COMPARING RAPE MYTH ACCEPTANCE AMONG POLICE TRAINEES AND MEDICAL STUDENTS: A PRELIMINARY DANISH VALIDATION OF THE UPDATED ILLINOIS RAPE MYTH ACCEPTANCE SCALE (IRMA-DK)

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ABSTRACT

Identifying rape myths among criminal justice and medical professionals is central to preventing secondary victimization. We present the first preliminary Danish validation of McMahon and Farmer's (2011) updated Illinois Rape Myth Acceptance Scale using samples of police and medical trainees. Exploratory and confirmatory factor analyses result in a 14-item, 4-factor measure that demonstrates acceptable model fit, satisfactory convergent and discriminant validity, and good internal consistency. While reported rape myth acceptance is generally low in both samples, some subscale scores vary across professional group, thereby identifying specific targets for intervention in different occupational contexts. Further tests of the scale are recommended.

INTRODUCTION

In recent years, there has been increasing attention to the public and professional treatment of rape victims. Exemplified by the #MeToo movement, there have been widespread calls in many countries to identify and break down potentially damaging social myths that may discourage victims from reporting sexual assault and/or contribute to secondary victimization by the medical and criminal justice systems when they do (Campbell, Wasco, Ahrens, Sefl, & Barnes, 2001). Similar patterns have been observed in Denmark which has recently struggled with claims of supporting a 'rape culture' (Amnesty International, 2019). Massive underreporting of sexual assault, paired with figures showing that nearly half of Danish rape complainants are unsatisfied with the police's handing of their case (Mannov, 2020; Pedersen, Kyvsgaard, & Balvig, 2020; Rigspolitiet, 2020), further underlines the importance of this issue. This has led to a number of political initiatives aimed at ensuring that rape survivors are met in the best possible way and calling for better training of professionals in contact with sexual assault victims (Justitsministeriet, 2016). Implicit in these discussions is the suggestion that rape myths, defined as stereotypical beliefs about the circumstances, victims and perpetrators of rape (Bohner, Eyssel, Pina, Siebler, & Tendayi, 2009; Burt, 1980), may play a role. Yet little is actually known about Danish rape myth acceptance (RMA), as only very few examinations have been conducted to date. The ability to systematically measure stereotypical attitudes towards rape, particularly among professional groups likely to have contact with rape victims, is paramount to informing public debate and to evaluating the success of interventions aimed at improving rape victims' experiences with the system. However, modern validated measures for doing so are lacking in the Danish context. With a view to providing such a measure and contributing to the growing literature exploring the validity and sensitivity of rape myth measurements in different cultural, professional, and linguistic contexts (Bendixen & Kennair, 2017; Fakunmoju, Abrefa-Gyan,

& Maphosa, 2018; Trottier, Benbouriche, LeBlanc, & Bonneville, 2020; Xue et al., 2016), we carry out a preliminary Danish validation of the updated *Illinois Rape Myth Acceptance Scale* (Lonsway & Fitzgerald, 1994; McMahon & Farmer, 2011) using two groups of professional trainees (police and medical students) who may play an important role in future efforts aimed at diminishing risks of secondary victimization. In doing so, we also construct the first Danish profile and comparison of rape myth acceptance in these groups, establishing an important empirical starting point for initiatives aimed at decreasing professional RMA.

LITERATURE REVIEW

Conceptualizing Rape Myths

Academic interest in identifying and combatting stereotypical attitudes towards rape dates back to the mid-1970's, when a number of scholars began pointing to widespread views blaming survivors for their own victimization and exonerating rape perpetrators for their actions (Brownmiller, 1975; Schwendinger & Schwendinger, 1974). In 1980 the first formal definition of such beliefs was coined, defining rape myths as "*prejudicial, stereotyped, or false beliefs about rape, rape victims, and rapists*" (Burt, 1980, p. 217). In the decades since, various modified and refined conceptualizations have been proposed, most of which focus on sexual assault committed by men against women (Gerger, Kley, Bohner, & Siebler, 2007; Lonsway & Fitzgerald, 1994). While there is no universal agreement as to the ideal wording or scope of rape myth definitions, there is today general consensus that the concept encompasses a wide range of "*descriptive or prescriptive beliefs about rape (i.e. about its causes, context, consequences, perpetrators, victims and their interaction) that serve to deny, downplay or justify sexual violence…"*(Bohner et al., 2009, p. 19). Typically, rape myths are framed as cognitive schemas that act to guide the interpretation and organization of rape-related information, and consciously and/or unconsciously shape social evaluations and decision making processes in relation to sexual assault (Ryan, 2019). Common rape myths

include the belief that victims cause the assault by their attire or behavior that many women are inclined to lie about rape, and that rape happens because men cannot control their sexual desires. As these examples illustrate, much of the existing work on rape myths is highly gendered, framing females as the victims of sexual assault and males as the perpetrators. While this focus is partly justified by international crime and victimization statistics indicating this pattern (World Health Organization, 2002), there is increasing recognition that sexual assault can be committed by all genders against all genders (Rumney, 2007), and that myths can also exist in relation to this fact. However, work on such myths is less developed.

Over the past 40 years, research into rape myths and their determinants, correlates and implications have been steadily accumulating. This evidence generally points to variations in rape myth acceptance (RMA) across age, gender and educational level (where men, older people and lower education relates to higher endorsement of rape myths). In addition, RMA has been found to be positively correlated with a range of other social attitudes, such as gender role stereotyping, sexism, racism and endorsement of interpersonal violence (Burt, 1980; Hockett, Smith, Klausing, & Saucier, 2016; Lonsway & Fitzgerald, 1994; Suarez & Gadalla, 2010). Furthermore, individuals who endorse rape myths may act accordingly. For instance, research indicates that higher RMA is related to men's proclivity to commit sexual violence (Yapp & Quayle, 2018), and victim's reluctance to report it (Egan & Wilson, 2012).

Rape Myths And Professional Practice

In addition to demonstrated relationships with individual demography and behavior, research also points to rape myths' potential organizational and systemic implications. Of particular relevance for this paper is evidence suggesting that these myths may have detrimental impacts on how rape complainants are treated within the medical and criminal justice systems, as professionals' endorsement of rape myths may contribute to secondary victimization and impact the progression of rape cases through the justice system (Campbell,

2005; Maier, 2008). For example, while research generally points to low overall levels of RMA among medical students, some evidence indicates that trainee doctors with higher RMA display increased hesitancy in screening for patients' sexual victimization history (Milone, Burg, Duerson, Hagen, & Pauly, 2010). Additionally, studies suggest that many sexual assault survivors are faced with victim-blaming questions by the personnel conducting forensic rape exams, and that these staff may fail to realize that their actions are distressing and can result in secondary victimization (Campbell, 2005; Campbell & Raja, 2005).

