

Personality, Learning and Motivation

A Trend Report

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A survey of doctoral level research over the last twenty years indicates a wide ranging coverage from specific studies of children's reactions to frustration, aggression and anxiety to broad comparative studies of engineering, medical, agricultural and teacher-training students. Several studies have developed and used new instruments while some instruments and methodology developed abroad have been adapted and/or developed further. Fiftythree Ph.D. theses and seven projects from various Indian universities have been sighted and abstracted for the purpose of the present report. Of these, twentysix studies relate to personality, seven to problems of delinquency, seven to adjustment problems and the rest to learning and motivation. Some important features of these studies are briefly described below.

PERSONALITY STUDIES

The first of the personality studies appeared in 1953 by Srivastava from the University of Allahabad. It was a comparative study of the personality of males and females. A sample of 160 males and 100 females was studied. Two studies appeared subsequently from the same university in the years 1954 and 1956 surveying the fantasy life of girls using Rorschach's test and TAT (Jain, 1954; Ghosh, 1956). From 1957 onwards other universities like Delhi University, Banaras Hindu University, Mysore University, and Rajasthan University which worked in this area started producing Ph.Ds. in Education. Universitywise break up of the number of theses in the area of personality is presented in Table 1, covering the period from 1953 to 1972 at the time of preparing this report.

TABLE 1

UNIVERSITYWISE BREAK UP OF Ph.D. THESES IN THE AREA OF PERSONALITY

S. No.	University	No. of Theses	Years in which appearing
1.	Allahabad University	5	1953, 1954, 1956, 1964, 1969
2.	Delhi University	3	1958, 1960, 1970
3.	Banaras Hindu University	1	1960
4.	Mysore University	1	1962
5.	Rajasthan University	1	1963
6.	Agra University	8	1967, 1968 (2), 1970 (4), 1971
7.	Gorakhpur University	1	1970
8.	Patna University	1	1970
9.	Madras University	1	1970
10.	Panjab University	2	1971
11.	Udaipur University	1	1972
12.	Kerala University	1	1972
Total		26	

The table indicates that, of the twenty-six studies, a majority has been contributed by Agra University during the period of four years from 1968 to 1972, followed by Allahabad University ranging over a period of about 16 years. The table also indicates that the frequency of researchers working in this area of educational psychology increased quite a bit recently. It is not known whether this is because the proportion of researchers working for Ph.D. in education in general has increased (and therefore a corresponding increase in those working in this area of research), or because there is a genuine increase in the interests of researchers to work in this area. Again it may also be due to departments of psychology in some universities turning their attention to research in educational psychology.

Areas covered:

The different areas of research covered by these twenty-six studies when arranged chronologically include: personality of males and females (Srivastava, 1953), fantasy life of girls (Jain, 1954; Ghosh, 1956), children's reactions to frustration (Pareek, 1958), development of ego ideal in children (Pratap, 1960), personality differences in graduates (Tyagi, 1960), personality characteristics of high school boy-leaders (Nayar, 1962), aggression, fear and anxiety in children (Julka, 1963), personality patterns of boys and girls (Saraswat, 1964; Gaur, 1967; Sharma, 1967), emotional stability of superior and average children (Lal, 1968), mental maturity in Indian school children, personality of engineering, law, medical and teacher training students (Pal, 1969), neurotic behaviour in adolescents (Srivastava, 1970), personality of students from religious and secular institutions (Sodhi, 1970), self-esteem and social-personal orientation as related to parental behaviour (Smart, 1970), personality of students using unfair means in examinations (Singha, 1970), personality correlates of art appreciation (Saroja, 1970), causes of frustration and level of aspiration (Mathur, 1970), personality of nursery school children (Saran, 1970), personality of stars and isolates of primary school children (Rajput, 1970), personality correlates of attitude towards social change (Nath, 1971), personality, age and motivational effects on persistence (Gupta, 1971), personality traits of adolescent girls (Uppal, 1971), children pain-

tings as indicators of personality (Mathur, 1972), effect of N.C.C. training on personality (Nair, 1972) and personality profiles of isolates.

Scope and Design:

The following points can be observed from these studies regarding their scope and methodology followed.

1. All levels of students have been studied from the nursery to the university stage including professional college students.
2. Although studies on the personality of different sections of students are available, there seems to be more concentrated efforts on exploring the personality of high school going children than on the college students. Sixteen of the twenty-six studies are on high school students, six on college students, two on pre-adolescents and two on adults.
3. While the earlier studies were concerned mostly with a mere exploration of the personality patterns of students, and concentrating on sex differences, the studies of late (i.e. from 1968 onwards) have started extending their horizon to different aspects of social life of the students from the individual personality studies.
4. While the earlier studies were mostly survey type and comparative, the recent studies tend to be correlational attempting to investigate the relationship between different environmental variables and personality variables.

