

*Effect of Counselling on the  
Need-Achievement, Study Habits and  
Academic Achievement of Underachievers*

**Ph.D Thesis**

by

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**Under the supervision of**

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**FACULTY OF EDUCATION**

**UNIVERSITY OF KASHMIR**

Hazratbal, Srinagar-190 006, Kashmir.

(NAAC-Accredited Grade 'A' University)

July-2011

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**THE THESIS SUBMITTED TO THE  
UNIVERSITY OF KASHMIR  
FOR THE AWARD OF THE DEGREE OF  
DOCTOR OF PHILOSOPHY (Ph.D) IN EDUCATION**

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**Department of Education**

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## *Certificate*

This is to certify that the thesis entitled, "**Effect of Counselling on the Need-achievement, Study Habits and Academic Achievement of Underachievers**" submitted by **Amina Parveen** for the award of Doctor of Philosophy in Education, the University of Kashmir, is a record of her original research work, carried out under my guidance and supervision. The matter reported in this thesis has not been submitted for the award of any other degree of any university.

It is further certified that she has fulfilled all the statutory requirements for the submission of this thesis.

(Prof. (Dr.) Mahmood Ahmad Khan)  
Supervisor

# *Acknowledgement*

IN THE NAME OF ALLAH, MOST GRACIOUS, MOST MERCIFUL

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**AMINA PARVEEN**

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**U**nderachievement continues to be a concern for teachers, planners and administrators throughout most states in India. Most students have the desire to be successful in school; yet many do not know how (Heacox, 1991). Moreover, among children, many fail to reach the academic level of which they are capable and quite often their school performance is constantly lower than that of their ability peers (Terman and Oden, 1947; Burt, 1962; Pringle, 1970; Whitmore, 1980; Gallagher, 1985). Underachievement appears to be a common phenomenon in the India's educational system. In spite of an increased focus on education, a large proportion of people in many countries are still being denied its full benefits. In developing countries it is essential that all its resources are fully utilized because a large number of pupils suffer from poor achievement. It is the responsibility of every country to take the necessary steps to ensure their students maximize their academic potential.

Many empirical studies based on scientific investigation have shown that pupils of superior intelligence can be underachievers, while some people with average intelligence achieve more than what is expected of them. In the achievement

related areas, need for achievement and study habits have been found to be the significant variables, which contributes to better performances in people. McClelland *et.al*, 1953: have found significant correlation between academic performance and need achievement; Jain (1967), has found that bright achievers were characterized by better study habits and higher achievement motivation than dull achievers; Shivappa (1980) has found that study habits and educational aspiration are the positive correlates of academic achievement; Singh (1984), has found that high achieving adolescents had significantly better study habits than middle and low achievers; Kapoor (1987) has found that high achievers had better study habits as compared to the average and the low achievers; Davanesan and Paul (1990), have found that there is a significant and positive relationship between the achievement-motivation and scholastic achievement of higher secondary students; Harikrishnan, (1992), has found that academic achievement is positively related with achievement-motivation and socio-economic status of students; Alam (2006) has find out that positive relationship exists between achievement motivation and academic achievement of Muslims and non-Muslim children. Sarwar et al (2009) showed that students who have better scores on study-orientation tend to have better academic achievement.

Research shows that school counselling intervention has a substantial impact on students' educational and personal

development. Classroom guidance along with individual and small-group counselling, may contribute directly to student success in the classroom and beyond. There may be significant value in further experimental studies testing the effect of counselling intervention on underachievers. In the light of previous studies conducted on counselling, the investigator sought to identify underachievers and their problems, assist them through counselling and analyze the effect of counselling on their scholastic achievement.

### **NEED AND IMPORTANCE**

The No Child Left Behind (NCLB) Act of 2001 which President George W. Bush signed into law on January 8, 2002, clearly demonstrated a strong national commitment to improving the academic success of all children (U.S. Department of Education, 2002). NCLB legislation is forcing school systems across the nation to focus on student outcomes. This focus on accountability and outcomes puts pressure on administrators, teachers, and school counsellors alike. All of these professionals are responsible for making the changes that are mandated within the NCLB and need to be involved in the process of increasing student achievement, reducing the achievement gap, improving school attendance and graduation rates, and ensuring adequate levels of safety within school systems. Although the specific term “underachievement” was not used in the NCLB, the law is clearly aimed at all students

who do not succeed, whether it is because they can't or because they won't. It is the responsibility of every country to take the necessary steps to ensure their students maximize their academic potential.

Guidance plays a vital role in removing the educational, personal, social, mental, and emotional problems of the students. Kochhar (2000) considers guidance necessary to help students with specific problems like lack of relationship between ability and achievement, deficiency in school subjects, faulty study habits, defective methods of learning and poor motivation. The purpose of guidance and counselling services for school children are to improve academic achievement, increase conflict resolution skills, decrease dropouts and foster positive attitudes toward school, learning, and study (Braddock, 2001).

With regard to the necessity of guidance services, they prepare students to assume increasing responsibility for their decisions and grow in their ability to understand and accept the results of their choices (Gibson, 2008; Kauchak, 2011). Sinha, (1970) observed, "measures like counselling and a programme of student personnel service are urgently required if the rate of failure and consequent wastage of manpower is to be reduced". Bhatnagar, (1992) in a survey of educational research, points out under research gaps and priorities, that the effect of guidance and counseling should be studied on special groups of children such as slow learners, underachievers, the mentally



challenged, and the mentally gifted. Mullis & Otwell (1997), ascertained that counselling decreases classroom disturbances. Counseling services support teachers in the classroom and enable teachers to provide quality instructions designed to assist students in achieving high standards. School counselors through collaborative efforts can implement both systematic and programmatic changes in schools and communities to prevent students from dropping out of school (Standard, 2003). Heyden (2011), while discussing the aim of Guidance and Counseling services, opines that their purposes are similar to the purposes of education in general—to assist students in fulfilling their basic psychological needs, understanding themselves and accepting others, developing associations with peers. Realizing successful achievement, and providing opportunities to gain independence.

This study is an effort to help underachieving students in government schools, including the students of less educated or illiterate families. The study aims to determine if counselling can improve the level of achievement of these students. The investigator made a counselling intervention with underachievers to improve their need-achievement, study habits and academic achievement, as these are the significant correlates of achievement. This study may encourage administrators to consider having school counselor for the assistance of students, especially underachieving students.

The specific research proposed by the investigator is to determine:

**THE EFFECT OF COUNSELLING ON THE NEED-ACHIEVEMENT,  
STUDY HABITS AND ACADEMIC ACHIEVEMENT OF UNDERACHIEVERS.**

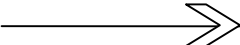
**OBJECTIVES OF THE STUDY**

This study is designed to achieve the following objectives:

- i) Identify the underachievers.
- ii) Help underachievers raise their need-achievement through counselling.
- iii) Help underachievers improve their study habits through counselling.
- iv) Help underachievers raise their academic achievement through counselling.

**HYPOTHESES**

1. There will be a significant improvement in the post-test *factor-wise* need-achievement scores of the experimental group.
2. There will be a significant improvement in the post-test *composite* need-achievement scores of the experimental group.
3. There will be a significant improvement in the post-test *factor-wise* study habit scores of the experimental group.

- 
- 
4. There will be a significant improvement in the post-test *composite* study habit scores of the experimental group.
  5. There will be a significant improvement in the post-test *subject-wise* academic achievement scores of the experimental group.
  6. There will be a significant improvement in the post-test *composite* academic achievement scores of the experimental group.

### **SAMPLE**

Students studying in the 9<sup>th</sup> class within the age range of 14 to 15 years old from the government high and higher secondary schools for girls of educational zones Rainawari and Gulab Bagh of district Srinagar, in Kashmir India, were asked to partake in this study (N = 310). A mental measurement test—Ravens Advanced Progressive Matrices (1962), Non-Verbal, was administered to the subjects in different groups. The mean of two annual examination results (7<sup>th</sup> & 8<sup>th</sup> class) was considered as the criterion for academic achievement. The students whose achievement scores were 10 percentile or more below their intelligence percentile scores were considered as underachievers. On this basis a total number of 129 students were defined as underachievers. Nine students were dropped because of their often absence from school. Thus the investigator was left with 120 students as the final sample.

## **PRE-TEST**

The investigator, in consultation with the concerned teachers, administered a test of academic achievement to students in both the experimental and control groups for the subjects: Mathematics, General English, General Science, Social Science and Urdu. The investigator administered the tests of need-achievement and study habits to both the experimental and control groups. No information about the grouping of the students was conveyed to the teachers. The scores gained by each student were recorded for need-achievement, study habits and academic achievement.

## **TOOLS**

1. Ravens Advanced Progressive Matrices (1962), for the measurement of intelligence.
2. Urdu Adaptation of B.N. Mukherjee's Incomplete Sentences Blank, Khan (1992), for the measurement of need-achievement.
3. Study Habit Inventory Khan (1999), for the measurement of study habits.

## **TREATMENT OF THE EXPERIMENTAL GROUP**

Counselling means to advance an individual's personal development. Many who counsel agree that the fundamental goal of counselling is to effect change in behaviour which in turn permits the recipient (counsee) to live a more productive

and self-satisfying life. In a school situation counselling focuses upon the individual problems and needs of students and helps them learn what is needed to solve these problems. It is the responsibility of the counsellor to obtain an adequate understanding of the individual's problems and accordingly select the appropriate method and techniques to use during counselling. The investigator started with a directive approach William-Son's (1939), and when the situation demanded, a non-directive approach was used, Roger's (1989). Throughout this research an attempt was made to adjust the techniques used to the requirements of situation and the student. The investigator approached this process with the attitude that it is the responsibility of the client to determine their own way of life and choose their own goals. The students were provided a permissive, accepting atmosphere where they were encouraged to feel free to discuss their problems and feelings with the investigator. Techniques such as reassurance, giving information and testing were employed in order to deal with those students who had the most difficulty in school. Their issues included: low personal satisfaction in education, an unfavourable attitude towards learning, low initiative and low self confidence. They were encouraged to form a better time table which allowed them to study while also sparing time for play and helping their parents with their day to day chores. The counselling technique utilized for these students was not merely

giving advice. The main aim was to help these students determine their own direction and develop the ability to deal with their own issues independently. Those students who came from a low socio-economic background (which was acting as a glass ceiling to their achievement) were narrated inspirational stories of famous successful people with similar low socio-economic backgrounds. This process helped in increasing the need-achievement of those students. Another technique to increase the need-achievement of these students was to make them aware of their academic potential, and their ability to achieve excellence.

The counselling process focused on three elements:

- a. **Existing Behaviour:** The behavior which is causing the subject to underachieve.
- b. **Change in Behaviour:** A change in this underachieving behavior through counselling.
- c. **Terminal Behaviour:** Increased academic achievement in consonance with the cognitive ability after counselling; including greater need-achievement and improved study habits.

## TIME BUDGET

In order to improve the outcome, budgeting of counselling time was done by the investigator in conjunction with the students.

|  |                   |
|--|-------------------|
| i) Total number of counselling sessions for each subject | <b>20</b>         |
| ii) Average time for each session                        | <b>60 minutes</b> |
| iii) Gap between counselling sessions                    | <b>06 days</b>    |

### **POST-TEST**

After the counselling process was completed the investigator conducted need-achievement and study habit tests to the experimental and control groups, to determine the effect of counselling on their need-achievement and study habits. The tests used to assess need-achievement and study habits were the same tests that were employed at the pre-test stage. The investigator (in consultation with the teachers concerned) administered an academic achievement test of course content taught during the counselling sessions in order to measure the student's improvement in academic achievement.

### **MAJOR FINDINGS**

- For academic achievement a certain amount of intelligence or scholastic aptitude is necessary, along with certain favourable non-intellectual variables.
- In the achievement related areas, need-achievement and study habits are the most important factors, which contribute to the academic achievement of a person beyond their intellectual ability.

- The post counselling test scores showed a significant improvement in the need-achievement of underachievers (experimental group).
- The post counselling test scores showed a significant improvement in the study habits of underachievers (experimental group).
- The post counselling test scores showed a significant improvement in the academic achievement of underachievers (experimental group).
- School counseling interventions have a substantial impact on students' educational and personal development.
- Individual and small-group counselling, classroom guidance contribute directly to students' success in the classroom and beyond.



**A**lmost one third of an individual's life is spent in school. Apart from family, school influences the youth, shapes friendships and success in life. It is the time of growth and development, a time for change, a time to struggle with dependence and independence, and a time to make mistakes and grow from them (Fenwick & Smith, 1994). Every child needs affection, the feeling of belonging and being wanted, respect as an individual, a favorable setting for growth, development of security, freedom from excessive domination, discipline, and support to allow an active imagination to develop (Torrance & Strom, 1965).

The educational goals and scholastic achievement of an individual are clearly affected by the motivational patterns of the children with regards to their future education and their eventual educational attainment is similarly influenced by the family to the extent that the family determines the cost and class positions of the individual. In our present day society emphasis is being laid on educational expansion. However we cannot ignore the students who show signs of higher potential and yet they fail at various stages of their educational career. (K. Mukesh & D. Rajan, 2011).

## UNDERACHIEVEMENT

Underachievement appears to be a common phenomenon in the India's educational system. In spite of an increased focus on education, a large proportion of people in many countries are still being denied its full benefits. In developing countries it is essential that all its resources are fully utilized because a large number of pupils suffer from poor achievement. It is the responsibility of every country to take the necessary steps to ensure their students maximize their academic potential. Realizing the potential of every individual child should be one of the main objectives of education. There are children of all ability levels who, for various reasons, fail to reach their full development and do not attain the scholastic level expected from the majority of their contemporaries. Moreover, among children, many not only fail to reach the academic level of which they are capable, but quite often their school performance is constantly lower than that of their ability peers (Terman and Oden, 1947; Burt, 1962; Pringle, 1970; Whitemore, 1980; Gallagher, 1985).

Underachievement is most commonly defined as a discrepancy between potential (or ability) and performance (or achievement) (Reis & McCoach, 2000). Therefore, a student who appears capable of succeeding in school but is nonetheless struggling is often referred to as an underachiever. Factors commonly associated with underachievement include low

academic self-concept (Schunk, 1998; Supplee, 1990; Whitmore, 1980), low self-efficacy (Schunk, 1998), low self-motivation (Weiner, 1992), low goal-valuation (McCall, Evahn, & Kratzer, 1992), and negative attitude toward school and teachers (Colangelo, Kerr, Christensen, & Maxey, 1993; Ford, 1996; Rimm, 1995). Most of the literature on underachievement suggests that underachievers have lower academic self-perceptions, lower self-motivation and self-regulation, less goal directed behavior, and more negative attitudes toward school than high achievers do. However the majority of research investigating the common characteristics of underachieving students has employed qualitative, clinical, or single subject research methodology. Very few large-scale quantitative studies have examined the legitimacy of these hypotheses (Reis & McCoach, 2000).

Underachievement is widespread and concerns the school population of all ages (Thomas and Hargreave reports, 1984), it seems important to understand the factors within the school situation that are conducive to the onset of the problem (Tannenbaun, 1962; Newsom, 1963; Rutter *et al*, 1979; Whitemore, 1980; Pilling and Pringle, 1978). A review of the literature has revealed considerable divergences of opinion on what causes underachievement in students. Sousa (2003) observed that a combination of factors both in the home and at school can cause underachievement. On the basis of current

research in cognitive development and reading comprehension, two important reasons for students' underachievement in any academic area can be identified: (1) their inadequate understanding of how to select, adapt, and monitor strategies for learning; and (2) their insufficient motivation to actively apply the understanding they have (Ryan 1989).

Ryan stressed that reading plays an important role in achievement. His research indicated that for the attainment of any reading or writing goal, an individual has four types of cognitive capabilities available for use: (1). Basic abilities (2). Acquired knowledge, (3). Strategies and (4). Met cognition. Ryan further observed that 75% of underachieving pupils in primary schools had reading problems among other things, whereas only 35% of the other pupils had reading problems. The former group underachieved in all subjects. Adequate attention should be given to reading and writing when the issue of underachievement arises, especially in countries where English is a second language. If pupils do not learn how to read effectively early, when they are in school, they may have difficulty at later stages and may withdraw from learning rather than risk being exposed to shame.

Others have cited a lack of motivation amongst students in secondary, primary and higher education as one of the causes of underachievement (Gallagher 1991, Reis and McCoach, 2000, Sousa 2003). These authors further argued

that lack of motivation provided by either teachers or parents could have a negative impact on children's performance. For example, Whitmore and Rand (2000) observed that many gifted underachieving students need motivation from their teachers because they have learning styles incompatible with prevailing instructional methods. Another review by Rutter (1974) stated that there is never a unitary cause of underachievement. Instead he believed that some causes are attributed to complex circumstances which cannot be scientifically or easily explained, for example, emotional disorder. There is usually interplay of personality and social factors in this regard. Research by Mroczek and Little (2006) on personality studies contend that the self-concept is learned through the child's environment, both at home and at school. Negative self concepts can cause underachievement when parents do not acknowledge their children's abilities or fail to support them. A teacher's response and feedback given to students also has the capability to shape their perceptions of themselves.

Teachers often mistakenly assumed that *underachievement* is a simple problem. This is why one often sees on school reports dreaded stereotyping comments such as 'not working to potential', 'lazy', or worse still, 'dumb' but in disguised terms. The review has attempted to address the issue of underachievement in schools, especially at the secondary level. The lack of generally accepted definitions and

agreed causes of underachievement was found to be a long standing problem among educationists. The gifted underachiever was identified as one of the types of underachievers that has attracted greater attention in recent time. The available literature has provided insights into the problem and revealed promising intervention strategies for the remediation of the situation, suggesting that underachieving learners can still learn if provided with the appropriate help. (Ogbonnia Chukwu-Etu, 2009).

Keeping in mind a number of studies addressed to underachievers and factors associated with this, it is felt that underachievers must be taken care of before their potential is spent in unproductive directions. They can in later life become lagers, dropouts or miscreants, which can prove fatal to the society in general and to themselves in particular. Underachievement has gained universal attention and many programmes have already been started in the area of applied psychology, in India in particular. In India although the causes of underachievement were clearly spelt out, no remedial measures were taken to get rid of the wastage of human capital until 1938. Guidance and counselling is being used by developed countries such as America. Now not only the government of India but also some private agencies showed great concern in the field. In 1941 a private vocational guidance bureau was set up in Mumbai, which led to the establishment of

Parsi-Panchayat Vocational Guidance Bureau in 1947. Contribution to its extension was the foundation of the first state Bureau in Allahabad in 1947 by the U.P. after the secondary education commission recommended diversified courses. The provision had no meaning if guidance was not provided in the selection of elective subjects in relation to their intelligence and aptitude. With the result in 1954 the Ministry of Education gave a formal shape to the Central Bureau of Educational and Vocational Guidance which later merged with the National Council of Educational Research and Training (NCERT).

The No Child Left Behind (NCLB) Act of 2001 which President George W. Bush signed into law on January 8, 2002, clearly demonstrated a strong national commitment to improving the academic success of all children (U.S. Department of Education, 2002). NCLB legislation is forcing school systems across the nation to focus on student outcomes. This focus on accountability and outcomes puts pressure on administrators, teachers, and school counsellors alike. All of these professionals are responsible for making the changes that are mandated within the NCLB and need to be involved in the process of increasing student achievement, reducing the achievement gap, improving school attendance and graduation rates, and ensuring adequate levels of safety within school systems. Although the specific term “underachievement” was

not used in the NCLB, the law is clearly aimed at all students who do not succeed, whether it is because they can't or because they won't. It is therefore the responsibility of every country to take necessary steps to control wastage or underachievement and to ensure the student's academic process.

### **ACHIEVEMENT AND ITS CORRELATES**

Achievement of an individual is an outcome of his mental and physical potential, besides the experience he has gained in the process of exploration and learning. In a study considering the factors of school achievement, it is possible to ignore those aspects in which individuals differ from one another. The starting point may be academic achievement itself where wide-ranging variations occur from the point of non-performance to the point of outstanding achievement. If we consider a group of students, it is normal that a few students are found to be high achievers on the one hand, and a few are underachievers on the other, while a sizable number of students usually appear as moderate achievers. The question arises why such a difference in achievement appears when the schools provide more or less uniform instructional and environmental facilities? Is this difference due to certain psychological factors? Does this difference depend upon inherent qualities? Is there any single factor or host of factors, which account for all differences in scholastic achievement? These questions often appear in the minds of educators, educationists and the psychologists, but



with hardly satisfactory answers. Various investigations have explored numerous factors which are found responsible for academic success and failure. It has been widely documented that the academic achievement of Mexican American students is linked to a number of socio-cultural variables. Among the socio-cultural variables associated with academic achievement are the educational and occupational attainment levels of parents, family income and composition, ethnic and language minority status, and the absence of learning material in the home (Arias, 1986; Rumberger, 1983, Steinberge, Blinde, Chan, 1984).

#### **COGNITIVE CORRELATES**

Intelligence has been recognized as an inherent quality, with unified and stable characteristics, distributed unequally among individuals. It may be explained as the capacity for knowledge and understanding, especially as applied to the handling of novel situations and the power of meeting a novel situation successfully by adjusting behavior to the situation. Binet-Simen and Terman (1916) made investigations taking their intelligence tests as predictors of scholastic achievement. Their findings are similar to those revealed from extremely large numbers of subsequent studies, using various tests and different criteria of scholastic achievement. The co-efficient of correlations commonly fall in the range of 0.40 and 0.50. Today we refer to these predictive studies or investigations as measured values of academic aptitude.

Is intelligence related to academic achievement? Historically this question has been addressed by researchers many times. The relationship between measures of intelligence and achievement is significant to research, if there is a strong relation between them. It might be deduced that the intelligence test has an important contribution in connection with other variables; for instance the curriculum, study program, the teacher, the characteristics of the school, and others in scholastic performance (Naglieri & Bornstein, 2003).

In current years, several researchers have shown more interest in the relationship between intelligence and academic achievement. Researchers mention that there is empirical evidence of a strong association between general cognitive ability and academic achievement. One study suggested that there is anywhere from 51% to 75% of the variance in academic achievement that is unaccounted for by measures of general cognitive ability alone (Rohde & Thompson, 2007). The academic achievement of students in high school strongly correlates (0.50 to 0.70) with intelligence scores (Jensen, 1998). In another study researchers experienced the hypothesis that the relationship between general intelligence and academic achievement was in large part associated with mental speed. At the beginning, the divided variance between general intelligence and academic achievement was nearly 30%. On the other hand, after controlling the mental speed component, the shared

variance between general intelligence and academic achievement was decrease to approximately 6% (Luo *et al.*, 2003). This result shows that items of intelligence such as mental speed have a significant effect on academic achievement.

Extensive research has been conducted to examine the role of psychological and social factors on academic achievement (Aluja & Blanch, 2004; Bruinsma, 2004; Caprara, Barbaranelli, Steca, & Malone, 2006; Dickhouser & Reinhard, 2006; DuPaul *et al.*, 2004; Englund, Luckner, Whaley, & Egeland, 2004; Evans & Rosenbaum, 2008; Gooden, Nowlin, Frank, & Richard, 2006; Greene, Millar, Crowson, Duke, & Akey, 2004; Guglielmi, 2008; Howes *et al.*, 2008; Martin, Montgomery, & Saphain, 2006; Martins & Alexandre, 2008; Papaioannou, Ampatzoglou, Kalogiannis, & Sagovits, 2008; Schwartz, Gorman, Duong, & Nakomoto, 2008).

The direct relationship between intelligence and academic achievement has also been widely studied. (Ediseth, 2002; Gagne & St. Pere, 2002; Kossowska, 1999; Parker *et al.*, 2004; Smith, Smith, & Dobbs, 1991; Stipek & Gralinski, 1996). Chatterjy, (1983) made a comparison of personality, intelligence, and achievement motivation of successful and unsuccessful students and found that successful students in all the academic groups are significantly superior in intelligence than unsuccessful ones in the respective groups.

In addition, several researchers have investigated the

relationship between intelligence, gender, and academic achievement (Duckworth & Seligman, 2006; Ehrmann & Massey, 2008; Fraine, Damme, & Onghena, 2007; Naderi, Habibollah, Rohani, Abdullah, & Tengku.Aizan, 2008). Laidra *et al.*, (2007) studied general intelligence and personality traits from the five-factor model as predictors of academic achievement in a large sample of Estonian school children from elementary to secondary school. A total of 3618 students (1746 boys and 1872 girls) from all over Estonia attending Grade 2, 3, 4, 6, 8, 10, and 12 participated in this study. Intelligence, as measured by the Raven's Standard Progressive Matrices, was found to be the best predictor of students' grade point average (GPA) in all grades. Deary, Strand, Smith, & Fernandes (2007) found a strong and positive relationship between intelligence and academic achievement. This study examined the relationship between psychometric intelligence at the age of 11 and education achievement in 25 academic subjects at the age of 16. The correlation between latent intelligence traits and latent traits of educational achievement was 0.81.

General intelligence contributed to success on all 25 academic subjects. Understanding the nature of the relationship between general cognitive ability and academic achievement has widespread implications for both practice and theory (Rohde & Thompson, 2007). Sarla Paul (2000) investigated some of the probable causes of low achievement on the part of higher

secondary teacher trainees and came with the conclusion that intelligence is a leading cause of low achievement. In another study Watkins, Lei, & Canivez (2007), stated there has been considerable debate regarding the causal precedence of intelligence and academic achievement. Some researchers view intelligence and achievement as identical constructs. Others believe that the relationship between intelligence and achievement is reciprocal. Laidra, Pullmann, & Allik (2007), reported that student achievement relies most strongly on their cognitive abilities through all grade levels. Through a bivariate approach it was found that intelligence showed a significant relationship with achievement, for both boys and girls (Mishra, 1997). A study was done to identify factors associated with poor academic achievement during the early school years and it was found that intelligence is significantly correlated with academic achievement for both boys and girls. To identify factors associated with poor academic achievement during the early years, it was found that cognitive ability, gender, prematurity and social factors contribute to poor academic achievement (Ong, L. C. *et al.*, 2010).

Thus, it can be maintained that the intellectual abilities of students have a positive association with their scholastic achievement. Some children with a considerable intellectual ability fail at subjects in which they should succeed at. This is only partly understood and should be a matter of concern for

parents and the education system. Hence the importance of non-intellectual factors needs to be studied. For a satisfactory performance it is therefore likely that a certain amount of intelligence or scholastic aptitude necessary for academic achievement must be possessed by the students, along with some favorable non-intellectual variables.

### **NON-COGNITIVE CORRELATES**

It is most likely that in the absence of intellectual abilities high scholastic achievement is not possible. At the same time the mere presence of superior intelligence does not ensure higher achievement. Many empirical studies based on scientific investigation have shown that pupils of superior intelligence can be underachievers, while some people with average intelligence achieve more than what is expected of them. In the achievement related areas, *need for achievement* (Need-achievement) has been found to be a significant variable, which contributes to better performances in people (Deshpande,1984: Sween,1984: Rai,1980: Shivappa,1980: Pathek,1974: Sinha,1970: Mehta,196,69: Atkinson,1958). Mehta Preyag (1969) investigated “need-achievement and school performance”. A sample of 974 higher secondary students of Delhi was taken for this study. The need-achievement scores showed a highly significant positive correlation with marks in English and Maths, and a good positive correlation with marks in Science subjects and marks in Hindi and Non-science subjects. The

result clearly indicated that there is a significant positive relationship between need-achievement and school performance. Sinha (1970), reported about a study of the relationship between need-achievement and academic achievement of school going children. He selected a sample of 170 of 10<sup>th</sup> and 11<sup>th</sup> class students, using T.A.T pictures of McClelland for measuring need-achievement and school examination marks as achievement scores. He found that the mean of need-achievement scores of the high achievers (5.29) was greater than the mean of need-achievement scores of low achievers (-1.42). The difference was a significant beyond 0.01 level. On the basis of his findings he concluded that there was significant and positive relationship between need-achievement and academic attainment. McClelland *et.al*, 1953: found significant correlation between academic performance and need-achievement.

The achievement motivation has been studied both in relation to economic growth (McClelland, 1961) and academic performance (McClelland *et al* 1953, Atkinson, 1958). McClelland and associates (1953) report that for a sample of male students, the correlation between grades and achievement motivation is 0.39. Burges (1956) finds that overachievers are significantly higher on need-achievement than underachievers. Rosen (1956) indicated that T.A.T measures of achievement motivation are directly related to school grade. Using the need-

achievement scale from the Edwards Personal Preference Schedule, Bending (1957), Weiss and associates (1960) observed a positive relation between achievement motivation and academic performance. Riccinti *et al.* (1955) found a moderate positive correlation between need-achievement and school grades. Lillig and Yeracaris (1965) in their study found that need-achievement is positively related to academic achievement among men but not among women. Uhlinger and Stephens (1960) reported that high achievers show greater need for achievement than do low achievers. Strive (1958) found that boys of high ability who were well motivated for college had a higher need-achievement than equally able boys who were not motivated for college. Pierce and Bowman (1960) found a tendency for able boys who achieved well in high school had a higher need-achievement than others who did not achieve as well in high school. Lum (1960) showed that underachievers differed significantly from over-achievers in achievement drive (0.01 level). Hall (1969) found significant differences in need-achievement between achievers and non-achievers. Davanesan and Paul (1990), found that there is a significant and positive relationship between the achievement-motivation and scholastic achievement of higher secondary students. Badhri (1991), remarked that the causes of poor achievement were low motivation, poor study habits, lack of parental involvement in education and poor teaching. Harikrishnan (1992), found that



academic achievement is positively related with achievement-motivation and the socio-economic status of students. Khan (2000) found that gifted underachievers were characterized by positive need-achievement. Sotankay (1986), found that high achievers had a higher motivation to realize their goals than low achievers.

There is statistically significant evidence of superior learning in a person with high need-achievement than a person with low need-achievement. Many studies have supported the positive relation between need-achievement and school grades. (Morgan, 1952; Meclelland, Atkinson, Clark, and Lowel 1953; Gebhart and Hoyt 1958; Merrill and Murthy 1959; Weiss Werthemier and Groesbeck 1960; Rai 1974), found that need-achievement and intelligence were differential personality correlates. (Chaudhari 1975), found that achievement motivation of bright achievers was higher than that of bright underachievers.

The role of *study habits* in academic achievement has been studied repeatedly during the past four decades. Jain (1967), found that bright achievers were characterized by better study habits and higher achievement motivation than dull achievers. (Shivappa 1980), found that study habits and educational aspiration were positive correlates of academic achievement. Regarding the study of over-achievers and under-achievers, a review of the literature shows these two groups

differed significantly in regard to their study habits. Over-achievers had better study habits (Diener, 1960; H.G. Gough, 1953; De Sena Paul, 1964; Sorenson, 1964 and Smith Leland, 1965). Singh (1984), found that high achieving adolescents had significantly better study habits than middle and low achievers. Patel (1986), found that the better the study habits, the higher the achievement. Kapoor (1987) found that high achievers had better study habits compared to the average and the low achievers. (Lidhoo and Khan 1990), found that poor study habits and low need-achievement were associated with underachievement among bright subjects. Ansari (1980) found that study habits and study attitudes were both significant variables which determine the academic performance of the students. (Russell and Petrie 1992) cited a research study aimed at finding out the relationship between study habits and student attitude and academic performance (cumulative GPA) of college students. The findings of this study indicated a positive correlation between study attitude, study habit and academic achievement. A research was conducted to assess the impact of study habits on achievement in reading English. The research revealed that study habits had an influence on achievement in reading English for high school students and that it may be possible to predict achievement in reading English analyzing study habits (Reddy, 2008).

National Assessment of Educational Progress (NAEP) in

1994 conducted research to find out the relationship between study habits and academic achievement. The findings of this research revealed a positive correlation between study habits and academic achievement of elementary and secondary school students. Onwuegbuzie (2001) conducted a series of studies to find out the relationship between study habits and academic success, and reported a positive relationship between them.

Nandita & S. Tanima (2004) conducted a study to find a relationship between study habits and attitude towards studies with academic achievement in Geography. This study was conducted using secondary school students in the 9th class in schools in Bhadrak, a district of Orissa in India. The coefficients of correlation were calculated between the variables: study habits, attitude towards study and academic achievement in Geography. It was found that there existed a positive significant relationship between attitude towards studies and academic achievement and between study habits and attitude towards studies. Study habits are actually improving because of the advent and wide use of the Internet, hypertext, and multimedia resources (Liu, 2005). Karim and Hassan (2006) noted that the exponential growth of digital information changes the way students perceive study material, affects reading and how printed materials are used to facilitate study.

Simmons (2002) noted that "good writing spawns from a close understanding of text and great writing results from an

interactive analysis and fluency with our reading." He adds that inadequate writing is a direct result of inadequate reading and studying. Fielden (2004) stated that good study habits help the student in critical reflection in skills outcomes such as selecting, analyzing, critiquing, and synthesizing. Nneji (2002) stated that study habits are learning tendencies that enable students work privately. Azikiwe (1998) described study habits as the way and manner a student plans his or her private reading outside lecture hours in order to master a particular subject or topic, and study habits help students master their areas of specialization. Riaz Aisha *et al* (2002), conducted a study, aimed at determining the effect of study habits on the achievements of students. It was undertaken in the University of Agriculture, Faisalabad. All 150 students of B.Sc. Home Economics and M.Sc. Home Economics (Food and Nutrition) during the year 2000-2001 were involved in the study. The data was collected with the help of an interview schedule. It was found that there existed a significant and positive relationship between achievement and a proper study schedule. Niradhar Dey (2008) undertook a study comparing the study habits of high achieving CBSE and ICSE students in school hours, and non-school hours, and comparing the study habits of high achieving boys and girls. The results indicated that high achieving CBSE and ICSE students had a similar positive nature in their study habits.

Nuthana & Yenagi (2009), studied the influence of study habits and self-concept on the academic achievements of boys and girls. It was revealed that the habits of reading, note taking, concentration and preparation for examinations had a significant correlation with academic achievement. The study orientations of low and high academic achievers were compared. These were measured through a self developed orientation scale (SOS) primarily based on 47 items comparing study habits and attitudes. Students marks, obtained in their 10<sup>th</sup> grade examinations, determined the measures of their academic performance. The analysis revealed that the high achievers had better study orientation, study habits and attitude towards study than the low achievers (Satwar *et al*, 2009). Bhaduri (1971), found that overachievers showed higher scores on study habits, attitude towards school, religion and cultural background compared to underachievers. Kapoor (1987), found that high achievers had better study habits compared to the average than low achievers. Rajyaguru (1991), found that overachievers had better study habits.

From the above-cited studies it appears that *need-achievement* and *study habits* are important factors which contribute to the academic achievement of a person. High achievers are characterized by better study habits and higher levels of need-achievement. In contrast underachievers possess lower level of need-achievement and poorer study habits.

However there have not been enough experimental studies to test whether we can help underachievers to realize their potential through the use of counselling intervention. Therefore, the investigator has explored whether counselling intervention can improve the need-achievement, study habits and academic achievements of underachievers.

### **NEED AND IMPORTANCE**

India is facing a high illiteracy rate, wastage and stagnation of human potential and a brain drain to developed countries. It cannot afford to leave underachievers to their own fate or allow them to become social misfits. Children are not born underachievers; their school behavior is acquired (Davis and Rim, 1985). All nations should become concerned about all of its potential human resources, especially the waste and loss of such resources. Some form of remedial help, possibly in the form of intensive counselling is needed to deal with underachievement. The Education Commission of India (1964-66), supports the view that “Guidance and Counselling services” should be made available at all school levels, particularly remedial help to backward children and underachievers. Based on its research, the institute of medicine has concluded that mental health and psychological services were essential for many students to achieve well academically, and recommended that such services be considered mainstream and not optional (Institute of Medicine, 1997).

With regard to the necessity of guidance services, they prepare students to assume increasing responsibility for their decisions and grow in their ability to understand and accept the results of their choices (Gibson, 2008; Kauchak, 2011). Sinha, (1970) observed, “measures like counselling and a program of student personnel service are urgently required if the rate of failure and consequent wastage of manpower is to be reduced”. Bhatnagar, (1992) in a survey of educational research, points out under research gaps and priorities, that the effect of guidance and counselling should be studied on special groups of children such as slow learners, underachievers, the mentally challenged, and the mentally gifted. Mullis & Otwell (1997), ascertained that counselling decreases classroom disturbances. Counselling services support teachers in the classroom and enable teachers to provide quality instructions designed to assist students in achieving high standards. School counselors through collaborative efforts can implement both systematic and programmatic changes in schools and communities to prevent students from dropping out of school (Standard, 2003). Heyden (2011), while discussing the aim of guidance and counselling services, opines that their purposes are similar to the purposes of education in general—to assist students in fulfilling their basic psychological needs, understanding themselves and accepting others, developing associations with peers. Realizing

successful achievement, and providing opportunities to gain independence.

The Comprehensive Developmental Guidance (CDG) Program model (Gysbers & Henderson, 2000) emerged during the 1970's and emphasized school counselling as a core educational program rather than a set of ancillary support services. The current model of Counselling in Hong Kong schools evolved from what began as essentially a remedial approach targeting individual students, to become a whole school approach through the implementation of a comprehensive developmental guidance and Counselling program for all (Gysbers, 2000; Hui, 2000). School Counselling in the Chinese mainland has been led by central government policy and has developed rapidly since the 1990s (Jiang, 2005). The level of implementation of Counselling activities in schools is higher in big cities than in small towns and rural areas. Counselling in mainland schools is termed “mental health education” in the official documents of the Chinese government (Ministry of Education of the People’s Republic of China, 2002). School Counselling in United Kingdom focuses on students’ social-emotional needs and thus helps to personalize schooling (Watkins, 1999, 2008). Schools are to provide students with opportunities to listen more to others, evaluate information, and decide things for themselves (Lang, 2003). Bhatnagar and Gupta (1999) were of the opinion that for better student achievement,



it is necessary to help pupils make progress in their education by removing their difficulties and developing good study skills. Hence guidance programs must include this aspect of student counselling.

Guidance plays a vital role in removing the educational, personal, social, mental, and emotional problems of the students. Kochhar (2000) considers guidance necessary to help students with specific problems like lack of relationship between ability and achievement, deficiency in school subjects, faulty study habits, defective methods of learning and poor motivation. In a study, Braddock (2001), stated that the purpose of guidance and counselling services for school children are to improve academic achievement, increase conflict resolution skills, decrease dropouts and foster positive attitudes toward school, learning, and study. Brigman and Campbell (2003) found that implementation of *Student Success Skills Curriculum* as a school counselor-led intervention program resulted in sizable gains in student achievement on the FCAT. Hussain (2006) found that guidance services are effective for the improvement of teaching instruction. It is therefore recommended that a center for guidance services or a guidance clinic should be established in each school. "The guidance and Counselling program is an integral part of a schools' total educational program; it is developmental by design, focusing on

needs, interests, and issues related to various stages of student growth”, (Cooley, 2010; Coy, 2004).

A review of the research on school Counselling shows that the services of school counselors have a positive effect on children. (Borders & Drury, 1992; Gerler, 1985; St. Clair, 1989; Whitson & Sexton, 1998). Quantitative analyses of research (meta-analyses) substantiate the beneficial effects of school Counselling programs. (Baker, *et al* 1984; Prout & Demartino 1986; Sprinthall 1981). School Counselling programs have significant influence on discipline problems. Baker and Gerler (2001); Omizo, *et al* (1988) reported that students who participated in a school Counselling program showed significantly less inappropriate behaviors and more positive attitudes toward school than those students who did not participate in the program.

Several studies found that elementary guidance activities have a positive influence on elementary students’ academic achievement (Sink & Stroh, 2003). School counselor interventions have reported success in helping students reduce test anxiety (Cheek *et al*, 2002). School counselors are effective in teaching social skills (Verduyn, Lord & Forrest 1990). School counselors are effective in assisting middle school children in the area of career development (Whiston, *et al* 1998). It has been reported that children who are experiencing family problems

have been helped by school counselors (Omizo & Omizo, S.A. 1988; Rose & Rose, 1992). In studies on the effects of using a small group Counselling approach to assist elementary school students who are failing their test, 83% of participating students showed improvement in their grades (Boutwell & Myrick, 1992). School Counselling interventions have a substantial impact on students' educational and personal development. School counselors should spend the majority of their time performing these interventions. Coordination activities should be confined to those that improve the efficiency and accountability of these counselling interventions (Borders & Drury 1992). Studies on high school attrition indicated that preventive Counselling, which occurs before students are in crisis, reduces the risk of these students dropping out later (Hayes, Nelson *et al*, 2002). Student counselling improves school attendance, school behaviour, student achievement and students' self-esteem and attitude toward school (Beale, 2004; Schmidt, 2003).

The School Dropout Assistance Program (1991-1996) funded a number of projects to test and evaluate the effect of strategies for dropout prevention and assisting dropout students to re-enter school. The results found that Counselling services were one of the key elements of promising dropout prevention initiatives (Kaufman, Klein & Frase 1999). A study done in Gwinnett County, Georgia shows that school counselors impact

students' academic performance by increasing student focus on their set tasks, increasing productive behavior of students and reducing disruptive behavior. The Behavior Rating Checklist indicated statistically significant decreases in disruptive behaviors and significant increases in productive, on-task behaviors for the third grade and fifth grade students tested. For these students their progress in language and arts progress was statistically significant for both grade levels as well (Mullis & Otwell 1997; Watts & Thomas 1997).

In the light of these above cited studies, there may be a need in the school system to identify underachievers and their specific problems. It may be necessary to support underachievers through counselling. This requires determining the effect of counselling on their need-achievement, study habits and academic achievement, as these appear to be significant correlates of underachievement. Many of the students of government schools belong to poor and less educated or illiterate families. They are therefore more deprived of proper educational guidance at home. This study is an effort to help underachieving students in government schools, including the students of these less educated or illiterate families. The study aims to determine if counselling can improve the level of achievement of these students. The investigator made counselling interventions with underachievers to improve their need-achievement, study habits and academic achievement.

These counselling interventions allowed the parents, teachers, counselors and administrators understand that counselling helps underachievers to boost their need-achievement, improve study habits and increase their academic results. This study may encourage administrators to consider having school counselor for the assistance of students, especially underachieving students.

