

# Development of the Japanese Version of the Rape Excusing Attitudes and Language Scale and Comparison Between Rape Myth Acceptance in Japan and the U.S.

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## Abstract

Rape myth acceptance (RMA) is the acceptance of false beliefs, stereotypes, and statements about rape victims, perpetrators, and the act itself. RMA positively predicts shame felt by victims and negatively predicts reports of sexual victimization. Knowledge about sexual violence changes over time; accordingly, psychometric scales measuring RMA should be updated. Hahnel-Peeters and Goetz developed the Rape Excusing Attitudes and Language (REAL) scale by updating the Illinois RMA Scale—a major instrument used in the United States. However, the REAL scale is not available in Japanese. Therefore, we developed and validated a Japanese version of the REAL

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scale, evaluated RMA in Japanese individuals ( $N = 1,000$ ), and compared the Japanese participants' RMA levels with the mean participant scores from Hahnel-Peeters and Goetz. In collaboration with one of the original authors, the Japanese version was developed through a back-translation process and administered to 1,000 men and women aged between 18 and 65; exploratory and confirmatory factor analyses were conducted on the data collected. The confirmatory factor analysis showed that the Japanese version moderately fitted the 4-factor structure of the original REAL scale. However, a 2-factor form obtained in the exploratory factor analysis best fit the data. Consistent with the original version, the Japanese version showed higher RMA in men than in women. The young generation (18–29 years old) self-reported higher RMA than other generations. Japan's RMA was significantly higher than that of the U.S. sample. The Japanese version of the REAL scale can be used in future studies to assess RMA in Japanese individuals and develop suitable educational programs to reduce RMA.

### **Keywords**

rape myth, rape myth acceptance, sexual victim support, sexual violence, rape

Sexual violence is a major societal problem. In the United States, someone is sexually victimized every 68 s according to the Rape, Abuse, and Incest National Network (RAINN, 2023), the largest anti-sexual violence organization in the United States. However, only an estimated 21.4% of rape victims report the incident to the police (Bureau of Justice Statistics, 2022). The remaining nearly 78.6% do not publicly assert their rights as victims or bring their perpetrators to justice. Reasons why women do not report their sexual victimization include police disbelieving the complainant, belief that the police would not help, shame surrounding the victimization, and not wanting others to know about the assault (Johnson & Lewis, 2023; Jones et al., 2009; Reich et al., 2022). One study suggests that women do not report their assaults due to societal norms and myths surrounding sexual violence (Reich et al., 2022). These fears are not without reason as studies suggest police reports surrounding sexual violence are fraught with rape myths (Dellinger Page, 2010; Gekoski et al., 2024; Murphy & Hine, 2019); these rape myths and stereotypes about “real rape” influence police decisions to prosecute alleged perpetrators (for review see Parratt & Pina, 2017). There is scarce research on rape myth acceptance (RMA) and sexual violence reporting in Japan (Dussich, 2001).

Rape myths influence individuals' decisions to report a sexual offense. Rape myths are "attitudes and beliefs that justify sexual aggression, including rape, by men against women, which are generally false but widely and persistently held" (Burt, 1980). Examples include, "It is usually only women who dress suggestively that are raped," and "If a woman is not injured, she has not been raped by a man." RMA, then, is the endorsement or belief in rape myths. Such RMA typically functions to blame the victim for her rape victimization and free the perpetrator from responsibility for the incident (Burt, 1980; Lonsway & Fitzgerald, 1994). RMA is negatively predictive of self-disclosure of sexual victimization (Rich et al., 2021; Russell & Hand, 2017). This is because people who believe in rape myths are more likely to blame themselves for being victimized or do not realize that the incident was rape (Angelone et al., 2021; Klement et al., 2019; LeMaire et al., 2016). These individuals also do not consult others for fear of victim blaming (Russell & Hand, 2017).

RMA is predictive of many behaviors surrounding sexual violence. For instance, it positively predicts recognition of sexual assault. McMahon and Farmer (2011) found that people with high RMA tend to recognize someone at risk of sexual assault but do not willingly help them. Rich et al. (2021) documented that students who endorse rape myths are more likely to feel shame and anger, blame their friends for victimization, and not support the victim when they report sexual assault. In contrast, Ahrens et al. (2010) found that victims of sexual assault often report their victimization to family, friends, and others close to them before reporting it in an official setting. Adverse reactions from those close to the disclosing victims often lead the victims to not officially report their victimization (Ahrens et al., 2010). Furthermore, studies have shown that higher RMA in men predicts a higher risk of sexual violence against women (Bhagal & Corbett, 2016; Yapp & Quayle, 2018). From these perspectives, educating individuals about sexual violence with the goal of reducing RMA of victims and perpetrators of crimes is necessary. Considering the impact of those who may be counseled on sexual crimes, it is essential to reduce RMA for all, not just for perpetrators and victims.