Methodology:

In fact when these twenty-six studies are classified on the basis of their methodology as shown in Table 2, a number of them turn out to be comparative studies, comparing the personality of two or more groups (males vs. females, stars vs. isolates, etc.); a few are descriptive and normative studies giving mere descriptions of personality or norms of some selected groups of subjects; some of them are survey type; some are correlational, correlating some of the personality variables with other factors; one is developmental and one is analytical and is entirely on construction of a personality test (some of the studies used mixed methodologies and have been grouped in more than one category).

TABLE 2

A METHODOLOGICAL CLASSIFICATION OF DOCTORAL DISSERTATIONS IN THE AREA OF PERSONALITY (EXCLUDING ADJUSTMENT AND DELINQUENT BASED STUDIES)

<i>Nature of study</i>	<i>No. of studies</i>
1. Comparative	14
2. Descriptive Normative	4
3. Survey type	3
4. Correlational	5
5. Analytical	1
6. Developmental	1

Variables :

A searching appraisal and analysis of these studies also indicate that a wide variety of personality variables have been studied by them. The number of studies that covered each of the different variables is presented in Table 3.

There appear to be at least thirtyfive personality variables studied. Table 3 reveals a great spread of the studies over different personality variables. A few variables like intelligence, adjustment, academic achievement, introversion-extraversion and neuroticism seem to have been studied by quite a few investigators. Adjustment is particularly noteworthy because, besides the six studies that included this variable, there have been seven studies conducted exclusively on this topic to be reported later in this trend report. Besides, adjustment has also been studied by a few more researchers who used TAT and other projective techniques, but not explicitly using the term adjustment. It seems that one important concern of those working in the field of education has been with academic achievement and therefore various personality correlates of achievement have been studied.

Sample :

Coming to the nature and scope of the sample studied by these investigators, a majority of the studies (16) seems to have concentrated on the adolescent group or high school boys. This is understandable in view of the need for studying students at this level as well as the ease with which the samples could be studied with appropriate verbal tests. Probably due to the difficulties, there are only two investigations reported on nursery or primary

school children (the preadolescents) while there are about six studies on college subjects; two studies also dealt with adults who are not students. One of

TABLE 3

FREQUENCY OF THE DOCTORAL STUDIES COVERING DIFFERENT PERSONALITY VARIABLES

<i>S. No.</i>	<i>Variable</i>	<i>No. of studies covering it</i>
1.	Intelligence	7
2.	Adjustment	6
3.	Academic achievement	5
4.	Extraversion-Introversion	5
5.	Sociability	4
6.	Sex differences	5
7.	Neuroticism	4
8.	Aggression	2
9.	Anxiety	2
10.	Personality needs and fantasy	5
11.	Verbal abilities	2
12.	Emotional stability	4
13.	Creative abilities	2
14.	Occupational interests	2
15.	Persistence	2
16.	Ego-ideal	1
17.	Fear	1
18.	Inferiority	1
19.	Values	1
20.	Level of aspiration	1
21.	Attitudes	1
22.	Autonomy	1
23.	Self-esteem	1
24.	Leadership traits	1
25.	Security-Insecurity	1
26.	Cheating	1
27.	Imagination	1
28.	Art appreciation	1
29.	Frustration	1
30.	Curiosity	1
31.	Conservatism-Radicalism	1
32.	Initiative	1
33.	Shyness	1
34.	Independence	1
35.	Concern over sex	1

(Note: The figures are based on the information given in the abstracts and hence some details are likely to have been missed).

these studies includes all three groups starting with adolescents.

Instruments :

With respect to the research instruments or tests used in these studies, quite interesting trends emerge. Almost all of these studies have used personality inventories (most of them using more than one) usually the standard ones, some adapted versions of these studies and a few developed specifically for the purpose. The frequency with which some of the standard instruments have been used and the details of the new instruments developed are given in Table 4.

The table indicates that there are only twelve new instruments developed to assess some of the personality variables. Most of the researchers show a tendency to use standard instruments rather than to develop new ones. The table also indicates use of projective techniques specially the

TAT and Rorschach by a number of these investigators. Only one adaptation reported is that of Rosenzweig's Picture Frustration Study. Besides these instruments, the investigators have also made use of other research techniques like observation, autobiographical studies, case histories, interviews and so on.

Viewing critically, the table reveals a significant trend of 'instrument dependent research' in the area of personality. There appears to be a great tendency in the researchers to plan their studies around a few instruments that are readily available. While this kind of research provides good data for comparative studies with standard instruments, there is always a danger for the researcher to get biased by these instruments in certain directions. This kind of instrument dependent research also poses danger of limiting the areas of exploration by the researcher and narrowing the scope of the studies.