### **STATEMENT OF THE PROBLEM**

There are some experimental studies conducted by Gaur (1970) who studied the effect of counselling on potential school failures. Patel (1973) studied how self esteem changes as a function of counselling. Sunanda (1982) studies the effect of counselling on the study habits and achievement of teacher trainees. Rather (1985) studied the influence of counselling on isolates and rejectees. Khan (1987) studied the effect of counselling on bright underachievers. Dua (1990) studied changes in academic self-concept through group counselling and its effect on school related behaviour. Kanth (1994) studied the impact of directive counselling upon writing skills. Illangovan & Rangaraj (2001) studied the effect of counselling on test anxiety and scholastic achievement in DTE students. In the light of the studies the investigator has reviewed, the investigator chose to identify underachievers and apply a counselling process to their scholastic situations. This was intended to determine if counselling could improve need-

achievement, better their study habits and bring their academic achievement on par with their intellectual capability. Few studies have been conducted in India on the issue in general. No study has been conducted specifically on the variables need-achievement, study habits and academic achievement with respect to the effect of counselling intervention in the valley of Kashmir.

The purpose of this study is to determine:

***The Effect of counselling on the need-achievement, study habits and academic achievement of underachievers.***

#### **OBJECTIVES OF THE STUDY**

This study is designed to achieve the following objectives:

- i) Identify the underachievers.
- ii) Help underachievers raise their need-achievement through counselling.
- iii) Help underachievers improve their study habits through counselling.
- iv) Help underachievers raise their academic achievement through counselling.

#### **HYPOTHESES**

1. There will be a significant improvement in the post-test *factor-wise* need-achievement scores of the experimental group.

2. There will be a significant improvement in the post-test *composite* need-achievement scores of the experimental group.
3. There will be a significant improvement in the post-test *factor-wise* study habit scores of the experimental group.
4. There will be a significant improvement in the post-test *composite* study habit scores of the experimental group.
5. There will be a significant improvement in the post-test *subject-wise* academic achievement scores of the experimental group.
6. There will be a significant improvement in the post-test *composite* academic achievement scores of the experimental group.

### DELIMITATIONS

1. 9th grade students were selected on the basis that students of this age group are most likely mature enough to take decisions for themselves.
2. The government high and higher secondary schools of educational zones Rainawari and Gulab Bagh of district Srinagar in Kashmir were selected. This selection was made on the basis that in the Srinagar the affluent and educated class send their children to private schools, while the poor send



their children to government schools. Therefore these students do not currently get counselling for their problems either inside or outside school.

3. The study was confined to the educational zones of Rainawari and Gulab Bagh of district Srinagar due to time available to the investigator for this study.
4. The age and gender of the students studied was controlled.

### **OPERATIONAL DEFINITION OF VARIABLES**

#### **1. COUNSELLING:**

A process in which individuals learn about themselves, their interpersonal relationships and behaviours that advance their personnel development.

*(Shertzer and Stone, 1976, P., 162)*

A process by which a troubled person (the client) is helped to feel and behave in a more personally satisfying manner through interacting with an uninvolved person (the counsellor) who provides information and reactions which stimulate the client to develop behaviours which enable him to deal effectively with himself and his environment.

*(Lewis, 1970 P., 10)*

A process in which the pupil is approached on an individual basis and is helped to form a decision, make a choice, find a direction at some important fork in the road such as that



of planning life career, a programme in college, a campaign to obtain employment.

*(Mehdi, 1959, P., 329)*

A process of perceiving and integrating into one's self any previously denied experiences in the safety of a warm and relaxed relationship with the therapist.

*(Rogers, 1951)*

**Counselling** in this study means,

To help students understand their potential and overcome their problems which distract them from academic achievement. Their problem may be in school, in their approach to study (such as poor study habits) or due to low level of need-achievement.

## **2. UNDERACHIEVER**

Underachievers are those whose educational age is one year or more below their mental ages.

*(Lewis, 1941)*

Represents a slower rate of learning than would be otherwise predicted by the level of intellectual functioning.

*(L'abate and Curtis, 1975)*

The underachiever is a young person who performs more poorly in school than one would expect on the basis of their mental abilities.

*(McCall, Evahn & Kratzer, 1992)*

**Underachiever** in this study means:

A student whose mean achievement scores from their previous two annual examinations are at the 10th percentile or more below their equivalent intelligence percentile scores.

The criterion model for the selection of underachievers is in line with Gowan (1960) which has successfully been used by Mohan & Nehru (1972), Mohan & Khera (1978), Khan (1996), Amina (2003), and Khan, M.A. & Parveen, A. (2005).

### 3. NEED-ACHIEVEMENT

Need-achievement refers to an individual's desire for significant accomplishment, mastering of skills, control, or high standards.

*(Henry Murray, 1938)*

Need for achievement refers to an individual's preference for success under conditions of competition.

*(David McClelland, 1965)*

**Need-achievement** in this study means:

The scores gained by sample subjects on an Urdu adaptation of B.N. Mukherjee's Incomplete Sentence Blank (Khan, 1992) in pre and post counselling tests.

### 4. STUDY HABITS

Study habits are study routines, including but not restricted to, frequency of studying sessions, review of material,

self-testing, rehearsal of learned material, and studying in a conducive environment. Students' attitudes toward the act of studying are referred to as 'study attitudes'.

(Crede & Kuncel, 2008)

Study habits are "the adopted way and manner a student plans his private readings, after classroom learning so as to attain mastery of the subject".

(Azikiwe, 1998)

**Study Habits** in this study means:

The scores gained by sample subjects on a Study Habit Inventory (Khan 1999) in the pre and post counselling tests.

## 5. ACADEMIC ACHIEVEMENT

"Academic achievement is the extent to which a learner is profiting from instructions in a given area of learning i.e., achievement is reflected by the extent to which skill or knowledge has been imparted to him".

(Crow and Crow, 1969)

**Academic Achievement** in this study means:

The aggregate marks gained by sample students in different subjects in the pre and post counselling tests.

**U**nderachievement is widespread and concerns the school population of all ages. In spite of an increased focus on education, a large proportion of people in many countries are still being denied its full benefits. In developing countries it is essential that all its resources are fully utilized because a large number of pupils suffer from poor achievement. It is the responsibility of every country to take the necessary steps to ensure their students maximize their academic potential.

Research shows that school counselling intervention has a substantial impact on students' educational and personal development. Classroom guidance along with individual and small-group counselling, may contribute directly to student success in the classroom and beyond. Review of literature makes it obvious that much research in guidance and counselling has been dealt in the areas of delinquency, student appraisal, mentally handicapped children and the like. Few studies have been conducted to see the effect of counselling on achievement especially with respect to underachievement. With this background, the investigator, in the present research

reviewed all such studies, as have been conducted in the concerned field and the other variables under manipulation. The studies, relevant for the proposed research have been classified into two areas.

## I CORRELATES OF ACHIEVEMENT

## II COUNSELLING INTERVENTION

### CORRELATES OF ACHIEVEMENT

● **Lynn, R.(1959):** *Two personality characteristics related to academic achievement.*

**Objective:** To examine the relationship of two personality dimensions of neuroticism and extra version with academic achievement. **Tool used:** The levels of neuroticism and extra version were assessed with Maudsley Personality Inventory.

**Major Finding:** The authors in this study found neuroticism to be a favorable factor for academic achievement. No such relationship was found with extra version factor.

● **Jamuar, K.K (1961):** *Personality and achievement.*

**Objectives:** (a) The investigation was conducted to observe the relationship between some personality variables and achievement. (b) Further it was intended to find out whether personality factors affected achievement independently of intelligence. **Major Findings:** (a) Achievement depended on

personality adjustment of pupils. (b) Among different dimensions of adjustment, home, emotional and social adjustment played a vital role. (c) Introversion also seemed to be positively related to achievement. Personality adjustment and introversion were observed to be influencing academic achievement independently of intelligence.

● **Sinha, N.C.P. (1970):** *Need for achievement and academic attainment.*

**Objective:** The study was undertaken to explore the exact relationship between need achievement and the academic achievement of school going children. **Tools used:** (a) Need-achievement, was measured by McClelland's test for need-achievement. (b) In order to ascertain the relationship between need-achievement and academic achievement, Phi-coefficient of correlation was used. **Major Finding:** It was found that need-achievement as measured by McClelland's test of need-achievement, was significantly and positively correlated with academic attainment

● **Bhaduri, A. (1971):** *A comparative study of certain psychological characteristics of the over and under achievers in higher secondary schools.*

**Objectives:** (a) To find out the similarities and differences between the overachieving and underachieving students with respect to sex, grade and academic courses. (b) To make a

comparison between the two groups over several psychological characteristics. **Tools used:** (a) Reasoning and Numerical Ability Sub-scales or DAT (form A). (b) The Jr-Sr High school personality Questionnaires (form A) devised by Cattell and Beloff. (c) The Kuder Performance Record (CH-Vocational form). (d) A forced choice questionnaire, devised by Mukherjee, B. (e) A study habit questionnaire, prepared by Jammuar; and (f) A biological data schedule, developed by the investigator. In analyzing data, examination marks were converted into T-scores and r's and multiple R's were computed. Regression equations were established and 't' test was applied for testing the hypothesis. **Major Findings:** (a) Overachieving students tended to be less anxious than the underachievers. (b) The group difference was in favour of the overachievers on social service and outdoor interest, while as musical interest and achievement motivation of this group were found to be lower than those of their underachieving peers. (c) The overachievers showed higher scores on study habits, attitude towards school, religion and cultural background. (d) The underachievers on the contrary tended to have a higher socio-economic status, a more congenial home condition and more of leisure time activities. (e) The over and underachievers within each subgroup sample differed on one or more of the twenty-six variables under study.

➤ **Dutt, et al (1972):** *Factorial Analysis of Intelligence Academic Achievement and some Personality traits.*

**Objectives:** (a) The relationship of some factors of personality and academic achievement. (b) The relationship between personality traits and intelligence. (c) The pattern of relationship existing among various factors of personality. **Tools used:** (a) Jankin's Non-Verbal group test of intelligence, standardized by CIE. (b) Dr. Sen's Personality Trait Inventory standardized on Indian population. For academic achievement composite scores awarded to the subjects during the previous annual promotional examination were used as an index of the subjects academic achievement. **Major findings:** (a) Intelligence and academic achievement are highly correlated variables, but they may serve as effective predictors of the other dimensions of the personality in view of the absence of a high correlation amongst them. (b) Neuroticism is to a little extent helpful in academic achievement. (c) Intelligence is relatively independent of personality traits. It is related to introversion only, and that too, very slightly.

➤ **Menon, S. K (1973):** *A comparative study of the personality characteristics of over and underachievers of high ability.*

**Objective:** To find out the relationship existing between underachievement and some of the personality characteristics like social activity, extroversion-introversion, tolerance,



maladjustment and masculinity—femininity and some motivational traits like academic interest, general ambition, persistence, and endurance and areas of interest like outdoor, aesthetic, scientific, mechanical, persuasive, clerical and social science. **Tools used:** (a) The general mental ability test-verbal form A and form B. (b) The personality inventory. (c) The motivational inventory. (d) The interest inventory. (e) A general Data Questionnaire.

The first three tools were developed by the department of psychology and the last two by the investigator respectively. Public examination marks or final examination were taken as a measure of the academic achievement of the subjects.

**Major findings:** (a) Overachieving group of boys and girls of superior ability as well as general group were found to be less socially active and masculine. (b) Overachieving group of boys and girls of superior ability as well as general group was found to show greater academic interest, endurance and greater persistence. Overachieving girls from general group and overachieving boys of both groups were also found to have greater general ambition. (c) Overachieving girls of the general group showed stronger interest than underachievers in aesthetic, social and mechanical activities and less interest in outdoor, persuasive and clerical activities; overachieving boys of the general group had more interest in aesthetic activities and less interest in outdoor work, while high ability underachievers

among boys had an interest in mechanical activities. (d) Overachievement and underachievement were found to be influenced by socio-economic status and demographic characteristics.

● **Reddy, V.L.N. (1973):** *A study of certain factors associated with academic achievement at first year degree examination.*

**Objective:** Relationship between academic achievement in a subject or groups of subjects at the first year degree examination and intelligence, need achievement, personality and home environment of students. **Tools used:** (a) The Questionnaire-cum-rating scale developed by investigator based on the Kuppaswami's SES scale. (b) The Mukerjee's sentence completion tests. (c) Cattell's culture Faire test of intelligence, scale 3, Form A and Form B. (c) The Cattell's 16 PF test, Form A (1962) and Form B (1961). **Major findings:** (a) Socio-economic status and personality factors E,F,O and Q2 were not significantly related to achievement in any subject or group of subjects. (b) The variables of parental value on education, emotional climate in the home, parental encouragement, educational facilities in the home, n-Ach, intelligence and personality factors of the 16 PF, namely, A, C, G, H, F, L, M, N, Q1, Q3, and Q4 were found Significantly associated with achievement in one subject or the other. (c) Home environment appeared to be more prominent as potential predictor of academic achievement after intelligence.

➤ **Abraham, M. (1974):** *Some factors relating to underachievement in English of Secondary school pupils.*

**Objective:** To identify factors leading to underachievement in English of secondary school pupils, namely, attitude towards academic work, attitude towards English, language interest, study habits, personal adjustment, social adjustment, socio-economic status, teacher effectiveness, sex, age, residence and school category, were formulated. **Tool used:** The data on study habit, socio-economic status and intelligence were collected through standardized tools. Those on personal and social adjustment were collected by adapting two parts of a standardized personality scale. The remaining variables were measured by using tools developed by the investigator. Intelligence and achievement in English were used as the basis for classifying the sample into over, normal and underachievers, by using Farquhar's method, by developing three regression equations for each instructional level using intelligence scores as independent variable and achievement as dependent. Analysis of variance, tests of significance for difference between means and centroid method of factor analysis were used for statistical treatment of the data. **Major findings:** (a) The achievement level was associated with attitude towards English, personal adjustment, social adjustment and socio-economic status. (b) There was greater proportion of normal achievers among girls as against boys. (c) Underachievement was more

frequent in rural schools and over-achievement in urban schools. (d) Overachievers were proportionally more in private schools than in Govt. schools. (e) Underachievement was more in higher age group and over-achievement was more in lower age group. (f) The factor pattern of the total sample was significantly different from the factor pattern obtained for the underachievers and the overachievers, whereas it was highly comparable with the pattern obtained for the normal achievers. (g) The three factors obtained were scholastic disposition, general adjustment and social stimulation which counted for variance of both the general group and the normal achieving group. (h) For the achievers only linguistic disposition and general adjustment were needed to account for total variance. (i) For underachievers, group adjustment socio-personal adjustment and scholastic disposition were found to be the factors responsible for explaining total variance;

● **Rai, P.N. (1974):** *A comparative study of a few differential personality correlates of low and high achievers.*

**Objectives:** (a) relationship between scholastic achievement and adjustment, scholastic achievement and anxiety, scholastic achievement and intelligence. (b) To establish regression equation between achievement as a criterion and adjustment, anxiety, level of aspiration, n-achievement and intelligence as predictors. **Tools used:** (a) the Sinha's Adjustment Inventory. (b) the Shah's Level of Aspiration Test. (c) the Mehta's Need

Achievement Test. (Projective test). (d) the Jallota's Group Test of General Mental Ability, and Kuppuswani's Socio-economic Status Scale. The data were analyzed with the help of frequency distribution, gives mean, S.D. Correlation, 't' test, regression equation and multiple R. **Major Findings:** (a) Anxiety as a personality trait had a changing role in scholastic achievement. Low level of anxiety helped in achieving high, whereas very high level of anxiety was detrimental to achievement. (b) Level of aspiration was not a significant correlation of achievement but it was desirable that students fixed up high goals commensurate with their ability and tried to achieve it. (c) Low goal setting was in no way a desirable characteristic for better achievement. It drove the students into academic activities. (d) Need achievement and intelligence were differential personality correlates.

● **Seetha, B.C. (1975):** *An Inquiry into the psychological and social factors affecting academic achievement.*

**Objectives:** (a) To examine the psychological and social factors affecting academic achievement. (b) To examine whether non-achievers as a group differ from the achievers of these factors.

**Tools used:** (a) A Group Test of General Mental Ability. (b) A Study Habit Inventory. (c) The Thematic Apperception Inventory. (d) A Cancellation and Letter Digit Substitution Test. (e) A Picture Frustration Test. (f) An Interest Inventory. (g) The 16 PF Test. (h) A Personal Data Sheet were used to collect the data.

Chi-square test, 't' test and factor analysis were used to analyse the data. **Major findings:** (a) High achievers possessed superior intelligence when compared with low and non-achievers. (b) Study habits had a positive relationship with academic achievement, in that high achievers possessed good study habits while as low achievers had poor study habits. But in case of achievers and non-achievers there was no significant relationship between academic achievement and study habits. (c) Greater need achievement was found in case of high achievers than low and non-achievers. (d) Non significant relationship existed between interest and academic achievement, social adjustment and academic achievement. Out of sixteen personality factors, three factors namely A, B and L had significant relationship with academic achievement.

☛ **Chaudhari, V.P. Jain (1975):** *Factors contributing to academic underachievement.*

**Objectives:** (a) To make a critical study of the factors contributing to academic underachievement. (b) It was assumed that the factors contributing to academic under-achievement, viz, study habits, personality structure and environmental conditions, were interrelated. **Tools used:** (a) P.S.M. General Intelligence Test (Marathi and Hindi), to measure mental abilities of the subjects. (b) Sinha's Anxiety Scale. (c) Adjustment Inventory (Saxena). (d) Study Habit Inventory (Jamuar). (e) Aronson's Graphic Expression Test. (f) Socio-

Economic Status Scale (modified from-Kuppuswamy). **Major findings:** (a) The study habits of achievers differed significantly from under-achievers. (b) A correlation between the study habit score and the index of achievement was quite high in the case of the male candidates. (c) Achievement motivation of bright achievers was higher than that of bright under achievers. (d) Dull achievers had low achievement motivation than bright underachievers. Difference in mean score of need achievement of two groups was sharper in the case of boys than in girls. (e) There was a negative correlation between anxiety and achiever index. Achievers who had high level of achievement motivation had minimum anxiety whereas dull achievers with low level of achievement had high level of anxiety.

● **Beedawat, S.S. (1976):** *A study of Academic underachievement among Students.*

**Objectives:** (a) To study the incidence of academic underachievement among students of class IX of secondary schools of Bikaner division. (b) To study the factors related to academic underachievement. (c) To make a comparative study of incidence of underachievement among boys and girls. (d) To make a comparative study of incidence of underachievement in rural and urban areas. (e) To make comparative studies between underachievers, overachievers and average achievers. (f) To study the relationship between intelligence score of underachievers and scores on; (i) *Personality characteristics*, (ii)

*Factors of personality adjustment*, (iii) *Motivation*, and (iv) *Study habits*. (g) To make some case studies to identify factors responsible for underachievement. **Tools used:** (a) the Cattell's 14 PF (HSPQ). (b) the Sexena's Personality Adjustment Inventory. (c) The Frymier's Junior Index of Motivation. (d) The Rao's Study Habit Inventory. **Major findings:** (a) The intensity of incidence of underachievement was more or less uniform in the urban and rural areas. (b) The incidence of underachievement was higher in science group. (c) The proportion of underachievement among girls was larger than that among boys. (d) Very few of the underachievement were found to be outgoing. Seventy five percent of the students among underachievers possessed average emotional stability. (e) About 40% of students were found to be possessing qualities like impulsively lively and gay enthusiastic.

● **Ghuman, M.S (1976):** *A study of aptitudes, personality traits and achievement motivation of academic overachievers & underachievers.*

**Objectives:** (a) To find out the difference in the aptitudes, personality traits and achievement motivation of overachieving and underachieving students with regards to sex, academic streams and residential background. (b) To hierarchically present the relative contribution of the identified personality traits, aptitudes and levels of achievement motivation to the prediction of academic achievement of over and underachievers.



(c) To find out the relationship between the personality traits, aptitudes and levels of achievement motivation of the overachievers and underachievers. **Tools used:** (a) Scientific Aptitudes Test Battery (Agarwal). (b) Verbal Aptitude Test (Sharma). (c) The 14 PF Test (HSPQ). (d) The Achievement Motivation Inventory (Mehta). The statistical techniques used for data analysis were multiple coefficients, t-test, analysis of variance and regression equations. **Major findings:** (a) The overachievers and underachievers did not differ significantly of any of the independent variables, namely, aptitudes, achievement motivation or personality traits. (b) The overachievers, regardless of sex possessed high achievement motivation whereas the underachievers possessed relatively low achievement motivation. (c) The difference between the means of the sub-urban underachievers and overachievers on the composite aptitude test were significant and the means were in favour of the former group whereas there were no significant differences in the aptitude scores of rural as well as urban over and underachievers, etc.

● **Chopra, S.L, (1982):** *A study of some non-intellectual correlates of academic achievement.*

**Objectives:** (a) To identify the variables having positive relationship with academic achievement. (b) To find out the relative importance of intelligence and various non-intellectual variables in determining academic achievement. **Tools used:** (a)

Raven's Advanced Progressive Matrices Test, for the measurement of intelligence. (b) Kulshreshtha's Socio-Economic Status Scale, to have an idea about the socio-Economic level of the families of the students. (c) An adaptation of Bell Adjustment Inventory, to assess student's adjustment in the four areas-home, health, social and emotional. Thereafter using Wherry Doolittle method beta coefficients were calculated to find out the relative importance of different variables in academic achievement. **Major findings:** (a) Socio-economic background was a very important determinant for continuation of education. Significantly larger number of students from the lower socio-economic classes failed in the High school examination and significantly a larger number of first class students belonged to higher Socio-economic classes. Parents from higher socio-economic classes gave greater help and encouragement to their children for studies. (b) Study habits were positively related to academic achievement. (c) Students from higher socio-economic classes had higher educational and occupational aspirations. (d) A larger number of students from higher socio-economic classes did some planning for a future career in life.

● **Sween, (1984):** *Academic achievement of high school students in relation to the instructional design, intelligence, self-concept and need-achievement.*

**Objectives:** (a) To study the effectiveness of instructional design on students performance. (b) To find out the impact of self-

concept on students performance. (c) To investigate the effect of intelligence on performance of students. (d) To ascertain the effect of n-achievement on students performance. (e) To study the interaction effects of instructional design, intelligence, self-concept and n-achievement on performance of pupils in various combinations, viz. double, triple and quadruple. **Tools used:** (a) The Jalota General Mental Ability Test (1972). (b) The Mehta Achievement Value and Anxiety Inventory (1969). (c) Deo Personality Word List (1973). **Major findings:** (a) The two levels of instructional design, viz. programmed instruction and adjunct programming differed in their effectiveness with respect to mean gain scores. Programmed instruction was found to be more effective than adjunct programming. (b) High intelligent students scored significantly better than low intelligent students. (c) Students with high self-concept achieved significantly higher scores than those with low self-concept. (d) High achievement motivated students gained significantly more than low achievement or intelligence motivated students.

● **Kapoor (1987):** *Study of factors responsible for high and low achievement at the junior high school level.*

**Objective:** To find out the factors related to high and low academic at the junior high school level. **Tools used:** (a) Raven's Progressive Matrices Test (1985). (b) Dr. S.P Kulshreshtha's scio-economic status scale. (c) Dr. V.K Mittal's Adjustment Inventory. (c) Dr. B.V Patel's Study Habit Inventory.

**Major findings:** (a) Among both the boys and girls the high achievers tended to show a higher level of intelligence as compared to the average and low achievers. (b) Majority of high achievers belonged to higher SES groups and large number of low achievers belonged to lower SES groups. (c) The high achievers had better home, health, social, emotional and school adjustment. The overall adjustment scores of high achievers were also significantly higher than the overall adjustment scores of the other two groups. (d) Among boys and girls, the high achievers had better study habits as compared to the average and the low achievers. The high achievers tended to plan their studies properly, had proper reading habits, could concentrate on their studies, and prepared for the examination in a better planned manner.

● **Devanesan, Paul P. (1990):** *Socio-economic status, achievement-motivation and scholastic achievement of higher secondary students in Pasumpon Thevar Thirumagan District.*

**Objectives:** (a) To find out the relationship between socio-economic status, achievement-motivation and scholastic achievement of higher secondary students. (b) To find out the difference among various groups of higher secondary students in socio economic status, achievement-motivation and scholastic achievement. **Tools used:**

(a) Prayang Mehta's Achievement-motivation Inventory Test. (b) Kuppuswamy's Socio-economic Status Scale. **Major Findings:** (a) There was significant and positive relationship between the achievement-motivation and scholastic achievement of higher secondary students. (b) There was significant and positive relationship between the achievement-motivation and scholastic achievement of higher secondary mathematics group of students. (c) There was significant and positive relationship between the achievement-motivation and scholastic achievement of higher secondary science group students. (d) There was a significant relationship between socio-economic status and scholastic achievement.

● **Bhattacharyya, P. & Bhattacharyya, A (1990):** *A cross-sectional study on achievement motivation of secondary school students and its impact on their school achievement.*

**Objectives:** (a) To determine the difference, if any, in need achievement of the students (sex-wise and strata-wise). (b) To find out the relationship between need achievement and school achievement specially of the pupils of some secondary schools in west Bangal. **Tool used:** Prayang Mehta's achievement values and anxiety inventory (AVAI) was used as a measuring tool of achievement motivation. **Major findings:** (a) Need achievement was a good predictor of school achievement. (b) The test related scores had considerable impact on school performance.

➤ **Badhri N. (1991):** *An investigation into the causes for low achievement in government high schools in Chenglapattu Educational District.*

**Objectives:** (a) To find out reasons for low achievement. (b) To find out differences, if any, in the reasons for boys and girls.

**Tools used:** (a) Group test of intelligence. (b) Study habit inventory. (c) School information blank. (d) Questionnaires.

**Major findings:** The causes of poor achievement identified as:- (a) low motivation. (b) policy of liberal promotion to the next higher class. (c) Poor study-habits. (d) Lack of parental involvement in education. (e) Poor teaching.

➤ **Baskaran, K. (1991):** *Achievement motivation, attitude towards problem-solving and achievement in mathematics of standard X students in Devakotal educational district.*

**Objectives:** (a) To identify the level of student's achievement-motivation, attitude towards problem solving and achievement in mathematics. (b) To identify the significant relationship, if any, between achievement-motivation and attitude towards problem solving. (c) To find out the significant difference, if any, between boys and girls, between urban and rural students and government and aided school students in achievement-motivation, attitude towards problem-solving and achievement in mathematics.

**Tools used:** (a) The researcher prepared the tool with three parts in it having Achievement-Motivation Inventory Test as the first part, Attitude Scale as the second

part and Achievement Test in Mathematics at standard x level as the final part. (b) For data analysis 't' test and correlation were used. **Major findings:** (a) There was a significant relationship between achievement-motivation and achievement in mathematics and attitude towards problem solving. (b) There was a positive relationship between the attitude towards problem solving and achievement in mathematics. (c) Urban and rural students did not differ in their achievement-motivation, and attitude towards mathematics.

● **Koteshwara, Narayana M. (1991):** *A comparative study of the characteristics of high achievers and low achievers in reading of class VIII pupils were special reference to school and home factors.*

**Objectives:** (a) To identify the specific characteristics of high and low achievers in reading standard VIII. (b) To identify the characteristics of high and low achievers in vocabulary and comprehension separately and in the composite reading scores. (c) To compare the performance to the reading achievement. (d) To compare the study habits of pupils to urban and rural areas. (e) To identify the relationship between the reading achievement, study habits and socio-economic status. **Tools used:** (a) A Study Habit Inventory. (b) A Questionnaire. (c) A Socio-Economic Status. (d) A Reading Achievement Test. **Major Findings:** (a) Urban students had a higher achievement in comprehension, vocabulary and composite reading ability

than the rural students. (b) Girls had a high achievement in comprehension than the boys but did not differ in vocabulary and composite reading abilities. (c) High scoring boys and girls did not differ in their mean scores on vocabulary, comprehension and composite achievement. (d) Low scoring boys and girls did not differ in these reading abilities. (e) Girls had better study habits than boys. (f) Urban students had better study habits than rural students. (g) High scorers on reading achievement had better study habits than low scorers.

● **Rajyaguru, M.S. (1991):** *A comparative study of over and underachievers in mathematics to compare the achievement in Maths, personal characteristics and environmental characteristics overachievers and underachievers in Maths.*

**Objective:** To find out overachievers and underachievers in the subject of mathematics. (b) To compare the personality, environment and cognitive aspects of overachievers and underachievers in mathematics. (c) To find out the characteristics of overachievers in mathematics. (d) To find out the characteristics of underachievers in mathematics **Tools**

**used:** (a) Desai-Bhatt Group Test of Intelligence. (b) Bhavsar Numerical Aptitude Test. (c) Mathematics Achievement Test developed by researcher. (d) Mathematics Anxiety Scale by Patel J.Z. (e) Study Habit Inventory by Patel, V.B. (f) Mathematics Aptitude Scale by Desai H.J. (g) Interview schedule and Rotter's



Locus of Control Scale adopted by Bhogayata (in Gujarati). **Major findings:** (a) There was positive and significant correlation between intelligence test and achievement in mathematics, achievement in maths and numerical aptitude, intelligence and numerical aptitude. (b) Overachievers and underachievers did not differ in intelligence, numerical aptitude and locus of control. (c) Overachievers had better study habits, more positive attitude towards mathematics and less mathematics anxiety.

● **Harikrishan, M. (1992);** *A study of academic achievement of the students of the higher secondary state in relation to achievement-motivation and socio-economic status.*

**Objective:** To find out the relation between academic achievement, achievement-motivation and socio-economic status among students. **Tools used:** (a) School marks. (b) The Achievement—Motivation Inventory of Prayag Mehta. (c) Socio-economic Status Scale developed by the researcher. **Major findings:** (a) Girls obtained a higher mean in achievement than boys. (b) Socio-economic status was significantly related to academic achievement. (c) Achievement was not related to achievement-motivation.

● **Rani, Meena, (1992):** *A study of locus of control, self-esteem, academic responsibility, academic motivation and scholastic achievement of advantaged and disadvantaged students.*

**Objectives:** (a) To compare locus of control, self-esteem, academic responsibility, academic motivation and scholastic achievement of advantaged and disadvantaged students. (b) To find out the difference in scholastic achievement of advantaged and disadvantaged students having differential levels of:- (i) locus of control, (ii) Self-esteem, (iii) Academic responsibility, and (iv) Academic motivation. **Tools used:** (a) Rotter's Internal-external Control Scale. (b) Self-esteem Scale of Stanley, Kanpur and Smith. (c) Academic Responsibility Scale by the researcher. (d) Academic Motivation by Srivastava and Maheshwari. (e) Socio-economic Status Scale by Varma E. Saxena. **Major findings:** (a) Advantaged and disadvantaged groups differed significantly with respect to their locus of control, self-esteem, academic responsibility, academic motivation and scholastic achievement. (b) Advantages girls as compared to the disadvantaged had better internal locus-of-control, self-esteem (higher score on general, social, home and school sub-areas of self-esteem scale).

☛ **Hota, A.K (1995):** *Self-concept and achievement motivation in relation to academic achievement of socially backward secondary school students.*

**Objectives:** (a) To investigate the relationship between self-concept and academic achievement. (b) To study the relationship between achievement motivation and academic achievement. (c) To investigate into the relationship between

self-concept and achievement motivation. **Tools used:** (a) Personality Word List P.Deo (1971) adopted in Oriya. (b) Achievement motivation scale by A. Mohan (1971). **Major findings:** (a) Self-concept is positively related to academic achievement. (b) Achievement motivation is positively and significantly related to academic achievement. (c) Self-concept is not related to achievement motive.

● **Mishra, B.B (1997):** *Correlates of academic achievement of high school students in India.*

**Objectives:** (a) To study, separately, the relationship between academic achievement and intelligence, socio-economic status and personality factors, in the case of high school boys and girls. (b) To establish regression equation, for predicting the academic achievement of high school boys and girls, separately, on the basis of their intelligence, socio-economic status and personality factors. **Tools used:** (a) Standard Progressive Matrices by J.C. Ravens (1960). (b) Socio-economic Status Scale by B. Kuppuswamy (1962). (c) Personality Inventory by R.G. Bernreutor (1938). **Major findings:** (a) Intelligence is significantly correlated with academic achievement, for both boys and girls. (b) The correlation between intelligence and academic achievement is higher in case of girls than that of boys. (c) The socio-economic status is not significant related with the academic achievement of boys and girls. (d) The personality factors (except self-sufficiency) are not significantly

related with the academic achievement of both boys and girls.  
(e) The personality factor self-sufficiency is significantly related to achievement only in case of boys.

● **Paul. S (2000):** *Low achievement: causes and remedial measures.*

**Objectives:** (a) To investigate some of the probable causes of low achievement on the part of higher secondary teacher trainees. (b) To investigate their study habits as one of the probable causes of low achievement. (c) To investigate their vocational interest as one of the probable causes of their low achievement (d) To find out sex difference in their study habits and vocational interests. (e) To try out certain remedial measures to improve their achievement. **Tools used:** (a) For measuring achievement, marks gained by the students in their first test for selection and later on in their second test for assessing their improvement in achievement were considered. (b) For identifying their study habits, Study Habit Inventory (SHI) prepared by M. Mukhopadhyay and D.N. Sansanwal was used. (c) For measuring vocational interests of the trainees Vocational Interest Record (VIR) prepared by S.P. Kulshreshtha was used. (d) For diagnosing causes of poor achievement, personal interview and informal conversation was done. (e) Suitable remedial measures were adopted accordingly. **Major findings:** (a) Physical health, intelligence general interest, study habits and others are the causes of the low achievement

at individual level. (b) Members in the family, structure of the family, position of the child, socio-economic status, parent-child interaction and others contribute to the causes of low achievement at family level. (c) General climate of the school, teacher-student interaction in the classroom inside and outside of the classroom, provision co-curricular activities, provision of teaching aids, system of evaluation and others contribute to the causes of low achievement at school level.

● **D. Betsy McCoach (2001):** *A comparison of high achievers' and low achievers' attitudes, perceptions and motivations.*

**Objective:** To compare high achieving and low achieving adolescents' attitudes toward school, attitude towards teachers, goal-valuation, motivation, and general academic self-perceptions. **Tool used:** School Attitude Assessment Survey-Revised (SAAS-R). **Major finding:** (a) High achieving students exhibit more positive academic self-perceptions, motivation/self-regulation, goal-valuation, attitude toward school, and attitude toward teachers than low achieving students. (b) However, academic self-perceptions and motivation/self-regulation appear to be stronger predictors of academic achievement.

● **Ellekkakumar, B. and Elankathirselvan, N. (2001):** *Achievement Motivation of Higher Secondary Students and their Achievement in Physics.*

**Objectives:** (1) To assess the achievement motivation of higher secondary students in Physics and achievement in Physics: (2) to find out whether there is any significant difference between mean scores and achievement scores of boys and girls and in Tamil medium and English medium; (3) to find out the nature of relationship between the components of achievement motivation and achievement of higher secondary students in Physics.

**Tool used:** Descriptive-Normative survey method was employed in the study. The sample was taken 530 students studying in Physics in the second year of higher secondary school, in Cuddalore district in Tamil Nadu, using probability sampling method for the study. Tools were used such as Achievement Motivation Inventory (Prayag Mehta, 1969) and Academic Achievement for the study. **Major findings:** (1) The mean scores of achievement related motivation was higher for girls than boys. (2) There was no significant difference between the students studying in Tamil medium and the students studying in English medium. (3) There was no significant difference in achievement mean scores in Physics between (a) Boys and Girls, (b) A group and B group, (c) Tamil medium and English medium. (4) The positive correlations were found between the achievement related motivation and achievement marks in Physics in respect of (a) girls, (b) students studying in Tamil medium. This study can be extended in other districts. Nine references were cited in the study.

- **R. Aisha, Kiran A. & Malik N.H. (2002):** *Relationship of study habits with educational achievements.*

**Objective:** To determine the effect of the study habits on the achievement of students. **Tool used:** Interview schedule. **Major finding:** There exists a significant and positive relationship between achievement of the students and the said factors like schedule of study, habit of notes taking and writing back.

- **Khan, Zebun Nisa (2002):** *Characteristics of high and low achieving Girls in Science stream at the Higher secondary stage: A Factorial study.*

**Objectives:** To investigate prognostic value of Cognitive variables, i.e. verbal and non-verbal intelligence and creativity, non-cognitive variables, i.e. personality variables and socio-economic status for girl students in determining some factors affecting the academic success in science courses. **Tools used:** (a) Mehrotra's Mixed type group test of intelligence. (b) Creativity test based on Guilford's Structure of Intellect Model. (c) Personality Inventory constructed by Rani, Bhargava's Achievement Motivation Test. (d) Socio-economic Scale constructed by Srivastava. **Major findings:** (a) The total sample of girls (N=200) studying in science stream of higher secondary classes had yielded seven factors. (b) The factor analysis of the girl students passed only (N=175) had yielded the following seven factors namely Confident and Suspicious, Conservative, Obstructive, Poor achievement, Lack of non-verbal Intelligence,

liveliness and Creativity. (c) The factor analysis of the scores obtained by the girls securing first division (N=77) had yielded the following six factors namely Nervousness, Experimenting, Venturesomeness, Introversion, Cooperative and Seriousness. (d) High achieving girls, i.e. those securing first division were persevering, venturesome and harsh, but the low achieving girls, i.e. those passed only were fickle minded, shy, stable, kind and conservative. (e) High achieving girls were nervous, impulsive and lack in divergent thinking (creativity), contrariwise, the low achieving girls had been found to be lively, obstructive and creative. (f) High achieving girls were suspicious, confident and lacking behind in non-verbal intelligence.

● **Fatima, N. (2003):** *Influence of social environment, reading habit and self-concept on scholastic achievement—An HRD approach for school children.*

**Objective:** To study the influence of school environment, reading habit and self-concept on scholastic achievement.

**Tools used:** (a) Reading Habit Scale (RHS), School Environment Scale (SES) developed by the researcher. (b) Ahluwalia's Children's Self-concept Scale (CSCS, 1986).

**Major findings:** It was found that different predictor variables were instrumental for significantly influencing criterion variable i.e. scholastic achievement for varied sub-sample groups however, in all only seven predictor variables viz., (1) Voluntary concentration-a



facet of reading habit; (2) Fixing priorities-a facet of reading habit; (3) Reading fast loudly-a facet of reading habit; (4) Reading slowly and silently-a facet of reading habit; (5) Students attitude towards school-a facet of school environment; (6) Total school environment; and (7) Self-concept emerged as significant predictors of scholastic achievement.

● **Imtisunga (2003):** *A study of the intelligence, motivation of high school students in comparison with scholastic marks.*

**Objectives:** (1) to examine the intelligence of test scores of the students and classify them in terms of IQ's on the basis of statistics: (2) to investigate scores of students in achievement motivation scale and interpret in terms of Stanine Scale and identify number of students under each level: (3) to compare the examination marks in order identify-over, normal and underachievers: (4) to study the impact of IQ as well as achievement motivation on the academic success: (5) to identify other factors of academic barriers and suggest some remedial measures. **Tools used:** (a) Standard Progressive Matrices standardized by J.C. Raven. (b) Achievement Motivation Scale prepared by Deo Mohan. **Major findings:** (1) The scores of correlation co-efficient were positive in all cases but not high. (2) the correlation co-efficient between all variables were very low. (3) Some students with high IQ's and achievement motivation could scores high academic marks and found as overachievers.

(4) The students have got ability to do but could not do as expected due to some academic barriers and obstacles.

● **Nandita & S. Tanima (2004):** *Study habits and attitude towards studies in relation to academic achievement.*

**Objectives:** (a) To find out the attitude of secondary students towards their studies. (b) To find out the study habits of secondary school students. (c) To find out the relationship between academic achievement and various dimensions of study habits. (d) To find out the relationship between study habits and attitude towards studies. **Tools used:** (a) RCEB scale of S.P. Anand (1990) to measure the attitude of students towards study, was used. (b) To study the study habits, the study habit inventory by Dr. M. Mukhopadhyay and Dr. D. N. Sansanwal (1983). **Major findings:** (a) There was positive and highly significant relationship between attitude towards studies and academic achievement. (b) There exists a positive and significant relationship between attitude and academic achievement in geography has been accepted. (c) There was a positive and significant relationship between study habits and attitude towards studies.

● **Sirohi, V. (2004):** *A study of under-achievement in relation to study habits and attitude.*

**Objective:** To study under-achievement in students in relation to their study habits and attitudes. **Tools used:** (a) General

Mental Ability Test by Jalota. (b) Teachers Made Achievement Test. (c) Test of Study Habits and Attitude by Mathur. **Major findings:** (a) All underachievers indicated deficiency in study habits. (b) 98.7% of the underachievers tend to possess unfavourable attitude towards teachers and needed guidance. (c) 97.5% had poor concentration. (d) 92.5% of them indicated deficiency in school and home environment. (e) 96.2% lacked proper attitude towards examination. (f) 72.8% faced mental conflicts. (g) 72.8% were low in self-confidence. (h) 72.3% had problems related to home assignments. (i) 24.6% indicated deficiency in attitude towards education.

● **Kusuma Harinath, P (2006):** *A Study of certain Factors Related to Learning Disabilities in English among School students.*

**Objectives:** (a) To identify the number and percentage of students with reading, writing and spelling difficulties in English. (b) To study the intelligence personality-based difficulties. (c) To study awareness of the study in reading, writing, spelling. (d) To study the awareness of parents and teachers towards Disabilities Diagnostic Test. the learning difficulties of the students Disabilities Diagnostic Test.

**Tools used:** (a) Reading Disabilities Diagnostic Test. (b) Writing Disabilities Diagnostic Test. (c) Spelling Disabilities Diagnostic Test. **Major findings:** (a) Most of the students were identified as students with learning difficulties in English. (b) Most of the

students with learning difficulties had low level of intelligence. (c) It was found that boys experience more learning difficulties than girls. (d) Parents occupation influences reading difficulties.

● **Alam, M.M (2006):** *Academic Achievement in Relation to Socio-economic Status, Anxiety Level and Achievement Motivation: A Comparative Study of Muslim and non-Muslim School Children of Uttar Pradesh.*

**Objectives:** (1) To study academic achievement in relation to socioeconomic status of the selected sample of school going children; (2) to study the extent up to which academic achievement of the children are affected by their anxiety level; (3) to study academic achievement with respect to achievement motivation of school going children; (4) To compare the data on academic achievement, socioeconomic status, anxiety level and achievement motivation between Muslim and non-Muslim school children. **Tools used:** The incorporated method and procedure opted for investigation. Various tools/questionnaires, were used such as Socio-economic Status Scale by Dr. Beena Shah; Comprehensive Anxiety Test by Dr. Harish Sharma, Dr. Rajeev Lochan Bhardwaj and Dr. Mahesh Bharagava (1992). Achievement Motivation Scale by Dr. Beena Shah was administered for collection of the data. The Data were tabulated and statistical treatment to the data was given using simple product moment coefficient of correlation, t-test, and skewness through computer. **Major findings:** Significant positive

relationship has been witnessed between socio-economic status and academic achievement, negative relationship exists between anxiety and academic achievement, positive relationship between achievement motivation and academic achievement of Muslim and non-Muslim children. Both Muslim and non-Muslim children have significant inverse relationship between socio-economic status and anxiety. Socio-economic status goes along with higher achievement motivation. The academic achievement of non-Muslim children has been found superior in comparison to their Muslim counterparts. The non-Muslim children have less anxiety in comparison to Muslim children. On the measure of achievement motivation, non-Muslim children are found to be superior to Muslim children. The study cites one hundred seventy seven references.