### *Measuring RMA*

Burt (1980) developed the first scale to measure RMA. However, the scale's measurement was inconsistent (Lonsway & Fitzgerald, 1994). Currently, the most used scale to measure RMA is the Illinois Rape Myths Acceptance Scale (IRMA) consisting of 45 items and 7 factors (Payne et al., 1999): "She asked for it," "It wasn't rape," "He did not mean to," "She wanted it," "She

lied,” “Rape is a trivial event,” and “Rape is a deviant event.” Payne et al. (1999) highlighted that RMA is influenced by time and culture. Accordingly, McMahon and Farmer (2011) updated the IRMA, resulting in a 5-factor structure consisting of “It wasn’t rape,” “He didn’t mean to,” “He didn’t mean to (intoxication items),” “She lied,” and “She asked for it.”

Rape myths evolve as knowledge and education surrounding sexual assault accumulate. For example, comparisons between RMA in 1998 and 2018 showed a significant decrease in self-reported RMA (Byrne et al., 2021). Due to the influence of cultural knowledge and norms on RMA, a decade-old scale may be outdated in its wording, especially for young people, such as high school and college students (McMahon & Farmer, 2011). Time-bound verbiage introduces questions of validity for attitude measurement.

Knowledge and education on sexuality change with time. Public acceptance of homosexuality, premarital pregnancy, and other sexual behaviors and concepts have evolved (Smith et al., 2014; Smith et al., 2018; Yokoyama, 1995). Accordingly, RMA has changed significantly (Beshers & DiVita, 2021; Byrne et al., 2021). This underscores the need for regular updates to the scales measuring RMA.

Hahnel-Peeters and Goetz (2022) argued that some items included in the IRMA are empirically supported statements and are not representative of rape myths. For example, “Girls who are caught cheating on their boyfriends sometimes claim it was rape” (McMahon, 2010; Payne et al., 1999) is supported as a fact by existing literature data. While false reports of sexual violence are very rare, the reasons women provide such false accusations include an alibi for covering a sexual affair (Kanin, 1994; Kelly et al., 2005; Kennedy & Witkowski, 2000; O’Neal et al., 2014). Hahnel-Peeters and Goetz (2022) also argued that “Rape happens when a guy’s sex drive goes out of control” and “If a guy is drunk, he might rape someone unintentionally” are not rape myths but items that seek to understand the motivation for rape. In short, Hahnel-Peeters and Goetz (2022) identified that 10 of the 22 items on the IRMA scale introduce problems of construct validity. They posited that these arguably demonstrable statements measure knowledge of rape rather than RMA. To address the problems of construct validity, they developed the Rape Excusing Attitudes and Language (REAL) scale (Hahnel-Peeters & Goetz, 2022). This scale is highly correlated with the IRMA and demonstrates high validity.

### ***Factors Affecting RMA***

Many studies document that men report higher RMA than women (Angelone et al., 2021; Bagasra et al., 2023; Carroll et al., 2016; Hockett et al., 2016).

Fávero et al. (2022) studied the RMA of Portuguese police officers and found a positive relationship between RMA, officer age, and years of service. They documented a negative relationship between RMA and higher levels of education (Fávero et al., 2022). The association between education level and RMA was also found by Baldwin-White and Elias-Lambert (2016). RMA surveys have been conducted with police officers, criminal justice students, and army officers who work directly with victims of sex crimes (Carroll et al., 2016; Constantinou & Butorac, 2023; Kim & Santiago, 2020). Many studies highlight a relationship between RMA and attending programs in college on preventing sexual violence: students who attended programs on preventing sexual violence have lower RMA (Aronowitz et al., 2012; Baldwin-White & Elias-Lambert, 2016; McMahan, 2010; Reddy et al., 2022).