Within the legal system, there is also considerable evidence suggesting that rape myths are present and influential, despite generally low levels of acceptance (Gray & Horvath, 2018; Page, 2010; Sleath & Bull, 2017). Studies indicate that police officers with higher RMA show inferior interviewing skills, are less likely to believe rape complainants, and are less prone to recommend charging the alleged offender (Goodman-Delahunty & Graham, 2011; Page, 2008; Rich & Seffrin, 2012). Furthermore, Shaw, Campbell, Cain, and Feeney (2017) show that rape myths are evident in official police records, suggesting that some officers "*invoke traditional rape myths in documenting their investigations*" (p. 602), and they have been found to influence the prosecution and sentencing of rape cases in the courtroom (Bitsch & Klemetsen, 2017; Dinos, Burrowes, Hammond, & Cunliffe, 2015; Temkin, Gray, & Barrett, 2018). Such evidence suggests that it is crucial to explore the extent and content of rape myths in professional groups likely to come into contact with rape survivors. Identifying and combatting these attitudes early in the career, when myths can more easily be targeted through education, may be particularly valuable.

Cultural Variations

To date, the vast majority of research into rape myths, including the development and application of measures, has been conducted within the United States, often using general college samples (Bohner et al., 2009). Yet emerging evidence comparing American samples

to those from other countries (Fakunmoju, Abrefa-Gyan, Maphosa, & Gutura, 2020; Xue et al., 2016), as well as studies exploring cultural background in relation to RMA (Lee, Pomeroy, Yoo, & Rheinboldt, 2005), points to variations in the level and types of rape myths endorsed. This highlights the importance of exploring rape myths in different cultures and national settings. In the Scandinavian context, despite high levels of gender equality (World Economic Forum, 2020) research suggests that some criminal justice professionals in Norway and Sweden also hold stereotypical beliefs about victims (Ask, 2010; Bendixen, Helle, Langbach, & Rasmussen, 2014) and might be influenced by rape myths in their judgments about rape cases (Ask & Landström, 2010; Bitsch & Klemetsen, 2017; Bohner & Schapansky, 2018). However, there is relatively little Danish research on rape in general, and rape myths in particular.

To the best of our knowledge, only one previous study has focused specifically on measuring Danish rape myth acceptance, showing that a sample of Danish website visitors had more favorable attitudes towards rape victims than Singaporean, US male and Australian student samples (Elklit, 2002). Two additional studies based on review of police records found no indications of investigative biases based on rape stereotypes among Danish police (Hansen et al., 2019), and only minimal support for the notion of the 'credible criminal' influencing charges and convictions of rape suspects (Nielsen, Hansen, & Ingemann-Hansen, 2018). While these studies provide a preliminary picture of the Danish landscape, there is a clear need for further investigations using additional samples and contemporary rape myth scales.

Measurement Of Rape Myth Acceptance

Systematic investigations of rape myths require valid and reliable measures. Several standardized measures of RMA have been developed since the concept was first introduced

(Burt, 1980; Feild, 1978; Ward, 1988), one of the most widely used of which is the *Illinois Rape Myth Acceptance scale* (IRMA) developed by Payne, Lonsway, and Fitzgerald (1999). Since the development of this and many other traditional RMA scales, increased attention to issues of sexual violence and greater public awareness regarding the social unacceptability of some of the included myths, has led to suggestions that rape myths have become more subtle and covert and therefore more difficult to measure reliably with older scales (Gerger et al., 2007; McMahon & Farmer, 2011). In hopes of better capturing modern rape myths, McMahon and Farmer (2011) thus revised and validated an updated version of the IRMA, which is now most widely used. While the original IRMA consisted of 40 statements (and five filler items) divided into seven subscales, McMahon & Farmer (2011) tested a 22-item version with four subscales, yielding 19 validated items organized into a five-factor second-order model. Myths which generally blame the victim for the assault due to her attire or behavior are captured by the "She asked for it" subscale, while the subscale "It wasn't really rape" includes items questioning whether it is rape if the victim doesn't have bruises or physically resist the assault. Statements excusing men's behaviour due to uncontrollable sexual urges or alcohol are included in the "He didn't mean to" subscale and the second-order factor "He didn't mean to (intoxication)". Finally, the subscale "She lied" expresses doubts about victims' credibility and truthfulness. All items are rated on a 5-point Likert scale from 1 (*strongly agree*) to 5 (*strongly disagree*), with higher scores indicating greater rejection of rape myths. To the best of our knowledge, the original IRMA and its updated version are among the most reliable and psychometrically sound measures of rape myth acceptance in use today (McMahon & Farmer, 2011).

The IRMA is also notable in that it has been translated and culturally adapted to a number of non-American contexts, including China (Xue et al., 2016), Norway (Bendixen & Kennair, 2017), Nigeria (Fakunmoju, Abrefa-Gyan, & Maphosa, 2018) and France (Trottier

et al., 2020). These studies support either a five (Trottier et al., 2020; Xue et al., 2016) or a four (Bendixen & Kennair, 2017; Fakunmoju et al., 2018) factor structure, indicating that while some items and subscales are robust across cultures, the validity of others may be more specific to the social context and/or respondent group. This variation points to the need for additional country and sample-specific validations that are able to shed light on the specificity of rape myth acceptance, while also allowing for the accumulation and comparison of knowledge generated using validated versions of the same scale.[1] To our knowledge, there are no existing validations of the updated IRMA scale among trainee groups with responsibility for handling rape cases. In light of the literature reviewed above, exploring the validity of this scale in such respondent populations is another important step towards advancing knowledge regarding the scale's applicability. In the Danish setting, a validated local measure that can capture modern rape myth acceptance in different occupational groups is particularly needed, as such a measure will be critical to informing and evaluating ongoing political and practical efforts aimed at improving future rape victims' contact with the medical and criminal justice systems.

STUDY AIMS

The aims of the current study are threefold. First, with a view to addressing some of the aforementioned gaps in the literature, we derive and test the factor structure of a Danish translation of the updated *Illinois Rape Myth Acceptance Scale* (McMahon & Farmer, 2011), using a sample of future law enforcement officers. Secondly, in order to test the robustness of the derived scale (hereafter referred to as IRMA-DK) and its psychometric properties in a different occupational group, we validate the scale using an independent sample of future medical professionals. Finally, with the aim of providing evidence to nuance current debate and policy efforts related to improving rape victims' meeting with the medical and criminal justice systems, we use this measure to establish initial descriptive and comparative profiles

of RMA in these two groups. The current study represents the first preliminary validation of a validated Danish measure of modern rape myth acceptance using a relevant sample of future professionals.

METHODS

Participants

We draw on two samples fielded as part of a larger randomized controlled trial (RCT) testing the effects of an e-learning module on sexual assault. The current study is based on data collected from control group participants between March 2018 and January 2019.

Sample 1 consists of 259 trainees from the Danish police academy who participated in the study in a class setting prior to the start of their normal teaching on sexual assault (95.5% estimated response rate based on course registration numbers). Four of these respondents had missing data for the rape myth measure and were therefore excluded from further analysis, yielding a final sample of 255. Respondents had an average age of 27.56 (SD = 3.25). Consistent with the over-representation of male police trainees generally, the sample was heavily skewed with respect to gender, with 79% of respondents identifying as male, 20% identifying as female, and less than 1% reporting an "other" gender identity.[2] For the purposes of some analyses, the police trainee sample is randomly split into two halves (hereafter identified as samples 1A and 1B). These were tested for gender and age imbalance and showed none.

