



Triguna Personality Traits as Predictors of Cognitive Distortion among College Students: Empirical evidence from India

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ABSTRACT

This study looked at the relationship between cognitive distortion and Triguna personality qualities in college students from Hisar, Haryana, who were 20 to 25 years old. Vedic Personality Inventory and the Cognitive Distortion Scale were utilized to gather data for this cross-sectional correlational study. Multiple regression analysis, correlation, and descriptive statistics were used for statistical analysis. The findings demonstrated a high positive association between Tamas and cognitive distortion components: - helplessness, hopelessness, self-blame, self-criticism, and preoccupation with danger. Rajas had moderately favourable associations with all dimensions of cognitive distortion except hopelessness. But in multiple regression Rajas negatively predicted hopelessness. An unexpected result but can be justified by statistical suppression effect. Sattva had a negative correlation with cognitive distortion and its components but proved to be a non-significant predictor in multiple regression. Tamas was the only significant predictor of cognitive distortion and its components, according to regression analysis. Rajas predicted hopelessness negatively, indicating that goal-directed and motivated activities by them, can reduce pessimism outlooks. These results indicate the potential integration of Ayurvedic psychology ideas with contemporary mental health techniques and emphasize the significance of Triguna qualities in comprehending maladaptive cognition.

Keyw4ords; Triguna, cognitive distortion, CBT, Sattva, Tamas, Rajas.

Introduction

To gain deeper insight into mind and cognitive processes we have to optimally utilise tools available with both Western scientific and Eastern traditional knowledge base. Western psychological knowledge and techniques are precise and effective but still not a complete package to deal with wide spectrum of mental disorders. We have studied, how Western concept of cognitive distortion and Ayurvedic personality classification of Triguna can be correlated and analysed to get a better understanding of types of personalities (specific Triguna) triggering distorted thoughts and subsequent mental distress more often.

Triguna Tri-dimensional Theory: As per Ayurveda the world is basically made up of five elements - Panch-Mahabhutas; Akasa-space, Vayu-Air, Agni-Fire, Jal-Water and Prithvi-Earth. Human body is also made of these five elements. These in turn lead to firstly three biological components called Doshas- Vata, Pitta and Kapha. Five elements' psychological components are three Gunas- Tamas, Rajas and Sattva. This is Triguna concept, which had been mentioned in Bhagwat Gita. Sattva guna is indicative of goodness, caring attitude, spirituality, clarity of mind and balance. Rajas symbolised activity, motion, restlessness, goal oriented, motivated by results, strong desires, impulsiveness and emotional reactivity. Tamas is marked by dullness, lethargy. sluggishness, unclear thinking and knowledge. They are pessimistic, lack discipline and are resistant to change.

Cognitive Distortion- Overriding concern of contemporary psycho-therapy had been to examine in detail faulty thinking or cognitive distortion as underlying cause of many mental disorders. This has been central theme of therapies like CBT and REBT. Cognitive distortions are faulty beliefs and perspectives we have about ourselves and the world around us (Beck, 1976). Cognitive distortions are triggered by: - skewed thought pattern, unrealistic belief that people have no control over their destiny and situations; mental health conditions like depression, stress, PTSD and schizophrenia.

Studies on Triguna and Cognitive distortion Interaction with Human Determinants:

Sattva is known to be a protective personality feature linked to favourable outcomes like life satisfaction, wellbeing and emotional regulation. Tamas and Rajas due to their detrimental features had unfavourable outcomes. This is highlighted by Pandey and Dubey (2021), wherein they established association between Seligman's PERMA indicators of wellbeing and Triguna. This was further confirmed by Sharma et al. (2021), wherein Sattva was associated with life satisfaction while, Tamas and Rajas showed favourable association with stress. Sattva individuals had ability to regulate emotions while Tamas and Rajas do not. Ravindra and Babu (2021), in a study established relationship between emotional styles and Triguna types. In next study by Sapmaz (2023) and Iftikhar et al. (2024) individuals with higher cognitive distortion showed unfavourable outcomes, had lower wellbeing, more stress and emotional dysregulation. Cognitive distortion and Triguna patterns have clinical implications also as highlighted by study done by Kumar and Balodhi (2016) where Tamas and Rajas were more prevalent in clinical samples, while Sattva was more in normal population. Clinical implication is further highlighted by Bhargav et al., (2023), where Tamas was associated with depression and psychotic symptoms and Rajas with OCD and anxiety. Many theorists have propagated faulty cognition, as root cause of anxiety, OCD and depression (Beck, 1976; Burns, 1980; Mathews & Macleod, 2005). Sattvavajaya, an Ayurvedic psychotherapy, similar to REBT and mindfulness promoted Sattva and decreased Tamas and Rajas. Both Ayurvedic and Western psychotherapies work on the premise that the root cause of psychological issues stem from cognitive distortion (Shinde et al., 2025; Raj & Tripathi, 2023).

