

Healthy Lifestyle for a Sustainable Future: A Study on Undergraduate Students

Bishal Das

Research Scholar, Department of Education, Sidho-Kanho-Birsha University, Purulia, West Bengal, India.

Corresponding Author: Bishal Das

DOI: <https://doi.org/10.52403/ijrr.20250222>

ABSTRACT

The study aims to find out how health, sustainability and related factors such as – Physical Fitness (PHF), Mental Health (MEH), Emotional Health (EMH), Spiritual Health (SPH) factor along with Environmentalism (ENVM) and Social Consciousness (SOC) are connected in undergraduate students. using a descriptive survey approach, a sample of 393 students from Purulia district, West Bengal was analysed to investigate variations based on gender, academic stream, and place of residence. Differences in Lifestyle of Health and Sustainability (LOHAS) and associated dimensions were observed among male and female students, arts and science students, and rural and urban students. statistical analysis using Mahalanobis Distance revealed significant differences between arts and science student, while gender and place of residence showed no significant disparities. Emphasizing the role of academic streams in influencing these multidimensional health and sustainability factors.

Keywords: Environmentalism, Mental health, Spiritual health, Mahalanobis distance, Emotional Health, Physical fitness, Undergraduate students, Social Consciousness

INTRODUCTION

Our modern lifestyle is heavily dependent on rapid technological advancement, urbanization and consumerism. Although it brings convenience and connectivity but also leads to some problems like increased energy consumption, waste generation and environmental degradation. LOHAS promotes holistic well-being by combining physical, mental, emotional, spiritual health with sustainability and social responsibility. It emphasizes fitness, mindfulness, resilience and eco-friendly living while encouraging ethical consumption and community engagement for personal and global harmony (Das and Mahato, 2024). A sustainable lifestyle means adopting practices that minimize harm to the environment, support social well-being, and promote economic balance. Adopting a sustainable lifestyle is like cultivating a garden of mindful choices, with every action blossoming a healthier, greener future for our planet (Das, 2023).

Objective of the study:

The study's primary goal is to describe and compare LOHAS, EMH, PHF, SPH, MEH, ENVM, SOC, considering them collectively as interconnected dimensions among various groups of undergraduate students.

Objectives in this study are follows:

1. To explore the distinctions between male and female undergraduate students concerning the identified variables.

2. To explore the distinctions between arts and science undergraduate students concerning the identified variables.
3. To explore the distinctions between rural and urban undergraduate students concerning the identified variables.

Hypotheses of the study

Hypotheses of the study are follows:

H₀₁: There is no significant difference between male and female undergraduate students on LOHAS, EMH, PHF, SPH, MEH, ENVM, SOC.

H₀₂: There is no significant difference between arts and science undergraduate students on LOHAS, EMH, PHF, SPH, MEH, ENVM, SOC.

H₀₃: There is no significant difference between rural and urban undergraduate students on LOHAS, EMH, PHF, SPH, MEH, ENVM, SOC.

LITERATURE REVIEW

Adhikari (2023a) highlighted the utility of Mahalanobis distance in education and psychology, showing its versatility in analysing variables like academic stress, self-efficacy, and anxiety. Das (2023) found no gender, stream, or residence-based differences in health and sustainability lifestyles. Mahato et al., (2023) revealed equivalent performance in language achievement among Class VII students from different school types. Mohanta et al., (2023a, 2023b) reported no significant differences in institutional commitment or organizational climate of west Bengal teachers based on various factors. Sen et al., (2023) found no notable variation in self-efficacy, depression, anxiety, stress, or leadership styles across groups. Mahato and Sen (2021) observed consistent dynamics in academic stress, self-efficacy and math anxiety. Ahmed et al., (2022) noted no significant differences in English and Math achievements between tribal and non-tribal students. Sen and Pal (2020) identified significant differences in science and math achievements across groups. Sutradhar et

al., (2023) reported comparable patterns in university students' mental health variables. Several studies have been done on Lifestyle of Health and Sustainability such as Mahato and Das (2024a; 2024b; 2024c); Kumari (2022); Das, Mahato and Sen (2023); Das (2023); Das, Mahato and Gayen (2024); Das, Gayen and Sen (2023a; 2023b); Saha and Maji (2013); Das and Mahato (2024a; 2024b).

