CHAPTER - III

THE PROBLEM

Although the research in the area of academic achievement and its correlates is increasing, the findings are far from conclusive. A clear picture of potential correlates of academic achievement has not emerged from the studies conducted so far. Notwithstanding the studies referred to, and several more, study of correlates of academic achievement is such a vast and multi-dimensional field, that it admits further fresh work as well as classification of previous studies. It is hoped that research on the correlates of academic achievement may reveal a definite set of correlates which may be significant for aiming at achieving academic excellence to its maximum. If some small number of parameter can be isolated, and defined in behavioural terms, it might help teachers to mobilize academic achievement of students to a maximum. Secondly, none of the studies has investigated the factors affecting academic achievement of Jawahar Navodaya Vidyalaya students.

The present study, therefore, attempts to investigate the psychological factors affecting academic achievement of JNV students and the relative contribution of the selected factors to it.

3.1 Statement of the Problem

The purpose of the study was to investigate into the association of
Adjustment problems, Creativity, Self-concept, Anxiety and Achievement Motivation with Academic Achievement of students studying in Jawahar Navodaya Vidyalayas of Karnataka.

The major source variables considered in the study were: adjustment problems, creativity, self-concept, anxiety and achievement motivation. In the present study the adjustment problems related to residence, food, peer-group, curriculum, cocurriculum, classroom teaching and evaluation were considered as surface variables of the source variable ‘Adjustment problems’. Further, creativity factors like fluency, originality and elaboration were considered as surface variables of the source variable ‘Creativity’. The remaining source variables had no surface variables. Lastly, the school subjects like English, Kannada, Hindi, Mathematics, Science and Social Science were considered as components of Academic Achievement.

3.2 General Objectives of the Study

The present study was undertaken with the following general objectives in view:

i. To investigate the relationship of surface variables with their respective source variables of students studying in JNVs.

ii. To investigate the relationship of adjustment problems, creativity, self-concept, anxiety and achievement motivation with total academic achievement and its components of students studying in JNVs.

iii. To investigate the relationship of academic achievement variables with total academic achievement of students studying in JNVs.
iv. To determine the relative efficiency of the surface variables of adjustment problem and creativity in predicting total adjustment problem and total creativity of students studying in JNVs.

v. To determine the relative efficiency of the adjustment problem, creativity, self-concept, anxiety and achievement motivation in predicting academic achievement (without taking into account the internal relations among the components of academic achievement) of students studying in JNVs.

vi. To determine the relative efficiency of academic achievement variables in predicting total academic achievement of students studying in JNVs.

vii. To determine the joint effect of adjustment problems, creativity, self-concept, anxiety and achievement motivation on academic achievement (taking into account the internal relations among the components of academic achievement) of students studying in JNVs.

viii. To determine the direct and indirect effects/paths of set of surface variables on source variables of students studying in JNVs.

ix. To determine the direct and indirect effects/paths of set of source variables on different academic achievement variables of students studying in JNVs.

x. To determine the direct and indirect effects/paths of different academic achievement variables on total academic achievement of students studying in JNVs.

xi. To determine the cluster of surface and source variables, academic achievement and its components in terms of their contributions to variation in academic success of students studying in JNVs.
xii. To identify the factors as linear combinations of the corresponding surface and source variables as well as total academic achievement and its components of students studying in JNVs.

3.3 Variables Considered in the Study

3.3.1 Independent Variables

i. Adjustment Problems


In JNV students coming from different places, staying with unknown students in the dormitories, taking common food, learning new and comparatively advanced curriculum, participating in a large number of co-curricular activities, being taught by interactive methods of teaching and subjected to continuous and comprehensive evaluation should be
facing a number of adjustment problems in the areas like residence, food, curriculum and cocurriculum etc. These may have an impact on academic achievement of students in JNVs. Hence, adjustment problem was considered as one of the independent variables affecting the academic achievement of the students in JNVs.

