

## Assessing the Relative Impacts of Gender and Educational Levels on the Moral Foundations of the Students

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### ABSTRACT

The study examined the impacts of gender and levels of education on harm/care, fairness/reciprocity, in-group/loyalty, authority/respect and purity/sanctity dimensions of moral foundations. One hundred ninety two male ( $M_{Age} = 20.95$ ,  $SD_{Age} = 2.11$ ) and 197 female ( $M_{Age} = 20.74$ ,  $SD_{Age} = 2.05$ ) graduates and postgraduates took part in this study. The moral foundations of the participants were measured with the help of Moral Foundation Questionnaire (Graham, Haidt, & Nosek, 2009). The findings of the study showed that the male and female participants did not differ significantly in their mean scores on the five dimensions of moral foundations. The male graduate and postgraduate students also did not differ significantly. Contrarily, the female undergraduate participants achieved significantly higher mean scores on fairness/reciprocity and in-group/loyalty dimensions of moral foundations as compared to their female postgraduate counterparts, whereas these two groups did not differ significantly on the rest of the measures. Irrespective of gender, the undergraduate participants achieved statistically higher mean scores on fairness/reciprocity and in-group/loyalty. The hierarchical regression also exhibited that gender and educational levels of the participants contributed significantly to five components of moral foundations. It was explicit that education accounted for significant variations in the scores of fairness-reciprocity and ingroup-loyalty. The main effects of educational levels for fairness-reciprocity and ingroup-loyalty were significant. In addition, the interaction effects of gender and educational levels were also significant for fairness-reciprocity. The findings evinced that educational level of the participants played an important role in shaping some of the dimensions of moral foundations. The findings have been discussed in the light of extant theoretical and empirical findings of moral foundations. The conclusions of the study have significant implications for understanding moral behaviours of various groups. The limitations and future directions for the researchers have also been highlighted.

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**M**orality constitutes one of the most desirable virtues of human beings that distinguish them from other beings. Moral behaviour refers to a set of behaviours that reflects manner, character and proper behaviour of an individual in a given situation according to some accepted social, cultural and legal standards. Traditionally, the study of morality and moral behaviours has been the subject matter of philosophy, religion or ethics. It has been argued that moral behaviours differ in their ontology and epistemology due to a host of socio-cultural and environmental factors (Helgeson, 2012).

Kohlberg (1981) was the one of the early psychologists who studied morality and presented a theory of moral development. In his series of longitudinal study of boys of elementary school to adulthood, Kohlberg (1981) evaluated people's stages of moral development that culminated into three phases comprising two stages each. The first two stages of moral development occur at pre-conventional phase that involve the physical consequences of behavior during which the morality of an individual is regulated by his fear of punishment or desire to be rewarded. The third and fourth stages pertain to the conventional phase that reflects the importance of rules and others' expectations, and the maintenance of law and order. The fifth and sixth stages are parts of post-conventional phase that signifies internal standards and conscience of the individuals. The moral development theory of Kohlberg (1981) is criticized on the ground that it excluded females from his study and, thus, is biased against females.

Gilligan (1982) was a great critic of Kohlberg's theory who argued that moral reasoning of women is not inferior to men. Moreover, Gilligan (1982) argued that women do not have a moral orientation that is inferior and different from men. In the other words, women have a morality of responsibility that reflects their relationship to others, whereas men have a morality of rights that denotes their separation from others. Thus, the morality of women comprises of responsibilities and feelings towards others, and relationships while the morality of men reflects rights, rules and standards of justice. In their meta-analytic study of 160 samples, Jaffe and Hyde (2000) reported a small gender difference in moral reasoning that reflected women to be care oriented and men to be justice oriented. It has also been argued that gender differences in morality are moderated by a host of factors (Mainiero, Gibson, & Sullivan, 2008). In a web-based study involving real life moral dilemma of United States sample after two months of 9/11 incident, Mainiero et al. (2008) observed that women scored higher than men on both care and justice orientations. In the other words, women may have had a stronger moral response overall than men in similar situations.

Gender differences in morality are strongly influenced by ethnicity and culture of the individuals. Jackson et al. (2009) have observed that White females, Black males, and Black females viewed moral behavior in terms of its relationship with well-being. For the life situations such as extra-marital affairs, divorce and legalizing marijuana, women reflect more traditional views than men (Eagly et al., 2004). The morality of women are heavily influenced by their social compassion reflecting well-being of others such as gun control, racial discrimination, disparity in income of rich and poor, and the death penalty. The difference in the religiosity of men and women is another important contributor to differences in their morality. It has been reported that women are more religious than men. For example,

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a study observed that majority of women believe in God, assume religion to be important and attend religious activities more than men (Pew, 2009a).