Cultural differences may affect self-reported levels of RMA. Stephens et al. (2016) used the IRMA scale to investigate differences in RMA among college students in Japan, the United States, and India. The results showed that India had the highest RMA, followed by Japan, and the United States. Women in the United States were most likely to be aware of campus or community organizations aiming to prevent sexual assault. Moreover, Japanese men were the least likely to be aware of such organizations. Japanese people were also less likely than Americans to seek help from family, friends, or the police if they had been sexually assaulted. Indian people were more likely to know about the informal support of community networks rather than the formal support of school organizations. Lambert et al. (2012) insisted on the importance of informing people about sexual assault prevention programs from informal as well as formal networks. Furthermore, RMA was found to be higher in Catholics than in atheists (Barnett et al., 2018; Prina & Schatz-Stevens, 2020). Therefore, different countries, cultures, and religious beliefs have different levels of RMA and need for support, suggesting the need for appropriate prevention programs in different countries. These data highlight the necessity of developing a valid scale measuring RMA in Japan.

The IRMA scale has been translated and verified in other countries, including Korea (Oh & Neville, 2004), China (Xue et al., 2019), France (Trottier et al., 2020), Hungary (Nyúl & Kende, 2023), Italy (Martini et al., 2022), and Poland (Łyś et al., 2023). To the best of our knowledge, no RMA scale has been translated and verified in Japan.

Accordingly, our first objective was to develop a Japanese version of the REAL scale, the most recent validated RMA scale. The second objective was examining the differences in self-reported RMA between Japan and the United States by comparing the respective REAL scores.

## **Method**

### *Study 1*

*Translation Process.* We translated the REAL scale into Japanese and then, back-translated it into English to ensure that the original and Japanese versions corresponded, considering linguistic and cultural differences. Japanese translation was performed by a native Japanese speaker fluent in English, a psychiatrist, and a clinical psychology and social sciences graduate. Additionally, a translation company translated the Japanese version, which was created considering various opinions. We asked another translator who had never seen the original version of the REAL scale to back-translate the Japanese version. The back-translated items were sent to the original author (Hanel-Peeters and Goetz), who suggested modifications to retain the intended meanings of items in the original version. This included adjusting minor nuances, differences in expression, and commenting on any problematic items. After the translation and back-translation process, we asked the original author to confirm the similarity of content between the English and Japanese versions, and this completed version was designated as the Japanese version of the REAL scale. Seven collaborators implemented the completed REAL Japanese version on the Internet to check for problems with Japanese language and screen transitions. This was used as the Japanese version of the REAL scale in this survey. See Appendix for resulting items.

*Study Design.* Five hundred men and 500 women aged between 18 and 65 years and living in Japan participated in our study. They were recruited through the survey implementation company Freeasy. As we aimed to compare results by age group, we set up the survey with equal representation of each age group and recruited participants accordingly—30 men and 30 women in their 18s and 19s, 105 men and 105 women in their 20s and 30s respectively, 100 men and 100 women in their 40s and 50s respectively, and 60 men and 60 women in their 60s to 65s. The personal attributes of the survey respondents were taken from a preexisting database held by the survey company. The only gender options in that database were male and female; therefore, we conducted this survey only with participants identifying as men or women. Before answering the web-based survey, the participants checked a box indicating their informed consent. Only those who provided informed consent could complete the questionnaire.

As the questions involved sexual content and included the possibility of recalling one's own painful experiences, multiple sources of counseling including the author's center, were listed on the web survey form. This study

was approved by the Graduate School of Medicine Ethics Committee at Chiba University (receipt number M10485).

### Measures

**The REAL Scale.** The REAL scale is a self-report questionnaire developed by Hahnel-Peeters and Goetz (2022) consisting of 20 items on a 5-point scale ranging from 0: “*completely disagree*” to 4: “*completely agree*.” The highest score is 80, with higher scores indicating a higher acceptance of rape myths. The scale was originally validated with four sub-scales: “Exaggeration of Harm,” “Confusion of Consent,” “Lack of Defense Against Rape,” and “Lied about the Event.”

**Demographic Information.** Demographic information was extracted from Freeeasy’s participant database. These measures included participant age, participant gender, marital status, and whether or not the participant had child(ren).

**Statistical Analysis.** We used SPSS Amos and SPSS Statistics 29 for statistical analyses (Armonk, NY USA). A confirmatory factor analysis was conducted with the original version of the REAL scale using SPSS Amos; an exploratory factor analysis was performed with SPSS Statistics to examine the reliability and validity. A *t*-test was conducted for the association between gender, marital status, child status, and REAL scores. A two-way analysis of variance (ANOVA) was conducted on the association between generation, gender, and REAL scores.