Based on the investigators visits to JNVs during pilot tryout and discussion carried out with the teachers and students the following are the adjustment areas considered in this study.

a. Residence
b. Food
c. Peer-group
d. Curriculum
e. Co-curriculum
f. Class-room teaching and
g. Evaluation

ii. Creativity

achievement. In addition, the recent study conducted by Bawa and Kaur (1995) revealed that relationship of creativity was better with the language when compared to social studies and general science. The study would like to confirm these relationships with regard to students studying in JNVs. Hence, creativity was considered as one of the independent variables which influence on academic achievement. The following were treated as important factors which contribute to creative ability:

a. Fluency
b. Originality
c. Elaboration

iii. Self-concept

Because JNVs are giving admission to the students of VI standard, who are still in the process of forming their self-concept, the focus of the study was to know to what extent the JNV climate is congenial in the development of self-concept and, in turn, its impact on their academic achievement. Hence, self-concept was considered as one of the independent variables affecting the academic achievement of the students studying in JNVs.

iv. Anxiety

Study conducted by Cox (1960) reported a curvilinear relationship between anxiety and academic achievement. Sarason (1961), Feldherson and Klausmeier (1962), Philips (1962), Walter (1964), Hill and Sarason (1971), Newbegin and Owens (1996), Williams (1996), Singh (1965), Sinha (1966), Raina (1966), Pandit (1969) Sharma (1969), Bhaduri (1971), Dhaliwal (1971), Beersingh (1972), Triwari and Rai (1975), Christian (1977), Tripathi (1978), Lall (1984), Sabapathy (1986), Gupta (1987), Trivedi (1995) showed a significant negative relationship between anxiety and academic achievement. The focus of the present study was to verify the relationship between these variables in case of JNV students. Life in the dormitories, residential set up in JNVs, sudden change over from State to CBSE syllabus, shifting from local climate to new unknown climate in the JNVs at the early age of 11+ may result in some kind of anxiety among the students of JNVs. Continuous and comprehensive evaluation and type of co-curricular activities organized in the JNVs may
arouse anxiety among students. Hence, the purpose was to study the student's anxiety level and its impact on their academic achievement in JNVs.

v. Achievement Motivation

Studies conducted by Atkinson and Litwin (1960), Sultan (1961), Caplehorn and Sultan (1965), Entwistle (1968), Bruce (1977), Bhatnagar (1967), Sinha (1967), Mehta (1968), Gokulnathan (1970), Dutt and Subhrawal (1973), Pathak (1974), Parikh (1976), Patel (1977), Christian (1977), Mitra (1985), Mehta (1987), Minnalkodi (1977) showed positive and significant relationship between achievement motivation and academic achievement. Schultz (1993) reported that achievement motivation is a significant mediator of academic performance. Rao and Rao (1997) revealed a positive correlation between achievement motivation and academic achievement. In JNVs residential life is integral part of the educational process, interactive teaching is preferred, follow CBSE syllabus, take part in special kind of co-curricular activities, follow continuous and comprehensive evaluation technique for the assessment of growth and development of the students may enhance their achievement motivation. The intention was to confirm these relationships in case of JNV students.

Since JNVs give admission only to the talented rural and urban students the study was intended to know the extent of their achievement motivation and its relationship / impact on their academic achievement in JNVs.
3.3.2 Dependent Variable

i. Academic Achievement

Low academic achievement of students in JNVs may be due to maladjustment of students to JNV climate, low creativity level, low self-concept, high anxiety, low achievement motivation and a host of other factors. Further, low academic achievement may also be due to the cumulative effect of all these factors or there may be factors other than these, such as inadequate preparation, poor study habits, personal problems, personality traits, low intelligence, low SES, frustration, guilt feelings, self-rejection, self-devaluation, failure to set up models, social customs, culturally determined patterns, etc.