TABLE 4
DETAILS OF THE VARIOUS INSTRUMENTS USED, ADAPTED, AND NEWLY DEVELOPED FOR THE TWENTYSIX PERSONALITY STUDIES

<i>S.No.</i>	<i>Name of the Instrument</i>	<i>No. of studies</i>	<i>S.No.</i>	<i>New instruments developed, investigator, year</i>
1.	Thematic Apperception Test	9	1.	A Personality Rating Inventory (Srivastava, 1953)
2.	Rorschach Ink Blot Test	6	2.	A questionnaire for measuring the ego-ideals (Pratap, 1960).
3.	Kuppuswamy's S.E.S. Scale	5	3.	A test to measure Fear, Aggression and Anxiety in children (Julka, 1963).
4.	Jalota's Group Test of Intelligence	6	4.	Personality Inventory (Lal, 1968).
5.	Raven's Progressive Matrices	3	5.	Attitude Scale (towards teachers, parents, life, country, religion etc.) (Sodhi, 1970).
6.	Maudsley Personality Inventory	2	6.	Occupational Inventory (Sodhi, 1970).
7.	Children Apperception Test	1	7.	Behaviour Determinant Scale (Singha, 1970).
8.	Stanford-Binet Intelligence Scale	1	8.	Questionnaire to study Frustrations and Aspirations (Mathur, 1970).
9.	Asthana's Adjustment Inventory	1	9.	A Conservatism-Radicalism Scale (Saran, 1970).
10.	Bell's Adjustment Inventory	2	10.	Personality Trait Questionnaire (Uppal, 1971).
11.	Mehta's Group Test of Intelligence	1	11.	Personality Assessment from Children's Paintings (Mathur, 1972).
12.	Rotter's Incomplete Sentence Blank	1	12.	Personality Inventory (Gaur, 1967).
13.	Allport-Vernon-Lindzey's Study of Values	1	13.	Rosenzweig's Picture Frustration Study was adapted by Pareek (1958).
14.	Saxena's Personality Inventory	1		
15.	Saxena's Adjustment Inventory	1		
16.	Carlson's Pre-adolescent and Adolescent Questionnaire	1		
17.	Carlson's Parent Questionnaire	1		
18.	Roe-Siegleman Parent-Child Relation Questionnaire	1		
19.	Bernreuter's Personality Inventory	1		
20.	Maslow's Security-Insecurity Inventory	1		
21.	Albert and Harbers FADA	1		
22.	Bendig's Judgement Test	1		
23.	Meier's Art Judgement Test	1		
24.	Graves Design Judgement Test	1		

Statistical Analysis :

The types of statistical techniques for data analysis used in these studies range from simple calculations of mean and standard deviations to factor analytical approaches. Correlation coefficients of different kinds and non-parametric statistics have also been used in the treatment of the data.

This completes a broad overview of the research trends in the area of personality. This overview gives the impression that although researches in this area are more in number covering as many as thirtyfive personality variables, many other aspects of the personality that are relevant to the educational psychologists have been neglected. These studies are mostly exploratory type and such exploratory studies conducted in the past do not seem to have provided any productive guidelines for future research studies. A naive researcher who is only familiar with the problems of education in the country would expect the researchers to explore problems like, what kind of school or college environment is required to develop certain desirable personality traits like creativity, achievement, etc., what kind of impact the teacher personality has on the students' personality development, to what extent it is possible to change the teacher and student personalities, what kind of teacher behaviour influences student personality and in what way, etc. Socialisation process among the students, structural and environmental determinants of student personalities and socialisation, development of higher needs in students are some areas that recent developments in educational technology warrant. More experimental studies are required to answer some of these questions. Personality research in educational psychology has unfortunately been limited to the students and the more important sections of education—the teachers, educational administrators, etc.—have comparatively been neglected. A few of the studies on teachers and administrators are reported in chapters on teaching and teacher behaviour, teacher education and educational administration. Studies using more sophisticated methodological attempts and studying higher order personality variables like personal orientation, self actualization, need achievement, level of aspiration, etc., are needed.

PERSONALITY OF JUVENILE DELINQUENTS

Besides the twentiesix studies covered

above, there are seven doctoral studies conducted on the personality patterns of juvenile delinquents and institutionalised people. All these seven studies were conducted at seven universities (viz., Banaras, Allahabad, Ranchi, Rajasthan, Delhi, Agra and Vikram universities). The first of these was conducted by Gopal Krishna (1956) at Banaras Hindu University. Gopal Krishna (1956) attempted to study the personality patterns of 180 delinquents of sixteen to twentyfour years of age using Rorschach test, TAT and MMPI. The rest of the studies also were conducted more or less on similar patterns and were meant to delineate the personality patterns of adolescent delinquents. The only addition to some of the latter studies was study of the delinquent personality by using other tests besides TAT and Rorschach. The other tests used by investigators include Bhatia's Battery of Performance Test (Kundu, 1965), Alexander's Passalong, Goodenough's Draw-a-Man and Word Association Tests (Bose, 1960), Raven's Progressive Matrices, Bernreuter's Personality Inventory, Rotter's Incomplete Sentence Blank and Allport-Vernon-Lindzey's Study of Values (Mirchandani, 1970) and Maslow's Security-Insecurity Inventory (Rajguru, 1971). Four of these seven studies used controls and compared their personality structure with delinquents.

