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Research Paper

Role of Some Demographic Factors on Emotion Regulation, Empathy and Life Orientation among College Students

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ABSTRACT

This study examines the link between emotional regulation, empathy, and life orientation using data from 106 college students, comprising 52 undergraduates and 54 postgraduates. Participants completed the Emotional Regulation Questionnaire, Toronto Empathy Questionnaire, and Life Orientation Test–Revised. Results indicate significant gender, age, education level, and field of study differences in emotion regulation, empathy, and life orientation. Males tend to have higher cognitive reappraisal, total emotion regulation and optimism while females exhibit greater total empathy. Older individuals show higher expressive suppression and total emotion regulation compared to younger ones. Postgraduates display higher levels of cognitive reappraisal, expressive suppression, total emotion regulation, and total empathy than undergraduates. Science students also demonstrate higher levels of these traits compared to arts students. Bivariate correlations highlight strong links between emotion regulation and life orientation, with cognitive and expressive emotion regulation strongly associated with total emotion regulation, and total empathy linked to optimism. Additionally, total empathy emerges as a predictor of optimism.

Keywords: *Emotion Regulation, Empathy, Life Orientation*

Emotions are mental states brought on by neurophysiological changes, variously associated with thoughts, feelings, behavioural responses, and a degree of pleasure or displeasure. Emotions play a crucial role during this transformative journey, intertwined with factors like emotion regulation, empathy, and life orientation. Emotion regulation involves managing emotional experiences consciously or unconsciously, influencing behaviour and responses to situations. Empathy, the ability to understand and share others' emotions, is essential for building relationships and navigating social interactions. Life orientation, encapsulating one's expectancy for positive or negative outcomes, shapes attitudes and beliefs about the future.

Understanding the interplay between emotion regulation, empathy, and life orientation is vital for supporting college students' well-being. The research delves into how students regulate emotions in empathic situations and explores the link between empathy and life orientation. By enhancing emotional intelligence and empathy, educators and mental health

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professionals can develop targeted interventions to support students' overall well-being, fostering a more empathetic and emotionally resilient society beyond the college campus.

A meta-analysis by Riggio et al. (2011) found that emotion regulation strategies such as reappraisal and acceptance were positively correlated with empathy. Additionally, a study by Eisenberg et al. (2000) showed that children with better emotion regulation abilities were more empathetic towards their peers. Research by Eisenberg and Fabes (1992) suggests that individuals employing adaptive emotional regulation strategies tend to demonstrate higher levels of empathy towards others. Heidi L. Maibom evaluated one of the most prominent accounts of how emotion regulation features empathy. According to this account, by Nancy Eisenberg and colleagues, empathy develops into either personal distress or sympathy depending on the ability to regulate one's empathic distress. However, recent evidence suggests that empathic distress and sympathy co-occur throughout the empathic episode and that a certain degree of empathic distress may be necessary for prosocial motivation.

Studies have shown that emotional regulation is indeed associated with life orientation. For example, a study by Gohm and Gross (2008) found that individuals with better emotion regulation abilities were more optimistic and less pessimistic than those with poorer emotion regulation skills. Additionally, a study by Kashdan et al. (2010) showed that interventions aimed at improving emotional regulation led to increased optimism and life satisfaction. Higher levels of empathy have been associated with greater life satisfaction, positive relationships, and prosocial behaviour (Davis, 1994). Moreover, empathy catalyzes personal growth, contributing to a more positive outlook on life and a sense of purpose among college students (Jolliffe & Farrington, 2006).

Objectives

1. To assess and compare emotion regulation, empathy and life orientation between male and female students.
2. To assess and compare emotion regulation, empathy and life orientation between UG and PG levels.
3. To assess and compare emotion regulation, empathy and life orientation between science and arts group students.
4. To determine the relationship between emotion regulation, empathy and life orientation.
5. To examine the role of emotion regulation and life orientation as predictor of empathy.

METHODOLOGY

Sample:

A total of 106 participants were purposively selected, primarily from West Bengal (57%) and Uttar Pradesh (25.2%). Delhi, Bihar, Chhattisgarh, and Rajasthan had smaller representation ranging from 1.9% to 4.7%. Other states like Assam, Odisha, Telangana, Tripura, and Uttarakhand each had a participation rate of 0.9%. Age range is 17-28 years, with 72 females and 34 males. The sample included 52 undergraduates and 54 postgraduates, with 40 from arts-related and 62 from science-related fields. Socio-economic status varied, with 4 high, 93 middle, and 9 low-status participants.