## Study 2

**Method.** The author of the REAL scale, Hahnel-Peeters, shared the original data collected during the creation and validation of the REAL scale ( $N=437$ ; Hahnel-Peeters & Goetz, 2022). These data are also available on OSF (<https://bit.ly/REALScale>). Both the original and the Japanese scales were based on 20 questions measured on a 5-point scale (0: “*completely disagree*” to 4: “*completely agree*”) leading to a maximum score of 80 on each scale. We compared the results with those obtained in Study 1 using the Japanese version of the REAL scale.

**Statistical Analysis.** SPSS Statistics 29 was used for statistical processing. *T*-tests were conducted on the difference in means of REAL scores.

## Results

### *Study 1*

Data were available in the survey system only for those who completed the questionnaire; therefore, the percentage of those who stopped responding midway could not be determined. A total of 1,000 individuals (50% men;  $n=500$ ) between the ages of 18 and 65 participated. The mean age was 41.27 ( $SD=13.76$ ), 393 (39.3%) were married, and 311 (31.1%) had children.

The Japanese version of the REAL scale displayed high internal reliability (Cronbach's  $\alpha=.94$ ). Validity was indicated by Kaiser-Meyer-Olkin coefficient=0.969, and the result of Bartlett's sphericity test was significant ( $p<.001$ ). Therefore, we corrected for sphericity violations in the ANOVAs discussed below.

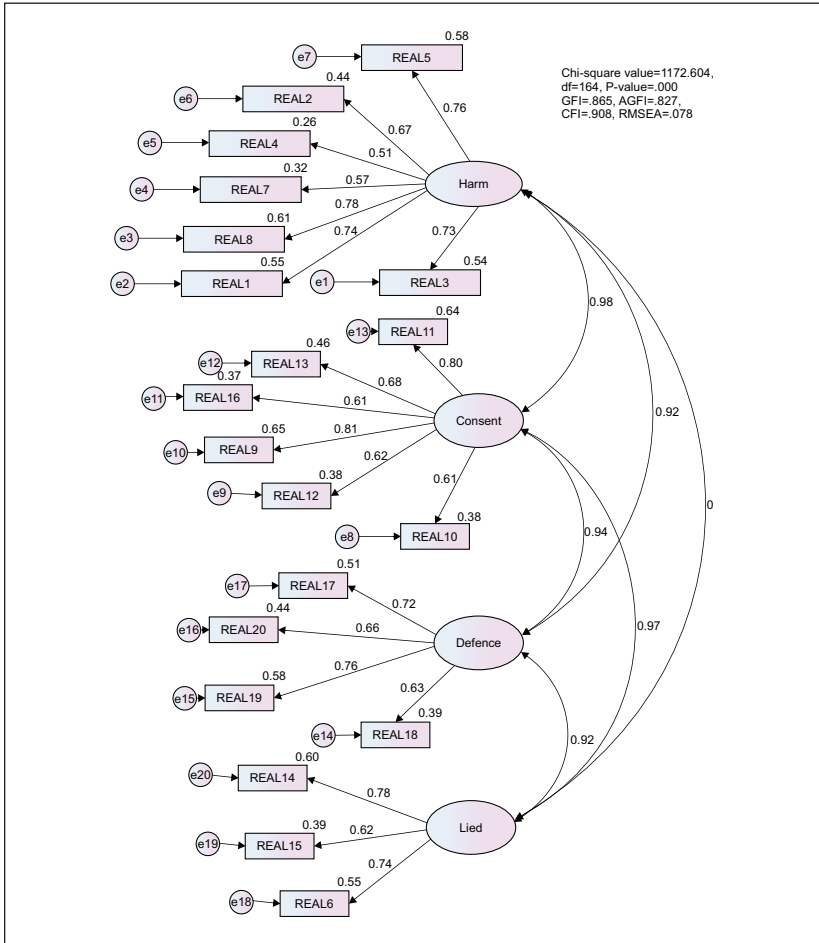
### *Structure of the Japanese Version of the REAL Scale*

A confirmatory factor analysis was conducted assuming a four-factor structure, similar to that of the original version, thereby confirming the factor structure of the Japanese version. The goodness-of-fit indices were: goodness-of-fit (GFI)=0.865, adjusted goodness-of-fit (AGFI)=0.827, root mean square error of approximation (RMSEA)=0.078, and Akaike information criterion (AIC)=1,264.604 (Figure 1).

Although the goodness-of-fit estimates between the original and the Japanese versions were moderate, we conducted an exploratory factor analysis using the maximum likelihood method and promax rotation to understand the unique factor structure of the Japanese version. Two factors were extracted, resulting in a different factor structure in the Japanese version compared to that in the United States version (Table 1). A confirmatory factor analysis was performed with the 2-factor structure obtained in the exploratory factor analysis. The goodness-of-fit estimates were GFI=0.917, AGFI=0.897, RMSEA=0.064, and AIC=748.603.