Rationale of the study

It is well established that personality types across all cultures influence - cognition, emotion and behaviour in numerous ways. Indigenous personality classification- Triguna like other personality types have affected individuals' pattern of thinking. Cognitive distortion has led to major psychological issues. It would be essential to understand cognitive distortion and Triguna's two-way interplay, because personality traits greatly predispose people to specific information processing styles which either protect against or enhance distorted thinking. Previous studies have explored, Triguna and cognitive distortion relationships to positive and negative human variables. Yet, hardly any research has studied Triguna and cognitive distortion jointly, to get comprehensive understanding of human information processing and subsequent behaviour. Combined research on these two constructs from different medical systems and diverse cultures was seldom attempted. There is need to break this barrier to get a holistic and wider perspective of irrational human cognition. This study aims to bridge the gap between indigenous and Western psychology, whereas Triguna personality type is embedded in indigenous Ayurveda, cognitive distortion is rooted in CBT- a prominent and current therapy in Western clinical settings. This empirical research's main aim is to understand association between Triguna and cognitive distortion, which would contribute immensely to our ability to help subjects in clinical settings. This will enable introducing new therapies that are in tune with both Ayurveda and Western psychotherapies. Thus, providing another holistic tool to psychologists to tackle maladaptive cognition leading to mental issues.

Objectives-

1. To identify pattern of Triguna personality types and cognitive distortion among sample.
2. To explore the relationship between Triguna personality types- Tamas, Rajas and Sattva and cognitive distortion.
3. To discover the relationship between Triguna personality types and dimensions of cognitive distortion - Self-Criticism, Self-Blame, Helplessness, Hopelessness and Preoccupation with Danger.
4. To analyse the predictive role of Tamas, Rajas and Sattva on cognitive distortion.
5. To study the predictive role of Tamas, Rajas and Sattva on each domain of cognitive distortion: Self-Criticism, Self-Blame, Helplessness, Hopelessness and Preoccupation with Danger.

Hypothesis -

- H1 Sattva will be negatively associated with cognitive distortions and their dimensions.
 H2 Tamas will be positively associated with cognitive distortion and their dimensions.
 H3 Rajas will be positively associated with cognitive distortion and their dimensions.
 H4 Sattva will negatively predict cognitive distortion and its dimensions.
 H5 Tamas will positively predict cognitive distortion and its dimension.
 H6 Rajas will positively predict cognitive distortion and its dimensions.

Methodology

Sample - For this study, a sample consisting of 114 post graduate students in the age range of 20-25 years including boys and girls were taken from Hisar, a city in Haryana. The data was collected through convenience sample. Only students who could comprehend English were taken.

Research Design- For this study, a cross sectional, quantitative correlational research design was employed. Descriptive statistics, Pearson's correlation and multiple regression techniques were used for statistical analysis.

Survey Instruments- Two standardised instruments were chosen - Cognitive Distortion Scale [CDS] by John Briere and Vedic Personality Inventory (VPI) by David Wolf. CDS was constructed by John Briere (2000) which has five components- Self-Criticism, Self-Blame, Helplessness, Hopelessness and Preoccupation with Danger (PWD). CDS consists of 40 items where five components each is measured by 8 items. Two scores are measured- total cognitive distortion score and scores of each component. Participants rate items on 5-point Likert Scale with 1 implying frequency of 'Never' and 5, 'Very Often' response. The scale reported good psychometric properties where reliability for subscales was 0.8 and for total score 0.9. Vedic Personality Inventory (VPI), measures three personality types; Sattva, Tamas and Rajas. It contains 56 items, 22 measuring Tamas, 15 Sattva and 19 Rajas. Participants respond on a 7-point Likert scale with '1' indicating 'Strongly Disagree' and '7' indicating 'Strongly Agree'. VPI has strong psychometric properties with Cronbach Alpha for Sattva, Tamas and Rajas from .93-.95 and 'Total items correlation' with subscales > 0.5. Scores can be standardised score, percentage score but based on the purpose, mean scores were used. There are different number of items for each guna so mean scores make interpretation easier.

