# Predictive Influence of Environmental and Psychological Factors on Academic Underachievement among High Ability Students in Public Secondary Schools in South-West, Nigeria

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## Abstract

*This study investigated some environmental and psychological factors that could predict the academic underachievement among high ability students in public secondary schools in the south-west, Nigeria. The study adopted the descriptive survey design of an ex-post facto type. A sample size of 300 junior secondary two students in the south-west, Nigeria was randomly selected using multi-stage sampling technique with one hundred and sixty-two (162) females and one hundred and thirty-eight (138) males. Majority of the participants fell within the ages of ten (10) and fifteen (15). Some adopted instruments were used for data collection. Eight research questions were raised to guide the study, the data were analysed using Pearson Product Moment Correlation and Multiple Regression at 0.05 level of significance. Findings showed that peer influence is the most significant predictor of academic underachievement (r=0.14) and followed by depression (r=0.13). It was evident that there was joint prediction of the psychological factors* $F_{(3,292)}$ *=4.77;* R*=0.05 and environmental factors (*$F_{(3,293)}$*=3.49;* R*=0.04 on the academic underachievement among the high ability students. It is thus recommended that effective motivational incentives, positive peer influence and conducive home and school environments will minimise academic underachievement among the high-ability students in schools in Nigeria.*

## Introduction

The academic underachievement of high ability students is, undoubtedly, a serious issue that has attracted the attention of researchers of old time to this present century. The solution to this phenomenon is yet to be found despite all efforts and suggestions of the past researchers with their findings to resolve this recurring problem that seems intractable. According to Matthews (2007), academic underachievement among the high ability students is a huge issue; that has remained a focus of research for quite a while now. The number one issues by a research in the National Research Centre on the Gifted and Talented in United States of America according to Renzulli, Reid and Gubbins (1991). Whitmore (2002) submitted that academic underachievement of high ability students is a perplexing phenomenon. For no clear reasons, students, who show great academic promise fail to perform at a level commensurate with their previously documented abilities. From literature and research work on academic underachievement among high ability students, it is discovered that academic underachievement is universal and attempts have been made to find a lasting solution to this enigma (Colangelo, Reis and Mccoach, 2000).

Fehrenbach (2008) averred that defining academic underachievement has been a difficult task for educators, teachers, psychologists and other professionals in the field of gifted education. Academic underachievement is not easy to define as there is no consensus on how best to define the concept, but generally it is defined as a

discrepancy between ability and performance. Dowdall and Colangelo (2006) stressed that despite all the assessment tools available to today's educators and numerous researches existing, a straightforward definition of academic underachievement is not available. It seems that divergence of opinions among gifted education professionals on what constitutes academic underachievement is the main reasons for disagreement, and thus different researchers may use different measures to determine who is an underachiever. Weis (2002) observed that academic underachievement is a behaviour, and not an attitude. Therefore, academic underachievement could be said to be a label usually adopted by researchers.

According to Rimm (1994), statistics indicated that half of high ability students do not reach levels that are consistent with their tested abilities. Among the major population of underachievers, two types have been designed, situational underachievers and chronic underachievers. Situational underachievers are those who underachieve on occasion, such as when a particularly difficult problem erupts or a clash occurs with one particular teacher. They generally cause little real concern beyond getting help with the immediate problem. The chronic underachiever, whose patterns recur, presents a problem particularly resistant to remediation. Underachievers come from homes where there are considerable inconsistencies in parenting styles. Parents of academic underachievers tend to be more inconsistent in their parenting styles, more restrictive, firm and less positive affection than parents of achieving students. These habits create an environment characterized by unclear expectations and emotional distance between the child and the parents (Abelman, 2007).

In addition, parent may lack the necessary skills or means to sufficiently support their high ability child's needs (Baker, 1998). Some parents lack the time to tend to their child's unique abilities, the knowledge of where to seek services for high ability students, the money to afford additional services, or the understanding of how to encourage their child's gifted talents. Consequently, the child's abilities remain under-utilised, makes him or her more likely to underachieve. In some families, behavioural guidelines remain unclear and children receive mixed messages from parents.

Parents may disagree with each other on academic expectations for the child, or may model achievement behavior that is inconsistent from the guidelines they preach. A good example is telling their child to perform creditably well in school, yet may not aspire to reach high standards in their own endeavours. Such mixed messages hinder high ability child's abilities, for they create an environment that makes exploration and clear communication difficult. Here, the children are not encouraged to take risks and explore their abilities. This in return, depletes their confidence to succeed at the high level of which they are capable (Baker, 1998). Family socioeconomic status generally perform better academically than students of low socioeconomic status (Tucker, 1999). The greater the socioeconomic resources of students, the better the level of academic performance when all else are constant (Luster and Mcadoo, 1994). Students of high socioeconomic status are eight times more likely to graduate from college than students of low socioeconomic status (Newman, Myer and Smith, 2000). However, many students have parents who are of low socioeconomic status among whom are usually underachievers. A person's

socioeconomic status is difficult to be referred to as the only factor causing academic underachievement because it has so many components attached to it.