Next, a confirmatory factor analysis was conducted with an 18-item version in which two items were removed. Items 10 and 15 had factor contribution ratios less than 0.4 and were therefore deleted based on the exploratory factor analysis. The fit estimate results were GFI=0.926, AGFI=0.906, RMSEA=0.064, and AIC=937.116 (Figure 2). Thus, the 2-factor, 18-item Japanese version of the REAL scale showed a higher goodness-of-fit than that of the other two models. We retained this structure for our final Japanese version of the REAL scale.





**Figure 1.** Factor structure of the original version of the REAL scale and results of confirmatory factor analysis.  
REAL: Rape Excusing Attitudes and Language.

The first factor was named “Underestimation of the Event” because it consisted of items related to the perceived underestimation of alleged assaults. These items had themes including “it was not rape” and “rape is not a significant problem.” The second factor was named “Implicit Consent” because it consisted of items that evaluated the act as consensual rather than rape, such as “Consent was provided” and “The woman wanted it too.”

Table 1. Exploratory Factor Analysis of the Japanese Version of the REAL Scale.

No.	Item Text	Factor	
		1	2
1	If she didn't get injured or pregnant, then nothing bad really happened.	0.97	
5	She probably wasn't raped if she doesn't have any injuries (for example, bruises).	0.92	
9	If she didn't scream for help, it wasn't as bad as she claims.	0.80	
8	If a woman gets wet (lubricated) during rape, it makes it consensual because it means she was enjoying it.	0.76	
19	Since she went out alone at night without a self-defense weapon (e.g., pepper spray), she's partially responsible.	0.65	
11	If she doesn't physically resist, she must have thought it wasn't that bad.	0.62	
14	Unless she audibly says "no," she cannot claim that she was raped.	0.60	
2	If a guy takes a woman on a nice date, he deserves to have sex with her.	0.56	
3	Any women claiming they have PTSD (Post traumatic Stress Disorder) from a rape are exaggerating the event.	0.53	
6	When a woman comes out about being raped many years after the alleged incident occurred, she is probably making it up.	0.48	
13	Because it's true that many women have rape fantasies, then some of them kind of want it.	0.46	
10	If a victim of rape doesn't fight back, they must have thought the assault wasn't that bad.	0.39	0.81
12	If a woman goes over to a man's house at night, she is consenting to sexual attention.		0.76
18	If she accepted a ride from a stranger, it's her fault if the driver rapes her.		0.69
4	If a woman enjoys being dominated, it must not have been rape.		0.58
16	If a woman sexually arouses a man and then changes her mind, it's not his fault if he rapes her.		0.55
17	A woman is somewhat responsible for being raped if it happened while she was drunk.		0.55
7	If two individuals are in a sexual relationship, it cannot be rape.		0.44
20	If a woman goes to a room alone with a guy at a party, she is practically asking to be raped.		0.44
15	Women often report rapes to get even with men.		0.38

