# "It is all her fault": psychosocial correlates of the negative attitudes towards rape victims among the general population of Pakistan

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## Abstract

**Background:**  Rape myths are marked for being false beliefs about sexual assault. With the problem being quite prevalent around the world, research has shown that numerous factors such as rape proclivity and perpetuation of rape myths are critical. The present study assesses the role of rape myths acceptance, rape victim empathy, and causal attributions towards rape victims as significantly predicting attitudes towards rape victims among the general population of Pakistan. Rape myths acceptance and causal attributions would significantly and positively predict negative attitudes towards rape victims.

**Method:**  A cross-sectional research design was used for the study. The online survey questionnaire was filled by 573 participants including 275 males and 298 females who were selected through purposive sampling from the general population of Pakistan. The sample size was estimated using G*Power analysis with 95% confidence intervals. Data collection was done using Illinois rape myths, attitudes towards rape victim's scale, rape victim empathy, and causal attributions scale were used. Data analysis was done using Pearson product-moment correlation, hierarchical regression, MANOVA, and mediation analysis via AMOS, all of which were executed using SPSS 21.0.

**Results:**  The findings showed that higher levels of rape myths acceptance, low empathy towards rape victims, and victim blaming are significantly associated with negative attitudes towards rape victims. There were no gender differences among the participants. However, rape victim empathy significantly mediated the association between rape myths acceptance and rape victim empathy. It was also found that rape myths acceptance, rape victim empathy, and causal attributions significantly predicted attitudes towards rape victims. Another core finding was that there were no gender differences among participants with regard to rape myths acceptance, rape victim empathy, causal attributions, and attitudes towards rape victims.

**Conclusions:**  Therefore, the findings contribute towards a better understanding of the rape myths in the general population of Pakistan and how the prevalence of such myths may contribute towards social, cultural, and legal problems of rape myths. The study also provides policy implications for a region where rape victims experience higher levels of blame and limited legal backing and support.

**Keywords:**  Rape myths acceptance, Attitudes towards rape victims, Causal attributions, Rape, Mediation analysis

## Practical impact statement

The importance of assessing and addressing the negative attitudes which the general population in Pakistan has towards rape victims is paramount. However, there was a gap in the attitudes towards rape victim's literature. The findings of the present research contribute towards

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the understanding about the role of rape myths acceptance, victim blaming, and having low empathy towards rape victims in predicting negative attitudes towards rape victims and providing awareness and education to the general public about their biases and orientations of rape victims so that the negative attitudes may be minimized.

## Background

Perpetration of sexual aggression towards women is a prevalent problem. Research evidence has consistently shown that sexual victimization of women, whether it be in the form of giving sexual comments, provocative remarks, or making tainted whistles or direct physical attempts towards forceful sexual intercourse, continues to be a growing societal problem (Milesi et al., 2020). In this regard, attitudes of the general population have remained a major area of concern for researchers and law enforcement agencies (Caffaro et al., 2014; Ireland et al., 2018). Research has also shown that attitudes of individuals towards rape victims have a major role to play in corrective responses towards such incidents (Mckee et al., 2020). Similarly, attitudes with regard to sexual assault or rape cases continue to remain a core factor across various educational campaigns dedicated towards raising awareness among the masses (Spohn, 2020).

It is critical to assess how interactive as well as motivational fundaments associated with rape are linked with processes of socialization. Specifically, as men tend to identify and associate their sexuality with dominance and because women tend to link their sexuality with dependence as well as passivity, most of the victims of rape have a higher orientation of blaming themselves for experiencing rape, sexual abuse, or sexual harassment. Experts have found that prevalence of rape myths also mediates the attitudes men and women have towards rape victims. Lonsway and Fitzgerald (1995), p. 704 identified rape myths including "women like to be raped," "a woman can resist a rapist only if she wants to," and "in rape cases, victim already has a bad reputation." Such rape myths have consistently been identified across different cultures (Anderson & Overby, 2021; George et al., 2022).