Some gender differences in the personality attributes may underlie in the dissimilar morality of men and women. Angney and Dearing (2002) suggested that females experience more shame and guilt and are more empathetic than males. On the other hand, men show more engagement in aggressive and antisocial behavior than women. These differences in their personality orientations make women to be care-oriented and men to be more justice-inclined. Nunner-Winkler, Meyer-Nikele, and Wohlrab (2007) studied gender differences in morality and reported that men and women differ in their moral stereotypes and motivations. In the other words, men show more inclination towards negative and morally unfavorable traits whereas women exhibit stereotypes reflecting mostly positive and morally favorable traits. These differences in the moral motivations of men and women may be caused by their dissimilar nature of gender identity and contents of cultural gender stereotypes (Nunner-Winkler et al., 2007).

In recent past, a newer explanation of gender differences in morality has been provided by moral foundations theory (Haidt & Joseph, 2004). The moral foundations theory argues for innate and universal psychological systems acting as the foundations of intuitive ethics that serve as the frameworks for the constructions of virtues, narratives, and institutions. These constructions create unique moralities reflected in men and women of different societies and nations. The theory has proposed multiple basic foundations for gender differences in morality. The first is care/harm that is related to long evolution of attachment styles, and positive and negative feeling abilities of human beings. It denotes the virtues of kindness, gentleness, and nurturance. The fairness/cheating dimension is related to the evolutionary process of reciprocal altruism that represents justice, rights, and autonomy. Loyalty/betrayal is the third foundation that denotes the virtues of patriotism and self-sacrifice for others and groups.

Authority/subversion is the fourth foundation that shapes hierarchical social interactions and carries leadership, followership deference to legitimate authority and respect for traditions. Lastly, sanctity/degradation constitutes the fifth foundation that regulates disgust and contamination. It makes possible the striving to live in an elevated, less carnal and nobler way. Liberty/oppression is the sixth foundation that represents the feelings of reactance and resentment toward restrictions of liberty. The education policies formulated by the political cultures of the world promote dissimilar modal personalities that give birth to different moral foundations. The moral foundations theory put forth six evolved and universal psychological systems or foundations that underlie all cultural constructions of morality. There are enormous differences in cultural constructs in moralities that lead to dissimilar moral foundations (Miles, 2014).

In essence, studying gender and educational differences in moral foundations carry an important theoretical and practical significance to underscore a variety of interpersonal interactions and psychological outcomes of the individuals. It has been argued that dissimilar cultural systems denote differences in tangible social and economic consequences and may lead to different moral foundations (Miles, 2014). Miles (2014) has argued that gender, age cohort, and religious affiliations are significant predictors of a widest range of moral constructs followed by education and marital status. In this backdrop of the facts and arguments, the present study aimed to underscore the impacts of gender and levels of

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educational attainment on harm/care, fairness/reciprocity, in-group/loyalty, authority/respect and purity/sanctity dimensions of moral foundations of the undergraduate and postgraduate students.

### **Objectives**

*Following were the basic objectives of the study:*

1. To find out gender differences in the various dimensions of moral foundations,
2. To develop an understanding into the differences in the various dimensions of moral foundations of undergraduate and postgraduate students,
3. To study the main and interaction effects of gender and educational levels in shaping the patterns of scores of the various dimensions of moral foundations of the participants, and
4. To estimate the predictive strengths of gender and educational levels for the scores of the various dimensions of moral foundations of the participants.

### **Hypotheses**

*Following hypotheses were set forth to be tested through the findings of the present study:*

1. The female participants will show higher mean scores on harm/care, fairness/reciprocity and in-group/ loyalty dimensions of moral foundations as compared to the males whereas the latter will show higher mean scores on the authority/ respect and purity/sanctity moral foundations as compared to the former.
2. The undergraduates will show higher mean scores on all the five dimensions of moral foundations namely, harm/care, fairness/ reciprocity, in-group/ loyalty, authority/ respect and purity/ sanctity as compared to the postgraduates.
3. The main and interaction effects of gender and educational levels on the various dimensions of moral foundations of the participants will be significant.
4. The gender and educational levels of the participants will account for significant variance in the scores of the various dimensions of moral foundations.

## **METHODS AND PROCEDURE**

### **Participants**

A correlational research design was employed to collect, process and analyze the data of the study. The convenient sampling method was used to recruit the participants in the study. Initially, 400 participants with equal number of males and females were recruited as the participants. After screening the 11 outliers, the scores of 192 male participants, with age ranging from 17 years to 27 years ( $M_{Age} = 20.95$ ,  $SD_{Age} = 2.11$ ), and 197 female participants, age spanning from 16 years to 26 years ( $M_{Age} = 20.74$ ,  $SD_{Age} = 2.05$ ) who did not differ in their age ( $t_{Age} = 1.03$ ,  $df = 387$ ,  $p = 303$ ), were finally used for statistical analysis. Out of 389 participants, 196 were undergraduate and the rest 193 were pursuing their post-graduation in various disciplines of Doctor Harisingh Gour Vishwavidyalaya, Sagar, Madhya Pradesh, India. Most of the participants belonged to lower and middle socioeconomic status with rural and urban domicile.