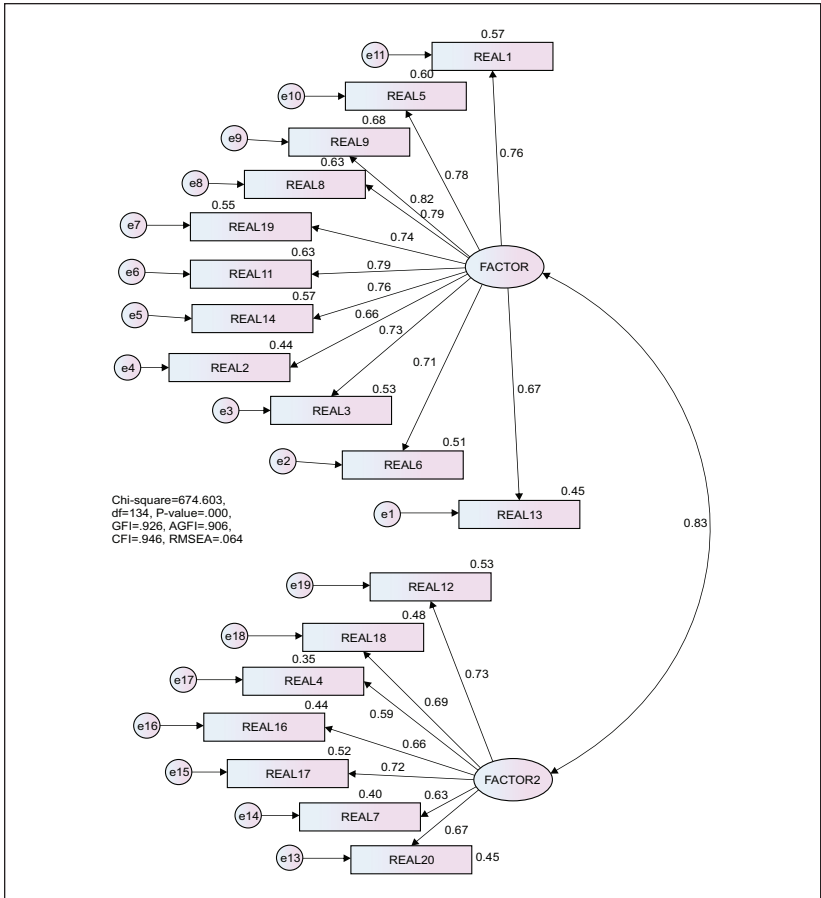


Figure 2. Confirmatory factor analysis of the 18-item scale.

### RMA as a Function of Participant Demographics

REAL scores were compared based on participant demographics. We conducted independent samples *t*-tests to determine the differences in REAL scores by gender (men compared to women), marital status (married compared to unmarried), and child status (does or does not have child(ren); Table 2). No differences were found according to marital status or presence of children. However, men had significantly higher scores than women,  $t(989)=6.71, p < .001$ , Cohen’s  $d = .46$ . The total average REAL scale score

**Table 2.** Participants' Attributes and T-Test Results.

Demographics	<i>n</i>	%	Mean	<i>SD</i>	<i>p</i> -Value
Participants	1000	100	20.91	15.1	
Gender					
Male	500	50.00	24.05	15.47	<.001
Female	500	50.00	17.78	14.04	
Marital status					
Married	393	39.30	20.40	14.93	n.s
Unmarried	607	60.70	21.25	15.20	
Children					
One or more	311	31.10	21.10	14.59	n.s
None	689	68.90	20.83	15.33	

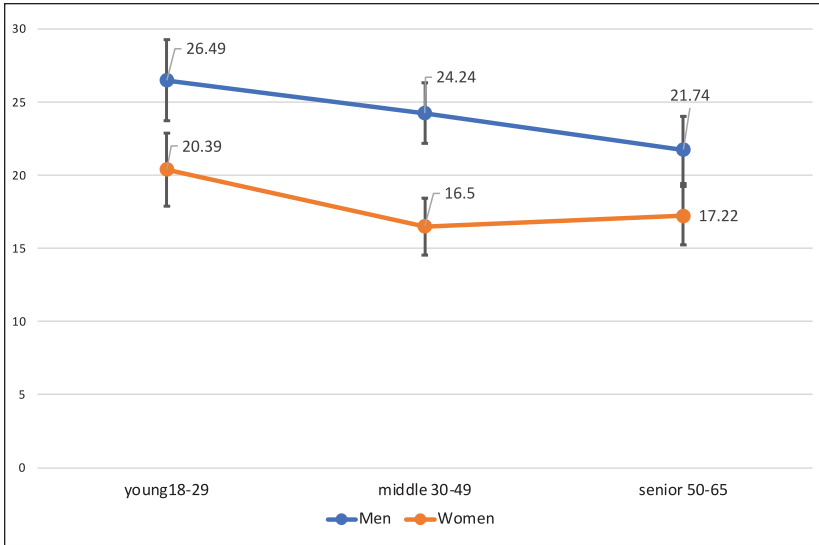
was 20.91 ( $SD=15.10$ ), with a mean of 24.05 ( $SD=15.47$ ) for men and 17.78 ( $SD=14.04$ ) for women.

An examination of RMA by age was conducted by categorizing the participants into three groups: young (ages 18–29), middle-aged (ages 30–49), and senior (ages 50–65). Because there were significant differences by gender, we conducted a two-factor repeated measures ANOVA on the gender factor and the generation factor. The result showed a significant difference in the gender ( $F(1,994)=42.14, p<.001$ ) and the generation ( $F(2,994)=5.78, p=.003$ ). We did not find any significant differences in the interaction effects ( $F(2,994)=1.082, p=.339$ ).

Multiple comparisons using Turkey's honestly significant difference (HSD) method (5% level) revealed significant differences between young ( $M=23.44; SD=15.90$ ) and middle-aged ( $M=20.37; SD=15.17; p<.5$ ) and young and senior ( $M=19.48; SD=14.04; p<0.1$ ) groups (Figure 3).