The school environment contributes to the development of academic underachievement among high ability students. Factors such as the school structures, teachers, and peer-relationships may inadvertently hinder a child's ability to perform at his or her expected ability. Elements built into the school structure may create an inappropriate learning environment for some high ability students. Within big schools, it becomes easy for school personnel to forget children with unique needs. High ability students' education becomes impersonal and they are treated like their average-ability peers, even though they require different educational support than other students. Their abilities are not fostered and they perform to levels below their ability. Additionally, many schools instill inflexible curricular requirements which may be inappropriate for high ability students. For instance, children are grouped in grades according to age rather than ability, and few opportunities to accelerate in education (that is grade skipping, taking additional classes) are utilised (Baker, 1998). Assignments designed to challenge average-ability students become busy work for high ability students. They are left with few outlets to demonstrate or explore their higher abilities (Seeley, 2004). When a school fails to adjust their curriculum to meet high ability children's needs, these students become bored with class material, and they remain academically unchallenged. Boredom leads to lower participation in class and apathy towards achievement, resulting in high levels of academic underachievement among the high ability population.

Teachers' behaviours, expectations and relationships with students may contribute to academic underachievement among high ability students. In some instances, teachers may fail to recognise gifted abilities and talents in a particular child for a variety of reasons. For instance, high ability children may act out because they remain unchallenged and become bored in class. The teacher, therefore may only see the problem behaviour, rather than the student's need for additional academic attention (Baker, 1998, Seeley, 2004). Consequently, teachers may not recognise exceptional abilities in students who are acting out; they attend more to the behavioural disruption, rather the underlying factors contributing to their behavior namely the gifted abilities. When giftedness is not acknowledged, it becomes difficult for it to be fostered. Depression is potentially debilitating and invasive, frequently misunderstood and often peculiar in its course. Depression is also egalitarian in manifestation, affecting people at any age, education or economic level and at ethnic background (American Psychiatric Association, 1994). Depression among high ability students is increasingly becoming a concern to parents and educators. It also presents a challenge to the counsellor. The type of depression that is usually common to the high ability students is existential depression (Webb, 2007). Existential depression occurs in high ability students and adolescents when their capacity for absorbing information about disturbing events is greater than their capacity to process and understand it. Many high ability students feel trapped in a world created by adults that is somehow out of control. High ability children's existential depression can result not only from their advanced reading ability but also from their participation in activities that call for greater maturity. People who bright are usually more intense, sensitive and idealistic, and can see the inconsistencies with others and absurdities in the values and behaviours of others (Webb, 2007).

The meaning of life, the inevitability of death, and the beginning and end of the universe are all subjects that may lead to depression in the child or adolescent who is attempting to understand them. Reis McCoach (2000) expressed the opinion that underachieving high ability students are depressed. Also, Sue and Sue (2006) reported that depression is marked by inability to concentrate, negative thinking and low energy levels. Depression thus interferes with normal life functioning including academic functioning. High ability students who cannot think clearly or maintain a normal energy level will understandably have difficulty earning grades that are commensurate with their intelligence in school. Self-concept is an affective construct that has received wide research in the literature. It is an idea an individual has about himself or herself. It could also be said to be perception or image of one's uniqueness. Specifically, academic self-concept is how an individual feels about his or her academic abilities.

According to Delisle and Berger (1990), academic underachievement is closely tied to self-concept. Students who see themselves in terms of failure begin to place self-imposed limits of what is possible. Most studies have found that high ability children have significantly higher self-concept than the other students (Dwairy, 2004). Although numerous studies have found that non-underachieving high ability have low self-concept, this same result has not been found with underachieving high ability students. Underachieving high ability students have shown a range of results ranging from no difference in self-concept (long, 2006) to significantly low self-concept scores only in the area of academic self-concept. Some researchers like Garg and Caslyn and Kenny (1997) found that a student must first do well in school to have a high academic self-concept, while others like Marsh, Trautwein, Ludtke, Koller Baumert (2005) support the notion that a high academic self-concept is a precursor to achievement. Strong arguments exist for both sides, suggesting that the relationship between academic achievement and academic self-concept is likely reciprocal (2000). Peers remain a significant force in high ability students' lives, especially after the late elementary years. As children move through junior secondary school to senior secondary school, they may begin to value friendship over their academic achievement. Students' desire for peer conformity also increases. Therefore, high ability students may desire to become more like their peer groups of average ability (Baker, Bridger and Evans (1998). They may subsequently perform to levels comparable to their friends, rather than their own. When the school peers of high ability students do not see a value in learning and doing well, then often times, high ability students will become underachievers just to follow their peer groups. Siegle and McCoach (2009) reported that underachieving students frequently report peer influence as the strongest force impeding their achievement, because they are trying to fit in with the people they are surrounded by on a daily basis.