ADJUSTMENT PROBLEMS

Of the seven studies that could be grouped under this area, five are directly on school adjustment of adolescent boys, one study is a comparative study of bright and dull children on personality habits (Patel, 1967) and the other on the mental symptoms of school children (Sen, 1971). These studies were conducted one each at the universities of Delhi, Allahabad, Agra, Calcutta and Kurukshetra and two at the M.S. University of Baroda. The areas covered by the five studies on adjustment include psychological needs and adjustment (Nanda, 1957), adjustment of school children (Kakkar, 1964; Bhagia, 1966), adjustment of school children as seen by parents, teachers and students themselves, (Agrawal, 1970), and adjustment differences in intelligence and socio-economic status (Mattoo, 1972). These studies were conducted on high school students. In some of these studies new adjustment inventories have been developed which have since become popular (for example Bhagia, 1966). Saxena's Adjustment Inventory and Asthana's Adjustment

Inventory have been used in two studies. The rest of them have developed their own inventories and standardised them. Other instruments like Rorschach, Raven's Progressive Matrices, TAT, Eysenck's Personality Inventory, Bernreuter's Personality Inventory, Dasgupta's Parental Love Inventory, Roy's Group Intelligence Test, Allahabad Bureau's Verbal Group Test of Intelligence, Kuppuswamy's SES Scale, etc. have been used and scores on some of these instruments have been correlated with the scores on adjustments.

While the interest in this area of study still seems to persist in the researchers, these studies do not seem to go beyond surveying or comparing the adjustment patterns of selected groups of students. Secondly, the concentration again is on students, like in the other personality studies and the teachers seem to have been badly neglected — may be sometimes it is taken for granted that the teachers are well adjusted. Perhaps this is something that needs to be explored at this stage of the research on personality adjustment. Here again environmental correlates of adjustment both in the teachers and students, job satisfaction or work-motivation of teachers and the school adjustment of students, the possibilities of enhancing the school adjustment of students by environmental variation or by teachers' verbal behaviour modification, etc. need to be studied. Perhaps before that the dynamics of school adjustment also needs to be further explored.

LEARNING

While the area of personality, discussed so far, covered about forty studies on different aspects of personality including personality traits of normal and delinquents and adjustment patterns of adolescents, etc., the studies related to learning and motivation seem to have received rather disproportionately low attention by the scholars in this field. Learning as well as motivation, both being core areas of educational psychology, one expects more researches in these areas than on the allied ones. Surprisingly there appear to be only seven doctoral studies conducted in the area of learning and three in the area of motivation. However, the negligence in the area of motivation is partly compensated by a few research projects exclusively in this area.

The seven studies on learning could be classified into three major types: developmental studies exploring the development of language learning and

concept formation, experimental studies on learning, and general studies. There are four studies falling into the first category, two into the second and one into the third.

The first of the developmental studies was conducted by Syamala in 1961 at Banaras Hindu University. This was a comparative study of concept formation and productive thinking in two groups of children from Southern and Northern parts of India. This was conducted in line with Piaget's studies and development of concepts like dreams, thought, God, beauty, birth, cleverness, death, life, family etc. were studied. This study revealed the regional differences in concept formation and made a significant contribution in pointing out to the environmental differences in concept formation. The next study was by Joshi (1963) from Lucknow University on 'development of understanding during childhood'. In all, 730 children from Lucknow were studied on eight concepts: self, social, aesthetic, weight, time, space, etc. For younger children interviews and for older children questionnaires were used. Development of understanding was found to be regulated both by age and sex of the children. Development of the different concepts have been discussed in detail in this study and the results are presented in the abstracts to be followed. The next two developmental studies were conducted at Bombay University which related to language development in Gujarati speaking children. Merchant (1961) studied the language development of Gujarati speaking Bohra girls of Standard IV at Bombay. A significant aspect of this study was that the investigator took into consideration the teachers of these girls and assessed simultaneously their awareness about the language development in their children. The second study was an extensive study of the language development in 800 Gujarati children from Gujarat, Saurashtra and Bombay. A number of tests were used including oral and written tests. Norms for the children upto 12 years of age were established and the results obtained gave very useful information about the language development in children. While these four studies are good attempts to study the concept formation and language development in children, their scope gets limited if the finding by Syamala (1961) regarding the environmental variation in concept formation is universal. In view of this perhaps concept formation studies would be required for different regions of the country, if at all some useful purposes have to be served in the curriculum development at school level in different regions of the country. In view of the

importance and relevance this area has, more studies would have been expected since 1964 when the last of these four studies appeared. A number of other practical problems along these lines have to be tackled. Concept formation in tribals seems to be one area that needs attention. Since there is environmental variation found in development of concepts the next logical question would be to identify the sources that are contributing to this kind of variation and explore the possibilities of the source manipulation in order to make the developmental process fast. Such studies only can give some useful information for the curriculum development or teacher training colleges, as the role of the teacher may have to be reconstructed for the primary school level in order to enhance fast development in children.