## Study 2

The original study obtained data from 437 individuals (Hahnel-Peeters & Goetz, 2022). Since data without missing values were obtained for the Japanese version, those with missing values in the original version were deleted to unify the conditions. Thus, excluding data of 26 participants, those of 411 were included from the original version in the analysis. In total, data for 1,411 individuals were used, 411 from the original and 1,000 from the Japanese version. The original version included data for 123 men and 288 women, with a mean age of 30.88 ( $SD=12.33$ ) years.



**Figure 3.** Average total REAL score by gender and generation (95% confidence interval).

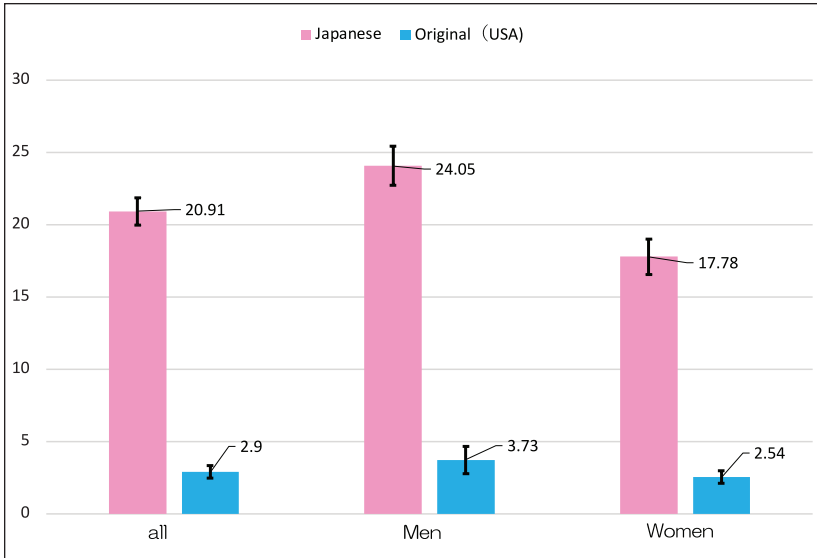
REAL: Rape Excusing Attitudes and Language.

Descriptive statistics of the original and Japanese versions were compared separately. The overall mean REAL score for the original version was 2.90 ( $SD=4.32$ ): 3.73 for men ( $SD=5.32$ ) and 2.54 for women ( $SD=2.54$ ). The overall mean REAL score for the Japanese version was 20.91 ( $SD=15.09$ ): 24.05 for men ( $SD=15.47$ ) and 17.78 for women ( $SD=14.04$ ).

A *t*-test was conducted on the total REAL score, categorizing the respondents of the original and Japanese versions. All scores (for men, women, and total) were significantly higher in the Japanese version than in the original version ( $t=34.477$ ,  $df=1309$ ,  $p < .001$ ; Figure 4). Since the Japanese version showed significant age differences, an ANOVA by age was conducted on the original version. Moreover, as the original version had data up to 75 years of age, four persons aged 66 or older were removed to ensure the same age range, resulting in a total of 407 persons for comparison. The results showed no difference in scores by age between the two versions ( $p > .89$ ).

## Discussion

The original version of the REAL scale had four factors. The Japanese version suggested a two-factor structure comprising Factor 1—“Underestimation



**Figure 4.** Comparison of average total REAL scores between Japan and the United States (95% confidence interval). REAL: Rape Excusing Attitudes and Language.

of the event” and Factor 2—“Implicit Consent.” The original REAL scale had 20 items, but the Japanese version consisted of 18 items, as two of the original items had factor loadings of less than .40. Although the factor structures differed, the model fit with the original version was reasonably high. Thus, the study helped develop the scale for Japanese individuals while retaining the meaning of the original version. However, the difference in factor structure could be due to the variation in the attitudes of American and Japanese individuals regarding rape myths.

The Japanese version showed higher scores for men than for women, consistent with the findings of Hahnel-Peeters and Goetz (2022) and of previous studies (Angelone et al., 2021; Bagasra et al., 2023; Carroll et al., 2016; Hockett et al., 2016). Men may report higher RMA compared to women worldwide.

We found no differences in Japanese participants’ reported RMA as a function of marital status or presence of children. This is a meaningful finding of this study because the original version did not explore differences in RMA by marital status or child status.