● **Pazhanivel, G. (2006):** *A Study of the Impact of Modular Approach on Achievement, Study Habits and Attitude of Students in Tamil Grammar at Secondary Level.*

**Objectives:** (1) To prepare and validate the Modular Approach to teach Tamil Grammar at Class IX; (2) to study the effectiveness of the Modular Approach materials in terms of achievement of the students of Class IX; and (3) to study the habits of students. **Tool used:** Experimental method was adopted for the study. Qualitative and quantitative approach was used in the study. A sample of 80 students from Class IX was selected through probability sampling method for this

study. The 't' test and Product moment correlation were used in the study for data analysis. **Major findings:** (1) Control group and experimental group students differ in their achievement in Tamil grammar and study habits. (2) There was significant relationship between the achievement and study habits. (3) The Modular Approach was effective in enhancing the academic achievement and study habits. The study cites eighty-two references.

● **Aruna, P.K. and Usha, P. (2006):** *Influence of Cognitive Style, Intelligence and Classroom Climate on Process Outcomes in Science.*

**Objective:** To find out the effect of cognitive style, intelligence and classroom climate on process outcomes in science. **Tools used:** (1) Group Embedded Figures Test (GEFT) by Otlman, *et al*, 1971, (2) Standard Progressive Matrices Test (SPMT) by Raven, 1958, (3) Scale of Classroom Climate by Usha and Aruna, 1999), (4) Test of process Outcomes in science by (Usha and Aruna, 1999). The statistical techniques used in this study were means, Pearson's product moment coefficient of correlation and three- way ANOVA with 3×3×3 Factorial Design. **Major findings:** The cognitive style and intelligence have significant positive correlation with process outcomes in science, while the classroom climate has no significant effect on process outcomes in science. The study cites thirteen references.

- **Kaia Laidra, Helle Pullmann, Juri Allika (2007):** *Personality and intelligence as predictors of academic achievement: A cross-sectional study from elementary to secondary schools.*

**Objective:** To document how intelligence and personality relate to academic achievement in Estonian schools, from elementary to secondary level. **Tool used:** The SPM was administered without time limits, followed by the personality questionnaire. **Major Finding:** The prominent role of intelligence and conscientiousness in predicting academic achievement agrees with the common sense notion that any kind of success is a result of ability and effort (Gagne and St Pere, 2001).

- **Dey, N. (2008):** *A Comparative Study of the study habits of high achieving CBSE and ICSE students in the secondary school examination.*

**Objectives:** (a) To study the study habits of high achieving CBSE students. (b) To study the study habits of high achieving ICSE students. (c) To compare the study habits of high achieving CBSE and ICSE students in school hours. (d) To compare the study habits of high achieving CBSE and ICSE students in non-school hours. (e) To compare the study habits of high achieving CBSE and ICSE students in different curricular activities and practices. (f) To compare the study habits of high achieving CBSE and ICSE boys and girls in secondary school examination. **Tools used:** (a) Mixed

questionnaire for the high achieving students. (b) Structured and unstructured interview schedule for the parents. (c) Structured and unstructured interview schedule for the teachers. (d) Structured and unstructured interview schedule for the private tutors. **Major findings:** (a) High achieving CBSE and ICSE students were having very positive and constructive study habits. (b) High achieving CBSE girls were studying more than the boys. (c) High achieving ICSE boys were devoting more time to studies in comparison to girls. (d) More than 90% of the CBSE and ICSE students were liking to study alone or self study.

● **Samuel O. Salami (2008):** *Roles of Personality, vocational interests, academic achievement and socio-cultural factors in educational aspirations of secondary school adolescents in southwestern Nigeria.*

**Objective:** To investigate the extent to which personality, vocational interests, academic achievement, parents' socio-economic status and demands from extended family predict educational aspirations of secondary school adolescents.

**Tools used:** (a) The NEO-PI-R (Costa and McCrae, 1992) was used to assess the five personality dimensions. (b) Vocational interest was assessed by means of Vocational Interest Inventory (VII) by Bakare (1977). (c) Parents' Socio-economic Status Scale (SES Salami, 2000). (d) Academic achievement tests which consists of three sub scales viz: English achievement tests



(EAT), Mathematics achievement tests (MAT) and Science achievement tests (SAT). **Major findings:** (a) A combination of certain components of personality, interests, achievement and other socio-economic factors relate to some aspects of higher level of educational aspirations among secondary school adolescents. (b) Societal context is of considerable importance in Nigeria.

● **Khan, Zebun Nisa (2009):** *Cognitive and non-cognitive characteristics as determinants of success in professional courses at undergraduate stage.*

**Objective:** (a) To study the prognostic value of components of intelligence and creativity for success in professional courses. (b) To study the prognostic value of personality traits and socio-economic status (non-cognitive) for success in professional courses. (c) To analyze the inter-correlation matrix obtained by correlating predictor variables and the criterion of success in order to arrive at smaller number of significant factors explaining the criterion variable. (d) To investigate the gender differences in variables which potentially predict the performance of students in professional courses. **Tool used:** (a) Personality Inventory by Rani. (b) Verma and Sexena's Socio-economic Index. **Major finding:** (a) The students of engineering and medical possessed a higher level of verbal intelligence than those of teacher education, law and library science. (b) The students of engineering, medical, teacher education, law and

library science possessed a higher level of non-verbal intelligence. (c) Creativity is very important aspect of the intellect. A significant relationship was found between creativity (originality, flexibility and fluency) with academic achievement irrespective of professional courses studied.

● **Sarwar M., Bashir M., Khan M.N. & Khan M.S. (2009):**  
*Study-orientation of high and low academic achievers at secondary level in Pakistan.*

**Objectives:** (a) Is there any significant difference between study-orientation of high and low academic achievers? (b) Is there any significant difference between study-orientation of female and male students? (c) Is there any significant difference between study-orientation of rural and urban students?

**Tool used:** A study-orientation (study habits and attitude) questionnaire was developed on the lines of Brown and Holtzman (1967), Ansari (1983), and Ansari & Chowdhri (1990), and keeping in view its relevance and suitability for Pakistani students and their practices in Pakistani educational institutions. **Major findings:** (a) The students who have better score on study-orientation tend to have better academic achievement. This difference is highly significant on sub categories: study habits, study attitude, delay avoidance, work method, attitude towards teacher and attitude towards education. (b) The difference between boys and girls are non-significant at 0.05 levels of confidence on all categories except

delay avoidance. (c) The difference between rural and urban students is significant on study-orientation, study habits, delay avoidance, work method and attitude towards education in favour of rural students.

● **Nuthana P.G. & Yenagi G.V. (2009):** *Influence of study habits, self-concept on academic achievement of boys and girls.*

**Objectives:** (a) To find out the gender differences if any, on the factors affecting academic achievement, to analyze the study habits of high school boys and girls, to study the self-concept of high school boys and girls and to analyze the academic achievement of high school boys and girls. (b) To know the influence of study habits and self-concept on academic achievement of high school boys and girls. **Tools used:** (a) Self Concept Scale developed by Singh & Singh (1988). (b) Study Habits Inventory developed by Patel with slight modification (1976). **Major findings:** (a) It is revealed that boys and girls had almost similar study habits. (b) It is revealed that boys and girls did not differ significantly on self-concept as the 't' value of 1.75 is found to be significant. (c) It is found that boys and girls did not differ significantly on academic achievement as the t-level of 1.26 was found to be non-significant. (d) The association of study habits of girls with academic achievement was significant. While as the association of the study habits of boys with academic achievement was not significant. (e) The association of

self-concept of boys and girls with academic achievement was significant. (f) It was revealed that significant relationship between reading and note taking habit, habits of concentration and preparation for examination had significant correlation with academic achievement.

● **Ogbonnia Chukwu-Etu, (2009):** *Underachieving learners: Can they learn at all.*

**Objectives:** (a) To find out if underachieving students can learn, and if not what can be done to improve their situation. (b) To determine possible causes of underachievement among students. **Major findings:** (a) Lack of motivation, parental/home influence, lack of nurturing of intellectual potential, disabilities/poor health conditions, conflict of values and others are factors that can cause underachievement in school children. (b) Counseling intervention can help underachievers to make decisions on goals and to unlearn habits that have been disruptive to learning.

● **Habibollah. Naderi, Rohani. Abdullah, H. Tengku Aizan, Jamaluddin. Sharir. (2010):** *Intelligence and academic achievement: An investigation of gender differences.*

**Objectives:** (a) What is the relationship between different aspects of intelligence and academic achievement? (b) Is there any significant gender differences regarding the relationship

between different aspects of creativity and academic achievement. **Tools used:** (a) Catell Culture Fair Intelligence Test to evaluate the intelligence. (b) Cumulative Grade Point Average (CGPA) was used as a proxy of academic achievement. **Major findings:** (a) Different aspects of intelligence and academic achievement do not matter for males and females when looking at the relation between intelligence and academic achievement. (b) Findings from this study are consistent with those of others (Deary *et al.*, 2003) Wendy and Johnson (2007) Mulhern (1995) Habibollah, *et al.*, (2008).

☛ **Ong L C, Chandran V. et. al. (2010):** *Factors associated with poor academic achievement among urban primary school children in Malaysia.*

**Objectives:** The aim of the study was to identify factors associated with poor academic achievement during the early school years. **Tools used:** (a) Raven's Advanced Progressive Matrices Test as a general measure of cognitive ability. (b) Audiometry and visual tests, and standardized measurements of weight and height. **Major findings:** (a) Cognitive ability, gender prematurity and social factors contribute to poor academic achievement during the early school years. (b) The higher proportion of poor achievers among non-participants warrants further attention.

- **Ali Riasat, Akhtar A. et al. (2011):** *The impact of motivation on students' academic achievement in mathematics in problem based learning environment.*

**Objective:** To examine the impact of motivation in problem based learning environment on the academic achievement of high achievers and low achievers in the subject of mathematics.

**Tool used:** The researcher made pre-test was administered before the allocation of students to the experimental and control group. Immediately after the treatment was over, a researcher made post-test was administered to both the groups. The validity of the items in the test was assessed by the doctoral committee and two mathematics education experts.

**Major finding:** The results indicate that the difference between mean scores of high achievers of experimental and the control group on post-test was found to be significant at 0.05 level. Hence, there was a significant difference in achievement of mathematics students' taught and motivated using problem solving method and those taught with routine method.

- **Kumar, M. Dixit, R. (2011).** *An investigation into study habits and personality related to achievement in English and Hindi medium students.*

**Objective:** (a) To find out the difference between the over under achievers students of English medium schools on the basis of the following variables-study-habits and personality. (b) to find out the differences between the over and under achiever students of Hindi medium on the basis of the following various-study habits and personality factor. (c) to find out the significant differences in the study habits, personality factors dimensions between the English and Hindi medium students. (d) to offer suggestions regarding the utility of these distinguishing variables (study, habit, personality factors) for education for professional planning to the students. **Major finding:** (a) The overachievers are those, whose achievements are higher than the level of their abilities. (b) these overachievers of English and Hindi medium have better study habits and they are propertied by positive personality traits. (c) under achievers have faulty study habits also they lack enthusiasm and are emotionally instable. (d) the over achiever English and Hindi medium students differ from under achiever English and Hindi medium students. (e) male and female over achievers exhibit better study habits as compared to under achievers. (f) the researcher found that study habit scores have direct and significant relation to academic achievement.

## COUNSELLING INTERVENTION

Since the guidance and counselling emerged as an independent discipline, very sound studies have come out with handsome benefits for people scattered over the globe. The review of literature makes it obvious that much research in guidance and counselling has been dealt in the areas of delinquency, student appraisal, mentally handicapped children and the like. Very few studies have been conducted to see the effect of counselling on achievement especially with respect to underachievers. The investigator with this background in this part of research reviewed all such studies, as have been conducted in the concerned field and the other variables under manipulation.

● **Gaur, J.S (1970):** *Effect of counselling on potential school failures.*

**Objectives:** (a) Gradual improvement in school subject achievement. (b) Positive change in the pupils' behaviour-cum-attitude towards studies. (c) Positive changes in teacher's observations of school pupils. **Tools used:** (a) The Jalota's Test of General Mental Ability and N.I.I.P. 70/23 (non-verbal test of intelligence). (b) The behaviour description of the students as marked on a list of sixteen negative behaviour description noted generally in case of potential school failures. (c) The school subject marks for the last two school examinations, a Pupil behaviour-cum-attitude checklist was prepared and



administered to twenty eight students selected. The data were analyzed by using 't'-test. **Major findings:** (a) The extent of the maximum deviation in the two groups at the first school achievement test did not show a significant effect due to counselling. Further the achievement on third and fourth school tests did not show a significant effect of counselling as regards the deviation in the achievement of the two groups. (b) The teachers observation for experimental group before and after the counselling program differed significantly at 0.05 level. (c) Counselling did not bring significant changes in the attitudes and behaviour of students.

● **Bhatnagar, A. (1972):** *Effect of individual Counselling on the achievement of bright underachievers.*

**Objectives:** (a) To study the effect of individual counselling on the achievement of bright underachievers. (b) Identify some of the probable factors associated with underachievement of the bright pupil. It was hypothesized that there will be an improvement in the achievement of the bright underachievers after individual counselling. An effort was also made to identify some of the non-cognitive factors associated with underachievement of the bright pupils. **Tools used:** (a) Verbal reasoning (DAT) Abstract reasoning (DAT) and Nafd's non-verbal test of intelligence. (b) Terman-Merrill test-Form L (1938) was administered individually by the investigator. **Major findings:** (a) The results revealed that there was an improvement in the

achievement of the pupils who had been given individual counselling. (b) Some non-cognitive factors emerged as factors associated with the under-achievement of the bright pupils. These could probably be grouped into four broad categories namely:-(i) Psychological factors, (ii) Physical factors, (iii) Familial factors, and (iv) Educational factors.

● **Patel, S.L. (1973):** *An investigation to study self-esteem changes as a function of counselling therapy.*

**Objectives:** (a) To study the extent to which self-esteem changed and what type of changes occurred under the influence of group counselling. (b) To examine specific changes in the behaviour of the subject at successive stages of counselling. (c) To find out whether the counselling treatment could influence self-esteem changes in the low self-esteem group. **Tools used:** (a) A self-esteem scale prepared on the basis of Stephenson's Q-technique. (b) A depressive effect scale. (c) The Panchal's neurotic scale. (d) An Anxiety Scale prepared on the model of Taylor Manifest Anxiety Scale (TMAS). **Major findings:** (a) Both the experimental and control group showed changes in self-esteem after three months but the amount of positive changes were for greater in the experimental groups. (b) Greater amount of change was found in low self-esteem group. (c) Low-esteem control group had least difference in self-esteem measure of pre and post-counselling. (d) Changes in the self-ideal were least in the high-esteem control group. (e) The experimental groups

showed marked decrease in neurotic symptoms, depression and anxiety as a result of counselling. (f) Subjects moved towards greater maturity with the progress of counselling.

● **Subramania, Dandapani (1977):** *Effect of a Group Guidance program upon the academic achievement of high school underachievers.*

**Objective:** The study was undertaken to determine whether or not high school male underachievers who participated in a group guidance-counselling program and remedial help achieve significantly higher in academic achievement test as a result of the counselling period in comparison with the control group of non-counselled underachievers and normal achievers.

**Tools used:** (a) The Group Test of Scholastic Ability (GTSA), standardized by state Bureau of Educational and vocational Guidance. (b) A battery of academic achievement tests covering mathematics, science and social studies. **Major finding:** It was found that the academic achievement of underachievers in the experimental group was significantly greater than that of the non-counselled underachievers and normal achievers. There was no significant difference between the two controlled groups.

● **Sunanda, G (1980):** *Effect of Counselling on the Study habits & achievement of teacher trainees.*

**Objectives:** (a) To find out the effect of counselling on the study habits in its various components and achievement of the women

teacher-trainees. (b) To find out the comparative effectiveness of three counselling types over the different personality types of the trainees. **Tools used:** (a) The investigator constructed a study habit questionnaire. (b) adapted Gilbert's Daily Work Schedule. (c) Solomon Four Group Experimental Design was followed. Two-way analysis of variance, 't'-test and correlation were the statistics used for the data analysis. **Major findings:** (a) The treatment groups that received counselling registered significant gain in their academic performance and study habit scores. (b) The controlled groups had nil or insignificant gain in these two variables. (c) Group-centered behavioural counselling was found to be the most effective of the three types of counselling in improving achievement. (d) The personality types had no influence on the academic achievement or study habits. (e) There was no interaction effect between counselling styles and personality types.

● **Rather, A. R. (1985):** *Influence of Guidance and Counselling on two socio-metric categories—isolates and neglectees.*

**Objective:** To see the influence of guidance and counselling on two socio-metric categories-isolates and neglectees. **Tools used:** (a) Sharma's (1970) socio-metric test was administered on all the subjects of the present study. (b) The entire data were analyzed on the basis of Bronfenbrenner's (1945) fixed frame of reference. This enabled the present investigator to identify six

socio-metric categories of pupil. Only the neglectees and isolates were taken out from the whole sample for treating them through guidance and counselling practice. **Major findings:** (a) The mean differences were found significant. (b) The improvement in each group of neglectees and isolates ranging from 80% to 100% with an average of 94.3% for the neglectees and 88.19% for isolates, which is considerable improvement and highly significant and can be attributed to no other factor except counselling.

● **Fernandes, L., (1984):** *The effect of guidance and counselling on the academic achievement of underachieving pre-adolescent and adolescent girls.*

**Objectives:** (a) To find out the effect of counselling on the achievement of pre-adolescent and adolescent underachievers. (b) To find out the effect of counselling on pre-adolescent and adolescent underachievers as compared to that of non-counselled normal achievers. (c) To find out the effect of counselling on the achievement of pre-adolescent and adolescent underachievers belonging to families holding white-collar and blue-collar jobs. **Major findings:** (a) The academic achievement of counselled pre-adolescent underachievers was significantly greater than of non-counselled underachievers. (b) The academic achievement of counselled preadolescent underachievers was significantly greater than that of non-counselled pre-adolescent normal achievers. (c) The academic

achievement of the counselled adolescent underachievers was significantly greater than that of non-counselled adolescent underachievers. (d) The academic achievement of the counselled adolescent underachievers was significantly greater than that of non-counselled adolescent normal achievers. (e) The academic achievement of counselled adolescent underachievers belonging to families holding white collar jobs and blue collar jobs did not differ significantly. (f) The academic achievements of counselled pre-adolescent under achievers belonging to families holding white collar jobs and blue collar jobs differ significantly.

● **Singh, S. (1985):** *Guidance needs of children living in Destitute Homes in Utter Pradesh.*

**Objectives:** (a) To find out the needs of children living in destitute homes. (b) To ascertain the intellectual level of such children. (c) To study children's achievement and identify their interests. (d) To diagnose adjustment problems of children living in destitute homes. (e) To compare needs, intellectual level, achievement, interests and adjustment problems of these children on the basis of sex, age and grade level. (f) To prepare a guidance program for these children. **Tool used:** Almost all children studying in VI, VII and VIII of the destitute homes were selected for the study. Their achievement scores were recorded from official records. The superintendents and class teachers of these children were approached to furnish details of their curricular and co-curricular needs on the basis of the guidance

needs questionnaire (teacher form). **Major findings:** (a) In destitute homes, 20 to 30 percent of the children suffered from sickness, headache, fatigue, bad sleep and physical handicaps. Medical facilities for prevention, treatment and cure of diseases were not available. (b) Basic requirements of life, such as food, clothes and living conditions were not adequately met in nearly half of the destitute homes. (c) Personal and Psychological relationships were strained on account of the prevalence of a sense of insecurity, anxiety, frustration, boredom and a pseudo-superiority complex in a majority of destitute home children. (d) Life in destitute homes was not conducive to development of harmonious social relationships. (e) Curricular and co-curricular programs were not suited to the needs of the majority of destitute home children. (f) Teaching strategies were generally not geared to the needs of 20% of the children. (g) In the area of teacher-taught relationship, social distance seemed to prevail. (h) The learning environment in classrooms and the learning style of the children were poor. (i) On intelligence test and achievement test boys performed better than girls. (j) Boys were significantly better adjusted than girls. (k) Subjects preferred by these children in order of importance were Hindi, English, Sanskrit, General Science and Social Studies. (l) More than 90% of the children showed a preference for government jobs. (m) The environmental setting of destitute homes was satisfactory but financially these destitute homes were not on firm ground.

(n) The happiest time for 50% of children was when they were with their parents.

● **Kamat, V., (1985):** *Improvement of self-concept and academic achievement of remand home boys through personal guidance.*

**Objectives:** (a) To measure the self-concept of remand home boys. (b) To study their academic achievement. (c) To give them coaching in two school subjects, viz., Science and Mathematics, to improve their academic achievement. (d) To find out the difference, if any, in the self-concept of those boys. **Tools used:**

(a) The case-study method and experimental method were adopted. (b) Questionnaires. (c) Interviews. (d) Observation. (e) Personal guidance and records were the tools for the study.

**Major findings:** (a) There was significant improvement in achievement of students due to coaching. (b) The t-ratio for pre-test and post-test of IQ was significant at 0.01 level. (c) The t-ratio for pre-test and post-test of self-concept (perceived self) scores was significant at the 0.01 level. The t-ratio for pretest and post-test of self-concept (ideal self) was significantly at 0.05 level. (d) Self-concept is a developmental aspect of personality and it could be improved through improvement in academic achievement.

● **Khan Mahmood A. (1987):** *The effect of individual counselling on the achievement of bright underachievers.*



**Objective:** The present investigator designed the study for helping subjects with better intelligence to improve their scholastic achievement through individual counselling.

**Tools used:** (a) Ravens advanced progressive Matrices (1962) (A Mental Measurement test), in different sittings. Those subjects were considered bright who were top 20% scores (i.e., score 13 on APM). Two years examination results (7<sup>th</sup> & 8<sup>th</sup>), were considered as a criterion for normal and underachievement. In this manner 61 subjects, who were within an age range of 14+, had a score of 13 on APM and above but scholastic achievement below 60% were considered bright underachievers for the study. The sample subjects were divided into two parallel groups- experimental and control. (b) In order to get an understanding of the problems of experimental group, a questionnaire developed by the investigator was administered and the counselling session was planned accordingly. After five counselling sessions, the teachers were required to administer a performance test of the subjects. **Major findings:** (a) Individual counselling helps in increasing the academic achievement of bright underachievers. (b) Poor home background, study habits and need achievement are the factors responsible for the underachievement of bright students.

● **Bhatnagar, A. & Gupta, N. (1988):** *Career maturity of secondary students: Effect of a guidance intervention program.*

**Objectives:** (a) To determine if participation in a short-term group guidance program would enable students to move in a positive direction towards the goal of increasing maturity in career related attitudes. (b) To find out sex differences in the career maturity attitudes of adolescents. **Tool used:** The Attitude Scale of Crite's Career Maturity Inventory (CMI). **Major findings:** (a) All the three groups, viz. Boys. Girls and combined, showed significantly higher scores after the guidance intervention. (b) The comparison across gender showed no significant difference in means in the pre-intervention and post-intervention.

● **Kanth, R.J (1994):** *Impact of directive counselling upon study habits writing skills of grades VI and VII students.*

**Objectives:** (a) To measure the effect of directive counselling on study habits. (b) To measure the effect of directive counselling on writing skills. **Tools used:** (a) Students with poor writing skills and inadequate study habits were selected through screening. (b) A self-constructed counselling technique was used to provide directive counselling. **Major findings:** (a) Counselling had a positive influence on children in modifying their behaviour in a desirable direction. (b) Counselling seemed to be more effective in the elementary classes where children happened to be curious enough to learn more adequate responses for a teaching-learning situation. (c) On 'readability'

whereas experimental group changed its percentage statistics significantly, the control group stuck to its pre-counselling position.

● **Dua, Pratibha, (1990):** *Changes in academic self-concept through group counselling and its effects on school-related behaviour.*

**Objectives:** (a) To improve the academic self-concept (ASC) of low ASC children through group counselling. (b) To see its effects on achievement and school adjustment. **Tools used:** (a) The Hindi adaptation of dimensions of self-concept (DOSC) by W.B. Micheal & R.S. Smith. (b) The Standard Progressive Matrices (SPM) by Ravens. (c) The School Adjustment Inventory by M.N. Bhagia. (d) School terminal examination marks as the measure of school achievement. **Major findings:** (a) Group counselling was found to be an effective method for changing the ASC of low ASC students of class IX. This consequently resulted in improvement in school adjustment (greater in the case of girls) and school achievement levels (greater in the case of boys) of these students. (b) During group counselling, the low ASC students revealed their deeper feelings about their academic selves, while others helped them to discuss more about their real selves. Thus they learnt alternative ways of perceiving their own selves and dealing with others. They developed realistic aspirations and goals and better perception of their academic selves.

- **Kerr Barbara and Erb Cheryl (1991):** *Career counseling with academically talented students: effects of a value-based intervention.*

**Objective:** Two studies were conducted to assess the impact of persuasive, value-based career counseling intervention on the development of purpose and identity in multi-potential college students. **Tools used:** (a) The Student Development Inventory (SDI) sub-scale of identity developed by Hood 1986. (b) The identity-confidence sub-scale. (c) The development of purpose-vocational sub-scale. **Major findings:** (a) In the first study, a simple pre-test-post-test evaluation, students who received the intervention showed significant gains in the development of purpose and identity. (b) Students who experienced the intervention in the second study, a Quasi-experimental design, gained significantly more than a control group in the development of identity but were similar to controls in their development of purpose.

- **Whiston Susan C. & Sexton Thomas L. (1998):** *A Review of School Counseling Outcome Research: Implications for Practice.*

**Objective:** To summarize school counseling outcome research published between 1988 and 1995. **Tools used:** (a) Computer databases (ERIC and PsycLIT). (b) Other reviews of outcome research were used to identify additional school-based studies. (c) The reference lists of these studies were checked and other

potential studies were identified. **Major finding:** On the basis of the review it was found that a broad range of activities school counselors perform often result in positive changes for students.

● **Pant Daya, (1998):** *Guidance needs of the school-going students.*

**Objective:** This review attempts to consolidate the available research work relating to guidance needs of the school students.

**Major finding:** The studies provided useful information about developmental problems and guidance needs. The review revealed information about the guidance needs of the children upto 12 years and adolescents in the age group of 13 to 17.

● **Kadesh et al (1999):** *The study of recidivism rates of youth who receive JCAP services compared with those who do not receive.*

**Objective:** To examine the recidivism rates of youth who receive JCAP services compared with those who do not receive.

**Major findings:** (a) that 25% of JCAP clients reoffend compared with 63% of youth who did not receive these services. (b) The significant difference in the recidivism rates suggest that JCAP is working toward its goal of decreasing the rate at which these youth reoffend.

● **Omeogun, O.M. (2000):** *Effect of Remedial Guidance on the Academic Achievement of Lagos State Adolescents in English Comprehension.*

**Objective:** To see whether the Robinson's SQ3R Model (Austin, 1960) will significantly improve the academic achievement of Lagos State Secondary School Adolescents in English Language, especially English Comprehension. **Tool used:** Robinson's SQ3R Model (Austin, 1960). **Major findings:** (a) The study reveals that the remedial guidance intervention, using RSQ3R Model, was effective and thus promotes adolescents academic achievement in English comprehension. (b) It is suggested that the model should be employed to improve secondary school students academic achievement in English language.

● **Ilangovan, K.N & Rangaraj K.R (2001):** *Relationship between counselling programs in test anxiety and scholastic achievement of DTE students.*

**Objective:** The objective of the study was to find out the relationship between group counselling programs in test anxiety and scholastic achievement of the students of diploma in teacher education course. **Tools used:** (a) Test Anxiety Scale (TAS), developed by Sarason *et al.* (b) Scholastic achievement marks obtained by DTE students in their revision test. **Major findings:** (a) The relationship between test anxiety and scholastic achievement as far as the total sample is concerned, is negative and significant at 0.05 level. A diligent and well-prepared student scores less than his performance level. Under otherwise normal conditions, because she becomes nervous, shaky and overanxious on the eve of a list, she forgets most of what she

learnt. (b) The relationship between test anxiety and scholastic achievement of the male sample is significant. This is due to the fact that the boys are generally less sensitive and susceptible to tests. Besides, the intervention program was too burden and short for male group to respond to it in a careful manner. The counselling program may need certain modifications, so as to suit the stronger sex. (c) It was inferred that there exists relationship between group counselling programs in test anxiety and scholastic achievement of DTE female students. That is to say, the more anxious the student is, the less achievement is his/her performance in the examination.

● **Lapan & Richard. T. et al (2002):** *Empowering students to become self-regulated learners.*

**Objective:** To empower students to become self-regulated learners. **Major findings:** This article was divided into three parts (a) Presents a frame work for integrating current research on self-regulated learning. (b) Outlines components of the school context that either encourage or inhibit the development of self-regulated learner. (c) Argued that by more fully implementing a comprehensive school counselling program, school counselors can shape those aspects of the school context creating the condition that encourage the development self-regulated learning. (d) Identifies both effective learning strategies and the steps necessary to motivate students to use these strategies. (e) School counselors have critical role to play in working with both

teachers and students to increase the use of achievement-enhancing learning strategies.

● **Brigman Greg, Campbell Chari. (2003):** *Helping students improve academic achievement and school success behavior.*

**Objectives:** (a) Do school counselor conducted group counseling and classroom guidance—which focused on cognitive, social, and self-management skills? (b) Have a positive impact on student achievement and school success behavior? **Tools used:** (a) Florida Comprehensive Assessment Test, Math and Reading (Florida Department of Education, 2002). (b) School Behavior Rating Scale (Merrell, 1993). **Major findings:** (a) The results revealed that the combined school counselor interventions of group counseling and classroom guidance were associated with a positive impact on student achievement and behavior. (b) The interventions targeted on specific skills associated with school success and that the school counselor used research based techniques to teach these critical skills were seen as central to the positive outcome of the study.

● **Sink C.A. & Stroh, H.R. (2003):** *What are the effects of comprehensive developmental guidance programs on early elementary students' academic achievement.*

**Objective:** Whether Comprehensive Developmental Guidance (CDP)—based school counseling programs are of demonstrable



benefit to students in terms of enhanced academic achievement.

**Tools used:** (a) The Comprehensive Guidance and Counselling Programs and Student Success in Washington State Elementary Schools Telephone Survey developed by the researchers. (b) The Iowa Test of Basic Skills-Form M(ITBS). (c) The Washington Assessment of Student Learning (WASL), a criterion referenced test. **Major findings:** (a) CSCP students in their first few years of school enrollment generally received significantly lower achievement test scores than those students in non-CSCP schools. The group achievement difference was largely erased as students remained for at least three years in their CSCP schools. (b) A Significant interaction was found for both third- and fourth-graders between Group and Length of Enrollment in high implementation CSCP versus non-CSCP schools. That is to say, the longer the participants stayed enrolled in high implementation CSCP schools, the more likely they would have significantly higher test scores. (c) Significant gender differences were also reported, but these are less important to the focus of this research brief.

● **Devi, P.N. (2003):** *Effectiveness of group counselling: Adjustment among women college students.*

**Objective:** The study aims to introduce group counselling programme in a college setting and study its effectiveness in bringing about their adjustment, improved self-confidence, and emotional stability. **Tools used:** (a) Bell Adjustment Inventory

(Bell, 1952). (b) Local of Control Scale (Rotter, 1972). (c) Eight State Questionnaire (8SQ, Curran and Cattell, 1973). **Major finding:** There were positive changes being brought about by counselling in terms of adjustment, self-confidence, locus of control and certain emotional states.

● **Hussain A. (2006):** *Effect of guidance services on study attitudes, study habits and academic achievement of secondary school students.*

**Objective:** To examine the effect of guidance services on study attitudes, study habits and academic achievement. **Tools used:** (a) Study habits and study attitude scale developed by the National Institute of Psychology (NIP) Islamabad. (b) Problem checklist developed by National Institute of Psychology (NIP) Islamabad. (c) Cumulative Record Card prepared by the Institute of Education and Research, University of the Punjab. (d) Achievement Test (comprehension tests were developed and the reliability of each test was calculated using Kuder Richardson Formula). **Major findings:** (a) Guidance services have significant positive effect on students study attitudes and study habits. (b) Improvement in study attitudes and study habits resulted in improvement of students academic achievement. (c) Significantly better performance of experimental group in the subjects of physics, mathematics, biology, chemistry and English text is an evidence that study attitude and study habits do affect students achievement.

➤ **Tony D. Crespi (2009):** *Group Counseling in the Schools: Legal, Ethical, and Treatment Issues in School Practice.*

**Objectives:** (a) To review mental health issues transforming children mental health. (b) To consider differing group counseling models and stages of group development. (c) To examine contemporary legal and ethical dilemmas inherent in school practice. **Major finding:** Group counseling is one of a useful intervention models that can positively impact children.

➤ **D. Lee, A. Elizabeth, Olson, et al. (2009):** *Effects of college counseling services on academic performance and retention.*

**Objective:** To examine the relationship between counseling experience and college students' academic performance and retention. **Tools used:** (a) Pre-college academic performance. (b) Archived records of high school GPA. (c) Verbal SAT and math SAT scores were used to assess pre-college academic performance. **Major finding:** (a) The results indicate that counseling experience is significantly associated with student retention. (b) Students receiving counseling services were more likely to stay enrolled in school.

➤ **Ogbonnia Chukwu-Etu, (2009):** *Underachieving learners: Can they learn at all.*

**Objectives:** (a) To find out if underachieving students can learn,

and if not what can be done to improve their situation. (b) To determine possible causes of underachievement among students. **Major findings:** (a) Lack of motivation, parental/home influence, lack of nurturing of intellectual potential, disabilities/poor health conditions, conflict of values and others are factors that can cause underachievement in school children. (b) Counseling intervention can help underachievers to make decisions on goals and to unlearn habits that have been disruptive to learning.

● **Eyo, Mary Bassey, Joshua, Akon Monday and Esuong, Aniekan Edet, (2010):** *Attitude of Secondary School Students Towards Guidance and Counseling Services in Cross River State.*

**Objectives:** (a) To determine the nature of the attitude of secondary school students' towards guidance and counseling services in Cross River State Nigeria. (b) To investigate how these students' attitudes were influenced by certain variables such as sex (gender) and geographical location of the school.

**Tool used:** Secondary school students' attitude towards guidance and counseling services, questionnaire (SSATGES) designed by the researcher. **Major findings:** (a) Secondary school students' attitude towards guidance and counseling services are positive. (b) Sex (gender) has a significant influence

on students' attitude towards guidance and counseling services.  
(c) Schools geographical location influence students' attitude towards guidance and counseling services.

● **A.O. Ogunmakin (2011):** *Differential effects of some counselling interventions on cognitive outcomes in secondary school mathematics in Nigeria.*

**Objective:** The Main purpose of this study was to investigate the separate and combined effects of counseling interventions, gender and mode of schooling on senior secondary school student's achievement in mathematics. **Tools used:** Four instruments were used to carry out the study. (a) Bakere's Study Habit Inventory (SHI). (b) Bakere's Academic Need Achievement scale (ANAS). The other two were self constructed achievement tests in mathematics. **Major findings:** The major findings include the following: (a) The group treated with a combination of Improved Study Habit and Enhanced Need-Achievement performed best among the groups. (b) the Enhanced Need-Achievement group performed better than the improved study Habit group. (c) there was no significant effect of mode of schooling on students achievement in mathematics. (d) there was no significant interaction effect among the pair-wise comparison of the three variables on students achievement.

## **AN OVERVIEW**

The direct relationship between intelligence and academic achievement has been widely studied (Ediseth, 2002; Gagne & St. Pere, 2002; Kossowska, 1999; Parker *et al.*, 2004; Smith, Smith, & Dobbs, 1991; Stipek & Gralinski, 1996). In addition, several researchers have investigated the relationship between intelligence and gender and or academic achievement (Duckworth & Seligman, 2006; Ehrmann & Massey, 2008; Fraine, Damme, & Onghena, 2007; Naderi. Habibollah, Rohani. Abdullah, & Tengku. Aizan, 2008). It has been observed that in the absence of intellectual abilities high scholastic achievement is not possible. At the same time mere presence of superior intelligence does not ensure higher achievement.

Many empirical studies based on scientific investigation have shown that pupils of superior intelligence can be underachievers, while some people with average intelligence achieve more than what is expected of them. In the achievement related areas, need for achievement and study habits have been found to be the significant variables, which contributes to better performances in people. McClelland *et.al*, 1953: have found significant correlation between academic performance and need achievement; Jain (1967), has found that bright achievers were characterized by better study habits and higher achievement motivation than dull achievers; Shivappa (1980) has found that study habits and educational aspiration are the

positive correlates of academic achievement; Singh (1984), has found that high achieving adolescents had significantly better study habits than middle and low achievers; Kapoor (1987) has found that high achievers had better study habits as compared to the average and the low achievers; Davanesan and Paul (1990), have found that there is significant an positive relationship between the achievement-motivation and scholastic achievement of higher secondary students; Harikrishnan, (1992), has found that academic achievement is positively related with achievement-motivation and socio-economic status of students; Alam (2006) has find out that positive relationship exists between achievement motivation and academic achievement of Muslims and non-Muslim children. Sarwar et al (2009) showed that students who have better scores on study-orientation tend to have better academic achievement.

Reviews of the research on school counseling show that the services of school counselors have a positive effect on children (Borders & Drury, 1992; Gerler, 1985; St. Clair, 1989; Whitson & Sexton, 1998). Quantitative analyses of research (meta-analyses) also substantiate the beneficial effects of school counseling programs (Baker, *et al* 1984; Prout & Demartino 1986; Sprinthall 1981). (Omizo, *et al* 1988) reported that students who participated in a school counseling program had significantly less inappropriate behaviors and more positive attitudes toward school than those students who did not

participate in the program. In studies on the effects of a small group counseling approach for failing elementary school students, 83% of participating students showed improvement in grades (Boutwell & Myrick, 1992). School counseling programs have significant influence on discipline problems (Baker and Gerler 2001). School counselors' interventions have reported success for helping students reduce test anxiety (Cheek *et al*, 2002). School counseling interventions have a substantial impact on students' educational and personal development. Studies on high school attrition indicate that preventive counseling, occurring before students are in crisis, reduces the risk of these students dropping out later (Hayes, Nelson *et al*, 2002). Several studies found that elementary guidance activities have a positive influence on elementary students' academic achievement (Sink & Stroh, 2003).

In the light of research gaps the investigator was desirous to find out if underachievers could be helped through counseling intervention so as to bring their achievements at par with their intellectual capability. The investigator also wants to explore if underachievers could be helped to better their need-achievement and improve their study habits through counseling.



**R**esearch design is comparable to the blue print, which the architect prepares before the bids are let and buildings commence. The initial draft proposal is subject to modification in the light of analysis by the student and his or her project adviser.

*(Best 1989, P.36)*

Research design sets up the framework for adequate tests of the relations among variables. Design tells us, in the sense, what observation to make, how to make them, and how to analyze the quantitative representation of the observations. Strictly speaking design doesn't tell us precisely what to do, but rather suggests the direction of the observation making and analysis.

*(Kerlinger 1983, P.276)*

Research design refers to the plan and structure of the investigation used to obtain evidence to answer research questions. The design describes the procedure for conducting the study, including when, from whom and under what condition the data will be obtained.

*(McMillan 1989, P. 30)*

Research design stands for advance planning of the method to be adopted for collecting the relevant data and the techniques to be used in its analyses, keeping in view the objectives of research and availability of staff, time and money.

*(Kothari 1990, P. 45)*

The preparation of a research proposal or design is an important step in the research process. This provides a basis for the evaluation of the project and the investigators are assisted during their research work. The investigator selected the experimental method for the conduct of this study. Following steps were taken for the preparation of the research design, in order to achieve logical conclusions: -

#### **1. FORMATION OF OBJECTIVES**

The objectives for this study have been framed and mentioned in chapter 1.

#### **2. TARGET POPULATION**

In district Srinagar there are 8 educational zones. Out of these 8 zones, Rainawari and Gulab Bagh were selected randomly for the sample purpose. The investigator selected two government high schools and one higher secondary school for girls from the educational zone Rainawari and three government high schools for girls from the educational zone

Gulab Bagh as sampling units in order to control the gender. The government high and higher secondary schools of Rainawari and Gulab Bagh were selected on the following basis: -

- (i) In the Srinagar city the affluent and educated class sends their children to private schools, while the poor send their children to government schools. Therefore these students do not currently get counselling for their problems either inside or outside school.
- (ii) In government schools the students are almost of the same socio-economic status (SES). Therefore, there may be minimal influence of SES on the results.
- (iii) The recruitment of teachers in all these schools is guided by the same recruitment policy.
- (iv) The government schools more or less possess uniformity: therefore, objective results are expected.
- (v) The choice of the 9<sup>th</sup> class was based on the rationale that the students of this age group are most likely mature enough to take decisions for themselves.

## **SAMPLE SIZE**

### **Initial Sample**

All the subjects studying in the 9<sup>th</sup> class within an age range of (14 to 15) from the Govt. high and higher secondary schools for girls of educational zones Rainawari and Gulab Bagh of district Srinagar (N = 310) were contacted.

Following is the institution-wise distribution of the initial sample:

**TABLE 1**

| <b>S.No</b>        | <b>NAME OF THE INSTITUTION</b>             | <b>NET SAMPLE</b> |
|--------------------|--|-------------------|
| 01                 | Govt. Hr. Sec. School for girls, Nowhatta. | 35                |
| 02                 | Govt. Hr. Sec. School for girls, Khanyar.  | 44                |
| 03                 | Govt. High School for girls, Saidakadal    | 64                |
| 04                 | Govt. High School for girls, Chatarhama.   | 61                |
| 05                 | Govt. High School for girls, Gulab Bagh.   | 65                |
| 06                 | Govt. High School for girls, Hazratbal.    | 41                |
| <b>Total score</b> |  | <b>310</b>        |

A mental measurement test—Ravens Advanced Progressive Matrices (1962), Non-Verbal, was administered to the subjects in different groups in order to measure intelligence. Mean of two annual examination results (7th & 8th) was considered as the criterion for academic achievement.