Among the two experimental studies in the area of learning, one is an experimental survey on bilingualism conducted by Vaidya at Bombay University as far back as in 1954. This study aimed at determining the influence of bilingualism on learning (school achievement, language development, intelligence, etc.). The study was conducted on 1,010 children speaking Gujarati and English. The study indicated interesting results which have far reaching implications for the language problems that one often comes across in education.

The record study in this area was an experimental study of learning and awareness by Ramesh Dixit (1967) from Jodhpur University. Although this study has more of psychological interest than educational interest, results have a few implications for educational psychology as it points out the role of awareness and reinforcement in verbal conditioning.

The last of the set is a study of the role played by cultural factors in learning process (Misra, 1968) conducted at Banaras Hindu University. This study examined a variety of sources to determine the role played by cultural factors in learning. The results are in the expected direction and point out to the need to take into consideration the cultural factors in curriculum construction.

On the whole, the studies on learning are rather disappointing as no theoretical or practical contributions of utility to the field of education in India have been made by these studies except the ones on concept formation, although the studies deserve a credit in their own right.

MOTIVATION

There are altogether eight studies that could be classified under this area of which three are thesis reports and five are project reports. All these studies are rather recent ones and indicate a significant trend of growing interest in this area of research, particularly achievement motivation. Of the eight, seven are exclusively studies on achievement motivation mostly using the achievement motivation pictures developed by Prayag Mehta at the National Council of Educational Research and Training. Some of the project reports covered in this area have since been published or widely circulated and hence are well known.

The first doctoral study was by Tamhankar (1968) on the achievement motivation of young adolescent boys, conducted at Poona University. A significant aspect of this study was the development of a scoring manual for n-Achievement in Marathi language. The results are rather interesting and indicate relationships between achievement motivation and personal values, socio-economic status, intelligence, academic performance, etc. The second doctoral study by Chaudhary (1971) conducted at Panjab University also attempted to assess the relationships between achievement motivation and anxiety, intelligence, sex, socio-economic class, vocational aspiration, etc. High school students were studied again using the test developed by Mehta. The third and recent study by Gokulnathan (1972) took an altogether new direction in studying the achievement motivation and educational achievement in tribal and non-tribal students. Again the achievement motivation set of cards developed by Mehta were used alongwith the Achievement value and Anxiety Inventory of Mehta, Kuppaswamy's SES Scale and examination marks. A significant aspect of the results is the finding favouring high need achievement level in tribal students as compared to the non-tribals.

The projects in this area have also been conducted under the initiation of Mehta. Two of them are studies on achievement motivation in high school students by Mehta and his associates (Mehta, 1969; Mehta, Kumar and Sharma, 1967) conducted with the assistance of NCERT. These were studies on the level of achievement motivation in high school boys at Delhi as well as a comparative study of the n-Achievement in middle class and working class boys. About 975 pupils of class IX from 32 schools of Delhi were studied. The results of this study are not discussed here in view of the detailed abstract

given at the end. This study later on appeared in a book form under the title 'The Achievement Motivation in High School Boys'. Following these studies, a number of studies appeared on n-Achievement of high school boys by Mehta and his associates as well as a few other investigators using the n-Achievement cards developed by Mehta. These are not reported here as most of them are published articles and do not fall under the scope of this report. However, it can be stated here that research in this area has grown greatly in the past two or three years and even now a few researches are in progress in different parts of the country, some of them attempting to boost up n-Achievement in school teachers, as well as students by training programmes. Two studies conducted at Sardar Patel University, Vallabh Vidyanagar by Desai (1971, 72) were also along these lines. Both of these studies attempted to develop achievement motivation in high school boys by designing special curricula. The detailed abstracts are given at the end. The last of the projects which could be grouped under motivation studies is by Pareek and his associates at the National Institute of Health Administration and Education. This study conducted under the title of 'Motivation Training for Mental Health' attempted to change teacher behaviour by

using feedback on interaction analysis. It aimed at improving the positive mental health of school children by bringing about such changes in teacher behaviour. Although grouped under this category, this study comes under a wave of new researches on interaction analysis which is fast developing in the area of educational social psychology.

Viewing broadly, researches on motivation in general and achievement motivation in particular seem to be developing fast, touching many new areas. While this is a welcome growth, other potent areas of motivation also deserve attention in view of the educational needs of the country. Some such areas include work motivation of teachers and the possibilities of increasing it, motivation in the adoption of innovations like programmed learning, motivation for change in teachers in order to bring change in students, further explorations in achievement motivation including the efficacy of achievement motivation training programmes and so on. As the number of students registered for Ph.D. in Education is on the increase, it can be hoped that in future, the researches would also contribute more to explore theoretical grounds using adequate theoretical models and at the same time oriented towards practical problems and educational development.