Sample 2 consists of 117 medical students from the three largest universities in Denmark who were invited to participate in the study during supplementary teaching offered in association with their core training in either gynecology or forensic medicine (63% estimated response rate based on attendance at the supplementary lectures).Three respondents with missing data on the rape myth measure were excluded from further analysis, rendering a

final sample of 114 students with an average age of 26.15 (*SD* = 2.39); 66.7% of respondents reported as female and 33.3% as male.

Due to the larger size and higher response rate in the police trainee group, this is treated as our primary sample for the initial validation, while the medical student sample is used to assess the robustness of the validated scale structure.

While these samples were not initially recruited with the primary purpose of validating the IRMA measure, the data collected as part of a larger study exploring rape myth acceptance in these groups provided a unique opportunity to conduct a preliminary validation using available data. Doing so provides novel insights regarding the applicability of the scale in these professional trainee groups. However, it is important to emphasize that because these samples are not representative of the general Danish population (e.g. both samples are skewed in terms of age and gender), we consider this a preliminary validation for the IRMA-DK for these specific professional groups. Additional samples would be required for a broader community validation. We return to this issue in the discussion.

Measures

Rape myth acceptance was measured using a Danish translation of McMahon & Farmer's (2011) updated Illinois Rape Myth Acceptance Scale described earlier. Following previous research, all 22 initial items from the updated IRMA scale are included in our validation, (rather than just the final 19 validated items) as other validation studies have found varying results regarding the additional three items (Bendixen & Kennair, 2017; Fakunmoju et al., 2018; Trottier et al., 2020). In order to ease interpretation, we employ a reversed 5-point scale, so that higher scores indicate greater rape myth acceptance rather than greater rejection of rape myths (1 = *strongly disagree* to 5 = *strongly agree*). As in the original scale, both overall (average) index scores and subscale scores measuring specific domains of RMA are computed. Informed by existing guidelines, and allowing for potential cultural adaptation of

relevant items (Beaton, Bombarider, Guillemin, & Ferraz, 2000), the scale was first translated to Danish by three independent translators, and subsequently back translated by three additional translators. Agreement between translators was reached through several committee meetings. The original, translated, and back-translated items are provided in Appendix A.

Procedures

Participants were invited to participate following the distribution of written material 1-2 weeks prior to data collection, and a short in-person introduction by a member of the project team. Students were informed that participation was voluntary and that responses were anonymous. No incentives or compensation were offered for participation. The study was registered with the regional ethics committee prior to commencing data collection (inquiry 281/2017) and all participants provided informed consent. Data collection preceded formalized teaching on sexual assault. The rape myth acceptance scale was administered through an online link, as part of a larger web-based survey assessing knowledge and attitudes towards rape. The survey was completed individually in a classroom setting, via computer, tablet or mobile phone. Following data collection, the participants were debriefed regarding the aims of the study and were given the opportunity to ask questions and reflect on their survey responses as a starting point for their subsequent teaching on sexual assault.

Analytic Strategy

We adopt a three-stage analytic approach. In order to address our first study aim, we first derive and test the factor structure of the IRMA-DK scale in a split sample of police recruits (samples 1A and B). Second, in order to address our second aim and explore the robustness of the scale validated in stage 1, we test the IRMA-DK structure and psychometric properties in an independent sample of medical students (sample 2). Finally, in order to address the third study aim exploring potential group differences in rape myth acceptance for these two

occupational groups, we conduct a series of between-group comparisons, controlling for gender. Details of each analysis and their corresponding results are presented below.

RESULTS

Stage 1. Deriving And Testing The IRMA-DK Scale In The Police Trainee Samples

The phase 1 validation of the IRMA-DK consists of two steps. In the first step, we carry out exploratory factor analyses (EFA) on sample 1A, in order to establish factor loadings for McMahon and Farmer's (2011) original 22 IRMA items. Based on previous validations, we expect that not all original items will be adequately valid and reliable indicators for the RMA sub-dimensions they were initially designed to measure. The EFA allows us to investigate this empirically and identify a final set of items for the Danish validation. Next, using structural equation modelling, we run a confirmatory factor analysis (CFA) on sample 1B, in order to test the hypothesized scale structure developed in step 1. Randomly partitioning the police sample in this way allows us to perform EFA on sample 1A without it affecting the validity of the CFA hypothesis tests in sample 1B. The EFA and CFA were run in the Stata 16 software (StataCorp, 2019) using the "factor" and "SEM" packages respectively. Due to violations of univariate and multivariate normality assumptions, we employ Principal Factor Extraction for the EFA and Robust ML (MLM) for the CFA, both of which are recommended for use with non-normal distributions (Brown, 2015; Fabrigar & Wegener, 2012).[3]

Exploratory Analyses

Descriptive statistics for the initial pool of 22 items are shown in Table 1, grouped according to the hypothesized structure of McMahon and Farmer's (2011) updated IRMA scale.

Table 1 about here

Exploratory factor analysis of the initial 22-item pool (principal factors; oblique-oblim rotation) yielded factor loadings consistent with the four dimensions "She asked for it" (SA),

"She lied" (SL), "Not really rape" (NRR) and "He didn't mean to" (HDM) originally identified by McMahon and Farmer (2011) (see Appendix B)[4]. An examination of the individual factor loadings for each item indicated that most had a conventionally strong (>.55) or acceptable loading (>.45) on their designated factor (Comrey & Lee, 1992), indicating sufficient convergent validity. However, seven items (SA4, SA5, SA6, HDM2, HDM3, NRR5 and SL1) fell below the .45 threshold and had uniqueness estimates above .70, indicating that a rather large share of their variation could not be accounted for by any of the factors. These items were thus dropped from the measurement model. In order to increase discriminant validity, one additional item (NRR3) with a factor loading of .46 and a secondary cross-loading of .26 was also removed.

A second EFA on the remaining 14 items (identified with stars in Table 1) indicated an improvement to the four-factor model, with 10 strong and four acceptable item loadings, the smallest being .48 (see Appendix C). On the basis of these results, the 14-item four-factor model was selected as the starting point for subsequent confirmatory analyses of the IRMA-DK scale.[5]

Confirmatory Analyses

Table 2 reports the estimates from a Robust ML (MLM) confirmatory factor analysis in the second half sample of police trainees (sample 1B).[6] In order to evaluate model fit, we examined the inferential goodness-of-fit statistic χ^2 and a range of descriptive fit indices. Following suggested guidelines (Brown, 2015; Gallagher & Brown, 2013; Hu & Bentler, 1999) we adopt the rule of thumb that acceptable model fit is indicated by a comparative fit index (CFI) > .90 and root mean square error approximation (RMSEA) < .10, whereas a good model fit is indicated with cutoffs of CFI > .95, RMSEA < .06 and standardized root mean square residual (SRMR) < .08. Our estimated fit statistics indicate an acceptable-to-good model fit and that model fit cannot be rejected at an α = .05 confidence level ($SB\chi^2$[df = 71]

= 89.44, p = .069; RMSEA [90% CI] = .051 [.015, .076]; CFI = .937; SRMR = .066). Furthermore, all items load significantly onto their expected factor ($p < .05$) and, with the exception of a single item with a standardized factor loading of .235 (HDM6), all factor loadings are satisfactory (.402-.912). Overall, this provides support for convergent validity, with the specific caveat that item HDM6 might not be an ideal indicator for its sub-dimension. The CFA estimations reported in Table 2 also support discriminant validity, yielding inter-factor correlations ranging from .131 to .760, all of which fall well below the traditional threshold of .85 as an indicator of poor discriminant validity (Brown, 2015). Additionally, none of these correlations have confidence intervals that include 1. Finally, with respect to internal consistency, a Cronbach's alpha value of .76 for the overall RMA index suggests that the scale is a reliable measure of rape myth acceptance, although the internal consistencies of the subscales (ranging between .59 and .71) indicate possible room for improvement.