### **Tool**

**The Moral Foundation Questionnaire** developed by Graham, Haidt, and Nosek (2009) was employed to measure moral foundations of the participants. The questionnaire consists of 32 items with six points scale (0-Strongly Disagree, 1-Moderately Disagree, 2-Slightly Disagree, 3-Slightly Agree, 4-Moderately Agree, and 5-Strongly Agree). The scale purports to measure five dimensions namely, harm/care

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(1, 7, 12, 17, 23, 28), fairness/reciprocity (2, 8, 13, 18, 24, 29), in-group/loyalty (3, 9, 14, 19, 25, 30), authority/respect (4, 10, 15, 20, 26, 31) and purity/sanctity (5, 11, 16, 21, 27, 32). The items 6 and 22 are just used to catch people who are not paying attention. The reliability and validity of the scale have been reported to be satisfactory and the scale has been used widely for research and academic purposes (Graham et al., 2009).

### **Procedure**

After preparing the plan of the study, selection of sample and procurement of the tool, the task of data collection was started. The whole sample was divided into small sub-groups of 15 to 20 participants for the ease of rapport building, administration of the questionnaire and proper communication. The actual data collection was started after debriefing about the basic objectives of the study and collection of written consent from each participant. It followed supplying a set of the questionnaire to each participant of all the sub-groups. The scoring was done as per the instructions depicted in the manual of the questionnaire and the data were arranged according to the need of statistical analyses. The mean, standard deviation (SD), t-test, analysis of variance (ANOVA) and hierarchical regression were used to analyse the data with the help of SPSS.

## RESULTS

The mean scores, SDs and t-values of the five dimensions of moral foundation of male and female participants have been presented in Table 1. The results exhibited that male and female participants did not differ in their mean scores on harm/care, fairness/reciprocity, in-group/loyalty, authority/respect and purity/sanctity dimensions of moral foundation (Table 1).

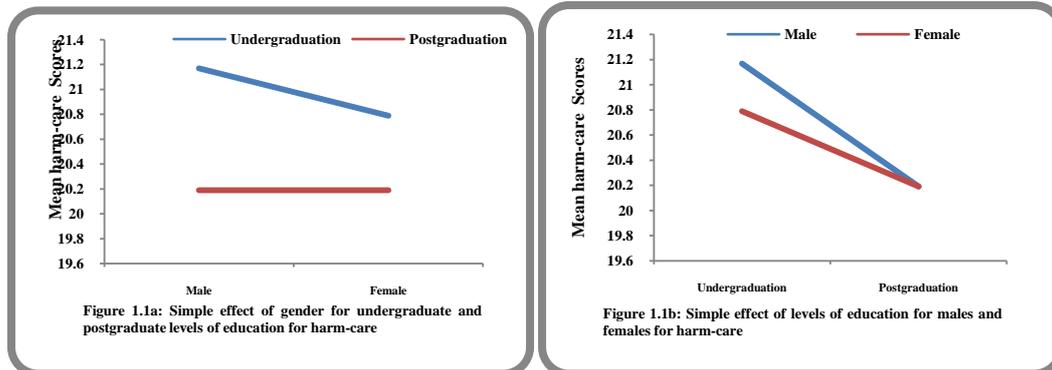
**Table 1: Mean scores, SDs and t-values of the harm/care, fairness/reciprocity, in-group/loyalty, authority/respect and purity/sanctity dimensions of moral foundations of the male and female participants**

| S. No. | Measures             | Gender | N   | Mean  | SD   | t    | df  | p    |
|--------|----------------------|--------|-----|-------|------|------|-----|------|
| 1.     | Harm-Care            | Male   | 192 | 20.70 | 4.22 | 0.45 | 387 | .656 |
|        |                      | Female | 197 | 20.48 | 5.25 |      |     |      |
| 2.     | Fairness-Reciprocity | Male   | 192 | 20.38 | 4.29 | 0.65 | 387 | .514 |
|        |                      | Female | 197 | 20.68 | 4.77 |      |     |      |
| 3.     | Ingroup-Loyalty      | Male   | 192 | 19.66 | 4.28 | 0.06 | 387 | .950 |
|        |                      | Female | 197 | 19.69 | 4.86 |      |     |      |
| 4.     | Authority-Respect    | Male   | 192 | 20.42 | 4.29 | 1.66 | 387 | .097 |
|        |                      | Female | 197 | 19.66 | 4.79 |      |     |      |
| 5.     | Purity-Sanctity      | Male   | 192 | 19.92 | 4.76 | 1.36 | 387 | .175 |
|        |                      | Female | 197 | 19.25 | 5.01 |      |     |      |