The grades and achievement levels of high ability students have been found to mirror those of their peers throughout the school year. Many highly achieving students can become underachievers throughout the school year based on their chosen peers. In studies, it has been found that the high ability students' grades will be high in the fall semester when school begins and then will slowly fall as the year progresses into the spring term due to changes in friends during the school year (Siegle and McCoach, 2009). The effects of peer influence are often seen starting around the middle

school years for high ability students. Motivation is most of/the time categorized into two contrasting types namely intrinsic and extrinsic (Schunk, 2008).

People who are highly intrinsically motivated to learn are curious, interested and focused on the task. People that are extrinsically motivated are interested in the outcomes of learning such as prizes and grades more than the task itself. Most of us are motivated by a combination of intrinsic and extrinsic reasons that may vary according to the task. Preckel and Holling (2006) reiterated that underachieving high ability students tend to have low motivation when dealing with stressful situations and challenges and this results to poor academic performance. Academic underachievement may set in when high ability students experience low motivation as found in studies by Mccoach and Siegle (2003). In any case both extrinsic and intrinsic motivation may -interplay in the academic performance of high ability students.

**Statement of Problem**

Academic underachievement is a phenomenon that has been a great concern to educators whose efforts and attempts to prescribe diverse interventions for remediation to the problem have failed as there has not been found a satisfactory solution to this enigma. A country suffers from the colossal loss of human resources because it makes the country experience loss of best brains. Also, the underachieving high ability student's loss of self-fulfilment could best be imagined. Several works have been done on academic underachievement of high ability students but there is paucity of works on environmental and psychological factors as 'predictors of academic underachievement among high ability students as used in this study.

**Purpose of the Study**

The purpose of the study is to investigate environmental and psychological factors as predictors of academic underachievement among high ability students in secondary schools in South-west, Nigeria.

The specific purposes are to:

(1) Investigate the relationship between environmental and academic underachievement of high ability students.

(2) Examine the relationship between psychological factors and academic underachievement of high ability students.

(3) Find out the relative contribution of environmental and psychological factors on academic underachievement of high ability students.

(4) Establish the joint contribution of each of the independent variables on the dependent variable.

**Research Questions**

i. What is the relationship between environmental factors and academic underachievement of high ability students?

ii. What is the joint contribution of environmental factors to academic underachievement of high ability students?

iii. What is the relative contribution of environmental factors to academic underachievement; on high ability students?

iv. What is the relationship between psychological factors to academic underachievement of high ability students?

v. What is the joint contribution of psychological factors to academic underachievement of high ability students?

vi. What is the relative contribution of psychological factors to academic underachievement of high ability

students?

vii. What is the joint contribution of the independent variables (environmental and psychological factors) to academic underachievement of high ability students?

viii. What is the relative contribution of environmental and psychological factors to academic underachievement of high ability students?

**Methodology**

This study adopted descriptive research design of an *ex-post facto type*. The design is such that the researcher cannot control the independent variables because they have already occurred and they cannot be manipulated. This study investigated related environmental factors (school, home and peer influence) and psychological factors (motivation, self-concept and depression) as predictors of academic underachievement among high ability students in South-West, Nigeria.

The population 'of this study comprised of all Junior Secondary School, JSSI students in the South West, Nigeria with the target population being the high ability students.

This study was conducted in Junior Secondary Schools in South- West, Nigeria. The states in South-West, Nigeria are: Osun, Ogun, Ondo, Oyo, Ekiti and Lagos. There were visits to the state ministries of education in order to collect data on the number of Junior Secondary Schools in the states. The Inspectorate Division of each ministry of education was particularly visited, soliciting for the assistance of the officials in the office for data on number of schools with junior secondary schools in the states. This was after the explanation on the purpose of the research by the researcher. The researcher proceeded to the various schools selected in the states for the study. The permission of the principals of the schools was sought after explanation of the purpose of the study. Some class teachers were used as research assistants in the administration of the questionnaires. The copies of the questionnaires were distributed to the participants by the researcher and the research assistants. They allowed the participants to ask for clarification on any item in the questionnaire that was not clear to them. The researcher and the research assistants waited to collect the questionnaires. The participants were properly guided and the copies of the questionnaires were checked to guide against any form of error.

