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Effect of Adjustment Problems, Awareness of Health, and Study Habits on Academic Achievement among Students of KGBVs

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Abstract:

The main objective of the research was to study the Effect of Adjustment Problems, Awareness of Health, and Study Habits on Academic Achievement among Students of KGBVs. The study adopted a survey research design, and data were collected from 610 students studying in KGBVs. Standardised tools such as the Students' School Adjustment Scale (Sushma Sarsani), the Test of Study Habits (C. P. Mathur), and a researcher-developed Awareness of Health Scale were used to gather data. Whereas the academic achievement data was collected from the school. The data were analysed using a 3 × 3 × 3 factorial ANOVA, considering each variable at high, moderate, and low levels. The findings revealed significant main effects of adjustment problems, awareness of health, and study habits on academic achievement. However, no significant two-way or three-way interaction effects were observed among these variables. The study highlights that each factor contributes to academic achievement independently rather than jointly.

Keywords: *Adjustment Problems, Health Awareness, Study Habits and Academic Achievement*

Introduction

For socially and educationally disadvantaged groups, special schools are established across the nation. As a special concern, Kasturba Gandhi Balika Vidyalaya's are residential school established, which covers hard-to-reach girls, especially the deprived ones belonging predominantly to the SC, ST, OBC community and minority groups (Gogoi & Borua, 2015). From 2024, the scheme is being implemented in educationally backward blocks of the country where the female rural literacy is below the national average, and the gender gap in literacy is above the

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national average (Krishnan, 2020). The schooling system is also observed in Karnataka state, a completely residential school practice. Students in residential schools frequently struggle with adjustment problems, which can have an impact on their emotional health and academic achievement. Academic achievement in this unique educational setting is greatly influenced by variables including study habits and awareness of health, in addition to adjustment problems. Therefore, understanding how these variables affect academic achievement becomes essential for strengthening the overall learning experience of girls in KGBVs. In this context, the present study was conducted.

Review of Related Literature

Shivakumar and Buvanendiran (2018) conducted a study on the analysis of health awareness among high school students of different educational divisions in Karnataka state. The study showed that there were significant differences in health awareness among girls' students of different educational divisions in Karnataka State. Mysore education division found the highest health awareness among the other three education divisions in Karnataka State.

Kumari and Vijayavardhini (2020) conducted a study on the Impact of Study Habits on the Academic Achievement of KGBV Students at the Secondary Level. The study found that there was a positive relationship between the study habits and academic achievement of secondary-level students of secondary level studying in KGBVs.

Agnafors, Barmark, and Sydsjo (2021) conducted a longitudinal birth cohort study to explore a study on Mental health and academic performance: a study on selection and causation effects from childhood to early adulthood. The results indicate that social selection mechanisms are present in all three periods studied. Behavioural and emotional problems at age 3 were associated with performing below grade level at age 12. Similarly, mental health problems at age 12 were associated with a lack of complete final grades from compulsory school and non-eligibility to higher education. Academic performance at ages 15 and 19 did not increase the risk for mental health problems at age 20.

Ahmed (2023) conducted a study on the Learning Achievement of the Girls Students Studying in Class IX in Mathematics: A Case Study of Kasturba Gandhi Balika Vidyalaya (KGBV) Students Residing in Hostel Under Nagaon District of Assam. The study found that the overall performance of students of class X in the learning achievement test was very poor. In the learning achievement test of mathematics, General category students performed better than SC, ST and OBC categories.

Kumar and Singh (2025) conducted a study on study of the educational achievement of the girls in Kasturba Gandhi Balika Vidyalayas of district

Pilibhit in the context of educational adjustment. The study found that there was a positive correlation between educational adjustment and educational achievement among girls studying in Kasturba Gandhi Balika schools.

Kumar and Kumar (2025) conducted a study on A Study of Academic Achievement, Mental Health and Adjustment Problems of Secondary School Students. The study found that there is a significant difference in male and female students' academic achievement, mental health and adjustment problems of secondary school students.

From the review of related literature, it is observed that studies are conducted concerning different variables related to Kasturba Gandhi Balika Vidyalaya, and a few studies are also related to variables other than the KGBVs. However, studies are not reported pertaining to Adjustment Problems, Awareness of Health, and Study Habits in relation to Academic Achievement among students of KGBVs as well as other schooling systems. In this background, the present study was undertaken.

Statement of the Problem:

The main objective of the research was to study the Effect of Adjustment Problems, Awareness of Health, and Study Habits on Academic Achievement among Students of KGBVs. The study intended to explore the main and interaction effects of variables on academic achievement among students of KGBVs.