Researchers are utilizing an array of sophisticated statistical method, such as t-tests [Wang and Du (2020); Chatterjee et al., (2016); Mondal and Saha (2023); Sen et al., (2013); khatun et al., (2022); Adhikari et al., (2023; 2023e); Ansary et al., (2022); Saha (2012a); Sen and Kar (2014); Mahato and Das (2024a; 2024b)], clustering technique [Das, Mahato and Sen (2023); Das and Mahato (2024a); Sen et al., (2023); Mohanta et al., (2023); Mohanta et al., (2023); Adhikari and Sen (2023a; 2023b); Saha et al., (2021); Ansary et al., (2023)], Man Whitney U test and parametric and non-parametric test [Adhikari (2023b); Mahato et al., (2022); Adhikari et al., (2023); Sen et al., (2021); Sen et al., (2021)], Fisher Z-transformation [Das and Mahato (2024b); Mahato and Das (2024c); Das, Mahato and Gayen (2024); Mahato, Das and Gayen (2024)], correlational study [Adhikari and Saha (2021); Saha (2021); Mahato et al., (2023); Sutradhar and Sen (2022a); Saha (2012b); Sutradhar et al., (2023); Saha (2013); Mahato and Sen (2021a); Mahato et al., (2023); Gayen (2024); Gayen et al., (2023); Kar and Saha (2021a; 2021b); Karmakar et al., (2016); Mahato et al., (2023); Mahato and Sen (2023); Singh and Kumari (2021); Sutradhar and Sen (2022b); Mahato and Sen (2023a); Mahato and Sen (2023b); Mondal and Saha (2017); Sen et al. (2023)] An exploration of statistical method utilized in Education has been conducted by Adhikari et al., (2023c; 2023d). A variety of studies on PCK done by Sen and Samanta (2015a; 2015b; 2015c; 2015d) and Sen (2016). Additionally, Chakrabarty and Saha (2014) carried out a study on achievement analysis.

Present work is done by collecting data and administering Lifestyle of Health and Sustainability Scale to study the healthy lifestyle for a sustainable future among undergraduate students from Purulia District in West Bengal.

MATERIALS & METHODS

Method: This research used a descriptive survey method.

Population of the study: The target group consists of undergraduate students from Purulia District in West Bengal.

Sample and sampling of the study: Stratified random sampling was used to collect 393 samples.

Variables of this study:

Variables of this study are LOHAS, EMH, PHF, SPH, MEH, ENVM, SOC. There are three dichotomous variables, i.e. Stream (Arts and Science), Gender (Male and Female), and Place of residence (Rural and Urban).

Tools of the study: Choi and Feinberg’s (2021) Lifestyle of health and sustainability scale was employed in this research work.

STATISTICAL ANALYSIS

Square of Mahalanobis Distance (MD) may be written as

$$\Delta^2 = (\mathbf{A} - \mathbf{B})^T \Sigma^{-1} (\mathbf{A} - \mathbf{B}) \dots\dots\dots(1)$$

In this context, A and B are Column Vectors, while Σ refers to the Pooled variance and covariance matrix of the two data groups.

From (1), MD can be written as

$$\mathbf{MD} = \left[(\mathbf{A} - \mathbf{B})^T \Sigma^{-1} (\mathbf{A} - \mathbf{B}) \right]^{\frac{1}{2}} \dots\dots\dots (2)$$

Pooled variance-covariance Matrix

$$\Sigma = [\mathbf{n}_1 \Sigma_1 + \mathbf{n}_2 \Sigma_2] / \mathbf{N} \dots\dots\dots(3)$$

In this context, Σ_1 and Σ_2 symbolize the Matrices of Covariance, the size samples for the 1st and 2nd groups are represented by \mathbf{n}_1 and \mathbf{n}_2 , respectively and $\mathbf{N} = \mathbf{n}_1 + \mathbf{n}_2$

RESULT

Result and Discussion:

Table 1: Descriptive statistic for various student groups

Male students (73)							
Variables	LOHAS	PF	MH	EH	SH	ENV	SC
Mean	101.86	18.25	10.96	14.81	10.22	36.59	11.04
SD	15.429	4.089	2.226	2.856	2.668	6.829	2.27
Female students (320)							
Variables	LOHAS	PF	MH	EH	SH	ENV	SC
Mean	103.43	18.2	11.07	15.04	10.56	37.32	11.23
SD	12.164	3.494	2.244	2.624	2.24	5.325	2.204
Arts students (381)							
Variables	LOHAS	PF	MH	EH	SH	ENV	SC
Mean	103.69	18.35	11.1	15.09	10.52	37.39	11.24
SD	12.079	3.455	2.214	2.603	2.329	5.397	2.168
Science students (12)							
Variables	LOHAS	PF	MH	EH	SH	ENV	SC
Mean	85.42	13.67	9.42	12.17	9.83	30.67	9.67
SD	21.644	5.28	2.503	3.215	2.209	8.742	3.114
Rural students (343)							
Variables	LOHAS	PF	MH	EH	SH	ENV	SC
Mean	103.15	18.41	11.13	14.9	10.49	37.09	11.13
SD	12.936	3.425	2.165	2.667	2.22	5.765	2.21
Urban students (50)							
Variables	LOHAS	PF	MH	EH	SH	ENV	SC
Mean	103	16.86	10.48	15.64	10.56	37.84	11.62
SD	12.169	4.477	2.644	2.601	2.977	4.617	2.221

Means and Standard Deviation (SD) of LOHAS and different dimensions are presented in Table 1. Different dichotomous variables like, Gender (Male and Female), stream (Arts and Science) and Residence (Rural and Urban) are used for data representation. Difference in LOHAS,

MEH, EMH, and ENVM are found between male and female students. Difference in LOHAS, PHF, MEH, EMH, ENVM and SOC are found between arts and science students. Difference in PHF, MEH, and EMH are found between rural and urban students.

Table 2: Metrix of Pooled variance and covariance for Gender (Male and Female)

	PHF	MEH	EMH	SPH	ENVM	SOC
PHF	13.0437354	3.240669	2.571341	2.219214	6.740438	1.774957
MEH	3.24066921	5.021326	1.976501	1.299504	3.927333	1.328196
EMH	2.57134097	1.976501	7.121275	2.096033	7.263181	2.146865
SPH	2.21921374	1.299504	2.096033	5.408076	4.24084	1.207374
ENVM	6.74043766	3.927333	7.263181	4.24084	31.75196	6.688684
SOC	1.77495674	1.328196	2.146865	1.207374	6.688684	4.909982

Table 3: Metrix of Pooled variance and covariance for Stream (Arts and Science)

	PHF	MEH	EMH	SPH	ENVM	SOC
PHF	12.4218397	3.016099	2.181046	2.127611	5.856504	1.572359
MEH	3.01609924	4.942649	1.837969	1.275122	3.617603	1.256695
EMH	2.1810458	1.837969	6.882672	2.057359	6.736107	2.022275
SPH	2.12761069	1.275122	2.057359	5.407359	4.165809	1.190496
ENVM	5.85650382	3.617603	6.736107	4.165809	30.57215	6.427519
SOC	1.57235878	1.256695	2.022275	1.190496	6.427519	4.85355

Table 4: Metrix of Pooled variance and covariance for Residence (Rural and Urban)

	PHF	MEH	EMH	SPH	ENVM	SOC
PHF	12.7856336	3.131659	2.691323	2.228496	6.850305	1.853517
MEH	3.13165903	4.979875	2.031466	1.310247	3.987463	1.363466
EMH	2.69132316	2.031466	7.067107	2.102389	7.213631	2.110092
SPH	2.22849618	1.310247	2.102389	5.429636	4.266461	1.209509
ENVM	6.85030534	3.987463	7.213631	4.266461	31.71835	6.658059
SOC	1.85351654	1.363466	2.110092	1.209509	6.658059	4.889489

For every dichotomous variable there were two variance-covariance matrices. For example, there was a variance and covariance matrix for male students and another for female students. Metrix of Pooled variance and covariance for Gender

(Male and Female) was calculated using equation (3). This is represented in table 2. Similarly, table 3 and table 4 represent the Metrix of Pooled variance and covariance for Residence (Rural and Urban) and Stream (Arts and Science).