Three hundred (300) junior secondary two school students participated in the study from 30 schools from South-west, Nigeria. That is, five schools were selected from each state. A multistage sampling technique was used in selecting participants for the study. The first stage of sampling involved a simple random sampling technique with the use of the 'hat' method in selecting five (5) junior secondary schools in each of the states for the study. The sum of the schools used was thirty (30) from South-west, Nigeria. The second stage was screening of all junior secondary school students in each of the selected schools to find out the high ability students using Slossom Intelligence Test (SIT) and School Academic Record (SAR) that consist of report cards and other, vital information about the students. The third stage was the selection of students who have been observed to be academically underachieving consistently for a period of time through their school records. The continuous assessment tests and terminal report cards of the students were collected from school and was examined to confirm that they have been in their academic performance and that

English language and Mathematics were used as the central subjects to further confirm that case of underachievement in them. Only ten (10) students were selected from a school using a simple random sampling technique.

Ten research instruments were used to collect data for the study. The instruments used included: Slosson Intelligence Test, Home Environment Inventory, School Environment, Peer Influence Inventory, Inventory, Beck's Depression Inventory, Motivation Scale and Self-concept Scale. The instruments were revalidated through a pilot test using the test-retest method. A reliability coefficient of 0.76 (Slosson Intelligence Test), Home Environment Inventory (0.68), School environment inventory (0.78), Peer Influence Inventory (0.82), Depression Inventory (0.75), Motivation Scale (0.84), Self-concept Scale (0.72). English language had reliability coefficient of 0.74 while Mathematics had 0.66.

**Method of Data Analysis**

Data collected in this study were analysed using Pearson's product moment correlation and multiple regression at 0.05 level of significance. Pearson's product moment correlation was used to test the relationship between the independent variables (Environmental factors: home, school and peer influence and psychological factors: motivation, self-concept and depression) to the dependent variable (academic underachievement). The regression analysis was used to test for the prediction or contribution (either jointly or relatively) of each independent variables (home, school, peer influence, motivation, self-concept and depression) to the dependent variable (academic underachievement).

**Results**

**Research Question One:** What is the relationship between environmental factors and academic underachievement of high ability students?

**Table 1: Correlation Matrix showing the relationship between environmental factors and academic underachievement of high ability students**

| Construct | Academic underachievement | Home environment | Peer influence | School environment |
|---|---|---|---|---|
| Academic underachievement | 1 | | | |
| Home environment | -0.095<br>0.101 | 1 | | |
| School environment | 0.027<br>0.644 | 0.368*<br>0.000 | 1 | |
| Peer influence | -0.138*<br>0.017 | 0.146*<br>0.012 | 0.274*<br>0.000 | 1 |
| Mean | 17.77 | 25.38 | 33.30 | 37.09 |
| Std. Deviation | 10.257 | 5.921 | 6.977 | 11.132 |

*Denotes correlation at 0.05 level of significance.

Table 1 shows that there was a negative but not significant relationship between home environment and academic underachievement of high ability students($r = -0.095$; $P>0.05$). This implies that home environment and academic underachievement of high ability students were negatively not related. School environment has a positive but not significant relationship with academic underachievement of high ability students ($r = 0.027$; $P>0.05$). This

means that school environment is not related to academic underachievement of high ability students. Peer influence has a negative significant relationship with academic underachievement of high ability students (r = -0.138; P<0.05). This shows that peer influence is negatively related with academic underachievement of high ability students.

**Research Question Two:** What is the joint contribution of environmental factors and academic underachievement of high ability students?

**Table 2: Summary of Multiple Regression Analysis on Composite Contributions of environmental factors to academic underachievement of high ability students**

| Model | Sum of Squares | Df | Means Square | F | Sig. |
|---|---|---|---|---|---|
| Regression | 300.363 | 3 | 100.121 | 3.493 | .016* |
| Residual | 8397.664 | 293 | 28.661 | | |
| Total | 8698.027 | 296 | | | |
| R = .186<br>$R^2$ = .035<br>Adjusted $R^2$ = .025<br>Std. Error of the Estimate = 5.354 | | | | | |

*Denotes significant relationship at 0.05 significance level.

Table 2 shows that the joint contribution of environmental factors and academic underachievement of high ability students was significant. The F value ratio of the result (F (3,293) = 3.493; P<0.05) shows that there is joint contribution. Table 4.2 further revealed a multiple regression adjusted ($R^2$) of 0.035. This implies that 3.5% of the total variation in academic underachievement of high ability students is attributable to the independent variables.

**Research Question Three:** What is the relative contribution of environmental factors to academic underachievement of high ability students?