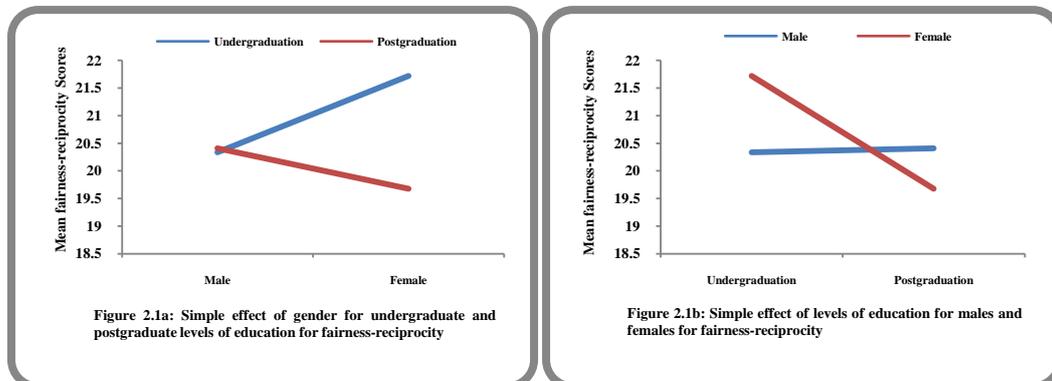
The mean scores of the five dimensions of moral foundation of undergraduate and postgraduate male participants were computed and compared which showed that graduate and postgraduate male students did not significantly differ in their mean scores on harm/care (Undergraduate-M = 21.17, SD = 4.17; Postgraduate-M = 20.19, SD = 0.12;  $t = 1.62$ ,  $df = 190$ ,  $p = .106$ ), fairness/reciprocity (Undergraduate-M = 20.34, SD = 4.01; Postgraduate-M = 20.41, SD = 4.60;  $t = 0.12$ ,  $df = 190$ ,  $p = .907$ ), in-group/loyalty (Undergraduate-M = 20.10, SD = 4.11; Postgraduate-M = 19.19, SD = 4.43;  $t = 1.49$ ,  $df = 190$ ,  $p = .139$ ), authority/respect (Undergraduate-M = 20.55, SD = 4.36; Postgraduate-M = 20.28, SD = 4.24;

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$t = 0.43$ ,  $df = 190$ ,  $p = .667$ ) and purity/sanctity (Undergraduate- $M = 19.93$ ,  $SD = 4.79$ ; Postgraduate- $M = 19.91$ ,  $SD = 4.75$ ;  $t = 0.03$ ,  $df = 190$ ,  $p = .980$ ) dimensions of moral foundations.

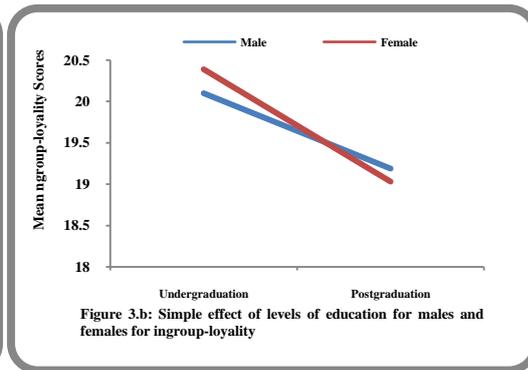
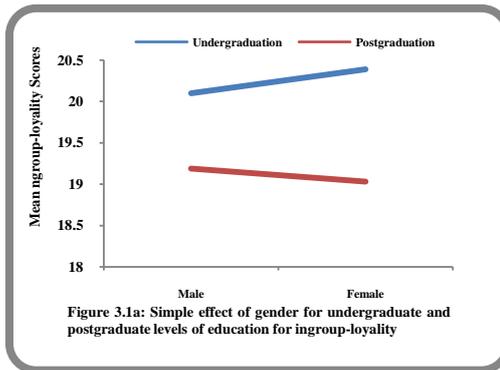


Contrarily, the female undergraduate participants achieved statistically significant higher mean scores on fairness/reciprocity (Undergraduate- $M = 21.72$ ,  $SD = 4.93$ ; Postgraduate- $M = 19.68$ ,  $SD = 4.40$ ;  $t = 3.06$ ,  $df = 195$ ,  $p = .003$ ) and in-group/loyalty (Undergraduate- $M = 20.39$ ,  $SD = 4.42$ ; Postgraduate- $M = 19.03$ ,  $SD = 5.18$ ;  $t = 1.97$ ,  $df = 195$ ,  $p = .050$ ) dimensions of moral foundations as compared to their female postgraduate counterparts.

