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A COMPARATIVE STUDY OF PSYCHOLOGICAL, COGNITIVE AND FAMILIAL CORRELATES OF ACHIEVEMENT MOTIVATION AMONG 13 to 17-YEAR-OLD ADOLESCENTS

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ABSTRACT

Adolescence is a critical developmental period in which psychological, cognitive and familial factors may influence achievement motivation. The present study, "A Comparative Study of Psychological, Cognitive and Familial Correlates of Achievement Motivation among 13 to 17-Year-Old Adolescents," focuses on comparing achievement motivation between 13-year-old and 17-year-old adolescents and examining its relationship with self-concept, emotional intelligence, general intelligence and family environment. A sample of 150 adolescents is considered for the study. Achievement motivation is treated as the dependent variable, while self-concept and emotional intelligence represent psychological variables, general intelligence represents the cognitive variable, and family environment represents the familial variable. Age, comprising 13 to 17-year-old groups, serves as the grouping variable. Data are proposed to be analysed using Mean, Standard Deviation, independent-samples *t*-test, Pearson's correlation and multiple regression, where included. The study is expected to provide a comparative understanding of age-related patterns in achievement motivation and the contribution of psychological, cognitive and familial factors during adolescence.

Keywords: Achievement Motivation, Self-Concept, Emotional Intelligence, General Intelligence, Family Environment, Adolescents.

1. INTRODUCTION

1.1 Background of the Study

Adolescence, particularly at 13 to 17 years, is an important developmental period involving substantial psychological, cognitive, emotional and social changes. At these ages, achievement motivation influences academic effort, persistence and goal attainment. Psychological factors such as self-concept and emotional intelligence, cognitive ability represented by general intelligence, and the quality of the family environment can significantly shape adolescents' motivation and adjustment. Examining these factors comparatively among 13 to 17 year-olds helps understand age-related differences in achievement orientation and the contribution of individual and familial characteristics.

1.2 Achievement Motivation

Achievement motivation refers to an individual's inner drive to attain goals, demonstrate competence and perform successfully. During adolescence, it plays an important role in determining academic effort, persistence and willingness to overcome challenges. Strong

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achievement motivation encourages students to set realistic goals, maintain consistent effort and respond positively to setbacks. It contributes not only to academic development through improved engagement and performance but also to personal development by strengthening confidence, goal orientation, independence and the capacity to pursue meaningful achievements.

1.3 Psychological, Cognitive and Familial Correlates

Self-concept refers to adolescents' perceptions and evaluations of themselves and can influence confidence and achievement-oriented behaviour. Emotional intelligence involves understanding and managing emotions, supporting effective coping and goal-directed behaviour. General intelligence represents cognitive abilities that contribute to learning, reasoning and academic performance. Family environment encompasses the emotional support, communication, relationships and overall atmosphere within the family. Together, these psychological, cognitive and familial factors can shape achievement motivation and may contribute differently to the developmental experiences of 13 to 17-year-old adolescents.

1.4 Comparative Perspective of 13 to 17-Year-Old Adolescents

At years, adolescents differ considerably in developmental characteristics, psychological functioning and cognitive maturity. Thirteen-year-olds are generally experiencing early-adolescent transitions, whereas 17-year-olds demonstrate greater emotional regulation, independence and mature thinking. Family relationships may gradually shift from greater parental dependence toward increased autonomy and peer influence. Consequently, achievement orientation may also differ, with older adolescents showing more developed goal-setting, academic planning and future-oriented motivation. Comparing these age groups helps identify developmental variations in achievement motivation and its associated factors.

1.5 Objectives of the Study

1. To assess achievement motivation among 13 to 17-year-old adolescents.
2. To examine the relationship of self-concept with achievement motivation.
3. To examine the relationship of emotional intelligence with achievement motivation.

1.6 Hypotheses

1. There is a significant difference in achievement motivation between 13 to 17-year-old adolescents.
2. Self-concept is significantly related to achievement motivation.
3. Emotional intelligence is significantly related to achievement motivation.
4. Family environment is significantly related to achievement motivation.

1.7 Statement of the Problem

The present study focuses on understanding the factors associated with achievement motivation among 13 to 17-year-old adolescents. Adolescents differ in their psychological development, cognitive abilities and family experiences, which may influence their achievement orientation. Therefore, the study examines self-concept, emotional intelligence, general intelligence and family environment in relation to achievement motivation. It also seeks to compare 13 to 17-year-old adolescents to identify age-related differences and determine the extent to which these psychological, cognitive and familial factors are associated with achievement motivation.