Table 5: Mahalanobis Distance for variables PHF, MEH, EMH, SPH, ENVM, SOC

Independent variables	Male vs Female	Arts vs Science	Rural vs Urban
Mahalanobis Distance	0.1896	1.7080	0.7014

Table 5 represents the value of Mahalanobis Distance for dichotomous variables Gender (Male vs Female), Residence (Rural vs Urban), and Stream (Arts vs Science). Hence, in case of dichotomous variable Male vs Female, the value of MD is 0.1896, less than 1. So, null hypothesis H_{01} : “There is no significant difference between male

and female undergraduate students on LOHAS, EMH, PHF, SPH, MEH, SOC.” is accepted.

After that in case of Arts vs Science, the value of MD is 1.7080, greater than 1. So, null hypothesis H_{02} : “There is no significant difference between arts and science undergraduate students on LOHAS, EMH,

PHF, SPH, MEH, ENVM, SOC.” is rejected. And alternative hypothesis H_{a2} : “There is a significant difference between arts and science undergraduate students on LOHAS, EMH, PHF, SPH, MEH, ENVM, SOC.” is accepted.

And the dichotomous variable Rural vs Urban, the value of MD is 0.7014, less than 1. So, the null hypothesis H_{03} : “There is no significant difference between rural and urban undergraduate students on LOHAS, EMH, PHF, SPH, MEH, ENVM, SOC.” is accepted.

CONCLUSION

Researcher can conclude that the study highlights the importance of understanding the interconnected dimensions of health and sustainability across different demographic and academic stream. From result it may be concluded that healthy lifestyle for a sustainable future is dependent on Stream (Arts vs Science), but independent of Gender (Male and Female) and Residence (Rural and Urban) of the students. These findings suggest that curricular focus and academic orientation may play a pivotal role in shaping students’ holistic well-being and sustainability consciousness. future research could explore the underlying factors contributing to these differences, providing a basis for targeted interventions to promote a balanced development of health and sustainability across diverse student populations.

Declaration by Authors

Acknowledgement: None

Source of Funding: None

Conflict of Interest: The authors declare no conflict of interest.

REFERENCES

1. Adhikari, A. (2023a). Application of Mahalanobis distance in education and educational psychology: a mini review. *Innovare Journal of Education*, 11(4), 5-7.
2. Adhikari, A. (2023b). Socio-educational perspectives: a study on human adjustment. *EPRA International Journal of Research & Development (IJRD)*, 8(1), 97-101.
3. Adhikari, A., & Saha, B. (2021). Measuring social relationship of undergraduate college students of West Bengal. *Education Indian Journal: A Quarterly refereed journal of dialogues on Education*, 10(4), 261-269.
4. Adhikari, A., & Sen, S. (2023a). Cluster analysis on institutional commitment and organizational climate. *International journal of research publication and reviews*, 4(5), 4974-4988.
5. Adhikari, A., & Sen, S. (2023b). Recent trends of cluster analysis in education. *International research journal of modernization in engineering technology and science*, 5(8), 1858-1861.
6. Adhikari, A., Gayen, P., Mahato, R. C., Pal, I., & Sen, S. (2023d). Multi-dimensional data analysis in education: accumulation and comparison among variables. *International Journal of Research Publication and Reviews*, 4(5), 2243-2245.
7. Adhikari, A., Gayen, P., Sutradhar, A., & Sen, S. (2023c). A measure for measure: statistics in education. *International journal of Research Publication and reviews*, 4(5), 4239-4243.
8. Adhikari, A., Gorain, S. C., Gayen, P., Pal, I., & Sen, S. (2023). Studying the differences: a review on t- test. *International Research Journal of Education and Technology*, 5(5), 338-349.
9. Adhikari, A., Mahato, R. C., & Sen, S. (2023e). Anxiety, depression, stress, general self-efficacy and specific self-efficacy: comparison among science and social science students. *International Journal of Advanced Research in science, Communication and technology (IJARSCT)*, 4(1), 382-389.
10. Adhikari, A., Mahato, R. C., Gorain, S. C., & Sen, S. (2023). A review on parametric and non-parametric test in education. *International Journal of Research and Analytical Reviews (IJRAR)*, 10(2), 796-801.
11. Ahmed, E. A., Karim, M. R., Banerjee, M., & Sen, S. (2022). Comparison of scholastic attainment in English and math amongst other studies at the higher secondary level: a study using Mahalanobis distance. *Education Administration: Theory and Practice*, 28(4), 1-13.
12. Ahmed, E. A., Karim, M. R., Banerjee, M., Sen, S., Banu, S., & Warda, W. U. (2024). Higher secondary students’ performance in

