



Achievement Motivation of Secondary Level Students in Relation to Gender and Area of Residence

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Abstract: The present study investigated achievement motivation among secondary school students in relation to gender and area of residence. A causal-comparative research design was adopted for the study. The sample consisted of secondary school students selected through multistage sampling technique from Bhubaneswar Block and Bhubaneswar Municipality area of Khordha district. Data were collected using Deo-Mohan Achievement Motivation (n-Ach) Scale. The collected data were analyzed using Two-Way Analysis of Variance (ANOVA) to examine the main and interaction effects of gender and residence on achievement motivation. The findings revealed that both gender and residence have significant effects on achievement motivation. However, the interaction effect between gender and residence was not found to be significant. The results indicate that achievement motivation differs independently based on gender and residential background, but their combined influence does not produce a significant effect. The study highlights the importance of considering demographic factors in understanding students' achievement motivation.

Keywords: achievement motivation, gender, area of residence, causal-comparative research, ANOVA.

1. Introduction

Achievement motivation plays a vital role in determining students' academic success. It refers to the internal drive that encourages students to strive for excellence and accomplish their goals. At the secondary level, motivation becomes especially important as students face academic pressure, career decisions, and competitive examinations. Gender and place of residence (urban and rural) are important social factors that may influence achievement motivation. Gender and residential background are important socio-demographic factors that may shape students' motivational patterns. Differences in socialization, parental expectations, educational opportunities, and availability of resources may contribute to variations in achievement motivation among boys and girls, as well as among urban and rural students. Urban students often have access to better educational facilities and exposure, whereas rural students may face limitations in infrastructure and academic support. However, motivational strength may not solely depend on resource availability, making it important to examine these differences empirically.

Understanding these differences helps educators design effective educational strategies. There is a saying that once a child is motivated to learn, half of the teaching-learning process is accomplished. Academic achievement implies one's knowledge, understanding, and skills in a specific subject or group of subject areas. Achievement motivation affects many aspects of an individual's life. It helps students overcome obstacles that come in the way of achieving their goals and enables them to progress with greater confidence and determination toward successful performance in competitive situations. Achievement motivation is an internal force that motivates individuals to master challenging and difficult tasks and to derive satisfaction from their performance. It refers to the desire to achieve excellence and attain a sense of accomplishment through effort and persistence. Students who have high achievement motivation work hard, remain focused on their goals, and perform well in their tasks. Achievement motivation refers to an individual's disposition to strive for success in competition with others or against a standard of excellence set by the individual. It reflects the desire to achieve, excel, and attain goals through persistent effort. Achievement motivation has been widely recognized as a crucial determinant of academic success. According to David C. McClelland (1961), achievement motivation refers to an individual's desire to excel, achieve in relation to standards of excellence, and strive for success through sustained effort. Similarly, Bernard Weiner (1985) emphasized that motivation is influenced by attributional processes, where students' interpretations of success and failure affect their persistence and performance.

Some studies report that girls show higher academic motivation due to better discipline, regular study habits, and higher intrinsic interest in academic tasks. Chaudhary (1973) observed that girls had higher n-Ach score. Patel (1977) found that the difference in n-Ach between male and female student teachers was significant and the latter having a higher mean score. Singh (2016) found that female students exhibited higher achievement motivation compared to male students, attributing this difference to greater academic involvement and responsibility. Verma (1992) observed that gender made differences in achievement motivation. Several studies have

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examined gender effect and reported significant gender differences in favour of girls at the secondary level. On the other hand, some studies suggest that boys exhibit higher achievement motivation in competitive and performance oriented competition. Some studies indicates that there are no significant students generally have higher achievement motivation due to better educational facilities, parental education, exposure to media and access to technology. However, Khan and Khan (2020) observed no significant gender difference, suggesting that motivational patterns vary across socio-cultural contexts.

Residence has also been identified as an important factor. Zhao and Xu (2021) reported that urban students demonstrated higher academic motivation than rural students due to better access to educational resources and competitive environments. Mishra and Behera (2022) found significant differences in achievement motivation between urban and rural secondary school students in Odisha. Similarly, Das and Saha (2020) concluded that rural students often face motivational challenges due to limited academic exposure and infrastructural support. Lalitha (1977) found that there is no significant difference in mean scores of tribal and non-tribal students in motivation. Recent research has explored interaction effects. Noroozi, and Meijden (2021) found that although gender and residence independently influenced motivation, their interaction effect was not significant. Patel and Sharma (2023) also reported that gender differences in motivation remained consistent across residential settings.

Overall, previous research suggests that gender and residence significantly influence achievement motivation, but their combined effect is often not statistically significant. These findings provide theoretical and empirical support for the present study.

Although various studies have been conducted in achievement motivation no research has been carried out focusing on secondary level students of khordha district in relation to both gender and residence simultaneously. In the context of Odisha, especially in Bhubaneswar block and Bhubaneswar Municipality of Khordha district, there exists variation in educational facilities between urban and rural schools. Therefore, this study is needed to provide local evidence and data-based conclusion. The present study attempts to examine the achievement motivation of secondary level students in relation to gender and residence to provide clearer insights and practical implications for educators and policymakers

A. Objectives of the Study

- To study the level of achievement motivation among secondary level students.
- To study the difference in achievement motivation between boys and girls secondary level students.
- To study the difference in achievement motivation between urban and rural secondary level students.
- To examine the interaction effect of gender and area of residence on achievement motivation.