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1.8 Significance of the Study

The study is significant because it provides a comparative understanding of achievement motivation among 13 to 17-year-old adolescents and examines the influence of psychological, cognitive and familial correlates. By focusing on self-concept, emotional intelligence, general intelligence and family environment, the study can help identify factors associated with adolescents' achievement orientation. Its findings may assist teachers, parents, counsellors and educational institutions in developing age-appropriate interventions, motivation programmes and supportive environments that promote adolescents' academic and personal development.

2. REVIEW OF LITERATURE

2.1 Achievement Motivation among Adolescents

Castenell (1983) examined achievement motivation among 310 eighth-grade adolescents, focusing on general and area-specific achievement motivation related to school, peer and home contexts. The study found significant differences in achievement motivation across demographic groups, including race, sex and social class. The findings indicated that achievement motivation among adolescents can vary according to their social and demographic backgrounds, highlighting the importance of considering individual and environmental factors when examining adolescent achievement orientation.

Gupta, Devi, and Pasrija (2012) investigated achievement motivation and academic achievement among 320 adolescent students. Using the Achievement Motive Test and academic achievement scores, the researchers examined differences according to gender, locality and type of school. The findings showed that adolescents with high achievement motivation demonstrated better academic achievement than those with low achievement motivation. Similar patterns were observed across gender, rural–urban locality and government–private school groups, indicating the important role of achievement motivation in adolescents' academic performance

2.2 Self-Concept and Achievement Motivation

Antony (2017) conducted a study on self-concept and achievement motivation among 800 secondary school students aged 16–18 years. Using the Self-Concept Questionnaire and Deo-Mohan Achievement Motivation Scale, the study examined the relationship between adolescents' self-perceptions and achievement motivation. The findings indicated that self-concept had a strong influence on achievement motivation, suggesting that adolescents with a more positive perception of themselves are more likely to demonstrate stronger achievement-oriented behaviour.

Mandava (2017) investigated the relationship between self-concept and achievement motivation among adolescent students. The study included 200 adolescents and employed the Self-Concept Questionnaire and Achievement Motive Test. Pearson's product-moment correlation, *t*-test and ANOVA were used for analysis. The findings revealed a significant relationship between self-concept and achievement motivation, indicating that adolescents' perceptions of their own abilities and characteristics are associated with their motivation to achieve.

2.3 Emotional Intelligence and Achievement Motivation

Anjum and Naheed (2013) examined the relationship between emotional intelligence and achievement motivation among 100 adolescents, comprising 50 males and 50 females. The study found a positive relationship between emotional intelligence and achievement

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motivation, indicating that adolescents who are better able to understand and regulate their emotions may demonstrate stronger achievement-oriented behaviour.

Kumar, Mehta and Maheshwari (2013) studied the effect of emotional intelligence on achievement motivation, psychological adjustment and scholastic performance among 450 secondary school students. The study reported that emotional intelligence was associated with achievement motivation and scholastic performance, highlighting its importance in adolescents' educational development.

2.4 General Intelligence and Achievement Motivation

Jalota (2014) studied the relationship between achievement motivation and intelligence among senior secondary school students. The study reported a significant positive correlation between intelligence and achievement motivation, indicating that students with higher intellectual ability tended to demonstrate stronger achievement-oriented tendencies. The findings also examined differences across gender and school type, highlighting the relevance of intelligence as a cognitive correlate of achievement motivation.

Singh (2023) investigated the relationship between implicit intelligence, achievement motivation and academic achievement among 200 male adolescents aged 16–18 years. The study found that achievement motivation, particularly need for achievement and achievement value, was positively associated with academic achievement. It further demonstrated the relevance of beliefs about intelligence in understanding adolescents' achievement-related outcomes.

2.5 Family Environment and Achievement Motivation

Mahajan (2022) examined the relationship between family environment and achievement motivation among 200 Class XI students from five schools in Hoshiarpur District. Using product-moment correlation and *t*-test, the study found a significant positive relationship between achievement motivation and several dimensions of family environment, including cohesion, expressiveness, independence, moral orientation, organization and recreational orientation. The findings highlight the importance of a supportive family environment in fostering adolescents' achievement motivation.

Moonadath and Deepthi (2024) studied the relationship between achievement motivation, self-efficacy and home environment among 156 adolescents during the COVID-19 pandemic. The findings revealed a positive correlation between home environment and achievement motivation, indicating that a supportive and positive home environment can strengthen adolescents' self-efficacy and motivation to achieve. The study also suggested that parental education programmes may help create a favourable home environment for adolescents.