Procedure- A survey was carried out in colleges of Hisar, subjects were given two standardised questionnaires - CDS by John Briere (2000) and VDI by David Wolf (1998). Subjects were instructed to answer the questions based on their feelings and experiences for past one month. After the data was collected, VDI scores were converted into mean scores whereas for CDS raw scores were used for analysis. SPSS was used for further statistical analysis including multiple regression,

RESULTS

Table 1. Data Distribution for Triguna and cognitive distortion

Variable	Mean	Standard Deviation	Variance	Skewness	Kurtosis
Sattva	5.04	0.72	0.52	-0.76	1.10
Tamas	2.93	0.78	0.61	0.52	0.61
Rajas	3.68	0.62	0.38	-0.04	0.10
Cognitive Distortion	81.54	27.91	779.10	1.60	3.61
Self-Criticism	15.25	6.35	40.40	1.56	2.63
Self-Blame	17.29	6.16	38.01	1.46	3.17
Helplessness	18.04	6.45	41.66	1.09	1.54
Hopelessness	14.65	6.50	42.24	1.48	2.78
Preoccupation with Danger	16.89	5.92	35.08	.93	0.98

Negative skewness in Sattva indicated fewer subjects had low scores, Sattva data had positive kurtosis indicating sharp curve. Skewness and kurtosis were within limits of normal distribution. Positive skewness in Tamas, suggested more participants scored low, however these were within normal range. Rajas score distribution was symmetrical. Overall, Triguna scores are within normal distribution.

Sample showed maximum Sattva, moderate Rajas and least Tamas traits. Cognitive distortions showed positive skewness but within limits, indicating most people scored less on cognitive distortion, Overall table indicated suitability for regression analysis.

Correlations between components of Triguna were significant but were both positive and negative, as Sattva-Rajas-Tamas, measure both positive and negative facets of personalities. Sattva had negative correlation with both Tamas and Rajas. Higher Sattva traits

Table 2. Correlation matrix between Triguna and Cognitive Distortion components

Variable	Sattva	Tamas	Rajas	Self-Criticism	Self-Blame	Helplessness	Hopelessness	Preoccupation with danger
Sattva	1							
Tamas	-0.51**	1						
Rajas	-0.26**	0.61**	1					
Self-Criticism	-0.39**	0.53**	0.31**	1				
Self-Blame	-0.32**	0.51**	0.36**	0.80**	1			
Helplessness	-0.28**	0.52**	0.26**	0.70**	0.79**	1		
Hopelessness	-0.35**	0.50**	0.17	0.67**	0.65**	0.71**	1	
Preoccupation with Danger	-0.28**	0.49**	0.27**	0.68**	0.76**	0.76**	0.64**	1

$$p < .01^{**}$$

indicated lower Tamas and Rajas personalities. Tamas showed a strong positive correlation with Rajas ($r = .612$), implied major overlaps between these two personalities, both sharing few negative tendencies. All cognitive distortion subtypes exhibited negative correlation with Sattva: PWD ($-.280$), SB ($-.321$), SC ($-.395$), Helplessness ($-.285$), and Hopelessness ($-.352$). Lower CDS mean higher levels of Sattva personality which supported hypothesis H1. Tamas showed strong positive associations with PWD ($r = .498$), SC ($r = .538$), SB ($r = .515$), Helplessness ($r = .521$), and Hopelessness ($r = .506$). This indicate that Tamas was most frequently linked to distorted thought process, which confirmed H2. Rajas had moderate positive correlations with SC (.311), SB (.362), Helplessness (.264), and PWD (.274). However, its correlation with Hopelessness was not significant (0.172), partially supporting H3. There were strong positive correlations among all components of cognitive distortion. These high correlations meant, there was plenty of common variances between CD components and between these and total CD score. This is on expected lines as they all are components of same construct.

Table 3. Multiple regression; Prediction of cognitive distortion from Sattva- Rajas-Tamas

Predictor	B	β	t	p
Constant			2.29	.024
Sattva	-4.61	-.11	-1.33	.187
Tamas	19.88	0.58	5.12	<.001
Rajas	-2.96	-0.06	-0.68	.500

$R = .59$, $R^2 = .35$, Adjusted $R^2 = .33$, $F(3,110) = 19.84$, $p < .001$

Multiple regression indicated Sattva, Tamas and Rajas combined together explained 35 percent variance in cognitive distortion. Adjusted $R^2 = .33$ did not change much from $R^2 = .35$, hence model was stable and not overfitted. $R = 0.59$, pointed to moderate multiple correlation between Triguna traits and cognitive distortion. Results suggested a strong model fit between DV(CDS) and IV(Triguna). Analysing unstandardised coefficients for Sattva, Tamas and Rajas; value of Tamas ($B=19.88$), was significant. Thus, for every unit increase in Tamas, cognitive distortion increased by 19.88 units. Tamas was only significant predictor of cognitive distortion. Rajas predicted only component of CD- Hopelessness, in negative direction against positive direction predicted in H6. Results substantiated H5, refuted H4 and supported H6 partially and in reverse order.