**Table 3: Summary of Multiple Regression showing Relative Contribution of environmental factors to academic underachievement of high ability students**

| Model | Unstandardised Coefficients | | Standardized Coefficients | Ran k | T | Sig. |
|---|---|---|---|---|---|---|
| | B | Std. Error | Beta(p) | | | |
| (Constant) | 25.162 | 3.39 9 | | | 6.814 | .0 00 |
| Home Environment | -.160 | .087 | -.113 | 2nd | 1.834 | .068 |
| Peer influence | -.174 | .070 | -.150 | 1st | 2.505 | .013* |
| School environment | .154 | .089 | .110 | 3rd | 1.735 | .084 |

*Denotes significant at P<0.05

Table 3 reveals the relative contributions of each of the independent variables of environmental factors to academic underachievement of high ability

students. The relative contributions of home environment (P = -.113; t = 1.834; P>0.05) and school environment (p = .110; t = 1.735; P>0.05) to academic underachievement of high ability students were not significant. The relative contribution of peer influence (p = -.150; t = 2.505; P<0.05) to academic underachievement of high ability students was not significant. Thus, out of all the independent variables only peer influence was significant on academic underachievement of high ability students.

**Research Question Four:** What is the relationship between psychological factors and academic underachievement of high ability students?

**Table 4: Correlation Matrix showing the relationship between psychological factors and academic underachievement of high ability students**

| Construct | Academic underachievement | Self-concept | Motivation | Depression |
|---|---|---|---|---|
| Academic underachievement | 1 | | | |
| Self-concept | -0.076<br>0.192 | 1 | | |
| Motivation | -0.197*<br>0.001 | 0.581* 0.000 | 1 | |
| Depression | -0.126*<br>0.030 | 0.194* 0.001 | 0.292*<br>0.000 | 1 |
| Mean | 17.77 | 70.09 | 91.39 | 47.11 |
| Std. Deviation | 10.257 | 5.921 | 6.977 | 11.132 |

*Denotes correlation at 0.05 level of significance.

Table 4 shows that there was a negative but not significant relationship between self-concept and academic underachievement of high ability students (r = -0.076; P>0.05). It implies that, self-concept and academic underachievement of high ability students were not related. Motivation (r = -0.197; P<0.05) and depression (r = -0.126; P<0.05) had a negative significant relationship with academic underachievement of high ability students. This shows that both motivation and depression were negatively related to academic underachievement of high ability students.

**Research Question Five:** What is the joint contribution of psychological factors to academic underachievement of high ability students?

**Table 5: Summary of Multiple Regression Analysis on Joint Contributions of psychological factors to academic underachievement of high ability students**

| **Model** | **Sum of Squares** | **Df** | **Means Square** | **F** | **Sig.** |
|---|---|---|---|---|---|
| Regression<br>Residual<br>Total | 403.785<br>8235.121<br>8638.916 | 3<br>292<br>296 | 134.598<br>28.202 | 4.773 | .003* |
| R = .216<br>$R^2$ = .047<br>Adjusted $R^2$ = .037<br>Std. Error of the Estimate = 5.311 | | | | | |

*Denotes significant relationship at 0.05 significance level.

Table 5 shows that the joint contribution of psychological factors and academic underachievement of high ability students was significant. The F value ratio of the result (F (3,292) = 4.773; P<0.05) shows that there is joint contribution. Table 4.5 further revealed a multiple regression adjusted ($R^2$) of 0.047. This implies that 4.7% of the total variation in academic underachievement of high ability students is attributable to the independent variable.

**Research Question Six:** What is the relative contribution of psychological factors and academic underachievement of high ability students?

**Table 6: Summary of Multiple Regression showing Relative Contribution of psychological factors to academic underachievement of high ability students**

| Model | Unstandardised Coefficients | | Standardized Coefficients | Ran k | T | Sig. |
|---|---|---|---|---|---|---|
| | B | Std. Error | Beta(p) | | | |
| (Constant) | 26.925 | 3.583 | | | 7.515 | .000 |
| Self-concept | .047 | .058 | .057 | 3rd | .811 | .418 |
| Motivation | -.120 | .041 | -.209 | 1st | 2.906 | .004* |
| Depression | -.031 | .024 | -.078 | 2nd | 1.307 | .192 |

*Denotes significant at P<0.05

Table 6 reveals the relative contributions of each of the psychological factors to academic underachievement of high ability students. The relative contributions of self-concept (β= .057; t = .811; P>0.05) and depression (|3 = -.078; t = 1.307; P>0.05) to academic underachievement of high ability students were not significant. The relative contribution of motivation (P = -.209; t = 2.906; P<0.05) to academic underachievement of high ability students was not significant. Thus, out of the psychological factors only motivation was significant to academic underachievement of high ability students.

**Research Question Seven:** What is the joint contribution of the independent variables (environmental and psychological factors) to academic underachievement of high ability students?