The intelligence and achievement percentile scores of the sample subjects are given below: -

**TABLE 2**

| PERCENTILE<br>PP | INTELLIGENCE SCORE        | ACADEMIC ACHIEVEMENT SCORE |
|------------------|---------------------------|----------------------------|
|                  | LOWEST SCORE = 03         | LOWEST SCORE = 25          |
| P90              | 25                        | 83                         |
| P80              | 21                        | 76                         |
| P70              | 19                        | 70                         |
| P60              | 16                        | 64                         |
| P50              | 14                        | 58                         |
| P40              | 12                        | 53                         |
| P30              | 10                        | 47                         |
| P20              | 08                        | 41                         |
| P10              | 05                        | 34                         |
|                  | <b>HIGHEST SCORE = 34</b> | <b>HIGHEST SCORE = 95</b>  |

Subjects whose academic achievement scores lie  $\pm 10$  percentile of their intelligence percentile scores were considered as achievers and were dropped from the study (N = 181). The subjects whose scores lie 10 percentile or more below their intelligence percentile scores, were considered as underachievers (N=129).

### **Final Sample**

Following the same criterion a total number of 129 subjects were screened out as underachievers. Nine students were dropped because of their often absence.

The institution-wise distribution of the final sample is cited as follows: -

**TABLE 3**

| <b>No.</b>         | <b>NAME OF THE INSTITUTION</b>              | <b>TOTAL NO. OF SUBJECTS</b> | <b>STUDENTS DROPPED</b> | <b>NET SAMPLE</b> |
|--------------------|---|------------------------------|-------------------------|-------------------|
| 1.                 | Govt. Hr. Sec. School for girls, Nowhatta   | 20                           | 01                      | 19                |
| 2.                 | Govt. High school for girls, Khanyar        | 12                           | Nil                     | 12                |
| 3.                 | Govt. High school for girls, Saidakadal     | 31                           | 01                      | 30                |
| 4.                 | Govt. High school for girls, Chatarhama     | 24                           | 02                      | 22                |
| 5.                 | Govt. High school for girls, Gulab Bagh     | 21                           | 03                      | 18                |
| 6.                 | Govt. Hr. Sec. school for girls, Hazratbal. | 21                           | 02                      | 19                |
| <b>Total score</b> |   | <b>129</b>                   | <b>9</b>                | <b>120</b>        |

Thus in the final analysis the investigator was left with 120 subjects, who served as the sample for the study. The criterion model for the selection of underachievers is in line with Gowan (1960), which has been successfully used by

Mohan and Nehru (1972), Mohan and Khera (1978) Khan (1996), Khan (2000) and Khan, M.A & Parveen, A. (2005).

### **CLASSIFICATION OF SAMPLE SUBJECTS**

In accordance with the research design the sample subjects were divided into two parallel groups—experimental and control groups (N = 60 each). The control factors to equate the groups concerned were I.Q and age.

Following is the School-wise distribution of sample subjects:

**TABLE 4**

| <b>S. No</b> | <b>NAME OF THE INSTITUTION</b>              | <b>EXPERIMENTAL GROUP</b> | <b>CONTROL GROUP</b> |
|--------------|---|---------------------------|----------------------|
| 01           | Govt. Hr. Sec. School for girls, Nowhatta   | 10                        | 8                    |
| 02           | Govt. High School for girls, Khanyar        | 05                        | 06                   |
| 03           | Govt. high school for girls, Saidakadal     | 15                        | 16                   |
| 04           | Govt. High school for girls, Chatarhama     | 13                        | 14                   |
| 05           | Govt. High school for girls, Gulab Bagh     | 08                        | 06                   |
| 06           | Govt. Hr. Sec. School for girls, Hazratbal. | 09                        | 10                   |
| <b>Total</b> |   | <b>60</b>                 | <b>60</b>            |

## PRE-TEST

The investigator, in consultation with the concerned teachers, administered a test of academic achievement to students in both the experimental and control groups for the subjects: Mathematics, General English, General Science, Social Science and Urdu. The investigator administered the tests of need-achievement and study habits to both the experimental and control groups. No information about the grouping of the students was conveyed to the teachers. The scores gained by each student were recorded for need-achievement, study habits and academic achievement.

The mean, SD and 't' of need-achievement, study habits and academic achievement scores (pre-test) of each group (experimental and control) is given below in table 5, 6, and 7 respectively: -

**TABLE 5**

Representing the mean difference of need-achievement scores (pre-test) between the experimental and control group.

| FACTORS         | EXPERIMENTAL GROUP |      | CONTROL GROUP |
|-----------------|--------------------|------|---------------|
| HOPE OF SUCCESS | X                  | 0.80 | 1.02          |
|                 | $\sigma$           | 4.93 | 4.27          |
|                 | 't'                |      | <b>0.26 *</b> |



|                                 |            |      |               |
|---------------------------------|------------|------|---------------|
| <b>EGO-IDEAL</b>                | X          | 1.03 | 1.05          |
|                                 | $\sigma$   | 3.35 | 3.48          |
|                                 | <b>'t'</b> |      | <b>0.03 *</b> |
| <b>PERSEVERANCE</b>             | X          | 0.60 | 0.72          |
|                                 | $\sigma$   | 3.47 | 3.39          |
|                                 | <b>'t'</b> |      | <b>0.19</b>   |
| <b>REALISTIC ATTITUDE</b>       | X          | 0.90 | 1.23          |
|                                 | $\sigma$   | 4.24 | 3.67          |
|                                 | <b>'t'</b> |      | <b>0.34 *</b> |
| <b>INTERNAL CONTROL OF FATE</b> | X          | 0.52 | 0.67          |
|                                 | $\sigma$   | 2.74 | 2.65          |
|                                 | <b>'t'</b> |      | <b>1.24 *</b> |

**\*: Not significant**

There is no significant difference between the experimental and control groups as far as their pre-test need-achievement scores are concerned. It shows that the two groups (Experimental and Control) are parallel in their need-achievement.

**TABLE 6**

Representing the mean difference of study habit scores (pre-test) between the experimental and control group.

| FACTORS                   | EXPERIMENTAL GROUP |      | CONTROL GROUP |
|---------------------------|--------------------|------|---------------|
| Time Appropriation        | X                  | 3.85 | 4.0           |
|                           | $\sigma$           | 1.33 | 1.39          |
|                           | 't'                |      | <b>0.6*</b>   |
| Content of Study          | X                  | 2.58 | 2.87          |
|                           | $\sigma$           | 1.06 | 1.38          |
|                           | 't'                |      | <b>1.32*</b>  |
| Interference during Study | X                  | 3.78 | 3.93          |
|                           | $\sigma$           | 1.12 | 1.18          |
|                           | 't'                |      | <b>0.71*</b>  |
| Other Indulgences         | X                  | 2.33 | 2.55          |
|                           | $\sigma$           | 0.84 | 1.16          |
|                           | 't'                |      | <b>1.22*</b>  |

**\*: Not significant**

There is no significant difference between the experimental and control groups as far as their pre-test study habit scores are concerned. It is indicating that the two groups (Experimental and Control) are almost parallel in study habits.

**TABLE 7**

Representing the mean difference of academic achievement scores (pre-test) between the experimental and control group.

|           | EXPERIMENTAL GROUP | CONTROL GROUP |
|-----------|--------------------|---------------|
| $\bar{X}$ | 22.54              | 24.53         |
| $\sigma$  | 9.34               | 09.15         |
|           | <b>'t'</b>         | <b>1.18 *</b> |

**\*: Not significant**

There is no significant difference between the experimental and control groups as far as their academic achievement scores are concerned. This indicates that the experimental and control groups are almost parallel so far as their academic achievement is concerned.

### **VARIABLES**

The important variables taken into consideration in this study are:

#### **Independent variable**

Counselling intervention served as the independent variable in the study.

### **Dependent variable**

1. Post counselling need-achievement scores of the subjects,
2. Post counselling study habit scores of the subjects, and
3. Post counselling academic achievement scores of the subjects served as dependent variables.

### **TOOLS USED**

1. Ravens Advanced Progressive Matrices (1962), for the measurement of intelligence.
2. Urdu Adaptation of B.N. Mukherjee's Incomplete Sentences Blank, Khan (1992), for the measurement of need- achievement.
3. Study Habit Inventory Khan (1999), for the measurement of study habits.

#### **1. Ravens Advanced Progressive Matrices (1962)**

Most of the tests of the mental measurement in the world are standardized for the English speaking/knowning populations. It was not desirable to select verbal tests, as the sample subjects were not conversant with this language. To overcome these difficulties a non-verbal test of mental measurement, Ravens Advanced Progressive Matrices (1962) was first considered as possible adequate tool in order to get an index of the I.Q of the sample subject without the consideration of language.

### ***Description of the test***

The objective of the construction of the Advanced Progressive Matrices (APM) was to build a non-verbal test for the establishment of the intellectual differences among the intellectually below average, average and above average. It comprises of two sets of problems (set I and set II). In set I there are 12 pictorial problems designed to induce a person to the method of working and cover all the intellectual processes needed for success. The first problem is as much as possible self-evident. The problems become more difficult progressively. In set II there are 36 pictorial problems in both their presentation and their argument. These problems are identical in concept with those in set I. They increase in difficulty more steadily and become considerably more complex. To avoid fatigue and boredom, the figures are drawn boldly and accurately and these are pleasing for assessing a person's maximum capacity to form comparisons and reason, without being unduly exhausted. The scale is self-administered or can be administered to an individual or to a group. A person's total score in set II provides an index of one's intellectual capacity. The scores in set I are not used as this set is solely used to prepare the subjects for set II. The test is being used throughout world.

### ***Administration and Scoring***

The test was administered to the sample subjects in separated seating positions to increase individual answers and to facilitate the keeping of a firm vigil on them. The sample subjects were seated comfortably, mostly in the school ground, sufficient apart, facing the investigator. After distributing the answer sheets, they were asked to fill up the particulars themselves in the answer sheet and were instructed not to open the booklet (set I) until everyone was ready. The investigator explained the problem list of set I and the ways of answering it correctly. After sound instruction set I was administered. A break of five minutes before commencing set II was used in order to avoid monotony. The scoring of the answer sheet was done strictly in accordance with the scoring key of the manual (APM, 1962).

### ***Reliability and Validity of the Test***

It has been assessed clearly by Raven's that the test cannot be used satisfactorily before the age of 11 years. At 12 1/2 years, it is reliable while with adults of more than average intellectual capacity it has high reliability of 0.91. To determine causes contributing to the low re-test reliability of 0.76 obtained when the test was used with children under 11 years of age, the data for these children were divided into two groups according to whether scores on the first test were above or below the median for the whole group. The re-test

reliability for the upper 50% was not greater than that for the lower 50%. The unreliability of low-test results arising from the number of solutions which could be selected by chance was obviously not the explanation. A more probable explanation is that the ability to form comparisons and reason by analogy is at this stage too recent an intellectual development for it to be exercised with a consistent degree of efficiency. It is, however, clear that from 12½ onwards, and particularly for young adults, the results obtained with the APM given as a 40 minute speed test of intellectual efficiency, becomes highly reliable.

## **2. Urdu Adaptation of Mukherjee's Incomplete Sentences Blank**

A sentence completion test or an "Incomplete Sentence Blank" test is a kind of projective test in which the testee is required to complete a number of sentences. A word or a part of a sentence constitutes the test items and the testee is required to write whatever comes to their mind after reading the given part of the sentence meaningfully. The underlying assumption is that the thoughts, ideas and the needs of the testee (subject) are revealed by the type of responses they make in completing the incomplete sentences.

The sentence completion technique is so flexible that it can be readily used to measure different facets of personality. It provides specific information as to what extent the testee

knows themselves better than others, the degree of their self-conception, their attitude towards others, their dominant needs; even their defensive behaviour. Mukherjee's Incomplete Sentence Blank purports to measure only one specific area of motivation, namely, the need for the achievement. The need for achievement (N.ach.) is defined operationally as the behaviour of showing effort to do one's best or to exceed others. According to Atkinson (1958) it reflects a "desire to move ahead to the ultimate goal". High achievement motivation is generally associated with striving and effectiveness. The positive aspect of achievement motivation is to have a sense of attainment, self-actualization, or self-fulfillment (Maslow, 1954). The Incomplete Sentence Blank (ISB) developed by Mukherjee has been specifically constructed to assess that aspect of the personality which an individual manifests in connection with their striving in an upward fashion to achieve something very significant, unique and important.

### ***Description of ISB***

The ISB consists of 71 items out of which 11 serve as filler items. Item numbering 9, 16, 28, 36, 37, 44, 52, 57, 59, and 71 of the 1996 version of ISB are filler items. Some items of ISB incorporate stems in the first person, e.g., "I direct my efforts to getting..." There are also a few item-stems constructed in the third person, e.g., "Most of people that they..."





### ***Features of the ISB***

1. The item-stems of ISB are neither too short nor too long. Each Incomplete Blank is of an optimal length such that a person with high Need-Achievement will tend to complete it in the desired manner consistent with the answer key. The stems neither put excessive restrictions on the part of the testee to respond in a specific way, nor evoke unlimited number of possible answers.

2. The use of filler items and stems in the third person makes the test far less transparent than many standard personality inventories.

3. The ISB is a handy tool to administer in groups for measuring those bipolar dimensions of personality which together constitute or define the achievement motive; including hope of success vs. fear for failure, internal control of fate vs. external control of fate, realistic attitude vs. unrealistic attitude.

4. The scoring method employed in ISB is simple, objective and does not call for as much training and sophistication as is necessary for scoring the (TAT) protocols for Need-Achievement following the scoring procedure suggested by McClland and his associates.

5. The ISB provides a multidimensional measure of Need-Achievement. The study of Mitchell (1961) has shown

that Need-Achievement is not a unitary construct. As such, an appropriate tool for studying need-achievement should be one, which can trap different facets of the individual's zeal for upward progression.

**Administration**

The testee is informed that the ISB is not a vocabulary test but a simple tool for measuring how rapidly and frankly he completes the blanks. The testee is asked to read the instructions appearing on the face sheet of the ISB carefully before starting the test. They are also told that there is no time limit for the test. They, however, should fill out each of the blanks as fast as possible.

**Scoring**

ISB protocols are presently being scored on the basis of the presence of certain important aspects of achievement motivation (Need-Achievement). Each response is scored either as +1, or -1 depending upon what manifest or latest need the complete sentence reflects. Each complete sentence is scored as +1 provided it indicates any of the following aspect of need-achievement:

- A. Hope of success.
- B. High Ego-ideal.
- C. Perseverance.
- D. Realistic attitude.
- E. Internal control of fate.

### **Reliability**

The odd even reliability of the ISB (excluding the 11 filler items) has been found to be 0.65 for a sample of 180 post-graduate students of Nagpur University. The internal consistency reliability, computed by following the Kuder-Richardson Formula 20 from the item-analysis results based on 100 subjects is 0.61.

### **Validity**

One concurrent validity study has not yielded promising results. The product moment correlation between ISB and a forced-choice scale of achievement values called the Sentence Completion Test (Mukherjee, 1964) is 0.25 from a sample of 100 Nagpur University post graduate students. This sample size may not be sufficient to achieve a satisfactory test of the validity of the method. One construct validity study recently completed shows that the total scores on ISB can predict very efficiently the amount of short-term retention for achievement related words.

### **3. Study Habit Inventory Khan (1999), for the measurement of study habits**

Study Habit Inventory has been developed by Khan (1999). These are 36 items in the inventory distributed over four areas:

TABLE I

| No. | AREAS                     | POSITIVE | NEGATIVE | TOTAL |
|-----|---------------------------|----------|----------|-------|
| 1   | Time Appropriation        | 6        | 2        | 8     |
| 2   | Content of Study          | 8        | 2        | 10    |
| 3   | Interference during study | 8        | 2        | 10    |
| 4   | Other Indulgence          | 1        | 7        | 8     |

The items are drafted in a closed system i.e. Yes/No forms. The inventory is scored as:

The positive items “1” for ‘Yes’ and “zero” for ‘No’

For negative items “zero” for ‘Yes’ and “1” for ‘No’

Higher scores on the inventory implies better study habit, whereas lower scores means poor study habits.

### **Reliability**

The coefficient of reliability as determined by the split half method (odd-even) after applying Spearman Brown Prophecy formula for all the four sub scales and composite scores of study habit inventory is given in the following table:

**TABLE II**

|              | <b>AREAS</b>              | <b>SCORES</b> |
|--------------|---------------------------|---------------|
| 1            | Time Appropriation        | 0.8           |
| 2            | Content of Study          | 0.78          |
| 3            | Interference during study | 0.75          |
| 4            | Other Indulgence          | 0.79          |
| <b>Total</b> |                           | <b>0.77</b>   |

Coefficient of reliability as determined by the test re-test method after an expiry of one month for the whole test and for five sub-scale is provided in the following table:

**TABLE III**

|              | <b>AREAS</b>              | <b>SCORES</b> |
|--------------|---------------------------|---------------|
| 1            | Time Appropriation        | 0.81          |
| 2            | Content of Study          | 0.78          |
| 3            | Interference during study | 0.68          |
| 4            | Other Indulgence          | 0.77          |
| <b>Total</b> |                           | <b>0.78</b>   |

### Validity

The high discriminatory power of items ('t' value higher than 1.96, significant at the 0.05 level) is a testimony to its internal consistency. The indirect estimate of construct validity of the test is provided in the Table IV.

**TABLE IV**

| No.   | AREA                      | TIME APPROPRIATION | CONTENT OF STUDY | INTERFERENCE DURING STUDY | OTHER INDULGENCES | TOTAL |
|-------|---------------------------|--------------------|------------------|---------------------------|-------------------|-------|
| 1     | Time Appropriation        | 0                  | 0.47             | 0.31                      | 0.37              | .67   |
| 2     | Content of Study          |                    | 0                | 0.42                      | 0.41              | .78   |
| 3     | Interference during study |                    |                  | 0                         | 0.52              | .65   |
| 4     | Other Indulgence          |                    |                  |                           | 0                 | .74   |
| Total |                           |                    |                  |                           |                   | 0     |

The concurrent validity of the test, using the Mukhopedy and Sansanwal (1987) study habit inventory, has come out to be 0.75.

### Norms

The following norms have been worked out to classify the subjects into three explanatory groups, on their total scores for the Study habit inventory and sub scale. The three categories are obtained by defining P<sub>75</sub> and over for better study habits and P<sub>25</sub> and below for poor study habits. These are the extreme groups and the scores ranging between P<sub>25</sub> and P<sub>75</sub> are defined as those subjects with average study

habits. The data is given in the following tables V & VI respectively.

**Table V (Total score)**

|                     |              |                      |
|---------------------|--------------|----------------------|
| $P_{75}$            | 27 and above | Better study habits  |
| $(P_{25} - P_{75})$ | 19 - 26      | Average study habits |
| $P_{25}$            | 18 and below | Poor study habits    |

**Table VI (Sub-scales)**

|                           |                   |             |                      |
|---------------------------|-------------------|-------------|----------------------|
| Time Appropriation        | $P_{75}$          | 8 and above | Better study habits  |
|                           | $P_{25} - P_{75}$ | (6 - 7)     | Average study habits |
|                           | $P_{25}$          | 5 and below | Poor study habits    |
| Content of Study          | $P_{75}$          | 8 and above | Better study habits  |
|                           | $P_{25} - P_{75}$ | (5 - 7)     | Average study habits |
|                           | $P_{25}$          | 4 and below | Poor study habits    |
| Interference During Study | $P_{75}$          | 9 and above | Better study habits  |
|                           | $P_{25} - P_{75}$ | (6 - 8)     | Average study habits |
|                           | $P_{25}$          | 5 and below | Poor study habits    |
| Other Indulgences         | $P_{75}$          | 7 and above | Better study habits  |
|                           | $P_{25} - P_{75}$ | (4 - 6)     | Average study habits |
|                           | $P_{25}$          | 3 and below | Poor study habits    |

The results obtained from the pre-test justify that underachievers have poor need-achievement, poor study habits and low academic achievement which is reflected in the following tables:

**TABLE 8**

Representing the mean of need-achievement scores (pre-test) factor wise and composite of the *experimental group*.

| Areas                    | Mean | Pre-Test |
|--------------------------|------|----------|
| Hope of Success          | X    | 0.80     |
| Ego-Ideal                | X    | 1.03     |
| Perseverance             | X    | 0.60     |
| Realistic Attitude       | X    | 0.90     |
| Internal Control of Fate | X    | 0.52     |
| Composite                | X    | 3.85     |

**TABLE 9**

Representing the mean of need-achievement scores (pre-test) factor wise and composite of the *control group*.

| Areas                    | Mean | Pre-Test |
|--------------------------|------|----------|
| Hope of Success          | X    | 1.02     |
| Ego-Ideal                | X    | 1.05     |
| Perseverance             | X    | 0.72     |
| Realistic Attitude       | X    | 1.23     |
| Internal Control of Fate | X    | 0.67     |
| Composite                | X    | 4.68     |



**TABLE 10**

Representing the mean of study habit scores (pre-test) factor wise and composite of the *experimental group*.

| Areas                     | Mean | Pre-Test |
|---------------------------|------|----------|
| Time appropriation        | X    | 3.85     |
| Content of study          | X    | 2.58     |
| Interference during study | X    | 3.78     |
| Other indulgences         | X    | 2.33     |
| Composite                 | X    | 12.55    |

**TABLE 11**

Representing the mean of study habit scores (pre-test) factor wise and composite of the *control group*.

| Areas                     | Mean | Pre-Test |
|---------------------------|------|----------|
| Time appropriation        | X    | 4.00     |
| Content of study          | X    | 2.87     |
| Interference during study | X    | 3.93     |
| Other indulgences         | X    | 2.55     |
| Composite                 | X    | 13.35    |

**TABLE 12**

Representing the mean of academic achievement scores (pre-test) factor wise and composite of the *experimental group*.

| Subjects        | Mean | Pre-Test |
|-----------------|------|----------|
| General English | X    | 26.86    |
| Mathematics     | X    | 22.44    |
| General Science | X    | 14.55    |
| Social Science  | X    | 20.72    |
| Urdu            | X    | 29.55    |
| Composite       | X    | 22.54    |

**TABLE 13**

Representing the mean of academic achievement scores (pre-test) factor wise and composite of the *control group*.

| Subjects        | Mean | Pre-Test |
|-----------------|------|----------|
| General English | X    | 28.72    |
| Mathematics     | X    | 21.44    |
| General Science | X    | 22.39    |
| Social Science  | X    | 19.19    |
| Urdu            | X    | 31.24    |
| Composite       | X    | 24.53    |

After the establishment of problem areas in both the need-achievement and the study habits of each subject (experimental group, N = 60) counselling intervention was arranged.

### **COUNSELLING INTERVENTION FOR EXPERIMENTAL GROUP**

A theoretical definition of counselling, widely accepted by educators and counselors is given by Rogers. Counselling is a definitely structured, permissive relationship which allows the client to gain an understanding of himself to a degree which enables him to take positive steps in the light of his new orientations (Rogers 1961). The broad objective of the counselling process is to help the individual to clear away the entangling and hampering tentacles so that he can be what he really is and contributes more both to himself and to his fellows (Arbuckle 1961). Generally all the definitions agree on the idea that the counselling process is basically a helping relationship. Tylor (1958) for instance, defined counselling as one kind of psychological activity, the kind that concentrates on the growth of a clear sense of ego-identity and the willingness to make choices and commitment in accordance with it. Similarly Patterson (1958) believes that the counselor should help clients to change their attitude and develop the capacity to enter in a different relationship, namely one of the client acceptance of responsibility rather than therapist acceptance of responsibility". Counselling usually addresses itself to the task

of alleviating the difficulties of the clients. The avowed aim of counselling is “to help the people to make a choice” (Wallis 1973). Counselling is often described as a “process” (Hansen, Stevic & Warner, 1982). The implicit meaning of this process is a progressive movement toward an ultimate conclusion, being the resolution of whatever precipitated the need for help. This progressive movement is often described as a series of stages through which the counselor and the client move. These stages are: (a) rapport or relation building; (b) assessment or definition of the problem; (c) goal setting; (d) initiating intervention; and (e) termination and follow-up. The stages overlap in such a way that assessment begins while the relationships is still developing. Early goal setting occurs even while assessment is well developed.

Many who counsel agree that the fundamental goal of counselling is to effect change in behaviour which in turn permits the recipient (counselee) to live a more productive and self-satisfying life. In a school situation counselling focuses upon the individual problems and needs of students and helps them learn what is needed to solve these problems. It is the responsibility of the counsellor to obtain an adequate understanding of the individual's problems and accordingly select the appropriate method and techniques to use during counselling. The investigator started with a directive approach William-Son's (1939), and when the situation demanded, a non-

directive approach was used, Roger's (1989). Throughout this research an attempt was made to adjust the techniques used to the requirements of situation and the student.

During Treatment, the counselling process focused on three elements:

- a. **Existing Behaviour:** The behavior which is causing the subject to underachieve.
- b. **Change in Behaviour:** A change in this underachieving behavior through counselling.
- c. **Terminal Behaviour:** Increased academic achievement in consonance with the cognitive ability after counselling; including greater need-achievement and improved study habits.

### TIME BUDGET

In order to improve the need-achievement, study habits and academic achievement budgeting of counselling time was done by the investigator in conjunction with the students.

|      |   |            |
|------|---|------------|
| i)   | Total number of counselling sessions for each subject | 20         |
| ii)  | Average time for each session                         | 60 minutes |
| iii) | Gap between counselling sessions                      | 06 days    |

The following table represents the plan for the counselling sessions.

| <b>PHASES</b> | <b>SUB COMPONENTS</b>            | <b>CONTENT</b>   |
|---------------|----------------------------------|--|
| 1-2           | Rapport or relationship building | Building of rapport, self-introduction, stating the goals of sessions.   |
| 3-5           | Assessing the problem            | Collection and classification of information related to the client's reason for seeking counselling.   |
| 6-7           | Goal-setting                     | Making a commitment to a set of conditions, a course of action, or an outcome.   |
| 8-17          | Initiating intervention          | A therapeutic plan to follow.  |
| 18-20         | Termination and follow-up        | Investigator's termination to counselling relationships without destroying the gains that have been accomplished. The opportunity for subjects to request follow-up is made available. |

## **PHASES OF COUNSELLING**

### **1. Establishing the relationship**

In the counselling setting, the relationship between the counselor and the counselee has significant importance. When the counselor establishes rapport with a client; the relationship includes such factors as respect, trust, and a sense of psychological comfort. Rapport refers to the psychological climate that emerges from the interpersonal contact between counselor and the client. From the beginning the investigator endeavored to convey trust, acceptance and confidentiality to build a warm and understanding atmosphere. She listened to each client, gave them attention, expressed a caring attitude and empathized with them. Importance was given to everyone being given a chance to speak about their problems and desires so that everybody could benefit. To give them training in speaking about their problems and to get them started, the investigator initiated the first session by saying, “now we will begin by listening to your problems related to your academic studies”.

Thus clients started to learn to discussing their genuine feelings openly, accepting them, managing them and enjoying them. The investigator detected how these clients felt and reflected. At the end of the session some structuring was done for the next session. The subjects were told “we will discuss

more about your problems related to your studies in the next session”.

## **2. Assessing the problem**

As the investigator and the client were in the process of establishing a relationship, a second process began. That process involved the collection and classification of information related to the client’s reason for seeking counselling. The invigilator has labeled this as the *assessment stage*, though it might also be thought of as the problem-definition process. In this context we think of assessment in two ways. First, assessment depends on the counselor’s theoretical and philosophical view of human problems. Second, assessment depends on the conditions present in the client’s situation and the counselor’s understanding of those conditions.

The investigator employed need-achievement and study habit tests to identify underachiever’s reasons for being underachievers. Many skills including observation, inquiry, making association between facts, recording information, and forming hypotheses or clinical hunches. The investigator took notice of client’s general state of anxiety or comfort, gestures or movements that suggest either emotional or physical dysfunctions, the manner in which the client frames or alludes to their problems, verbal and non-verbal patterns, and so on. What may appear an insignificant detail at the moment proved to be a part of significant pattern overtime. The investigator



talked to the clients in order to get a clear and close assessment of their problems as underachievers. They were not motivated or attracted towards their studies. Reasons were many. Sometimes these were domestic problems, a feeling of despair and depression, self destructive thoughts, fear of failure, interpersonal conflicts. Lack of interest in their studies, their facial expressions, use of emotionally loaded words and the defensiveness gave much of the required data. The investigator's efforts to have a caring attitude, respect for the clients and a desire to help, contributed to uncovering the source of their concern. Gradually, the subjects started accepting responsibility for achieving a positive outcome from the counselling. They discussed their deeper feelings e.g. details of family problems, how their parents treat them, their personal reaction to their parents, their hope to succeed, running away from schools, cheating, not studying, not caring for their teachers etc.

Having determined the purpose for which a counselling relationship was established, the investigator and the client then agreed as to how this goal will be achieved. This required that the client, who is likely to be unsophisticated about counselling, to developed some idea of the nature of the counselling relationship and its legitimate uses. It was the investigator's job to help them do this, and the investigator accomplished this through a variety of techniques. The investigator stated concerning the purpose and procedure of

the counselling, and communicated to the client in a variety of ways (words, attitudes, manner) how the counselling process would proceed and what role was expected of both parties. This made the counseling process more effective.

### **3. Goal-setting**

Setting goals is very important to the success of counselling. We set goals in order to know how well counselling is working and when counselling should be concluded. Furthermore, as was evident later, what's done in the counselling, such as the interventions, are often determined by the counselling goals. The process of setting goals is mutually defined by the counselor and the client. The counselor has the advantages of greater objectivity, training in normal and abnormal behavior, and experience in the process. The client has the advantages of intensive experience in the problem and its history, potential insights, and aware of the personal investment needed to change. Thus, the client needs to be involved in the goal setting thought process as well as the final decisions about how the counseling will proceed.

The skills involved in goal-setting were divided into three classes. First was the investigator's inferential skill. The investigator listened to client's vague descriptions of existing and desired conditions and read between the lines of those messages. The second skill involved differentiation between the ultimate goals, the intermediate goals, and the immediate goals.



Most of the clients were thinking in terms of the ultimate goals e.g. when I grow up; when I graduate from college etc. But if we are to accomplish the ultimate goals, we must be able to think in terms of intermediate goals, in the next six months I plan to..... and immediate goals, I will do the following things tomorrow. Intermediate and immediate goals provide the strategies necessary to accomplish the ultimate goals and are the real vehicle for change in counselling. The third skill of the goal-setting process involved teaching clients how to think realistically in intermediate and immediate terms. In other words, the counselor may need to teach clients how to set goals that are attainable.

The clients stated their purpose, they and the investigator agreed as to how they will proceed. Their next step was to clarify the nature of the client's difficulties and to gain some understanding of their dynamics. This included a consideration not only of the problem itself, but of the client as a person in relation to the problem. Thus the investigator was concerned with clarifying both the client's perception of their difficulties and their feelings concerning their difficulties. Essentially this was an exploration phase, but not random exploration. The investigator and the client, working together, attempted to expose and examine as many facets of the problem as necessary in order that an appropriate attack on the problem could be made.

#### **4. Initiating interventions**

There are different points of view concerning what a good counselor should do with clients. The real issue in talking about interventions is change and how it occurs. The whole object of counselling is to *initiate and facilitate desirable change*. Thus, when the counselor and client are able to identify desirable goals or an outcome, the next logical question is, “how shall we accomplish these goals?” Having defined the ‘problem’ the first thing the investigator did was asking clients what solutions or remedies they had already tried. Most of the time clients were able to describe one or more things they had tried which were to no avail or only minimally successful in alleviating the problem. This information not only saved the investigator from suggesting alternatives that would be rejected; it also gave the investigator some sense of the client’s past efforts to remedy difficulties and the client’s resourcefulness as a problem solver.

As the client’s thoughts and feelings about their difficulties became clarified and better understood, they began to move toward their counselling goal. Part of this movement may, in the beginning, simply be the result of this clarification. As the client began to understand the nature of their difficulty and to express their feelings about it, they began to learn to handle these feelings. They became able to look squarely at themselves and their concerns without feeling overwhelmed by them. In addition, as the problem was

clarified it became more amenable to attack. Based on their tentative understanding of the problem, the investigator and the client tried various approaches to it. Those, which seem to work, were pursued and the progress was made in a consistent direction.

### **Need-achievement**

As far as the need-achievement of experimental group was concerned, before counselling intervention most of the students had low need-achievement. Among 60 subjects 46 had low need-achievement in terms of their hope of success, 40 in Ego Ideal, 49 in Perseverance, 31 in Realistic Attitude and 32 in Internal Control of Fate. There were 52 subjects who were having low scores on composite scores of need-achievement.

*Hope of Success:* The underachievers were had the belief that they could succeed, sometimes blaming the situation around them and sometimes their own self for their failures. They wanted to initiate the process of moving forward but their poor hope to succeed did not allow them. They were always had the thought that whatever and however they perform they cannot win. Their fear of failure became a hurdle in their path to progress. The investigator made them understand that they have enough capabilities to dominate their surroundings and their problems. They learned that their will power can change their situations and they can become champions in their field.

Results that previously were difficult now became easier to achieve.

*High Ego-Ideal:* Most of the students were confronted with the problems of what to do and what not to do. Here the investigator played a valuable role in making them understand their capabilities and accordingly decide their plans for their future. They were dreaming about things which were either below or above their capacities. These underachievers were expecting that they would be able to achieve outcomes they could achieve because of their specific capabilities. The investigator familiarized them with their residual capacities and counseled them to frame their ambitions according to their own desires and capabilities. Decisions as per their capabilities lead them near to their destiny. They redefined their goals in accordance to both their interests and abilities and found significant changes in their approach. It helped them to come out of their false Ego-Ideal and shape their attitude according to their own mental and physical structure.

*Perseverance:* Continuous failure will definitely weaken the will power of a human being and can lead him to underachievement. But there are people who seek lessons from their failure and try again and again in spite of the hurdles that intervening their progress. Underachievers were helped to come out from their fear of failure through counselling. Those students who came from a low socio-economic background

(which was acting as a glass ceiling to their achievement) were narrated inspirational stories of famous successful people with similar low socio-economic backgrounds. One example is Abraham Lincoln who became President of the United States of America due to his innate capabilities and hard work. This outstanding success was achieved despite his low socio-economic background. These people proved that behind every success lies perseverance. They were told that man is the crown of all creations. We are capable enough to adapt and adjust to our surroundings. Nothing is impossible when perused with consistent efforts.

*Realistic attitude:* These Students were in conflict with the world and with themselves. While solving their own problems and proceeding forward they were encouraged to be realistic so that they would not misunderstand the association between themselves and their environment. Sometimes they were denying who they really were and follow the things which were not suiting their mental and physical structure. This resulted in failure. The investigator helped them to understand that one should have a realistic approach while dealing with life. There is no harm in accepting one's weaknesses. Instead one should become aware of what he is and what he can be. They saved time and effort making more appropriate decisions about themselves. This resulted in more positive and successful results. The underachievers were helped to change their unrealistic attitude into realistic one.

*Internal Control of Fate:* Their external control of fate was another obstacle in the way of many of the subjects. Whenever they confronted problem instead of initiating a solution, they would wait for others to help them. Sometimes they blamed others—parents, teachers, classmates etc. for their poor condition or performance which was totally unrealistic. They were helped to develop the tendency to face their situations on their own. They were assisted to know that situations usually affect our decisions, but our will power and internal control of fate plays a major role in overcoming the influence of these situations.

### **Study habits**

In study habits there were 35 subjects who had poor study habits in the area of Time Appropriation, 50 in Content of Study, 38 in Interference during Study, 32 in Other Indulgences. There were only 48 subjects who had very low scores on composite scores of study habits. In order to improve their study habits the investigator facilitated them to frame a time table with the help of which they could focus equal attention on every subject of their syllabus. They were assisted how to use their time in a better and economical way. In the beginning sessions the subjects were made aware that they were a special group who were achieving low because they did not know effective study methods. They were asked about their



problems with studying, typical complaints like difficulty in Mathematics and English, slow learning; weak vocabulary and expression; lack of a quiet place to study; forgetfulness; nervousness during examinations and no planned study time.

The following items were discussed with the students. Attention was also given to those problems related to studies that subjects mentioned themselves beyond these three items.

- (i) When to study?
- (ii) Where to study?
- (iii) How to study?

With the help of their syllabus oriented books the subjects were demonstrated these technique and were given exercises to practice them.

- (iv) How to prepare a time table.
- (v) How to take examinations.
- (vi) Getting help and being helpful.
- (vii) How to be attentive in the classroom.

*Time appropriation:* Underachievers were poor in different areas of study habits. In the area of Time Appropriation they had difficulty in determining when to study, how to manipulate daily assignment and what to do in order to accommodate every subject of their academics into their time schedule. They were counselled to prepare a time table in which every subject was given equal time. Management of their time contributed to their

academic achievement, because it not only saved them time, it also brought quality to their time spent studying. Now they were in a position to spend time on other activities. To quote a case of a girl namely Muzamil who was busy in her domestic activities because she was the only female and helping hand for her two younger brothers and her ailing mother. When she was counselled how to manage both her domestic and academic assignments, she was in a position to complete every assignment in the proper time. This resulted in her spending sufficient time on her academic studies which earlier was not possible for her.

*Content of study:* Students were unsure of what to study and what not to study. Sometimes their whole day was spent watching television and sometimes they were motivated towards a single subject only. Management of their time and the content of study contributed to their academic achievement. It not only saved time but also brought quality to their academic activities. The underachievers were assisted to give the maximum time to the studies which effected their academic achievement. Sometimes when they are annoyed with their syllabus oriented books they were suggested to read story books, comics and newspaper etc. in order to develop their study habits.

*Interference during study:* the underachievers were disturbed during their studies due to one or other reason. Their domestic engagements, overpowered brothers, their parent's

ignorance about the value of Education were intervening in their studies. They were helped to develop new look for Education as this is the only way to make them self-sufficient. Underachievers were advised to be selective while watching TV or listening to the Radio. By doing so they saved time which they could then utilize on their studies.

*Other indulgences:* There were some candidates in this study who were often disturbed due to one or other reason. Some were overburdened in their domestic life; some were interested in other activities rather than academics. Every candidate was counselled in such a way that they formulated the solution to these problems themselves. For example there were three girls who were afraid of examinations. When they prepared their school assignments in time, and were in a position to give the maximum time to their studies due to better management of time they were able to prepare the notes on time than in contrast to their early routine. The result was that when their exams started the feeling of now being prepared resolved their previous fear of examinations.

#### **Academic achievement**

Regarding the subject's academic achievement, 42 subjects were showing as having poor achievements in English, 40 in Mathematics, 55 in General Science, 45 in Social Science and 28 in Urdu. There were 14 subjects whose academic achievement scores were low in all the subjects mentioned above.

It is not often possible that students are interesting in all of their academic subjects; some subjects may be less interesting to them. It becomes the responsibility of the concerned teacher to attract and develop the motivation of the students towards the subject they are not interested. In this study this job was done by the investigator. They were assisted to manage their time with the help of arranging time-table. All those variables which were disturbing their studies were taken care during counselling. Their fear of failure was changed to hope of success. They were helped to follow the goals persistently.

As the Need-achievement and Study Habits of underachievers (experimental group) had been improved by the counselling intervention, they engaged in their studies with a new mood and a new attitude towards learning. Their improved study habits helped them to understand a significantly greater portion of their syllabus in a reduced amount of time and their modified need-achievement motivated them to excel.

### **5. Termination and follow-up**

It is difficult to get counselors to think of termination in the beginning of counseling as they are more concerned with

how to begin the counselling that ending the process seems a distant problem. However all counselling has as its ultimate goal the successful termination of the counseling process. How does a counselor terminate a counselling relationship without destroying the gains that have been accomplished? It must be done with sensitivity, with intention and forethought, and by degree. As the client begins to accomplish the goals that had been set, it becomes apparent that a void is being created. The temptation is to set new goals, create new activity, and continue the counseling process. However, even this may not succeed in filling the void. Eventually, the client begins to realize that the original purpose for seeking counselling no longer supports the process. At this point a creative crisis occurs for the client.

Long before the client reaches this awareness, the counselor should be recognizing the signs, anticipating the creative crises, and laying the groundwork for a successful termination. As a general rule, the counselor should devote as many sessions to the active terminating process as were devoted to the rapport-building process. This is what is meant by *termination by degree*. When it is apparent that the counselling relationship may not last more than four to six more sessions, it

is time for the counselor to acknowledge that the relationship will eventually end. This can be done simply by saying, “I think we are soon going to be finished with our work”.

Counselling sessions were concluded after 16<sup>th</sup> or 17<sup>th</sup> sessions for each client. In the last sessions, they appraised the worth of counselling sessions and how this temporary relationship had helped them. They appraised their progress i.e. what new behavior they had learnt, identified the unfinished ones which they will continue to work on their own, whose assistance they could take, what problems they may face in implementing and maintaining new behaviours and how they could deal with these problems in future.

Before counselling was terminated, a brief period of consolidation was advised. The investigator encouraged the client to consider his counselling experiences in the light of probable future developments. The client tried to draw from his counselling experience some insights about himself and his approach to personal difficulties and to apply these to his future. The investigator’s purpose was not only to increase client's ability to deal with the difficulties, but also a gentle improvement in his ability to cope with himself and his world.

This does not mean to say that a person may not seek further counselling later but it was hoped that the effects of counselling experience would continue beyond the termination of the counselling itself.

### **POST-TEST**

After the counselling process was completed the investigator conducted need-achievement and study habit tests to the experimental and control groups, to determine the effect of counselling on their need-achievement and study habits. The tests used to assess need-achievement and study habits were the same tests that were employed at the pre-test stage. The investigator (in consultation with the teachers concerned) administered an academic achievement test of course content taught during the counselling sessions in order to measure the student's improvement in academic achievement.