Table 2 about here

To further assess the suitability of the four-factor model, we also ran supplementary analyses comparing the fit indices for this model against those of two alternative specifications: a one-factor model where all items load from the same underlying dimension, and a three-factor model in which the "She asked for it" and "Not really rape" dimensions are collapsed (due to their relatively high inter-factor correlation). For both of the competing models the $SB\chi^2$-test rejected model fit at the .05 confidence level, and both alternatives produced inferior fit indices as compared to the chosen four-factor model (see Appendix D).

Stage 2: Confirmation Of The IRMA-DK Factor Structure In The Medical Student Sample

In order to test whether the IRMA-DK scale structure developed using the police sample could be confirmed in a different occupational trainee group, a final confirmatory factor

analysis was performed using the medical student sample (sample 2). As shown in Table 3, both inferential and descriptive indices again indicate an acceptable-to-good model fit ($SB\chi^2$[df = 71] = 87.29, p = .092; RMSEA [90% CI] = .064 [.035, .090]; CFI = .933; SRMR = .065). In terms of convergent validity, the four factor model performs even better in this sample: all items load significantly onto their factor ($p < .05$) with standardized factor loadings ranging between .446 and .904, indicating systematic convergent validity across all items and sub-dimensions. Discriminant validity is also supported, with all inter-factor correlations falling within standard thresholds and no confidence intervals include 1. Internal reliability is also generally acceptable, and slightly better than in sample 1B, with subscale alpha values of .70 or above for all but one subscale ("Not really rape" α = .52), and an overall alpha of .83 indicating good internal reliability for the index.

Table 3 about here

Taken together, the Stage 1 and 2 validation results outlined above suggest that the proposed 14-item IRMA-DK scale provides a valid preliminary measure of rape myth acceptance for both police trainees and medical students. That said, while the CFA on the medical student sample generally indicated solid convergent and discriminant validity, results from the police trainee sample suggest that there is room to improve the internal reliability of some subscales, and that the item "if a guy is drunk, he might rape someone unintentionally" may be a poor indicator of the "He Didn't Mean to" dimension.

Stage 3: Between-Group Differences In Rape Myth Acceptance

With a view to addressing our final study aim, in the third and last stage of the analysis, the 14-item validated scale was used to explore endorsement and between-group differences in rape myth acceptance among police trainees and medical students. Mean differences in total and subscale scores are investigated using independent samples *t* tests with Bonferroni

corrected *p* values run in *IBM SPSS Statistics* software version 25 (IBM Corporation, 2017). Due to previously established gender differences in rape myth acceptance (Ryan 2019) and considerable variation in the gender breakdown of our two occupational groups, any significant group differences are also explored using ordinary least squares (OLS) regression.

Descriptive analyses of total IRMA-DK scores showed relatively low levels of RMA among both police trainees (M = 2.17, SD = .41) and medical students (M = 1.87, SD = .48).[7] Although the average RMA score for the police trainees was significantly higher than that of the medical students (t (187,467) = 5.761, $p < .001$, $d = .67$), both groups generally disagreed with the included rape myths, with average total scores falling well below three on the 5-point scale. As illustrated in Figure 1, average scores for both groups also fell on the "disagree" side of the scale for all four subscales, with the lowest scores observed for the "She asked for it" dimension followed closely by "It wasn't really rape". Significant differences between the educational groups were nonetheless observed for two of the four subscales; namely, the "She asked for it" (t (258,540) = 4.003, $p < .001$, $d = .44$) and "She lied" (t (176,075) = 7.418, $p < .001$, $d = .87$) subscales. In line with previous studies (Sleath & Bull, 2015; Venema, 2018), myths relating to victim credibility, as captured by the subscale "She lied", seem to be especially relevant for the police trainees.

Figure 1 about here

Looking at gender differences within the two groups, we unexpectedly observe no significant differences in average rape myth acceptance for male and female police trainees (male M = 2.18, SD = .394 vs. female M = 2.13, SD = .436, t (252) = -.729, p = .467, d = .11), or medical students (male M = 1.94, SD = .467, female M = 1.84, SD = .488, t (112) = -1.081, p = .282, d = .22). Although this finding is contrary to previously established gender differences in RMA, it might be in line with longstanding theories about occupational

socialization processes that can act to eliminate or reduce gender differences (Gomez-Mejia, 1983). In order to explore this further, a hierarchical linear regression analysis was conducted, with gender as a predictor of RMA in the first step, and professional group added in the second step. The results from this analysis are presented in Table 4, and show that gender was a significant predictor of total IRMA-DK score in the first model, with men scoring higher than women. In model 2, professional group, but no longer gender, was a significant predictor, with medical students showing significantly lower RMA than police trainees when controlling for gender. This indicates that the previously established differences between the occupational groups were not due to differences in their gender distributions. Further regression analyses on the SA and SL subscales showed that all significant differences between medical students and police trainees persisted when controlling for the effects of gender. This suggests that occupational group may be a stronger predictor of RMA than participant gender.

Table 4 about here

DISCUSSION

Improved international understanding of the nature and scope of rape myth acceptance among medical and criminal justice actors requires psychometrically sound local measures. Our results suggest that the 14-item IRMA-DK scale provides a valid and reliable measure of rape myth acceptance among Danish police trainees and medical students. The four-factor measurement structure derived and tested in the police sample demonstrated acceptable-to-good model fit, satisfactory convergent and discriminant validity, and good internal consistency, albeit with possible room for improvement on some subscales. These findings were confirmed in an independent sample of medical students, where the measure demonstrated similar and even slightly improved psychometric properties.

The factor loadings of the retained IRMA-DK items are similar to those reported by McMahon and Farmer (2011), although the second-order factor of "He didn't mean to – intoxication" could not be established in this sample. Other recent validation studies have similarly failed to identify this second-order factor (Bendixen & Kennair, 2017; Fakunmoju et al., 2018; Xue et al., 2016), indicating that it could be culturally or cohort-specific. Eight items from the original 22-item IRMA were removed during the validation process. These exclusions might point to outdated rape myths, and highlight the dynamic nature of these beliefs, as well as the need to update RMA measures over time, especially in the post #MeToo era. While a comprehensive comparison of the final item structure of other translated IRMA scales is beyond the scope of this paper, it is worth noting that while previous validations have shown varying results regarding item composition (Bendixen & Kennair, 2017; Fakunmoju et al., 2018; Trottier et al., 2020), they generally share similar factor structures and good psychometric properties. Thus, while the individual versions may not be exactly equivalent, nor the results they produce directly comparable, they all contribute to the accumulation of knowledge about rape myth acceptance as a universal concept manifested in diverse contexts.

