

Binge Eating and Mindful Eating: Exploring the Mediating Role of Tri-Gunas of Personality

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ABSTRACT

Background: Abnormal eating behaviors such as binge eating are increasing, prompting interest in their psychological roots. Mindful eating provides a healthier alternative. This study uses the Triguna theory to examine how lifestyle, food habits, and personality traits are interconnected in adolescents. **Aim:** The current study aims to explore the mediating role of triguna personality between binge eating and mindful eating. **Methods:** This study involved 214 urban high school students (ages 15–20) from English-medium schools. Purposive sampling techniques were used. A correlational research design as a quantitative approach, was used to examine the association. It aimed to investigate binge and mindful eating in relation to Triguna personality traits, examining the gunas' mediating role between these eating behaviors. Tools were used Binge eating scale (BES; Gormally et al., 1982), Mindful eating questionnaire (Framson et al., 2009) and Vedic Personality Inventory (Wolf, 1999) **Result and Conclusion:** The findings indicated that binge eating behavior was positively associated with Tamas guna, reflecting traits such as inertia, impulsivity, and lack of self-regulation. In contrast, mindful eating was positively correlated with Sattva guna, which represents balance, awareness, and self-discipline. Mediation analysis confirmed that Triguna personality traits significantly influenced the relationship between binge and mindful eating. Specifically, higher tamasic tendencies predicted greater binge eating, while higher sattvic tendencies supported mindful eating behaviors. These results suggest that fostering sattvic qualities through interventions like mindfulness practices may help reduce maladaptive eating patterns in adolescents and promote better mental and physical health.

Keywords: Binge Eating, Mindful Eating, Triguna Personality Theory, High School Students, Indian Cultural Context

Eating habits are influenced by a combination of psychological, biological, and sociocultural factors. While the human relationship with food is ancient, modern challenges like binge and emotional eating have raised concerns. This study explores these behaviors using the Indian psychological framework of **Triguna personality theory**, which proposes that three qualities—*Sattva* (balance), *Rajas* (restlessness), and *Tamas* (inertia)—govern individual personality (Srivastava, 2012). These gunas shape one's approach to emotions, behavior, and even food choices. Mindful eating, which involves

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conscious, present-moment awareness of food without judgment, is increasingly recognized for improving physical and emotional well-being (Nelson, 2017). Research shows it helps regulate emotional disturbances and can reduce binge eating (Katterman et al., 2014; Cherpak, 2019; Keyte et al., 2020). Binge eating, often linked with emotional dysregulation and psychological distress, may relate to underlying tamasic traits. Neurological findings also show overlap between binge eating and substance abuse due to similar reward pathways involving dopamine (Mathes et al., 2009). High school students are at a pivotal stage of identity and behavior development, making them an ideal population for exploring how personality traits, especially those based on Triguna theory, relate to mindful and binge eating.

Studies have linked Triguna traits with various psychological outcomes. Mendiratta et al. (2020) found that sattvic and rajasic individuals engaged more in mindful eating than tamasic ones. Khanna et al. (2015) showed that Sattva correlated positively with well-being, while Rajas and Tamas had negative associations. Mindfulness-based interventions effectively reduced binge and emotional eating (Katterman et al., 2014). Keyte et al. (2020) emphasized mindful eating's link to self-compassion and motivation. These findings suggest that personality traits and eating styles are interconnected, and mindfulness can support healthier behaviors.

METHODOLOGY

Aim: The present study has been conducted with the objective of exploring the mediating role of triguna personality between binge eating and mindful eating.

Objectives

- Assessing the levels of Binge eating, mindful eating with tri gunas of personality among high school students.
- To find the relationship between Mindful and Binge eating with three gunas of Triguna personality.
- To determine the mediating roles of three gunas between binge eating and mindful eating.

Hypotheses

- Mindful Eating would be positively related with Sattva guna and negatively related to Tamas and Rajas guna.
- Binge eating would be negatively related with Sattva guna and positively related to Tamas and Rajas guna.
- There would be an emerging mediating role of tamas guna in Mindful eating and Binge eating as compared to the other gunas, i.e., sattva and rajas guna.

Venue

The present study was conducted at **Christ University, Delhi NCR Campus**. Data was collected online using Google Forms, ensuring accessibility and convenience for participants. All data analysis and interpretation were carried out within the premises of the university using its research facilities.

Research Design

This study was done to understand the strength and direction of the relationship between variables, so a correlational research design as a quantitative approach was used to examine the association. Also, to understand how one variable affects another variable and to study the

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whole mechanism, mediation was also done to explore the mediating role of trigunas in personality.

