

Emotional Eating, Emotional Regulation, and Personality of College Students

Tripta Nair and Shiju Joseph

Department of Psychology, Government College for Women, Thiruvananthapuram, Kerala

Emotional eating is characterized by food consumption in response to emotional states rather than physiological hunger cues. This behavior is often linked to various psychological factors, including an individual's ability to regulate emotions and personality traits. The present study aims to explore the relationship between emotional eating, emotional regulation, and the Big Five personality traits among college students in Kerala, India. Data were collected from 200 undergraduate and postgraduate students using the Emotional Eating Scale (EES), the Emotional Regulation Questionnaire (ERQ), and the Big Five Inventory-2 Short Form (BFI-2-S). Independent t-tests and Pearson's correlation were conducted. The findings revealed significant gender differences in the dimensions of anger and depression of emotional eating, where males scored higher than females. A significant difference was found between undergraduate and postgraduate students in their emotional eating. However, no significant difference was observed concerning the socioeconomic status of the students. Emotional eating was positively correlated with negative emotionality and negatively correlated with open-mindedness. The results suggest that cultural aspects of the construct of emotional eating merit in-depth exploration and research. Intervention strategies in emotional eating also should consider personality factors, especially negative emotionality.

Keywords: emotional eating, emotional regulation, personality, college students

Emotional eating refers to the tendency to consume food in response to emotional triggers rather than physiological hunger signals (van Strien & Oosterveld, 2008). According to Geliebter and Aversa (2003), emotional eating often involves consuming high-calorie, palatable foods as a means of coping with both positive and negative emotions. Eating works as a coping mechanism during moments of stress, when people try to 'eat their troubles away' with palatable food (Kaplan & Kaplan, 1957). A cross-sectional analysis of 5863 Family Health Habits Survey participants in the US (Barak et al., 2021) revealed that 20.5% of the sample tended to emotionally eat often or very often. Emotional eating has garnered significant attention in psychological research due to its association with obesity, disordered eating patterns, and various mental health issues. College students, in particular, represent a vulnerable demographic group as they navigate numerous academic, social, and personal stressors. The transition to college life is marked by significant emotional and psychological changes, which can influence eating behaviors and overall well-being.

Emotional regulation, defined as the process of identifying, understanding, and managing emotional experiences (Gratz &

Roemer, 2004) plays a crucial role in determining how individuals respond to emotional stimuli. Effective emotional regulation strategies can mitigate the tendency to engage in maladaptive coping behaviors, such as emotional eating (Gross, 2001). Two primary strategies for regulating emotions are cognitive reappraisal, which involves changing one's perspective on an emotional situation, and expressive suppression, which entails inhibiting the outward expression of emotions (Gross & John, 2003).

Personality traits also significantly influence emotional eating behaviors. The Big Five personality model, developed by Costa and McCrae (2000) includes five broad dimensions: openness, conscientiousness, extraversion, agreeableness, and neuroticism. Research has consistently shown that neuroticism, characterized by emotional instability and a heightened sensitivity to stress, is positively associated with emotional eating (Elfhag & Morey, 2008). In contrast, traits such as conscientiousness and openness are generally linked to healthier coping mechanisms and lower instances of emotional eating (Mottus et al., 2013).

Research shows that individuals using adaptive emotional regulation strategies handle stress better and are less likely to engage in maladaptive behaviors like emotional eating (Whiteside et al., 2007). Barnhart et al. (2021) found that difficulties in emotional regulation correlate with increased negative emotional eating, indicating that poor regulation exacerbates unhealthy eating behaviors. Personality traits, particularly within the Big Five model, significantly influence emotional eating. Neuroticism, associated with emotional instability and negative emotions, is a strong predictor of emotional eating, with individuals high in neuroticism more likely to use food as a coping mechanism (Elfhag & Morey, 2008). Conversely, conscientiousness is linked to healthier eating behaviors and lower emotional eating rates. Recent studies by Madali et al. (2021) and Zhang et al. (2024) further illustrate these dynamics. Madali et al. found that higher emotional eating scores

Author Note

¹Tripta Nair, Student, Department of Psychology, Government College for Women, Thiruvananthapuram, Kerala

²Shiju Joseph, Clinical Psychologist, Assistant Professor, Department of Psychology, Government College for Women Thiruvananthapuram, Kerala

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Correspondence concerning this article should be addressed to Shiju Joseph, Clinical Psychologist, Assistant Professor, Department of Psychology, Government College for Women Thiruvananthapuram, Kerala

E-mail: shijujoseph@gcwtvm.ac.in

were associated with overweight and unhealthy dietary patterns, emphasizing the need for effective coping mechanisms. Zhang et al. (2020) revealed that persistent stress promotes emotional eating among college students, leading to increased consumption of sweets and soft drinks. Overall, emotional eating is often triggered by negative emotions and stress, particularly among those who report higher rates linked to anxiety and body image concerns. Personality traits like neuroticism play a crucial role in how individuals respond to these emotional triggers through their eating habits.

