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ACADEMIC STREAM AND PSYCHOLOGICAL WELL-BEING: A COMPARATIVE STUDY ON SCIENCE AND ARTS COLLEGE BOYS OF WEST BENGAL

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Abstract

Psychological well-being is the ability to handle stress, retain self-concept and adjust socially and academically to overall development of a human being. Mental health is a main component of Psychological well-being. Academic stream may perhaps manipulate mental health of a student. Students of science and arts discipline differ in cognitive demands and academic pressures. Rural college boys face extra socio-cultural and economic challenges which are very impotent for their mental health. This study evaluates science and arts rural college boys in West Bengal applying the Mental Health Battery (Singh & Sen Gupta, 2000). **Method:** A total of 200 male students (science-100, arts- 100) from selected colleges of Purba Medinipur district, West Bengal, were randomly chosen. Their ages ranged from 17 to 22 years. The Mental Health Battery of six components (emotional stability, overall adjustment, autonomy, security–insecurity, self-concept and intelligence) was tested using a questionnaire in both English and Bengali. Mean, standard deviation and t-tests were used to analyze the data. Significance level was 0.05. **Results:** Arts students achieve significantly higher in overall adjustment (M = 30.42 vs. 27.26; t = 2.151*) while science students was better in security–insecurity (M = 8.44 vs. 7.13; t = 3.043*) and intelligence (M = 20.42 vs. 17.94; t = 2.080*). No noteworthy differences were observed in emotional stability, autonomy and self-concept. Minimal mean differences were identified in autonomy. Socio-economic conditions, curriculum constitution, cognitive loads and cultural outlook were considered as the influencing aspects. **Conclusion:** Academic stream influences some mental health areas as well as psychological well- being among rural college boys. Science students demonstrate higher intelligence and security-insecuirity while arts students exhibit better overall adjustment. Emotional stability, autonomy and self-concept stay basically similar across streams. These results highlight the requirement of stream-specific mental health support in rural colleges.

Keywords: Psychological well-being, Mental Health, Academic stream, Mental health dimensions.

INTRODUCTION

Psychological well-being is a fundamental component of overall human development. It is the ability of an individual to cope with stress, maintaining positive self-concept, achieving personal goals and fit oneself efficiently to the social and academic aspects. Mental health is a main component of Psychological well-being. In the higher education section, college students frequently face exclusive intellectual, emotional and social challenges that directly influence their mental health. For rural college students, these challenges can be multifaceted by limited opportunities to the educational resources, socio-cultural aspects and familial

responsibilities. In this context, the assessment of mental health becomes very important. Academic stream is one of the features that may manipulate the mental health and broadly the psychological well-being of students. Science and arts streams differ from each other not only in the nature of their curriculum but also in the academic difficulties, problem-solving aspects and performance outlook that placed on the students. Science students, for example, frequently face rigorous coursework, numerous evaluations and competitive career pathways which can manipulate stress levels, handling strategies and overall mental health. On the other hand, arts students normally experience a more flexible academic structure, permitting creativity, discussion and self-expression which can promote emotional adjustment. A number of studies have highlighted that academic stream can manipulate components of mental health such as adjustment, autonomy, intelligence and self-concept (Gul, 2015; Home Science Journal, 2017; Reddy, Menon, &Thattil, 2018). Though, the relationship between streams of study and psychological well-being among rural college male students remains comparatively underexplored, particularly in the background of West Bengal. In this study, the mental health, a major component of psychological well-being, of rural college male students was evaluated by means of the *Mental Health Battery* developed by Singh and Sen Gupta (2000). This battery evaluates multiple dimensions of mental health including emotional stability, overall adjustment, autonomy, security–insecurity, self-concept and intelligence. By comparing science and arts students, this study plans to examine whether academic stream is connected with differences in mental health as well as psychological well-being of a student. The study also provides the insight into the mental health needs and support methods appropriate for rural male undergraduates.

METHODOLOGY

Selection of subjects

Subjects for the present study were college male students from selected colleges of Purba Medinipur District, West Bengal. All the colleges are situated in the rural area of the state. All the selected subjects were male and they studied in 6th semester of their respective courses. Ages of the students were 17 to 22 years. Total 200 male students were selected randomly from science and arts stream of whom 100 were from science steam and rest 100 were from arts stream.