The mean of post-test scores of need-achievement, study habits and academic achievement (composite and subject-wise) of both the experimental and control groups (N=60 each) are given in following tables:

**TABLE 14**

Representing the mean of need-achievement scores (post-test) factor wise and composite of the **Experimental Group**.

| Areas                    | Mean | Post-Test |
|--------------------------|------|-----------|
| Hope of Success          | X    | 3.25      |
| Ego-Ideal                | X    | 4.60      |
| Perseverance             | X    | 5.28      |
| Realistic Attitude       | X    | 4.02      |
| Internal Control of Fate | X    | 4.37      |
| Composite                | X    | 21.52     |

**TABLE 15**

Representing the mean of need-achievement scores (post-test) factor wise and composite of the **Control Group**.

| Areas                    | Mean | Post-Test |
|--------------------------|------|-----------|
| Hope of Success          | X    | 1.18      |
| Ego-Ideal                | X    | 0.93      |
| Perseverance             | X    | 0.48      |
| Realistic Attitude       | X    | 1.32      |
| Internal Control of Fate | X    | 0.53      |
| Composite                | X    | 4.45      |



**TABLE 16**

Representing the mean of study habit scores (post-test) factor wise and composite of **Experimental Group**.

| Areas                     | Mean | Post-Test |
|---------------------------|------|-----------|
| Time appropriation        | X    | 7.43      |
| Content of study          | X    | 7.50      |
| Interference during study | X    | 7.68      |
| Other indulgences         | X    | 6.83      |
| Composite                 | X    | 29.45     |

**TABLE 17**

Representing the mean of study habit scores (post-test) factor wise and composite of the **Control Group**.

| Areas                     | Mean | Post-Test |
|---------------------------|------|-----------|
| Time appropriation        | X    | 4.25      |
| Content of study          | X    | 2.92      |
| Interference during study | X    | 3.80      |
| Other indulgences         | X    | 2.33      |
| Composite                 | X    | 14.55     |

**TABLE 18**

Representing the mean of academic achievement scores (post-test) factor wise and composite of the **Experimental Group**.

| Subjects        | Mean | Post-Test |
|-----------------|------|-----------|
| General English | X    | 45.33     |
| Mathematics     | X    | 40.72     |
| General Science | X    | 32.5      |
| Social Science  | X    | 45.11     |
| Urdu            | X    | 48.28     |
| Composite       | X    | 32.62     |

**TABLE 19**

Representing the mean of academic achievement scores (post-test) factor wise and composite of the **Control Group**.

| Subjects        | Mean | Post-Test |
|-----------------|------|-----------|
| General English | X    | 28.2      |
| Mathematics     | X    | 19.07     |
| General Science | X    | 22.44     |
| Social Science  | X    | 19.24     |
| Urdu            | X    | 31.72     |
| Composite       | X    | 24.2      |

**I**t is unfortunate that inadequate knowledge in the application of the statistical analysis leads to blind alleys or unwarranted inferences. These limitations are due to techniques which are being used sometimes not for any justification, but for boosting the theoretical frame work of a research design. Any investigator involved in the study of cause and effect relationship, as regards the criterion and predictor variables, looks for an appropriate treatment of the data so as to segregate the impact of one factor on the other. For this purpose various statistical designs have been discussed by experts like Garrett (1960), Guilford (1956) and Cohen (1978).

The present investigator had to analyze the impact of counseling intervention on the need-achievement, study habits and academic achievement of underachievers (experimental group). For this purpose the data was treated to Fisher's 't' test and the impact of counseling was established on the basis of need-achievement, study habits and academic achievement of the subjects before and after the counseling sessions. The collected information and the impact of counseling on different parameters of achievement were put into the three segments of analysis, (I) Need-achievement (II) Study Habits, and (III) Academic achievement.

## I. NEED-ACHIEVEMENT

(EXPERIMENTAL GROUP)

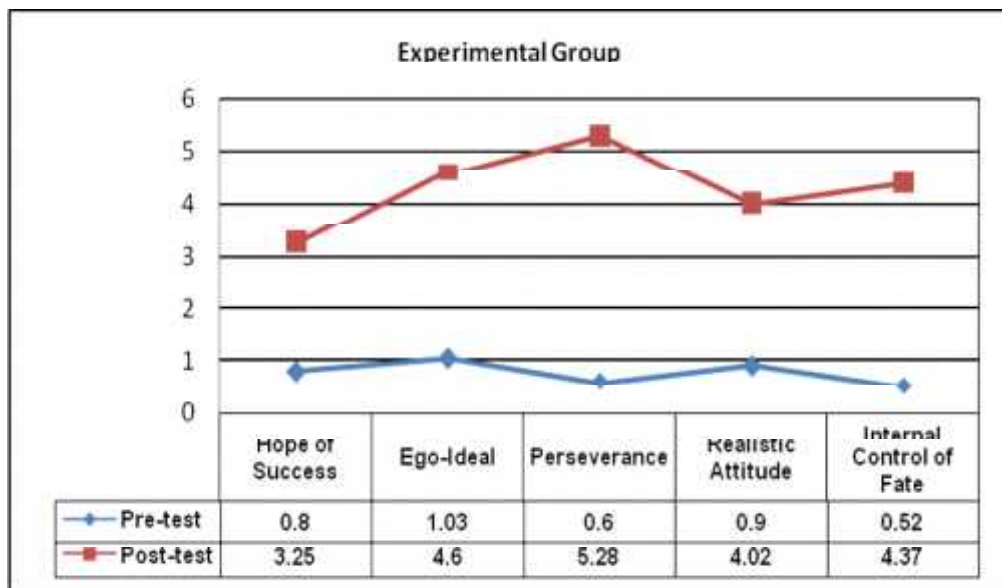
**Table 20**

| AREAS                    | PRE-TEST |      | POST-TEST    |
|--------------------------|----------|------|--------------|
| Hope of Success          | X        | 0.80 | 3.25         |
|                          | $\sigma$ | 4.93 | 3.67         |
|                          | ‘t’      |      | <b>3.10*</b> |
| Ego-Ideal                | X        | 1.03 | 4.60         |
|                          | $\sigma$ | 3.35 | 1.34         |
|                          | ‘t’      |      | <b>7.6*</b>  |
| Perseverance             | X        | 0.60 | 5.28         |
|                          | $\sigma$ | 3.47 | 1.68         |
|                          | ‘t’      |      | <b>9.36*</b> |
| Realistic Attitude       | X        | 0.90 | 4.02         |
|                          | $\sigma$ | 4.24 | 2.51         |
|                          | ‘t’      |      | <b>4.87*</b> |
| Internal Control of Fate | X        | 0.52 | 4.37         |
|                          | $\sigma$ | 2.98 | 0.96         |
|                          | ‘t’      |      | <b>9.62*</b> |

**\*: Significant**

Representing the significance of mean difference between (pre and post-test) need achievement scores (factor wise) of experimental group.

**FIG. 1**



Line Graph representing the significance of mean difference between (pre and post-test) need achievement scores (factor wise) of experimental group.

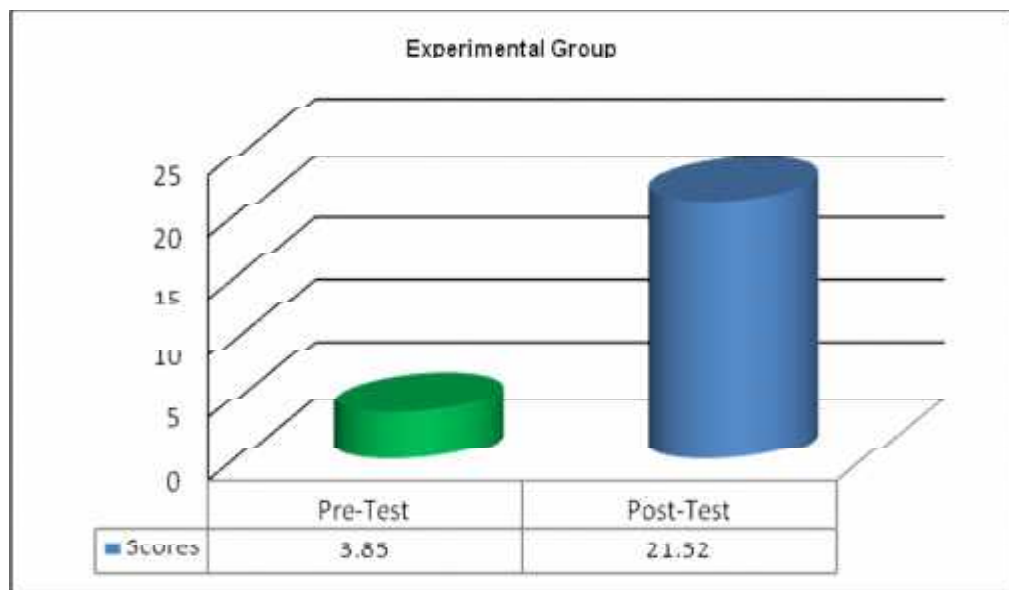
**TABLE 21**

|              |          |      |        |
|--------------|----------|------|--------|
| <b>Total</b> | X        | 3.85 | 21.52  |
|              | $\sigma$ | 8.98 | 5.02   |
|              | t'       |      | 13.28* |

**\*: Significant**

Representing the significance of mean difference between (pre and post-test) need-achievement scores (total) of experimental group.

**Fig. 2**



Bar Graph representing the significance of mean difference between (pre and post-test) need-achievement scores (total) of experimental group.

**CONTROL GROUP**

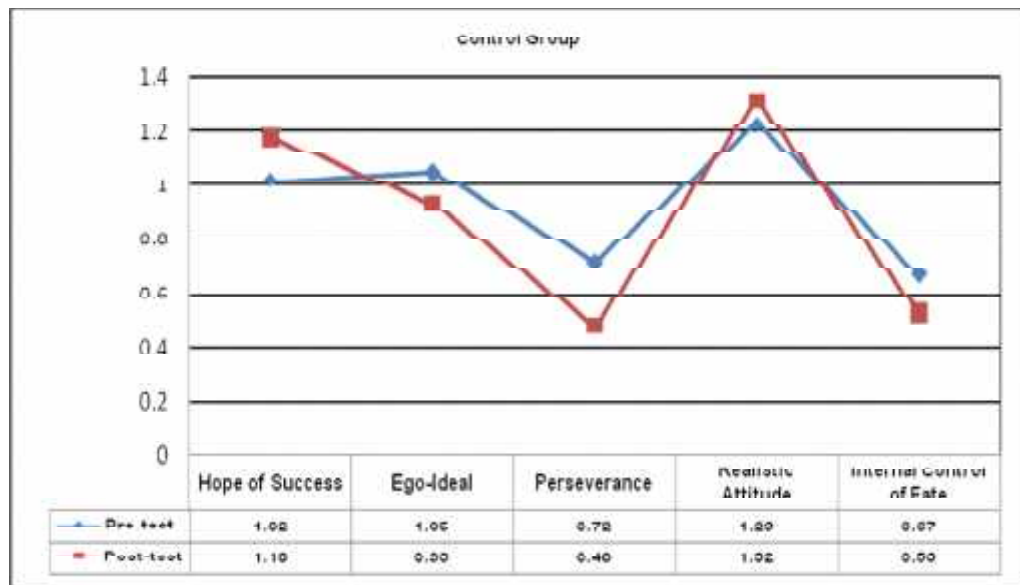
**Table 22**

| AREAS                    | PRE-TEST |      | POST-TEST     |
|--------------------------|----------|------|---------------|
| Hope of Success          | X        | 1.02 | 1.18          |
|                          | $\sigma$ | 4.27 | 4.07          |
|                          | ‘t’      |      | <b>0.21**</b> |
| Ego-Ideal                | X        | 1.05 | 0.93          |
|                          | $\sigma$ | 3.48 | 3.47          |
|                          | ‘t’      |      | <b>0.19**</b> |
| Perseverance             | X        | 0.72 | 0.48          |
|                          | $\sigma$ | 3.39 | 3.65          |
|                          | ‘t’      |      | <b>0.38**</b> |
| Realistic Attitude       | X        | 1.23 | 1.32          |
|                          | $\sigma$ | 3.67 | 3.58          |
|                          | ‘t’      |      | <b>0.14**</b> |
| Internal Control of Fate | X        | 0.67 | 0.53          |
|                          | $\sigma$ | 2.65 | 2.68          |
|                          | ‘t’      |      | <b>0.29**</b> |

**\*\*:** Not significant

Representing the significance of mean difference between (pre and post-test) need achievement scores (factor wise) of control group.

**FIG. 3**



Line Graph representing the significance of mean difference between (pre and post-test) need achievement scores (factor wise) of control group.



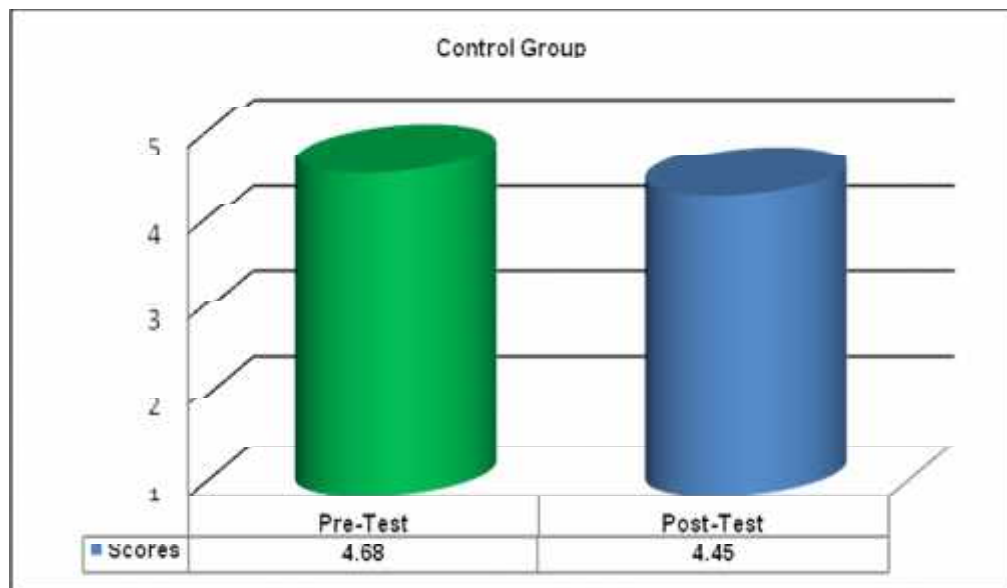
**TABLE 23**

|              |          |        |      |
|--------------|----------|--------|------|
| <b>Total</b> | X        | 4.68   | 4.45 |
|              | $\sigma$ | 8.52   | 7.83 |
|              | t'       | 0.08** |      |

**\*\* Not significant**

Representing the significance of mean difference between (pre and post-test) need achievement scores (total) of control group.

**Fig. 4**



Bar Graph representing the significance of mean difference between (pre and post-test) need achievement scores (total) of control group.

## II. STUDY HABITS

(EXPERIMENTAL GROUP)

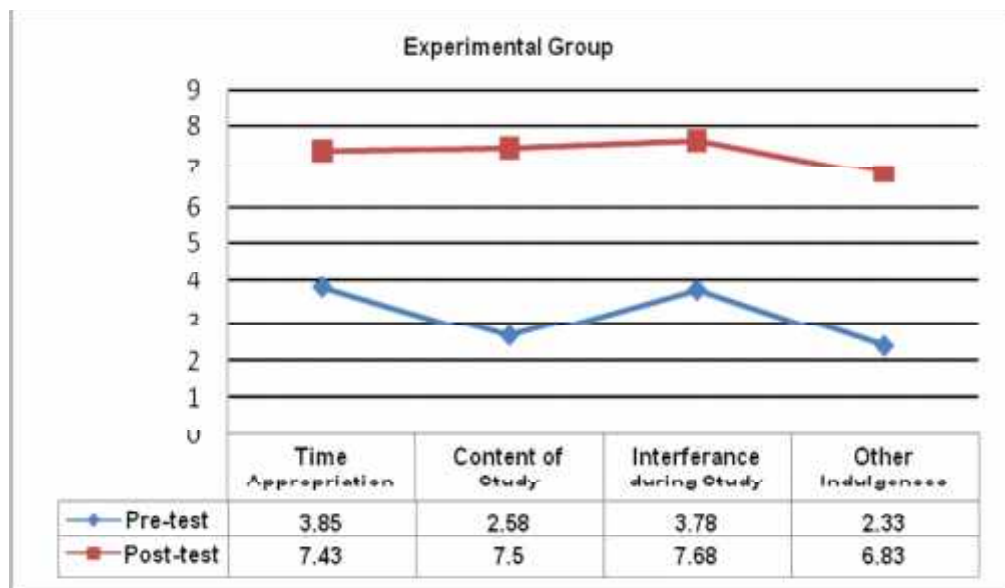
**Table 24**

| Areas                            | Pre-Test   |      | Post-Test     |
|----------------------------------|------------|------|---------------|
| <b>Time Appropriation</b>        | X          | 3.85 | 7.43          |
|                                  | $\sigma$   | 1.33 | 0.62          |
|                                  | <b>'t'</b> |      | <b>18.89*</b> |
| <b>Content of Study</b>          | X          | 2.58 | 7.50          |
|                                  | $\sigma$   | 1.06 | 1.14          |
|                                  | <b>'t'</b> |      | <b>24.6*</b>  |
| <b>Interference during Study</b> | X          | 3.78 | 7.68          |
|                                  | $\sigma$   | 1.12 | 1.17          |
|                                  | <b>'t'</b> |      | <b>18.57*</b> |
| <b>Other Indulgences</b>         | X          | 2.33 | 6.83          |
|                                  | $\sigma$   | 0.84 | 0.98          |
|                                  | <b>'t'</b> |      | <b>26.47*</b> |

**\* Significant**

Representing the significance of mean difference between (pre and post-test) Study Habits scores (factor wise) of Experimental group.

**Fig. 5**



Line Graph representing the significance of mean difference between (pre and post-test) Study Habits scores (factor wise) of Experimental group.

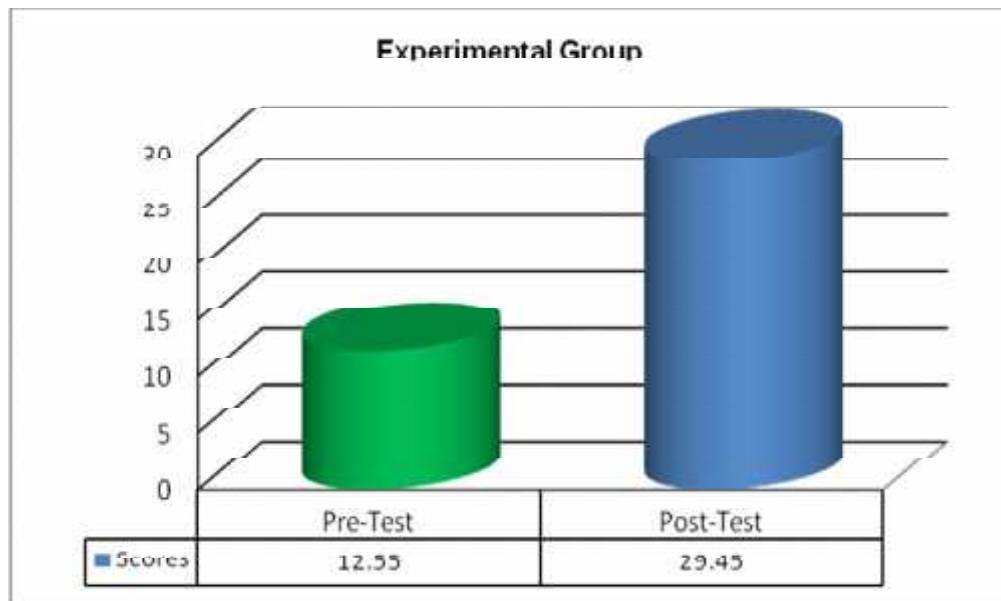
**Table 25**

|              |            |               |       |
|--------------|------------|---------------|-------|
| <b>Total</b> | $X$        | 12.55         | 29.45 |
|              | $\sigma$   | 2.37          | 2.35  |
|              | <b>'t'</b> | <b>39.30*</b> |       |

**\*Significant**

Representing the significance of mean difference between (pre and post-test) Study Habits scores (total) of Experimental group.

**FIG. 6**



Bar Graph representing the significance of mean difference between (pre and post-test) Study Habits scores (total) of Experimental group.

**CONTROL GROUP**

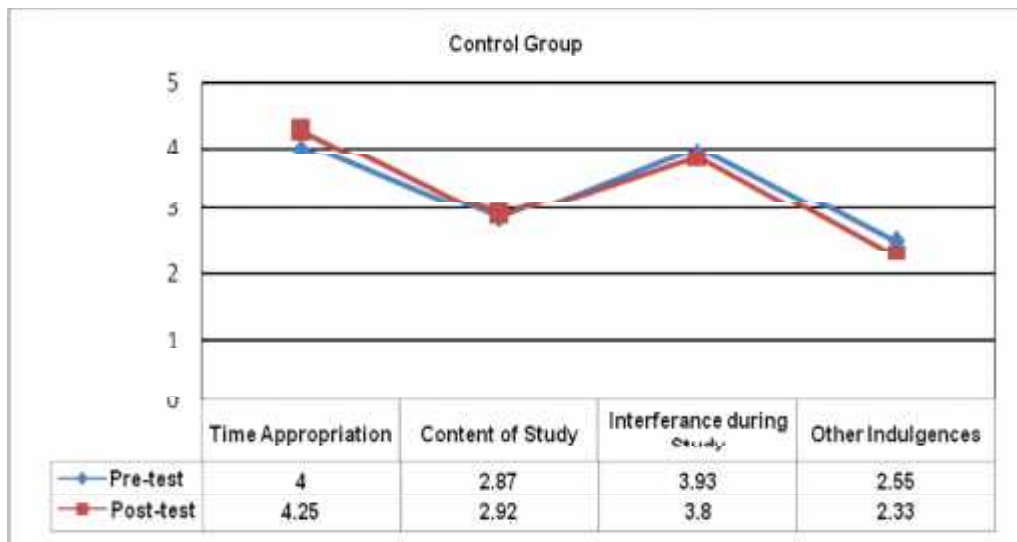
**TABLE 26**

| Areas                     | Pre-Test |      | Post-Test     |
|---------------------------|----------|------|---------------|
| Time Appropriation        | X        | 4.00 | 4.25          |
|                           | $\sigma$ | 1.39 | 2.01          |
|                           | ‘t’      |      | <b>0.78**</b> |
| Content of Study          | X        | 2.87 | 2.92          |
|                           | $\sigma$ | 1.38 | 1.90          |
|                           | ‘t’      |      | <b>0.16**</b> |
| Interference during Study | X        | 3.93 | 3.80          |
|                           | $\sigma$ | 1.18 | 2.60          |
|                           | ‘t’      |      | <b>0.35**</b> |
| Other Indulgences         | X        | 2.55 | 2.33          |
|                           | $\sigma$ | 1.16 | 0.84          |
|                           | ‘t’      |      | <b>1.22**</b> |

**\*\* Not significant**

Representing the significance of mean difference between (pre and post-test) Study Habits scores (factor wise) of Control group.

**FIG. 7**



Line Graph representing the significance of mean difference between (pre and post-test) Study Habits scores (factor wise) of Control group.

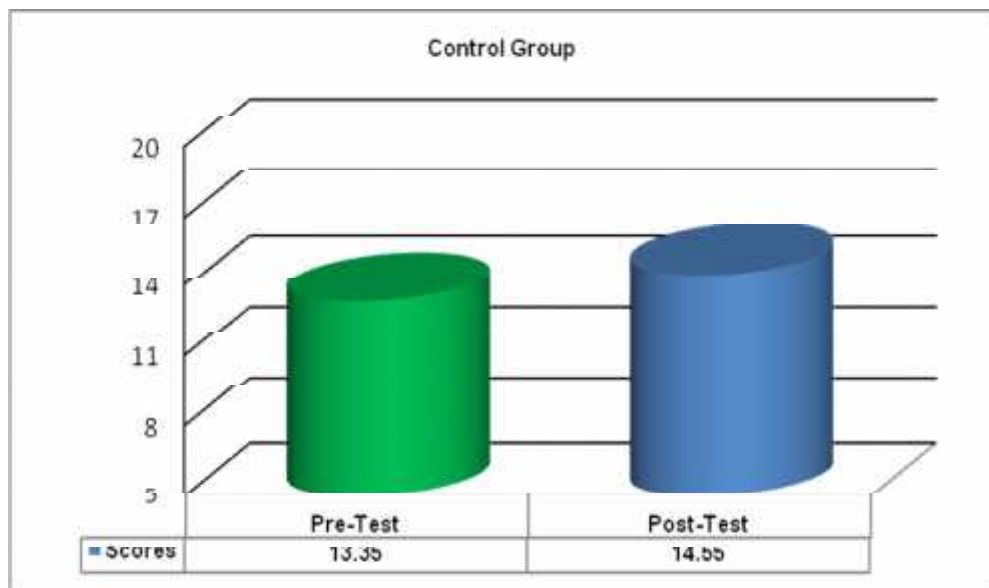
**TABLE 27**

|              |            |       |               |
|--------------|------------|-------|---------------|
| <b>Total</b> | X          | 13.35 | 14.55         |
|              | $\sigma$   | 2.86  | 5.06          |
|              | <b>'t'</b> |       | <b>0.55**</b> |

**\*\* Not significant**

Representing the significance of mean difference between (pre and post-test) Study Habits scores (total) of Control group.

**FIG. 8**



Bar Graph representing the significance of mean difference between (pre and post-test) Study Habits scores (total) of Control group.

### III. ACADEMIC-ACHIEVEMENT

#### EXPERIMENTAL GROUP

**TABLE 28**

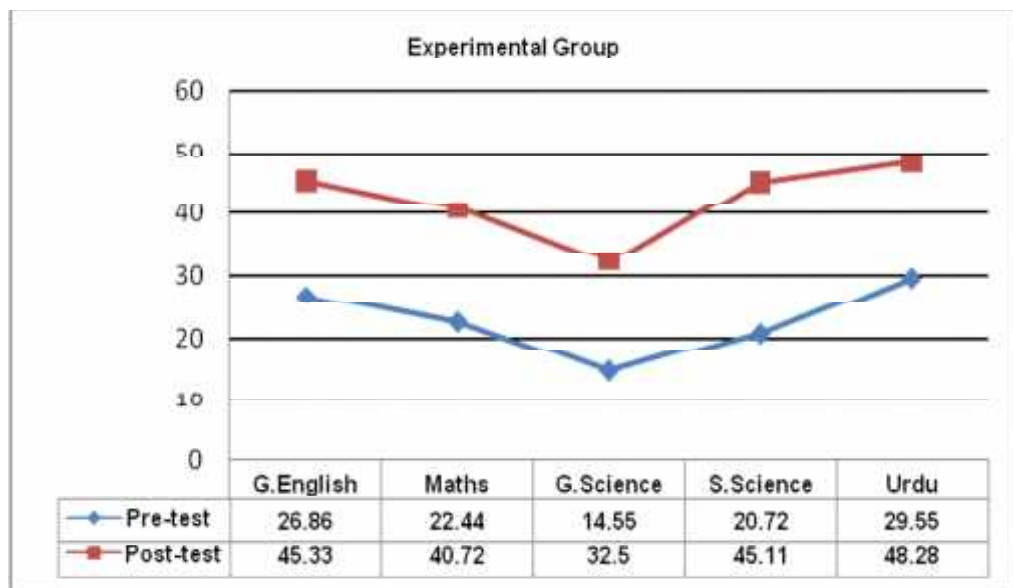
| Subjects          | Pre-Test |       | Post-Test    |
|-------------------|----------|-------|--------------|
| <b>G. English</b> | X        | 26.86 | 45.33        |
|                   | $\sigma$ | 10.24 | 18.65        |
| <b>'t'</b>        |          |       | <b>6.67*</b> |
| <b>Maths</b>      | X        | 22.44 | 40.72        |
|                   | $\sigma$ | 11.67 | 14.88        |
| <b>'t'</b>        |          |       | <b>7.49*</b> |
| <b>G.Science</b>  | X        | 14.55 | 32.5         |
|                   | $\sigma$ | 15.66 | 20.97        |
| <b>'t'</b>        |          |       | <b>5.31*</b> |
| <b>S.Science</b>  | X        | 20.72 | 45.11        |
|                   | $\sigma$ | 10.54 | 16.8         |
| <b>'t'</b>        |          |       | <b>9.53*</b> |
| <b>Urdu</b>       | X        | 29.55 | 48.28        |
|                   | $\sigma$ | 11.39 | 18.74        |
| <b>'t'</b>        |          |       | <b>6.62*</b> |

**\* Significant**

Representing the significance of mean difference between (pre and post-test) academic achievement scores (subject wise) of Experimental Group.



**FIG. 9**



Line Graph representing the significance of mean difference between (pre and post-test) Academic achievement scores (subject wise) of Experimental group.

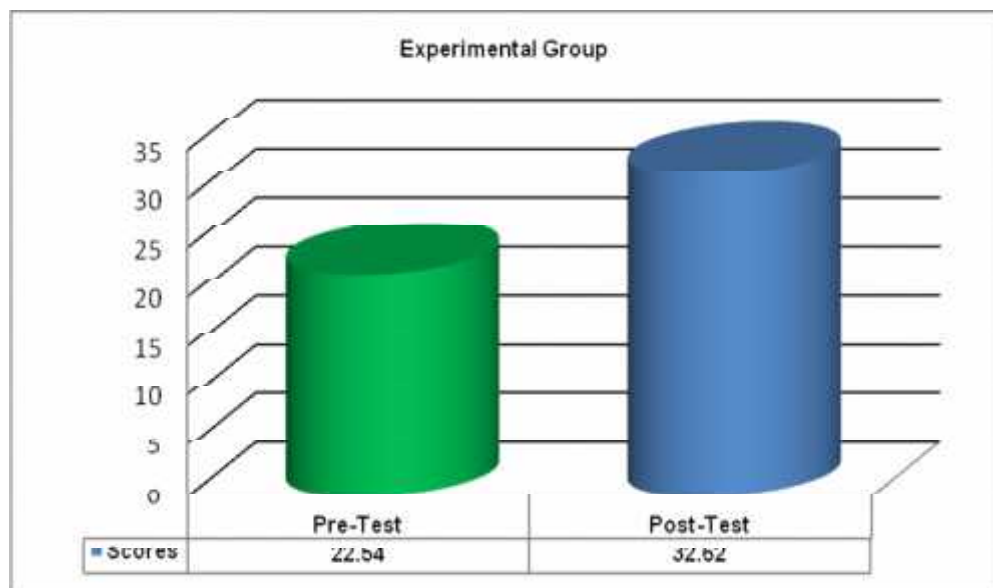
**TABLE 29**

|          | Pre-Test | Post-Test    |
|----------|----------|--------------|
| X        | 22.54    | 32.62        |
| $\sigma$ | 9.34     | 10.12        |
|          | 't'      | <b>5.66*</b> |

**\* Significant**

Representing the significance of mean difference between (pre and post-test) Academic achievement scores (composite) of Experimental group.

**FIG. 10**



Bar Graph representing the significance of mean difference between (pre and post-test) Academic achievement scores (composite) of Experimental group.

CONTROL GROUP

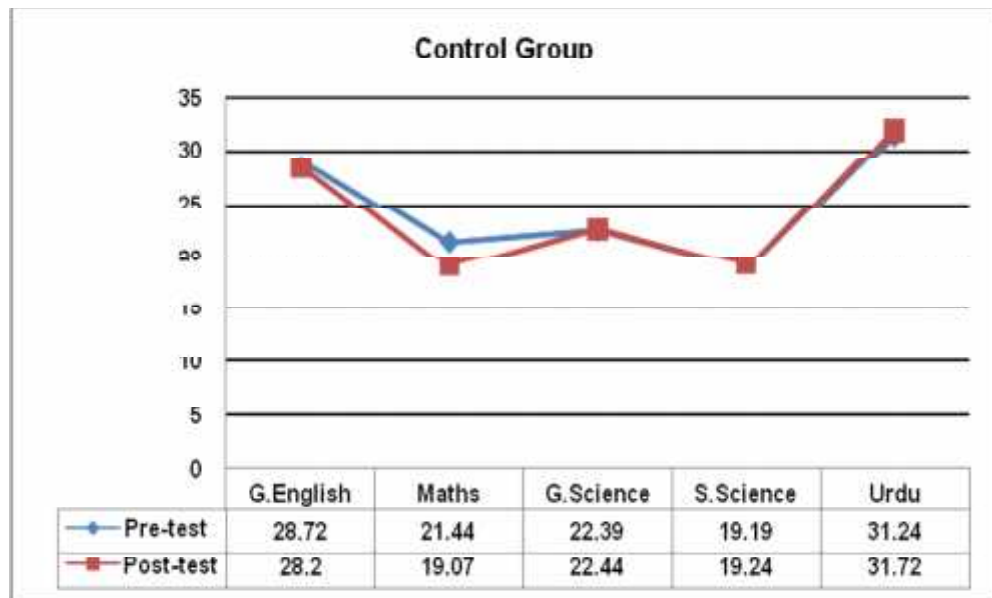
TABLE 30

| Subjects   | Pre-Test |       | Post-Test     |
|------------|----------|-------|---------------|
| G. English | X        | 28.72 | 28.2          |
|            | $\sigma$ | 16.57 | 16.58         |
| ‘t’        |          |       | <b>0.17**</b> |
| Maths      | X        | 21.44 | 19.07         |
|            | $\sigma$ | 12.52 | 18.60         |
| ‘t’        |          |       | <b>0.82**</b> |
| G.Science  | X        | 22.39 | 22.44         |
|            | $\sigma$ | 15.08 | 11.67         |
| ‘t’        |          |       | <b>0.02**</b> |
| S.Science  | X        | 19.19 | 19.24         |
|            | $\sigma$ | 11.33 | 11.53         |
| ‘t’        |          |       | <b>0.02**</b> |
| Urdu       | X        | 31.24 | 31.72         |
|            | $\sigma$ | 17.25 | 18.60         |
| ‘t’        |          |       | <b>0.15**</b> |

**\*\* Not significant**

Representing the significance of mean difference between (pre and post-test) Academic achievement scores (subject wise) of Control group.

**FIG. 11**



Line Graph representing the significance of mean difference between (pre and post-test) Academic achievement scores (subject wise) of Control group.

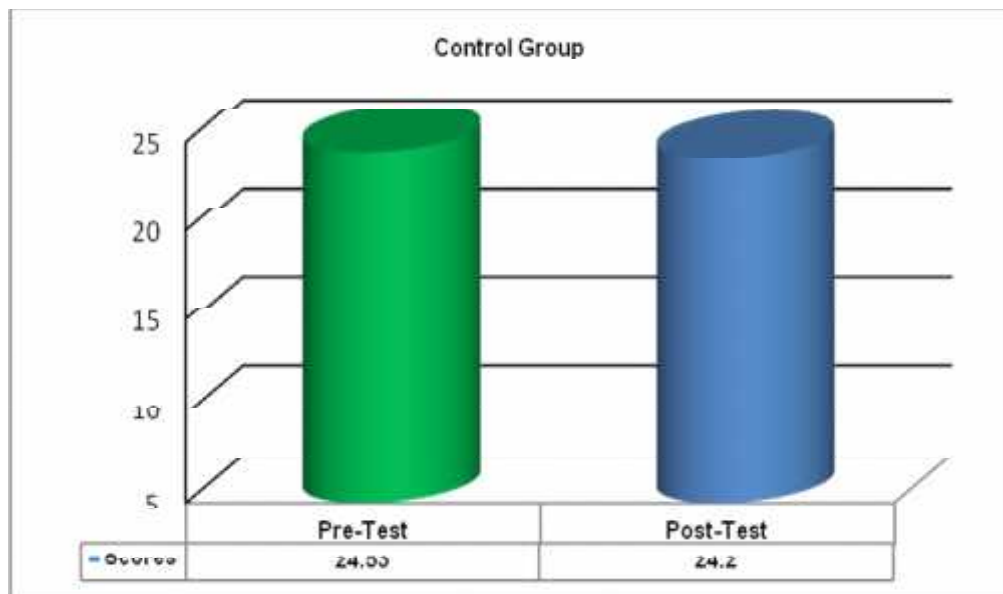
Table 31

|          | Pre-Test | Post-Test |
|----------|----------|-----------|
| X        | 24.53    | 24.2      |
| $\sigma$ | 9.15     | 6.9       |
| 't'      |          | 0.22**    |

**\*\* Not significant**

Representing the significance of mean difference between (pre and post-test) Academic achievement scores (composite) of Control group.

FIG. 12



Bar Graph representing the significance of mean difference between (pre and post-test) Academic achievement scores (composite) of Control group.

**D**iscussion and interpretation of research observations is the central objective of any study under investigation. The researcher is obligated to give a completely detailed account of all his experience and thinking involved in the method of the research so as to carry the reader with him from identification and definition of the problem, formulation of hypothesis, collection of data as evidence, analysis and interpretation of data, to testing of hypothesis and drawing out of conclusions. Van Dalen (1973) in her research methodology titled, “understanding Educational Research” has aptly and precisely explained the format and the development of a research report. In this study the investigator has profusely drawn instructions from her research report for the development of discussion.

When the concept of intelligence was firmly accepted, underachievement emerged as a problem area and educationists and psychologists worked in the field and gave an array of factors associated with underachievement. The review of the literature has revealed considerable divergences of opinion, on what causes underachievement in students. The investigator in

the same way tried to study some of the factors (need-achievement and study habits) associated with underachievement.

Urdu adaptation of B.N. Mukherjee's Incomplete Sentence Blank, Khan (1992) was employed for the measurement of need-achievement. It was found that all the sixty students in the experimental group were possessing low need-achievement, in which forty six students were having low need-achievement in Hope of Success; forty in Ego-Ideal; forty nine in Perseverance; thirty one in Realistic Attitude and thirty two in Internal Control of Fate .There were fifty two students who had very low score on composite score of need-achievement. The results are given in appendix 1.

Khan's Study Habit Inventory (1999) was used for the measurement of study habits. It was found that there were thirty five students with poor study habits in the area of Time Appropriation, fifty in Content of Study, thirty eight in Interference during Study and thirty two in the area of Other Indulgences. There were forty eight students who had very low scores on composite scores of study habits. The details are given in appendix II.

The results analyzed above justify that underachievers have poor study habits and low need-achievement. This also means that study habits and need-achievement are contributing factors for expected academic achievement.

The results are in line with: Pierce (1960), who has

emphasized that poor study habits, parental attitude towards the child are the factors which affect the achievement to a great extent; Bahaduri (1971), who observed that achievers possess high achievement motivation, better study habits as compared to their underachieving counterparts; Seetha (1975), who has emphasized that study habits and need-achievement have a positive relationship with academic achievement; Jain (1975), concluded that study habits and need-achievement of achievers differed significantly from underachievers; Chopra (1982), has found that study habits, socio-economic status were positively related to academic achievement; Sween (1984), asserted that high achievement motivated students gained significantly more than low achievement motivated students; Kapoor (1987), found that high achievers had better study habits as compared to the average and the low achievers; Davanesan and Paul (1990), have found that there is significant and positive relationship between the achievement-motivation and scholastic achievement of higher secondary students; Bhattacharyya & Bhattacharyya (1990), has found out that need-achievement was a good predictor of school achievement; Badhri (1991), has found out the causes of poor achievement as low motivation, poor study habits, lack of parental involvement in education and poor teaching; Lidhoo and Khan (1990), have found out that poor study habits and low need-achievement is associated with underachievement among bright subjects; Hota (1995), found out that achievement motivation is positively and



significantly related to academic achievement. The findings are partly in line with Bhatnagar (1976), Rai (1974), Mehdi (1965) and Hilderth (1966), as all these authors have emphasized motivational factors to be more concerned with poor achievement of underachievers.

Reviews of the research on school Counselling show that the services of school counselors have a positive effect on children. (Borders & Drury, 1992; Gerler, 1985; St. Clair, 1989; Whitson & Sexton, 1998). School Counselling programs have significant influence on discipline problems. It has been reported that students who participated in a school Counselling program had significantly less inappropriate behaviors and more positive attitudes toward school than those students who did not participate in the program. Several studies found that elementary guidance activities have a positive influence on elementary students' academic achievement (Sink & Stroh, 2003). School Counselling interventions have a substantial impact on students' educational and personal development. School counselors should spend the majority of their time performing these interventions. Coordination activities should be confined to those that improve the program's efficiency and accountability (Borders & Drury 1992). Studies on high school attrition indicate that preventive Counselling, occurring before students are in crisis, reduces the risk of these students dropping out later (Hayes, Nelson et al, 2002).

In the light of research gaps the investigator was desirous

to find out if underachievers could be helped through Counselling intervention so as to bring their achievements at par with their intellectual capability. The investigator also wants to explore if underachievers could be helped to better their need-achievement and improve their study habits through Counselling. After the establishment of problem areas in reference to their need-achievement and study habits (experimental group, N=60), which are represented in appendix I and appendix II respectively, counselling session were organized and the pre and post-test need-achievement, study habits and academic achievement scores of both the experimental group and the control group were subjected to statistical analysis as shown in Table 20 to 31.

### **NEED-ACHIEVEMENT**

The perusal of table 20 shows that the mean difference between (pre and post-test) need-achievement scores in all the areas favors post-test. The mean difference between the pre and post-test in the area of Hope of Success (A) of experimental group is 3.10 which is significant at 0.01 level. Before Counselling intervention the underachievers had the belief that they could succeed, sometimes blaming the situation around them and sometimes their own self for their failures. They wanted to initiate the process of moving forward but their poor hope to succeed did not allow them. They were always had the thought that whatever and however they performed they could not win. Their fear of failure became a hurdle in their path to

progress. The investigator made them understand that they have enough capabilities to dominate their surroundings and their problems. They learned that their will power can change their situations and they can become champions in their field. Results that previously were difficult now became easier to achieve. They were quoted the examples of great persons who excel in spite of hurdles coming in their ways. The result was that these underachievers worked hard with optimistic mind and their underachieving behavior got changed. This is evident from their post-test scores of need-achievement in the area of Hope of Success.

Table 20 is representing the mean difference between the pre and post-test scores in the area of Ego-Ideal (B) which is 7.6 and is significant at 0.01 level. This could only happen when Counselling intervention was given. Earlier the underachievers were confronted with the problem of what to do and what not to do. Here the investigator played a valuable role in making them understand their capabilities and accordingly decide their plans for their future. They were dreaming about things which were either below or above their capacities. These underachievers were expecting that they would be able to achieve outcomes they could not achieve because of their specific capabilities. The investigator familiarized them with their residual capacities and counseled them to frame their ambitions according to their own desires and abilities. Decisions as per their capabilities lead them nearer to their destiny. They redefined their goals in

accordance to both their interests and abilities and found significant changes in their approach. It helped them to come out of their false Ego-Ideal and shape their attitude according to their own mental and physical structure.