In addition to contributing to a growing international literature on the *measurement* of rape myth acceptance, the findings presented here also provide important new insights into the *extent* of RMA in two Danish trainee groups likely to have contact with rape victims. Consistent with previous research, both groups showed low average levels of RMA as measured by the IRMA-DK, thus generally disagreeing with the included myths (Milone et al., 2010; Sleath & Bull, 2017). Even so, a number of group differences were observed. Compared to medical students, the police trainees scored significantly higher on total IRMA-DK, and on the two subscales "She asked for it" and "She lied", differences which persisted when controlling for gender. The between-group differences observed here might reflect

underlying variations in the attitudinal profiles of individuals with different occupational preferences (those drawn to law enforcement vs. medicine) (Lippa, 2010). However, these differences (as well as the observed within-group gender similarities) could also be an expression of early occupational socialization (Gomez-Mejia, 1983). While this cannot be determined in the current study, these findings highlight the need to consider the potential role of such processes as they relate to rape myth acceptance in different trainee and professional groups.

With respect to the specific patterns of RMA observed in each group, police trainees scored highest on the rape myths related to victim credibility, captured by the "She lied" subscale, in accordance with previous research (Jordan, 2004; Page, 2010; Sleath & Bull, 2015; Venema, 2018). While it can be argued that lie detection is an inherent part of police work (Docan-Morgan, 2007), creating special attention to potentially false statements, such results have also been interpreted as evidence of a general culture of skepticism in the treatment of rape victims within the criminal justice system (Jordan, 2004; Sleath & Bull, 2015). Even though our police trainees do not endorse rape myths at a high level, special attention to myths expressing skepticism is warranted, especially in light of the previously mentioned report from the Danish police, showing that alarming numbers of rape complainants reported feeling that their reports were not taken seriously (Rigspolitiet, 2020).

Contrary to previous research (Sleath & Bull, 2015; Venema, 2018), both the police trainees and medical students reported lowest acceptance of the subscale "She asked for it", which could either indicate that these myths are not prevalent in the Danish context, or that widespread attention in the media and general discussions about rape, has rendered them especially prone to social desirability bias. As it was not possible to control for social desirability bias in this study, we cannot exclude the possibility that the low rates of agreement with some of the rape myths explored here could reflect socially desirable

reporting. However, given that previous IRMA validations have shown that social desirability does not appear to predict rape stereotypes or impact the predictive value of RMA, this may not be a serious concern (Bendixen & Kennair, 2017). Future investigations may nonetheless benefit from the development of more implicit attitude measurements and the comparison of findings generated using different measurement approaches (Ryan, 2019).

LIMITATIONS

While this study provides the most detailed information on Danish rape myth acceptance in these professional groups to date, a number of limitations must also be recognized. Most notably, the cross-sectional nature of the research did not allow for examination of the test-retest reliability of the IRMA-DK scale for our samples, nor its predictive validity. Further, the confines of the RCT in which this validation study was embedded prevented us from exploring additional predictors of RMA and group differences including, for example benevolent and hostile sexism, adversarial sexual beliefs or ethnicity. This unfortunately excluded the possibility of exploring e.g., convergent validity with these constructs, which should be a priority for future work aimed at further validating this measure.

Practical constraints at the educational institutions participating in the study also required different sampling procedures for the two occupational groups, which may have produced a sampling bias among the medical students, such that those with a particular interest in the topic and potentially more positive attitudes toward victims might have been more likely to attend the data collection sessions, as compared to both non-participating medical students and the police sample, who instead participated as part of their standard teaching activities. These potential selection issues should also be addressed in future studies using the IRMA-DK.

Another limitation concerns the trainee samples used. While this validation has produced a measure suitable for use among future professionals (a highly relevant group for

forward-looking efforts to improve rape victims' contact with the system via education), the generalizability of the validated scale must still be demonstrated. The current study provides a first step towards developing a solid Danish measure of rape myths, but more work is needed. For example, future studies should endeavor to validate the scale in a more representative community sample. The generally low levels of RMA observed in both of the occupational groups explored here may not mirror patterns within a general community sample. Furthermore, future studies should test the scale structure among other professional trainee groups and especially among more senior and specialized medical and criminal justice professionals. This may be particularly relevant, given that occupational group predicted RMA in the current study.

IMPLICATIONS

Despite its limitations, the current study adds valuable knowledge to the growing body of literature indicating that cultural and linguistic adaptations of RMA measures are possible and valuable. It further highlights that while particular rape myths might be culturally or professionally specific and dynamic, the overall concept and dimensionality of rape myths seems to extend beyond cultures and languages. In the Danish context, this study provides a preliminary psychometric validation supporting the IRMA-DK as a valid and reliable measure of modern rape myth acceptance for the professional groups explored. Furthermore, it is the first to map RMA in Danish trainee samples who will likely go on to interact with rape victims and shape their experiences with the medical and criminal justice systems. These findings offer crucial empirical evidence to nuance public debate regarding rape myths within the Danish criminal justice and medical systems, and the IRMA-DK provides a concrete tool that can be used to evaluate applied intervention efforts with these groups in the future. While the generally low levels of RMA identified in this study is a comforting finding, the results still highlight the need for attention to specific myths and point to potential focus areas

that can usefully be targeted for education and intervention. Our results also hint at potential differences in occupational culture and the importance of tailoring early training to address the specific stereotypical views of different professional groups. The hope is that this work will inspire future research aimed at confirming the validity of IRMA-DK in general community samples and additional occupational groups in Denmark, at linking these attitudes to professional conduct and, ultimately, to informing intervention efforts aimed at improving rape victims' meeting with the system.

NOTES

[1]Although the revised IRMA scale captures more subtle rape myths than previous measures, it is far from comprehensive. Myths about male victims are lacking, as are myths about victims' post assault behaviour (e.g. victim emotional reaction, delayed reporting, habitual behavior etc.). These shortcomings are beyond the scope of this paper, but should be addressed in future attempts to develop even more comprehensive measures of contemporary rape myths.

[2]Respondents reporting a non-binary gender identity were included in the validation of the scale, but excluded from the subsequent comparisons due to anonymity and power concerns.

[3]MLM yields standard errors and a chi-squared statistic (the Satorra-Bentler scaled χ^2-statistic, denoted $SB\chi^2$) that are robust to non-normality (Satorra & Bentler, 1994). To address potential concerns that a 5-point scale might not satisfy the assumption that items are interval scaled, we repeated the CFA using Diagonally Weighted Least Squares estimation (DWLS) which allows ordinal item distributions (Li, 2016; Yang-Wallentin, Jöreskog, & Luo, 2010). These robustness analyses yielded substantively equivalent results in all respects, increasing confidence in our reported analyses.

[4]As noted earlier, McMahon & Farmer (2011) also identified a second order "He didn't mean to" (intoxication) dimension. In our case, extracting more than four factors in the EFA did not indicate a separate intoxication dimension.

[5]Two items have a uniqueness above 0.70. This might reduce the measurement reliability of the aggregated scale(s).

[6]The model was estimated with the following constraints: (1) variation in the 14 IRMA-DK items could be explained by exactly four factors, (2) each item was only allowed to have a non-zero loading on the factor which it was designed to measure, (3) the four factors were allowed to be correlated, and (4) error terms were not allowed to be correlated.

[7]These results are based on the pooled responses for all police trainees.