Objective of the Study:

1. To find the main and interaction effect of levels of adjustment, awareness of health and study habits on the academic achievement of students studying in KGBVs of Karnataka.

Hypothesis of the Study:

1. There is a significant main and interaction effect of levels of adjustment, awareness of health and study habits on the academic achievement of students studying in KGBVs of Karnataka.

Research Design:

The study used a survey design to explore the problem. The study intended to explore the main effect and interaction effect of the level of adjustment problems, awareness of health, and study habits on the academic achievement of students' studies in KGBVs.

Sample of the Study:

The data was collected from 610 students studying Kasturba Gandhi Balika Vidyalayas of Karnataka.

Tools Used in the Study:

The study used the students' school adjustment scale developed by Surskha Sarsani, the test of study habits developed by C.P. Mathur and the awareness of health scale developed and standardised by the researcher to collect the data for the present study. Whereas the academic achievement data was collected from the school.

Statistical Techniques Used in the Study:

The data was collected and analysed using 3X3X3 factorial ANOVA.

Analysis and Interpretation of Data:

Hypothesis: There is a significant main and interaction effect of levels of adjustment, awareness of health and study habits on the academic achievement of students studying in KGBVs of Karnataka.

Table 1: Summary of 3X3X3 Factorial ANOVA test with respect to the main and interaction effects of levels of adjustment, awareness of health and study habits on academic achievement of students studying in KGBVs of Karnataka

Main & Interaction Effect	Sum of Squares	df	Mean Square	F	Sig.
Level of Adjustment Problem (A)	5128.999	2	2564.499	24.427	.000
Levels of Awareness of Health (B)	1645.772	2	822.886	7.838	.000
Levels of Study Habits (C)	2642.562	2	1321.281	12.585	.000
A X B	368.477	4	92.119	.877	.477
A X C	692.822	4	173.205	1.650	.160
B X C	778.267	4	194.567	1.853	.117
A X B X C	573.097	8	71.637	.682	.707
Residuals	61207.407	583	104.987		

Main Effect of Level of Adjustment, Awareness of Health and Study Habit on Academic Achievement:

The above table indicate that F-value is 24.427 and p-value is .000 for main effect of level of adjustment problems on academic achievement, F-value is 7.838 and p-value is .000 for main effect of level of awareness of health on academic achievement and F-value is 12.585 and p-value is .000 for main effect of level of levels of study habits on academic achievement of students studying KGBVs of Karnataka. Since, obtained p-values are less than the .05 level of significance, the research hypotheses are accepted, and the null hypotheses are rejected. Therefore, there is a significant effect of factors A, B and C on the academic achievement of students studying in KGBVs of Karnataka.

Thus, There is a significant main effect of levels of adjustment problems on academic achievement of students studying in KGBVs of Karnataka at the .05 level of significance, $F= 24.427$, $p < .05$; There is a significant main effect of levels of awareness of health on academic achievement of students studying in KGBVs of Karnataka at the .05 level of significance, $F= 7.838$, $p < .05$; and There is a significant main effect of levels of study habits on academic achievement of students studying in KGBVs of Karnataka at the .05 level of significance, $F= 12.585$, $p < .05$.

Two-Way Interaction Effect of Level of Adjustment, Awareness of Health and Study Habit on Academic Achievement:

The above table indicate that F-value is 0.877 and p-value is 0.477 for interaction of levels of adjustment problems and levels of awareness of health on academic achievement, F-value is 1.650 and p-value is .160 for interaction of levels of adjustment problems and levels of study habits on academic achievement and F-value is 1.853 and p-value is 0.117 for interaction of levels of awareness of health and levels of study habits on academic achievement of students studying KGBVs of Karnataka.

Since, obtained p-values are higher than the 0.05 level of significance, the research hypotheses are rejected, and the null hypotheses are accepted. Therefore, There is no significant interaction effect of levels of adjustment problems and level of awareness of health on academic achievement of students studying in KGBVs of Karnataka at the .05 level of significance, F= .877, p > .05; There is no significant interaction effect of levels of adjustment problems and level of study habits on academic achievement of students studying in KGBVs of Karnataka at the .05 level of significance, F= 1.650, p > .05; and There is no significant interaction effect of levels of awareness of health and Level of study habits on academic achievement of students studying in KGBVs of Karnataka at the .05 level of significance, F= 1.853, p > .05.

Three-Way Interaction Effect of Level of Adjustment, Awareness of Health and Study Habit on Academic Achievement:

The above table indicates that the F-value is .682 and the p-value is .707 for the interaction of levels of adjustment problems, awareness of health and study habits on academic achievement of students studying in KGBVs of Karnataka. Therefore, there is no significant interaction effect of levels of adjustment and level of awareness of health on academic achievement of students studying in KGBVs of Karnataka at the .05 level of significance, F= .687, p >.05.