Tools:

1. **Life Orientation Test-Revised (LOT-R)**: Developed by Scheier (1994), measures optimism vs. pessimism with 10 items rated on a 4-point scale.
2. **The Emotional Regulation questionnaire (ERQ)**: It was developed by Gross and John (2003), it assesses emotional regulation with 10 items targeting cognitive reappraisal and expressive suppression, rated on a 7-point scale.
3. **Toronto Empathy Questionnaire (TEQ)**: Developed by Spreng, McKinnon, Mar, and Levine in 2009, it evaluates emotional empathy with 16 items on a 5-point Likert scale, higher scores indicating greater empathy.

RESULTS

The study included 106 individuals aged 17-28 (mean age: 22.5), with 34 males and 72 females. Of these, 52 were undergraduates, 54 were postgraduates. The majority came from middle-class backgrounds (93), with fewer from low (9) and high (4) socio-economic statuses.

Table 1 shows that males had slightly higher cognitive reappraisal scores (M = 31.44, SD = 3.96) compared to females (M = 29.45, SD = 4.59), with a significant t-value of 2.283 ($p < 0.05$). Total emotion regulation scores were higher in males (M = 49.14, SD = 6.41) compared to females (M = 46.00, SD = 7.14), with a t-value of 2.272 ($p < 0.05$, df = 105). In terms of total empathy, females scored significantly higher (M = 48.778, SD = 6.00) than males (M = 44.058, SD = 6.62), with a t-value of 3.524 ($p < 0.05$, df = 105). Additionally, males exhibited higher levels of optimism (M = 8.88, SD = 5.235) compared to females (M = 7.36, SD = 5.722), with a t-value of 3.305 ($p < 0.01$, df = 105). However, there was no significant difference in pessimism levels between males and females (t = 1.218, df = 105).

Table – 1 Mean, SD and t values of Males and Females, Regarding Emotion Regulation, Empathy, and Life Orientation.

Variables	Mean	SD	t value
Emotion Regulation			
Cognitive			
Male	31.44	3.96	2.283*
Female	29.45	4.59	
Expressive			
Male	17.70	4.21	1.124
Female	16.65	5.05	NS
Total			
Emotion Regulation			
Male	49.14	6.41	2.272*
Female	46.00	7.14	
Total Empathy			
Male	44.058	6.62	3.524*
Female	48.778	6.00	
Life Orientation			
Optimism			
Male	8.88	2.011	3.305**
Female	7.36	2.58	
Pessimism			
Male	5.235	1.810	1.218
Female	5.722	2.137	NS

*** P< 0.01 level (2-tailed).* **P< 0.05 level (2-tailed).*

Table 2 indicates significant differences between PG and UG students across various domains. PG students scored higher in cognitive reappraisal ($t = 4.218$, $df = 105$, $p < 0.01$), expressive suppression ($t = 2.326$, $df = 105$, $p < 0.05$), total emotion regulation ($t = 4.514$, $df = 105$, $p < 0.01$), and total empathy ($t = 2.443$, $df = 105$, $p < 0.01$) compared to UG students. However, there were no significant differences in optimism ($t = 0.166$, $df = 105$) or pessimism ($t = 0.325$, $df = 105$) between PG and UG students.

Table – 2 Mean, SD and t values of Different Education Qualifications, Regarding Emotion Regulation, Empathy, and Life Orientation.

Variables	Mean	SD	t value
Emotion Regulation			
Cognitive			
UG	28.36	3.63	4.218**
PG	31.75	4.61	
Expressive			
UG	15.90	5.05	2.326*
PG	18.03	4.43	
Total			
Emotion Regulation			
UG	44.11	6.56	4.514**
PG	49.79	6.37	
Total Empathy			
UG	45.71	6.58	2.443**
PG	48.75	6.24	
Life Orientation			
Optimism	7.80	2.53	0.166
UG	7.88	2.50	NS
PG			
Pessimism	5.500	2.04	0.325
UG	5.629	2.05	NS
PG			

*** P< 0.01 level (2-tailed). *P< 0.05 level (2-tailed).*

In Table 3, cognitive reappraisal shows strong correlations with total emotion regulation ($r = 0.731$, $p < 0.01$) and optimism ($r = 0.261$, $p < 0.01$), but not with expressive suppression, total empathy, or pessimism. Expressive suppression correlates strongly with total emotion regulation ($r = 0.755$, $p < 0.01$), but not with total empathy, optimism, or pessimism. Total emotion regulation does not correlate significantly with total empathy, optimism, or pessimism. Total empathy correlates with optimism ($r = 0.203$, $p < 0.05$), but not with pessimism. Optimism is not associated with pessimism.