ABSTRACTS : 127-186

127. *AGRAWAL, R.N., Adjustment Problems of Pupils of Secondary Schools — Adjustment Problems of Secondary School Pupils as Perceived and Judged by Parents, Teachers and Pupils themselves, Ph.D. Edu., Agra U., 1970.*

The study sought to answer the following questions: (i) What kind of adjustment problems do boys think they themselves have? (ii) In what respects do the parents' and teachers' judgements of pupils' adjustment problems differ from each other and from pupils' judgement of themselves? (iii) Are the boys of school age aware of what their parents and teachers think their actual adjustment problems are? (iv) What is the relationship between common adjustment problems and socio-economic status of boys of the age group thirteen to eighteen years?

A multistage sample of 2,375 male students of different socio-economic strata from ninth to eleventh standards within the age range of thirteen to eighteen years from higher secondary schools was selected for the study.

An inventory consisting of ninety items was constructed after two tryouts. The items were classified into five areas of adjustment, viz., home, school, social, emotional and health. The reliability coefficient of the inventory by test-retest method was 0.80 and by split-half method, it was 0.91. The internal validity was maintained by selecting only those items which had a discriminating value of at least 0.25, and external validity was determined by correlating the inventory scores with teachers' ratings, parents' ratings and M.S.L. Saxena's Adjustment Inventory scores for which the coefficients were 0.74, 0.85 and 0.74 respectively.

The major findings are: (i) adjustment problems in home, school and social areas as perceived by pupils themselves decrease with age, whereas in case of emotional and health areas, they increase; (ii) most of the mean differences between different socio-economic strata groups in home and health areas and between upper and lower socio-economic groups in other areas are found to be significantly different; (iii) the number of pupils' overall adjustment problems in different areas except home are highest for upper socio-economic group and lowest for the lower; (iv) in general the homogeneity in the nature of adjustment problems in-

creases with age, and it is found the highest in emotional area and lowest in school area; (v) parents' responses reveal that the number of adjustment problems of pupils increase significantly with age in home and health areas, and they decrease in social and emotional areas while there is no significant effect of age on problems in school area. Parents feel that pupils have more adjustment problems in home area rather than in emotional area. Teachers' perception of pupils' adjustment problems is, by and large, in agreement with that of parents.

128. *BHAGIA, N. M., Study of the Problem of School-Adjustment and Developing an Adjustment Inventory, Ph.D. Edu., MSU, 1966.*

The main aim was to develop an inventory for the assessment of school adjustment of pupils. The other purposes were: (i) to place in the hands of teachers a reliable and economic way of measuring school adjustment of each pupil, (ii) to enable the teachers through the inventory to spot out the children having problems and difficulties in adjusting to schools, and (iii) to enable the schools to evaluate their setup and practices in the light of pupil requirements. In order to determine the basis for developing the inventory the study aimed at discovering a comprehensive data for contents in terms of pupils' problems and other characteristics.

The study was confined to secondary schools of Rajasthan. A sample of 618 pupils of 20 secondary schools was selected for collecting the problems and difficulties faced by students with regard to various aspects of school life. A number of educationists, psychologists, headmasters and teachers were also consulted. After analysing and classifying, 115 problems and 48 characteristics were finally listed in two checklists. Two criterion groups of well adjusted and poorly adjusted pupils were identified. A satisfaction questionnaire was prepared and administered to 3,224 pupils studying in ninety-two classes of twentyeight schools. Simultaneously the nominations of the students at the two extreme points of school adjustment were invited from two teachers of same classes. One hundred and thirty-

four pairs of well adjusted and poorly adjusted pupils matched for the sex, age, school and class were selected on the basis of the best agreement of these two techniques, viz., self adjustment and teacher nomination. The responses of 134 pairs to the problem checklist and of their teachers to the characteristics checklist were studied for differences by using chi-square method. In all, ninety-nine problems and thirty-six characteristics were found to be discriminating between the two groups at .01 level of significance. 200 questions were constructed for the inventory dealing with the five aspects of school life, viz., academic, social, administrative, teacher and personal. The number was reduced to 186 after referring them to twenty experts for their face validity in their related aspects. Three preliminary runs of the inventory were held to select effective items for the final form. The first run helped to remove language difficulties. In the second run, they were tested against a fresh criterion of 120 pairs. Pupils and items were finally evaluated against internal criterion. In the third run, it was administered on a sample of 400. Making use of twenty-seven percent high and low scores, biserial r for each item was estimated. The final form of the inventory was shortened to 165 items. The final form of the inventory was administered to a representative sample of 2,550 students from X to XI classes. The mean, median and standard deviation of the scores were calculated and their reliability was tested. The skewness and kurtosis of the tests showed no real deviation from normality. The correlations of scores on five categories with the score on total inventory were sufficiently high varying from .70 to .91. Intercategory correlations varied from .25 to .70. Validity coefficient was found to be .69. The split-half reliability coefficient on a sample of 255 pupils was .83. Percentile norms, T score norms and letter grade norms were calculated for the population. The data were further analysed into various sub-groups—sex, area, management, grade etc.