Moreover, a cluster of factors have been identified in terms of the determinants of the attitudes towards rape victims include individual, community, and societal factors (Ireland et al., 2018). It is pertinent to note that attitudes towards rape victims are also significant in terms of perpetration of sexual assault or rape against women (Byrne et al., 2021). The evidence has consistently highlighted a significant predictive association among violence supportive beliefs, acceptance of rape myths, and lack of empathy towards these victims (George et al., 2022). One such example is how men who have

traditional, conservative, and misogynistic beliefs are likely to have negative attitudes and low empathy towards rape victims (Coetzee, 2020). Moreover, they are likely to make characterological or internal attributions towards the victim in rape cases (Peter-Hagene & Ullman, 2018). Morris and Ratajczak (2019) conducted a meta-analysis and found that masculinity and conservative beliefs are linked with negative attitudes towards rape victims. At the same time, higher levels of perpetrator blame are negatively associated with minimal degrees of victim blame (Sjoberg & Sarwar, 2022). It is on the basis of such ideas that a large number of individuals reject the prevalence of rape or sexual victimization being a widespread problem (Jaffe et al., 2021). Moreover, to assess sexual victimization, rape victim empathy has drawn extensive interest in terms of which it has been found that rape victim responsibility is negatively associated with rape victim empathy for both male and females (Jones et al., 2020). Rape victim responsibility has been associated negatively with higher levels of rape victim empathy and is also indicative of the personal experience of individuals regarding a rape situation (Beck & Rose, 2021). Therefore, considering a major role played by emotional as well as cognitive responses towards rape victims, it is imperative to assess the role of rape victim empathy in impacting the attitudes which individuals towards rape victims in the general population of Pakistan.

During the past decades, a significant increase has been witnessed in the number of rape cases in Punjab, a region with the highest population in the country. Thousands of cases are registered in Punjab on a yearly basis as per the report released by Punjab police (2018). However, there is also evidence to show that the number of rape cases might actually be high due to social and cultural barriers in the region as a result of which most female victims of rape do not prefer to report such incidents. Kamal et al. (2010) have identified social and cultural factors associated with negative attitudes towards rape victims in the region. Khan and Gul (2017) has also confirmed the presence of negative attitudes among the general population of Pakistan with regard to rape victims. Nadeem et al. (2017) have also reported that conservative social values and normative systems can be associated with negative attitudes towards rape victims along with higher levels of rape myths acceptance. Devdas and Rubin (2007) studied South Asian cultural and religious practices and their role in contribution towards the development of rape myths. Belief in rape myths have been associated and attributed to conservative views regarding sexuality as well as an orientation towards and acceptance of traditional reviews regarding how women should behave across different situations (Niaz, 2003).

**Fig. 1** Rape victim scale flow chart
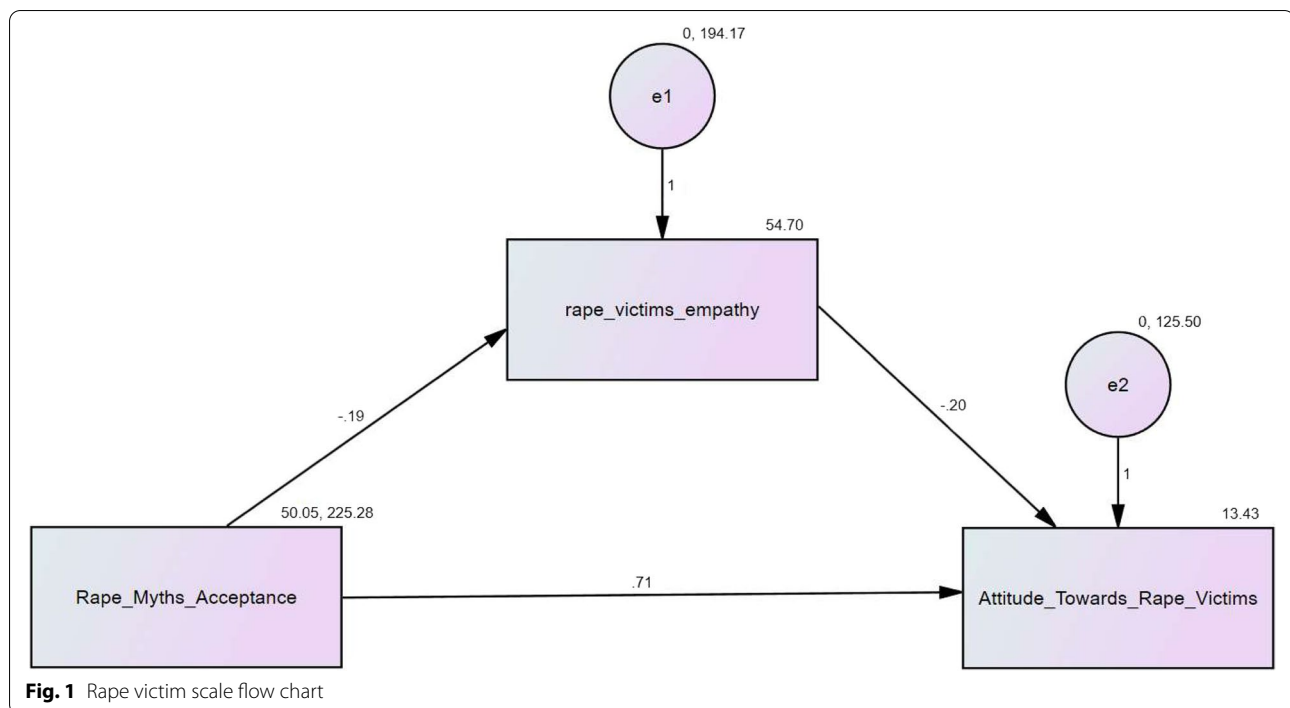
In view of the above findings, it is important to assess the association among rape myths acceptance, causal attributions, rape victim empathy, and attitudes towards rape victims. Moreover, the role of social and cultural factors in impacting the attitudes towards rape victims in the general population of Pakistan warrant further discussion (Hudspith et al., 2021). Moreover, an analysis of the evidence has identified important gaps in research with regard to assessing the attitudes of the general population in Pakistan. Arif et al. (2014) have reported the incidence of rape as being about 8.4 per 100,000 population with 10% of the cases of gang rapes. As per the statistics issued by the National Police Bureau, more than 4500 cases of rape were reported in 2018 with about 15,000 rape cases from 2017 to 2021 (Gurmani, 2021).