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TABLES

Table 1: *Univariate Item Statistics for the Initial Pool of McMahon and Farmer's (2011) 22 IRMA Items (Original English).*

Dimensions and items		Police trainees Mean (SD)	Medical students Mean (SD)	Pooled sample Mean (SD)
Susbcale: She asked for it (SA)				
SA1*	If a girl is raped while she is drunk, she is at least somewhat responsible for letting things get out of hand.	1.40 (0.69)	1.28 (0.65)	1.37 (0.67)
SA2*	When girls go to parties wearing slutty clothes, they are asking for trouble.	1.47 (0.72)	1.19 (0.55)	1.38 (0.68)
SA3*	If a girl goes to a room alone with a guy at a party, it is her own fault if she is raped.	1.42 (0.62)	1.19 (0.42)	1.35 (0.57)
SA4	If a girl acts like a slut, eventually she is going to get into trouble.	2.56 (1.00)	1.87 (0.93)	2.35 (1.03)
SA5	When girls get raped, it's often because the way they said "no" was unclear.	2.20 (0.80)	1.74 (0.82)	2.05 (0.84)
SA6	If a girl initiates kissing or hooking up, she should not be surprised if a guy assumes she wants to have sex.	3.03 (1.07)	2.52 (1.15)	2.87 (1.12)
Susbcale: He didn't mean to (HDM)				
HDM1*	When guys rape, it is usually because of their strong desire for sex.	2.70 (1.07)	2.40 (1.11)	2.61 (1.09)
HDM2	If both people are drunk, it can't be rape	1.62 (0.80)	1.42 (0.62)	1.56 (0.76)
HDM3	It shouldn't be considered rape if a guy is drunk and didn't realize what he was doing.	1.39 (0.65)	1.29 (0.49)	1.36 (0.61)
HDM4*	Guys don't usually intend to force sex on a girl, but sometimes they get too sexually carried away.	2.60 (0.94)	2.18 (0.92)	2.47 (0.95)
HDM5*	Rape happens when a guy's sex drive goes out of control.	2.70 (1.01)	2.44 (1.09)	2.62 (1.04)
HDM6*	If a guy is drunk, he might rape someone unintentionally.	2.05 (1.00)	2.28 (1.04)	2.12 (1.02)
Susbcale: Not really rape (NRR)				
NRR1*	If a girl doesn't physically fight back, you can't really say it was rape.	1.45 (0.66)	1.32 (0.67)	1.41 (0.67)
NRR2*	A rape probably doesn't happen if a girl doesn't have any bruises or marks.	1.50 (0.65)	1.52 (0.69)	1.51 (0.66)
NRR3	If the accused "rapist" doesn't have a weapon, you really can't call it rape.	1.13 (0.44)	1.04 (0.19)	1.10 (0.38)
NRR4*	If a girl doesn't physically resist sex—even if protesting verbally—it can't be considered rape.	1.55 (0.83)	1.31 (0.71)	1.47 (0.80)
NRR5	If a girl doesn't say "no" she can't claim rape.	2.13 (1.10)	2.09 (1.05)	2.12 (1.08)
Subscale: She lied (SL)				
SL1	Girls who are caught cheating on their boyfriends sometimes claim it was rape.	3.56 (0.86)	2.60 (1.00)	3.26 (1.01)
SL2*	Rape accusations are often used as a way of getting back at guys.	3.15 (0.84)	2.36 (0.93)	2.91 (0.94)
SL3*	A lot of times, girls who say they were raped often led the guy on and then had regrets.	2.69 (0.82)	2.23 (0.89)	2.55 (0.87)
SL4*	A lot of times, girls who claim they were raped have emotional problems.	2.88 (0.81)	2.26 (1.04)	2.69 (0.93)
SL5*	A lot of times, girls who say they were raped agreed to have sex and then regret it.	2.85 (0.86)	2.28 (0.93)	2.68 (0.92)

Note: Descriptive statistics based on police trainee sample 1 (n = 255), medical student sample 2 (n = 114) and the total pooled sample (N = 369). Starred (*) items retained in the validated IRMA-DK.

Table 2: *Estimates From Confirmatory Factor Analysis of the Final Four-Factor 14-Item IRMA-DK Model in Police Trainee Sample 1B.*

Dimensions and items		**Standardized factor loading**	**Cronbach's alpha**
She asked for it (SA)			0.64
	SA1	0.556	
	SA2	0.534	
	SA3	0.729	
He didn't mean to (HDM)			0.64
	HDM1	0.747	
	HDM4	0.564	
	HDM5	0.683	
	HDM6	0.235	
Not really rape (NRR)			0.59
	NRR1	0.770	
	NRR2	0.402	
	NRR4	0.602	
She lied (SL)			0.72
	SL2	0.513	
	SL3	0.688	
	SL4	0.428	
	SL5	0.912	

Inter-factor correlations	1.	2.	3.
1. She asked for it			
2. He didn't mean to	0.131 (ns)		
3. Not really rape	0.760	0.329	
4. She lied	0.442	0.438	0.411

Note: Robust ML (MLM) Confirmatory Factor Analysis of the proposed four-factor IRMA-DK model. n = 128. Fit statistics: $SB\chi^2$[df = 71] = 89.44, p = .069; RMSEA [90% CI] = .051 [.015, .076]; CFI = .937; SRMR = .066. (ns) = not significant at the α = .05 level. All other factor loadings and inter-factor correlations are significant at $p < .05$. The $SB\chi^2$ hypothesis test indicates that adequate fit of the four-factor model cannot be rejected at the α = .05 level.

Table 3: *Validation Sample: Estimates from Confirmatory Factor Analysis of the Final Four-Factor 14-Item IRMA-DK Model in Medical Student Sample 2.*

Dimensions and items		**Standardized factor loading**	**Cronbach's alpha**
She asked for it			0.70
	SA1	0.798	
	SA2	0.448	
	SA3	0.811	
He didn't mean to			0.73
	HDM1	0.578	
	HDM4	0.664	
	HDM5	0.715	
	HDM6	0.591	
Not really rape			0.52
	NRR1	0.592	
	NRR2	0.519	
	NRR4	0.446	
She lied			0.84
	SL2	0.625	
	SL3	0.904	
	SL4	0.704	
	SL5	0.824	
Inter-factor correlations	1.	2.	3.
1. She asked for it			
2. He didn't mean to	0.269		
3. Not really rape	0.698	0.564	
4. She lied	0.376	0.538	0.707

Note: Robust ML (MLM) Confirmatory Factor Analysis of IRMA-DK using the validation sample. n = 114. Fit statistics: $SB\chi^2$[df = 71] = 87.29, p = .092; RMSEA [90% CI] = .064 [.035, .090]; CFI = .933; SRMR = .065. All factor loadings and inter-factor correlations are significant at p<.01. The $SB\chi^2$ hypothesis test indicates that adequate fit of the four-factor model cannot be rejected at the α = .05 level.