Table 2: Post-hoc test and Pairwise comparison of the difference in academic achievement according to the level of adjustment problems of students studying in KGBVs of Karnataka

Levels of Adjustment Problems	N	Mean	SD	Levels of Adjustment Problems	
				Moderate	Low
High	156	67.455	10.242	.038 (p < .05)	.000 (p < .05)
Moderate	287	70.195	10.249		.000 (p < .05)
Low	167	77.156	10.248		

The above table indicates the pairwise comparison based on the Scheffe test. The mean is 67.455, and SD is 10.242 for academic achievement of high-level adjustment problems students, 70.195 and SD is 10.249 for academic achievement of moderate-level adjustment problems students, and the mean is 77.156 and SD is 10.248for academic achievement of low-level adjustment problems students studying in KGBVs of Karnataka.

The corresponding p-value for pairwise comparison of mean score revels that: There is a significant difference ($p < .05$) in academic achievement between students with high adjustment problems *(M = 67.455, SD = 10.242)* and those with moderate adjustment problems *(M = 70.195, SD = 10.249)* studying in KGBVs of Karnataka; There is a significant difference ($p < .05$) in academic achievement between students with high adjustment problems *(M = 67.455, SD = 10.242)* and those with low adjustment problems *(M = 77.156, SD = 10.248)* studying in KGBVs of Karnataka; and There is a significant difference ($p < .05$) in academic achievement between students with moderate adjustment problems *(M = 70.195, SD = 10.249)* and those with low adjustment problems *(M = 77.156, SD = 10.248)* studying in KGBVs of Karnataka.

Overall, from mean comparison, it is observed that students with low-level adjustment problems show higher academic achievement, followed by those with moderate and high-level adjustment problems studying in KGBVs of Karnataka.

Table 3: Post-hoc test and Pairwise comparison of difference in academic achievement according to the level of awareness of health of students studying in KGBVs of Karnataka

Levels of Awareness of Health	N	Mean	SD	Levels of Awareness of Health	
				Moderate	Poor
High	155	74.794	9.860	.136 ($p > .05$)	.000 ($p < .05$)
Moderate	286	71.885	9.859		.033 ($p < .05$)
Low	169	67.467	9.854		

The above table indicates the pairwise comparison based on the Scheffe test. The mean is 74.794, and SD is 9.860 for academic achievement of high-level awareness of health students, 71.885, and SD is 9.859 for academic achievement of moderate-level awareness of health students, and the mean is 67.467, and SD is 9.854 for academic achievement of low-level awareness of health students studying in KGBVs of Karnataka.

The corresponding p-value for pairwise comparison of mean score revels that: There is no significant difference ($p > .05$) in academic achievement between students with high health awareness *(M =*

74.794, SD = 9.860) and those with moderate health awareness *(M = 71.885, SD = 9.859)* studying in KGBVs of Karnataka; There is a significant difference ($p < .05$) in academic achievement between students with high health awareness *(M = 74.794, SD = 9.860)* and those with low health awareness *(M = 67.467, SD = 9.854)* studying in KGBVs of Karnataka; and There is a significant difference ($p < .05$) in academic achievement between students with moderate health awareness *(M = 71.885, SD = 9.859)* and those with low health awareness *(M = 67.467, SD = 9.854)* studying in KGBVs of Karnataka.

Overall, from mean comparison, it is observed that students with high and moderate levels of health awareness showed higher academic achievement, followed by those with low levels of health awareness studying in KGBVs of Karnataka.

Table 3: Post-hoc test and Pairwise comparison of the difference in academic achievement according to the level of study habits of students studying in KGBVs of Karnataka

Levels of Study Habits	N	Mean	SD	Levels of Study Habits	
				Moderate	Poor
High	153	73.288	10.242	.674 ($p > .05$)	.001 ($p < .05$)
Moderate	302	72.248	10.253		.001 ($p < .05$)
Low	155	67.884	10.246		

The above table indicates the pairwise comparison based on the Scheffe test. The mean is 73.288, and SD is 10.242 for academic achievement of high-level study habits students, 72.248 and SD is 10.253 for academic achievement of moderate-level study habits students, and the mean is 67.884, and SD is 10.246 for academic achievement of low-level study habits students studying in KGBVs of Karnataka.