Rationale of the Study

The necessity for this study is underscored by reports of increased emotional eating in the post-COVID social environment, where the pandemic has heightened emotional issues such as anxiety and depression, contributing to rising obesity rates (Burnatowska, Surma, & Olszanecka-Glinianowicz, 2022). While existing research predominantly focuses on Western contexts, there is a notable lack of studies addressing emotional eating in India. Cultural factors, including societal norms and attitudes toward food and emotions, significantly influence emotional eating behaviors. Therefore, it is imperative to investigate emotional eating within the Indian context to develop culturally relevant interventions. This study aims to fill this gap by exploring the relationships between emotional eating, emotional regulation, and personality traits among college students in Kerala. By doing so, it seeks to enhance the understanding of emotional eating within the Indian subcontinent and contribute to the development of specific tools and interventions tailored to this population.

Method

Participants

The study sample consisted of 200 college students aged 18 to 23 years, drawn from various higher education institutions in Kerala. Of the participants, 124 were undergraduate students, and 76 were postgraduate students. The sample included 123 females (61.5%) and 77 males (38.5%). Additionally, 75% of the participants belonged to the Above Poverty Line (APL) category, while 25% belonged to the Below Poverty Line (BPL) category.

Inclusion and Exclusion Criteria

Participants were required to be enrolled in a full-time undergraduate or postgraduate program in non-professional courses. Students undergoing treatment for severe or chronic physical or mental illnesses were excluded from the study to ensure that the findings were not confounded by medical conditions.

Measures

Emotional Eating Scale (EES): Developed by Arnow, Kenardy, and Agras (1995) the Emotional Eating Scale is a 25-item self-report measure that assesses the extent to which individuals engage in emotional eating in response to specific emotions. The scale includes three subscales: Anger/Frustration, Anxiety, and Depression. Each item is rated on a 5-point Likert scale, ranging from 1 (no desire to eat) to 5 (an overwhelming urge to eat). The reliability of the EES is well-established, with Cronbach's alpha values of 0.89 for the anger subscale, 0.85 for the anxiety subscale, and 0.72 for the depression subscale.

Emotional Regulation Questionnaire (ERQ): The ERQ, developed by Gross and John (2003) is a 10-item self-report measure that assesses two key emotional regulation strategies: cognitive reappraisal and expressive suppression. Each item is rated on a 7-point Likert scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The scale has demonstrated good reliability, with a Cronbach's alpha of 0.73.

Big Five Inventory-2 Short Form (BFI-2-S): The BFI-2-S, developed by Soto and John (2017), is a 30-item self-report measure that assesses the Big Five personality traits: openness, conscientiousness, extraversion, agreeableness, and neuroticism. Each item is rated on a 5-point Likert scale, ranging from 1 (*disagree strongly*) to 5 (*agree strongly*). The scale has demonstrated good reliability, with an average Cronbach's alpha of 0.78.

Research Design

The present study employed an exploratory correlational design to investigate the relationships between various dimensions of emotional eating, emotional regulation, and personality traits among college students. Different categories of the student population based on gender (males & females), program of study (undergraduate & postgraduate), and economic status (Below Poverty Line & Above Poverty Line) were compared in the dimensions of emotional eating.

Procedure

Participants who met the inclusion criteria were approached either individually or through the institution. After obtaining informed consent, instruments were administered to the participants. Responses were scored, and statistical analyses were performed.

Results

Mean Differences

Table 1

N, mean, SD, t-test, df and Significance of Three Dimensions of Emotional Eating across Genders (Male & Female), Programs (UG & PG), Economic Status (BPL & APL)

Component of Emotional Eating	Group	N	Mean	SD	t	df	Sig.
Anger/ Frustration	Female	123	21.18	6.809	-2.386	198	.018
	Male	77	24.14	6.799			
Anxiety	Female	123	24.16	7.028	.215	198	.830
	Male	77	23.89	5.792			
Depressed	Female	123	11.04	4.332	-3.541	198	.000
	Male	77	13.84	4.343			
Emotional Eating total	Female	123	56.27	15.875	-2.00	198	.044

	Male	77	61.97	13.588			
Anger/ Frustration	UG	124	22.44	6.858	1.875	198	.062
	PG	76	20.57	6.820			
Anxiety	UG	124	23.27	6.181	-2.241	198	.026
	PG	76	25.47	7.559			
Depressed	UG	124	12.44	4.626	3.692	198	.000
	PG	76	10.12	3.773			
Emotional Eating total	UG	124	58.04	14.980	.827	198	.409
	PG	76	56.16	16.608			
Anger/ Frustration	BPL	50	21.18	6.847	-.645	198	.520
	APL	150	21.91	6.913			
Anxiety	BPL	50	23.74	6.827	-.443	198	.658
	APL	150	24.23	6.814			
Depressed	BPL	50	11.50	4.652	.886	198	.913
	APL	150	11.58	4.408			
Emotional eating total	BPL	50	56.40	16.320	.811	198	.630
	APL	150	57.63	15.403			

Note. (UG= Undergraduate, PG= Postgraduate, BPL= Below Poverty Line, APL= Above poverty Line)

Males exhibit significantly higher mean scores than females in dimensions of anger /frustration and depression dimensions of emotional eating and also in the total score ($t = -2.386, p = 0.018$; $t = -3.541, p = 0.000$. & $t = -2.00, p = 0.044$ respectively). No significant difference was found in the anxiety component.