TABLE 4. Multiple regression: Prediction of cognitive distortion components from Triguna types

Predictors													Danger		
	β	t	p	β	t	p	β	t	p	β	t	p	β	t	p
Constant		2.02	0.046		1.39	0.168		1.41	0.163		2.28	0.025		1.48	0.142
Sattva	-.016	1.73	0.087	-.08	-0.87	0.385	-.002	-0.2	0.842	-.11	-1.19	0.235	-.03	-.31	0.758
Tamas	0.47	4.1	<.001	0.42	3.64	<.001	0.56	4.89	<.001	0.58	5.08	<.001	0.51	4.36	<.001
Rajas	-.002	-.16	0.873	0.08	-0.8	0.426	-.009	-.84	0.402	-.21	-2.09	0.039	-.05	-.45	0.656
R	0.56			0.52			0.53			0.54			0.50		
R^2	0.31			0.27			0.28			0.30			0.25		
Adjusted R^2	0.29			0.25			0.26			0.28			0.23		

Prediction of Self-Blame. The model explained 27% of the variance in Self-Blame. With $R^2 = 0.27$ and adjusted R^2 of 0.25, values were very close, implying a fit model. Tamas was a significant predictor of Self-Blame with, $B = 4.63$, $\beta = 0.42$. For one unit increase in Tamas, Self-Blame increased by 4.63 units. Sattva and Rajas did not predict Self-Blame.

Prediction of Helplessness. Triguna accounted for 28% of the variation in Helplessness. Adjusted R^2 of 0.26 did not deviate much from R^2 indicating fit model. Tamas was significant positive predictor of Helplessness, with ($\beta = 0.56$, $t = 4.89$). For every one SD increase in Tamas, Helplessness increased, 0.56 times. Helplessness was not predicted by Sattva and Rajas,

Prediction of Hopelessness Model accounted for 30% of the variance in Hopelessness ($R^2 = 0.3$). There was not much difference in R^2 and adjusted $R^2 = 0.28$ indicating a fit model. Tamas was a significant positive predictor of Hopelessness ($B = 4.78$, $\beta = 0.57$). For every unit increase in Tamas, Hopelessness increased by 4.78 units. Rajas was a significant negative predictor of Hopelessness ($B = -2.22$, $\beta = -0.22$). For every unit increase in Rajas, Hopelessness reduced by 2.22 units. Hopelessness was not predicted by Sattva.

Prediction of Preoccupation with Danger Model accounted for 25% variance in Preoccupation with Danger. Tamas was its significant predictor ($B = 3.86$, $\beta = 0.51$). Preoccupation with Danger rose by 3.86 units for every unit increase in Tamas. Adjusted $R^2 = 0.23$ did not change much from R^2 , suggesting a fit model. Tamas was the only predictor of Preoccupation with Danger among Triguna traits.

DISCUSSIONS

The present study aimed to explore the association between the Ayurvedic personality model of Triguna and the Western psychological construct- cognitive distortion, among college students. These findings provided empirical evidence that Triguna personality traits are significantly linked to maladaptive patterns of thinking. The study integrated an ancient indigenous personality framework with Modern-Western cognitive concept, making notable contribution to the growing field of cross-cultural studies.

Descriptive statistics highlighted that, subjects had higher level of Sattva, moderate level of Rajas and comparatively lower level of Tamas. This distribution implied that most subjects demonstrated - clarity in mind, balance in emotions and actions and ability to regulate emotions effortlessly. On contrary, very few participants displayed Tamasic tendencies of- sluggishness, imbalanced thinking, inactivity and resistant to change. Rajas subjects were positioned between above two categories- showed higher activity, agitation, anxiousness and sense of gratification. Earlier studies proved that normal population showed more Sattva tendencies, whereas Rajas/Tamas traits were more prevalent in clinical population (Kumar & Balodhi, 2016; Bhargava et al, 2023). Distribution of cognitive distortion scores showed, fewer subjects had high distortion whereas most were low in distortion. This pattern is so typically in this sample of graduate students, because with education and experience people acquire skills to process information rationally. Many studies have concluded that cognitive distortion is more prevalent in clinical population as compared to healthy population (Beck, 1967; Burns, 1980)

