity score. Although the model did significantly predict 48% of the variance, this is still a rather disappointing result, because the Rape Scale and recognition of the *women are sex objects* consistent sentences were the only two independent variable to significantly contribute to the model. This means that although overall the model does help to predict a moderate amount of the variance in Rape Proclivity scores, four of the five individual ITs (as measured via the interpretative bias task) did not significantly contribute to this variance.

Due to the implicit nature of schema, and the unconscious role of information processing, we had expected that the implicit measure of ITs would be more successful than the explicit, self report measure. HHHHHH owever, the results of this study do not support this prediction. Although other researchers have successfully identified ITs in child molesters using implicit methods (e.g. Kamphuis et al., Keown et al., 2008; Mihailides et al., 2004), these methods have yet to be used with rapists (to our knowledge), and our own investigation of the ITs in rape prone men (Blake & Gannon, 2010) was unsuccessful in identifying ITs using cognitive methods. There are several possible explanations for our findings; rape prone men may not hold the same ITs as rapists, the interpretative bias task may be failing to tap in to the ITs or our sample may have not been large enough to catch small effects.

It is interesting that the self report measure of rape supportive cognitions was one of only two significant predicator variables, accounting for the highest proportion of variance, considering that we anticipated the implicit measure of the interpretative to be a more robust measure of men’s beliefs. In our previous work we suggested that this may be because rape prone men hold more generalised rape supportive cognitions—as measured by the Rape Scale—compared to the more specific beliefs described by ITs in the LDT we employed. For example, sentences used in the LDT to describe *male sex drive is uncontrollable included* “A man’s sexual arousal is difficult to control”, which refers, very broadly, to all men. In contrast, the Rape Scale contains such statements as; “Most of the men who rape have stronger sexual urges than other men.”, which clearly describes how a rapist differs in his desires from other men. We attempted to circumvent this possibility in the present study by creating rape supportive sentences that were less specifically about rapists’ needs and motivations, and more about men in general. However as we still failed to identify endorsement for these ITs in the present study it could then be more likely that rape prone men simply do not hold the same ITs as rapists. We do know that they endorse more of the rape supportive statements on the Rape Scale, and it appears they do also appear to endorse the “women as sex objects” IT, so there may be a small degree of similarity between beliefs held by convicted rapists and rape prone men, but it would be unwise to draw any firm conclusions from this study.

As mentioned, another possibility for the non significant results of this study may be due, in part, to the methodology employed. The effectiveness of interpretative bias task relies on strong stimuli that accurately represent the belief systems of interest, and also on the a ability of participants to recall their interpretations of the sentences they had previously seen. It is possible that either our stimuli was not representative enough of the rape supportive beliefs or participants struggled to recall the sentences they had read earlier. This does not explain however the predictive utility of the *women are sex objects* IT. The fact that this IT has significant predictive power for Rape Proclivity demonstrates that the interpretative bias task and stimuli must have some validity. Also there was one significant correlation between ITs measured by the task—*women are sex objects* was significantly positively correlated with our newly proposed *victim blame* IT (r = .255, p = .025)—which is suggestive of some degree of stimuli and task validity. However, if the task and stimuli are accurate at tapping in to ITs, then we would expect some correlation between the explicit and implicit measure as they should be measuring the same beliefs. However there were no significant positive correlations between Rape Scale score and recognition of rape supportive sentences. In fact there was a negative correlation between score on Rape Scale and the *women falsely accuse* IT ( r = -.247, p = .030), which is perplexing considering we proposed this IT after analysing scores from the Rape Scale in our previous research. This further calls in to question the validity of the interpretative bias task in tapping in to rape supportive beliefs. It seems unusual that individuals would consciously endorse specific beliefs on a self report measure and yet fail to unconsciously interpret ambiguous stimuli to be consistent with these beliefs. It is impossible to tell if this discrepancy is a result of methodological flaws, or if the relationship between consciously expressed beliefs and implicit attitudes is more complex than first thought—could it be possible for there to be such inconsistency between conscious and non-conscious beliefs? And if this is the case, what are the theoretical implications? In the case of the *women falsely accuse belief*, it could be possible that a kind of reverse social desirability is in operation. Perhaps when answering the questionnaire men indicate their endorsement of this belief, because in Western society and the Criminal Justice System itself there is much negativity and stigma attached to women accusing men of rape—particularly in cases of date rape, when the issue of consent pertinent or if the reputation of the rape victim is called in to question. It is possible that for some men, the perceived socially desirable way of answering is to indicate endorsement of these statements, even if this is inconsistent with their true beliefs, thus explaining why when measured implicitly, their responses indicate a tendency to interpret sentences representing the *women falsely accuse* IT in a non-rape supportive manner—which is consistent with their true beliefs. However, considering that responses to this specific IT were not correlated with Rape Proclivity this explanation does not help further our knowledge of the ITs of Rape Prone men, and could suggest that this unexpected result is merely an artefact in the data.