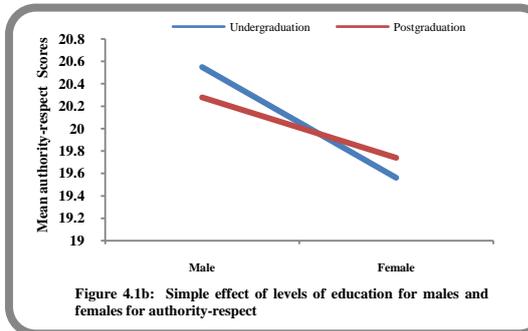
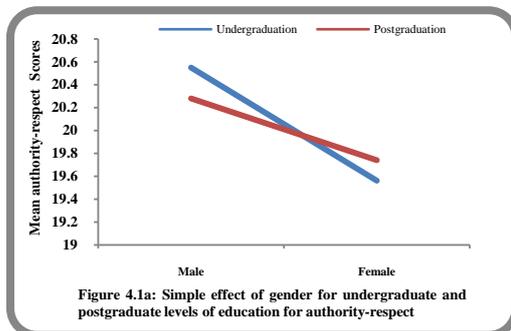


On rest of the dimensions of moral foundations namely, harm/care (Undergraduate- $M = 20.79$ ,  $SD = 5.50$ ; Postgraduate- $M = 20.19$ ,  $SD = 5.01$ ;  $t = 0.81$ ,  $df = 195$ ,  $p = .421$ ), authority/respect (Undergraduate- $M = 19.56$ ,  $SD = 4.54$ ; Postgraduate- $M = 19.74$ ,  $SD = 5.03$ ;  $t = 0.26$ ,  $df = 195$ ,  $p = .793$ ) and purity/sanctity (Undergraduate- $M = 19.06$ ,  $SD = 5.06$ ; Postgraduate- $M = 19.43$ ,  $SD = 4.97$ ;  $t = 0.51$ ,  $df = 195$ ,  $p = .612$ ), the two groups of females did not differ significantly.

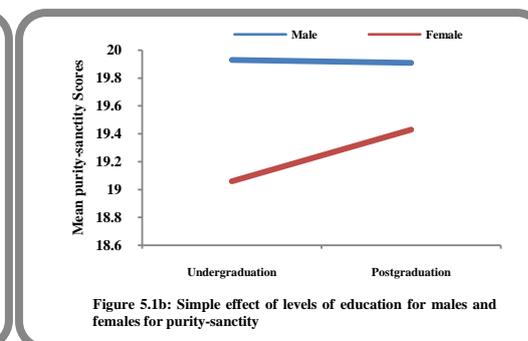
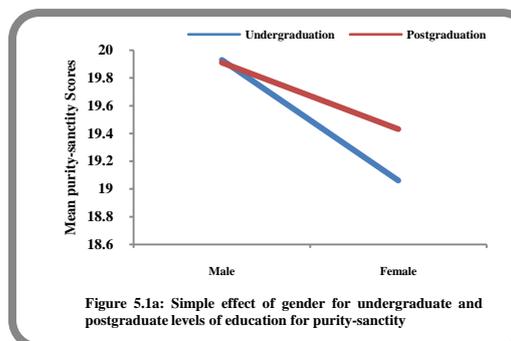
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Irrespective of gender, the undergraduate participants evoked statistically higher mean scores on fairness/reciprocity (Undergraduate-M = 21.02, SD = 4.53; Postgraduate-M = 20.03, SD = 4.50;  $t = 2.15$ ,  $df = 387$ ,  $p = .032$ ) and in-group/loyalty (Undergraduate-M = 20.24, SD = 4.26; Postgraduate-M = 19.10, SD = 4.83;  $t = 2.46$ ,  $df = 387$ ,  $p = .014$ ) dimensions of moral foundations as compared to their postgraduate counterparts (Table 2).



On rest of the dimensions of moral foundations namely, harm/care (Undergraduate-M = 20.99, SD = 4.86; Postgraduate-M = 20.19, SD = 4.65;  $t = 1.66$ ,  $df = 387$ ,  $p = .099$ ), authority/respect (Undergraduate-M = 20.07, SD = 4.46; Postgraduate-M = 20.00, SD = 4.67;  $t = 0.14$ ,  $df = 387$ ,  $p = .86$ ) and purity/sanctity (Undergraduate-M = 19.51, SD = 4.93; Postgraduate-M = 19.66, SD = 4.86;  $t = 0.31$ ,  $df = 387$ ,  $p = .758$ ), the two groups of the participants did not differ significantly (Table 2).



The results of analysis of variance showed that the main effects of gender for harm-care ( $F(1, 385) = .150$ ,  $p = .698$ ), fairness-reciprocity ( $F(1, 385) = .507$ ,  $p = .477$ ), ingroup-loyalty ( $F(1, 385) = .020$ ,  $p = .888$ ), authority-respect ( $F(1, 385) = 2.726$ ,  $p = .100$ ) and purity-sanctity ( $F(1, 385) = 1.860$ ,  $p = .173$ ) were not significant.