The mean difference between the pre and post-test scores in the area of Perseverance (C) is 9.36 which is significant at 0.01 level. As was evident during the counselling intervention these students' Failures had weakened their will power and lead them to underachievement. While as there are people who seek lessons from failure in spite of the hurdles that intervene in their progress. They try again and again until they succeed. Underachievers were helped through counselling to come out from their fear of failure. They were assisted to believe that behind every success lies perseverance. Humans are the crown of all creations, and are enough capable to adapt and adjust their surroundings. Nothing is impossible when followed by consistent efforts. This affected their approach towards upcoming challenges and they realised that the only way to improve is through hard work and dogged perseverance.

The Table 20 is further authenticating the effectivity of counselling intervention. The mean difference between the pre and post-test scores of need-achievement in the area of Realistic Attitude (D) is 4.87 which is significant at 0.01 level. Before treatment, Students (experimental Group) were in conflict with the world and with themselves. While solving their own problems and proceeding forward they were encouraged to be

realistic so that they would not misunderstand the association between themselves and their environment. Sometimes they were denying who they really were and follow the things which were not suiting their mental and physical capabilities. This resulted in failure. The investigator helped them to realise that one should have a realistic approach while dealing with life. They were suggested that there is no harm in accepting one's weaknesses. Instead one should become aware of what he is and what he can be. They saved time and effort making more appropriate decisions about themselves. This resulted in more positive and successful outcomes.

Counselling has shown its effect at one after another step. The mean difference between pre and post-test scores in the area of Internal Control of Fate (E) is 9.62 which is again significant at 0.01 level. Earlier external control of fate was another obstacle in the way of many of the subjects. Whenever they confronted problem instead of initiating a solution, they would wait for others to help them. Sometimes they blamed others—parents, teachers, classmates etc. for their poor condition or performance which was totally unrealistic. They were helped to develop the tendencies to face their situations on their own. They were assisted to know that situations usually affect our decisions, but our will power and Internal Control of Fate plays a major role in overcoming the influence of these situations. The investigator with the help of counselling succeeded in developing their internal control of fate which is

depicted from the post-test scores of need-achievement of experimental group in the area of internal control of fate. The results of pre and post-test need-achievement scores of experimental group are further drafted in fig 1. The pre and post-test lines are showing significant improvement. This was obvious as they were provided counselling intervention which changed their fear of failure to Hope of Success, their external control of fate was replaced to Internal Control of Fate. Now they were motivated to follow their destiny persistently. This way the hypothesis No. 1 that “*there will be a significant improvement in the post-test factor-wise need-achievement scores of the experimental group stands confirmed*”.

Table 21 is representing the significance of mean difference between (pre and post-test) need-achievement scores (total) of experimental group. The mean difference is 13.28 which is significant at 0.01 level. Each and every factor was modified by counselling intervention. With the result the pre and post-test need-achievement scores (composite) was influenced. The results are authenticating the fact that counselling has brought significant improvement in the need-achievement scores of experimental group. This is further graphed in fig.2. Therefore, the hypothesis No. 2 that “*there would be significant improvement in the post-test composite scores of need-achievement of the experimental group*” stands confirmed.

In table 22 the significance of mean difference between

(pre and post-test) need-achievement scores of control group are represented area wise. In the area of Hope of Success (A) the mean difference is 0.21, in Ego-Ideal (B) it is 0.19, Perseverance (C) 0.38 Realistic Attitude (D) 0.14, and in Internal Control of Fate (E) it is 0.29. None of the values are significant at 0.05 level. No improvement was seen in control group as far as their post-test need-achievement scores are concerned It was obvious because the independent variable (counselling intervention) which could make difference was not provided to this group. The results are again drafted in fig. 3 wherein the two lines of (pre and post-test) intersect each other at many points. In table 23 the significance of mean difference between (pre and post-test) need-achievement scores (total) of control group is 0.08 which is not significant even at 0.05 level. Showing that no improvement has emerged in post-test scores of need-achievement of control group as no counselling intervention was provided to them. The result is further substantiated in fig. 4.

The results are partly in line with: Gaur (1970), who observed that Counselling brought gradual improvement in pupil's school subject achievement, his behavior-cum-attitude towards studies and brought positive changes in teacher's observations of school pupil; Bhatnagar (1976), has found that individual Counselling brought a significant change in achievement of bright underachievers; Subremania (1979), has found that academic achievement of underachievers in the experimental group was significantly greater than that of non-

counseled underachievers and normal achievers. He had employed group guidance technique in his study; Markle, et al (1980) found that relative to a no-treatment control group, grades did improve (2.30 versus 1.85 pre-post) for the counseled subjects; Downstein (1982) emphasized that compared to a no-treatment control group, the treated underachievers gained in reading and spelling, but in Mathematics performance; Sunanda (1982), emphasized that treatment groups that received Counselling registered significant gain in their academic achievement and study habit records; Lidhoo and Khan (1996), has found that bright underachievers improved their academic achievement due Counselling intervention; Kadesh *et al* (1999) has found out that 25% of JCAP clients reoffend compared with 63% of youth who did not receive these services; Ilangovan & Rangaraj (2001) found out that there exists relationship between group counselling programs in test anxiety and scholastic achievement of DTE female students. Lapan & Richard. T. *et al.* (2002) argued that by more fully implementing a comprehensive school counselling program school counselors can shape those aspects of the school context creating the condition that encourage the development self-regulated learning. Sink C.A. and Stroh, H.R. (2003) found that CSCP students in their first few years of school enrolment generally received significantly lower achievement test scores than those students in non-CSCP schools. Hussain A. (2006) found that guidance services have significant positive effect on



students study attitudes and study habits. Tony D. Crespi (2009) found that group counselling is one of the useful intervention models that can positively impact children. EYO, *et al* (2010) found that secondary school student attitude towards guidance and counselling services were positive.

### **STUDY HABITS**

The perusal of table 24 is representing the mean difference between (pre and post-test) study habit scores (factor wise) of experimental group. There is significant improvement in all the areas of need-achievement which is the effect of Counselling. The difference between pre and post-test scores is significant at 0.01 level in the all areas of study habits. Underachievers were poor in different areas of study habits. In time appropriation they had difficulty determining when to study, how to manipulate daily assignment and what to do in order to accommodate every subject of their academics into their time schedule. During counselling intervention the investigator facilitated them to frame a time table with the help of which they could do focus equal attention on every subject of their syllabus. They were assisted how to use their time in a better and more economical way. In the beginning sessions the subjects were made aware that they were a special group who were achieving low because they did not know effective study methods. They were asked about their problems with studying. Typical complaints were difficulty in Mathematics and English, slow learning; weak vocabulary and expression; lack of a quiet

place to study; forgetfulness; nervousness during examinations and no planned study time. Attention was also given to those problems related to studies that the subjects mentioned themselves.

With the help of their syllabus oriented books the students were demonstrated these techniques and were given exercises to practise them.

- (iv) How to prepare a time table.
- (v) How to take examinations.
- (vi) Getting help and being helpful.
- (vii) How to be attentive in the class room.

Management of their time contributed to their academic achievement, because it not only saved them time, it also brought quality to their time spent studying. Now they were in a position to spend time on other activities. To quote cases of three girls who were very busy in their domestic activities because they were the only female and helping hands for their families. They were counselled to maintain time table both for their domestic and academic assignments they were now in the position to complete every assignment in the proper time which resulted in their spending sufficient time on their academics studies which earlier was not possible for them. The improvement is reflected in mean difference between pre and post-test scores of study habits in the area of Time Appropriation (A) which is 10.36 and is significant at 0.01 level.

In Table 24 the mean difference between pre and post-test

study Habit scores in the area of Content of Study (B) is 24.6 which is significant at 0.01 level. Before counselling students were unsure of what to study and what not to study. Sometimes their whole day was spent watching television and sometimes they were motivated towards a single subject only. Management of their time and the content of study contribute to their academic achievement. It not only saved time but also brought quality to their academic activities. The underachievers (experimental group) were assisted to give the maximum time to the studies which effected their academic achievement and in which there performance was poor. Sometimes when they were annoyed with their syllabus oriented books they were suggested to read story books, comics and newspaper etc. in order to develop their study habits. This has definitely brought quality in their Content of study which is clear from the post-test study habit scores. Underachievers showed a significant improvement in their Habits of Study.

Earlier the underachievers were disturbed during their studies due to one or other reason. Their domestic engagements, overpowered brothers, their parent's ignorance about the value of Education were intervening in their studies. English was another hurdle in their way to excel. They were helped to develop new look for education as this is the only way to make them self-sufficient. Underachievers were advised to be selective while watching the TV or listening to the Radio. By doing so they saved time which they could then utilize on their

studies. Result is evident in table 24 the mean difference between pre and post-test study habit scores in the area of Interference During Study (C) is 18.57 which is significant at 0.01 level.

The investigator left no stone untouched. There were some candidates in this study who were often disturbed due to one or another reason. Some were overburdened in their domestic life; some were interested in other activities rather than academics. Every candidate was counselled in such a way that they formulated the solution to these problems themselves. For example there were few girls who were afraid of examinations. Some of the girls were annoyed with their over burdening syllabus and some felt underprepared. When they prepared their school assignments in time, and were in a position to give the maximum time to their studies due to better management of time they were able to learn and prepare the notes on time in contrast to their earlier routine. This resolved their problem of indulging in other activities during their study time. They found a significant improvement in their study habits which is reflected in table 24 in the area of Other Indulgences (D). The result was when their exams started the feeling of now being prepared resolved their previous fear of examinations. The results of Table 24 are further represented in fig. 5. The mean post-test scores are significantly higher than those of pre-test. Counselling again proved to be a significant technique to modify the study habits. The underachievers are now punctual about

their assignments because of the proper manipulation of time. Their specific content of study saved them to indulge in other less important assignments. Therefore the hypothesis No. III that *“there will be a significant improvement in the post-test factor-wise study habit scores of the experimental group”* stands confirmed.

Table 25 is representing the significance of mean difference between (pre and post-test) study habit scores (total) of experimental group. The mean difference is 39.30 which is significant at 0.01 level. It was obvious because most of the problems pertaining to their study habits were resolved with the help of counselling intervention. The results are authenticating the fact that counselling has brought significant improvement in the study habit scores of experimental group, which are further graphed in fig.6. The hypothesis No. IV, that *“there would be significant improvement in post-test composite study habit scores of experimental group”* stands confirmed.

The perusal of Table 26 makes it obvious that no mean difference between (pre and post-test) study habit scores (factor wise) of control group was found. The ‘t’ values are 0.78 in Time Appropriation, 0.16 in Content of Study, 0.35 in Interference during Study and 1.22 in Other Indulgences. None of these values are significant even at 0.05 level. The results are authenticating the fact that no difference was found in scores as no counselling was given. The scores are further shown in Fig.7. both the lines of pre and post-test scores showing no significant

difference has taken place. The Table 27 is representing the significance of mean difference between (pre and post-test) study habit scores (total) of control group. The 't' value is 0.55 which is not significant even at 0.05 level. The results are further drafted in Fig.8.

The results are partly in line with: The services of school counselors have a positive effect on children. (Borders & Drury, 1992; Gerler, 1985; St. Clair, 1989; Whitson & Sexton, 1998). Quantitative analyses of research (meta-analyses) also substantiate the beneficial effects of school Counselling programs. (Baker, *et al* 1984; Prout & Demartino 1986; Sprinthall 1981). School Counselling programs have significant influence on discipline problems. Baker and Gerler (2001); Omizo, *et al* (1988) reported that students who participated in a school Counselling program had significantly less inappropriate behaviors and more positive attitudes toward school than those students who did not participate in the program. Another study reported that group Counselling provided by school counselors' significantly decreased participants' aggressive and hostile behaviors. Several studies found that elementary guidance activities have a positive influence on elementary students' academic achievement (Sink & Stroh, 2003). School counselors interventions have reported success for helping students reduce test anxiety (Cheek *et al*, 2002). School counselors are effective in teaching social skills. (Verduyn, Lord & Forrest 1990). School counselors are very effective in assisting middle school children

in the area of career development. (Whiston, *et al* 1998). Children who are experiencing family problems report being helped by school counselors. (Omizo & Omizo, S. A. 1988; Rose & Rose, 1992). In studies on the effects of a small group Counselling approach for failing elementary school students, 83% of participating students showed improvement in grades (Boutwell & Myrick ,1992). School Counselling interventions have a substantial impact on students' educational and personal development. School counselors should spend the majority of their time performing these interventions. Coordination activities should be confined to those that improve the program's efficiency and accountability. (Borders & Drury 1992). Studies on high school attrition indicate that preventive Counselling, occurring before students are in crisis, reduces the risk of these students dropping out later (Hayes, Nelson *et al*, 2002).

### **ACADEMIC ACHIEVEMENT**

Regarding the academic achievement of underachievers, the pre-test scores reflected that there were 42 subjects showing poor achievements in English, 40 in Mathematics, 55 in General Science, 45 in Social Science and 28 in Urdu .There were 14 subjects whose academic achievement scores were low in all the subjects mentioned above. Before counselling it was not common for students to be interested in all of their academic subjects; some subjects were less interesting to them than others. It becomes the responsibility of the concerned

teacher to attract the interest and develop the motivation of the students towards the subject they are not most interested. Here this job was done by investigator. The investigator discussed the importance of every subject in their overall achievements. They were helped to give maximum time to the subjects which they think are difficult. Their fear of failure has changed to Hope of Success. They were helped to be realistic about their capabilities. With the result they accommodate themselves and their interests with the varied subjects in their academics.

As the Need-Achievement and Study Habits of underachievers (experimental group) were improved by the counselling intervention, they engaged in their studies with a new mood and a new attitude towards learning. Their improved study habits helped them to understand a significantly greater portion of their syllabus in a reduced amount of time and their modified need-achievement motivated them to raise their academic results. Similar to the results in need-achievement and study habits, the counselling brought a significant improvement in the academic achievement scores of the underachievers. The results are represented in Table 28, where the significance of mean difference between pre and post-test academic achievement scores in G. English is 6.67, in Mathematics 7.49, in G. Science 5.31, in S. Science 9.53 and in Urdu 6.62. All these means are significant at 0.01 level. The results are further represented in Fig. 9. Therefore the hypothesis No. V, that *“there will be a significant improvement in*



*the post-test subject-wise academic achievement scores of the experimental group” stands confirmed.*

Table 29 is representing the mean of pre and post academic achievement scores (composite) of the experimental group. The difference between the two means is 5.66 which is significant at 0.01 level. The underachievers’ academic achievement has improved which is definitely the result of counselling intervention. All the variables intervening their studies were taken care during counselling. The underachievers’ learnt to get a maximum from the available time for their studies. They have overpowered their prevailing conditions by their modified study attitude and will to succeed. Their improved academic achievement scores are further represented in fig. 10 where the lines of pre and post academic achievement scores are showing significant difference. This indicates the likelihood that the application of the counselling techniques discussed in this study was successful in achieving their desired outcome of increased academic scores. This way the hypothesis No. VI, that *“there will be a significant improvement in the post-test composite academic achievement scores of the experimental group”* stands confirmed.

Table 30 is showing the significance of mean difference between pre and post-test academic achievement scores (subject wise) of control group. In G. English the mean difference is 0.17, in Mathematics it is 0.82, in both G. Science and S. Science 0.02, and in Urdu 0.15. None of these values are significant at

0.05 level. Meaning thereby is that no improvement has taken place as far as post-test academic achievement scores of control group are concerned. This is clear from fig. 11, where two lines of pre and post-test scores have shown low difference as no significant improvement has taken place. This was obvious because no counselling intervention was provided.

Table 31 is representing the significance of mean difference between pre and post-test academic achievement scores (composite) of control group. The difference is 0.22 which is not significant at 0.05 level. Same is represented in fig.12. the two lines of pre and post-test academic achievement scores are meeting at most of the points. This shows that there is no significant difference between the two scores because no counselling intervention was given.

On the basis of results obtained in this study, it is fairly established that a large number of students suffer in their academic achievement for want of guidance and counselling facility in schools. Mainly the results of this study have revealed that poor school as well as home background, illiteracy of parents, lack of academic guidance are also related with achievement apart from poor need-achievement and poor study habits. The investigator is not claiming that all the underachievers in this study were elevated to level of their academic achievement but at the same time it cannot be denied that helping the underachievers in realizing their potential and academic objectives have definitely shown positive results in

their academic achievement. In this way this can be fairly stated that organized and continuous sessions of individual counseling has helped the underachievers in attaining better performance and thus were saved from failure and underachievement.

This is confirmed from the above discussion that school counselors in collaborative efforts can implement both systematic and programmatic changes in schools and communities to prevent students from underachievement. They can be assisted in fulfilling their basic psychological needs, understanding themselves and accepting others, developing associations with peers, balancing between permissiveness and controls in the educational setting, realizing successful achievement, and providing opportunities to gain independence.

## **CONCLUSIONS**

Various conclusions have been drawn from the inferences which arose from the intensive investigations of this study, these are listed as follows:

### **CHAPTER I**

- For academic achievement a certain amount of intelligence or scholastic aptitude is necessary along with some favorable non-intellectual variables.
- Poor study habits and low need-achievement are to more extent responsible for pulling down the academic achievement of underachievers than other factors.
- Organized and continuous sessions of individual counselling will help the underachievers in attaining better academic performance.

### **CHAPTER II**

- It has been concluded that in the absence of intellectual abilities high scholastic achievement is not possible.

- In the achievement related areas, need for achievement (Need-achievement) and study habits are the most important factors, which contribute to the academic achievement of a person beyond intellectual ability.
- School counselling interventions have a substantial impact on students' educational and personal development.
- Counselling will help the underachievers to raise their achievements.

### **CHAPTER III**

- The post counselling test scores showed a significant improvement in the need-achievement of underachievers (experimental group).
- The post counselling test scores showed a significant improvement in the study habits of underachievers (experimental group).
- The post counselling test scores showed a significant improvement in the academic achievement of underachievers (experimental group).

### **CHAPTER IV**

- There is a significant mean difference between pre and post-test need-achievement scores (factor wise) of experimental group.

- There is a significant mean difference between pre and post-test need-achievement scores (composite) of the experimental group.
- There is a significant mean difference between pre and post-test study habit scores (factor wise) of experimental group.
- There is a significant mean difference between pre and post-test study habit scores (composite) of experimental group.
- There is a significant mean difference between pre and post-test academic achievement scores (factor wise) of experimental group.
- There is a significant mean difference between pre and post-test academic achievement scores (composite) of experimental group.

## **CHAPTER V**

- Counselling has helped to improve the need-achievement of underachievers.
- Counselling has helped to improve the study habits of underachievers.
- Counselling has helped to improve the academic achievement of underachievers.

## **SUGGESTIONS**

On the basis of field experience the following suggestions have been formed:

- Underachievement is wide spread and concerns the school population of all ages.
- It is important to understand and concentrate on the factors within the school situation that are conducive to the onset of the causes of underachievement.
- Corrective measures like counselling as part of a program of student personnel services are required if the rate of underachievement is to be reduced and students are to achieve their academic potential.
- The function of education is to provide opportunities for each student to reach his/her potential in the areas of educational, vocational, social and emotional development. The school leader must ensure that guidance is an integral part of education and that it is centered directly on this function.
- Individual counselling will definitely contribute in the education of special children.

- School counselors in collaborative efforts can implement both systematic and programmatic changes in schools and communities to prevent students from dropping out of schools.
- If examining the effect of individual counselling in a rural setting, it will definitely be a worthwhile future study.



1. **A.O. Ogunmakin (2011).** *Differential effects of some counselling interventions on cognitive outcomes in secondary school mathematics in Nigeria.* INTED, Proceedings, pp. 2595-2601.
2. **Abraham, M. (1974).** *Some factors relating to underachievement in English of secondary school pupils.* Second Survey of Research in Education, Buch, M.B, (Edu.), Baroda: Society for Educational Research and Development (SERD), 1979, P.340.
3. **Alam, M.M (2006).** *Academic achievement in relation to socio-economic status, anxiety level and achievement motivation: A comparative study of Muslim and non-Muslim school children of Uttar Pradesh.* Indian Educational Abstracts, Vol. 6 (2), 42-43.
4. **Ali Riasat, Akhtar A. et al. (2011).** *The impact of motivation on students' academic achievement in mathematics in problem based learning environment.* International Journal of Academic Research (Part I), Vol.3. No.1, pp.306-309.
5. **Aluja, A., & Blanch, A. (2004).** *Socialized Personality, Scholastic Aptitudes, Study Habits, and Academic Achievement: Exploring the Link.* European Journal of Psychological Assessment, 20(3), 157-165.
6. **Ansari, Z.A. (1980).** *Study Habits and Attitudes of Students: Development and Validation of Questionnaire Measures.* Islamabad: National Institute of Psychology.

- 
- 
7. **Arbuckle, D.S. (1961).** *Counselling: An introduction.* Boston: Allyn & Bacon, p. 185.
  8. **Arias, M.B. (1986).** *The context of education for Hispanic Students: an overview.* American Journal of Education, 1995, (26-57).
  9. **Aruna, P.K. and Usha, P. (2006).** *Influence of Cognitive Style, Intelligence and Classroom Climate on Process Outcomes in Science.* Educational Track, Vol. 6. (10), 30-33.
  10. **Atkinson, J.W., (1958).** *Motives in Fantasy, Action and Society.* Princeton, O. Van Nostrand Co. INC.
  11. **Azikiwe, U. (1998).** *Study approaches of university students.* WCCI Region II Forum. Vol. 2, Lagos. pp.106-114.
  12. **Badhri N., (1991).** *An investigation into the causes for low achievement in government high schools in Chenglapattu Educational District, Tamil Nadu.* Ph.D., Edu. Patna U.
  13. **Baker, S.B., Swisher, J.D. et al (1984).** *Measured effects of primary prevention strategies.* The Personnel and Guidance Journal, 62, 459-464.
  14. **Baker, S. B., & Gerler, E. R. (2001).** *Counseling in schools.* In D. C. Locke, J. E. Myers, and E. L. Herr (Eds.). The Handbook of Counseling, Thousand Oaks, CA: Sage Publications.
  15. **Baskaran, K. (1991).** *Achievement motivation, attitude towards problem-solving and achievement in mathematics of standard X students in Devakotal educational district.* Ph. D. Edu., Allagappa Uni.
  16. **Beale, A.V. (2004).** *Questioning whether you have a contemporary school counselling program.* The Clearing House, 78(2), 73-76.
-

- 
17. **Beedawat, S.S. (1976).** *A study of Academic underachievement among Students.* Second Survey of Research in Education, Buch, M.B, (Edu.), Baroda: Society for Educational Research and Development (SERD), 1979, P.343.
18. **Bending, A.W. (1957).** *The validity of two temperament scales in predicting student's achievement in introducing psychology.* Journal of Educational Research, 50, 571-580.
19. **Bergin, J. J., Miller, S. E., et al. (1990).** *The effects of a comprehensive guidance model on a rural school's counseling program.* Elementary School Guidance and Counseling, 25(1), 37-45.
20. **Best, J.W. (1989).** *Research in Education 6<sup>th</sup> edition.* Prentice-Hall of India Pvt. Ltd., New Delhi.
21. **Bhaduri, A. (1971).** *A comparative study of certain psychological characteristics of the over and under achievers in higher secondary schools.* D. Phil., Cal., U., Cit. in Buch, M.B (Edu.), Second Survey of Research in Education, Baroda: SERD. P.343.
22. **Bhatnagar, A. (1972).** *Effect of individual Counselling on the achievement of bright underachievers.* Journal of Indian Educational Review, (NCERT), New Delhi pp. 10-18.
23. **Bhatnagar, A. & Gupta, N. (1988).** *Career maturity of secondary students: Effect of a guidance intervention program.* Indian Educational Review, Vol. 23(4): (p.42-50).
24. **Bhatnagar, A., (1992).** *Guidance and counselling.* Cit., in Buch, M.B. (Edu.) Fifth survey of research in education (1988 – 1992) Vol. 1, New Delhi: NCERT. p. 230.

- 
25. **Bhatnagar, A. & Gupta N. (1999).** *Guidance and Counseling*. Vol. II, New Delhi: National Council of Education.
26. **Bhattacharyya, P. & Bhattacharyya, A (1990).** *A cross-sectional study on achievement motivation of secondary school students and its impact on their school achievement*. Journal "Man & Life" 16 (1-2).
27. **Binet. A., & Simon, T. (1916).** *The development of intelligence in children*. Baltimore, Williams & Wilkins. (Reprinted 1973, New York: Arno Press; 1983, Salem, NH: Ayer Company). The 1973 volume includes reprints of many of Binet's articles on testing.
28. **Borders, L.D., & Drury, S.M. (1992).** *Comprehensive school counseling programs: A review for policymakers and practitioners*. Journal of Counseling and Development, 70, 487-498.
29. **Boutwell, D.A., & Myrick, R.D. (1992).** *The go for it club*. Elementary School Guidance & Counseling, 27, 65-72.
30. **Braddock, L. (2001).** *Guidance program pages*. Retrieved from [www.fcps.com](http://www.fcps.com). 19-06-2001, Handbook.
31. **Brigman Greg, Campbell Chari. (2003).** *Helping students improve academic achievement and school success behavior*. ASCA/ Professional School Counselling 7 (2) Dec. 2003, 91-98.
32. **Bruinsma, M. (2004).** *Motivation, cognitive processing and achievement in higher education*. Learning and Instruction, 14(6), 549-568.
33. **Burges, E., (1956).** *Personality factors over and underachievers in engineering*. Journal of Educational Psychology, 47, 89-99.
-

- 
34. **Burt, C., (1962).** *The gifted child year book of education.* London: Evans.
35. **Caprara, G. V., Barbaranelli, C., et al (2006).** *Teachers' self-efficacy beliefs as determinants of job satisfaction and students' academic achievement: A study at the school level.* Journal of School Psychology, 44(6), 473-490.
36. **Chaudhari, V.P. Jain (1975).** *Factors contributing to academic underachievement.* Ph.D Psy., Nag. U.
37. **Cheek, J.R., Bradley, L.J et al (2002).** *An intervention for helping elementary students reduce test anxiety.* Professional School Counselling, 6(2), 162-164.
38. **Chopra, S.L, (1982).** *A study of some non-intellectual correlates of academic achievement.* D.Litt. Edu., Luc. University. D. Litt., Edu., Luc., U.
39. **Cohen (1978).** *Educational Research in Class rooms and Schools: a manual of materials and methods.* London: Haper and Row publishers.
40. **Colangelo, N., Kerr, B., et al (1993).** *A comparison of gifted underachievers and gifted high achievers.* Gifted Child Quarterly, 37, 155-160.
41. **Coleman, H. L. (2009).** *Handbook of school counseling.* Mahwah, NJ: Lawrence Erlbaum.
42. **Cooley, L. (2010).** *The power of groups: Solution-focused group counselling in schools.* Thousand Oaks, CA: Corwin Press.
43. **Coy, D.R. (2004).** *Developmental guidance and counselling in today's schools.* Alexandria, VA: National Association of Secondary Schools.
-

- 
44. **Crede, M., & Kuncel, N. R. (2008).** *Study habits, skills, and attitudes: the third pillar supporting collegiate academic performance.* Perspectives on Psychological Science, 3, 425-453.
45. **Crow, L.D. and Crow., (1969).** *Adolescent development and adjustment.* McGraw-Hill Book Company, United States.
46. **Devanesan, Paul P. (1990).** *Socio economic status, achievement-motivation and scholastic achievement of higher secondary students in Pasumpon Thevar Thirumagan District.* M.Phil., Edu.. Alagappa U.
47. **Davis, G.A. and Rimm, S.B., (1985).** *Education of the gifted and talented.* New Jersey: Prentice-hall.
48. **D. Betsy McCoach (2001).** *A comparison of high achievers' and low achievers' attitudes, perceptions and motivations.* Ph.D, University of Connecticut. Academic Exchange-Summer, 2001, 71-76.
49. **D. Lee, A. Elizabeth, Olson, et al., (2009).** *Effects of College Counseling Services on Academic Performance and Retention.* The Journal of College Student Development, May/June, 2009.
50. **Deary, I. J., Strand, S., et al., (2007).** *Intelligence and educational achievement.* Intelligence, 35(1), 13-21.
51. **Desena, P.A. (1964).** *The effectiveness of two study habits incentives in predicting consistent over, under, and normal achievement in college.* J. Counselling Psychology, 11, 388-394.
52. **Deshpande, A.S., (1984).** *A study of determinants of achievement of students at the SSC examination in the Pune division of Maharashtra state.* Ph. D. Edu., Pune U., Cit. in Buch, M.B. (Edu.) fourth survey of education, New Delhi: NCERT. PP. 819 – 820.
-

- 
53. **Devanesan, Paul P., (1990).** *Socio economic status, achievement-motivation and scholastic achievement of higher secondary students in Pasumpon Thevar Thirumagan District.* M.Phil., Edu.. Alagappa U.
54. **Devi, P.N. (2003).** *Effectiveness of group counselling: Adjustment among women college students.* Journal of Indian Educational Psychology, Vol.21,(2), 67-77.
55. **Dey, Niradhar. (2008).** *A Comparative Study of the study habits of high achieving CBSE and ICSE students in the secondary school examination.* Indian Educational Review, Vol. 44, No. 2, July 2008.
56. **Dickhouser, O., & Reinhard, M.A., (2006).** *Factors Underlying Expectancies of Success and Achievement: The Influential Roles of Need for Cognition and General or Specific Self-Concepts.* Journal of Personality and Social Psychology, 90(3), 490-500.
57. **Diner, C.G. (1960).** *Similarities and differences between over-achieving and underachieving students.* Personal Guidance Journal, 38, 396-400.
58. **Gough, H.G. (1953).** *The construction of a personality scales to predict academic achievement.* J. Appl. Psychology, 37, 361-366.
59. **Dua, Pratibha, (1990).** *Changes in academic self-concept through group counselling and its effects on school-related behaviour.* Ph.D., Luc. U.
60. **Duckworth, A. L., & Seligman, M. E. P. (2006).** *Self-Discipline Gives Girls the Edge: Gender in Self-Discipline, Grades, and Achievement Test Scores.* Journal of Educational Psychology,98(1), 198-208.
61. **DuPaul, G. J., et al., (2004).** *Elementary school students with AD/HD: predictors of academic achievement.* Journal of School Psychology, 42(4), 285-301.
-

- 
62. **Dutt, et al., (1972).** *Factorial Analysis of Intelligence Academic Achievement and some Personality traits.* Educational Trend, 6 (3-4) 4-11.
63. **Ediseth, A. (2002).** *The Relationship between Intelligence, Approaches to Learning and Academic Achievement.* Scandinavian Journal of Educational Research, 46(2), 219-230.
64. **Ehrmann, N., & Massey, D. S. (2008).** *Gender-specific effects of ecological conditions on college achievement.* Social Science Research, 37(1), 220-238.
65. **Ellekkakumar, B. and Elankathirselvan, N. (2001).** *Achievement Motivation of Higher Secondary Students and their Achievement in Physics.* Journal of Educational Research and Extension, Vol. 38 (1).
66. **Englund, M. M., et al.. (2004).** *Children's Achievement in Early Elementary School: Longitudinal Effects of Parental Involvement, Expectations, and Quality of Assistance.* Journal of Educational Psychology, 96(4), 723-730.
67. **Evans, G. W., & Rosenbaum, J. (2008).** *Self-regulation and the income-achievement gap.* Early Childhood Research Quarterly, In Press, Uncorrected Proof.
68. **Eyo, Mary Bassey, et al. (2010).** *Attitude of Secondary School Students Towards Guidance and Counseling Services in Cross River State.* Edo Journal of Counseling, Vol. 3, No. 1, 2010.
69. **Fatima, N. (2003).** *Influence of social environment, reading habit and self-concept on scholastic achievement—An HRD approach for school children.* Ph.D. Edu., Aligarh Muslim University.
70. **Fernandes, L., (1984).** *The effect of guidance and counselling on the academic achievement of underachieving pre-adolescent and adolescent girls.* Ph.D. Edu., Mys.Uni.
-



- 
71. **Fenwick, E., & Smith, T. (1994).** *Adolescence*. New York: Dorling Kindersley, Inc.
72. **Fielden, K. (2004).** *Evaluating Critical Reflection for Postgraduate Students in computing. Informing Science and Information Technology Education Joint Conference, 2005, Flagstaff, Arizona.* [www.informingscience.org/proceedings/InSITE2005/I38f36Field.pdf](http://www.informingscience.org/proceedings/InSITE2005/I38f36Field.pdf).
73. **Fraine, B. D., Damme, J. V., & Onghena, P. (2007).** *A longitudinal analysis of gender differences in academic self-concept and language achievement: A multivariate multilevel latent growth approach.* *Contemporary Educational Psychology*, 32(1), 132-150.
74. **Gagné, F., & St Père, F. (2002).** *When IQ is controlled, does motivation still predict achievement?* *Intelligence*, 30(1), 71-100.
75. **Gallagher, J.J., (1985).** *Teaching the gifted children.* Borton: Allyn & Bacon, (3<sup>rd</sup> ed.).
76. **Garret, H.E. (1960).** *Statistics in Psychology and Education.* Mumbai, Allied pacific private Ltd.
77. **Gaur, J.S., (1970).** *Effect of counselling on potential school failures.* Deptt. of Educational Psychology and Foundations of Education, (NCERT) New Delhi, Cit., in, Buch, M.B (Edu.), second survey of research in education. Baroda: SERD. PP. 318 – 319.
78. **Gebhart, C.G. & Hoyt Donald (1958).** *Personality needs of under and over-achieving freshmen.* *J. App. Psychology*, 42, 125-28.
79. **Gerler, E.R. (1985).** *Elementary school counseling research and the classroom learning environment.* *Elementary School Guidance & Counseling*, 20, 39-48.
-

- 
80. **Gerler, E. R., Kinney, J., & Anderson, R. F. (1985).** *The effects of counseling on classroom performance.* Journal of Humanistic Education and Development, 23, 155-165.
81. **Gerler, E. R., & Anderson, R.F. (1986).** *The effects of classroom guidance on children's success in school.* Journal of Counseling & Development, 65, 78-81.
82. **Gerler, E. R., & Drew, N.S. (1990).** *Succeeding in middle school: A multimodal approach.* Elementary School Guidance and Counseling, 24(4), 263-272.
83. **Gerler, E. R., & Herndon, E.Y. (1993).** *Learning how to succeed academically in middle school.* Elementary School Guidance and Counseling, 27(3), 186-197.
84. **Ghuman, M.S (1976).** *A study of aptitudes, personality traits and achievement motivation of academic overachievers & underachievers.* Ph.D. Psy., RSU.
85. **Gibson, R.L. (2008).** *Introduction to guidance and counselling.* Upper Saddle River, NJ: Prentice Hall.
86. **Gooden, M. A., Nowlin, T. Y., et al. (2006).** *The Achievement Gap and the No Child Left Behind Act: Is there a Connection.* In Advances in Educational Administration (Vol. Volume 9, pp. 231-247): JAI.
87. **Gowan, J.C., (1960).** *Factors of achievement in high school and college.* J. of counselling psychology. 73, PP.91 – 95.
88. **Greene, B. A., Miller, R. B., Crowson, et al. (2004).** *Predicting high school students' cognitive engagement and achievement: Contributions of classroom perceptions and motivation.* Contemporary Educational Psychology, 29(4), 462-482.
89. **Griffen, R (1988).** *Underachievers in secondary school.* Lawrence, NJ: Erlbaum Associates, Inc.
-

- 
90. **Guglielmi, R. S. (2008).** *Native Language Proficiency, English Literacy, Academic Achievement, and Occupational Attainment in Limited-English-Proficient Students: A Latent Growth Modeling Perspective.* *Journal of Educational Psychology*, 100(2), 322-342.
91. **Guilford, J.P. (1956).** *Fundamental Statistics in Psychology and Education.* New York: McGraw Hill book co.
92. **Gysbers, N. C. (2000).** *Implementing a whole school approach to guidance through a comprehensive guidance program.* *Asian Journal of Counselling*, 7(2), 5-17.
93. **Gysbers, N. C. & Henderson, P. (2000).** *Developing and managing your school guidance program.* (3rd ed.). Alexandria, VA: American School Counseling Association.
94. **Habibollah, Naderi, et al. (2010).** *Intelligence and academic achievement: An investigation of gender differences.* *Life Science Journal*, 2010; 7(1): 83-87.
95. **Hadley, H.R. (1988).** *Improving reading scores through a self-esteem prevention program.* *Elementary School Guidance & Counseling*, 22, 248-252.
96. **Hall, L.H. (1969).** *Selected variables in the academic achievement of junior college students from different socio-economic background.* *J. Edu. Res.*, 63, 60-62.
97. **Hansen, J. C., Stevic, R. R., & Warner, R. W., (1982).** *Counseling theory and process (3rd ed.).* Boston: Allyn & Bacon.
98. **Harikrishan, M., (1992).** *A study of academic achievement of the students of the higher secondary state in relation to achievement-motivation and socio-economic status.* M. Phil. Edu., Annamalai University.
-

- 
99. **Hayes, R.L., Nelson. J. et al (2002).** *Using school-wide data to advocate for student success.* Professional School Counselling, 6(2), 86-95.
100. **Heacox, D. (1991).** *Up from underachievement.* Minneapolis: Free Spirit Publishing, Inc.
101. **Heyden, S.N. (2011).** *Counselling children and adolescents.* Belmont, CA: Brooks/Cole.
102. **Hota, A.K (1995).** *Self-concept and achievement motivation in relation to academic achievement of socially backward secondary school students.* Educational review 101 (9) Se' 95, pp. 151-154 Bibliographic Tables.
103. **Howes, C., et al. (2008).** *Erratum to "Ready to learn? Children's pre-academic achievement in pre-Kindergarten programs"* [Early Childhood Research Quarterly 23 (2008) 27-50]. Early Childhood Research Quarterly, 23(3),429-430.
104. **Hui, E. K. P. (2000).** *Guidance as a whole school approach in Hong Kong: From remediation to student development.* International Journal for the Advancement of Counselling, 22(1), 69-82.
105. **Hussain A. (2006).** *Effect of guidance services on study attitudes, study habits and academic achievement of secondary school students.* Bulletin of Education and Research, June 2006, Vol. 28, No. 1, pp 35-45.
106. **Ilangovan, K.N. & Rangaraj. K.R., (2001).** *Relationship between counselling programs in test anxiety and scholastic achievement of DTE students.* Educational Review 44 (7), PP. 14-16, bibliography.
107. **Imtisunga (2003).** *A study of the intelligence, motivation of high school students in comparison with scholastic marks.* Journal of All India Association for Educational Research, Vol.15, 3-4, Sep., Dec., 60-64.
-

- 
108. **Institute of Medicine (1997).** *School and health.* Washington, D.C.: National Academy Press.
109. **Jain, S.K., (1967).** *Study Habits and Academic Attainment in Utter Pradesh Colleges.* Unpublished Ph.D. Thesis Agra University.
110. **Jamuar, K.K (1961).** *Personality and achievement.* Psychological Studies, Vol.6, No.2, 32-36.
111. **Jensen, A. R. (1998).** *The g factor: The science of mental ability.* Westport, CT: Praeger.
112. **Jiang, G. (2005).** *The development of school counseling in the Chinese mainland: A review [in Chinese].* Journal of Basic Education, 14(1), 65–82.
113. **Kadesh et al (1999).** *The study of recidivism rates of youth who receive JCAP services compared with those who do not receive.* Ph.D., Deptt. of Psy., JMI.
114. **Kaia Laidra, Helle Pullmann, Juri Allika (2007).** *Personality and intelligence as predictors of academic achievement: A cross-sectional study from elementary to secondary schools.* Personality and Individual Differences, 42 (2007) 441-451.
115. **Kamat, V., (1985).** *Improvement of self-concept and academic achievement of remand home boys through personal guidance.* PVDT College of Education for Women, Mumbai (SIE, Pune Financed).
116. **Kapoor, Rita, (1987).** *Study of factors responsible for high and low achievement at the junior high school level.* Ph.D. Edu., Avadh U., Cit., in Buch, M.B. (Edu.) Fourth survey of research in education (1983 – 1988) Vol. 1, New Delhi: NCERT, PP. 829 – 830.
117. **Kanth, R.J., (1994).** *Impact of directive counselling upon study habits writing skills of grades VI and VII students.* Insight, Vol. 1, No. 1 P. 36-49.
-

- 
118. **Karim, N.S. and Hassan, A. (2006).** *Reading Habits and Attitude in the Digital age: Analysis of gender and academic program differences in Malaysia.* The Electronic Library, Vol. 25, No. 3, p. 288-297.
119. **Kauchak, D.P. (2011).** *Introduction to teaching: Becoming a professional.* Upper Saddle River, NJ: Prentice Hall.
120. **Kaufman, P., Klein, S., & Frase, M. (1999).** *Dropout Rates in the United States, 1997.* Statistical Analysis Report. U.S. Department of Education.
121. **Kerlinger, F. (1983).** *Foundation of Behavioural Research: Education and Psychological Inquiry.* Chicago: Holt, Reinhart and Winston, Inc.
122. **Kerr Barbara and Erb Cheryl (1991).** *Career Counseling with Academically Talented Students: Effects of a Value-Based Intervention.* Journal of Counseling Psychology, Vol. 38, No. 3, (1991), 309-314.
123. **Khan M. A., (1987).** *The effect of individual counselling on the achievement of bright underachievers.* M. Phil. Edu., KU.
124. **Khan M.A., (1996).** *Gifted achievers and underachievers – their personality profiles, need-achievement and socio-economic status.* Indian Educational Review, Vol. 31, No. 2, PP. 151-155.
125. **Khan M.A., (2000).** *Gifted achievers and underachievers on personality, need-achievement and socio-economic status variables.* J. Indian Educational Review, Vol. 36, No. 2, PP. 33-47.
126. **Khan, Zebun Nisa (2002).** *Characteristics of high and low achieving Girls in Science stream at the Higher secondary stage: A Factorial study.* Indian journal of Psychometry and Education, Vol. 33(2), 127-136.
-

- 
127. **Khan, Zebun Nisa (2009).** *Cognitive and Non-cognitive Characteristics as Determinants of Success in Professional Courses at Undergraduate Stage.* Journal of Social Sciences, Vol.5, No. 3, 212-215.
128. **Kochhar, S.K. (2000).** *Educational and Vocational Guidance in secondary schools.* New Delhi: Sterling Publishers Pvt. Ltd.
129. **Kossowska, S. (1999).** *Learning styles: differential effects of self-control and deep-level information processing on academic achievement.* Personality Psychology in Europe(7), 263-281.
130. **Koteshwara, Narayana M. (1991).** *A comparative study of the characteristics of high achievers and low achievers in reading of class VIII pupils were special reference to school and home factors.* M.Phil., Edu. Venkateshwara Uni.
131. **Kothari, C.R., (1990).** *Research methodology: Methods and techniques (2<sup>nd</sup> ed.).* N.Delhi, Wiley Eastern Ltd.
132. **Kumar, M. Dixit, R. (2011).** *An investigation into study habits and personality related to achievement in English and Hindi medium students.* International Referred Research Journal, Vol.III, Issue 27, pp.46-47.
133. **Kusuma Harinath, P (2006).** *A Study of certain Factors Related to Learning Disabilities in English among School students.* Indian Educational Abstracts, July 2006, (P. 51).
134. **L'Abate, L., & Curtis, L.T., (1975).** *Teaching the exceptional child.* Philadelphia: Saunders, pp.505.
135. **Laidra, K., Pullmann, H., & Allik, J. (2007).** *Personality and intelligence as predictors of academic achievement: A cross-sectional study from elementary to secondary school.* Personality and Individual Differences, 42(3), 441-451.
-

- 
136. **Lang, P. (2003).** *Affective education in schools: A personal response.* In M. Yuen, P. S. Y. Lau, T. K. M. Leung, P. M. K. Shea, R. M. C. Chan, E. K. P. Hui, et al. (Eds.), *Life skills development and comprehensive guidance program: Theories and practices* (pp. 36–44). Hong Kong: Life Skills Development Project, Faculty of Education, University of Hong Kong.
137. **Lapan, R.T., Gysbers, N.C., & Sun, Y. (1997).** *The impact of more fully implemented guidance programs on the school experiences of high school students: A statewide evaluation study.* *Journal of Counseling & Development*, 75, 292-302.
138. **Lapan & Richard. T. et al (2002).** *Empowering students to become self-regulated learners.* *Professional School Counselling*, Vol 5 (4), pp. 257-265.
139. **Lee, R.S. (1993).** *Effects of classroom guidance on student achievement.* *Elementary School Guidance & Counseling*, 27, 163-171.
140. **Lewis, W.D., (1941).** *A comparative study of the personalities, interests and home backgrounds of gifted achievement.* *Journal of Genetic Psychology*, 59, pp.207-218.
141. **Lewis, E.C. (1970).** *The psychology of counselling.* New York: Holt, Rinehart and Winston, Inc., P.10.
142. **Lidhoo, M.L. & Khan, M.A., (1990).** *Bright underachievers among the socially backward: Counselling and remedial measures.* *Indian Edu. Review*, vol. XXV, No. 1, PP. 21-30.
143. **Lillig, P.W., & Yeracaris, C.A. (1965).** *Academic achievement correlates of achievement and affiliation motivation.* *Journal of Psychology*, 55, 115-119.