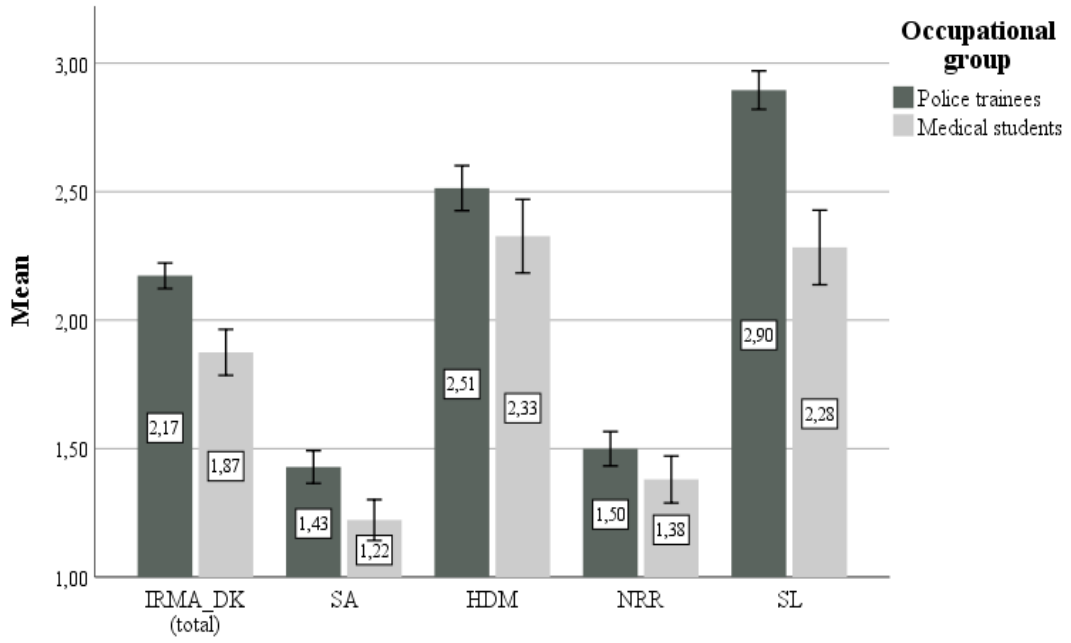
Table 4. *Hierarchical Regression Analysis Predicting Total IRMA-DK Score.*

		***B* (95% BCI)**	**SE B**	**β**	***p***
Step 1					
	Constant	1.96 (1.87, 2.05)	0.04		$p < .001$
	Gender	0.18 (0.08, 0.29)	0.05	.19	$p < .001$
Step 2					
	Constant	2.12 (2.02, 2.22)	0.05		$p < .001$
	Gender	0.07 (-0.04, 0.17)	0.05	.07	$p = .198$
	Occupational group	-0.26 (-0.38, -0.15)	0.06	-.27	$p < .001$

Note: N = 369; R^2 = .04 for Step 1; R^2 = .10 for Step 2. Bias corrected and accelerated confidence intervals and standard errors based on 1000 bootstrap samples.

FIGURES

Figure 1. *Total and Subscale IRMA-DK Scores for Police Trainees and Medical Students.*



Note: Full police trainee sample n = 255. Medical student sample n = 114. Error bars indicate 95% confidence intervals.

APPENDICES

Appendix A: Translated IRMA Items

22 Original English (OE), Danish (D) and Back Translated (BT) English Items From McMahon and Farmer's (2011) Revised IRMA

Dimensions and items		
Subscale: She Asked for it (SA)		
SA1*	OE	If a girl is raped while she is drunk, she is at least somewhat responsible for letting things get out of hand.
	D	Hvis en kvinde bliver voldtaget, mens hun er fuld, er hun i nogen grad selv ansvarlig.
	BT	If a woman is raped while being drunk, she is partly responsible.
SA2*	OE	When girls go to parties wearing slutty clothes, they are asking for trouble.
	D	Når kvinder går til fest iført udfordrende tøj, beder de selv om problemer.
	BT	When women go to parties dressed provocatively, they are asking for trouble.
SA3*	OE	If a girl goes to a room alone with a guy at a party, it is her own fault if she is raped.
	D	Hvis en kvinde er til fest, og går alene med en mand en andet sted hen, er det hendes egen skyld, hvis hun bliver voldtaget.
	BT	If a woman is at a party and goes somewhere alone with a man, it is her own fault if she is raped.
SA4	OE	If a girl acts like a slut, eventually she is going to get into trouble.
	D	Hvis en kvinde opfører sig billigt, vil hun med tiden havne i problemer.
	BT	If a woman behaves trashy, she will eventually get into trouble.
SA5	OE	When girls get raped, it's often because the way they said "no" was unclear.
	D	Når kvinder bliver voldtaget, er det ofte fordi deres "nej" var tvetydigt.
	BT	When women are raped, it is often because their "no" was ambiguous.
SA6	OE	If a girl initiates kissing or hooking up, she should not be surprised if a guy assumes she wants to have sex.
	D	Hvis en kvinde tager initiativ til at kysse eller hooke up, bør hun ikke blive overrasket, hvis manden antager, at hun vil have sex.
	BT	If a woman takes initiative to kiss or hook up, she should not be surprised if the man assumes she wants to have sex.
Subscale: He didn't mean to (HDM)		
HDM1*	OE	When guys rape, it is usually because of their strong desire for sex.
	D	Når mænd begår voldtægt, skyldes det ofte deres stærk trang til sex.
	BT	When men commit rape, it is often because of their strong sexual urges.
HDM2	OE	If both people are drunk, it can't be rape
	D	Hvis begge parter er fulde, kan det ikke betragtes som voldtægt.
	BT	If both parties involved are drunk, it cannot be considered rape.
HDM3	OE	It shouldn't be considered rape if a guy is drunk and didn't realize what he was doing.

	D	Hvis en mand er fuld og ikke er klar over, hvad han gør, bør det ikke betragtes som voldtægt.
	BT	If a man is drunk and not aware of his actions, it should not be considered rape.
HDM4*	OE	Guys don't usually intend to force sex on a girl, but sometimes they get too sexually carried away.
	D	Det er som regel ikke mænds intention at tvinge kvinder til sex, men nogle gange lader de sig rive med af den seksuelle lyst.
	BT	Men generally do not intent to force women to have sex, but sometimes they get carried away by their sexual urges.
HDM5*	OE	Rape happens when a guy's sex drive goes out of control.
	D	Voldtægt finder sted, når en mands seksuelle lyst kommer ud af kontrol.
	BT	Rape occurs when a man's sexual urges get out of control.
HDM6*	OE	If a guy is drunk, he might rape someone unintentionally.
	D	Hvis en mand er fuld, kan det hænde, at han voldtager nogen uden at have intention om det.
	BT	If a man is drunk, he might rape someone without having the intention of doing so.
Subscale: Not really rape (NRR)		
NRR1*	OE	If a girl doesn't physically fight back, you can't really say it was rape.
	D	Hvis en kvinde ikke kæmper fysisk imod, kan man egentlig ikke kalde det for voldtægt.
	BT	If a woman does not physically fight back, it cannot be called rape
NRR2*	OE	A rape probably doesn't happen if a girl doesn't have any bruises or marks.
	D	Hvis en kvinde ikke har blå mærker eller rifter, er hun sandsynligvis ikke blevet voldtaget.
	BT	If a woman does not have bruises or scratches, she has probably not been raped.
NRR3	OE	If the accused "rapist" doesn't have a weapon, you really can't call it rape.
	D	Hvis den anklagede "voldtægtsmand" ikke har et våben, kan man egentlig ikke kalde det for voldtægt.
	BT	If the accused "rapist" does not carry a weapon, it cannot be called rape.
NRR4*	OE	If a girl doesn't physically resist sex—even if protesting verbally—it can't be considered rape.
	D	Det kan ikke betragtes som voldtægt, hvis en kvinde ikke fysisk modsætter sig sex, heller ikke selvom hun protesterer verbalt.
	BT	It cannot be considered rape if a woman does not physically resist sex, not even if she protests verbally.
NRR5	OE	If a girl doesn't say "no" she can't claim rape.
	D	Hvis en kvinde ikke siger "nej", kan hun ikke anklage manden for voldtægt.
	BT	If a woman does not say " no", she cannot accuse the man of rape.
Subscale: She lied (SL)		
SL1	OE	Girls who are caught cheating on their boyfriends sometimes claim it was rape.
	D	Når kvinder bliver opdaget i at være utro, påstår de nogle gange, at de blev voldtaget.
	BT	When women get caught cheating, they sometimes claim that they were raped.