The differences in the mean scores of various groups and critical ratios indicated many significant differences. (i) Girls exceed boys significantly in their adjustment to general environment and organisational aspect of the school; (ii) rural school pupils exceed urban school pupils significantly in adjustment to their teachers, mates and self; and (iii) private school pupils are significantly better than government school pupils in their adjustment to the teachers.

129. BHATT, L. J., PATEL, P. M., PATEL, M. M., and PARIKH, D. S., *Inquiry into Psychological Factors related to Adolescent Adjustment, Faculty of Education and Psychology, MSU, 1961. (ICMR financed)*

The problem of the study was: Inquiry into psychological factors related to adolescent adjustment. The three-fold task of the study was: (a) to identify psychological factors which might influence adjustment of adolescents, (b) to construct and standardise and/or adapt tools for measuring adjustment and psychological factors, and (c) to study the relationship of various psychological factors with adjustment.

The test material consisted of a battery of ten psychological inventories specially constructed and standardised and/or adapted for the study. The battery, called Adolescent Adjustment Tests Battery, consisted of (1) Emotional Adjustment Inventory, (2) Social Adjustment Inventory, (3) Family Adjustment Inventory, (4) Interest Inventory-I, (5) Interest Inventory-II, (6) Conservative-Radical scale, (7) Bernreuter Personality Inventory-ISI version, (8) Maudsley Personality Inventory—Short Form, (9) Level of Education Aspiration scale, and (10) Study Habits Inventory. In addition to the above, the Baroda Group Test of Intelligence was also used.

The tests were administered to a sample of about 2,500 adolescent boys and girls drawn from urban and rural schools and colleges located in five geographical regions of Gujarat State, viz., North, Central and South Gujarat, Saurashtra and Kutch. Their ages ranged from thirteen to nineteen years. Norms were computed on a sample of 1,300 pupils, drawn from above regions. The detailed analysis was carried out on a sample of 300 cases.

The main findings were: The correlation coefficients between the three areas of adjustment, viz., emotional, social, and family were statistically significant. Sex and community (urban and rural) were found to influence family adjustment scores. Age did not influence scores in any of the three areas of adjustment. Between means for grades were found to have affected all the three areas of adjustment. Sex X community and grade X community interactions were significant with respect to the family adjustment.

The psychological factors which had significant relationships with emotional adjustment were: neurosis and dominance-submission scales of Bernreuter's Inventory, normal-neurotic dimension of the

Maudsley Personality Inventory, study habits, intelligence and Conservative-Radical scale.

The factors which were found to be closely related to social adjustment were: neurosis, self-sufficiency and dominance-submission scales of Bernreuter Personality Inventory, normal-neurotic dimension of Eysenck's Personality Inventory, social interests, scores on Conservative-Radical scale, and study habits.

The psychological factors which were found to be related to family adjustment were: neurosis, introversion-extraversion, and dominance-submission scales of Bernreuter Personality Inventory and social and aesthetic interests.

130. BOSE, K., *A Psychological Study of the Personality Patterns of a group of Institutionalised boys with a view to understanding certain Emotional Factors leading to Problem Behaviour*, Ph.D. Edu., Del. U., 1960.

The study intended to explore the factors in the personality make-up of institutionalised boys giving rise to delinquent behaviour in them.

The sample comprised various categories of offenders, belonging to different parts of the country, in the age range seven to eighteen years, with an average age of 12.8 years. Majority of them were illiterate and court-referred. Their terms of detention varied from six months to eleven years. The tools used for collecting data were observations, interviews, consultation of relevant records, and administration of Alexander's Passalong Test, Goodenough's Draw-a-Man Test, Word Association Test, and Thematic Apperception Test.

The study revealed that (i) the boys lived in crowded houses without facilities of a comfortable and peaceful life; (ii) loss of support and security, denial of home affection, deprivation of material benefits had turned them into wayward vagrants, capable of doing mischief of any kind or degree; (iii) they were more often than not aggressive, acquisitive, and selfassertive (noncooperative, selfish and with stern attitude towards the world and people); (iv) mentally they showed lack of persistency in efforts, concentration, lack of perception of relationships and also of clear vision of gradual steps involved in an operation; (v) they had a very slow development of concept formation and still slower speed of performing a task; (vi) the boys were low in intellectual capacities; (vii) more than fifty per-

cent of the boys were definitely disturbed cases; (viii) the interest of the boys was centred in the home, but their affectional ties at home were loose and they were frustrated in an uncongenial home full of strife and friction; (x) they derived more satisfaction through violence, stealing, and wandering; (xi) the common theme of their stories centred around deprivation, lack of love, conflict of desires, offence and punishment, dominance, escape, family trends, thefts, murders, job difficulties, etc.; (xii) boys lacked the presence of super ego, while the development of ego was disturbed.

131. CHAUDHARY, N., *The Relationship between Achievement Motivation and Anxiety, Intelligence, Sex, Social Class and Vocational aspirations*, Ph.D. Psy., Pan. U., 1971.

