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ARTICLE

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A STRUCTURAL EQUATION MODELLING APPROACH TO EXAMINE THE RELATIONSHIP BETWEEN LONELINESS, SEXUAL DESIRES AND RAPE MYTH ACCEPTANCE AMONG YOUNG ADULTS

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The present study attempts to explore the patterns of and interactions between three of the important variables related to sexuality: loneliness, sexual desires and rape myth acceptance. 400 adult Indians (200 females and 200 males) belonging to the age group of 18 to 23 years, were administered the UCLA loneliness scale, Sexual Desire Inventory-II and Illinois Rape Myth acceptance scale to assess the above stated constructs. The gender differences in each of the three constructs were determined and it was found that significant differences in all three variables prevailed. This study further attempted to determine the mediation effect of sexual desire in the relationship between the other two variables, something which no other previous Indian research could stress on. An insignificant direct effect of the predictor on the criterion terminated the further analyses on the model. However, structural equation modelling (SEM) was conducted to understand the interactions among the variables, which have been discussed.

Introduction

As compared to the developed countries, very few studies have been conducted to study sexual violence in India[1]. Also, very few efficient laws are present here to combat the violence against women. In this context, there is a need to fill these void by determining which factors serve as the seed to develop rape mentality among the Indian people. In the words of Burt[2], rape myths are the prejudicial, stereotyped, or false beliefs about rape, rape victims, and rapists. Since rape myths are known to be directly related to the occurrence of rape[3], there is a need to determine which psychological factors contribute to the acceptance of rape myths. In this study, we shall focus on the scenario of women being the victims of rape. There are definite gender differences found in attitudes towards rape[4], which is an indicator rape myth acceptance (RMA).

One important determining factor is loneliness. According to Pittman and Reich[5], loneliness is the unpleasant experience which takes place when a person's network of social relations is rendered inadequate in some way. Crick and Grotpeter[6] found that loneliness is significant dimension of adjustment that is linked with different forms of aggression which promotes violence, rape. Studies reveal that emotional loneliness in men leads to hostile attitude towards women and interpersonal aggressive behavior[7].

Sexual Desire (SexD) can be another important determinant. It has been a stereotype that men experience more sexual desires than the women[8], but the present study attempts to put this notion to test. Sexual desire is defined simply as the interest in sexual objects (person or things)

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or activities. Regan and Atkins[9] consider sexual activities to be a "motivational state" that drives our interest in sexual engagement. Researches state that sexual fantasies that are evoked due to high sexual arousal are linked with greater acceptance of rape myths[10]. Marshall and Barbaree[11] established the biological causes like the function of hormones, genetic basis, sensitiveness to content and others, as the basis of sexual desires in people, which lead to sexual offences. In a notable research by Smeaton and Byrne[12], it has been found that men, who have coercive sexual desires, are more likely to rape a woman.

Hypotheses

H1: There exists significant difference in each of rape myth acceptance, loneliness and sexual desires, among the males and females.

H2: Sexual desire significantly mediates the relationship between loneliness and rape myth acceptance.

H3: All direct effects in the mediation path (X vs. M, M vs. Y and X vs. Y) are significant.

Methods

Participants: 400 young adults comprising of 200females and 200 males from the state of Tripura, India were selected and retained to participate in this study. People who were willing for voluntary participation were selected. They belonged to the age group of 18-23 years (*M*= 21.50, *SexD*= 2.01). They were mostly students by occupation, however some were pursuing a job. The socio-economic condition the participants belonged to was middle-class. The inclusion criteria of the participants included good working knowledge of the English language.

Materials Used

The updated Illinois Rape Myth Acceptance Scale (IRMAS) by McMahon and Farmer[13], was administered to assess the rape myth acceptance. There are 22 items spread across 4 subscales. The IRMAS utilizes a 5 point Likert-type scale, where the scores range from 1 (strongly agree) to 5 (strongly disagree). Higher scores in the test indicate greater rejection of rape myths. The Cronbach's alphas of the subscales range from 0.64 to 0.80.To assess loneliness, the UCLA Loneliness scale[14] was used. It is a 20 item scale, assessing subjective feelings of loneliness. There are 4 categories for each item: O ("I often feel this way"), S ("I sometimes feel this way"), R ("I rarely feel this way") and N ("I never feel this way"). The Cronbach's alpha ranged from 0.89 to 0.94 and the test-retest reliability was 0.73.