**Table 7: Summary of Multiple Regression Analysis on Joint Contributions of environmental and psychological factors to academic underachievement of high ability students**

| Model | Sum of squares | Df | Means Square | F | Sig. |
|---|---|---|---|---|---|
| Regression | 607.664 | 5 | 101.277 | 3.632 | .002* |
| Residual | 8029.726 | 288 | 27.881 | | |
| Total | 8637.390 | 294 | | | |
| R = .265<br>$R^2$ = .070<br>Adjusted $R^2$ = .051<br>Std. Error of the Estimate = 5.280 | | | | | |

*Denotes significant relationship at 0.05 significance level.

Table 7 shows that the joint contribution of the independent variables (environmental and psychological factors) to academic underachievement of high ability students was significant. The F value ratio of the result (F(5,288) = 3.632; P<0.05) shows that there is joint contribution. Table 4.7 further revealed a multiple regression adjusted ($R^2$) of 0.070. This implies that 7.0% of the total variation in academic underachievement of high ability students is attributable to the independent variables of environmental and psychological factors.

**Research Question Eight:** What is the relative contribution of environmental and psychological factors to academic underachievement of high ability students?

**Table 8: Summary of Multiple Regression showing Relative Contribution of environmental and psychological factors to academic underachievement of high ability students**

| Model | Unstandardised Coefficients | | Standardized Coefficients | Ran k | T | Sig. |
|---|---|---|---|---|---|---|
| | B | Std. Error | Beta(p) | | | |
| (Constant) | 28.256 | 4.164 | | | 6.786 | .000 |
| Home Environment | -.137 | .088 | -.097 | 4th | 1.558 | .120 |
| School environment | -.129 | .071 | -.111 | 3rd | 1.821 | .70 |
| Peer influence | .180 | .092 | .129 | 2nd | 1.960 | .051* |
| Self-concept | .050 | .059 | .060 | 5th | .844 | .399 |
| Motivation | -.118 | .043 | -.206 | 1st | 2.782 | .306* |
| Depression | -.019 | .025 | -.046 | 6th | .761 | .474 |

* Denotes significant relationship at 0.05 significance level

Table 8 reveals the relative contributions of each of the environmental and psychological factors to academic underachievement of high ability students. The relative contributions of home environment (P = -.097; t = 1.558; P>0.05), school environment (P = -.111; t = 1.821; P>0.05) self-concept(p = .060; t = .844; P>0.05) and depression(p = -.046; t = .447; P>0.05) to academic underachievement of high ability students were not significant. The relative contributions of peer influence (P = .129; t = 1.960; P<0.05) and motivation (P = -.046; t = .761; P<0.05) to academic underachievement of high

ability students were significant. Thus, out of the environmental and psychological factors only peer influence and motivation were significant to academic underachievement of high ability students.

**Discussion of Findings**

The result of the study showed that there was significant and negative relationship between peer influence as environmental factor and academic underachievement. Negative peer influence contributes to academic underachievement of the students. This finding is in consistent with Classen and Classen (1995). In their study, 66% of the high ability students reported peer influence of their friends as the primary force against getting good grades. It was also reported by these researchers that underachieving students' frequently report peer influence as the strongest force impending their academic achievement. The result of the study also showed that there was no relationship between school and academic underachievement. This is in contrary to the study carried out by Ford(1995) on Black achievers and underachievers. Ford reported that underachievers experienced less positive teacher-student relationship, having too little time to understand the material and being unmotivated and disinterested in school.

The findings in the study showed that there was composite effect of all the three independent variables in the environmental factors on the academic underachievement of high ability students. This study corroborates the findings of Whitmore (1980). Whitmore found that high ability students seek peer acceptance by masking giftedness and conforming to peer behaviour patterns and purposely underachieving. Alvino (1995) reported that home environment is critical in nurturing giftedness and instilling the values conducive to its full blossoming. Ford (1995) carried out a study on Black achievers and underachievers. He observed that underachievers experienced less positive teacher-student relations, having too little time to understand the material and being unmotivated and disinterested in school. The findings in the study is also in agreement with Berndt (1999) that found that students seemed to resemble more closely their friends at the end of the school year. Berndt conducted the study to measure students and their behavior in the fall and spring of the academic year.