Tools for the study

Mental Health Battery(MHB) developed and validated by Arun Kumar Singh and AlpanaSen Gupta (2000) was used in the study. Students were given the original English version questionnaire along with the translated Bengali version as all the students were from the Bengali medium colleges and they were very comfortable to give answer in their mother language. The collected Data was analysed following the Manual of the MHB.

Criterion measures

The mental health conditions of the male students studying science and the arts were compared using all six categories: emotional stability, general adjustment, autonomy, security-insecurity, self-concept, and intelligence.

Statistical analysis

Mean and standard deviation were used to analyse the data. T-test was used to identify the significance of statistical difference between the two groups. Level of significance was set at 0.05 level of confidence.

RESULT OF THE STUDY

Table-1

Socio-economic status of the students (SES)

SES	SES RANGES	SCIENCE STUDENTS	ARTS STUDENTS
UPPER	15-17	3	NIL
MIDDLE	9-14	67	64
LOW	8 OR BELOW	30	36
TOTAL STUDENTS		100	100

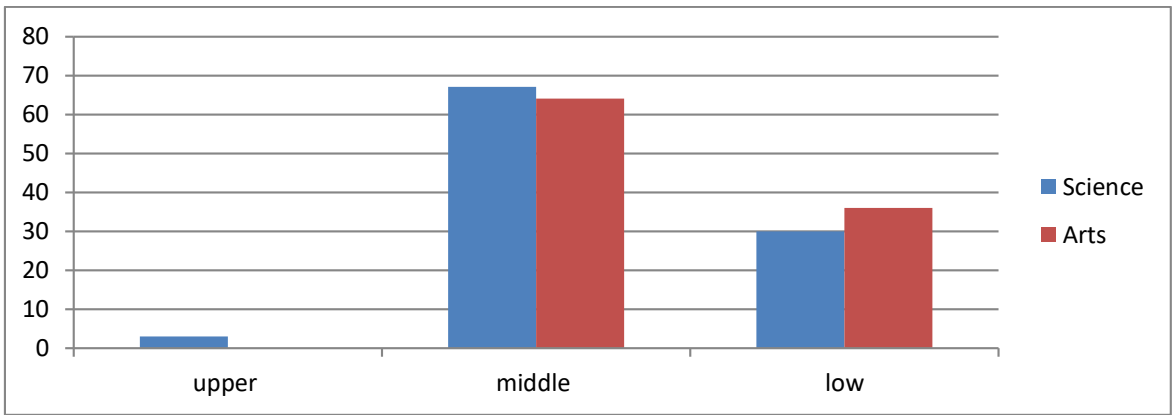

Figure-1: **Graphical presentation of science and arts student's SES**

Based on Table 1 and Figure 1, it is observed that within the science stream, 3 students belonged to the upper socio-economic status (SES), 67 students fell under the middle SES category, and 30 students came from the low SES group. In contrast, for the arts stream, none of the students were from the upper SES, while 64 students represented the middle SES and 36 students were identified from the low SES category.

Table-2

Qualitative Interpretation of Scores

PERCENTILE RANGE	MENTAL HEALTH LEVEL	SCIENCE STUDENTS			ARTS STUDENTS		
		UPPER	MIDDLE	LOW	UPPER	MIDDLE	LOW
P_{90} and above	EXCELLENT	Nil	Nil	Nil	Nil	Nil	Nil
P_{70} to P_{89}	GOOD	Nil	Nil	Nil	Nil	6	nil
P_{50} to P_{69}	AVERAGE	3	51	4	Nil	38	17
P_{30} to P_{49}	POOR	Nil	16	21	Nil	15	19
Below P_{29}	VERY POOR	Nil	Nil	5	Nil	5	Nil
		TOTAL: 100			TOTAL: 100		

Table 2 highlights the mental health status of the students. Among the 100 students from the science stream, 58 were found to have an average level of mental health, which included 3 from the upper SES, 51 from the middle SES, and 4 from the low SES. The remaining 37 science students reflected poor mental health, consisting of 16 from the middle SES and 21 from the low SES. Only 5 low SES students of science stream fall in very poor mental health category. In the case of arts students, 55 exhibited an average level of mental health, with 38 belonging to the middle SES and 17 to the low SES. Additionally, 6 students from the middle SES group reported good mental health, while 34 students showed poor mental health, including 15 from the middle SES and 19 from the low SES. Here also 5 arts students middle SES performed very poor result.