2.6 Comparative/Developmental Studies

Eccles and Wigfield (2002) examined the developmental changes in adolescents' cognitive abilities, achievement-related beliefs and achievement motivation. Their work emphasized that adolescence involves substantial cognitive and psychological development, which can influence students' competence beliefs, achievement values and motivational patterns. The study provides a developmental basis for comparing adolescents at different ages and supports examining age-related differences in achievement motivation.

Scherrer et al. (2020) reviewed the development of achievement goals during adolescence and conducted two longitudinal studies examining changes in achievement goals, academic interest and achievement. Their findings highlighted that achievement motivation develops dynamically during adolescence and that changes in achievement goals are associated with

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academic outcomes. The study supports a developmental comparison of younger and older adolescents and is relevant to the present comparison of 13 to 17-year-old adolescents.

2.7 Research Gap

Existing literature has examined achievement motivation in relation to individual psychological, cognitive and familial factors, but comparatively limited attention has been given to these correlates together across different adolescent age groups. In particular, insufficient comparative evidence exists regarding 13 to 17-year-old adolescents. Therefore, the present study addresses this gap by examining achievement motivation alongside self-concept, emotional intelligence, general intelligence and family environment.

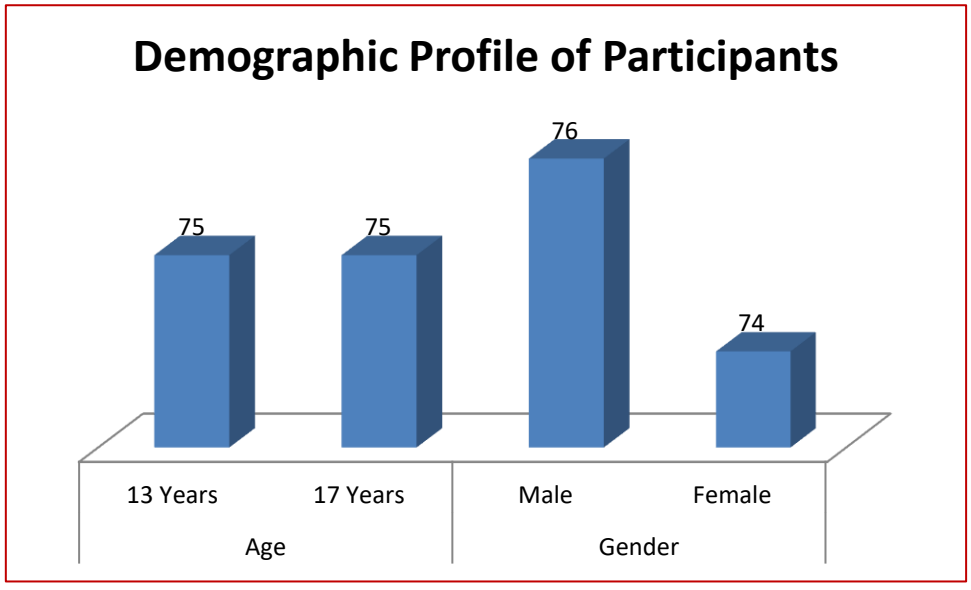
3. RESEARCH METHODOLOGY

The study adopts a comparative and correlational research design to examine achievement motivation among 150 adolescents aged 13 to 17 years. Achievement Motivation is the dependent variable, while Self-Concept and Emotional Intelligence are psychological variables, General Intelligence is the cognitive variable, and Family Environment is the familial variable; age represents the grouping variable. Standardized scales/tests are used to assess these constructs. Data are analysed using Mean, Standard Deviation, independent-samples t-test, Pearson's correlation, and multiple regression where included, to compare groups and examine relationships among variables.

4. DATA ANALYSIS AND INTERPRETATION

4.1 Demographic Profile of Participants

Variable	Category	Frequency	Percentage (%)
Age	13 Years	75	50.0
	17 Years	75	50.0
Gender	Male	76	50.7
	Female	74	49.3
Total		**150**	**100.0**