There is relative contribution of environmental factors to academic underachievement of high ability students. This is evidenced in the school environment. In Nigeria, gifted education is still new and most teachers are not aware of the new education policy in relation to the provisions for high ability students. Also the finding agree with that of Peters, Gladder-Loidl and Supple (2000) that observed that organisation of teaching and the personality of the teacher were the two main factors that influenced the achievement of children in the classroom. Home environment plays vital role in the academic performance of underachieving children. The finding in this study agree with the findings of Rimm and Lowe (1988) that found that parents frequently oppose each other when disciplining their children. In their study, 95% of the families played the role of the parent that challenges and disciplines the children while the other 5% took the role of the protector. This inconsistence in parenting style results in academic underachievement. The result of the study showed that there was a significant relationship between motivation and academic underachievement. Motivation has negative relationship with academic underachievement and this implies that' the higher the motivation, the lower the

academic underachievement of high ability students. This finding agree with the findings' of Mccoach and Siegle (2003) that found that poor motivation was strongly correlated with underachievement. High ability students who lack motivation to excel are at risk for underachievement. This study also corroborates the findings of Hoover-Schultz (2005) that observed that underachievers tend to lack perseverance and therefore may not aim to perform well when obstacles arise.

The findings in the study showed relative contribution of psychological factors and academic underachievement. This finding is in line with the findings of Sue, Sue and Sue (2003) that observed that depression is marked by the inability to concentrate, negative thinking and low energy levels. Thus it interferes with normal life functioning including academic achievement. This finding also support Frojd, Nissinen, Pelkonen, Martluerib and Kolvisto (2008) that recorded that depression impair cognitive functioning and blocks cognitive sources and many of the academic achievement and also homework depend on the ability to sustain attention and concentration. It is obvious that depression is known to disrupt concentration and attention in school, and it is likely to undermine academic achievement of students.

The findings in the study showed joint contribution of environmental and psychological factors to academic underachievement of high ability students. The finding corroborates the findings of McNabb (2003) that observed that academic underachievement is considered to be the product of multiple variables, both external and internal. External variables include environmental factors such as family and school. Internal variables may include motivation, low effort, low persistence and a desire for social acceptance. Also, this finding is in line with that of Merry (2008) which highlights both the paucity of research on academic underachievement and the need for further study. The finding in this study is further in line with that of McCoach and Siegle (2003) in which about 91 underachieving students indicated that 72.5% of the 91 students had very low motivation which is one of the reasons for academic underachievement. In the same vein, this study agree with Davis and Rimm (2004) that reported that lack of motivation contributes to academic underachievement. The findings in the study lend credence to the findings of Baker, Bridger and Evans (1998) that observed that high ability students desire to become like their same-aged classmates and subsequently perform to levels comparable to their friends, rather than their own.

**Recommendations**

1. The following recommendations are given based on the findings in this study: School guidance counsellor should from time to time organise counselling session to interact with the underachieving high ability students in order to intimate them with evil influences of bad friends who could hinder their academic progress. The underachieving students should be informed of inherent dangers in close relationship with friends who are not interested in academics and whose behaviour to education is negative. It is true that no one is an island and also a truism as adage says that show me your friend and I will tell who you are. Therefore, counsellors should talk to the students to take caution in following and copying negative attitude and behaviour of their colleagues who are anti-intellectual.
2. Parents of underachieving high ability students should always appreciate their children and wards

and make them belief that they can do well in academics. The students should be encouraged to cultivate positive self-concept. Once a while mistakes could be made by the students but that should not deter them from aspiring and determining to succeed in their studies. In most cases, children live with their parents and therefore it should be the responsibility of the parents to help them appreciate their uniqueness and potential to perform better in their academic pursuits.

3. School environment should be made conducive to learning. All necessary facilities that ' can promote academics should be put in place. All learning distractions should be removed from the classroom and school environment. Materials and structures that promote learning must be available for positive academic growth of the students.
4. Guest speakers of long-term experience can be invited to talk to the school in general but with view of addressing challenges of underachieving high ability students. Topics such as promotion of positive self-concept and motivation can be among selected list of areas that the guest speakers can talk about. This will boost the academic morale of the students especially underachievers.

## Conclusion

Environmental factors (peer influence, home environment and school environment) and psychological factors (motivation, self-concept and depression) contributed to academic underachievement in high ability students. It should be noted that contributions of these variables may not be in isolation as revealed in the study but in combination of two or more variables. Peer influence as environmental factor obviously has negative impact on the academic performance of the high ability students. Thus, increase in motivation as a psychological factor will equally influence the academic performance of the high ability students.

## References

Abelman, R. (2007). Fighting the war on indecency: Mediating TV, internet and Videogame usage among achieving and underachieving gifted children. *Roeper Review.* 29(2), 100-112.

Airaksinen, E., Wahlin, A., Forsell, Y. and Larsson, M. (2006). Low episodic memory performance as a premorbid marker of depression: evidence from a 3-year follow-up. *Acta Psychiatica Scandinava* (Online Early Article).

Alvino, J. (1995). Consideration and strategies for parenting the gifted child (RM 95218). Storrs, CT: The National Research Centre on the Gifted and Talented, University of Connecticut.