Mean, S.D. and t-ratio showing difference in mental health among science and Arts stream of rural college boys of west Bengal

Sl. No.	Dimension of Mental Health	Groups	N	Mean	SD	t-ratio
	Emotional stability(ES)	Science		10.78	2.1535	0.3164
		Arts		10.96	2.7921	
	Over-all adjustment (OA)	Science		27.26	2.8731	2.1509*
		Arts		30.42	3.5481	

	Autonomy(AY)	Science		9.86	1.6698	1.3884
		Arts		10.92	1.4611	
	Secuirity-insecuirity(SI)	Science		8.44	1.8549	3.0431*
		Arts		7.13	1.8783	
	Self- concept(SC)t	Science		8.74	2.1254	0.0281
		Arts		8.10	1.8882	
	Intelligence(IG)	Science		20.42	2.6368	2.080*
		Arts		17.94	3.1966	

Significance level of confidence at 0.05 level= 1.98

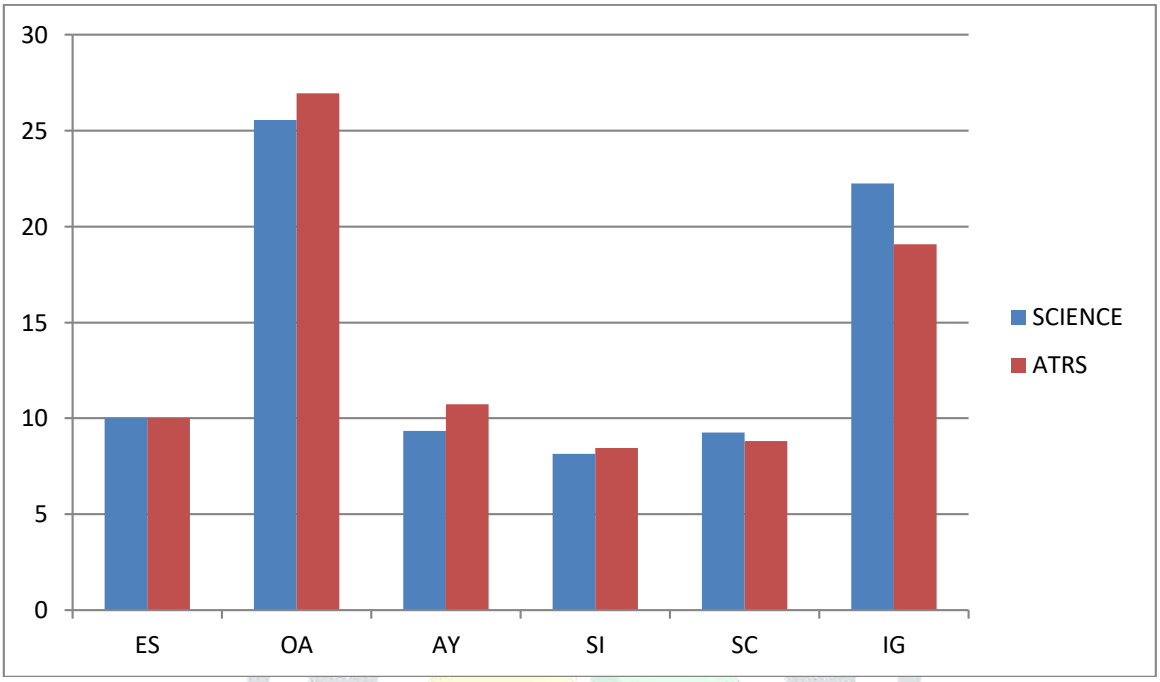

Figure: 2 : comparison of Mean of science and arts boys student's various mental health dimension

Table 3 and Figure 2 reveal that the calculated t-ratios for key three dimensions of mental health—emotional stability (t = 0.3164), autonomy (t = 1.3884) and self-concept (t = 0.0514) fall below the required significance value of 1.98 at the 0.05 level. However, the data also show that for the overall adjustment (t = 2.1509), security–insecurity (t = 3.0431) and intelligence (t = 2.080) dimension of mental health surpass the critical value (t = 1.98). Furthermore, the mean scores of overall adjustment clarify this distinction. Arts stream boys have (M = 30.42) outperformed their science counterparts (M = 27.26) in overall adjustment. In case of security–insecurity and intelligence, the science students beat the arts students and their mean difference are notable.