Postgraduate students report higher levels of anxiety while undergraduate students report higher levels of depression ($t = -2.241,$

$p = .026$ & $t = 3.692, p = .000$ respectively). No significant differences were found between the two groups in the anger/frustration dimension or in the overall emotional eating scores.

No significant differences were observed between students from Above Poverty Line (APL) and Below Poverty Line (BPL) categories across various dimensions of emotional eating.

Correlations

Table 2

Correlation between Dimensions of Emotional Eating, Dimensions of Emotional Regulation, and Personality Factors

Variable	N	ES	CR	E	A	C	N	O
Anger	200	-.050	.061	.102	-.080	-.073	.087	-.253**
Anxiety	200	-.039	-.008	.116	-.038	.007	-.076	.012
Depressed	200	.123	.030	.050	-.063	-.058	.208**	-.314**

Note. **= significant at 0.01 level, *= significant at 0.05 level, N= Number, ES= Expressive Suppression, CR= Cognitive Reappraisal, E= Extraversion, A= Agreeableness, C= Conscientiousness, N= Negative emotionality, O= Open mindedness

There is no significant correlation between the dimensions of emotional eating and emotional regulation.

Negative emotionality, a dimension of the Big Five personality model, was positively correlated with the depression dimension of emotional eating ($r = 0.208, p < 0.01$). Openness, on the other hand, was negatively correlated with the anger and depression dimensions of emotional eating ($r = -0.253, p < 0.0$ & $r = -0.314, p < 0.001$ respectively). No significant correlations were found between the other personality traits, such as extraversion, agreeableness, and conscientiousness, and the dimensions of emotional eating.

Discussion

The present study provides valuable insights into the relationships between emotional eating, emotional regulation, and personality traits among college students in Kerala. One of the key findings of the study is the significant gender difference in emotional eating,

particularly in the dimensions of anger and depression. Male students reported higher levels of emotional eating in response to these emotions compared to female students. This finding is in contrast with the finding of Barak et al. (2021) but aligns with an Indian study by Bushra and Dutta (2021) which reported higher emotional eating scores among males. The result suggests that male students may be more prone to using food as a coping mechanism for managing negative emotions. This finding challenges the common perception that emotional eating is more prevalent among females and highlights the need for further research to explore the factors contributing to emotional eating among males.

The study also identified significant differences in emotional eating based on the academic program, with postgraduate students reporting higher levels of anxiety-related emotional eating and undergraduate students reporting higher levels of depression-related emotional eating. These findings suggest that the emotional

challenges faced by students may vary depending on their stage of academic progression, which in turn influences their eating behaviors.

The absence of significant differences based on socioeconomic status indicates that emotional eating may be influenced more by psychological factors, such as personality traits and emotional regulation (Elfhag & Morey, 2007) rather than economic factors. Previous research has suggested that socioeconomic status is not linked to disordered eating among the Indian population (Jain et al., 2024).

The correlations between personality traits and emotional eating underscore the role of negative emotionality and openness in influencing emotional eating behaviors, in agreement with prior studies. The positive correlation between negative emotionality and depression-related emotional eating suggests that individuals who are more prone to experiencing negative emotions are more likely to use food as a coping mechanism, consistent with findings from Keller and Siegrist (2015) who reported that emotional instability is a significant predictor of emotional eating. Similarly, Heaven et al. (2001) found that neuroticism was positively associated with disordered eating patterns. Conversely, the negative correlation between openness and emotional eating suggests that individuals with higher levels of openness may possess greater resilience against emotional eating tendencies, a pattern similarly observed by (Elfhag & Morey, 2007).

The lack of significant correlations between emotional regulation and emotional eating is an intriguing finding that warrants further investigation. While previous studies like Shriver et al. (2022) have identified emotional regulation as a key predictor of emotional eating, the present study did not find any significant relationships. This discrepancy may also be due to cultural differences in how emotions are regulated and expressed, highlighting the need for culturally specific tools to measure these constructs. While certain personality traits, particularly negative emotionality and openness, play a significant role in influencing emotional eating behaviors, others may have a more limited impact.

Conclusion

In conclusion, the present study sheds light on the complex interplay between emotional eating, emotional regulation, and personality traits among college students in Kerala. The findings underscore the importance of considering gender and personality factors when examining emotional eating behaviors. They also highlight the need for culturally tailored interventions and tools to better understand and address emotional eating in the Indian context. Future research should focus on exploring the cultural factors that influence emotional eating and developing context-specific measurement tools to enhance the accuracy and relevance of research findings in this area.

Limitations and Future Directions

The absence of instruments in the regional language and the restricted representativeness of the sample may have constrained the research findings. Subsequent research should broaden the sample size to enhance representativeness, undertake qualitative investigations to develop a thorough inventory of emotional eating and perform additional exploratory studies in this nascent field.

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