**Purpose of the study**
Although it has been assessed that though there is extensive research evidence to highlight the psychosocial determinants of attitudes towards rape victims across developed regions, limited literature is available across developing countries such as Pakistan (Jamshed and Kamal, 2021a, b). Moreover, there is a gap in the literature with regard to the role of rape myths, rape empathy, and causal attributions as impacting the attitudes towards rape victims in Pakistan. It is also unclear how causal attributions impact attitudes of the general population towards sexual violence determine and propensity towards victim blaming. Another objective of the study is to identify how

different rape myths are associated with one another and with the attitudes towards rape victims (Fig. 1).

**Hypotheses**

1. Acceptance of rape myths would be positively and significantly associated with negative attitudes towards rape victims and victim blaming (internal attribution).
2. Rape victim empathy would be negatively associated with negative attitudes towards rape victims.
3. Rape victim empathy would be positively associated with perpetrator blame (external attribution).
4. There would be no significant gender differences with regard to rape myths acceptance, rape victim empathy, and attitudes towards rape victims.
5. Rape myths acceptance, rape victim empathy, and causal attributions would significantly predict attitudes towards rape victims

Rape victim empathy would significantly mediate the association between rape myths acceptance and attitudes towards rape victims.

**Methods**
**Research design**
A correlation research design was used to assess the role of rape empathy and rape myths acceptance in impacting the attitudes of the general population of

Pakistan. Purposive sampling technique was used for this purpose.

## Participants

A total of 573 participants include both 275 males and 298 female participants in the age range of 18 to 68 years of age. Moreover, 459 participants were single, 106 were married, and 8 were divorced. In terms of educational attainment, 60 had intermediate, 328 were graduate, and 185 had postgraduate level of education. In terms of religious orientations, 372 participants identified themselves as being liberal, while 201 were identified as conservatives. Three-hundred ninety-two participants lived in urban, while 181 resided across rural settings. The participants were purposively selected for participation to assess particular orientations and characteristics of individuals with regard to their attitudes towards rape victims. Silverman (2022) have reported that purposive sampling enables researchers to assess and select cases since it is beneficial in exemplifying a specific process or feature of interest, and it also helps researchers in critical analysis of parameters of the population that are being researched.

## Instruments

### Attitude towards rape victims

The attitude towards rape victim's scale was used for assessing this construct. It is a 25-item measurement instrument developed by Ward (1988). The response range is from 0 to 4 years of age with the scoring range being from 0 to 100. Reverse scoring is also done for some items as per the scoring criteria with higher total scores being associated with more negative attitudes towards rape victims. Item 12 states that "any female may be raped" is an example of an item that is subject to reverse scoring. The alpha reliability of the scale has been reported to be 0.83 (Ward, 1988).

### Rape myths acceptance

This construct was assessed through the Illinois Rape Myth Acceptance Scale (McMahon & Farmer, 2011). It is a 22-item measure which assessed acceptance of rape myths with the response options ranging from 1 (strongly agree) to 5 (strongly disagree) with higher scores showing a higher probability of rejecting rape myths. There are also four subscales indicative of varying levels of rape myths acceptance including the following: (1) she asked for it, (2) he did not mean to, (3) it was not really rape, and (4) she lied. The reliability of the scale has been identified as being about 0.93 (McMahon & Farmer, 2011). Moreover, Das and Bhattacharjee (2021) conducted a validation of the factor structure of the Illinois Rape

Myths Acceptance using a sample of Indian students and reported that the Illinois Rape Myths Acceptance Scale has satisfactory cross-cultural validity. As Pakistani and Indian cultures have numerous similarities with regard to gender roles, religious practices and adherence to traditional belief systems and practices, the usage of Illinois Rape Myths Acceptance within the Pakistani context was justified.