Conclusion

Due to the fact that only the explicit measure of rape supportive beliefs, and the implicit measure of just one IT, *women are sex objects*, could significantly predict score of Rape Proclivity it is difficult to draw any firm conclusions about the nature of ITs in rape prone men. It could be that rape prone men do only hold one of the ITs proposed to be held by rapists, or as discussed it may be possible that the interpretative bias task is not accurately identifying the presence of ITs. The explicit measure is substantially correlated with Rape Proclivity, indicating that men scoring higher on Rape Proclivity certainly do endorse rape supportive beliefs on some level, however due to the self report methodology we can not make any inferences about the rape supportive cognition that may underlie these beliefs. It would be very beneficial if we could extend this research to include a sample of incarcerated rapists, to see whether the interpretative bias task is successful in measuring ITs in men known to have committed offences. This would help us to work out the utility of such implicit tests, and help to develop future research strategies.

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Table 1: Mean number of word per sentence type

|  |  |  |  |
| --- | --- | --- | --- |
| Sentence type | Mean number of words per original sentences | Mean number of words per rape-supportive sentences | Mean number of words per non rape-supportive sentences |
| Women are unknowable | 7.33 | 7.33 | 7.67 |
| women as sex objects | 7.33 | 7.67 | 7.83 |
| Male sex drive is uncontrollable | 11.5 | 12.5 | 11.67 |
| Victim blame | 11 | 11 | 10.67 |
| Women falsely accuse | 11 | 11 | 10.5 |
| Control sentences | 10.8 | 10.6 | 10.6 |
|  |  |  |  |

Table 2: Descriptive statistics and correlations for DV and all IVS

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | **Rape proclivity** | **Women are unknowable** | **Women are sex objects** | **Male sex drive is uncontrollable** | **Victim blame** | **Women falsely accuse** | **Rape scale** | **Â** | **â** | **sr2** |
| Women are unknowable | -.14 |  |  |  |  |  |  | .10 | .02 | .00 |
| Women are sex objects | .29\* | -.01 |  |  |  |  |  | 1.3 | .24 | .05 |
| Male sex drive is uncontrollable | -.13 | -.02 | -.02 |  |  |  |  | -.68 | -.12 | .01 |
| Victim blame | -.00 | .12 | .26\* | .14 |  |  |  | -.28 | -.05 | .00 |
| Women falsely accuse | -.12 | -.07 | .01 | .13 | -.02 |  |  | .57 | .08 | .00 |
| Rape scale | .67\*\* | .06 | .09 | -.02 | -.02 | -.25\* |  | .28 | .67\*\* | .39 |
|  |  |  |  |  |  |  |  |  |  |  |
| Means | 17.40 | -.39 | -.42 | -.35 | -.26 | -.82 | 68.71 |  |  |  |
| Standard deviations | 6.13 | 1.02 | 1.10 | 1.20 | 1.12 | .90 | 14.92 |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| \*\*p < .01 | \*p < .05 |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |

Table 3: Variables Predicting Rape Proclivity score

|  |  |  |  |
| --- | --- | --- | --- |
| Variable | â | t | p |
| Rape Scale | .67 | 7.57 | .00 |
| Women are unknowable | .02 | .20 | .842 |
| Women as sex objects | .24 | 2.81 | .006 |
| Male sex drive is uncontrollable | -.12 | -1.45 | .152 |
| Victim blame | -.05 | -.58 | .567 |
| Women falsely accuse | .08 | .94 | .350 |
| Adjusted R2 = ..48 df 6,76 | | F = 12.76, p<.01 | |