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**Table 2: Mean scores, SDs and t-values of the harm/care, fairness/reciprocity, ingroup/loyalty, authority/respect and purity/sanctity dimensions of moral foundations of the undergraduate and postgraduate participants**

| S. No. | Measures             | Education     | N   | Mean  | SD   | t    | df  | p    |
|--------|----------------------|---------------|-----|-------|------|------|-----|------|
| 1.     | Harm-Care            | Undergraduate | 196 | 20.99 | 4.86 | 1.66 | 387 | .099 |
|        |                      | Postgraduate  | 193 | 20.19 | 4.65 |      |     |      |
| 2.     | Fairness-Reciprocity | Undergraduate | 196 | 21.02 | 4.53 | 2.15 | 387 | .032 |
|        |                      | Postgraduate  | 193 | 20.03 | 4.50 |      |     |      |
| 3.     | Ingroup-Loyalty      | Undergraduate | 196 | 20.24 | 4.26 | 2.46 | 387 | .014 |
|        |                      | Postgraduate  | 193 | 19.10 | 4.83 |      |     |      |
| 4.     | Authority-Respect    | Undergraduate | 196 | 20.07 | 4.46 | 0.14 | 387 | .886 |
|        |                      | Postgraduate  | 193 | 20.00 | 4.67 |      |     |      |
| 5.     | Purity-Sanctity      | Undergraduate | 196 | 19.51 | 4.93 | 0.31 | 387 | .758 |
|        |                      | Postgraduate  | 193 | 19.66 | 4.86 |      |     |      |

Likewise, the main effects of educational levels for harm-care ( $F(1, 385) = 2.701, p = .101$ ), authority-respect ( $F(1, 385) = .009, p = .925$ ) and purity-sanctity ( $F(1, 385) = .121, p = .728$ ) were also not significant. Conversely, the main effects of educational levels for fairness-reciprocity ( $F(1, 385) = 4.641, p = .032$ ) and ingroup-loyalty ( $F(1, 385) = .6030, p = .015$ ) were significant.

The interaction effects of gender and educational levels were statistically non-significant for harm-care ( $F(1, 385) = .156, p = .693$ ), ingroup-loyalty ( $F(1, 385) = .227, p = .634$ ), authority-respect ( $F(1, 385) = .234, p = .629$ ) and purity-sanctity ( $F(1, 385) = .146, p = .702$ ) dimensions of moral foundations. Contrarily, the interaction effects of gender and educational levels were statistically significant for fairness-reciprocity ( $F(1, 385) = 5.357, p = .021$ ). These results have been presented graphically in Figures 1.1a, 1.1b, 2.1a, 2.1b, 3.1a, 3.1b, 4.1a, 4.1b, 5.1a and 5.1b, respectively.

The hierarchical regression analysis showed that the predicted value of fairness-reciprocity for female was .300 units higher than for males (Table 3). Similarly, the value of  $R^2$  showed no significant variations in the scores of fairness-reciprocity accounted for by gender with the model 1 ( $R^2 = .001, F(1, 387) = 0.426, p = .514$ ). In model 2, it was explicit that the predicted value of fairness-reciprocity for undergraduates was .995 units lower than for postgraduates (Table 3). Thus, the value of  $R^2$  showed statistically significant variations in the scores of fairness-reciprocity accounted for by education with the model 2 ( $R^2 = .013, F(1, 386) = 4.723, p = .030$ ). Similarly, the predicted value of ingroup-loyalty for female was .029 units higher than for males (Table 3).

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**Table 3: Summary of Hierarchical Regression Analysis for Variables Predicting harm-care, fairness-reciprocity, ingroup-loyalty, authority-respect and purity-sanctity dimensions of moral foundations of the participants (N = 389)**

| Variables                   | Model 1 |      |       | Model 2 |      |       |
|-----------------------------|---------|------|-------|---------|------|-------|
|                             | B       | SE B | β     | B       | SE B | β     |
| <b>Harm-Care</b>            |         |      |       |         |      |       |
| Gender                      | -.216   | .484 | -.023 | -.189   | .483 | -.020 |
| Education                   |         |      |       | -.792   | .483 | -.083 |
| R2                          | .001    |      |       | .007    |      |       |
| F for change in R2          | .199    |      |       | 2.690   |      |       |
| <b>Fairness-Reciprocity</b> |         |      |       |         |      |       |
| Gender                      | .300    | .460 | .033  | .333    | .458 | .037  |
| Education                   |         |      |       | -.995   | .458 | -.110 |
| R2                          | .001    |      |       | 0.013   |      |       |
| F for change in R2          | 0.426   |      |       | 4.723*  |      |       |
| <b>Ingroup-Loyalty</b>      |         |      |       |         |      |       |
| Gender                      | .029    | .465 | .003  | .067    | .462 | .007  |
| Education                   |         |      |       | -1.138  | .462 | -.125 |
| R2                          | .000    |      |       | 0.016   |      |       |
| F for change in R2          | .004    |      |       | 6.075** |      |       |
| <b>Authority-Respect</b>    |         |      |       |         |      |       |
| Gender                      | -.767   | .461 | -.084 | -.766   | .462 | -.084 |
| Education                   |         |      |       | -.041   | .462 | -.004 |
| R2                          | .007    |      |       | .007    |      |       |
| F for change in R2          | 2.765   |      |       | .008    |      |       |
| <b>Purity-Sanctity</b>      |         |      |       |         |      |       |
| Gender                      | -.673   | .495 | -.069 | -.679   | .496 | -.070 |
| Education                   |         |      |       | .176    | .496 | .018  |
| R2                          | .005    |      |       | .005    |      |       |
| F for change in R2          | 1.847   |      |       | 0.125   |      |       |

\* $p < .05$ . \*\* $p < .01$ .