The Sexual Desire Inventory-II was used to assess sexual desire among the participants. The 14 item test, devised by Spector, Carey, and Steinberg[15] utilizes 7 point and sometimes 8 point scale for some of its items. The alpha varies from 0.86 to 0.96.

Procedure

The data was collected from participants who gave their consent. A proper rapport was established with each one of them, following which the questionnaire was administered and the instructions were clearly elucidated. After the data was collected, the scorings and tabulations were done. This was followed by statistical analyses, where the data was firstly cleaned for outliers and other unwanted features, thus retaining a total of 400 best suiting participants. Firstly, the t-test was run in IBM SPSS v26 to test the first hypothesis. Then, for the other hypotheses, the structural equation modelling and mediation analysis were performed using IBM SPSS AMOS v22. The required visualizations were drawn and the results were carefully interpreted.

Results

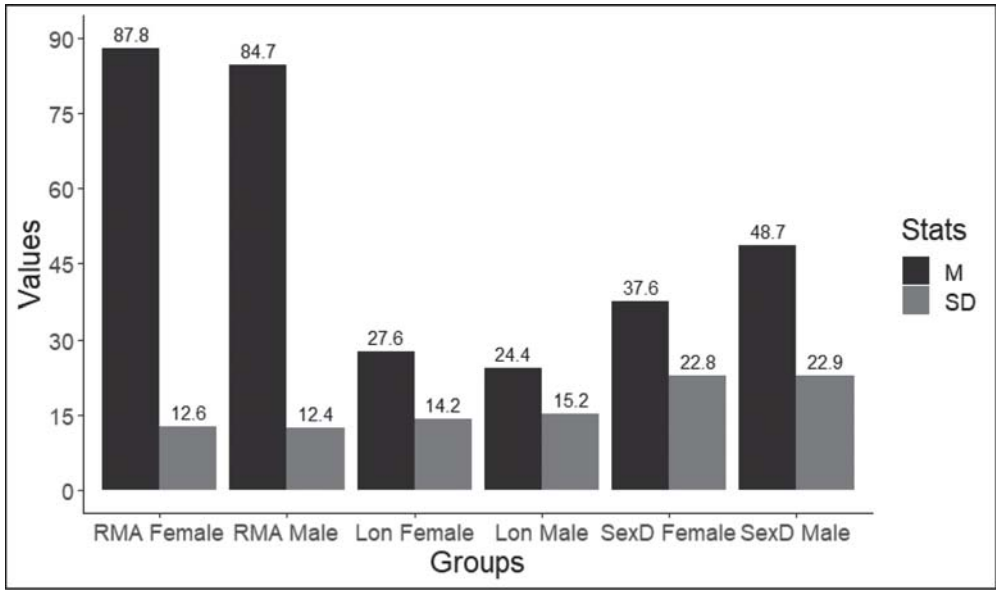
Table 1: Showing the descriptive statistics and t-test for the variables

Variables		M	SD	*t*	df	*p*
RMA	Female	87.800	12.635	2.488	397.9	0.013*
	Male	84.680	12.449			
Lon	Female	27.560	14.173	2.169	395.9	0.031*
	Male	24.370	15.229			
SexD	Female	37.625	22.761	-4.871	397.9	0.000**
	Male	48.740	22.878			

*Significant at 0.05 level ** Significant at 0.001 level

RMA= Rape Myth Acceptance, Lon= Loneliness, Sex D= Sexual Desire

Table 1 shows the frequency, mean and SexD of the variables across the gender groups. For RMA, the females are having a higher mean, indicting greater rejection of rape myths as compared to their male counterparts. For the UCLA loneliness scale, the mean score was again higher in the females, indicating that they are more prone to feel lonely than the males. The mean score of SexD was found to be higher in the males, which makes them have more sexual desire than the females. For each of the three variables, the SexD was found to be similar for both the males and females.