Sample

For the purpose of this study, participants from the age group of 15 to 20 years were taken. The participants were from English medium educational institutes and living in Urban areas. So, students from various schools were asked to participate in this research as per their availability and informed consent. The sample had males and females participating in it. By the end, 214 participants gave their responses via google forms, out of which 10 responses had to be removed as per the exclusion criteria and were considered invalid while forming results.

Inclusion Criteria

1. Participants aged between 15 to 20 years.
2. Students studying in English-medium educational institutions.
3. Individuals residing in urban areas.
4. Participants who provided informed consent (and parental/guardian consent if below 18).
5. Availability of participants to respond via online Google Form.

Exclusion Criteria

1. Individuals diagnosed with binge eating disorder or any organic mental disorder.
2. Students living in hostels, due to differing dietary routines and supervision.
3. Participants who did not complete the full questionnaire or provided incomplete/invalid responses.
4. Individuals without access to smartphones or computers for online form participation.

Tools

- **Binge eating scale (BES; Gormally et al., 1982)**
- **Mindful eating questionnaire (Framson et al., 2009)**
- **Vedic Personality Inventory (Wolf, 1999)**

Description of Tools

- **Binge eating scale (BES; Gormally et al., 1982):** The scale consists of 16 items assessing both behavioral aspects (e.g., eating rapidly or consuming large quantities of food) and emotional/cognitive components (e.g., guilt, loss of control, or difficulty stopping). Each item presents 3 to 4 response choices, which are weighted to represent varying degrees of severity for each symptom. Respondents are instructed to choose the option that most accurately reflects their experience. Based on established cutoff scores (Marcus, Wing, & Lamparski, 1985), individuals are classified into three categories of binge eating severity: no or minimal binge eating (scores ≤ 17), mild to moderate binge eating (scores 18–26), and severe binge eating (scores ≥ 27). The scale has demonstrated excellent construct reliability, with a coefficient of .96 (Looti, 2023).
- **Mindful eating questionnaire (Framson et al., 2009):** Mindful eating (i.e., paying attention to our food, on purpose, moment by moment, without judgment) is an approach to food that focuses on individuals' sensual awareness of the food and their experience of the food (Joseph Nelson, 2017). The MEQ contains 28 items. Respondents mark their answers on a 4-point Likert scale to indicate to what degree they relate to each of the statements (ranging from 1 = never/rarely to

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4 = usually/always). Items are grouped into five factors: Disinhibition, Awareness, External Cues, Emotional Response, and Distraction. The test-retest reliability was found to be 0.85 (Apolzan et al. 2016)

- **Vedic Personality Inventory (Wolf, (1999)):** Personality attribute was measured on the personality Inventory. It basically measures the characteristics of personality attributes (trait- sattva, rajas and tamas) individually. The Vedic Personality Inventory was devised to assess the validity of the Vedic concept of the three gunas, or modes of nature, as a psychological categorization system. It included 56 items with a seven-point scale system. The reliability measures for the sattva subscale was .93, for rajas subscale it was .94 and for tamas subscale, it was .94. (Dasa, 1999).

Procedure

As part of the procedure, the google form (link) and the consent forms (hardcopy) were prepared. Then schools and colleges' respective authorities were contacted for a meeting to discuss the objectives and description of the research. Institutes that agreed were given consent forms (for the participants below 18 years of age) and signed. Then the google form link was shared with the participants via social media apps and emails as per their convenience. Before sharing the google form links, the participants were briefed about the study being conducted and for what purpose they were participating. After the data collection, invalid responses were removed, and with the help of Jamovi software, correlation between variables was done.

Statistical analysis

Once the data collection, data cleaning and removal of 10 invalid responses as per the exclusion criteria was done. Jamovi, one of the latest statistical software (used for data analyses as being the easiest open-source software) used to run descriptive statistics and calculate coefficients of correlation. To achieve the goals of the current inquiry, however, descriptive statistics and linear correlation were calculated using Pearson's product-moment method of correlation coefficient.

RESULTS

Table 1: Shows the description of the study and correlation of the high school students

Variables	Mean	S.D.	α	BES	MES	STV	RJS	TMS
BES	11.90	7.46	0.86	—				
MES	2.62	0.17	0.80	-0.15*	—			
STV	70.30	13.00	0.79	-0.22**	0.23**	—		
RJS	78.20	14.20	0.78	0.30***	-0.05	0.20**	—	
TMS	79.20	18.80	0.84	0.47***	-0.15*	-0.15*	0.69***	—

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

The table presents the mean, standard deviation (S.D.), and Cronbach's alpha (α) values for five key variables: Binge Eating Scale (BES), Mindful Eating Scale (MES), and the three gunas from Triguna Personality Theory—Sattva (STV), Rajas (RJS), and Tamas (TMS).