- 
144. **Liu, Z. (2005).** *Reading Behaviour in the digital environment: changes in Reading behaviour over the past 10 years.* Journal of Documentation, Vol. 61, No. 6, pp 700-12.
145. **Lum, K.M. (1960).** *A Comparison of under and over-achieving female college students.* Journal of Educational Psychology, 51, 109-114.
146. **Luo, D., Thompson, L. A., & Detterman, D. K. (2003).** *The causal factor underlying the correlation between psychometric g and scholastic performance.* Intelligence, 31(1), 67-83.
147. **Lynn, R.(1959).** *Two personality characteristics related to academic achievement.* British Journal of Educational Psychology, 29 (3), 213-216.
148. **McCall, R. B., Evahn, C., & Kratzer, L. (1992).** *High school underachievers: What do they achieve as adults?* Newbury Park, CA: SAGE Publications.
149. **Mandel, H.P., & Marcus, S. I. (1995).** *"Could do better:" Why children underachieve and what to do about it.* New York: John Wiley & Sons, Inc.
150. **Markle, A. et., (1980).** *Effect of achievement motivation training on academic performance of underachievers.* Psychological Reports, No. 47, PP.567-574.
151. **Martin, J. H., Montgomery, R. L., & Saphian, D. (2006).** *Personality, achievement test scores, and high school percentile as predictors of academic performance across four years of coursework.* Journal of Research in Personality, 40(4), 424-431.
152. **Martins, S. S., & Alexandre, P. K. (2008).** *The association of Ecstasy use and academic achievement among adolescents in two U.S. national surveys.* Addictive Behaviors, In Press, Accepted Manuscript.
-

- 
153. **McCall, R. B., Evahn, C., & Kratzer, L. (1992).** *High school underachievers*. Newbury Park, CA: Sage.
154. **McClelland, C.D. et al, (1953).** *The achievement motive*. New York: Appleton – century Crafts.
155. **McClelland, David C. (1965).** *Need-Achievement and Entrepreneurship: A Longitudinal Study*. Journal of Personality and Social Psychology, Vol. 1, No. 4, pp. 389-392.
156. **McGannon, W., Carey, J., & Dimmitt, C. (2005).** *The current status of school counseling outcome research* (Research Monograph No. 2). Amherst, MA: Center for School Counseling Outcome Research.
157. **McMillan, J. H. & Schumacher, S. (1989).** Research in education: A conceptual introduction. Glenview, IL: Scott, Foresman and Company.
158. **Mehta, Prayag (1969).** *The achievement motive in high school boys*. Research Monograph, New Delhi: NCERT.
159. **Menon, S. K (1973).** *A comparative study of the personality characteristics of over and underachievers of high ability*. Ph.D. Thesis, Ker., U., Cit. in Buch, MB (Edu.), Second Survey of Research in Education, Baroda: SERD. P. 350-351.
160. **Merill, R.M. & Murthy, D.T., (1959).** *Personality factors and academic achievement in college*. Journal of Counselling Psychology, 6, 207-211.
161. **Miech, R.A., Eaton,W.W., Brennan, K., (2005).** *Mental health disparities across education and sex: a prospective analysis examining how they persist over the life course*. Journal of Gerontology B Psychological Sciences and Social Sciences, 60 Spec No 2 93-98.
-

- 
162. **Ministry of Education, (1964-66).** *Reports of the Education Commission.* Education and National Development, Ministry of Education, Govt. of India, Delhi: PP. 238-243.
163. **Ministry of Education of the People's Republic of China. (2002).** *Guidelines on secondary and primary mental health education* [in Chinese]. Beijing: People's Education Press.
164. **Mishra, B.B (1997).** *Correlates of academic achievement of high school students in India.* The Educational Review, Vol. CIII, No. 11, (21-25).
165. **Mohan, V. & Nehru, K., (1972).** *Differentiation of over and underachievers on 16 personality factors.* Psy. Studies 17, P. 52 - 55.
166. **Mohan, V. & Khera, N., (1978).** *The relation of over and underachievement of socio-economic status and 16 PF in school children.* Educational trends, Vol. 13, No. 1, P. 13 - 23.
167. **Morgan, H.H., (1952).** *Psychometric comparison of achieving and non-achieving college students of high ability.* Journal of Consulting Psychology, 16, 252.
168. **Mroczek, D.K., and Little, T.D., (2006).** *Handbook of personality development.* London: Routledge.
169. **Mukherjee, B.N., (1968).** *Research manual for Mukherjee's Incomplete Sentence Blank.* Canada: York University, Toronto.
170. **Mullis, F. & Otwell, P. (1997).** *Counselor accountability: A study of counselor effects on academic achievement and student behaviors.* Georgia School Counselors Association Journal, 1:4, 4-12.
171. **Murray, H. A. (1938).** *Explorations in personality.* New York: Oxford University Press.
-

- 
172. **Naderi Habibollah, et al., (2008).** *Male versus female intelligence among undergraduate students: Does gender matter?* Asian Journal of Scientific Research, In Press, online first.
173. **Naglieri, J. A., & Bornstein, B.T. (2003).** *Intelligence and achievement: Just how correlated are they?* Journal of Psycho-educational Assessment 21, 244-260.
174. **Nandita & S. Tanima (2004).** *Study habits and attitude towards studies in relation to academic achievement.* Psycho-lingua 2004, 34 (1): 57-60., Psycholinguistic Association of India.
175. **No Child Left Behind Act of 2001.** Pub. L. No. 107-110, 115, Stat. 1434.
176. **National Assessment of Educational Progress. (1994).** *Report on Assessment of Educational Progress.* Princeton, NJ: Educational Testing Service.
177. **Newsom, J., (1963).** *Half our future*, London, H.M.S.O. Cit., in Butler-Por Underachievers in schools: Issues and intervention, New York, P. 24.
178. **Nneji L. (2002).** *Study Habits of Nigerian University Students.* HERDSA conference. <http://www.ecu.edu.au/conferences/herdsa/main/papers/ref/pdf/Nneji.pdf>.
179. **Nuthana P.G. & Yenagi G.V. (2009).** *Influence of study habits, self-concept on academic achievement of boys and girls.* Karnataka J. Agric. Sci., 22 (5) (pp. 1135-1138), 2009.
180. **Ogbonnia Chukwu-Etu, (2009).** *Underachieving learners: Can they learn at all.* ARECLS, 2009, Vol. 6, (pp. 84-102).
-

- 
181. **Omeogun, O.M. (2000).** *Effect of remedial guidance on the academic achievement of Lagos state adolescents in English comprehension.* Ilorin Journal of Education, Vol. 20, June 2000.
182. **Omizo, M.M., et al. (1988).** *Teaching children to cope with anger.* Elementary School Guidance & Counseling, 22, 241-245.
183. **Ong L C, Chandran V. et. al. (2010).** *Factors associated with poor academic achievement among urban primary school children in Malaysia.* Singapore Med J., 2010; 51(3): 247.
184. **Onwuegbuzie, A. J., Slate, J.R. et al. (2001).** *Role of Study Skills in Graduate Level Educational Research Courses.* The Journal of Educational Research. 94(4), 238-246.
185. **Pant Daya, (1998).** *Guidance needs of the school-going students.* Indian Educational Review, Vol.33, No.1, 65-79.
186. **Papaioannou, A. G., et al. (2008).** *Social agents, achievement goals, satisfaction and academic achievement in youth sport.* Psychology of Sport and Exercise, 9(2), 122-141.
187. **Parker, J. D. et al. (2004).** *Academic achievement in high school: does emotional intelligence matter?* Personality and Individual Differences, 37(7), 1321-1330.
188. **Parveen Amina, (2003).** *Effect of individual counselling on the achievement of underachievers.* M.Phil., Edu., University of Kashmir, J&K.
189. **Patel, S.L., (1973).** *An investigation to study self-esteem changes as a function of counselling therapy.* Ph.D., Mys. U., Cit. In, Buch, M.B (Edu.), second survey of research in education, Baroda: SERD. P. 340.
-

- 
190. **Patel, S., (1986).** *A psychological study of high achievers.* Ph. D. Psy., Guj. U., Cit., in Buch, M.B. (Edu.) Fourth survey of research in education (1983 - 1988) Vol. 1, New Delhi: NCERT. P. 842.
191. **Pathak, C.C., (1974).** *A study of achievement motive. Educational norms and school performace of high school pupils.* Ph.D. thesis SPU. Cit., in Buch, M.B. (Edu.) Second survey of research in education, Baroda SERD, P. 190 - 191.
192. **Patterson, C.H., (1958).** *Two approaches to human relations.* American Journal of Psychotherapy, 12, 691-708.
193. **Paul. S (2000).** *Low achievement: causes and remedial measures.* Journal of All India Association for Educational Research, Vol. 12, No. 3 & 4, Sept. & Dec. 2000.
194. **Pazhanivel, G. (2006).** *A study of the impact of modular approach on achievement, study habits and attitude of students in Tamil grammar at secondary level.* Indian Educational Abstracts, Vol. 6 (2), P. 18.
195. **Pierce, J.V. & Bowman, P.H. (1960).** *Motivation patterns of superior high school students—the gifted students.* Co-operative Research Monograph, 2, Washington, D.C.: U.S. Office of Education.
196. **Pilling, D. & Pringle, M., (1978).** *Controversial issues in child development.* London: Paul Eleck.
197. **Pringle, M.L., (1970).** *Able misfits—A study of educational and behaviour difficulties of 103 very intelligent children (IQS 120 - 200).* London.
198. **Prout, H.T. & Demartino, R.A. (1986).** *A meta-analysis of school-based studies of psychotherapy.* Journal of School Psychology, 24, 285-292.
-

- 
199. **Rai, P.N. (1974).** *A comparative study of a few differential personality correlates of low and high achievers.* Ph.D Education, Agra University, 1974.
200. **Rai, P.N., (1980).** *Achievement motive in low and high achievers—A comparative study.* Indian Educational review, Vol. 14, No. 3, pp. 117 - 123.
201. **Rajyaguru, M.S. (1991).** *A comparative study of over and underachievers in mathematics to compare the achievement in maths, personal characteristics and environmental characteristics overachievers and underachievers in maths.* Ph.D. Education, Bhavnagar University, 5<sup>th</sup> Survey of Education, Vol. II, p. 1902.
202. **Rani, Meena, (1992).** *A study of locus of control, self-esteem, academic responsibility, academic motivation and scholastic achievement of advantaged and disadvantaged students.* Ph.D., Edu., Univ. of Allahabad.
203. **Rather, A. R. (1985).** *Influence of Guidance and Counselling on two socio-metric categories—isolates and neglectees.* J. Indian Educational Review, Vol. XX, No. 3, p. 98-102.
204. **Ravens, J.C. (1962).** *Advanced progressive matrices, Set I and II instructions, scoring key and norms.* London: H.K. Lewis & Co.
205. **R. Aisha, Kiran A. & Malik N.H. (2002).** *Relationship of study habits with educational achievements.* International Journal of Agriculture and Biology, Vol. 4(3), 370-371.
206. **Reddy, A.M. et al. (2008).** *Impact of study habits on achievement in reading in English.* Indian Educational Review, Vol. 44, No. 2, pp. 91-119.
-

- 
207. **Reddy, V.L.N., (1973).** *A study of certain factors associated with academic achievement at first year degree examination.* Ph. D. Thesis Mys. U., Cit. in, Buch, M.B (Edu.), second survey of research in education, Baroda: SERD. P. 356.
208. **Reis,S., & McCoach, D.B., (2000).** *The underachievement of gifted students: What do we know and where.* Gifted Child Quarterly, 44(3), 152-170.
209. **Ricciuti, et al. (1955).** *The prediction of academic grades with a projective test of achievement motivation: II cross validation at the high school level.* Princeton, N.J.: E.T.S. Contract No. NR 694.
210. **Rogers, C.R., (1951).** *Client-centered therapy.* Boston, Houghton, Mufflin Co.
211. **Rogers, C.R. (1961).** "A therapist's view of the good life: The fully functioning person", in *on Becoming a Person.* Boston: Houghton Mifflin Company, 183-196.
212. **Rohde, T. E., & Thompson, L. A. (2007).** *Predicting academic achievement with cognitive ability:* Intelligence, 35(1), 83-92.
213. **Rose, C.C. & Rose, S.D. (1992).** *Family change groups for the early age child.* Special Services in the Schools, 6, 113-127.
214. **Rosen, B.C. (1956).** *The achievement syndrome; a psycho-cultural dimension of social stratification.* Amer. Socio. Rev., 21, 203-211.
215. **Rumberger, R.W. (1983).** *Dropping out of high school: the influence of race, sex and family background.* American Educational Research Journal, 20(2), (199-220).
-



- 
216. **Russell, R.K.; Petrie, T. A. (1992).** *Academic adjustment of college students: Assessment and counseling.* In Steven D. Brown, Robert W. Lent. *Handbook of Counseling Psychology.*
217. **Rutter, et al, (1979).** *Fifteen thousand hours.* Somerset: Open Books. Cit., in Butler-Por Underachievers in school: Issues and interventions, P. 24, New York.
218. **Samuel O. Salami (2008).** *Roles of personality, vocational interests, academic achievement and socio-cultural factors in educational aspirations of secondary school adolescents in southwestern Nigeria.* *Career Development International*, Vol. 13, No. 7, 2008, (pp. 630-647).
219. **Sarla Paul (2000).** *Low achievement: Causes and remedial measures.* *Journal of All India Association for Educational Research*, Vol.12, No. 3 and 4, Sept. & Dec. 2000.
220. **Sarwar M., Bashir M., et al. (2009).** *Study-orientation of high and low academic achievers at secondary level in Pakistan.* *Educational Research and Review*, Vol. 4 (4), (pp. 204-207), April 2009.
221. **Schmidt, J.J., (2003).** *Counselling in the schools: Essential services and comprehensive programs (4<sup>th</sup> ed.).* Boston: Houghton Mifflin.
222. **Schunk, D. H. (1998, November).** *Motivation and self-regulation among gifted learners.* Paper presented at the annual meeting of the National Association of Gifted Children, Louisville, KY.
223. **Schwartz, D., et al. (2008).** *Peer Relationships and Academic Achievement as Interacting Predictors of Depressive Symptoms During Middle Childhood.* *Journal of Abnormal Psychology*, 117(2), 289-299.
-

- 
224. **Seetha, B.C. (1975).** *An Inquiry into the psychological and social factors Affecting Academic Achievement.* Ph.D. Ban., U., Cit. in Buch, MB (Edu.), Second Survey of Research in Education, SERD. P. 356-357.
225. **Shertzer, B. and S. C. Stone, (1976).** *Fundamentals of guidance.* Boston: Houghton Mifflin Company.
226. **Shivappa, D., (1980).** *Factors affecting the academic achievement of high school pupils.* Ph. D. Edu., Kar. U., Cit., in Buch, M.B. (Edu.) Third Survey of Research in Education. (1978–1983) New Delhi: NCERT. P. 690.
227. **Simmons, J. (2002).** Reading and the University, cited in King, D. (2003). Reading>Writing, Rithmatic. UCSC's Writing 169 Electronic Resource. Online:<http://people.ucsc.edu/~davidlaw/King.html>.
228. **Sinha, D., (1970).** *Academic achievers and non-achievers.* Allahabad: United Publishers.
229. **Sinha, N.C.P. (1970).** *Need for achievement and academic attainment.* Indian Educational Review, 5 (2), 59-63.
230. **Singh, S., (1984).** *Relationship of home environment, need for achievement and academic motivation with academic achievement.* Ph. D. Psy., MAG. U., Cit., in Buch, M.B. (Edu.) Fourth survey of research in education (1983 - 1988) Vol. 1, New Delhi: NCERT. p. 856.
231. **Singh, S. (1985).** *Guidance needs of children living in Destitute Homes in Utter Pradesh.* BHU. (NCERT).
232. **Sink C.A. & Stroh, H.R. (2003).** *What are the effects of comprehensive developmental guidance programs on early elementary students' academic achievement.* School Counselling Research Brief 2.2, Feb. 15, 2004, Center for School Counseling Outcome Research.

- 
233. **Sirohi, V. (2004).** *A study of under-achievement in relation to study habits and attitude.* Journal of Indian Education, Vol. 30, No.1, 14-19.
234. **Smith, T. C., Smith, B. L., & Dobbs, K. (1991).** *Relationship between the peabody picture vocabulary test-revised, wide range achievement test-tevised, and weschler intelligence scale for children-revised.* Journal of School Psychology, 29(1), 53-56.
235. **Smith, L., (1965).** *Significant difference between high ability achieving and non-achieving college freshman as revealed by interview data.* J. Educ. Res., 59, 10.
236. **Sorenson, H. (1964).** *Psychology in education.* New York: McGraw Hill.
237. **Sotankay, V.V., (1986).** *A comparative study of personality factors and achievement motivation of high and low achievers in natural and biological sciences.* Ph. D. Edu., Cit., in Buch, M.B. (Ed.) Fourth Survey of Research in Education (1983 - 1988) Vol. 1, New Delhi: NCERT. P. 858 - 859.
238. **Sousa, D.A., (2003).** *How the gifted brain learners.* California: Corwin Press.
239. **Sprinthall, N.A. (1981).** *A new model for research in the science of guidance and counseling.* The Personnel and Guidance Journal, 59, 487-493.
240. **Standard R.P., (2003).** *High school graduation rates in the United States: implication for the counselling profession.* Journal of Counselling and Development, 81(2), 217-221.
241. **Steinberge, L. et al. (1984).** *Dropping out among language minority youth.* Review of Educational Research, 54(1), (113-132).
-

- 
242. **St. Clair, K.L. (1989).** *Middle school counseling research: A resource for school counselors.* Elementary School Guidance & Counseling, 23, 219-226.
243. **Stipek, D., & Gralinski, J. H. (1996).** *Children's beliefs about intelligence and school performance.* Journal of Educational Psychology, 88(3), 397-407.
244. **Strive, E.H. (1958).** *Motivation for college in high school boys.* School Review, 66, 341-350.
245. **Subramania, Dandapani (1977).** *Effect of a Group Guidance program upon the academic achievement of high school underachievers.* Ph.D. Edu., Mys. Uni., (1977).
246. **Subramania, D. (1979).** *Guidance program for underachievers.* J. Indian Educational Review. A Research Journal. Vol. XIV, No. 1, PP. 111-119.
247. **Sunanda, G (1980).** *Effect of Counselling on the Study habits & achievement of teacher trainees.* Ph.D. Edu., Chennai Uni., 1980.
248. **Sunanda, G., (1982).** *The effect of counselling on the study habits and achievement of the teacher trainees.* Indian J. of applied psychology, Vol. 19, No. 2, P. 85-91.
249. **Supplee, P.L., (1990).** *Reaching the gifted underachiever.* New York: Teachers College Press.
250. **Sween, (1984).** *Academic achievement of high school students in relation to the instructional design, intelligence, self-concept and need-achievement.* Ph.D. Edu., Pan. U., Cit., in, Buch, M.B (Edu.), fourth survey of research in education (1983 - 88). Vol. 1, P. 861.
-

- 
251. **Tannenbaum, A., (1962).** *Adolescent attitude towards academic brilliance.* New York: Teachers College Press.
252. **Terman, L.M., (1916).** *The Measurement of Intelligence,* Boston, Houghton Mifflin.
253. **Terman, L.M. & Oden, M.H., (1947).** *The gifted child grows up in genetic studies of genius.* Vol. II, Stanford U., Press Stanford.
254. **Thomas Committee Report, (1984).** *Improving Primary Schools.* London: Thomas N; Chairman, I.L.E.E. Report.
255. **Tony D. Crespi (2009).** *Group Counseling in the Schools: Legal, Ethical, and Treatment Issues in School Practice.* Psychology in the School. Vol. 46 (3), (2009).
256. **Torrance P., & Strom R, (1965).** *Mental health and achievement.* New York: John Wiley and Sons, Inc.
257. **Tyler, L. E. (1958).** *Theoretical principles underlying the counselling process.* Journal of Counselling Psychology, 5, 3–10.
258. **Uhlinger, C.A. & Stephens, M.W., (1960).** *Relation of achievement motivation to academic achievement in students of superior ability.* Journal of Educational Psychology, 51, 259-60.
259. **University of Massachusetts,** School of Education.
260. **U.S. Department of Education. (2002).** *No Child Left Behind.* Available online at [www.ed.gov/offices/OESE/reference.html](http://www.ed.gov/offices/OESE/reference.html).
261. **Van Dalen, D.B. (1973).** *Understanding Educational Research.* New York; McGraw Hill.
-

- 
262. **Verduyn, C.M., Lord, W., & Forrest, G.C. (1990).** *Social skills training in schools: An evaluation study.* Journal of Adolescence, 13, 3-16.
263. **Wallis, J. H. (1973).** *Personal counselling: An introduction to relationship therapy.* London: Allen and Unwin.
264. **Watkins, C. (1999).** *Personal-social education: Beyond the national curriculum.* British Journal of Guidance and Counselling, 27(1), 71-84.
265. **Watkins, C. (2008).** *Depoliticisation, demoralisation and depersonalisation—And how to better them.* Pastoral Care in Education, 26(1), 5-11.
266. **Watkins, M. W., Lei, P.-W., & Canivez, G. L. (2007).** *Psychometric intelligence and achievement: A cross-lagged panel analysis.* Intelligence, 35(1), 59-68.
267. **Watts, V. & Thomas, B. (1997).** *Proving that counseling programs do count: The counseling accountability.* Georgia School Counselors Association Journal, 1:4, 1-3.
268. **Weiner, I. B. (1992).** *Psychological disturbance in adolescence (2nd Edition):* New York: John Wiley & Sons.
269. **Weiss, P.M., Werthemier & Groesbeck (1960).** *Achievement motivation, academic aptitude and college grades.* Edu. Psychol. Measurement. 20, 663-665.
270. **Whiston Susan C. & Sexton Thomas L. (1998).** *A Review of School Counseling Outcome Research: Implications for Practice.* Journal of Counseling and Development, Fall 1998, Vol. 76, 412-425.
271. **Whitemore, J.R., (1980).** *Giftedness conflict and underachievement.* Boston: Allyn & Bacon.
272. **Williamson, E.G. (1939).** *How to counsel students.* New York; McGraw Hill Book Co.
-

## APPENDIX I

Representation of the Underachievement (Experimental Group) on different problems with respect to Need-achievement (pre-test).

| SUBJECT | AREAS                  | SUBJECT | AREAS               |
|---------|------------------------|---------|---------------------|
| 1       | A, B, C, E & Total     | 31      | A, B, C, D, & Total |
| 2       | A, B, C, D & Total     | 32      | A, C, D, E, & Total |
| 3       | A, B, C, Total         | 33      | A, B, C, D & Total  |
| 4       | C, D, E, Total         | 34      | A, B, C, E, & Total |
| 5       | A, C, D, E, & Total    | 35      | A, B, C, D          |
| 6       | C, D, E, & Total       | 36      | A, B, C & Total     |
| 7       | B, C, D, E             | 37      | A, B, C, E & Total  |
| 8       | A, C, D & Total        | 38      | A, B, C, E & Total  |
| 9       | A, B, C, & Total       | 39      | A, B, C, E, & Total |
| 10      | A, B, C, E, & Total    | 40      | A, B, C, D, & Total |
| 11      | A, B, C, & Total       | 41      | C, D & Total        |
| 12      | A, B, C, D & Total     | 42      | C, D, E & Total     |
| 13      | A, B, C, E, & Total    | 43      | B, C, D, E          |
| 14      | A, B, C, & Total       | 44      | A, E, & Total       |
| 15      | C, D, E                | 45      | A, C, D, & Total    |
| 16      | A, C, E, & Total       | 46      | C, D, E             |
| 17      | A, D, E & Total        | 47      | A, B, C & Total     |
| 18      | B, C, D, E             | 48      | A, B, C & Total     |
| 19      | C, D, E, & Total       | 49      | A, B, C, E & Total  |
| 20      | C, D, E, & Total       | 50      | A, B, C & Total     |
| 21      | A, B, C, & Total       | 51      | A, B, C, E & Total  |
| 22      | A, B, C, D, & Total    | 52      | A, B, C & Total     |
| 23      | A, B, C, D, E, & Total | 53      | A, C, D & Total     |
| 24      | A, B, C, E, & Total    | 54      | B, C, D, E          |
| 25      | A, B, C, & Total       | 55      | C, D, & Total       |
| 26      | A, B, C, D             | 56      | A, C, E & Total     |
| 27      | A, B, C, E, & Total    | 57      | C, D, E & Total     |
| 28      | A, B, C, D, & Total    | 58      | A, B, C & Total     |
| 29      | A, C, D, E, & Total    | 59      | A, B, C, E, & Total |
| 30      | A, B, C, D, & Total    | 60      | A, B, C, & Total    |

A: Hope of success  
 C: Perseverance  
 E: Internal Control of Fate

B: Ego-ideal  
 D: Realistic Attitude

## APPENDIX II

Representation of the Underachievement (Experimental Group) on different problems with respect to Study Habits (pre-test).

| SUBJECT | AREAS            | SUBJECT | AREAS               |
|---------|------------------|---------|---------------------|
| 1       | A, B, C & Total  | 31      | A, B, C, D,         |
| 2       | A, B, D & Total  | 32      | B, C, D & Total     |
| 3       | A, B, C & Total  | 33      | A, B, D & Total     |
| 4       | B, C, D & Total  | 34      | A, B, C & Total     |
| 5       | A, C, D & Total  | 35      | A, B, D             |
| 6       | C, D & Total     | 36      | B, C & Total        |
| 7       | B, C, D          | 37      | A, B & Total        |
| 8       | C, D & Total     | 38      | A, B & Total        |
| 9       | A, B, C, & Total | 39      | A, B, C & Total     |
| 10      | A, B & Total     | 40      | A, B, D, & Total    |
| 11      | B, C, & Total    | 41      | B, C, D & Total     |
| 12      | A, B, D          | 42      | C, D & Total        |
| 13      | A, B & Total     | 43      | B, C, D             |
| 14      | A, B, C, & Total | 44      | A, B & Total        |
| 15      | B, D             | 45      | A, B, C, D, & Total |
| 16      | A, C & Total     | 46      | B, C, D             |
| 17      | D, & Total       | 47      | A, B, C & Total     |
| 18      | B, C, D          | 48      | B, C & Total        |
| 19      | C, D, & Total    | 49      | A, B, C & Total     |
| 20      | C, D, & Total    | 50      | A, B, & Total       |
| 21      | A, B, & Total    | 51      | A, B & Total        |
| 22      | A, B, D, & Total | 52      | B, C & Total        |
| 23      | B, C, D          | 53      | A, C, D & Total     |
| 24      | A, B, & Total    | 54      | A, B, C, D          |
| 25      | B, C & Total     | 55      | B, C, D, & Total    |
| 26      | A, B, D          | 56      | A, C & Total        |
| 27      | A, B & Total     | 57      | B, C, D             |
| 28      | B, C, D, & Total | 58      | A, B, C & Total     |
| 29      | A, B, D & Total  | 59      | A, B & Total        |
| 30      | A, B, D, & Total | 60      | B, C, & Total       |

A: Time Appropriation  
 C: Interference During Study

B: Content of Study  
 D: Other Indulgences



### APPENDIX III

Representation of Need-achievement Scores of  
Experimental Group, N=60 (Pre-Test)

| S.No. | Hope of Success | Ego-ideal | Perseverance | Realistic Attitude | Internal Control of Fate | Total |
|-------|-----------------|-----------|--------------|--------------------|--------------------------|-------|
| 1     | -4              | 1         | 4            | 10                 | 5                        | 16    |
| 2     | 4               | 2         | 6            | -5                 | 3                        | 10    |
| 3     | -3              | -3        | 2            | 5                  | 6                        | 7     |
| 4     | 2               | -2        | 4            | -2                 | -1                       | 1     |
| 5     | -4              | 4         | 1            | 5                  | -1                       | 5     |
| 6     | -7              | -2        | 3            | 4                  | 4                        | 2     |
| 7     | -5              | -5        | 1            | -2                 | -2                       | -13   |
| 8     | -5              | -5        | 2            | 3                  | -3                       | -8    |
| 9     | -3              | -3        | 4            | -3                 | 1                        | -4    |
| 10    | -7              | -2        | 4            | 4                  | -1                       | -2    |
| 11    | 6               | 3         | 0            | 10                 | 1                        | 20    |
| 12    | 7               | 4         | 2            | -4                 | 1                        | 10    |
| 13    | 6               | -3        | 0            | 7                  | -2                       | 8     |
| 14    | -3              | -2        | -3           | -3                 | -1                       | -12   |
| 15    | 2               | 1         | 9            | 8                  | -2                       | 18    |
| 16    | 6               | 3         | 2            | 12                 | 4                        | 27    |
| 17    | 9               | 6         | 2            | 3                  | -1                       | 19    |
| 18    | 4               | -2        | 5            | -2                 | 0                        | 5     |
| 19    | -4              | -2        | 6            | 5                  | 5                        | 10    |
| 20    | 5               | -3        | 6            | -2                 | -2                       | 4     |
| 21    | -4              | -2        | -1           | -3                 | -3                       | -13   |
| 22    | -3              | -5        | 1            | 2                  | 4                        | -1    |
| 23    | -5              | 2         | -4           | -5                 | 3                        | -9    |
| 24    | 8               | -3        | 0            | 7                  | 6                        | 18    |
| 25    | 5               | 9         | 2            | -4                 | 4                        | 16    |
| 26    | -5              | 3         | -8           | 4                  | -2                       | -8    |
| 27    | 6               | 3         | -2           | -1                 | -3                       | 3     |
| 28    | -3              | 2         | 4            | 2                  | 1                        | 6     |

| S.No. | Hope of Success | Ego-ideal | Perseverance | Realistic Attitude | Internal Control of Fate | Total |
|-------|-----------------|-----------|--------------|--------------------|--------------------------|-------|
| 29    | -7              | -2        | 4            | 4                  | -1                       | -2    |
| 30    | 4               | -1        | 4            | -1                 | -3                       | 3     |
| 31    | 3               | 2         | -3           | -5                 | 2                        | -1    |
| 32    | -5              | 2         | -3           | 5                  | -3                       | -4    |
| 33    | -4              | 2         | -2           | 5                  | -1                       | 0     |
| 34    | -6              | -4        | -4           | -2                 | -1                       | -17   |
| 35    | -9              | 4         | -1           | 5                  | -2                       | -3    |
| 36    | 7               | 4         | 1            | -4                 | -3                       | 5     |
| 37    | 2               | 6         | 2            | -2                 | -3                       | 5     |
| 38    | 2               | 5         | 3            | 3                  | -2                       | 11    |
| 39    | 4               | 2         | 4            | -3                 | -1                       | 6     |
| 40    | 8               | 4         | 4            | -2                 | -1                       | 13    |
| 41    | 5               | 6         | 1            | -2                 | -2                       | 8     |
| 42    | 2               | -2        | 2            | 4                  | -3                       | 3     |
| 43    | 2               | 3         | 3            | -3                 | -3                       | 2     |
| 44    | -3              | 1         | 3            | -3                 | 1                        | -1    |
| 45    | 3               | 2         | -6           | -2                 | 5                        | 2     |
| 46    | 2               | 5         | -6           | 5                  | 6                        | 12    |
| 47    | 4               | 3         | -2           | 4                  | 2                        | 11    |
| 48    | 3               | -4        | -3           | 4                  | 2                        | 2     |
| 49    | 3               | 4         | -3           | -2                 | -2                       | 0     |
| 50    | 4               | -1        | -3           | -1                 | 2                        | 1     |
| 51    | 2               | 3         | 2            | -1                 | 5                        | 11    |
| 52    | 3               | 4         | 2            | -2                 | 2                        | 9     |
| 53    | 6               | 2         | 2            | -3                 | 5                        | 12    |
| 54    | 8               | 3         | -1           | 4                  | -2                       | 12    |
| 55    | -3              | 6         | -1           | -2                 | 6                        | 6     |
| 56    | 4               | -2        | -2           | -4                 | 4                        | 0     |
| 57    | 9               | 1         | -2           | -2                 | -2                       | 4     |
| 58    | -2              | 2         | -3           | 1                  | 3                        | 1     |
| 59    | -6              | -2        | -4           | 2                  | -2                       | -12   |
| 60    | -2              | 5         | -4           | -1                 | -1                       | -3    |

## APPENDIX IV

Representation of Need-achievement Scores of  
Experimental Group, N=60 (Post-Test)

| S.No. | Hope of Success | Ego-ideal | Perseverance | Realistic Attitude | Internal Control of Fate | Total |
|-------|-----------------|-----------|--------------|--------------------|--------------------------|-------|
| 1     | 4               | 4         | 6            | 10                 | 4                        | 28    |
| 2     | 4               | 6         | 8            | 4                  | 4                        | 26    |
| 3     | 10              | 6         | 6            | 4                  | 4                        | 30    |
| 4     | 10              | 6         | 8            | 3                  | 4                        | 31    |
| 5     | 10              | 3         | 6            | 6                  | 3                        | 28    |
| 6     | 6               | 3         | 6            | 6                  | 6                        | 27    |
| 7     | -4              | 3         | 5            | 3                  | 6                        | 13    |
| 8     | -4              | 3         | 6            | 2                  | 6                        | 13    |
| 9     | 4               | 5         | 4            | 2                  | 5                        | 20    |
| 10    | 3               | 6         | 4            | 3                  | 5                        | 21    |
| 11    | 6               | 6         | 0            | -2                 | 5                        | 15    |
| 12    | 6               | 6         | 4            | 3                  | 5                        | 24    |
| 13    | 10              | 4         | 4            | 6                  | 5                        | 29    |
| 14    | 2               | 4         | 5            | 6                  | 5                        | 22    |
| 15    | -2              | 1         | 6            | 6                  | 6                        | 17    |
| 16    | 11              | 3         | 4            | 10                 | 6                        | 34    |
| 17    | -2              | 4         | 4            | 4                  | 4                        | 14    |
| 18    | 3               | 4         | 8            | 4                  | 4                        | 23    |
| 19    | 2               | 4         | 8            | 0.4                | 5                        | 19.4  |
| 20    | 2               | 5         | 8            | 2                  | 5                        | 22    |
| 21    | 5               | 5         | 6            | 3                  | 4                        | 23    |
| 22    | 4               | 5         | 6            | 2                  | 6                        | 23    |
| 23    | 3               | 5         | 6            | -3                 | 4                        | 15    |
| 24    | 9               | 4         | 6            | 10                 | 5                        | 34    |
| 25    | 3               | 9         | 5            | 8                  | 4                        | 29    |
| 26    | -5              | 6         | 8            | 8                  | 5                        | 22    |
| 27    | 6               | 6         | 4            | 6                  | 4                        | 26    |
| 28    | -2              | 4         | 8            | 5                  | 5                        | 20    |

| S.No. | Hope of Success | Ego-ideal | Perseverance | Realistic Attitude | Internal Control of Fate | Total |
|-------|-----------------|-----------|--------------|--------------------|--------------------------|-------|
| 29    | 4               | 4         | 8            | 6                  | 3                        | 25    |
| 30    | 4               | 3         | 8            | 5                  | 3                        | 23    |
| 31    | 5               | 5         | 5            | 5                  | 5                        | 25    |
| 32    | 4               | 5         | 5            | 5                  | 3                        | 22    |
| 33    | -2              | 5         | 5            | 5                  | 4                        | 17    |
| 34    | 5               | 6         | 5            | 3                  | 4                        | 23    |
| 35    | 3               | 6         | 4            | 6                  | 4                        | 23    |
| 36    | 3               | 6         | 4            | 6                  | 4                        | 23    |
| 37    | 3               | 5         | 5            | 6                  | 5                        | 24    |
| 38    | 5               | 3         | 5            | 4                  | 5                        | 22    |
| 39    | 3               | 5         | 6            | 4                  | 3                        | 21    |
| 40    | 3               | 4         | 6            | 5                  | 3                        | 21    |
| 41    | 2               | 4         | 6            | 5                  | 3                        | 20    |
| 42    | 3               | 4         | 7            | 5                  | 4                        | 23    |
| 43    | 2               | 4         | 7            | 3                  | 4                        | 20    |
| 44    | -2              | 6         | 7            | 3                  | 3                        | 17    |
| 45    | 2               | 6         | 3            | 3                  | 5                        | 19    |
| 46    | 3               | 6         | 3            | -1                 | 5                        | 16    |
| 47    | 5               | 6         | 3            | 5                  | 3                        | 22    |
| 48    | 5               | 3         | 4            | 5                  | 3                        | 20    |
| 49    | 3               | 3         | 4            | 5                  | 3                        | 18    |
| 50    | -2              | 3         | 4            | 3                  | 5                        | 13    |
| 51    | 5               | 4         | 6            | 3                  | 5                        | 23    |
| 52    | 3               | 4         | 6            | 3                  | 5                        | 21    |
| 53    | 3               | 6         | 6            | 2                  | 3                        | 20    |
| 54    | 6               | 6         | 4            | 2                  | 5                        | 23    |
| 55    | -3              | 6         | 4            | 2                  | 5                        | 14    |
| 56    | -4              | 4         | 4            | 3                  | 6                        | 13    |
| 57    | 4               | 3         | 4            | 2                  | 4                        | 17    |
| 58    | 5               | 4         | 4            | 2                  | 4                        | 19    |
| 59    | 6               | 4         | 3            | 4                  | 4                        | 21    |
| 60    | 5               | 3         | 3            | 1                  | 3                        | 15    |

## APPENDIX V

Representation of Need-achievement Scores of  
Control Group, N=60 (Pre-Test)

| S.No. | Hope of Success | Ego-ideal | Perseverance | Realistic Attitude | Internal Control of Fate | Total |
|-------|-----------------|-----------|--------------|--------------------|--------------------------|-------|
| 1     | 3               | 5         | -3           | 3                  | 2                        | 10    |
| 2     | 5               | 4         | -3           | -5                 | -3                       | -2    |
| 3     | 3               | 2         | -2           | 3                  | 5                        | 11    |
| 4     | 2               | 3         | -4           | -2                 | 3                        | 2     |
| 5     | 2               | 6         | -1           | 5                  | -2                       | 10    |
| 6     | -4              | -4        | 1            | 4                  | 2                        | -1    |
| 7     | 3               | 3         | 2            | 2                  | -3                       | 7     |
| 8     | -2              | 5         | 3            | 3                  | -2                       | 7     |
| 9     | -4              | 5         | 4            | 3                  | -1                       | 7     |
| 10    | -3              | -2        | 4            | -2                 | 1                        | -2    |
| 11    | 2               | 3         | 1            | -2                 | -2                       | 2     |
| 12    | 5               | 2         | 2            | 4                  | 3                        | 16    |
| 13    | -2              | -2        | 3            | -4                 | -3                       | -8    |
| 14    | 4               | 3         | 3            | -3                 | 1                        | 8     |
| 15    | 2               | 5         | -6           | -2                 | 3                        | 2     |
| 16    | -2              | 4         | -6           | -3                 | 2                        | -5    |
| 17    | -3              | 1         | -2           | 2                  | -2                       | -4    |
| 18    | 5               | -4        | -3           | 5                  | 2                        | 5     |
| 19    | 6               | -4        | -3           | 2                  | 4                        | 5     |
| 20    | -3              | -3        | -3           | 4                  | 2                        | -3    |
| 21    | -2              | -6        | 2            | -1                 | 5                        | -2    |
| 22    | 5               | -5        | 2            | -2                 | 2                        | 2     |
| 23    | 3               | 2         | 2            | 3                  | 1                        | 11    |
| 24    | 2               | 3         | -1           | 3                  | 2                        | 9     |
| 25    | -3              | 9         | -1           | 5                  | 3                        | 13    |
| 26    | -4              | -2        | -2           | -4                 | 4                        | -8    |
| 27    | 4               | 1         | -2           | -2                 | -2                       | -1    |
| 28    | -2              | -2        | -3           | -2                 | -3                       | -12   |

| S.No. | Hope of Success | Ego-ideal | Perseverance | Realistic Attitude | Internal Control of Fate | Total |
|-------|-----------------|-----------|--------------|--------------------|--------------------------|-------|
| 29    | -6              | -2        | -4           | -3                 | -2                       | -17   |
| 30    | -2              | -1        | -4           | -1                 | -1                       | -9    |
| 31    | -4              | -1        | 4            | 8                  | 1                        | 8     |
| 32    | -8              | 2         | 6            | -3                 | -3                       | -6    |
| 33    | -5              | 4         | 2            | -5                 | 1                        | -3    |
| 34    | -2              | -2        | 4            | -2                 | 1                        | -1    |
| 35    | -3              | 7         | 1            | -4                 | -1                       | 0     |
| 36    | -9              | -2        | 3            | 4                  | 4                        | 0     |
| 37    | -4              | 3         | 1            | -2                 | -4                       | -6    |
| 38    | 5               | -3        | 2            | 3                  | -3                       | 4     |
| 39    | 3               | -3        | 4            | 3                  | 1                        | 8     |
| 40    | 2               | -2        | 4            | 4                  | -1                       | 7     |
| 41    | 3               | 3         | 0            | -6                 | 2                        | 2     |
| 42    | 1               | 4         | 2            | -4                 | 4                        | 7     |
| 43    | 9               | -3        | 0            | 7                  | 2                        | 15    |
| 44    | 3               | -2        | -3           | 3                  | 1                        | 2     |
| 45    | 2               | 3         | 9            | 8                  | 5                        | 27    |
| 46    | 6               | 3         | 2            | 4                  | 2                        | 17    |
| 47    | 7               | 5         | 2            | 3                  | -1                       | 16    |
| 48    | 3               | 2         | 5            | -2                 | 5                        | 13    |
| 49    | 5               | 2         | 6            | 5                  | 2                        | 20    |
| 50    | -2              | -3        | 6            | 2                  | 2                        | 5     |
| 51    | 4               | -2        | -1           | 3                  | -3                       | 1     |
| 52    | -3              | 4         | 1            | 2                  | -4                       | 0     |
| 53    | 5               | 2         | -4           | 6                  | 1                        | 10    |
| 54    | 9               | -3        | 0            | 7                  | 2                        | 15    |
| 55    | 3               | 7         | 2            | 3                  | 3                        | 18    |
| 56    | -5              | 5         | -4           | 4                  | 2                        | 2     |
| 57    | 7               | 3         | -2           | 3                  | -3                       | 8     |
| 58    | 4               | -2        | 5            | -2                 | 5                        | 10    |
| 59    | 5               | 2         | 5            | 4                  | -1                       | 15    |
| 60    | 6               | 1         | 5            | 5                  | -3                       | 14    |