We documented that Japan was more accepting of rape myths than the United States. Although we had expected that RMA would probably be higher in Japan than in the United States, we were surprised by the magnitude of the difference in scores. One possible reason is that participants in Hahnel-Peeters and Goetz's (2022) study were college students, many of whom had attended mandatory sexual violence awareness programs; thus, they had more knowledge of rape myths. In the United States, the Department of Education's Office for Civil Rights (OCR) has implemented Title IX of the Education Amendments Act of 1972, which requires schools and educational institutions that receive federal government assistance to implement educational programs to protect people from harassment and other discrimination based on sex (OCR, 2021), including sexual violence. However, in Japan, while some schools have their own programs, such initiatives are not mandatory and there are no programs to reduce acceptance of rape myths. This difference in policy may have contributed to the difference in scores.

Furthermore, this study examined differences in REAL scores by age group; several studies measured RMA in university students (Lathan et al., 2023; Oesterle et al., 2023; Xue & Lin, 2022). The significance of this study is that it used an Internet survey and controlled for age when collecting data. In the original version, no differences by age were found. However, in the Japanese version, the young generation reported more rape myths than the older generations did. As previous studies have shown that the degree of RMA declined over time (Beshers & DiVita, 2021; Byrne et al., 2021), younger generations are expected to have lower RMA. We documented opposite results. In Japan, although people are becoming more sexually conscious with time, the higher RMA of the young generation than that of other generations may be due to the lack of sufficient opportunities to receive sex education. With age, they may get more opportunities to learn about sexual violence in the news and other media reports or through harassment prevention programs implemented in the workplace, which may reduce RMA. Because of this, it is reasonable to assume that the older a person is, the more opportunities they would have received to learn about sexual violence, thereby lowering their REAL score. The fact that the REAL scale in the United States did not differ by age dovetails with our hypothesis. Because sexual violence prevention programs are widespread in the United States due to Title IX mandates, societal attention and adequate education at younger ages are likely more frequent compared to that in Japan.

The surprising difference in RMA between Japan and the United States is a concern for Japan. The results suggest that Japan needs to actively implement education on rape myths and other aspects of sexual violence prevention. In

addition, clarifying the factors contributing to the difference in RMA scores between the United States and Japan is an issue for future research.

The results of this study indicate that the Japanese version of the REAL scale has a certain degree of reliability and can be used to measure RMA in Japan. Based on the RMA scores obtained using this scale, education to reduce RMA, especially among young people regardless of sex, can be implemented.

The main limitation of this study is that the retest method was not implemented due to concerns about secondary harm to the participants. Criterion-related validity could not be investigated owing to the lack of other appropriate domestic, Japanese scales measuring RMA. However, the study is significant as it developed a scale to measure RMA in Japan and identified differences in RMA between Japan and the United States. The issue of homosexuality and gender identity is a major social theme today, but we did not investigate these effects. Moreover, there are cases where women are the perpetrators and men are the victims of sexual violence. Despite this, the questionnaire is designed to define rape myths in which men are perpetrators and women are victims since an estimated 90% of rape victims are female and 99% of rape perpetrators are male (Chon & Clifford, 2021; Mears, 2020; Perilloux et al., 2012). These issues should be addressed in the future.

For future research, we suggest using the Japanese version of the REAL scale to investigate the relationship between RMA and reporting sexual victimization to others. In addition, we would like to develop a program that can be used to reduce the level of RMA in Japan and to implement it, especially among young people.

## **Conclusion**

This study developed the Japanese version of the REAL scale and confirmed its validity and reliability. The model fit with the original factor structure was evaluated. Among the Japanese participants, we found statistically higher RMA in men compared to that in women using the scale. Compared to the United States, Japan's RMA was surprisingly statistically higher. We believe that Japan needs to make efforts to lower the RMA as soon as possible. The Japanese version of the scale developed in this study can be used to assess RMA in Japanese individuals to help create appropriate educational programs to reduce RMA, especially among younger generations.

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### Author Contributions

- Conceived and designed the analysis: Eiji Shimizu
- Questionnaire Translation: Rebecka K. Hahnel-Peeters; Original scale author
- Contributed the data/analysis tools: Rina Sasaki
- Performed the analysis: Rina Sasaki
- Wrote the paper: Rina Sasaki, Rebecka K. Hahnel-Peeters, Eiji Shimizu

### Declaration of Conflicting Interests

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### Ethical Approval

This study was approved by the Graduate School of Medicine Ethics Committee at Chiba University (receipt number M10485) in February 2023.

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### Supplemental Material

Supplemental material for this article is available online.

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