- math, English, and other science subjects in pre-covid 19 and during covid-19 pandemic: a comparative study using Mahalanobis distance. *Theory and Practice in Language studies*, 14(3), 854-865.
13. Ansary, K., Ansary, S., Adhikari, A., & Sen, S. (2023). Clustering technique for analysing attitude towards value-oriented education among undergraduate students. *International journal of research publication and reviews*, 4(5), 5576-5584.
 14. Ansary, S., Ansary, K., & Adhikari, A. (2022). Attitude towards social adjustment among the undergraduate students of Purulia District. *EPRA International Journal of Research and Development (IJRD)*, 7(12), 21-26.
 15. Chakrabarty, A. K., & Saha, B. (2014). Low achievers at elementary stages of EFL learning: the problems and possible way-outs. *International Journal on New Trends in Education and Their Implications*, 5(3), 160-165.
 16. Chatterjee, R., Mondal, B. C., & Saha, B. (2016). Student attitudes towards using social media for educational purpose. *European Academic Research*, 4(6), 5365-5376.
 17. Choi, S., & Feinberg, R. A. (2021). The LOHAS (Lifestyle of Health and Sustainability) scale development and validation. *Sustainability*, 13(4), 2-17.
 18. Das, B. (2023). Application of Mahalanobis distance as a measure of lifestyle of health and sustainability and its components. *The Social Science Review A Multidisciplinary Journal*, 1(1), 44-52.
 19. Das, B., & Mahato, S. (2024a). Analysing positive mental health among students in Purulia district, west Bengal, using clustering techniques. *The Social Science Review A Multidisciplinary Journal*, 2(3), 12-26.
 20. Das, B., & Mahato, S. (2024b). Lifestyle of health and sustainability: comparison of correlations between rural-urban students in Purulia district, west Bengal using fisher z-transformation. *The Social Science Review A Multidisciplinary Journal*, 2(3), 229-240.
 21. Das, B., Gayen, P., & Sen, S. (2023a). Lifestyle of health and sustainability (LOHAS): a comparative study on undergraduate students. *International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)*, 3(1), 32-44.
 22. Das, B., Gayen, P., & Sen, S. (2023b). Lifestyle of health and sustainability (LOHAS) of undergraduate students of Purulia district of west Bengal. *EPRA International Journal of Socio-Economic and Environmental Outlook (SEEO)*, 10(8), 13-19.
 23. Das, B., Mahato, S., & Gayen, P. (2024). Lifestyle of health and sustainability (LOHAS): differentiating relationships in regard to stream of study. *The Social Science Review A Multidisciplinary Journal*, 2(1), 1-13.
 24. Das, B., Mahato, S., & Sen, S. (2023). Clustering technique for analysing lifestyle of health and sustainability of undergraduate students. *International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)*, 3(1), 207-221.
 25. Das, B., & Mahato, S. (2024). Lifestyle patterns and sustainability practices: a correlational study among undergraduate students of Purulia district, west Bengal. *The International Journal of Indian Psychology*, 12(4), 1468-1488.
 26. Gayen, P. (2024). Academic resilience & m-learning of undergraduate students: A correlational study. *Indian journal of multidisciplinary research*, 1, 35-39.
 27. Gayen, P., Sen, S., & Adhikari, A. (2023). Relationship between organizational climate and institutional commitment of secondary school teachers of west Bengal. *International journal of scientific research and engineering development*, 6(3), 426-436.
 28. Kar, D., & Saha, B. (2021a). A study of relationship between leadership style and emotional intelligence of undergraduate students. *International journal of research and analytical reviews (IJRAR)*, 8(2), 13-15.
 29. Kar, D., & Saha, B. (2021b). Leadership style and adjustment ability among undergraduate students: a correlational study. *International journal of creative research thoughts (IJCRT)*, 9(9), d148-d151.
 30. Karmakar, T., Paul, A., Mondal, A., & Saha, B. (2016). Intelligence in relation to height and weight among secondary school students. *American journal of Educational Research*, 4(16), 1145-1148.