### Rape victim empathy scale

The construct "rape myths" were assessed through the rape myths empathy scale. It is an 18-item scale developed by Deitz et al. (1982). It is a widely used measure for assessment of rape empathy. It is also critical to note that the scale is focused more towards measurement of rape empathy rather than assessing cognitive as well as emotional elements with specific emphasis on how participants are required to empathy with a rape victim or at the same time, with the perpetrator using a unidimensional scale. The alpha reliability of the scale is 0.92 with the response options ranging from 1 = strongly disagree to 7 = strongly agree (Diaz et al., 1982).

### Causal attributions for sexual violence scale

To assess the causal attributions towards sexual violence that primarily focuses on blaming the rape on the victim or external factors is a 9-item scale formulated by Fetchenhauer et al. (2005) with a reliability of 0.78. It is used for measurement of different causal attributions including characterological, behavioral, and external causal factors associated with varying degrees of sexual victimization. The statements used for measurement of such causal attributions include the following: "I wasn't careful enough," and "I am just unlucky."

## Procedure

Informed consent was sought from all participants, and all forms of ethics related information were provided. The approval for the topic was sought from the Bioethics Review Board of the university concerned. The members had evaluated the relevant ethical dimensions and had found no major risks in requisition of this information from participants. The ethical dimensions were also assessed through the Declaration of Helsinki in which no ethical risks were uncovered. Moreover, one of the authors being a clinical psychologist had informed the participants about providing mental health counseling and support based on their request. The participants were also assured that their information will be kept confidential, and for this purpose, the names and contact information of the participants were not sought. Moreover, for the purpose of confidentiality, the participants

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were assigned ID numbers. Moreover, the sample size for the study was finalized using G*Power analysis with 95% confidence intervals. The analyses revealed that a sample size of 500 would be sufficient to compute effect sizes and for sample determination purposes.

Data collection was done using Google Forms, the link to which were shared with the participants using WhatsApp and Facebook. The emphasis of the researchers was on gaining access to a large number of participants through these online mediums. The participants were also encouraged to share the online questionnaire with their friends, family, and acquaintances. This approach was beneficial for the researchers in gaining access to the required number of participants.

### Data analysis

Data analysis was performed using Pearson product-moment correlation, stepwise regression, MANOVA, and mediation analysis. SPSS 21.0 was used for carrying out the required analyses.

**Table 1** Sociodemographic characteristics of participants at baseline

| Demographics | N | % |
|---|---|---|
| Gender | | |
| Male | 275 | 48.0 |
| Female | 298 | 52.0 |
| Age | | |
| 18 to 25 | 314 | 54.7 |
| 26 to 34 | 115 | 20.1 |
| 35 to 46 | 109 | 19.02 |
| 47 to 55 | 28 | 4.88 |
| 56 to 70 | 10 | 1.7 |
| Marital status | | |
| Single | 459 | 80.1 |
| Married | 18.5 | 18.5 |
| Separated | 8 | 2.5 |
| Divorced | 8 | 1.4 |
| Widowed | 0 | 0 |
| Education | | |
| Matriculation | 2 | 0.3 |
| Intermediate | 58 | 10.1 |
| Graduate | 328 | 29.0 |
| Postgraduate | 166 | 29.0 |
| Doctorate | 19 | 3.3 |
| Affiliation | | |
| Liberal | 327 | 64.9 |
| Conservative | 201 | 35.1 |
| Locality | | |
| Urban | 392 | 68.4 |
| Rural | 181 | 31.6 |

### Results

Table 1 depicts the demographic characteristics of the participants. The statistical estimates show that 48% (275) of the participants were males and 52% (298) were females. About 54.7% of the participants were in the age range of 18 to 25 years, 20.1% were in the age range 26 to 34 years, and remaining participants, i.e., about 25%, were in the age range 35 to 70 years of age. A total of 80% were single while 18.5% were married, while 2.5% were separated with 1.4% being divorced. Above 71% of the participants had at least intermediate level education with about 58% having graduate and postgraduate level of educational attainment. A total of 64.9% of the participants identified themselves as having liberal values, while 35.1% identified having conservative orientations. Moreover, 68.4% of the participants resided in urban settings, while 31.6% resided in rural settings.