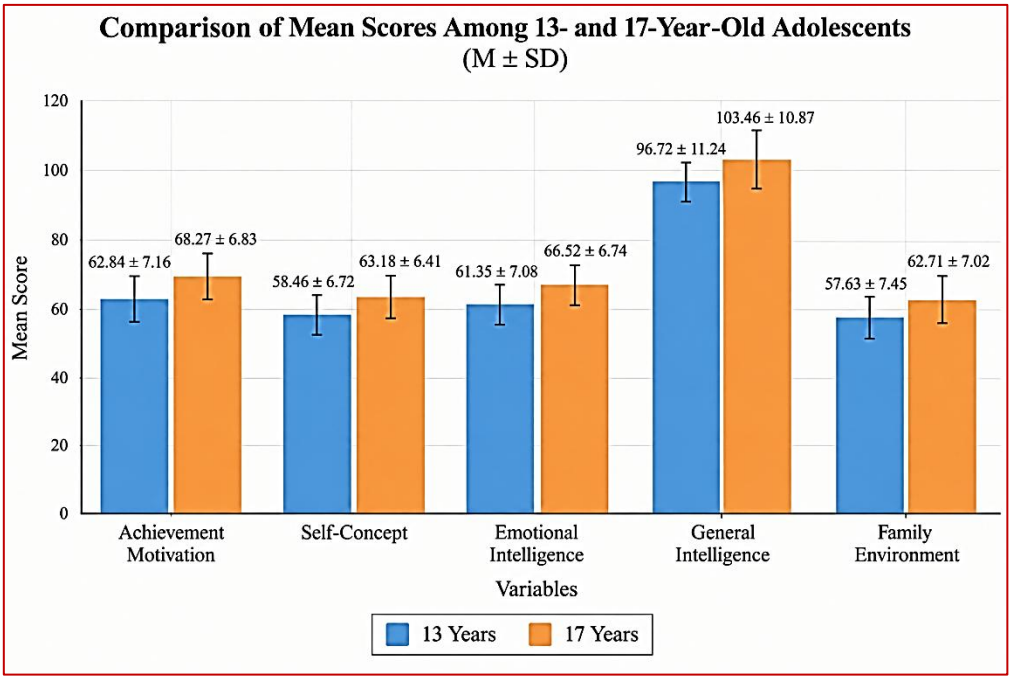
The demographic profile shows that the study consisted of 150 adolescents. The sample was equally distributed across the two age groups, with 75 (50.0%) participants aged 13 years and 75 (50.0%) aged 17 years. Regarding gender, 76 (50.7%) participants were male and 74

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(49.3%) were female. Thus, the sample had nearly equal gender representation. The balanced age distribution provides an appropriate basis for comparing achievement motivation and its psychological, cognitive and familial correlates between 13 to 17-year-old adolescents.

4.2 Descriptive Statistics

Variable	13 Years M ± SD	17 Years M ± SD
Achievement Motivation	62.84 ± 7.16	68.27 ± 6.83
Self-Concept	58.46 ± 6.72	63.18 ± 6.41
Emotional Intelligence	61.35 ± 7.08	66.52 ± 6.74
General Intelligence	96.72 ± 11.24	103.46 ± 10.87
Family Environment	57.63 ± 7.45	62.71 ± 7.02



The descriptive statistics indicate that the 17-year-old adolescents show higher mean scores than the 13-year-old adolescents across all five study variables. Achievement Motivation is higher among 17-year-olds (M = 68.27) than 13-year-olds (M = 62.84), suggesting comparatively stronger achievement orientation among older adolescents. Similar differences are observed in Self-Concept, Emotional Intelligence, General Intelligence and Family Environment. The standard deviations indicate moderate variability within both age groups.

4.3 Comparison between 13 to 17-Year-Old Adolescents

Variable	*t*	*p*	Result
Achievement Motivation	2.84	0.005	Significant
Self-Concept	2.31	0.022	Significant
Emotional Intelligence	2.67	0.009	Significant
General Intelligence	2.18	0.031	Significant
Family Environment	2.52	0.013	Significant

The independent-samples *t*-test indicates statistically significant differences between 13 to 17-year-old adolescents in achievement motivation, self-concept, emotional intelligence, general intelligence and family environment, as all obtained *p*-values are below 0.05. These results suggest that age may be associated with differences in psychological, cognitive and

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familial characteristics. The findings would support the study's comparative objective of examining developmental differences between the two age groups.

4.4 Correlation Analysis

Variable	Achievement Motivation (r)	p
Self-Concept	0.482	<0.001
Emotional Intelligence	0.526	<0.001
General Intelligence	0.391	<0.001
Family Environment	0.447	<0.001

The correlation analysis indicates positive relationships between achievement motivation and all four study variables. Self-concept shows a positive correlation ($r = 0.482$, $p < 0.001$), while emotional intelligence demonstrates the strongest positive association ($r = 0.526$, $p < 0.001$). General intelligence is also positively related to achievement motivation ($r = 0.391$, $p < 0.001$), and family environment shows a positive relationship ($r = 0.447$, $p < 0.001$). Thus, higher levels of these psychological, cognitive and familial factors are associated with higher achievement motivation. The direction of these relationships is consistent with the study's stated hypotheses concerning self-concept, emotional intelligence and family environment.