RMA= Rape Myth Acceptance, Lon= Loneliness, SexD= Sexual Desire

Fig. 1: Illustrating the Mean and SexD for the gender group

The difference between the gender was found to be highly significant (p<0.001) in case of Sex D. The differences in case of RMA and Loneliness, between the gender groups was found to be significant, but with comparatively lesser strength (p<0.05). This means that the difference in RMA and loneliness scores among the two sexes is not as large as that in case of Sex D. The bar plot below visualizes the means and SexD of the gender groups in terms of the three variables.

In Fig. 1, the structural equation modelling is shown so that we have a more clear understanding of the relationships between the three variables. The design was made to explore the possible mediation effect of SexD in the interaction between loneliness and RMA. We can see from the estimates (Table 2), that the predictor (loneliness) is seen to significantly predict the mediator (β=0.12; p<0.05). But since the predictor does not significantly predict Sex D, i.e. the criterion (β= -0.04; p=n.s.), the further analyses of mediation (indirect effects) could not be done[16] (Hayes, 2009). This is because for a mediation effect, the condition is that the mediator and criterion (M and Y, respectively) need to be directly and significantly predicted by the predictor in the mediation model[17].

Hence, a simple path analysis was done to understand the effect of the variables on each other. The process of path analysis using SEM has been conducted several prior researches in social science[18,19]. The results indicate that loneliness has a significant effect on SexD, as stated previously (β=0.12; p<0.05). Again, SexD does not significantly predict RMA (β= -0.06; p=n.s.). However, it should be noted that the beta is found to be negative which signifies an inverse relationship between the two. The direct effect of loneliness (predictor) and RMA (criterion) was not found to be significant (β= -0.04; p=n.s.), as mentioned previously. Again, a negative beta was found in this case, implying an inverse relationship. The paths (depicted by arrows) and the standardized coefficients are shown in Fig. 1.

Thus, the first hypothesis of the study was accepted. However, we could not accept the second one. The third hypothesis was but partially accepted, where only one path: X vs M (loneliness tosexual desire) was found to be significant.