American Psychiatric Association (2000). Diagnostic and statistical manual of mental disorders. 4th Edition, Text Revision. Washington, DC: American Psychiatric Association.

Baker, J.A. (1995). Depression and suicide ideation among academically talented adolescents. *Gifted Child Quarterly* 39: 218-233.

Baker, J.A., Bridger, R. and Evans, K. (1998). Models of underachievement and gifted pre-adolescents: The role of personal, family and school factors. *Gifted Child Quarterly* 42(1), 5-15.

Berndt. T.J. (1999). Friends influence on students' adjustment to school. *Educational Psychologist* 34:15-28.

Clasen, D.R. and Clasen, R.E. (1995). Underachievement of highly able students and the peer society. *Gifted*

*and Talented International* 10(2), 67-75.

Colangelo, N. (2003). Counselling gifted students. In N. Colangelo and G. A. Davis (Eds.) *Handbook of gifted education* (3rd ed. pp. 373-387). Boston, M. A.: Allyn and Bacon.

Colangelo, N. and Davis, G. (1997). *Handbook of gifted education* (2nd AEd.) New York: Allyn and Bacon, p. 5.

Dowdall, C. B. and Colangelo, N. A. (2006). Underachieving gifted students: Review and implications. *Gifted Child Quarterly* 26, 179-184.

Dwairy, M. (2004). Parenting styles and mental health of Arab gifted adolescents. *Gifted Child Quarterly* 48(4), 275-286.

Fehrenbach, C. R. (2008). Underachieving gifted students: Intervention programmes that work. *Roeper Review* 16:88-90.

Ford, D.Y. (2000). A study of achievement and underachievement among gifted. Potentially gifted and regular education black students. Storrs, CT: The University of Connecticut, National Research Centre on the Gifted and Talented.

Froyd, S. A., Nissinen, E. S., Pelkonen, M. U. I., Martluenb, M. J. and Kolvisto, A. M. (2008). Depression and school performance in middle adolescent boys and girls. *Journal of Adolescents* 31:485-498. DOI:10,1016/j.adolescence.2007.08.006.

Hoover-Schultz, B. (2005). Gifted underachievement: Oxymoron or educational enigma? *Gifted Child Today* 28(2), 46-49.

Marsh, H. W., Trautwein, U., Ludtke, O., Koller, O. and Baumert, J. (2005). Academic self-concept, interest grades and standardised test scores: Reciprocal effects models of causal ordering. *Child Development* 76:397-416.

McNabb, T. (2003). Motivational potential to performance. In N. Colangelo and G. A. Davis (Eds.) *Handbook of gifted education* (3rd ed. pp. 417-423). Boston, M. A.: Pearson Education.

Merry, M. (2008). Educational justice and the gifted. *Theory of Research in Education* 6(1), 47-71.

Newman, B., Myers, M., Newman, P., Lohman, B. and Smith, V. (2000). The transition to high school for academically promising, urban, low income. African American Youth *Adolescence* 53(137): 45-66.

Renzulli, J.S., Reid, B. D. and Gubbins, E.J. (1991). Setting an agenda: Research priorities for the gifted and talented through the year 2000. Storrs: University of Connecticut. *The Review of Psychology* 41, 417-440.

Rimm, S. (1986). *Under achievement syndrome: causes and cures.* Watertown, WI: Apple.

Rimm, S. and Lowe, B. (1988). Family environments of underachieving gifted students.

Rimm, S.B. (2008). Underachievement Syndrome: In S. Pfeiffer (Ed.), Handbook of giftedness in children Psycho-Educational Theory, Research, and Best practices ( pp. 139-160). New York: Kluwer Academic.

Schultz, R.A. (2002). Understanding giftedness and Underachievement: At the edge of possibility. *Gifted Child Quarterly,* 46(3), 193-208.

Schunk, D.J. (I989). Modelling and attribution effect on children's achievement. A self-effects efficacy analysis. *Journal of Educational Psychology* 73:93-105.

Siegle, D., and Mccoach, D.B. (2006). Making a difference: Motivating gifted students who are not achieving. Teaching *Exceptional Children,* 38(1), 22-27.

Sue, D., Sue, D.W. and Sue, S. (2003). *Understanding abnormal behaviour* (7th Edition). Boston: Houghton Mifflin Company.

Tong, J. and Yewchuk, C. (1996). Self-

concept and sex role orientation in gifted high school students. *Gifted Child Quarterly* 40(1), 15-23.

Tucker, B. and Hafenstein, N.L. (1997). Psychological intensities in young gifted children. *Gifted Child Quarterly* 41(3), 66-75.

Weiss, I. (1972). Underachievement-empirical studies. *Journal of Adolescents* 3, 143-151.