Table 2 shows the psychometric properties of the study variables. The alpha reliability analysis shows that rape victim empathy scale demonstrated the highest level of reliability, i.e., 0.93 followed by rape myths acceptance scale which yielded 0.91 reliability, attitude towards rape victim's scale showing 0.89, and causal attributions towards sexual violence scale demonstrating a 0.75 level of reliability. All reliabilities were in the acceptable range (Ravinder & Saraswathi, 2020).

Table 3 depicts the results of correlation analyses. The assumptions for conducting a correlation analyses were tested, and all assumptions were met. Results had shown a positive association between attitudes towards rape victims with rape myths acceptance ($r = 0.69$, $p < .05$), significant negative association with rape victim empathy ($r = -0.30$, $p < .05$), significant positive association with causal attributions towards sexual violence ($r = 0.89$, $p < .05$), victim's characterological self ($r = 0.66$, $p < .05$), significant positive association with behavioral-self ($r = 0.66$, $p < .05$), and a significantly low positive association with external attribution ($r = 0.14$, $p < .05$). Moreover, significant positive associations were identified with regard to the total scores and subscales of rape myths acceptance scale. Moreover, rape myths acceptance had a significant negative association with rape myths empathy ($r = -0.19$, $p < .05$) and a significant positive association

**Table 2** Psychometric properties of variables

| Variables | M | SD | α | No. of items |
|---|---|---|---|---|
| Attitude towards rape victims | 47.15 | 17.69 | 0.89 | 25 |
| Rape myths acceptance scale | 63.95 | 15.02 | 0.91 | 19 |
| Causal attributions towards sexual violence | 15.05 | 6.5 | 0.75 | 9 |
| Rape victim empathy scale | 45.33 | 14.22 | 0.93 | 17 |

Note: *M* mean, *SD* standard deviation, *α* reliability coefficient

**Table 3** Intercorrelations for attitudes towards rape, rape victims empathy, rape myths acceptance, and causal attributions and its subscales

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| 1. Attitude towards rape victims | - | 0.69** | −0.30** | 0.89** | 0.79** | 0.66** | 0.14** |
| 2. Rape myths acceptance | | - | −0.19** | 0.61** | 0.57** | 0.38** | .07 |
| 3. Rape victim empathy | | | - | −0.32** | −0.32* | −0.39** | .00 |
| 4. Causal attributions | | | | – | 0.89** | 0.77** | .09** |
| 5. Victim's self | | | | | – | 0.52** | .06 |
| 6. Behavioral self | | | | | | – | .04 |
| 67. External self | | | | | | | – |

Note: $N = 323$, **$p < .05$

with causal attributions towards sexual violence and its subscales with a nonsignificant relationship with external attribution for sexual violence. It was also found that rape victim's empathy was significantly and negatively associated with attitude towards rape victims ($r = −0.30$, $p < .05$), rape myths acceptance ($r = −0.19$, $p < .05$), victim's characterological self ($r = −0.32$, $p < .05$), and behavioral self ($r = −0.39$, $p < .05$). Moreover, total scores on causal attributions scale were significantly and positively associated with victim's characterological self and behavioral self but not with external attributions. Table 4 depicts the results of independent sample *t*-test. Normality checks were performed on the data, and all the assumptions for conducting a one-way MANOVA were met. The results showed that there were no significant gender differences among the participant scores with regard to rape myths acceptance, rape victim empathy, and attitudes towards rape victims.

Table 5 shows that hierarchical regression was used to assess whether rape myths acceptance, rape victim empathy, subscales of rape myths acceptance, and subscales for causal attributions towards sexual violence scale predicted attitudes towards rape victims. Normality checks were performed on the study variables, and the relevant assumptions were met. The results showed that in model 1, rape myths acceptance ($B = 0.35$, $p < .05$) with $\Delta R^2$ 0.12 accounting for 12% variance and significantly predicted the attitudes towards rape victims. In model 2, the subscales of rape myths acceptance,

specifically she asked for it ($B = 1.19$, $p < .05$), it was not really rape ($B = 0.74$, $p < .05$), she lied ($B = 1.21$, $p < .05$), and he did not mean to ($B = 0.60$, $p < .05$) with an $\Delta R^2$ 0.54, accounted for 54% and significantly predicted attitudes towards rape victims. In model 3, the subscales "she asked for it" ($B = 0.73$, $p < .05$), "it wasn't really rape" ($B = 0.45$, $p < .05$), and "she lied" ($B = 0.57$, $p < .05$) and the subscales of causal attributions towards sexual violence scale including victim's self-attribution ($B = −0.70$, $p < .05$), behavior self ($B = 1.66$, $p < .05$), and external attribution ($B = 2.62$, $p < .05$) significantly predicted attitudes towards rape victims scale with an $\Delta R^2$ of 0.69 which shows that these variables accounted for 69% variance in the dependent variable, i.e., attitude towards rape victims.