DISCUSSION OF THE FINDINGS

As shown in Table 1 and Figure 1, the majority of boys take part in this study (97 out of 100 in the science stream and all 100 in the arts stream) belong to the middle or low socio-economic status (SES) groups. This outcome indicates that the majority of families in these regions depend on farming, casual wage employment or insignificant informal occupations that produce modest earnings. Consequently, chances for education, medical facilities and other fundamental resources remain limited in rural regions. Only a very small proportion of students, specifically 3 across the entire sample, come from the upper SES group. This socio-economic profile is further mirrored in the results of the Mental Health Battery (Sinha & Gupta), highlighting how students' backgrounds shape their mental health outcomes. The academic, social and environmental conditions may give explanation why almost all the boys, whether from the arts (average-55 & poor-34) or science (average-58 & poor-37), tend to achieve either average or poor on the mental health components of the Mental Health Battery (Sinha & Gupta), as shown in table 2. Rural college boys often show average or low mental health due to financial hardship,

academic pressure without proper support, early family responsibilities, lack of recreation and limited disclosure to opportunities.

According to table 3 and figure 2, both science and arts groups displayed similar levels of emotional stability. Almost all the boys come from families with low incomes that rely on agriculture or informal work. They face similar academic and financial pressures. They also grow up with limited access to mental health support or recreation options. This leads to similar ways of managing emotions. Since both groups deal with nearly the same social, economic and cultural conditions their emotional stability levels are not significantly different. The study of Baraiya, S. D. examines emotional maturity of college students from rural vs urban backgrounds and finds *no significant difference* between the two with respect to emotional maturity. Study of Shalini Sharma & Suraksha Pal (2017) and Khan, H., & Dar, Y. (2013) have supported the result of the present study.

Arts-stream students often show better overall adjustment than science students because science programmes typically impose higher academic workload, more frequent assessment, high career oriented pressure and higher academic stress. Arts students frequently experience greater flexibility and different peer-support patterns which help them in adjustment. Home Science Journal. (2017) stated that Educational adjustment and study involvement were considerably higher among arts stream undergraduates as compared to science students, reflecting differences in curriculum pressure and coping strategies. The result of the present study corroborates with the findings of Gul, S. B. A. (2015) and Reddy, K. J., Menon, K. R., & Thattil, A. (2018).

According to table 3 and figure 2, both science and arts groups displayed near about similar levels of autonomy and the result is not statistically significant but a notable mean difference is identified. In rural background**,** both the groups are subject to similar parental influence, limited disclosure and controlled decision-making opportunities which reduce the stream-based gap. Rural boys, regardless of stream, frequently share parallel family expectations, restrictions and rural socio-cultural customs which limit differences in autonomy. Though statistically non-significant, a noteworthy mean difference may still point to rising tendencies. The arts students show slightly higher in autonomy due to flexible curriculum. Nair, P., & Rani, A. (2015), Jha, M., & Singh, R. (2012) and Gul, S. B. A. (2015) have reported same result in their studies on mental health battery of college students.

Observation of Table 3 and figure-2 have revealed that the value of t-ratio showing difference in security-insecurity (=3.0431) among science and arts stream rural college boys was significant at .05 level. Science-stream rural boys may report greater security due to clearer career paths, higher social prestige, structured curriculum, and generally the academically stronger students choose science stream. Arts boys, on the other hand, may experience greater insecurity because of less-defined career opportunities and social undervaluation of their stream. The result of the present study has similarity with the study of Deb, S., Strodl, E., & Sun, J. (2015) and Reddy, K. J., Menon, K. R., & Thattil, A. (2018).

The absence of significant or notable mean differences suggests that self-concept in rural college boys is shaped more by common developmental, cultural and family factors than by academic stream**.** Both arts and science students, being from the same rural context and age group, share similar life experiences, leading to comparable levels of self-concept. Marsh and Craven (2006) argue that self-concept and academic performance have reciprocal effects and that self-concept is a relatively stable, multidimensional construct—therefore differences in academic stream alone may not produce large or reliable differences in overall self-concept. (Marsh & Craven, 2006).