Correlation Matrix clearly illustrated that Sattva was associated negatively with cognitive distortion and all its components. This outcome is in line with Sattva's underlying traits- clarity in thinking, balance in actions and emotions, ability to regulate emotions. All these prevent maladaptive information processing. Research also corroborated earlier studies that, Sattva personalities and individuals with lower cognitive distortion exhibited higher levels of life satisfaction, wellness, and emotional regulation than Tamas/Rajas types who generally had higher distorted thoughts (Sharma et al, 2021; Pandey & Dubey, 2021; Simsek et al, 2021; Sapmaz, 2023). Further, Tamas was positively correlated with cognitive distortion and all its components, which implied such individuals had tendencies of- emotional dysregulation, lesser clarity in thinking, resistant to change, pessimism and sluggishness; these predispose individuals to process information in an irrational manner. Gopal's (2009) study reiterated that there was a favourable relationship between Tamas and faulty thinking, leading to focus issues, withdrawal, and depression; on the other hand, Sattva exhibited a negative correlation with each of these. Further, Rajas showed moderate positive association with cognitive distortion and all its components except Hopelessness, implying that these individuals had intense emotions, impulsiveness and restlessness which caused them to process information in irrational ways. Nevertheless, Rajas's strong emphasis on action and accomplishment prevented people from experiencing persistent pessimism about the future (a core feature of Hopelessness). Sattva was negatively associated to Tamas and Rajas, Tamas was positively correlated with Rajas, facts supported by a study done by (Khanna et al, 2013).

Multiple regression analysis showed a more complex pattern in relationships between various variables. Even as correlational studies clearly suggested Sattva traits safe guard against cognitive distortion and Tamas/ Rajas had propensity towards maladaptive thinking. In regression, Tamas was only reliable and significant predictor of cognitive distortion and its components. Tamasic tendencies positively predicted most types of distorted thinking such as- blaming and criticising oneself, having perception that future is bleak, feeling you generally have no control over situation and excessive fixation on thoughts of imminent danger. Sattva was not a significant predictor of cognitive distortion and any of its components. This outcome could be so because, rather than directly lowering cognitive distortions; the protective influence of Sattva might be indirect, by countering the detrimental consequences of Tamas. Thus, the independent predictive effect of Sattva may decrease when Tamas is statistically adjusted in the regression model. Against a noticeable relationship shown by correlation chart, multiple regression analysis takes into account the intricate interaction between three Triguna traits within themselves and five components of cognitive distortion. In correlation matrix, Rajas was positively correlated with all components of cognitive distortion except Hopelessness but in multiple regression it negatively predicted Hopelessness. This is an unexpected result but can be justified by noting intricate differentiation in multiple regression and correlation statistical mechanisms. Possible statistical reasoning behind this was suppression effect. When predictors share variance, a suppression effect takes place that can change the relationships seen in correlations. The positive correlations between Rajas and other elements of cognitive distortion during correlation may have been influenced by this shared variance. After controlling shared variance earlier positive associations disappeared while a true unique relationships of Rajas became visible that it was negative predictor of Hopelessness. This is so because, Rajas traits are of - ambitiousness, full of activity and thinking ahead; all may minimise Hopelessness whose core feature is gloomy expectations of the future.

Future Implications and Limitations.

Study provided boost to the idea that when indigenous psychological paradigms are utilised along with modern psychological constructs, it augments our understandings of mental processes leading to a more culturally inclusive understanding of psychologic processes. These findings would be significant in psychotherapy for treatment of various mental ailments. Ayurveda psychotherapies like Sattvavajaya increase Sattva and reduce Tamas/Rajas components, because later ones lead to irrational cognitions. This technique is indigenous counterpart of mindfulness, cognitive restructuring. In the future, psychotherapies in line with Sattvavajaya should be explored but with emphasis to reduce Tamas rather than increasing Sattva. Current study should be expanded both horizontally and vertically. More research on cognitive distortion as a mediating factor between Triguna and mental disorders, be undertaken so that in future we develop better techniques to deal with reducing irrational thoughts and for treating mental issues. Vertical expansion be undertaken by incorporating cross-cultural samples, including both healthy individuals and clinical samples. Studies that contrast clinical and non-clinical groups may shed further light on the ways in which Triguna patterns affect cognitive distortion in mental health problems. The current study contains few shortcomings despite its major contributions. The generalization of the findings is limited by the current study's small sample size. Sample included university students from a specific region, larger and varied sample should be used in future studies. In this study even though Sattva correlated with cognitive distortion but did not predict cognitive distortion in multiple regression, raising the possibility of overlapping variance between gunas, which

would require advanced research technique like structure equation modelling that explain underlying processes and potential confounding variables.