- **BES** had a mean of 11.90 (S.D. = 7.46) and showed high reliability ($\alpha = 0.86$). It was negatively correlated with MES ($r = -0.15$, $p < .05$) and STV ($r = -0.22$, $p < .01$), and positively correlated with RJS ($r = 0.30$, $p < .001$) and TMS ($r = 0.47$, $p < .001$).
- **MES** had a mean of 2.62 (S.D. = 0.17) and reliability of 0.80. It showed a positive correlation with STV ($r = 0.23$, $p < .01$), and a negative correlation with TMS ($r = -0.15$, $p < .05$).

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- **STV** (Mean = 70.30, S.D. = 13.00, $\alpha = 0.79$) correlated positively with MES and negatively with BES and TMS.
- **RJS** (Mean = 78.20, S.D. = 14.20, $\alpha = 0.78$) had a positive correlation with BES ($r = 0.30$, $p < .001$) and STV ($r = 0.20$, $p < .01$), but was not significantly related to MES.
- **TMS** (Mean = 79.20, S.D. = 18.80, $\alpha = 0.84$) showed strong positive correlation with RJS ($r = 0.69$, $p < .001$), and positive correlation with BES while being negatively related to MES and STV.

Table 2: Mediating roles of three gunas between Mindful eating and Binge eating in high school students

Type	Effect	Estimate	β	z	P
Indirect	BES \Rightarrow STV \Rightarrow MES	0.001	-0.04	-2.17	0.03
	BES \Rightarrow RJS \Rightarrow MES	-8.67	0.00	-0.18	0.86
	BES \Rightarrow TMS \Rightarrow MES	-8.72	-0.04	-1.04	0.30
Component	BES \Rightarrow STV	-0.38	-0.22	-3.19	0.01
	STV \Rightarrow MES	0.00	0.20	2.95	0.00
	BES \Rightarrow RJS	0.57	0.30	4.44	< .001
	RJS \Rightarrow MES	-1.53	-0.01	-0.18	0.861
	BES \Rightarrow TMS	1.18	0.47	7.50	< .001
	TMS \Rightarrow MES	-7.41	-0.08	-1.05	0.296
Direct	BES \Rightarrow MES	0.001	-0.06	-0.77	0.444
Total	BES \Rightarrow MES	0.001	-0.15	-2.12	0.03

Note. Confidence intervals computed with method: Standard (Delta method)

Note. Betas are completely standardized effect sizes.

This table presents a mediation analysis examining whether Sattva (STV), Rajas (RJS), and Tamas (TMS) gunas mediate the relationship between Binge Eating (BES) and Mindful Eating (MES) among high school students. The analysis includes indirect, component, direct, and total effects, with beta values (β), z-scores, and significance levels (p-values).

Indirect Effects:

- Sattva (STV) significantly mediated the relationship between BES and MES ($\beta = -0.04$, $z = -2.17$, $p = 0.03$), indicating a small but significant indirect pathway: more binge eating predicts lower sattva, which is associated with lower mindful eating.
- Rajas (RJS) and Tamas (TMS) did not show significant mediation (both $p > 0.30$), suggesting these traits do not significantly influence the BES–MES pathway.

Component Paths:

- BES was negatively associated with STV ($\beta = -0.22$, $p = 0.01$), and STV positively predicted MES ($\beta = 0.20$, $p < 0.01$).
- BES was positively associated with RJS ($\beta = 0.30$, $p < .001$), but RJS did not significantly predict MES.

Similarly, BES was positively related to TMS ($\beta = 0.47$, $p < .001$), but TMS did not significantly predict MES.

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Direct and Total Effects:

- The direct effect of BES on MES was non-significant ($\beta = -0.06$, $p = 0.444$), suggesting no direct influence of binge eating on mindful eating after accounting for mediators.
- The total effect, combining direct and indirect paths, was significant ($\beta = -0.15$, $p = 0.03$), indicating an overall negative relationship between binge and mindful eating, primarily driven by the mediation through Sattva guna.

DISCUSSION

The study examined how eating habits, particularly binge and mindful eating, are related to personality traits in adolescents aged 15 to 20. Utilizing the Binge Eating Scale, Mindful Eating Scale, and Vedic Personality Inventory, data were collected from school students (excluding hostel residents and those with disorders). The analysis revealed that Sattva guna was positively correlated with mindful eating and negatively correlated with binge eating, while Rajas and Tamas were positively correlated with binge eating and negatively correlated with mindful eating. Only the Sattva–mindful eating relationship exhibited significant mediation. The study underscores how eating behaviors reflect and shape personality traits; however, limitations include sampling bias and a lack of qualitative data.