Similarly, the value of  $R^2$  showed no significant variations in the scores of ingroup-loyalty accounted for by gender with the model 1 ( $R^2 = .000$ ,  $F(1, 387) = 0.004$ ,  $p = .950$ ). In model 2, it was explicit that the predicted value of ingroup-loyalty for undergraduates was 1.138 units lower than for postgraduates (Table 3). Thus, the value of  $R^2$  showed statistically significant variations in the scores of ingroup-loyalty accounted for by education with the model 2 ( $R^2 = .016$ ,  $F(1, 386) = 6.075$ ,  $p = .014$ ). Contrarily, gender and education did not account for significant variance in the scores of harm-care, authority-respect and purity-sanctity dimensions of moral foundations (Table 3).

## **DISCUSSION**

The findings of the study evinced that the male and female participants did not differ significantly in their mean scores of harm/care, fairness/reciprocity, in-group/loyalty, authority/respect and purity/sanctity dimensions of moral foundation. Likewise, the undergraduate and postgraduate male participants also exhibited the same trends of the results on these measures. Conversely, the female undergraduate participants achieved statistically significant higher mean scores on fairness/reciprocity and in-group/loyalty dimensions of

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moral foundations as compared to their female postgraduate counterparts whereas these two groups did not differ significantly on harm/care, authority/respect and purity/sanctity measures of moral foundations. Irrespective of gender, the undergraduate participants achieved statistically higher mean scores on fairness/reciprocity and in-group/loyalty. Contrarily, these two groups did not differ in their mean scores of harm/care, authority/respect and purity/sanctity components of moral foundations. The main effects of educational levels for fairness-reciprocity and ingroup-loyalty were significant. In addition, the interaction effects of gender and educational levels were also significant for fairness-reciprocity. The hierarchical regression also exhibited that gender and educational levels of the participants contributed significantly to shape the nature of fairness/reciprocity and in-group/loyalty components of moral foundations.

These findings did not support the hypothesis 1 which presumed that the female participants will show higher mean scores on harm/care, fairness/reciprocity and in-group/loyalty dimensions of moral foundations as compared to the males whereas the latter will show higher mean scores on the authority/respect and purity/sanctity moral foundations as compared to the former. Conversely, the findings partially approved hypothesis 2 which conjectured that the undergraduates will show higher mean scores on all the five dimensions of moral foundations as compared to the postgraduates. Likewise, the findings of the study again partially supported hypothesis 3 that expected that the main and interaction effects of gender and educational levels on the various dimensions of moral foundations of the participants will be significant. Lastly, the hypothesis 4 was partially approved that inferred gender and educational levels to account for significant variance in the scores of the various dimensions of moral foundations.

Moral Foundations Theory (Graham et al., 2013) was given to explain the variety and universality of moral judgments. The theory assumes that all individuals have a first and innate draft of the moral mind that is amenable to be edited by experience (Marcus, 2004). People may similarly be more prone to learning some moral values. Need for effective interactions between individuals within social groups may act as precursor for differences in moral foundations (Richerson & Boyd, 2005). The first draft of the moral mind gets edited during development within a culture. The moral judgments are associative, automatic, relatively effortless, rapid, and rely on heuristic processing (Kahneman, 2011). There are many psychological foundations of morality. There are numerous adaptive social challenges throughout evolutionary history that act as the precursors to emerge various moral foundations.

The care/harm dimension assumes that humans undergo long period of development and remain dependent upon their caretakers. Therefore, caretakers who were more sensitive to the needs and distress of their children were more likely to have children survive into adulthood. The fairness/cheating dimension denotes that all social animals interact with each other and the sense of fairness can be found across human cultures (Fiske, 1991). People monitor the behaviour and reputations of others for future interactions. The loyalty/betrayal assumes that there are finite resources and coalitions compete for these resources. The authority/subversion dimension involves that psychology of authority is essential for understanding human interpersonal and group behaviour (Boehm, 1999). Groups having clear authority function better than leaderless or normless groups, or groups with autocratic and domineering leadership (Pfeffer, 1998). The purity/degradation signifies that contamination concerns can

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be generalized to social practices including being fearful of dissimilar others and a rejection of people who do not live in accordance with the sacred practices of the group.

