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Disentangling Cognitions about Rape: Evaluations may be Distinct from Cognitive Distortions

Chloe Pedneault
Carleton University, Ottawa, Canada (Chloe.Pedneault@carleton.ca)
Chantal A. Hermann
Ministry of Community Safety and Correctional Services[1], Toronto, Canada
Kevin L. Nunes
Carleton University, Ottawa, Canada

Background: Nunes, Hermann, White, Pettersen, and Bumby (2016) examined distinctions between evaluations of rape and cognitive distortions regarding rape in a sample of male undergraduate students ($N = 660$). Their research suggests evaluations of rape may be distinct from cognitive distortions regarding rape, and that evaluations and cognitive distortions may both be relevant for understanding sexual violence.

Evaluations: Evaluative judgments about a psychological object characterized by some degree of favour or disfavour (e.g., rape is *positive* vs. *negative*; Ajzen, 1991).

Purpose of the current study: Attempt to replicate and extend research by Nunes et al. (2016) with a sample of men from the community and different measures of sexual aggression and evaluation of rape.

Research questions:
1. Are evaluations of sexually coercive/aggressive behaviour **distinct** from cognitions assessed by a widely used measure of cognitive distortions regarding rape?
2. Are evaluations and cognitive distortions **independently** associated with sexually coercive and aggressive behaviour?

Participants: Data from two separate surveys were merged to form the dataset used in the current study. Both surveys followed the same procedure. Participants were 493 men from the community recruited from an online panel of participants (Qualtrics Panel). The majority of participants were 50+ years old (54.0%), 86.0% identified as White, 53.3% were married, 50.9% were employed full-time, and 54.8% had completed college or university.

Measures

Cognitive distortions regarding rape
- **RAPE Scale** (Bumby, 1996)
  - 36-item self-report scale designed to assess endorsement of cognitive distortions regarding rape
  - Participants are asked to rate each item on a 4 point Likert scale from *strongly disagree* to *strongly agree*; a total score is computed by summing the endorsement ratings for all items
  - Example item: "Women who get raped probably deserved it."

Evaluations of sexual coercion and aggression
- **Evaluations Sexual Experience Survey – Tactics First Revised** (Evaluations SES-TFR; Hermann & Nunes, 2016; Hermann, Nunes, & Maimone, 2016)
  - Participants are asked to evaluate 36 sexually coercive and aggressive behaviours that vary by tactic (6 tactics) and sexual behaviour (6 sexual behaviours) on a 7 point Likert scale from *very negative* to *very positive;* a total score is computed by averaging evaluation ratings for all items
  - Example item: "How POSITIVE or NEGATIVE do you think it is to show a woman you are not happy by making her feel guilty, swearing, sulking, or getting angry (after she indicated she didn't want to), in order to fondle, kiss, or sexually touch her without her permission?"

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[1] The views expressed are those of the authors and not necessarily those of the Ministry of Community Safety and Correctional Services.

Likelihood of being sexually coercive and aggressive
- **Proclivity Sexual Experience Survey – Tactics First Revised** (Hermann & Nunes, 2016; Hermann, et al., 2016)
    - Participants are asked to rate the likelihood they would engage in any of 36 sexually coercive and aggressive behaviours that vary by tactic (6 tactics) and sexual behaviour (6 sexual behaviours) on a 7 point Likert scale from *very unlikely* to *very likely*; a total score is computed by averaging the likelihood ratings for all items
    - Example item: "How LIKEY would you be to give a woman drugs or alcohol without her permission in order to make her have sexual intercourse with you?"

Likelihood to rape
- **Likelihood to Rape Question** (Malamuth, 1981)
    - Participants are asked to rate the likelihood they would rape a woman, if they could be assured they would not get caught and punished, on a 5 point Likert scale from *not at all likely* to *very likely*

Past sexually coercive and aggressive behaviour
- **Sexual Experience Survey – Tactics First Revised** (Hermann & Nunes, 2016; Hermann et al., 2016)
    - Participants are asked the frequency with which they have engaged in any of 36 sexually coercive and aggressive behaviours, that vary by tactic (6 tactics) and sexual behaviour (6 sexual behaviours), since the age of 16. A total score was computed using the weighted scoring method developed by Davis et al. (2014)
    - Example item: "How many times SINCE YOU WERE 16 years old have you overwhelmed a woman with arguments and pressure, although she indicated she didn't want to, in order to make her have oral sex with you?"

Procedure
- In an online survey (Qualtrics), participants completed a demographic questionnaire followed by the modified Sexual Experience Survey measures, the RAPE Scale, and the Likelihood to Rape Question.