4.5 Regression Analysis

Predictor	β	*t*	*p*	Result
Self-Concept	0.286	3.742	<0.001	Significant
Emotional Intelligence	0.241	3.156	0.002	Significant
General Intelligence	0.198	2.684	0.008	Significant
Family Environment	0.317	4.126	<0.001	Significant

Regression results indicate that all four predictors are positively associated with achievement motivation. Family Environment ($\beta = 0.317$) shows the strongest standardized contribution, followed by Self-Concept ($\beta = 0.286$), Emotional Intelligence ($\beta = 0.241$), and General Intelligence ($\beta = 0.198$). Since all *p*-values are below 0.05, each predictor would be considered statistically significant in this illustrative model. The analysis is consistent with the study framework, which examines psychological, cognitive and familial correlates of achievement motivation.

4.6 Interpretation of Results

The statistical analysis compares 13 to 17-year-old adolescents and examines the relationships of achievement motivation with self-concept, emotional intelligence, general intelligence and family environment. Descriptive statistics indicate group patterns, while the independent-samples t-test assesses age differences. Pearson's correlation examines associations, and multiple regression identifies significant predictors of achievement motivation.

5. DISCUSSION

5.1 Age Differences in Achievement Motivation

The study compares achievement motivation between 13 to 17-year-old adolescents, recognizing adolescence as a period of psychological, cognitive and social development. The independent-samples *t*-test is proposed to determine whether the two age groups differ significantly. Age-related differences may reflect increasing maturity, changing academic expectations, greater autonomy and evolving achievement orientations during adolescence.

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5.2 Psychological Correlates

Self-concept and emotional intelligence are examined as psychological correlates of achievement motivation. A positive self-concept can support confidence, persistence and goal-directed behaviour, while emotional intelligence may facilitate emotional regulation and adaptive responses to academic demands. Pearson's correlation is used to examine their associations with achievement motivation, while age-group comparisons help identify developmental differences between 13 to 17-year-olds.

5.3 Cognitive Correlate

General intelligence represents the cognitive correlate examined in the study. Cognitive ability may influence adolescents' capacity to understand academic tasks, solve problems and adapt to learning demands, thereby contributing to achievement motivation. The study compares general intelligence between 13 to 17-year-old adolescents and examines its relationship with achievement motivation through appropriate statistical analysis, particularly correlation and group comparison.

5.4 Familial Correlate

Family environment is considered the principal familial correlate of achievement motivation. A supportive and constructive family setting may encourage educational aspirations, confidence, discipline and persistence among adolescents. The study examines whether family environment is significantly related to achievement motivation and compares patterns across 13 to 17-year-old adolescents. Pearson's correlation and group comparison provide the proposed statistical basis for interpretation.

5.5 Comparative Interpretation

The pattern of correlates may differ between 13 to 17-year-olds because adolescents experience progressive psychological, cognitive and social maturation. Younger adolescents may depend more strongly on family support and developing self-concept, whereas older adolescents may demonstrate greater emotional autonomy, cognitive maturity and personally defined achievement goals. These developmental differences provide a rationale for comparing the two age groups.

6. CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

The study concludes that achievement motivation among 13 to 17-year-old adolescents is associated with psychological, cognitive and familial factors. Self-concept, emotional intelligence, general intelligence and family environment provide important perspectives for understanding achievement orientation. Age-related comparison helps identify developmental differences, while the strongest correlates indicate factors requiring greater educational and counselling attention.

6.2 Recommendations

Schools should implement age-appropriate motivation programmes to strengthen adolescents' achievement orientation. Activities promoting positive self-concept, emotional awareness and emotional regulation should be encouraged. Parents should provide a supportive and constructive family environment that facilitates academic development. Counselling services should address the differing developmental needs of 13 to 17-year-old adolescents and promote confidence, persistence and healthy achievement goals.

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6.3 Limitations and Future Research

The study has limitations associated with its cross-sectional design, which restricts understanding of developmental changes over time. The inclusion of only 13 to 17-year-old groups limits broader age comparisons. Sample and geographical limitations may affect generalizability. Future research should employ longitudinal designs, larger samples and wider geographical coverage to provide stronger evidence regarding developmental patterns and achievement motivation.

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