The findings demonstrated that gender of the participants did not play important role in shaping the nature of various dimensions of moral foundations. This may be due to the fact that the males and females in the sample of the study perceive equal opportunity of care, nutrition, education and employment as most of them belong to rather homogenous urban dwelling. These similarities in the socialization practices, parental expectations and environmental stimulations may underlie their similar moral foundations. The findings exhibited that the female undergraduate participants achieved statistically significant higher mean scores on fairness/reciprocity and in-group/loyalty dimensions of moral foundations as compared to their female postgraduates. Irrespective of gender, the undergraduate participants achieved statistically higher mean scores on fairness/reciprocity and in-group/loyalty. Fairness/reciprocity involves the argument that all social animals interact with one another and the sense of fairness can be found across human cultures (Fiske, 1991). People monitor the behaviour and reputations of others for future interactions. Furthermore, in-group/loyalty assumes that there are finite resources and coalitions compete for these resources. The undergraduate female students were observed to show significantly higher scores on fairness/reciprocity and ingroup/loyalty dimensions of moral foundations. In fact, undergraduate is the entry point of university education in India, where girls come out of their limited boundary of home and co-education. The threats of security, heterosexual and academic stress probably propel them to inculcate fairness and reciprocation for successful adjustment in the changed scenario of co-education and have to expand their horizon. Even male undergraduate students who mostly come from rural environment are conscious of their self-perception and social perception, naturally practice fairness. Reciprocity is inevitable value orientation for coping in an urban dominant surrounding. When these undergraduate students move into postgraduate classes, they become career conscious and bound to develop a kind of individuality exist in competitive environment. They hardly have time for earlier level of reciprocity. The many faceted competition also make them less susceptible for fairness in comparison to care free undergraduate years where happy go merry was one of the cherished aim. These facts might be working behind the dissimilar performance of the undergraduate and postgraduate females.

### **SUMMARY AND CONCLUSIONS**

The findings of the study showed that the male and female participants did not differ significantly in their mean scores on the five dimensions of moral foundations. The male graduate and postgraduate students also did not differ significantly. Contrarily, the female undergraduate participants achieved significantly higher mean scores on fairness/reciprocity and in-group/loyalty dimensions of moral foundations as compared to their female postgraduate counterparts whereas these two groups did not differ significantly on the rest of the measures. Irrespective of gender, the undergraduate participants achieved statistically higher mean scores on fairness/reciprocity and in-group/loyalty. The hierarchical regression also exhibited that gender and educational levels of the participants contributed significantly to fairness/reciprocity and in-group/loyalty aspects of moral foundations. It was explicit that education accounted for significant variations in the scores of fairness-reciprocity and ingroup-loyalty. The main effects of educational levels for fairness-reciprocity and ingroup-loyalty were significant. In addition, the interaction effect of gender and educational levels was also significant for fairness-reciprocity. The findings evinced that educational level of the participants played important role in shaping some of the dimensions of moral

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foundations. The conclusions of the study have significant implications for understanding moral behaviours of various groups.

### DIRECTIONS FOR FUTURE RESEARCHERS

Moral Foundations Theory assumes that moral judgements are universal and reflect innate tendency useful for survival (Graham et al., 2013). The innate draft of the moral mind is modifiable (Marcus, 2004). Socio-cultural realities of life and useful interactions having survival values shape its nature and dynamics. There are many psychological foundations of morality and changes are incorporated as per the adaptive social challenges of life. The research about the nature and dynamics of moral foundations is in its infancy. The future researchers may carry out their studies to explore its usefulness to understand human behavior in interpersonal, community and group interactions. The positive aspects of human existence such as, spirituality (Sharma, Tiwari, & Rai, 2017; Sharma, Tiwari, & Rai, communicated; Sharma, Tiwari, Rai & Gour, 2018), forgiveness (Mudgal & Tiwari, 2015; Mudgal & Tiwari, 2017; Mudgal & Tiwari, communicated), positive body image (Jain, & Tiwari, 2016a; Jain, & Tiwari, 2016b; Tiwari, & Kumar, 2015; Tiwari, 2014), self-concept (Gujare & Tiwari, 2016a; Gujare & Tiwari, 2016b), emotional intelligence (Tiwari, 2016a), spiritual practices (Tiwari, 2016b), emotion regulation (Tiwari, 2015), compassion (Verma & Tiwari, 2017a; Verma & Tiwari, 2017b), gender attitudes and femininity (Jain, Tiwari, & Awasthi, 2018; Jain, Tiwari, Awasthi, & Chaubey, 2018) and metacognition (Jain, Tiwari & Awasthi, 2017; Jain, Tiwari & Awasthi, 2018a; Jain, Tiwari & Awasthi, 2018b) may be considered for further studies in association with moral foundations to develop better understanding and their outcomes significant for human life. The researchers may also carry out further research employing methodological innovations. For example, use of qualitative methods and mixed methods may help to come up with useful findings. Cross-cultural verification of these findings may be another scope for future researchers.

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### Conflict of Interest

There is no conflict of interest.

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