## APPENDIX VI

Representation of Need-achievement Scores of  
Control Group, N=60 (Post-Test)

| S.No. | Hope of Success | Ego-ideal | Perseverance | Realistic Attitude | Internal Control of Fate | Total |
|-------|-----------------|-----------|--------------|--------------------|--------------------------|-------|
| 1     | 2               | -1        | 3            | 3                  | 4                        | 11    |
| 2     | -5              | -1        | 3            | 2                  | 4                        | 3     |
| 3     | 4               | 2         | 3            | -5                 | 1                        | 5     |
| 4     | 3               | -4        | -4           | -2                 | 1                        | -6    |
| 5     | -2              | -4        | -1           | 6                  | -2                       | -3    |
| 6     | 3               | -4        | 1            | 6                  | -4                       | 2     |
| 7     | -3              | 3         | 2            | 2                  | -4                       | 0     |
| 8     | -5              | 3         | 3            | 3                  | -4                       | 0     |
| 9     | 2               | 2         | 4            | 3                  | -1                       | 10    |
| 10    | -6              | -2        | 4            | -2                 | -1                       | -7    |
| 11    | 2               | -5        | 1            | -2                 | -2                       | -6    |
| 12    | 3               | 3         | 2            | 4                  | -3                       | 9     |
| 13    | -2              | -2        | 3            | -4                 | -3                       | -8    |
| 14    | 3               | 2         | 3            | -3                 | 1                        | 6     |
| 15    | -2              | 1         | -6           | -2                 | 3                        | -6    |
| 16    | 3               | 3         | -6           | 3                  | 5                        | 8     |
| 17    | -7              | 1         | -2           | 2                  | 2                        | -4    |
| 18    | -3              | 4         | -3           | 4                  | 2                        | 4     |
| 19    | 5               | -4        | -3           | 2                  | 2                        | 2     |
| 20    | -4              | -3        | -3           | -1                 | 2                        | -9    |
| 21    | -2              | 5         | 2            | 1                  | 2                        | 8     |
| 22    | 3               | -5        | 2            | -2                 | 2                        | 0     |
| 23    | 3               | 2         | 2            | -3                 | 1                        | 5     |
| 24    | 2               | 3         | -1           | 6                  | 2                        | 12    |
| 25    | -3              | 9         | -1           | 7                  | 3                        | 15    |
| 26    | -4              | -2        | -2           | 4                  | 4                        | 0     |
| 27    | 4               | 1         | -2           | -2                 | -2                       | -1    |
| 28    | -2              | 5         | -3           | -2                 | -3                       | -5    |

| S.No. | Hope of Success | Ego-ideal | Perseverance | Realistic Attitude | Internal Control of Fate | Total |
|-------|-----------------|-----------|--------------|--------------------|--------------------------|-------|
| 29    | 3               | 2         | -8           | -3                 | -2                       | -8    |
| 30    | -2              | 1         | -8           | 4                  | -1                       | -6    |
| 31    | 6               | -1        | 4            | 7                  | 1                        | 17    |
| 32    | -5              | 2         | 6            | -4                 | -3                       | -4    |
| 33    | 3               | -4        | 2            | 3                  | 1                        | 5     |
| 34    | 7               | -2        | 4            | -2                 | 1                        | 8     |
| 35    | 4               | 4         | 1            | -5                 | -1                       | 3     |
| 36    | 2               | -2        | 3            | 4                  | 4                        | 11    |
| 37    | 5               | 3         | 1            | -2                 | -6                       | 1     |
| 38    | 2               | -3        | 2            | 3                  | -6                       | -2    |
| 39    | -3              | 5         | 4            | 3                  | 1                        | 10    |
| 40    | 4               | 3         | 4            | 4                  | -1                       | 14    |
| 41    | 7               | 3         | 0            | -2                 | 1                        | 9     |
| 42    | 3               | 4         | 2            | -4                 | 1                        | 6     |
| 43    | 9               | -3        | 0            | 7                  | 2                        | 15    |
| 44    | -3              | -2        | -3           | 3                  | 1                        | -4    |
| 45    | 3               | 1         | 9            | 8                  | 2                        | 23    |
| 46    | 7               | 3         | 2            | 3                  | 2                        | 17    |
| 47    | -3              | 4         | 2            | 4                  | -1                       | 6     |
| 48    | -4              | -2        | 5            | -2                 | 3                        | 0     |
| 49    | 2               | 2         | 2            | 5                  | 2                        | 13    |
| 50    | 6               | -3        | -6           | 2                  | 2                        | 1     |
| 51    | -4              | 2         | -1           | 3                  | -3                       | -3    |
| 52    | 2               | -4        | 1            | 2                  | 6                        | 7     |
| 53    | 5               | 2         | -4           | -3                 | 4                        | 4     |
| 54    | 9               | -3        | 0            | 7                  | 2                        | 15    |
| 55    | 3               | 9         | 2            | -4                 | 0                        | 10    |
| 56    | -5              | 5         | -8           | 4                  | 2                        | -2    |
| 57    | 6               | 3         | -2           | 3                  | 3                        | 13    |
| 58    | 3               | 5         | 4            | -2                 | 1                        | 11    |
| 59    | 5               | 7         | 4            | 4                  | -1                       | 19    |
| 60    | 2               | 3         | 4            | 1                  | 3                        | 13    |



## APPENDIX VII

Representation of Study Habit Scores of  
Experimental Group, N=60 (Pre-Test)

| S.No. | Time Appropriation | Content of Study | Interference During Study | Other Indulgences | Total |
|-------|--------------------|------------------|---------------------------|-------------------|-------|
| 1     | 5                  | 3                | 5                         | 4                 | 17    |
| 2     | 3                  | 3                | 5                         | 3                 | 14    |
| 3     | 3                  | 2                | 5                         | 3                 | 13    |
| 4     | 4                  | 2                | 5                         | 3                 | 14    |
| 5     | 6                  | 3                | 3                         | 2                 | 14    |
| 6     | 6                  | 2                | 2                         | 3                 | 13    |
| 7     | 5                  | 3                | 5                         | 2                 | 15    |
| 8     | 3                  | 4                | 5                         | 1                 | 13    |
| 9     | 5                  | 2                | 3                         | 2                 | 12    |
| 10    | 3                  | 3                | 4                         | 3                 | 13    |
| 11    | 5                  | 3                | 4                         | 2                 | 14    |
| 12    | 3                  | 4                | 5                         | 3                 | 15    |
| 13    | 3                  | 2                | 3                         | 3                 | 11    |
| 14    | 4                  | 4                | 5                         | 3                 | 16    |
| 15    | 5                  | 4                | 4                         | 2                 | 15    |
| 16    | 5                  | 4                | 2                         | 3                 | 14    |
| 17    | 5                  | 3                | 3                         | 3                 | 14    |
| 18    | 2                  | 2                | 5                         | 2                 | 11    |
| 19    | 6                  | 2                | 5                         | 4                 | 17    |
| 20    | 4                  | 3                | 4                         | 1                 | 12    |
| 21    | 2                  | 2                | 3                         | 2                 | 9     |
| 22    | 2                  | 2                | 2                         | 1                 | 7     |
| 23    | 5                  | 1                | 3                         | 3                 | 12    |
| 24    | 5                  | 3                | 3                         | 2                 | 13    |
| 25    | 3                  | 4                | 5                         | 2                 | 14    |
| 26    | 4                  | 2                | 2                         | 1                 | 9     |
| 27    | 5                  | 3                | 5                         | 4                 | 17    |
| 28    | 3                  | 3                | 5                         | 3                 | 14    |

| S.No. | Time Appropriation | Content of Study | Interference During Study | Other Indulgences | Total |
|-------|--------------------|------------------|---------------------------|-------------------|-------|
| 29    | 2                  | 3                | 5                         | 4                 | 14    |
| 30    | 5                  | 3                | 5                         | 2                 | 15    |
| 31    | 3                  | 2                | 2                         | 3                 | 10    |
| 32    | 3                  | 4                | 4                         | 3                 | 14    |
| 33    | 5                  | 2                | 4                         | 3                 | 14    |
| 34    | 2                  | 1                | 5                         | 2                 | 10    |
| 35    | 3                  | 2                | 5                         | 2                 | 12    |
| 36    | 3                  | 2                | 5                         | 3                 | 13    |
| 37    | 2                  | 3                | 2                         | 2                 | 9     |
| 38    | 2                  | 2                | 4                         | 1                 | 9     |
| 39    | 6                  | 1                | 4                         | 3                 | 14    |
| 40    | 4                  | 3                | 4                         | 3                 | 14    |
| 41    | 2                  | 3                | 4                         | 2                 | 11    |
| 42    | 2                  | 3                | 3                         | 1                 | 9     |
| 43    | 3                  | 2                | 2                         | 1                 | 8     |
| 44    | 5                  | 2                | 2                         | 3                 | 12    |
| 45    | 5                  | 1                | 4                         | 2                 | 12    |
| 46    | 3                  | 3                | 3                         | 2                 | 11    |
| 47    | 6                  | 2                | 3                         | 3                 | 14    |
| 48    | 2                  | 2                | 3                         | 3                 | 10    |
| 49    | 3                  | 6                | 4                         | 2                 | 15    |
| 50    | 3                  | 3                | 2                         | 1                 | 9     |
| 51    | 4                  | 2                | 3                         | 1                 | 10    |
| 52    | 6                  | 6                | 3                         | 2                 | 17    |
| 53    | 5                  | 3                | 5                         | 3                 | 16    |
| 54    | 3                  | 3                | 5                         | 2                 | 13    |
| 55    | 3                  | 2                | 3                         | 2                 | 10    |
| 56    | 5                  | 2                | 2                         | 1                 | 10    |
| 57    | 3                  | 1                | 4                         | 3                 | 11    |
| 58    | 5                  | 2                | 3                         | 3                 | 13    |
| 59    | 3                  | 3                | 5                         | 3                 | 14    |
| 60    | 3                  | 2                | 5                         | 1                 | 11    |

## APPENDIX VIII

Representation of Study Habit Scores of  
Experimental Group, N=60 (Post-Test)

| S.No. | Time Appropriation | Content of Study | Interference During Study | Other Indulgences | Total |
|-------|--------------------|------------------|---------------------------|-------------------|-------|
| 1     | 7                  | 8                | 9                         | 7                 | 31    |
| 2     | 7                  | 8                | 9                         | 7                 | 31    |
| 3     | 7                  | 8                | 9                         | 7                 | 31    |
| 4     | 6                  | 9                | 8                         | 6                 | 29    |
| 5     | 8                  | 7                | 9                         | 7                 | 31    |
| 6     | 7                  | 7                | 9                         | 6                 | 29    |
| 7     | 8                  | 8                | 8                         | 7                 | 31    |
| 8     | 7                  | 8                | 6                         | 5                 | 26    |
| 9     | 7                  | 8                | 6                         | 5                 | 26    |
| 10    | 8                  | 9                | 8                         | 7                 | 32    |
| 11    | 7                  | 9                | 6                         | 7                 | 29    |
| 12    | 7                  | 7                | 8                         | 7                 | 29    |
| 13    | 8                  | 6                | 6                         | 8                 | 28    |
| 14    | 8                  | 6                | 6                         | 8                 | 28    |
| 15    | 7                  | 6                | 8                         | 8                 | 29    |
| 16    | 8                  | 7                | 6                         | 8                 | 29    |
| 17    | 8                  | 7                | 6                         | 7                 | 28    |
| 18    | 8                  | 8                | 8                         | 7                 | 31    |
| 19    | 8                  | 8                | 6                         | 6                 | 28    |
| 20    | 7                  | 6                | 6                         | 6                 | 25    |
| 21    | 7                  | 8                | 8                         | 5                 | 28    |
| 22    | 8                  | 6                | 9                         | 6                 | 29    |
| 23    | 8                  | 6                | 9                         | 8                 | 31    |
| 24    | 8                  | 8                | 9                         | 7                 | 32    |
| 25    | 8                  | 6                | 8                         | 5                 | 27    |
| 26    | 7                  | 6                | 7                         | 5                 | 25    |
| 27    | 7                  | 8                | 9                         | 7                 | 31    |
| 28    | 7                  | 8                | 9                         | 7                 | 31    |

| S.No. | Time Appropriation | Content of Study | Interference During Study | Other Indulgences | Total |
|-------|--------------------|------------------|---------------------------|-------------------|-------|
| 29    | 7                  | 8                | 7                         | 8                 | 30    |
| 30    | 8                  | 6                | 7                         | 8                 | 29    |
| 31    | 7                  | 8                | 8                         | 8                 | 31    |
| 32    | 7                  | 6                | 8                         | 7                 | 28    |
| 33    | 8                  | 6                | 9                         | 8                 | 31    |
| 34    | 8                  | 8                | 9                         | 8                 | 33    |
| 35    | 8                  | 9                | 8                         | 7                 | 32    |
| 36    | 8                  | 9                | 8                         | 7                 | 32    |
| 37    | 8                  | 8                | 8                         | 8                 | 32    |
| 38    | 8                  | 9                | 9                         | 8                 | 34    |
| 39    | 7                  | 9                | 9                         | 7                 | 32    |
| 40    | 6                  | 9                | 9                         | 6                 | 30    |
| 41    | 8                  | 8                | 6                         | 7                 | 29    |
| 42    | 8                  | 9                | 6                         | 6                 | 29    |
| 43    | 8                  | 7                | 7                         | 6                 | 28    |
| 44    | 7                  | 7                | 8                         | 6                 | 28    |
| 45    | 7                  | 6                | 8                         | 7                 | 28    |
| 46    | 7                  | 9                | 9                         | 7                 | 32    |
| 47    | 8                  | 9                | 9                         | 8                 | 34    |
| 48    | 8                  | 8                | 9                         | 8                 | 33    |
| 49    | 7                  | 7                | 7                         | 5                 | 26    |
| 50    | 8                  | 6                | 8                         | 5                 | 27    |
| 51    | 8                  | 6                | 6                         | 6                 | 26    |
| 52    | 7                  | 6                | 6                         | 6                 | 25    |
| 53    | 8                  | 8                | 6                         | 8                 | 30    |
| 54    | 7                  | 7                | 7                         | 7                 | 28    |
| 55    | 7                  | 9                | 8                         | 7                 | 31    |
| 56    | 7                  | 9                | 9                         | 7                 | 32    |
| 57    | 8                  | 9                | 9                         | 8                 | 34    |
| 58    | 8                  | 8                | 6                         | 8                 | 30    |
| 59    | 7                  | 8                | 7                         | 7                 | 29    |
| 60    | 6                  | 7                | 7                         | 7                 | 27    |

## APPENDIX IX

Representation of Study Habit Scores of  
Control Group, N=60 (Pre-Test)

| S.No. | Time Appropriation | Content of Study | Interference During Study | Other Indulgences | Total |
|-------|--------------------|------------------|---------------------------|-------------------|-------|
| 1     | 5                  | 3                | 5                         | 4                 | 17    |
| 2     | 3                  | 2                | 4                         | 4                 | 13    |
| 3     | 3                  | 1                | 4                         | 3                 | 11    |
| 4     | 4                  | 1                | 5                         | 5                 | 15    |
| 5     | 6                  | 3                | 6                         | 2                 | 17    |
| 6     | 6                  | 2                | 2                         | 3                 | 13    |
| 7     | 5                  | 3                | 5                         | 2                 | 15    |
| 8     | 5                  | 4                | 4                         | 4                 | 17    |
| 9     | 3                  | 6                | 3                         | 2                 | 14    |
| 10    | 3                  | 3                | 4                         | 3                 | 13    |
| 11    | 5                  | 3                | 3                         | 5                 | 16    |
| 12    | 3                  | 4                | 5                         | 3                 | 15    |
| 13    | 3                  | 2                | 3                         | 5                 | 13    |
| 14    | 4                  | 4                | 5                         | 3                 | 16    |
| 15    | 5                  | 5                | 4                         | 2                 | 16    |
| 16    | 5                  | 4                | 6                         | 3                 | 18    |
| 17    | 5                  | 3                | 3                         | 4                 | 15    |
| 18    | 2                  | 1                | 4                         | 2                 | 9     |
| 19    | 5                  | 2                | 5                         | 4                 | 16    |
| 20    | 4                  | 3                | 4                         | 1                 | 12    |
| 21    | 2                  | 4                | 3                         | 2                 | 11    |
| 22    | 3                  | 2                | 2                         | 1                 | 8     |
| 23    | 5                  | 1                | 3                         | 3                 | 12    |
| 24    | 6                  | 3                | 3                         | 5                 | 17    |
| 25    | 3                  | 4                | 4                         | 2                 | 13    |
| 26    | 4                  | 2                | 2                         | 1                 | 9     |
| 27    | 2                  | 3                | 5                         | 4                 | 14    |
| 28    | 5                  | 3                | 5                         | 2                 | 15    |

| S.No. | Time Appropriation | Content of Study | Interference During Study | Other Indulgences | Total |
|-------|--------------------|------------------|---------------------------|-------------------|-------|
| 29    | 3                  | 2                | 2                         | 2                 | 9     |
| 30    | 4                  | 4                | 4                         | 3                 | 15    |
| 31    | 5                  | 2                | 4                         | 3                 | 14    |
| 32    | 2                  | 1                | 5                         | 2                 | 10    |
| 33    | 3                  | 2                | 5                         | 2                 | 12    |
| 34    | 3                  | 3                | 5                         | 2                 | 13    |
| 35    | 7                  | 3                | 6                         | 2                 | 18    |
| 36    | 2                  | 2                | 4                         | 2                 | 10    |
| 37    | 6                  | 4                | 3                         | 4                 | 17    |
| 38    | 4                  | 6                | 3                         | 3                 | 16    |
| 39    | 2                  | 6                | 4                         | 5                 | 17    |
| 40    | 2                  | 3                | 3                         | 1                 | 9     |
| 41    | 3                  | 1                | 2                         | 1                 | 7     |
| 42    | 4                  | 1                | 2                         | 3                 | 10    |
| 43    | 5                  | 3                | 4                         | 2                 | 14    |
| 44    | 3                  | 3                | 3                         | 3                 | 12    |
| 45    | 7                  | 2                | 6                         | 1                 | 16    |
| 46    | 2                  | 2                | 3                         | 1                 | 8     |
| 47    | 3                  | 6                | 4                         | 2                 | 15    |
| 48    | 2                  | 3                | 2                         | 2                 | 9     |
| 49    | 4                  | 2                | 4                         | 1                 | 11    |
| 50    | 6                  | 1                | 3                         | 1                 | 11    |
| 51    | 5                  | 1                | 5                         | 3                 | 14    |
| 52    | 4                  | 1                | 5                         | 2                 | 12    |
| 53    | 3                  | 2                | 6                         | 2                 | 13    |
| 54    | 6                  | 2                | 4                         | 2                 | 14    |
| 55    | 3                  | 4                | 4                         | 3                 | 14    |
| 56    | 5                  | 4                | 3                         | 2                 | 14    |
| 57    | 3                  | 3                | 6                         | 2                 | 14    |
| 58    | 4                  | 2                | 3                         | 1                 | 10    |
| 59    | 5                  | 5                | 3                         | 2                 | 15    |
| 60    | 6                  | 5                | 5                         | 2                 | 18    |

## APPENDIX X

Representation of Study Habit Scores of  
Control Group, N=60 (Post-Test)

| S.No. | Time Appropriation | Content of Study | Interference During Study | Other Indulgences | Total |
|-------|--------------------|------------------|---------------------------|-------------------|-------|
| 1     | 4                  | 2                | 4                         | 4                 | 14    |
| 2     | 5                  | 3                | 2                         | 2                 | 12    |
| 3     | 4                  | 4                | 3                         | 5                 | 16    |
| 4     | 5                  | 3                | 3                         | 2                 | 13    |
| 5     | 3                  | 3                | 3                         | 4                 | 13    |
| 6     | 7                  | 2                | 7                         | 6                 | 22    |
| 7     | 3                  | 4                | 3                         | 3                 | 13    |
| 8     | 1                  | 8                | 3                         | 1                 | 13    |
| 9     | 3                  | 4                | 5                         | 5                 | 17    |
| 10    | 2                  | 3                | 2                         | 7                 | 14    |
| 11    | 4                  | 3                | 3                         | 7                 | 17    |
| 12    | 4                  | 3                | 2                         | 1                 | 10    |
| 13    | 8                  | 6                | 4                         | 6                 | 24    |
| 14    | 3                  | 4                | 3                         | 1                 | 11    |
| 15    | 7                  | 2                | 2                         | 4                 | 15    |
| 16    | 3                  | 7                | 4                         | 3                 | 17    |
| 17    | 2                  | 1                | 1                         | 1                 | 5     |
| 18    | 3                  | 1                | 1                         | 7                 | 12    |
| 19    | 3                  | 3                | 3                         | 5                 | 14    |
| 20    | 7                  | 2                | 1                         | 2                 | 12    |
| 21    | 4                  | 3                | 1                         | 1                 | 9     |
| 22    | 7                  | 5                | 7                         | 4                 | 23    |
| 23    | 6                  | 6                | 9                         | 2                 | 23    |
| 24    | 3                  | 1                | 7                         | 3                 | 14    |
| 25    | 3                  | 1                | 8                         | 5                 | 17    |
| 26    | 2                  | 5                | 7                         | 5                 | 19    |
| 27    | 4                  | 1                | 7                         | 5                 | 17    |
| 28    | 8                  | 6                | 7                         | 2                 | 23    |

| S.No. | Time Appropriation | Content of Study | Interference During Study | Other Indulgences | Total |
|-------|--------------------|------------------|---------------------------|-------------------|-------|
| 29    | 7                  | 5                | 8                         | 5                 | 25    |
| 30    | 7                  | 3                | 8                         | 7                 | 25    |
| 31    | 3                  | 3                | 9                         | 8                 | 23    |
| 32    | 3                  | 2                | 9                         | 8                 | 22    |
| 33    | 2                  | 9                | 2                         | 6                 | 19    |
| 34    | 4                  | 1                | 2                         | 7                 | 14    |
| 35    | 1                  | 2                | 1                         | 1                 | 5     |
| 36    | 6                  | 2                | 7                         | 6                 | 21    |
| 37    | 4                  | 2                | 1                         | 1                 | 8     |
| 38    | 2                  | 1                | 7                         | 1                 | 11    |
| 39    | 7                  | 2                | 1                         | 2                 | 12    |
| 40    | 8                  | 1                | 1                         | 2                 | 12    |
| 41    | 5                  | 1                | 7                         | 5                 | 18    |
| 42    | 1                  | 1                | 2                         | 3                 | 7     |
| 43    | 5                  | 1                | 2                         | 2                 | 10    |
| 44    | 7                  | 5                | 1                         | 3                 | 16    |
| 45    | 3                  | 1                | 3                         | 1                 | 8     |
| 46    | 3                  | 1                | 2                         | 1                 | 7     |
| 47    | 7                  | 3                | 7                         | 3                 | 20    |
| 48    | 3                  | 2                | 3                         | 5                 | 13    |
| 49    | 3                  | 3                | 2                         | 2                 | 10    |
| 50    | 4                  | 1                | 5                         | 6                 | 16    |
| 51    | 4                  | 2                | 2                         | 2                 | 10    |
| 52    | 2                  | 2                | 7                         | 2                 | 13    |
| 53    | 5                  | 1                | 1                         | 5                 | 12    |
| 54    | 7                  | 4                | 2                         | 2                 | 15    |
| 55    | 4                  | 6                | 3                         | 3                 | 16    |
| 56    | 5                  | 1                | 2                         | 3                 | 11    |
| 57    | 7                  | 2                | 2                         | 2                 | 13    |
| 58    | 2                  | 2                | 1                         | 3                 | 8     |
| 59    | 5                  | 4                | 1                         | 2                 | 12    |
| 60    | 1                  | 3                | 5                         | 3                 | 12    |



## APPENDIX XI

Representation of Academic Achievement Scores of  
Experimental Group, N=60 (Pre-Test)

| S.No. | General English | Mathematics | General Science | Social Science | Urdu |
|-------|-----------------|-------------|-----------------|----------------|------|
| 1     | 25              | 6           | 55              | 20             | 38   |
| 2     | 21              | 9           | 6               | 16             | 27   |
| 3     | 12              | 12          | 5               | 5              | 16   |
| 4     | 9               | 7           | 7               | 4              | 29   |
| 5     | 12              | 12          | 6               | 20             | 22   |
| 6     | 20              | 20          | 6               | 14             | 20   |
| 7     | 15              | 20          | 5               | 3              | 11   |
| 8     | 8               | 4           | 6               | 3              | 7    |
| 9     | 14              | 20          | 5               | 6              | 5    |
| 10    | 28              | 11          | 13              | 17             | 21   |
| 11    | 13              | 8           | 4               | 10             | 8    |
| 12    | 25              | 8           | 7               | 20             | 24   |
| 13    | 14              | 9           | 6               | 6              | 11   |
| 14    | 33              | 7           | 6               | 16             | 20   |
| 15    | 28              | 27          | 7               | 20             | 21   |
| 16    | 17              | 20          | 8               | 12             | 20   |
| 17    | 13              | 16          | 5               | 10             | 9    |
| 18    | 15              | 8           | 5               | 9              | 26   |
| 19    | 19              | 24          | 7               | 23             | 45   |
| 20    | 23              | 9           | 20              | 6              | 22   |
| 21    | 10              | 17          | 11              | 23             | 15   |
| 22    | 10              | 20          | 5               | 20             | 20   |
| 23    | 20              | 11          | 5               | 15             | 20   |
| 24    | 12              | 13          | 7               | 8              | 8    |
| 25    | 27              | 7           | 5               | 6              | 20   |
| 26    | 10              | 1           | 19              | 23             | 6    |
| 27    | 10              | 20          | 5               | 10             | 2    |
| 28    | 8               | 2           | 8               | 4              | 15   |

| S.No. | General English | Mathematics | General Science | Social Science | Urdu |
|-------|-----------------|-------------|-----------------|----------------|------|
| 29    | 10              | 7           | 4               | 6              | 13   |
| 30    | 15              | 20          | 5               | 7              | 11   |
| 31    | 12              | 12          | 5               | 5              | 16   |
| 32    | 21              | 9           | 5               | 16             | 27   |
| 33    | 25              | 26          | 6               | 20             | 38   |
| 34    | 20              | 20          | 55              | 14             | 20   |
| 35    | 12              | 12          | 6               | 20             | 22   |
| 36    | 9               | 7           | 6               | 4              | 29   |
| 37    | 14              | 20          | 7               | 6              | 5    |
| 38    | 8               | 4           | 5               | 3              | 7    |
| 39    | 15              | 20          | 6               | 3              | 11   |
| 40    | 25              | 8           | 5               | 20             | 24   |
| 41    | 13              | 8           | 7               | 10             | 8    |
| 42    | 28              | 11          | 4               | 17             | 21   |
| 43    | 28              | 27          | 13              | 20             | 21   |
| 44    | 13              | 7           | 8               | 16             | 20   |
| 45    | 14              | 9           | 7               | 6              | 11   |
| 46    | 15              | 8           | 6               | 9              | 26   |
| 47    | 13              | 16          | 7               | 10             | 9    |
| 48    | 17              | 20          | 5               | 12             | 20   |
| 49    | 10              | 17          | 5               | 23             | 15   |
| 50    | 23              | 9           | 5               | 6              | 22   |
| 51    | 19              | 24          | 11              | 23             | 45   |
| 52    | 12              | 13          | 20              | 8              | 8    |
| 53    | 20              | 11          | 5               | 15             | 20   |
| 54    | 10              | 20          | 7               | 20             | 20   |
| 55    | 10              | 20          | 5               | 10             | 2    |
| 56    | 10              | 1           | 8               | 23             | 6    |
| 57    | 27              | 7           | 5               | 6              | 20   |
| 58    | 15              | 20          | 19              | 7              | 11   |
| 59    | 10              | 7           | 5               | 6              | 13   |
| 60    | 8               | 2           | 5               | 4              | 15   |

## APPENDIX XII

Representation of Academic Achievement Scores of  
Experimental Group, N=60 (Post-Test)

| S.No. | General English | Mathematics | General Science | Social Science | Urdu |
|-------|-----------------|-------------|-----------------|----------------|------|
| 1     | 42              | 28          | 50              | 36             | 40   |
| 2     | 38              | 18          | 16              | 26             | 28   |
| 3     | 27              | 32          | 11              | 17             | 23   |
| 4     | 19              | 27          | 28              | 27             | 17   |
| 5     | 29              | 35          | 39              | 37             | 36   |
| 6     | 31              | 39          | 19              | 40             | 31   |
| 7     | 37              | 26          | 26              | 27             | 36   |
| 8     | 6               | 13          | 2               | 7              | 7    |
| 9     | 12              | 20          | 5               | 18             | 25   |
| 10    | 57              | 18          | 22              | 42             | 28   |
| 11    | 28              | 15          | 9               | 14             | 27   |
| 12    | 29              | 16          | 15              | 30             | 24   |
| 13    | 25              | 13          | 8               | 20             | 36   |
| 14    | 27              | 14          | 7               | 16             | 29   |
| 15    | 42              | 48          | 23              | 34             | 41   |
| 16    | 43              | 31          | 7               | 39             | 31   |
| 17    | 12              | 15          | 12              | 11             | 15   |
| 18    | 25              | 12          | 33              | 24             | 24   |
| 19    | 34              | 35          | 48              | 31             | 36   |
| 20    | 35              | 27          | 6               | 37             | 27   |
| 21    | 18              | 23          | 7               | 26             | 27   |
| 22    | 23              | 22          | 31              | 37             | 46   |
| 23    | 33              | 32          | 28              | 35             | 46   |
| 24    | 12              | 13          | 25              | 12             | 10   |
| 25    | 34              | 31          | 28              | 29             | 52   |
| 26    | 16              | 32          | 6               | 7              | 12   |
| 27    | 12              | 24          | 20              | 29             | 13   |
| 28    | 28              | 12          | 7               | 29             | 27   |

| S.No. | General English | Mathematics | General Science | Social Science | Urdu |
|-------|-----------------|-------------|-----------------|----------------|------|
| 29    | 22              | 28          | 18              | 30             | 27   |
| 30    | 20              | 27          | 29              | 35             | 48   |
| 31    | 27              | 32          | 11              | 17             | 23   |
| 32    | 38              | 18          | 16              | 26             | 28   |
| 33    | 42              | 28          | 50              | 36             | 40   |
| 34    | 31              | 39          | 19              | 40             | 31   |
| 35    | 29              | 35          | 39              | 37             | 36   |
| 36    | 19              | 27          | 28              | 27             | 17   |
| 37    | 12              | 20          | 5               | 18             | 25   |
| 38    | 6               | 13          | 2               | 7              | 7    |
| 39    | 37              | 26          | 26              | 37             | 36   |
| 40    | 29              | 16          | 15              | 30             | 24   |
| 41    | 28              | 15          | 9               | 14             | 27   |
| 42    | 57              | 18          | 22              | 42             | 28   |
| 43    | 42              | 48          | 23              | 34             | 41   |
| 44    | 27              | 14          | 7               | 16             | 29   |
| 45    | 25              | 13          | 8               | 20             | 36   |
| 46    | 25              | 26          | 33              | 24             | 24   |
| 47    | 12              | 15          | 12              | 11             | 15   |
| 48    | 43              | 31          | 7               | 39             | 31   |
| 49    | 18              | 23          | 7               | 26             | 27   |
| 50    | 35              | 27          | 6               | 37             | 27   |
| 51    | 34              | 37          | 48              | 31             | 36   |
| 52    | 12              | 13          | 25              | 12             | 10   |
| 53    | 33              | 32          | 28              | 35             | 46   |
| 54    | 23              | 22          | 31              | 37             | 46   |
| 55    | 12              | 24          | 20              | 29             | 13   |
| 56    | 16              | 32          | 6               | 7              | 12   |
| 57    | 34              | 31          | 28              | 29             | 52   |
| 58    | 20              | 27          | 29              | 35             | 48   |
| 59    | 22              | 28          | 18              | 30             | 27   |
| 60    | 28              | 12          | 7               | 29             | 27   |

### APPENDIX XIII

Representation of Academic Achievement Scores of  
Control Group, N=60 (Pre-Test)

| S.No. | General English | Mathematics | General Science | Social Science | Urdu |
|-------|-----------------|-------------|-----------------|----------------|------|
| 1     | 16              | 8           | 7               | 12             | 18   |
| 2     | 27              | 16          | 11              | 9              | 31   |
| 3     | 38              | 8           | 20              | 26             | 53   |
| 4     | 20              | 26          | 34              | 20             | 20   |
| 5     | 22              | 3           | 3               | 7              | 0    |
| 6     | 29              | 22          | 11              | 7              | 11   |
| 7     | 5               | 7           | 6               | 20             | 16   |
| 8     | 7               | 20          | 15              | 4              | 25   |
| 9     | 11              | 20          | 9               | 8              | 15   |
| 10    | 24              | 22          | 13              | 8              | 12   |
| 11    | 8               | 9           | 10              | 8              | 20   |
| 12    | 21              | 10          | 12              | 11             | 19   |
| 13    | 21              | 28          | 30              | 22             | 37   |
| 14    | 20              | 20          | 35              | 7              | 26   |
| 15    | 11              | 5           | 8               | 9              | 20   |
| 16    | 26              | 12          | 18              | 8              | 27   |
| 17    | 9               | 7           | 8               | 16             | 10   |
| 18    | 20              | 16          | 5               | 20             | 10   |
| 19    | 0               | 11          | 29              | 17             | 9    |
| 20    | 22              | 27          | 28              | 9              | 28   |
| 21    | 45              | 7           | 8               | 0              | 8    |
| 22    | 8               | 7           | 7               | 13             | 12   |
| 23    | 20              | 14          | 18              | 11             | 1    |
| 24    | 20              | 6           | 16              | 20             | 23   |
| 25    | 2               | 6           | 6               | 20             | 17   |
| 26    | 6               | 21          | 7               | 1              | 24   |
| 27    | 20              | 3           | 4               | 7              | 4    |
| 28    | 11              | 4           | 6               | 20             | 22   |

| S.No. | General English | Mathematics | General Science | Social Science | Urdu |
|-------|-----------------|-------------|-----------------|----------------|------|
| 29    | 13              | 12          | 6               | 7              | 18   |
| 30    | 15              | 9           | 13              | 2              | 26   |
| 31    | 38              | 8           | 20              | 26             | 53   |
| 32    | 27              | 16          | 11              | 9              | 31   |
| 33    | 16              | 8           | 7               | 12             | 18   |
| 34    | 29              | 22          | 11              | 7              | 11   |
| 35    | 22              | 3           | 3               | 0              | 0    |
| 36    | 20              | 26          | 34              | 20             | 20   |
| 37    | 11              | 20          | 9               | 8              | 15   |
| 38    | 7               | 20          | 15              | 4              | 25   |
| 39    | 5               | 7           | 6               | 20             | 16   |
| 40    | 21              | 10          | 12              | 11             | 19   |
| 41    | 8               | 9           | 10              | 8              | 20   |
| 42    | 24              | 22          | 13              | 8              | 12   |
| 43    | 11              | 5           | 8               | 9              | 20   |
| 44    | 20              | 20          | 35              | 7              | 26   |
| 45    | 21              | 28          | 30              | 22             | 37   |
| 46    | 20              | 16          | 5               | 20             | 10   |
| 47    | 9               | 7           | 8               | 16             | 10   |
| 48    | 26              | 12          | 18              | 8              | 27   |
| 49    | 45              | 7           | 8               | 0              | 8    |
| 50    | 22              | 27          | 28              | 9              | 28   |
| 51    | 0               | 11          | 29              | 17             | 9    |
| 52    | 20              | 6           | 16              | 20             | 23   |
| 53    | 20              | 14          | 18              | 11             | 1    |
| 54    | 8               | 7           | 7               | 13             | 12   |
| 55    | 20              | 3           | 4               | 7              | 4    |
| 56    | 6               | 21          | 7               | 1              | 24   |
| 57    | 2               | 6           | 6               | 20             | 17   |
| 58    | 15              | 9           | 13              | 2              | 26   |
| 59    | 13              | 12          | 6               | 7              | 18   |
| 60    | 11              | 4           | 6               | 20             | 22   |

## APPENDIX XIV

Representation of Academic Achievement Scores of  
Control Group, N=60 (Post-Test)

| S.No. | General English | Mathematics | General Science | Social Science | Urdu |
|-------|-----------------|-------------|-----------------|----------------|------|
| 1     | 22              | 22          | 11              | 0              | 20   |
| 2     | 29              | 28          | 16              | 7              | 20   |
| 3     | 16              | 16          | 38              | 12             | 32   |
| 4     | 27              | 37          | 49              | 9              | 38   |
| 5     | 38              | 9           | 5               | 26             | 0    |
| 6     | 21              | 33          | 18              | 11             | 27   |
| 7     | 5               | 8           | 6               | 20             | 20   |
| 8     | 7               | 34          | 26              | 4              | 28   |
| 9     | 11              | 27          | 9               | 8              | 43   |
| 10    | 20              | 27          | 22              | 20             | 47   |
| 11    | 21              | 22          | 7               | 22             | 22   |
| 12    | 20              | 6           | 3               | 7              | 0    |
| 13    | 11              | 45          | 47              | 9              | 64   |
| 14    | 24              | 39          | 49              | 8              | 9    |
| 15    | 8               | 14          | 18              | 8              | 2    |
| 16    | 22              | 27          | 17              | 9              | 20   |
| 17    | 45              | 9           | 2               | 0              | 10   |
| 18    | 26              | 10          | 10              | 8              | 7    |
| 19    | 9               | 7           | 40              | 16             | 10   |
| 20    | 20              | 23          | 28              | 20             | 30   |
| 21    | 20              | 16          | 6               | 7              | 13   |
| 22    | 8               | 17          | 8               | 13             | 8    |
| 23    | 20              | 23          | 24              | 11             | 10   |
| 24    | 20              | 11          | 16              | 20             | 28   |
| 25    | 0               | 1           | 11              | 17             | 13   |
| 26    | 11              | 0           | 20              | 20             | 11   |
| 27    | 13              | 12          | 9               | 7              | 9    |
| 28    | 15              | 15          | 2               | 2              | 27   |

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|-------|-----------------|-------------|-----------------|----------------|------|
| 29    | 2               | 17          | 15              | 20             | 21   |
| 30    | 6               | 17          | 26              | 1              | 27   |
| 31    | 16              | 16          | 38              | 12             | 32   |
| 32    | 27              | 28          | 16              | 9              | 20   |
| 33    | 38              | 22          | 11              | 26             | 20   |
| 34    | 20              | 33          | 18              | 20             | 27   |
| 35    | 22              | 9           | 5               | 0              | 0    |
| 36    | 29              | 37          | 49              | 7              | 38   |
| 37    | 5               | 27          | 9               | 20             | 43   |
| 38    | 7               | 34          | 26              | 4              | 28   |
| 39    | 11              | 8           | 6               | 8              | 20   |
| 40    | 24              | 6           | 3               | 8              | 0    |
| 41    | 8               | 22          | 7               | 8              | 22   |
| 42    | 21              | 27          | 22              | 11             | 47   |
| 43    | 21              | 14          | 18              | 22             | 2    |
| 44    | 20              | 39          | 49              | 7              | 9    |
| 45    | 11              | 45          | 47              | 9              | 4    |
| 46    | 26              | 10          | 10              | 8              | 7    |
| 47    | 9               | 9           | 2               | 16             | 10   |
| 48    | 20              | 27          | 17              | 20             | 20   |
| 49    | 0               | 16          | 6               | 17             | 13   |
| 50    | 22              | 23          | 28              | 9              | 30   |
| 51    | 45              | 7           | 40              | 0              | 10   |
| 52    | 8               | 11          | 16              | 13             | 28   |
| 53    | 20              | 23          | 24              | 11             | 10   |
| 54    | 20              | 17          | 8               | 20             | 8    |
| 55    | 2               | 12          | 9               | 20             | 9    |
| 56    | 6               | 0           | 20              | 17             | 11   |
| 57    | 20              | 1           | 11              | 7              | 13   |
| 58    | 11              | 17          | 26              | 20             | 27   |
| 59    | 13              | 17          | 15              | 7              | 21   |
| 60    | 15              | 15          | 2               | 2              | 27   |