Table – 3 Bivariate correlations between emotion regulation, empathy and life orientation

Variables	E R Cognitive	E R Expressive	Total E R	Total Empathy	Optimism	Pessimism
E R Cognitive		0.119 NS	**0.731****	0.003 NS	**0.261****	0.84 NS
E R Expressive			**0.755****	0.108 NS	0.015 NS	0.068 NS
Total E R				0.065 NS	0.179 NS	0.20 NS
Total Empathy					**0.203***	0.003 NS
Optimism						0.043

*** Correlation is significant at the 0.01 level (2-tailed).*
**Correlation is significant at the 0.05 level (2-tailed).*

Results of Table 4 shows that total empathy is a predictor of optimism. Step wise multiple regression analysis explains that total empathy contributed 4.1% of the total variance (R square change= 0.041). Beta (Standardized Coefficient) explains that there is a positive relation between predictor and criterion variables (β =0.203). The t value is also significant between groups on total empathy (t= 2.111, P < 0.05).

Table- 4 Step wise Multiple regression analysis using optimism as criterion and empathy as predictor variable

Criterion Variable - **Optimism**

Predictors	R	R Square	Adjusted R Square	R Square Change	B	Beta	t
Total Empathy	0.203	0.041	0.032	0.041	0.078	0.203	2.111*

**P< 0.05 level (2-tailed).*

DISCUSSION

The study delved into the intricacies of emotion regulation, empathy, and life orientation among college students, uncovering nuanced findings regarding gender disparities, age-related trends, academic differences, and interrelationships between these psychological constructs.

Gender disparities were evident, with males demonstrating superior cognitive reappraisal, total emotion regulation and optimism compared to females, while females exhibited higher levels of total empathy. Males might excel in cognitive and total emotion regulation due to their utilization of diverse strategies influenced by age, activation of cognitive control areas, and preference for cognitive reappraisal in interpersonal contexts. Regarding optimism, males may also exhibit higher levels compared to females. In many societies, men are often encouraged to be confident and assertive, potentially contributing to their elevated levels of optimism. Additionally, research suggests that men may be more inclined to take risks, leading to a more optimistic outlook on the future. Females tend to exhibit higher levels of empathy. This could be due to societal expectations, gender roles, and neurobiological differences. Postgraduate students (PG) displayed heightened cognitive reappraisal, expressive suppression, total emotion regulation and empathy compared to undergraduates (UG), likely due to advanced academic training fostering critical thinking and self-reflection, alongside increased life experience and maturity.

Correlation analyses unveiled the connections between different facets of emotion regulation, highlighting the integral role of cognitive and expressive strategies in overall emotional well-being. Additionally, total empathy exhibited a positive correlation with optimism, suggesting that empathetic individuals tend to maintain a more positive outlook on life. Regression analysis elucidated the impact of total empathy on optimism, indicating a modest but significant relationship between the two constructs. This suggests that while empathy contributes to optimism, other factors not captured in the model also influence one's overall outlook on life.

CONCLUSION

Based on the analysis of data, significant conclusions emerge regarding gender, education, and psychological traits in the sample chosen for the study. Firstly, concerning gender differences, males generally score higher in cognitive reappraisal, total emotion regulation and optimism, while females excel in total empathy. Educational qualifications appear to influence psychological variables significantly. Postgraduate (PG) students consistently exhibit higher levels of cognitive reappraisal, expressive suppression, total emotion regulation, and total empathy compared to undergraduate (UG) students. The interrelationships between emotion regulation, empathy, and life orientation are evident. Emotion regulation, both cognitive reappraisal and expressive reappraisal, strongly correlates with total emotion regulation, indicating their interconnectedness. Cognitive reappraisal and total empathy also correlate positively with optimism. Total empathy emerges as a predictor of optimism, suggesting that individuals with higher empathy levels may also exhibit a more positive life orientation.

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Conflict of Interest

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