B. Hypotheses of the Study

H₀₁: There is no significant difference in achievement motivation between boys and girls secondary level students.

H₀₂: There is no significant difference in achievement motivation between urban and rural secondary level students.

H₀₃: There is no significant interaction effect of gender and area of residence on the achievement motivation of secondary level students.

2. Methods

A. Research Design

The researcher has adopted the causal-comparative research method. In this study Achievement motivation is the dependent variables and gender and residence are independent variables. This method was chosen because the independent variables, namely gender and residence, cannot be manipulated and are already existing variables. Therefore, the study examined the differences as they naturally occur.

B. Participants

The population of the study consists of all secondary level students of the Bhubaneswar Block and Bhubaneswar Municipality of Khordha District, Odisha. The researcher has adopted multistage sampling technique for selecting the sample. There were 179 high schools in Khordha district of Odisha. Out of which 39 High schools which were situated in Bhubaneswar Municipality Area and 15 High Schools which were situated in Bhubaneswar Block. In the first stage five Urban schools from Bhubaneswar Municipality Area and five Rural schools from Bhubaneswar Block were randomly selected. In the second stage five boys and five girls' students from ninth class were randomly selected from each school. In this way the sample of present study consisted of 100 ninth class students.

C. Tools Used

The researcher has used Deo–Mohan Achievement Motivation Scale (n-ach Scale) for data collection. This standardized scale was used to measure the level of achievement motivation among secondary school students.

D. Procedure of Collection of Data

The Deo–Mohan Achievement Motivation Scale was administered to the selected students in a group setting. First, answer sheets were distributed to the students. They were asked to fill in their personal details such as name, age, gender, school name, address, and other necessary information. After that, the scale booklets were distributed, one to each student. The students were informed that there was no time limit, but they were expected to respond honestly, sincerely, and thoughtfully to each item. After completion, the answer sheets and test booklets were collected for scoring and analysis.

E. Scoring Procedure

The Deo–Mohan Achievement Motivation Scale consists of statements with five response categories: Always, Frequently, Sometimes, Rarely Never. For positive items, the scoring

pattern is: Always = 4, Frequently = 3, Sometimes = 2, Rarely = 1, Never = 0. For negative items, the scoring is reversed: Always = 0, Frequently = 1, Sometimes = 2, Rarely = 3, Never = 4. The total score was calculated by summing the scores of all items. A higher total score indicates a higher level of achievement motivation, while a lower score indicates a lower level of achievement motivation.

F. Statistical Techniques Used

In order to interpret the data systematically and test the hypotheses of the study, appropriate statistical techniques were applied. The collected data were analyzed using both descriptive and inferential statistics.

1) Descriptive Statistics

The descriptive statistics mean and Standard Deviation were used.

The Mean was calculated to determine the average achievement motivation score of different groups (boys and girls; urban and rural students).

The Standard Deviation was calculated to measure the variability or dispersion of scores within each group.

2) Inferential Statistics

To test the formulated hypotheses, the inferential statistical technique Two-Way Analysis of Variance (Two-Way ANOVA) was employed.

Two-Way ANOVA was used to examine:

- The main effect of Gender (Male/Female)
- The main effect of Residence (Urban/Rural)
- The interaction effect between Gender and Residence on Achievement Motivation

This technique was appropriate because the study involved two independent variables (Gender and Residence) and one dependent variable (Achievement Motivation).

3. Results and Discussion

Table 1
Mean and Standard Deviation (SD) of achievement motivation score

Group	N	Mean	SD
Girls	50	153.04	18.42
Boys	50	135.46	15.79
Urban students	50	147.10	20.05
Rural students	50	141.40	16.35
Urban Girls	25	158.88	18.79
Urban Boys	25	135.52	15.49
Rural Girls	25	147.00	13.80
Rural Boys	25	134.04	16.04

From the above table it was found that the girls’ students have more achievement motivation than boys’ students. The Mean score of achievement motivation of girls’ students was 153.04 and boys’ students was 135.46. The mean difference was 17.58. It was a noticeable gender effect. So, the Achievement Motivation was higher among girls’ students compared to boys’ students. The Mean score of achievement motivation of urban students was 147.10 and rural students was 141.40. Urban students have slightly higher achievement motivation than rural students. The Urban group has more variability (SD=20.05), meaning scores were more spread out. The Mean score of achievement motivation of urban girls was

158.88, urban boys was 135.52 and rural girls was 147.00 and rural boys is 134.04. From this data, it was interpreted that area of residence has a moderate effect, with urban students scoring higher. Urban girls scored the highest among all groups. Rural boys scored the lowest. Girls outperformed boys in both urban and rural setting.