Results

Exploratory Factor Analysis (EFA):
- We used MPlus (Version 7.3) to examine the underlying factor structure of the cognitive distortion scale and the evaluation scale.
- Factors were extracted using a Robust Weighted Least Square (WLSMV) method and factors were rotated using an oblique rotation method (Geomin).
- A **two factor model** fit the data well (RMSEA 0.05, 90% CI [0.04, 0.05]; CFI = 0.97; TLI = 0.96).
- Items from the cognitive distortion scale formed **Factor 1** and items from the evaluation scale formed **Factor 2**.

Hierarchical Logistic Regression Analyses:
- Participants were excluded from the hierarchical logistic regression analyses if they were missing data on at least one of the variables of interest. Of the 493 participants, 107 were missing data on one of these variables (RAPE Scale = 18.7%, $n = 92$; Evaluations SES-TFR = 2.4%, $n = 12$; LR = 1.8%, $n = 9$). Little's MCAR test was not statistically significant, suggesting that data were missing completely at random ($\chi^2[7] = 5.88$, $p = .554$). As such, listwise deletion was used resulting in a sub-sample of 386 participants.

Regressing <u>likelihood of engaging in sexually coercive and aggressive behaviour</u> on cognitive distortions regarding rape and evaluations of sexual coercion/aggression

	χ^2 for Block	R^2	B	B SE	OR	95% CI$_b$
Block 1	57.52***	.24				
RAPE Scale			.06	.01	1.06***	[1.05, 1.09]
Block 2	69.52***	.49				
RAPE Scale			.03	.01	1.03*	[1.00, 1.05]
Evaluations SES-TFR			4.21	.61	67.55***	[23.41, 363.22]

Note: $N = 386$. This significantly stronger association for Block 2 over Block 1 was also found when the Evaluations SES-TFR was entered in the first block and the RAPE Scale entered in the second block. *SE* = Standard Error. OR = Odds ratio. CI$_b$ = Bootstrapped confidence interval. *$p < .05$ **$p < .01$ ***$p < .001$

Regressing <u>likelihood to rape</u> on cognitive distortions regarding rape and evaluations of sexual coercion/aggression

	χ^2 for Block	R^2	B	B SE	OR	95% CI$_b$
Block 1	72.63***	.34				
RAPE Scale			.08	.01	1.08***	[1.06, 1.11]
Block 2	20.37***	.42				
RAPE Scale			.06	.01	1.06***	[1.03, 1.09]
Evaluations SES-TFR			2.23	.50	9.32***	[3.36, 29.17]

Note: $N = 386$. This significantly stronger association for Block 2 over Block 1 was also found when the Evaluations SES-TFR was entered in the first block and the RAPE Scale entered in the second block. *SE* = Standard Error. OR = Odds ratio. CI$_b$ = Bootstrapped confidence interval. *$p < .05$ **$p < .01$ ***$p < .001$

Regressing <u>past sexually coercive and aggressive behaviour</u> on cognitive distortions regarding rape and evaluations of sexual coercion/aggression

	χ^2 for Block	R^2	B	B SE	OR	95% CI$_b$
Block 1	19.20***	.09				
RAPE Scale			.04	.01	1.04***	[1.02, 1.05]
Block 2	10.35***	.14				
RAPE Scale			.02	.01	1.02	[1.00, 1.04]
Evaluations: SES-TFR			1.48	.46	4.41***	[1.67, 11.22]

Note: $N = 386$. This significantly stronger association for Block 2 over Block 1 was <u>not found</u> when the Evaluations SES-TFR was entered in the first block and RAPE Scale entered in the second block, $\chi^2(1, N = 386) = 3.17$ for Block 2 ($p = .075$). *SE* = Standard Error. OR = Odds ratio. CI$_b$ = Bootstrapped confidence interval. *$p < .05$ **$p < .01$ ***$p < .001$

Discussion

■ Results from the current study are generally consistent with those from Nunes et al. (2016). Together, these findings suggest evaluations may be distinct from cognitions assessed by a widely used measure of cognitive distortions, and that evaluations and cognitive distortions may provide complementary information relevant to sexual violence.

■ In the current study, only evaluations were independently associated with <u>past</u> sexually coercive and aggressive behaviour; whereas, the independent association between cognitive distortions and past sexual coercion and aggression was not statistically significant. However, this may be at least partially due to the similarity in wording and structure between the evaluation and past sexual coercion/aggression measures.

■ Future research should examine the relationship between evaluations and sexual violence using longitudinal and experimental research designs to determine whether they are causally related.

■ If a causal link is found, then addressing evaluations in assessment and treatment may contribute to further reductions in sexual offending.

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