31. Khatun, S., Ansary, K., & Adhikari, A. (2022). Attitude towards yoga education among undergraduate students. *EPRA International Journal of Multidisciplinary Research (IJMR)*, 8(12), 9-13.
32. Kumari, S. (2022). Sustainable lifestyle for healthy environment. *EIACP: Geodiversity and Impact on Environment*, 27(3), 17-21.
33. Mahato, A., Gayen, P., & Mahato, R. C. (2023a). Relationship between cognitive failure and internet addiction of higher secondary students of Purulia district of West Bengal: a study. *Innovare journal of education*, 11(3), 15-19.
34. Mahato, D., Gayen, P., & Mahato, R. C. (2023b). Relationship between academic resilience and internet addiction of undergraduate students of Purulia district of West Bengal: a study. *EPRA International journal of multidisciplinary research (IJMR)*, 9(3), 103-106.
35. Mahato, D., Gorain, S. C., Roy, S., & Adhikari, A. (2022). Introspecting flipped classroom: a survey on higher education students. *Galore International Journal of Applied Sciences and Humanities*, 6(4), 56-69.
36. Mahato, M., Gayen, P., & Mahato, R. C. (2023). Relationship between self-efficacy and m-learning of undergraduate students of Purulia District of West Bengal. *International journal of research publication and reviews*, 4(4), 3219-3222.
37. Mahato, R. C., & Sen, S. (2021b). Application of Mahalanobis distance to determine the dynamical nature of academic stress, self-efficacy in mathematics and anxiety in mathematics. *International journal of advances in engineering and management (IJAEM)*, 3(5), 1398-1401.
38. Mahato, R. C., & Sen, S. (2023b). Relationship among contexts knowledge (CK1), technological pedagogical content knowledge (TPCK) and attitude towards creative teaching for pre-service trainee teachers: A study on mathematics method subject. *International journal of creative research thoughts*, 11(4), d301-d314.
39. Mahato, R. C., & Sen, S. (2021a). Academic stress, self-efficacy and anxiety: a study on mathematics of higher secondary level students in Purulia districts of West Bengal, India. *International Journal of Creativity Research Thoughts (IJCRT)*, 9(5), c969-c980.
40. Mahato, R. C., & Sen, S. (2023a). A study of contexts knowledge (ck1), technology pedagogical content knowledge (TPCK) and attitude toward creative teaching (act) among the pre – service mathematics trainee teachers in west Bengal, India. *Journal of emerging technologies and innovation research (JETIR)*, 10(4), h35-h43.
41. Mahato, R. C., Sen, S., & Adhikari, A. (2023). A study of dass-21 and the self-efficacy scale on post- graduate students. *International Journal of Research Publication and Reviews*, 4(6), 4249-4255.
42. Mahato, S., & Das, B. (2024a). Comparison of environmental attitude by applying t-test and Mahalanobis distance (MD) of undergraduate students in Purulia. *The Social Science Review A Multidisciplinary Journal*, 5(2), 133-140.
43. Mahato, S., & Das, B. (2024b). Mental well-being among students with respect to gender, institution and residence: insight from Purulia district, West Bengal. *The Social Science Review A Multidisciplinary Journal*, 2(2), 164-175.
44. Mahato, S., & Das, B. (2024c). Understand gender-specific comparison of correlations between the lifestyles of health and sustainability and its components using the Fisher Z-transformation. *International journal of research publication and reviews*, 5(8), 650-659.
45. Mahato, S., Das, B., & Gayen, P. (2024). Achievement on language subjects of secondary school students: differentiating relationships in regard to gender and type of institute. *The Social Science Review A Multidisciplinary Journal*, 2(1), 78-86.
46. Mahato, S., Das, B., & Sen, S. (2023). Test of changing status in achievement on language subjects for class vii student: a study by Mahalanobis distance. *International Journal of Research Publication and Reviews*, 4(10), 1540-1545.
47. Mohanta, R., Adhikari, A., Pal, I., & Sen, S. (2023). Introspecting institutional commitment using cluster analysis. *International Research Journal of Education and Technology*, 5(4), 198-217.
48. Mohanta, R., Gayen, P., Pal, I., Sutradhar, A., & Sen, S. (2023a). Comparison among different dimensions of institutional commitment of secondary school teachers of West Bengal by Mahalanobis distance. *International Research Journal of*