Fig. 1. Achievement motivation score of girls’ students and boys’ students
Note: Mean score of achievement motivation of girls is 153.04 and boys is 135.46

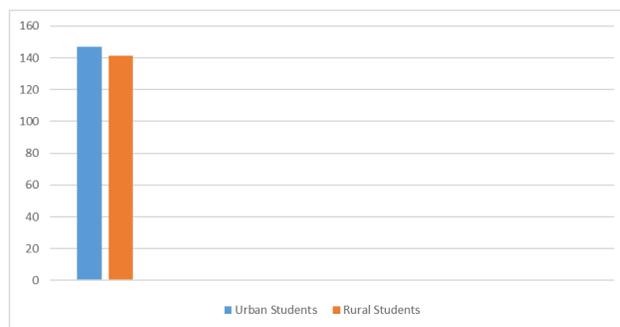


Fig. 2. Achievement motivation score of urban and rural students
Note: Mean score of achievement motivation of urban students is 147.10 and rural students is 141.40

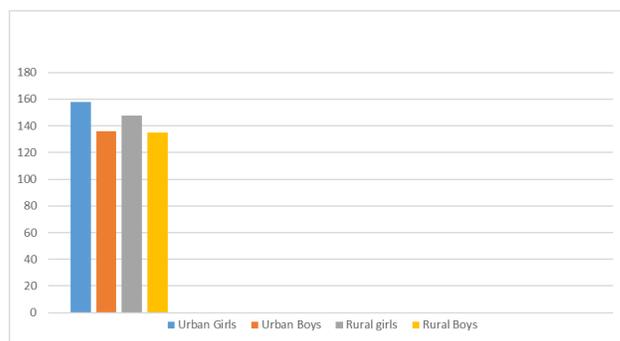


Fig. 3. The interaction effect of gender and residence
Note: Mean score achievement motivation of urban girls is 158.88, urban boys are 135.52 and rural girls is 147.00 and rural boys is 134.04

From the ANOVA table, the obtained F-value for rows (Gender) was found to be significant at the 0.01 level. Therefore, the null hypothesis stating that there is no significant difference between boys and girls in achievement motivation was rejected. This indicates that gender has a significant effect on achievement motivation. The F-value for columns (Area of Residence) was significant at the 0.05 level. Hence, the null hypothesis stating that there is no significant difference between urban and rural students in achievement motivation was also rejected. This shows that area of residence has a

Table 2
Analysis of variance (ANOVA) for achievement motivation

Source of Variation	Sum of Square	df	Mean Square	F Value
Gender (Girls vs Boys)	9840.64	1	9840.64	31.48**
Area of Location (Urban vs Rural)	1831.84	1	1831.84	5.86*
Interaction (Gender*Residence)	712.89	1	712.89	2.28
Within	30002.20	96	312.52	
Total	42387.57	99		

** Statistically Significant at 0 .01 level of significance

* Statistically Significant at 0 .05 level of significance

significant effect on achievement motivation.

However, the F-value for the interaction effect (Gender × Area) was not significant. Therefore, the null hypothesis regarding the interaction effect was accepted. This means that there is no significant interaction effect of gender and residence on achievement motivation. In other words, the difference between boys and girls in achievement motivation does not depend on whether they belong to urban or rural areas. The pattern of difference between boys and girls remains almost consistent in both urban and rural settings.

4. Conclusion

The present study examined achievement motivation among secondary school students in relation to gender and residence. The findings revealed that there was a significant difference in achievement motivation between boys and girls. Gender had a significant and main effect on achievement motivation. This finding aligns with Chaudhary (1973), Singh (2016) and Verma (1992) who reported that girls score higher than boys in achievement motivation. A significant difference was found between urban and rural students in achievement motivation. Area of residence significantly influenced achievement motivation. This finding aligns with who reported that the interaction effect between gender and residence (Gender × Area) was not significant. This indicates that the effect of gender on achievement motivation does not depend on whether the students belong to urban or rural areas. The difference between boys and girls in achievement motivation remained almost consistent in both urban and rural setting. This finding aligns with Noroozi, and Meijden (2021) who reported that although gender and residence independently influenced motivation, their interaction effect was not significant. Mishra and Behera (2022) also found significant differences in achievement motivation between urban and rural secondary school students in Odisha. Since gender shows a significant effect on achievement motivation, teachers should adopt gender-sensitive instructional strategies to encourage equal participation and motivation among boys and girls. As residence (urban–rural) also influences achievement motivation, special motivational programs should be designed for rural students to bridge the gap. Schools should organize workshops, counselling sessions, and career guidance programs to enhance achievement motivation among secondary school students. Teachers should create a competitive yet supportive classroom environment that promotes mastery, goal setting, and self-confidence. Parents should be made aware of their role in fostering achievement motivation through regular parent–teacher meetings.

As with all studies the study reported in this paper has some

limitation. The study is delimited to ninth Class students only. The study is confined to high schools located in the Bhubaneswar Block and Bhubaneswar municipality of Khordha District, Odisha. A larger sample from different districts or states may be taken for better generalization. The study can be extended by including other variables such as socio-economic status, parental education, intelligence, and academic achievement. Similar studies may be conducted at higher secondary levels. Qualitative studies may also be undertaken to understand the psychological factors affecting achievement motivation.

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