In Table 6, the assumptions for conducting a mediation analysis were assessed to identify significant linear relations among the variables. Moreover, normality checks were performed on the data, and the assumptions were met. Table 6 shows significant indirect effect of rape victim empathy on attitudes towards rape victims ($\beta = .03$, $p < .01$), and the direct effect of rape myths acceptance was ($\beta = 0.71$, $p < .01$), rape victim empathy ($\beta = −0.20$, $p < .01$) on attitudes towards rape victims. Furthermore, for the purpose of assessing the level of different forms of indirect effects and the usage of parametric bootstrapping was performed. In relevance to using bootstrapping, the usage of Monte Carlo method is done with emphasis on 95% bias-corrected

**Table 4** Mean differences with regard to rape-related attitudes, rape myths acceptance and its subscales, and subscales of causal attributions of sexual violence scale subscales

| Source | *M* | *SD* | *M* | *SD* | *F* | *P* | Partial η² |
|---|---|---|---|---|---|---|---|
| Sex | Male | | Female | | | | |
| Rape myths acceptance | 57.09 | 17.62 | 58.02 | 18.41 | 0.37 | 0.22 | 0.53 |
| Rape victims empathy | 48.76 | 15.29 | 49.03 | 15.83 | .04 | 0.60 | 0.84 |
| Attitudes towards rape victims | 47.64 | 16.90 | 46.70 | 18.40 | 0.40 | 0.16 | 0.52 |

Note: $N = 573$, **$p < .05$

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**Table 5** Regression coefficients for rape myths acceptance, rape victim empathy, subscales of rape myths acceptance, and subscales for causal attributions towards sexual violence scale

| Variable | B | β | SE | P | 95% CI |
|---|---|---|---|---|---|
| Constant | | | | | |
| Step 1 | | | | | |
| Rape myths acceptance | 0.35 | 0.34 | .03 | .000 | [0.43, 0.28] |
| Rape victim empathy | −.00 | .00 | .04 | 0.854 | [−.09, .07] |
| $\Delta R^2$ | 0.12 | | | | |
| Step 2 | | | | | |
| Rape myths acceptance | .00 | .00 | .03 | 0.991 | [−.06, .06] |
| Rape victim empathy | .03 | .03 | .03 | 0.278 | [−.02, 0.10] |
| She asked for it | 1.19 | 0.30 | 0.14 | .000 | [1.47, 0.91] |
| It was not really rape | 0.74 | 0.16 | 0.19 | .000 | [1.12, 0.35] |
| She lied | 1.21 | 0.31 | 0.15 | .000 | [1.52, 0.90] |
| He did not mean to | 0.60 | .09 | 0.25 | .017 | [1.09, 0.10] |
| He did not mean to (alcohol) | 0.13 | .02 | 0.18 | 0.492 | [0.49, 0.24] |
| $\Delta R^2$ | 0.54 | | | | |
| Step 3 | | | | | |
| Rape myths acceptance | .00 | .00 | .02 | 0.99 | [.05, .05] |
| Rape victim empathy | .04 | .03 | .03 | 0.127 | [.01, .09] |
| She asked for it | 0.73 | 0.18 | 0.12 | .000 | [0.97, 0.50] |
| It was not really rape | 0.45 | .09 | 0.16 | .006 | [0.76, 0.13] |
| She lied | 0.57 | 0.14 | 0.13 | .000 | [0.84, 0.30] |
| He did not mean to | 0.12 | .02 | 0.15 | 0.423 | [0.44, 0.18] |
| He did not mean to (alcohol) | 0.19 | .03 | 0.20 | 0.360 | [0.59, 0.21] |
| Victim's self-attribution | −0.70 | 0.15 | 0.15 | .000 | [0.40, 1.00] |
| Behavioral self | 1.66 | 0.25 | 0.53 | .002 | [2.71, 0.62] |
| External attribution | 2.62 | 0.64 | 0.34 | 0.145 | [1.93, 3.30] |
| $\Delta R^2$ | 0.69 | | | | |

Note. $N = 573$, *CI* confidence interval

confidence intervals is examined. Findings suggest significant partial mediation of rape victim empathy on the association between rape myths acceptance and attitudes towards rape victims.