Difference in intelligence (=2.080) among science and arts stream rural college boys was significant at .05 level. Science stream students beat the arts students in intelligence test. Science curriculum stresses on problem-solving, logical reasoning and analytical thinking- all of these directly strengthen intellectual capabilities. Continuous exposure to mathematics, experiments, and planned reasoning tasks facilitated science students achieve better on intelligence-related components. Science courses were prepared to encourage critical thinking and reasoning, while arts curriculum highlights interpretive and descriptive learning. These factors together contribute to science

stream boys give better performance compared with arts-stream peers. The result of the present study corroborates with the findings of Furnham, A. (2013), Khaleefa, O., Amer, M., & Lynn, R. (2014) and Dutton, E. (2014).

CONCLUSION

The study reveals that academic stream manipulates specific components of mental health among rural college boys. This mental health manipulation also affects the psychological well –being of a person. Arts students demonstrate better in overall adjustment, whereas science students attain higher in security–insecurity and intelligence. Emotional stability, autonomy and self-concept stay mainly constant between the streams due to the socio-cultural and developmental individuality. These findings emphasize the effect of curriculum design, academic demands and cognitive stresses on mental health. The result also recommended the necessity of stream-specific plan to support the mental health as well as psychological well-being in rural campuses.

References

(1) Singh, A. K., & Sen Gupta, A. (2000).*Manual for Mental Health Battery (MHB).* Agra: National Psychological Corporation.(1st Edition)

(2) Gul, S. B. A. (2015). A comparative study of adjustment among arts and science stream students. *International Journal of Advanced Scientific and Technical Research, 5*(3), 101–110.

(3) Home Science Journal. (2017). Influence of stream of study on educational adjustment and study involvement of undergraduate students. *International Journal of Applied Home Science, 4*(9–10), 693–697.

(4) Reddy, K. J., Menon, K. R., & Thattil, A. (2018). Academic stress and its sources among university students. *Biomedical and Pharmacology Journal, 11*(1), 531–537. https://doi.org/10.13005/bpj/1404

(5) Baraiya, S. D. "A Psychological Study of Emotional Maturity in College Students of Urban and Rural Background." *International Journal of Indian Psychology*, vol. 9, no. 3, 2021, pp. 1490–1496. https://ijip.in/articles/a-psychological-study-of-emotional-maturity-in-college-students-of-urban-and-rural-background/

(6) Sharma, S., & Pal, S. (2017). A comparative study of emotional stability and socio-economic status of secondary students. *International Education and Research Journal (IERJ), 3*(6), 19–21. Retrieved fromhttps://ierj.in/journal/index.php/ierj/article/view/1084

(7) Khan, H., & Dar, Y. (2013). Emotional intelligence of adolescent students with special reference to high and low socio-economic status. *International Journal of Educational Research and Technology, 4*(2), 104–107. Retrieved from https://www.researchgate.net/publication/326579516

(8) Nair, P., & Rani, A. (2015). Influence of socio-cultural factors on autonomy development of Indian college students. *Indian Journal of Community Psychology, 11*(2), 321–329.

(9) Jha, M., & Singh, R. (2012). Autonomy and adjustment patterns among rural adolescents. *Indian Journal of Psychology and Education, 2*(1), 45–52.

(10) Deb, S., Strodl, E., & Sun, J. (2015). Academic stress, parental pressure, anxiety and mental health among Indian high school students. *International Journal of Psychology and Behavioral Sciences, 5*(1), 26–34.

(11) Marsh, H. W., & Craven, R. G. (2006). Reciprocal effects of self-concept and performance. *Perspectives on Psychological Science, 1*(2), 133–163.

(12) Furnham, A. (2013). Individual differences in art and science students. *Personality and Individual Differences, 55*(3), 245–250. https://doi.org/10.1016/j.paid.2013.03.019

(13) Khaleefa, O., Amer, M., & Lynn, R. (2014). IQ differences between arts and science students at the University of Khartoum. *Mankind Quarterly, 55*(1), 1–10. https://doi.org/10.46469/mq.2014.55.1.1

(14) Dutton, E. (2014). IQs of academics in different disciplines. *Interdisciplinary Journal of Research on Religion, 10*(1), 1–10. https://doi.org/10.46469/ijrr.2014.10.1.1