CONCLUSION

With the expansion of the food industry and trending lifestyles, it is very important for developing individuals to be mindful of their mental and physical well-being. Hence it is essential to understand what factors are affecting our personality. As hypothesized in the study, binge eating has a direct relationship with Tamas guna; hence individuals high on tamasic guna can benefit from mindful eating as it has a high correlation with sattva guna. Therefore, promoting mindful eating to individuals in their adolescence can be beneficial for healthy mental and physical well being.

Limitations of the Study

1. Only quantitative data was collected, so participants' personal experiences and deeper insights were not explored.
2. The study was conducted online, so only those with access to phones or computers could participate, excluding others who may have been relevant.
3. Demographic data was collected but not used in the analysis, missing the chance to study patterns based on gender, location, or education.
4. Some participants showed mixed traits, such as having a sattvic personality but consuming tamasic foods, which created inconsistencies in interpreting results.
5. The study used a correlational design, so no cause-effect relationship between variables could be established.

REFERENCES

- Cherpak CE. Mindful Eating: A Review of How the Stress-Digestion-Mindfulness Triad May Modulate and Improve Gastrointestinal and Digestive Function. *Integr Med (Encinitas)*. 2019 Aug;18(4):48-53. PMID: 32549835; PMCID: PMC7219460.
- Dingemans, Alexandra & Bruna, M & Van Furth, Eric. (2002). Binge eating disorder: A Review. *International journal of obesity and related metabolic disorders: journal of the International Association for the Study of Obesity*. 26. 299-307. 10.1038/sj.ijo.0801949.
- Framson C, Kristal AR, Schenk JM, Littman AJ, Zeliadt S, Benitez D. Development and validation of the mindful eating questionnaire. *J Am Diet Assoc*. 2009 Aug;109(8):1439-44. doi: 10.1016/j.jada.2009.05.006. PMID: 19631053; PMCID: PMC2734460.

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- Gormally J, Black S, Daston S, Rardin D. The assessment of binge eating severity among obese persons. *Addict Behav.* 1982;7(1):47-55. doi: 10.1016/0306-4603(82)90024-7. PMID: 7080884.
- Hussain, M., Unchiasu, M., Wood, J. et al. Exploring Mindfulness and Mindful Eating and Visual Attention Towards Food Cues: Preliminary Findings. *J Cogn Enhanc* 6, 402–416 (2022). <https://doi.org/10.1007/s41465-022-00246-7>
- Katterman SN, Kleinman BM, Hood MM, Nackers LM, Corsica JA. Mindfulness meditation as an intervention for binge eating, emotional eating, and weight loss: a systematic review. *Eat Behav.* 2014 Apr;15(2):197-204. doi: 10.1016/j.eatbeh.2014.01.005. Epub 2014 Feb 1. PMID: 24854804.
- Keyte R, Egan H, Mantzios M. How does mindful eating without non-judgement, mindfulness and self-compassion relate to motivations to eat palatable foods in a student population? *Nutr Health.* 2020 Mar;26(1):27-34. doi: 10.1177/0260106019888367. Epub 2019 Nov 28. PMID: 31779514.
- Khanna P, Singh K, Singla S, Verma V. Relationship between Triguna theory and well-being indicators. *Int J Yoga - Philosophy Psychology Parapsychology* 2013; 1:69-74
- Lofgren, Ingrid. (2015). Mindful Eating. *American Journal of Lifestyle Medicine.* 9. 10.1177/1559827615569684.
- Mathes WF, Brownley KA, Mo X, Bulik CM. The biology of binge eating. *Appetite.* 2009 Jun;52(3):545-553. doi: 10.1016/j.appet.2009.03.005. Epub 2009 Mar 20. PMID: 19501749; PMCID: PMC2694569
- Mendiratta A., Goel K. & Sondhi S. (2020). Effect of gunas on stress and mindful eating. *International Journal of Indian Psychology*, 8(4), 1345-1353. DIP:18.01.147/20200804, DOI:10.25215/0804.147
- Nelson J. B. (2017). Mindful Eating: The Art of Presence While You Eat. *Diabetes spectrum: a publication of the American Diabetes Association*, 30(3), 171–174. <https://doi.org/10.2337/ds17-0015>
- Salagame, D. K. K. (2019, June 4). Concept triguna: A critical analysis and synthesis. *Psychological Studies*. Retrieved March 31, 2022, from https://www.academia.edu/39364877/Concept_triguna_A_critical_analysis_and_synthesis
- Srivastava K. (2012). Concept of personality: Indian perspective. *Industrial psychiatry journal*, 21(2), 89–93. <https://doi.org/10.4103/0972-6748.119586>
- Wolf DB. A psychometric analysis of the three gunas. *Psychol Rep.* 1999 Jun;84(3 Pt 2):1379-90. doi: 10.2466/pr0.1999.84.3c.1379. PMID: 10477953.

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Conflict of Interest

The author(s) declared no conflict of interest.

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