## Discussion

The purpose of the research was to assess the relationship among rape myths acceptance, rape victim empathy, and causal attributions as predictors of the attitudes towards rape victims. Moreover, the study emphasized

how these predictive associations contribute towards the negative attitudes towards rape victims in the general population of Pakistan. First, it was hypothesized that rape myths acceptance would be significantly associated with negative attitudes towards rape victims and victim blaming. The present study confirmed this hypothesis as rape myths acceptance had a significant negative association with rape victim empathy and a significant positive association with attitudes towards rape victims and victim blaming (assessed through victim's self-attribution) (see Table 3). Bendixen et al. (2014) reports a higher scores with regard rape myths acceptance reported has more negative attitudes towards rape victims. Moreover, Ryan (2011) endorses these findings and has further reported that individuals having negative attitudes towards rape victims blame the victim for the incident. Other research evidence has also confirmed that associations among negative attitudes towards rape victims, rape myths acceptance, and victim blaming (Anderson & Bissel, 2011; Campbell, 2001). Furthermore, the results of the present study showed that attitudes towards were significantly and positively associated with rape myths acceptance, victim's self, behavioral self, and external self. Leverick (2020) has supported this finding through reporting a significant positive relationship among attitudes towards rape victims, victim's characterological attributions, and rape myths acceptance. The results of the present study also provide evidence regarding the causal role of cultural and religious factors with regard to the attitudes of the general population in Pakistan towards rape victims. Devdas and Rubin (2007) have determined how Southeast Asian countries including India and Pakistan have a high prevalence of conservative belief systems and cultural practices with regard to sexuality. It is due to the presence of such conservative belief systems in addition to cultural norms regarding gender roles, e.g., women deserve to be raped if they behave inappropriately across different sexual contexts or viewing rape as a consequence of inappropriate behaviors of women that are in direct violation of the religious and cultural norms of a society (Riaz, 2021).

Secondly, it was hypothesized that rape victim empathy would be negatively associated with attitudes towards rape victims. It was also hypothesized that rape victim

**Table 6** Mediation effect of rape victim empathy between rape myths acceptance and attitudes towards rape victims

| X to Y | Mediator | Indirect effect | SEB | Direct effect | 95% CI | |
|---|---|---|---|---|---|---|
| | | | | | LL | UL |
| RMA ➔ ATR | RVE | .03** | .03 | 0.71** | .08 | 0.14 |
| RVE ➔ ATR | RVE | −0.19** | .08 | −0.20** | 0.14 | 0.21 |

Note: Bootstrap sample size, 2000. *B* regression coefficient (direct effect). *RVE* rape victim empathy, *ATR* attitude towards rape victims, *RMA* rape myths acceptance, 95% CI for indirect effect (all significant at .05)

empathy would mediate the relationship between scores on rape myths and attitudes towards rape victims. The present study confirmed this hypothesis. The results showed that rape victim empathized a significant negative association with attitudes towards rape victims; thus, showing individuals holding negative attitudes towards rape victims is less likely to exhibit empathy towards them (see Table 3). Numerous studies have confirmed these significant and negative associations between negative attitudes towards rape victims and poor empathy towards rape victims (Bitton et al., 2020; Dejong et al., 2020). Studies have emphasized how the literature on blame attribution has consistently highlighted low rape victim empathy among the general population of numerous countries (Gracia et al., 2020). Experts are of the view that intuition-based conflicting moral judgments might be responsible for these associations especially with regard to the negative attitudes towards these victims (Mudder & Bohner, 2022). Research has also shown that individuals who have conflicting moral standards are more likely to have low empathy towards rape victims (Gravelin et al., 2019). Apart from this, the negative association between negative attitudes towards rape victims and rape victim empathy can be explained through the propensity which most individuals have with regard to the endorsement of traditional gender roles. It is thus clear how most of the studies reviewed have supported our considerations and hypotheses regarding a higher prevalence of negative attitudes towards rape victims in the general population and how these negative attitudes might be explained due to the orientation of individuals towards accepting rape myths.

Consistent with the previous hypotheses, rape victim empathy was hypothesized to be positively associated with perpetrator blame or external attribution of the rape incident. The hypothesis was confirmed and is also consistently supported in the relevant literature (see Table 3). Sprankle et al. (2018) endorsed this finding through confirming that higher scores on rape victim empathy were associated with lower scores on victim blaming and higher scores on perpetrator blaming. Moreover, Bongiorno et al. (2020) confirmed that rape victim empathy is a mechanism which provides protective effects to rape victims especially those belonging to stigmatized and marginalized communities. It is also critical to note that higher levels of rape victim empathy in a population are associated with more effective legislative measures and policies regarding rape. Moreover, the evidence suggests that male perpetrator empathy is more dangerous in such situations in comparison with rape victim empathy especially in terms of its impact on victim blame.