However, keeping in view the feasibility of the researcher, the study was confined only to the factors like adjustment, creativity, self-concept, anxiety and achievement motivation. The relationship of these variables with academic achievement is already substantiated by empirical evidences in their respective sections. Thus, the present study focussed on analyzing the extent to which the selected variables will determine the academic achievement of students in JNVs.

3.4 Specific Objectives of the Study

In pursuance of the General Objectives – 1, 2 and 3, the following specific objectives were set up:

i. To investigate the relationship of surface variables of adjustment problems – residence, food, peer-group, curriculum, cocurriculum, classroom teaching and evaluation with total adjustment problems.
ii. To investigate the relationship of surface variables of creativity—fluency, originality and elaboration with creativity.

iii. To investigate the relationship of adjustment problems with total academic achievement and its components.

iv. To investigate the relationship of creativity with total academic achievement and its components.

v. To investigate the relationship of self-concept with total academic achievement and its components.

vi. To investigate the relationship of anxiety with total academic achievement and its components.

vii. To investigate the relationship of achievement motivation with total academic achievement and its components.

viii. To investigate the relationship of surface variables of adjustment problems—residence, food, peer-group, curriculum, cocurriculum, classroom teaching and evaluation with total academic achievement and its components.

ix. To investigate the relationship of surface variables of creativity-fluency, originality and elaboration with total academic achievement and its components.

x. To investigate the relationship of academic achievement variables—English, Kannada, Hindi, Mathematics, Science and Social Science with total academic achievement.
In pursuance of the General Objectives – 4, 5 and 6, the following specific objectives were set up:

xi. To determine the relative efficiency of the components of adjustment problems—residence, food, peer group, curriculum, co-curriculum, classroom teaching and evaluation in predicting total adjustment problems.

xii. To determine the relative efficiency of fluency, originality and elaboration in predicting creativity.

xiii. To determine the relative efficiency of each of the surface variables and source variables, i.e. adjustment problems, creativity, self-concept, anxiety, achievement motivation in predicting total academic achievement and its components without taking into account the internal relations among the components of academic achievement.

xiv. To determine the relative efficiency of each of the components of academic achievement in predicting total academic achievement.

In pursuance of the General Objective – 7, the following specific objective was set up:

xv. To determine the joint effect of each of the surface variables and source variables, i.e. adjustment problems, creativity, self-concept, anxiety and achievement motivation on total academic achievement and its components taking into account the internal relations among the components of academic achievement.

In pursuance of the General Objectives – 8, 9 and 10, the following specific objectives were set up:

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xvi. To determine the direct and indirect effects of residence, food, peer-group, curriculum, cocurriculum, classroom teaching and evaluation on total adjustment problems.

xvii. To determine the direct and indirect effects of fluency, originality and elaboration on creativity.

xviii. To determine the direct and indirect effects of adjustment problems, creativity, self-concept, anxiety and achievement motivation on each of the components of academic achievement.

xix. To determine the direct and indirect effects of each of the components of academic achievement on total academic achievement.

3.5 Research Hypotheses

In pursuance of the Specific Objectives 1 to 10 the following research hypotheses were set up:

\( H_{R1} \): There exists a significant relationship between surface variables of adjustment problem i.e., residence, food, peer-group, curriculum, cocurriculum, classroom teaching and evaluation and total adjustment problem.

\( H_{R2} \): There exists a significant relationship between surface variables of creativity i.e., fluency, originality and elaboration and creativity.

\( H_{R3} \): There exists a significant relationship between adjustment problems and academic achievement in English, Kannada, Hindi,
Mathematics, Science, Social Science and total Academic Achievement.

\(H_{R_4}\): There exists a significant relationship between creativity and academic achievement in English, Kannada, Hindi, Mathematics, Science, Social Science and total Academic Achievement.

\(H_{R_5}\): There exists a significant relationship between self-concept and academic achievement in English, Kannada, Hindi, Mathematics, Science, Social Science and total Academic Achievement.