- Modernization in Engineering Technology and Science*, 5(4), 4088-4093.
49. Mohanta, R., Gayen, P., Pal, I., Sutradhar, A., & Sen, S. (2023b). Comparison among different dimensions of organizational climate of secondary school teachers of west Bengal by Mahalanobis distance. *EPRA International Journal of Research and Development (IJRD)*, 8(4), 129-133.
50. Mohanta, R., Sen, S., Adhikari, A., & Pal, I. (2023). Perceptual environment: a study on organizational climate using cluster analysis. *International Journal of Research Publication and Reviews*, 4(4), 1336-1346.
51. Mondal, A., & Saha, B. (2017). Job satisfaction of secondary school teachers in relation to personality and emotional intelligence. *American Journal of Educational Research*, 5(10), 1097-1101.
52. Mondal, N., & Saha, B. (2023). Achievement difference in science at secondary level in Darjeeling districts: a comparative study. *International Journal of Scientific Research*, 2(2), 85-86.
53. Saha, B. (2012a). A comparative study of environmental awareness among teacher trainees of west Bengal. *Indian Streams Research Journal*, 2(9), 1-5.
54. Saha, B. (2012b). Creativity in relation to socio – economic status in secondary school students in west Bengal. *Indian Journal of Applied Research*, 2(2), 60-61.
55. Saha, B. (2013). Creativity in relation to environment awareness in Birbhum districts: an analytical study. *IJSR-International Journal of Scientific Research*, 2(8), 106-107.
56. Saha, B. (2021). Attitude towards yoga practice among college student with regard to gender, residence and stream of study. *IAR Journal of Humanities and Social Science*, 2(5), 25-29.
57. Saha, B., Sen, S., & Adhikari, A. (2021). Analysis of attitude towards yoga among college students using clustering techniques. *EPRA International Journal of Multidisciplinary Research (IJMR)*, 7(9), 308-314.
58. Saha, S., & Maji, S. (2013). Building the sustainable development through environmental education: a conceptual study. *Review of Research*, 2(4), 1-3.
59. Sen, S. (2016). Content knowledge and pedagogical content knowledge in the tenth-grade mathematics textbook of west Bengal board of secondary education. *International Journal of Advanced Education and Research*, 1(10), 11-17.
60. Sen, S., & Samanta, T. K. (2015a). Content knowledge and pedagogical content knowledge in the sixth-grade mathematics textbook of west Bengal board of secondary education. *International Journal of Multidisciplinary Educational Research*, 4[5(3)], 221-231.
61. Sen, S., & Samanta, T. K. (2015b). Content knowledge and pedagogical content knowledge in the seventh-grade mathematics textbook of west Bengal board of secondary education. *International Journal of Multidisciplinary Research and Development*, 2(9), 36-40.
62. Sen, S., & Samanta, T. K. (2015c). Content knowledge and pedagogical content knowledge in the eighth-grade mathematics textbook of west Bengal board of secondary education. *Scholarly Research Journal for Interdisciplinary Studies*, 3(19), 619-629.
63. Sen, S., & Samanta, T. K. (2015d). Content knowledge and pedagogical content knowledge in the ninth-grade mathematics textbook of west Bengal board of secondary education. *International Journal of Multidisciplinary Research and Development*, 2(11), 228-232.
64. Sen, B., Mondal, N., & Saha, B. (2013). A comparative study of poor achievement in physics at the higher secondary level with respect to secondary level in Birbhum district. *International Journal of Scientific Research*, 2(4), 66-67.
65. Sen, S., & Kar, S. (2014). Comparison between the achievements in unit tests and annual examinations: a study of seventh and eighth grade students on science subjects. *Indian Streams Research Journal*, 4(7), 1-5.
66. Sen, S., & Pal, I. (2020). Mahalanobis distance: a study on achievement of science and mathematics. *International journal of creative research thoughts (IJCRT)*, 8(7), 1-6.
67. Sen, S., Adhikari, A., Ansary, K., Roy, S., & Pal, I. (2023). Clustering techniques for analysing leadership style of the head of the institutions. *International journal of advanced research in science, communication and technology (IJARSCT)*, 3(3), 220-228.
68. Sen, S., Gayen, P., Mahato, R. C., & Adhikari, A. (2023). A correlation study on