SL2*	OE	Rape accusations are often used as a way of getting back at guys.
	D	Voldtægtsbeskyldninger bruges ofte som hævn mod mænd.
	BT	Rape accusations are often used as retaliation against men.
SL3*	OE	A lot of times, girls who say they were raped often led the guy on and then had regrets.
	D	Ofte har kvinder, som siger de er blevet voldtaget, selv lagt op til manden og derefter fortrudt det.
	BT	Often, women who claim to have been raped, have made a pass at the man and then regretted it.
SL4*	OE	A lot of times, girls who claim they were raped have emotional problems.
	D	Ofte er det kvinder med følelsesmæssige problemer, som påstår de er blevet voldtaget.
	BT	It is often women with emotional problems who claim that they have been raped
SL5*	OE	A lot of times, girls who say they were raped agreed to have sex and then regret it.
	D	Ofte har kvinder, som siger de er blevet voldtaget, indvilliget i at have sex og derefter fortrudt det.
	BT	Often, women who claim to have been raped have consented to having sex and then regretted it.

Source. Payne, Lonsway, and Fitzgerald (1999) and McMahon and Farmer (2011).
Note: No major cultural adaptations were made during the translation process, but the words "girl" and "guy" were changed to "woman" and "man" throughout the scale, as the translators felt that the Danish word for girl usually refers to a young child, and the word for guy has a slightly positive connotation in Danish.
Starred (*) items retained in the validated IRMA-DK scale.

Appendix B: Exploratory Factor Analysis Using Sample 1A on Initial 22 items

Loadings from an Exploratory Factor Analysis (Principal Factors) of the Initial 22 McMahon and Farmer (2011) IRMA Items in Police Trainee Sample 1A

Item	Factor1	Factor2	Factor3	Factor4	Uniqueness
She asked for it					
SA1*	0.537	0.088	0.125	-0.047	0.603
SA2*	0.569	-0.145	0.140	0.091	0.622
SA3*	0.613	0.133	0.012	-0.027	0.545
SA4	0.445	0.171	-0.086	0.012	0.743
SA5	0.067	0.378	0.136	0.188	0.712
SA6	0.366	0.110	-0.139	0.112	0.820
He didn't mean to					
HDM1*	0.189	-0.051	-0.045	0.471	0.726
HDM2	0.306	0.073	0.209	0.036	0.775
HDM3	0.242	-0.137	0.351	0.139	0.755
HDM4*	-0.093	0.086	-0.064	0.586	0.644
HDM5*	-0.002	-0.034	0.065	0.699	0.514
HDM6*	0.054	0.145	0.037	0.547	0.623
Not really rape					
NRR1*	0.146	-0.041	0.608	0.087	0.542
NRR2*	0.153	0.131	0.451	-0.180	0.646
NRR3	-0.031	0.108	0.459	-0.257	0.711
NRR4*	-0.038	0.086	0.631	0.063	0.579
NRR5	-0.036	0.340	0.322	0.116	0.711
She lied					
SL1	0.323	0.168	-0.261	0.035	0.841
SL2*	0.103	0.563	-0.120	0.111	0.620
SL3*	0.110	0.581	0.036	0.015	0.582
SL4*	-0.167	0.510	0.007	0.124	0.744
SL5*	0.076	0.641	0.118	-0.088	0.503

Note: For full item wordings, see Table 1. Starred (*) items indicate items retained in the validated IRMA-DK. Table entries are loadings on oblique-oblimin rotated principal factors. Absolute loadings of .25 or stronger are in bold. n = 127.

Appendix C: Exploratory Factor Analysis Using Sample 1A on final 14 items

Loadings From an Exploratory Factor Analysis (Principal Factors) of the Final 14 IRMA-DK Items in police trainee Sample 1A

Item	Factor1	Factor2	Factor3	Factor4	Uniqueness
She asked for it					
SA1	0.587	0.105	0.039	-0.018	0.575
SA2	0.538	-0.142	0.122	0.117	0.642
SA3	0.564	0.151	-0.024	0.014	0.609
He didn't mean to					
HDM1	0.144	-0.054	0.046	0.481	0.727
HDM4	-0.101	0.091	-0.078	0.565	0.663
HDM5	0.007	-0.049	0.077	0.687	0.525
HDM6	0.094	0.160	-0.055	0.553	0.608
Not really rape					
NRR1	0.038	-0.060	0.722	0.064	0.459
NRR2	0.018	0.135	0.536	-0.163	0.641
NRR4	-0.046	0.102	0.571	0.022	0.660
She lied					
SL2	0.015	0.577	-0.016	0.148	0.608
SL3	0.155	0.554	0.057	-0.016	0.582
SL4	-0.183	0.512	0.040	0.119	0.736
SL5	0.158	0.562	0.088	-0.089	0.565

Note: For full item wordings, see started items in Table 1. Table entries are loadings on oblique-oblimin rotated principal factors. Absolute loadings of .25 or stronger are in bold. n = 127.

Appendix D: Fit Statistics of Final IRMA-DK

Fit Statistics for Confirmatory Factor Analyses of Final 14 IRMA-DK Items in Police Recruit Sample 1B.

	SBχ^2	**df**	**RMSEA (90% CI)**	**CFI**	**SRMR**
Sample 1b (N = 128)					
One-factor model	211.217 (*p = .000)*	77	0-125 [0.106 - 0.144]	0.588	0.110
Three-factor model (collapsed SA and NRR)	97.909 (*p* = .033)	74	0.057 [0.027 – 0.081]	0.919	0.069
Four-factor model	89.444 (*p* = .069)	71	0.051 [0.015 – 0.076]	0.937	0.066

Note: Fit statistics from Robust ML (MLM) CFA of measurement models with different dimensional structures. Hypothesis tests in the first column show that adequate fit of the four-factor model can not be rejected at the α =.05 level . n = 128.

BIO STATEMENTS

Marie Skov is a PhD fellow at the Department of Psychology and Behavioral Sciences at Aarhus University in Denmark. Her research interests include sexual assault, rape myths and survivors' encounter with the medical and criminal justice systems, with a special focus on how trauma-informed interventions can alter perceptions among groups of future professionals (medical students and police trainees).

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