\(H_{R_6}\): There exists a significant relationship between anxiety and academic achievement in English, Kannada, Hindi, Mathematics, Science, Social Science and total Academic Achievement.

\(H_{R_7}\): There exists a significant relationship between achievement motivation and academic achievement in English, Kannada, Hindi, Mathematics, Science, Social Science and total Academic Achievement.

\(H_{R_8}\): There exists a significant relationship between residence adjustment problems and academic achievement in English, Kannada, Hindi, Mathematics, Science, Social Science and total Academic Achievement.

\(H_{R_9}\): There exists a significant relationship between food adjustment problems and academic achievement in English, Kannada, Hindi, Mathematics, Science, Social Science and total Academic Achievement.
HR_{10}: There exists a significant relationship between peer-group adjustment problems and academic achievement in English, Kannada, Hindi, Mathematics, Science, Social Science and total Academic Achievement.

HR_{11}: There exists a significant relationship between curriculum adjustment problems and academic achievement in English, Kannada, Hindi, Mathematics, Science, Social Science and total Academic Achievement.

HR_{12}: There exists a significant relationship between co-curriculum adjustment problems and academic achievement in English, Kannada, Hindi, Mathematics, Science, Social Science and total Academic Achievement.

HR_{13}: There exists a significant relationship between classroom teaching adjustment problems and academic achievement in English, Kannada, Hindi, Mathematics, Science, Social Science and total Academic Achievement.

HR_{14}: There exists a significant relationship between evaluation adjustment problems and academic achievement in English, Kannada, Hindi, Mathematics, Science, Social Science and total Academic Achievement.

HR_{15}: There exists a significant relationship between fluency in creativity and academic achievement in English, Kannada, Hindi,
Mathematics, Science, Social Science and total Academic Achievement.

$H_{16}$: There exists a significant relationship between originality in creativity and academic achievement in English, Kannada, Hindi, Mathematics, Science, Social Science and total Academic Achievement.

$H_{17}$: There exists a significant relationship between elaboration in creativity and academic achievement in English, Kannada, Hindi, Mathematics, Science, Social Science and total Academic Achievement.

In pursuance of the Specific Objectives – 11 to 14, the following research hypotheses were set up:

$H_{19}$: There exists the joint effect of residence, food, peer-group, curriculum, co-curriculum, classroom teaching and evaluation (surface variables of adjustment) on total adjustment problem.

$H_{20}$: There exists the joint effect of fluency, originality and elaboration (surface variables of creativity) on creativity.

$H_{21}$: There exists the joint effect of adjustment, creativity, self-concept, anxiety and achievement motivation (source variables) on
academic achievement in English, Kannada, Hindi, Mathematics, Science, Social Science and total Academic Achievement.

\( \text{HR}_{22} \): There exists the joint effect of residence, food, peer-group, curriculum, co-curriculum, classroom teaching, evaluation (adjustment problem); fluency, originality, elaboration (creativity); self-concept, anxiety and achievement motivation (surface variables) on academic achievement in English, Kannada, Hindi, Mathematics, Science, Social Science and total Academic Achievement.

\( \text{HR}_{23} \): There exists joint effect of English, Kannada, Hindi, Mathematics, Science and Social Science (academic achievement variables) on total Academic Achievement.

3.6 Scope of the Study

i. The present study is confined to JNVs of Karnataka State, India

ii. The study is further confined to students studying in VIII Standard for three reasons:

a. Students admitted to Standard VI may require one or two years to adjust themselves to a greater extent with the new environment.

b. Students newly admitted to Standard VI may not be in a position to pinpoint their adjustment problems.
c. Standards IX and X in JNVs have migrated students and thus it is the combination of Hindi and non-Hindi speaking students. Since the tools are developed/selected keeping in view the regional language and local students this heterogeneous class may find it difficult to follow them. Hence, the present study is confined to VIII Standard.

iii. Academic achievement of the students is influenced by various factors like, personality, attitudes, achievement motivation, anxiety, study habits, self-concept, socio-economic status child rearing practices, aspirations, intelligence, creativity, interpersonal relationship, classroom socio-emotional climates, interests, aptitudes of the students etc. However, the present study is confined to certain variables like student’s adjustment problems, creativity, anxiety, self-concept and achievement motivation only.