- organizational climate and institutional commitment of secondary school teachers. *International journal of multidisciplinary research and publications (IJMRAP)*, 5(12), 152-155.
69. Sen, S., Gayen, P., Pal, I., Sutradhar, A., Ansary, K., Mahato, R. C., & Adhikari, A. (2023). Comparison among different leadership styles of head of the institution of west Bengal by Mahalanobis distance. *International journal of modernization in engineering technology and science*, 5(4), 5005-5010.
70. Sen, S., Mandi, A., Dhara, B., Ansary, F., Mandi, M., & Baran, M. (2021). General self-efficacy and specific self-efficacy of postgraduate students in the covid-19 pandemic: a study. *International Journal of Research Publication and Reviews*, 2(9), 531-536.
71. Sen, S., Pal, I., & Adhikari, A. (2023). Comparison among self-efficacy, depression, anxiety and stress of postgraduate students by Mahalanobis distance. *International Journal of Advanced Education and Research*, 8(1), 85-88.
72. Sen, S., Sau, P., Mahato, S., Satpati, S., Afreen, T., & Gayen, P. (2021). Depression, anxiety and stress of postgraduate students during covid-19 pandemic: a study on postgraduate students of Sidho-Kanho-Birsha university, Purulia, west Bengal, India. *International Journal of Research Publication and Reviews*, 2(9), 586-591.
73. Singh, R., & Kumari, V. (2021). Loneliness and smartphone addiction among youths: a correlational study. *Indian journal of applied research*, 11(3), 51-53.
74. Sutradhar, A., Adhikari, A., Sutradhar, S. M., & Sen, S. (2023). Use of correlational analysis in educational research. *International Research Journal of Education and Technology*, 5(5), 731-737.
75. Sutradhar, A., & Sen, S. (2022a). Effect of different dimensions of emotional maturity on academic achievement of B.Ed. trainees-a study. *International Journal of Research Publication and Reviews*, 3(11), 1237-1247.
76. Sutradhar, A., & Sen, S. (2022b). Emotional maturity and study habits of b. ed. trainees-a correlational study. *International Journal of Multidisciplinary Research and Development*, 9(12), 77-83.
77. Sutradhar, A., Sen, S., Adhikari, A., & Sutradhar, S. M. (2023). Self-efficacy, depression, anxiety and stress of university students: a study by Mahalanobis distance. *Galore International Journal of Applied Sciences and Humanities*, 7(3), 7-15.
78. Wang, Q., & Du, T. (2020). Implementation of the college student mental health education course (CSMHEC) in undergraduate medical curriculum: effects and insights. *BMC Medical Education*, 20(505), 2-12.
- How to cite this article: Bishal Das. Healthy lifestyle for a sustainable future: a study on undergraduate students. *International Journal of Research and Review*. 2025; 12(2): 187-195. DOI: <https://doi.org/10.52403/ijrr.20250222>