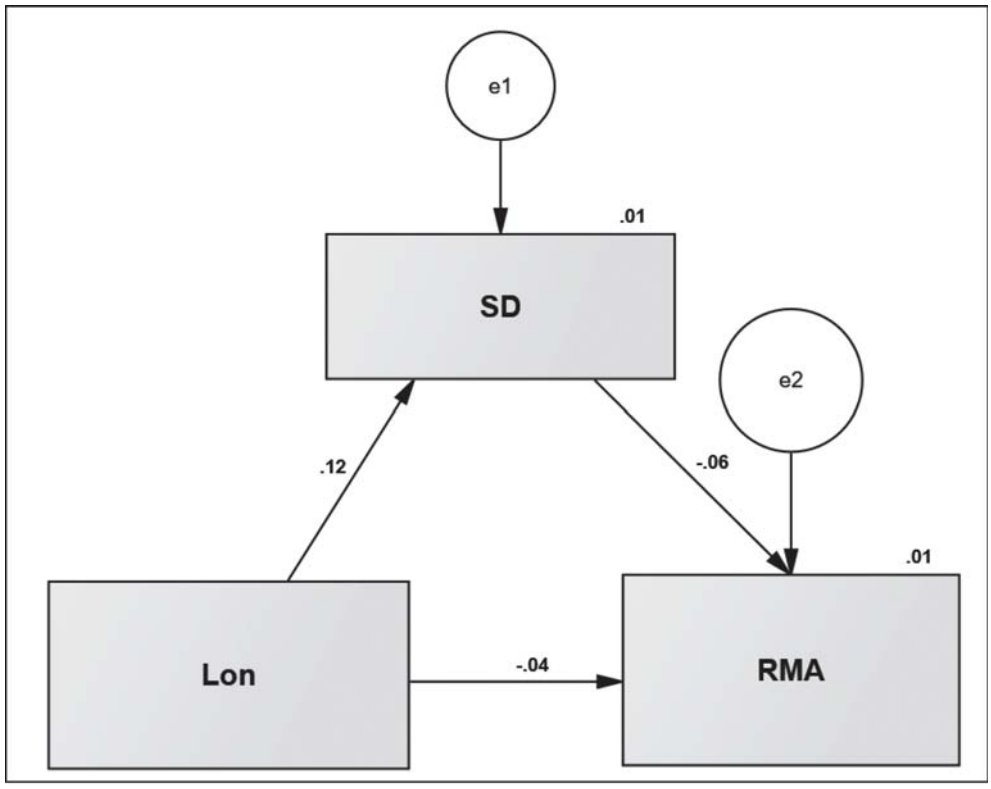
Table 2: Showing the SEM estimates

Variables	Standardized Weight	Estimate	S.E.	C.R.	p
SexD • ← Lon	0.121	0.191	0.079	2.426	0.015*
RMA • ← SexD	-0.058	-0.031	0.027	-1.156	0.248
RMA • ← Lon	-0.036	-0.031	0.043	-0.721	0.471

** Significant at 0.05 level*

Discussion

The results show that the males and the females are significantly different from one another in terms of rape myth, loneliness and sexual desires. The study by Silver and Hovick[20] corroborated the existing theory supporting gender differences in rape myth acceptance. Women were more likely to exhibit consent-supportive attitudes and perceived behavior control. Several other theories were supportive of men having more acceptance of rape myths than the women[21,22]. These concur with the findings of the present study. A cross country study including US, Japan and



RMA= Rape Myth Acceptance, Lon= Loneliness, SexD= Sexual Desire

Fig. 2: Illustrating the Structural Equation Modelling

India showed that regardless of the nation, men were high in disbelieving rape claims by the victims and also, blamed them[1].

The gender differences in loneliness have been highlighted by previous studies. In a study conducted in the Indian-sub continental country of Bangladesh, it has been found that men had significantly higher subjective feelings of loneliness[23]. This study contends the present findings. However, in an Indian study by Grover et al.[24], no significant difference in loneliness was noted among the two sexes. One important thing to note is the fact that India is an individualistic society[25], where the emphasis is on the group, rather than on the individual. Such a society is characterized by interdependence and co-operation[26]. So, in general people in India are less likely to experience loneliness because of their affiliation to social groups. If the females portray more loneliness, it means that they were more of individualistic pattern of personality. This paves the way for further research.

Concurring with the present findings on the gender differences in sexual desire, Quinta Gomes et al.[27] explained that the men experienced higher sexual excitation than their female counterparts. Again, sexual desire was found to vary significantly across the two sexes[28] and men who get into daily sexual activities were much higher in number than the females. One possible reason, as stated by van Anders[29] can be the roles of testosterone in the human body, whose level differs across the sexes.

In this present study, the mediation effect of sexual desires on the relationship between the other two variables could not be verified. Ahmed[23] showed the mediating effect of internet browsing on the relationship between loneliness and mental health. Loneliness was found to significantly impact the online sexual desires and activities[30], thus supporting our present findings. Similar findings of the significant relatedness of the two variables among adult samples have been noted[31]. One important characteristic of the relation between the two variables is that social isolation or loneliness can aggravate the dependency on a romantic partner[32]. Unlike the present findings, Barbaree and Marshall[33] confirmed and explained the significant role of sexual arousal in rape. In another study, it was found that greater sexual arousal was related to psychoticism and rape[34]. Loneliness was not found to significantly impact rape myth acceptance. This finding is contested by that of Marshall and Hambley[35], where they found a significant relationship between the two. However, another study found that the loneliness among sex offenders were related to their rape myth acceptance[36].

Conclusion

The study fulfilled its objective of explaining the prevailing gender differences in rape myth acceptance and two other related variables: Loneliness and Sexual Desire, in the Indian scenario. Significant gender differences have been noted in each of the three variables. A mediation model was formed to understand how sexual desires mediated the relationship between the other two. Though there was no mediating effect, it was found that loneliness has a significant effect on sexual desires.

Limitations

The study has the following limitations:

1) Different strata of population could not be included in the study (e.g. diverse socio-economic status, different family types, different religion, etc.).

2) People from LGBTQ community could not be included in this study.

3) A qualitative approach to fulfill the objectives of the study could provide us with more relevant information. ❐

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