3.7 Definition of Technical Terms

A few technical terms are used in this study to convey specific meaning. They are as follows:

1. Adjustment: It is defined as the extent of equilibrium or balance between student’s needs and the circumstances that influence the satisfaction of their needs and/or between the conventional and innovative educational inputs/processes. Its components considered in the study are residence, food, peer group, curriculum, co-curriculum, classroom teaching and evaluation.
a. **Residence adjustment** represents the extent of equilibrium or balance between student’s safety need and residential circumstances that influence the satisfaction of that need.

b. **Food adjustment** represents the extent of equilibrium or balance between students’ basic physiological need and ‘food’ served which influence the satisfaction of that need.

c. **Peer-group adjustment** represents the extent of equilibrium or balance between students’ love and belongingness need and ‘peer-group’ of JNV which influence the satisfaction of that need.

d. **Curriculum and co-curriculum adjustment** represent the extent of equilibrium or balance between student’s educational need and ‘curriculum’ and ‘co-curriculum’ of JNV which influence the satisfaction of that need.

e. **Class-room teaching adjustment** represents the extent of equilibrium or balance between conventional and innovative teaching process of JNV.

f. **Evaluation adjustment** represents the extent of equilibrium or balance between the traditional and new evaluation process followed in JNV.

2. **Creativity** : It is a process where the individual locates gaps in ideas, thinks of alternative solutions to a problem, persists an idea, does not easily agree to what is usually thought to be correct and has unique ways of thinking or doing. The components of creativity are defined as follows:
a. **Fluency**: This component of creativity is the ability of the individual to produce as many ideas as possible to a given idea where quantity is emphasised rather than the quality of responses.

b. **Originality**: This component refers to the unusualness of responses or remote associations and relationships of responses. One who tries to get away from the ordinary or conventional is said to have more score on originality.

c. **Elaboration**: This component of creativity refers to the person's ability to add pertinent details to the basic idea or outline map or to build or construct or elaborate the given idea/ stimulus figure to make it more meaningful.

3. **Self-concept**: It is defined as the sum total of a person's perceptions, feelings and beliefs about himself. The self-concept can be thought of as having two parts - one that includes characteristics and personality traits (tall, conceited, intelligent and so forth) and a second that is an evaluation of the worth or desirability of the traits. The latter component is often called self-esteem. It is also referred as the extent of congruence between the self-concept as the individual perceives and self-concept as he would like to possess.

4. **Anxiety**: It refers to a feeling state very similar to fear but without any specific referent. Because fears tend to be directed toward specific situations or objects, while anxiety tends to be a diffuse feeling of uneasiness and tension not associated with any specific stimulus. It is often termed as
ˈvague fear' that may be associated with no object at all. In other words, anxiety is an unpleasant tension state, which results from mild threat, lack of appropriate social skills and inner conflicts.

5. **Achievement Motivation**: It is a disposition to strive for success—on some challenging tasks—in situations where an individual's performance is evaluated not for profit or status, but for the sake of doing well. It is called as 'pursuit of excellence'.

6. **Academic Achievement**: Academic achievement of an individual refers to one's attainment in scholastic subjects prescribed for a particular course of study. In this study, academic achievement would mean the total attainment of the JNV student in VIII standard school subjects like English, Kannada, Hindi, Mathematics, Science and Social Science. The total marks obtained in all the school subjects by a student in the annual examination held in March 1997 is considered as his/her academic achievement.
REFERENCES