It was also hypothesized that there would be no significant gender differences among the general population with regard to rape myths acceptance, rape victim empathy, causal attributions, and in terms of the attitudes towards rape victims. The findings showed that male and female participants did not differ significantly with regard to their scores on rape myths acceptance, rape victim empathy, and attitudes towards rape victims (see Table 4). The results confirmed these findings along with the relevant literature which provides evidence supporting similarities in the psychological responses of the general population towards rape victims (Caffaro et al., 2014; Ireland et al., 2018). It was also hypothesized that rape myths acceptance, rape victim empathy, and causal attributions would significantly predict attitudes towards victims. The findings of the present offered a partial confirmation of this hypothesis. Firstly, subscales of rape myths acceptance such as "she asked for it," "it wasn't really rape," "she lied," and "he didn't mean to" significantly predicted negative attitudes towards rape victims. Moreover, in terms of causal attributions, victim's self-attribution and behavioral attributions significantly predicted negative attitudes towards rape victims (see Table 5). Ryan (2019) has reported that myths which are held at cultural level across the general population are more damaging to rape victims. While rape myths such as "it wasn't really rape," "she lied," and "she asked for it" are believed to be more prevalent in developing regions, an adverse impact is seen in terms of the chances rape victims have with regard to attaining justice in legal settings is adverse. Anderson and Overby (2021) disagrees, however, that rape myths are culture specific and instead emphasizes that most of the rape myths are universal and are associated with higher degrees of victim blaming. Riaz (2021) also reports that rape myths tend to be equally prevalent in both male and female genders in Southeast Asian cultures which are thus indicative of strict adherence to cultural and traditional norms.

## Conclusions
It is thus concluded that higher levels of rape myths acceptance, low empathy towards rape victims, and victim blaming are significantly associated with negative attitudes towards rape victims. It was also found that rape myths acceptance, rape victim empathy, and causal attributions significantly predicted attitudes towards rape victims. Another core finding was that there were no gender differences among participants with regard to rape myths acceptance, rape victim empathy, causal attributions, and attitudes towards rape victims. It was also found that rape victim empathy was significantly associated with rape myths acceptance and attitudes towards rape victims. Moreover, it can be concluded that greater

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attention is required with regard to the role of cultural and traditional norms and how they have an impact on the attitudes of the general population in Pakistan towards rape victims.

## Limitations and suggestions for future research

Several limitations were identified in the current study. Firstly, the nonsignificant gender differences might have emerged due to the way in which we operationalized the variables or due to the online mode of data collection. Moreover, data comprise responses gained through a purposive sample of the general population which was accessed online. Therefore, the generalizability of the findings can be questioned as a different researcher might come up with a different sampled elements using the same target population. Accordingly, the sample for the study might not have been so diverse as only individuals having access to smartphone devices were the ones who were sampled. Though attempts were made to gain access to a diverse sample, university students were primarily the ones who were sampled. This might be a major reason behind most participants being homogenous in age and educational attainment. This might also be a reason due to which nonsignificant effects were seen with regard to age, gender, socioeconomic status, and other indicators.

Studies should specifically be done to address these limitations. Attempts should be made to gain access to a larger and more random sample to achieve generalizability of results. Moreover, experimental research can be done to assess whether rape myths acceptance and causal attributions causally explain negative attitudes towards rape victims.

## Implications

The findings contribute towards a better understanding of the rape myths in the general population of Pakistan and how the prevalence of such myths may contribute towards social, cultural, and legal problems of rape myths. The study also provides policy implications for a region where rape victims experience higher levels of blame and limited legal backing and support.

### Abbreviations
MANOVA: Multivariate analysis of variance; AMOS: Analysis of moment structures.

### Authors' contributions
SMAK and RI contributed to the study's conception and design. Data collection was performed by SMAK and MUF. SMAK performed data analysis. The first draft of the manuscript was written by SMAK, MUH, and RI. The authors read and approved the final manuscript.

### Availability of data and materials
Raw data were generated at the SPSS sheet. Derived data supporting the findings of this study are available upon request.

## Declarations

### Ethics approval and consent to participate
Ethical approval of the study was obtained from the Ethics Review Committee, Government College University, Lahore. Moreover, all participants had issued informed consent for participation in the study. Anonymity and confidentiality of participants were also ensured. There was no harm for participants to contribute to this study. The study was performed following all relevant ethical standards of the Declaration of Helsinki.

### Consent for publication
Consent has been given by all authors for publication of this study.

### Competing interests
The authors declare that they have no competing interests.

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