The corresponding p-value for pairwise comparison of mean score revels that: There is no significant difference ($p > .05$) in academic achievement between students with high study habits *(M = 73.288, SD = 10.242)* and those with moderate study habits *(M = 72.248, SD = 10.253)* studying in KGBVs of Karnataka; There is a significant difference ($p < .05$) in academic achievement between students with high study habits *(M = 73.288, SD = 10.242)* and those with low study habits *(M = 67.884, SD = 10.246)* studying in KGBVs of Karnataka; and There is a significant difference ($p < .05$) in academic achievement between students with moderate study habits *(M = 72.248, SD = 10.253)* and those with low study habits *(M = 67.884, SD = 10.246)* studying in KGBVs of Karnataka.

Overall, from mean comparison, it is observed that students with high and moderate levels of study habits showed higher academic achievement, followed by those with low levels of study habits,

students studying in KGBVs of Karnataka.

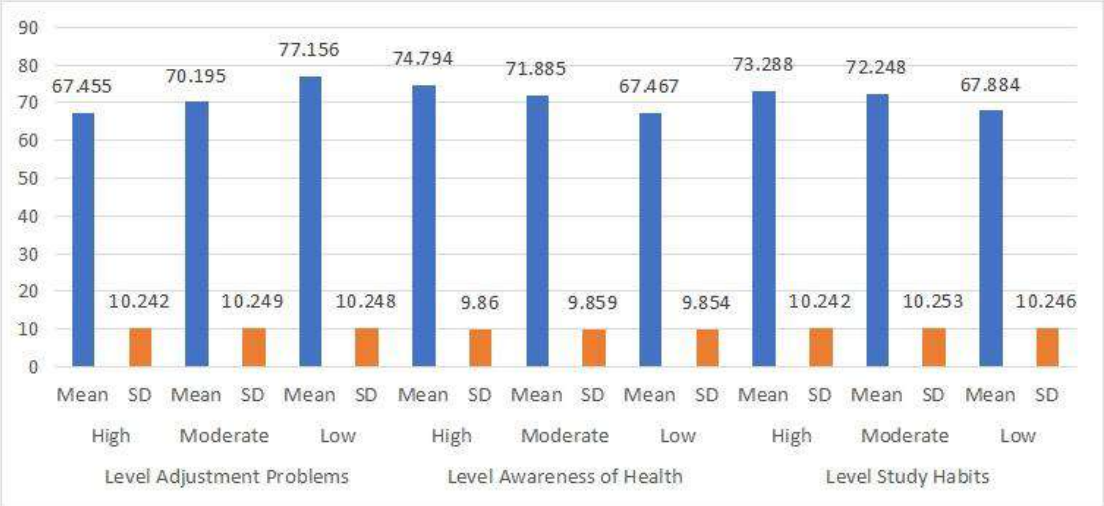

Figure 1: Comparison of differences in academic achievement according to the level of adjustment problems, awareness of health and study habits of students studying in KGBVs of Karnataka

Major Finding of the Study:

- There is a significant main effect of levels of adjustment problems on academic achievement of students (F= 24.427, p < .05), levels awareness of health on academic achievement of students (F= 7.838, p < .05), and levels study habits on academic achievement of students (F= 12.585, p < .05) studying in KGBVs of Karnataka at the .05 level of significance. Pairwise comparison indicates that, related to pairwise comparison, the descriptive and p value indicate that students with low-level adjustment problems showed higher academic achievement, followed by those with moderate and high-level adjustment problems studying in KGBVs of Karnataka. Concerning levels of awareness of health, students with high and moderate levels of health awareness showed higher academic achievement, followed by those with low levels of health awareness studying in KGBVs of Karnataka. With regard to levels of study habits, students with high and moderate levels of study habits showed higher academic achievement, followed by those with low levels of study habits, students studying in KGBVs of Karnataka.
- There is no significant interaction effect of levels of adjustment problems and level of awareness of health on academic achievement of students (F= .877, p > .05), levels of adjustment problems and level of study habits on academic achievement (F= .877, p > .05), and levels of awareness of health

and Level of study habits on academic achievement (F= 1.853, p > .05) of students studying in KGBVs of Karnataka at the .05 level of significance. There is no significant interaction effect of levels of adjustment and level of awareness of health on academic achievement of students studying in KGBVs of Karnataka (F= .687, p >.05) at the .05 level of significance.

Discussion and Conclusion:

The findings indicate that the level of adjustment problems, awareness of health, and study habits each have a significant independent effect on the academic achievement of students in KGBVs of Karnataka. However, the interaction effects among these variables were not significant, suggesting that each factor contributes to academic achievement independently rather than jointly. This implies that improvement in any one of these areas can positively impact academic achievement, regardless of the status of the other variables.

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