References

1. Beck, A. T., & Emery, G. (1985). *Anxiety disorders and phobias: A cognitive perspective*. Basic Books.
<https://doi.org/10.1037/11117-000>
2. Bhargav, H., Eiman, N., Jasti, N., More, P., Kumar, V., Holla, B., Arasappa, R., Rao, N. P., Varambally, S., Gangadhar, B. N., & Keshavan, M. S. (2023). Composition of yoga-philosophy based mental traits (gunas) in major psychiatric disorders: A trans-diagnostic approach. *Frontiers in Psychology*, 14, 1075060.
<https://doi.org/10.3389/fpsyg.2023.1075060>
3. Burns, D. D. (1980). *Feeling good: The new mood therapy*. HarperCollins.
4. Das, G. M. A., & Gopal, D. V. V. (2009). Triguna and psychological problems. *Journal of Indian Psychology*, 27(1–2), 47–52.
5. Iftikhar, A., Saeed, B., Chaudhry, S., & Hassan, S. (2024). Stress, cognitive distortions, and emotional dysregulation among psychologists. *Migration Letters*, 21(S9), 1371–1385.
6. Khanna, P., Singh, K., Singla, S., & Verma, V. (2013). Relationship between triguna theory and well-being indicators. *International Journal of Yoga: Philosophy, Psychology and Parapsychology*, 1(2), 69–74.
7. Kumar, A., & Balodhi, J. (2016). Sattwa, rajas & tamas (SRT) factors in depression. *International Journal of Indian Psychology*, 3(4), 74–89. <https://doi.org/10.25215/0304.008>
8. Mathews, A., & MacLeod, C. (2005). Cognitive vulnerability to emotional disorders. *Annual Review of Clinical Psychology*, 1, 167–195. <https://doi.org/10.1146/annurev.clinpsy.1.102803.143916>
9. Pandey, S., & Dubey, A. (2021). Confluence of triguna and PERMA model: An empirical validation. *Mind and Society*, 10(3–4), 43–49.
10. Raj, A., & Tripathi, J. S. (2023). Critical appraisal on Sattvavajaya chikitsa and its possible correlation and integration with rational emotive behaviour therapy. *International Journal of Indian Psychology*, 11(3), 3708–3717.
<https://doi.org/10.25215/1103.347>
11. Ravindra, P. N., & Babu, P. (2021). A correlation study between tri-guna and emotional style: A theoretical approach toward developing a working model to integrate tri-guna with affective neuroscience and well-being. *International Journal of Yoga*, 14(3), 213–221. https://doi.org/10.4103/ijoy.ijoy_52_21
12. Sapmaz, F. (2023). Relationships between cognitive distortions and adolescent well-being: The mediating role of psychological resilience and moderating role of gender. *International Journal of Psychology and Educational Studies*, 10(1), 83–97. <https://doi.org/10.52380/ijpes.2023.10.1.866>
13. Sharma, S., Bhargav, P. H., Singh, P., Bhargav, H., & Varambally, S. (2021). Relationship between Vedic personality traits (sattva, rajas, and tamas) with life satisfaction and perceived stress in healthy university students: A cross-sectional study. *AYU (An International Quarterly Journal of Research in Ayurveda)*, 42(1), 39–44. https://doi.org/10.4103/ayu.ayu_98_2
14. Shinde, V. V., Jaraje, V. P., & Shah, R. (2025). A conceptual study on stress management using Sattvavajaya chikitsa. *International Journal of Innovative Research in Technology (IJIRT)*, 12(7), 5255–5259.
15. Şimşek, O. M., Koçak, O., & Younis, M. Z. (2021). The impact of interpersonal cognitive distortions on satisfaction with life and the mediating role of loneliness. *Sustainability*, 13(16), 9293. <https://doi.org/10.3390/su13169293>
16. Yadav, A., & Kumar, P. (2024). Role of “Triguna” personality in the psychological well-being of women. *Indian Journal of Health, Sexuality and Culture*, 10(Special issue), 11–17. <https://doi.org/10.5281/zenodo.13762169>