The hypotheses formulated for this study were: (i) n-Achievement and intelligence would be significantly and positively related to each other; (ii) n-Achievement and test anxiety would be negatively correlated; (iii) students from middle class would have higher n-Achievement than those from higher and lower social classes; (iv) boys would have higher n-Achievement than girls; (v) students with high n-Achievement and low test anxiety would have realistic vocational aspirations.

The sample consisted of 200 boys and 209 girls from higher secondary schools of Amritsar, Jullundur and Chandigarh. Mehta's adapted version of the McClelland's TAT for n-Achievement, the Hindi version of test anxiety scale for children developed by Sarason and others, the Raven's Standard Progressive Matrices for Intelligence, the Kuppaswamy's Socio-Economic Status Scale and a self developed vocational information questionnaire for vocational aspirations were used. The validity and reliability of the adapted version of the TAT were calculated for the population in question. Persistence was used as the behavioural validating criterion. Differences in persistence scores between high and low groups on n-Achievement, test anxiety and on a combined in persistence scores between high and low groups by the Mann-Whitney U test separately for the boys, girls and the combined sample. The differences were statistically significant in the predicted directions. The test-retest reliability ranged from .70 to .72 and the split-half reliability from .47 to .55. The pretest indicated that sex of figures in the projective test did not affect the n-Achievement level of the girl-students. The following techniques were used to analyse the data: Pearson's product-moment correla-

tion, partial correlation, multiple correlation, analysis of variance, regression equations, chi-square test, and Mann-Whitney U test. The statistical analysis was done for both boys and girls combined and also separately.

The important findings were: (i) the correlation coefficients between n-Achievement and intelligence scores for the combined samples, and for boys were not significant, whereas the same was significant at .01 level for girls; (ii) partial correlation (first and second order), multiple correlation, analysis of variance and regression equations indicated absence of correlation between these two variables; (iii) the correlation between n-Achievement and test anxiety scores was negative and not significant; (iv) the correlation between n-Achievement and social class scores was positive and significant for the total group but it was not significant in the case of boys as well as girls (when computed separately); positive significant correlation was obtained by partial correlation, multiple correlation and regression equations; (v) girls had higher n-Achievement score; (vi) the hypothesis asserting that n-Achievement and intelligence were significantly positively related, was rejected; (vii) students with high n-Achievement and low test anxiety revealed moderate degree of discrepancy from realistic vocational aspirations as compared to the students with low n-Achievement and high test anxiety.

132. DEO, P., *Self Concept of Disciplined and Indisciplined Students*, Dept. of Edu., Pan. U., 1967. (F. F. financed)

The present project was taken up for comparing the disciplined and the indisciplined students on their self-concepts. The main purpose was to find out if these two groups revealed different patterns of their self-concepts which could be related to their disciplined or indisciplined behaviour.

The sample consisted of over 800 students from Punjab, Haryana, Chandigarh, U.P. and Jammu and Kashmir. From these 800 students, 300 disciplined students and 400 indisciplined students finally constituted the sample for the project. Out of these 700 students, sixty were female disciplined students, and ninety female indisciplined students. As no objective instrument was available for identifying disciplined or indisciplined students the measure adopted was ratings by teachers and heads of the institutions. In the development of the tool for

objectively identifying disciplined and indisciplined students, two main factors were taken into account, viz., social desirability variable and the chances of the subject faking and maligning the responses. For studying the self-concept, Deo's Personality Word List which is a standardised test was used. Descriptive statistical methods were used for analysing the data. The main technique for data collection was that of psychological testing.

The study revealed that the indisciplined group generally exhibited a high tendency to mark more words for their self-description as compared with the disciplined group which marked fewer words, the difference being statistically significant. This suggests the presence of extrovert types amongst the indisciplined group which is self-explanatory. The differences in the mean scores of these two groups were observed to be statistically significant on two dimensions, viz., emotional characteristics and character traits, other dimension differences being not significant. On the emotional dimension, the indisciplined group obtained a significantly higher score by marking more words than the disciplined group. This is indicative of the emotional emphasis in the indisciplined group. The disciplined group on the other hand, gave a much higher score on character traits where the score was low for indisciplined group. Thus higher emotionality and lower values of character speak for the indisciplined behaviour. On the percent differences fortythree adjectives significantly discriminated between the two groups. Out of these the negative adjectives picked up more by the indisciplined group were Aggressive, Nervous, Suggestible, Intolerant, Hostile and Talkative. On the positive side, the indisciplined students more often described themselves as Graceful, Likable, Attractive, Smart, Humorous, Intelligent, Systematic, Enthusiastic, Affectionate, Straightforward, Alert, Reasonable, Frank, Forceful, Responsible, Active, Bold, Carefree and Strong. They also described themselves as Noble, Punctual and Ambitious. The Physical strength, Intelligence, Activeness, Boldness, Frankness and Ambition are some of the characteristics which would distinctly go with the indisciplined group. There is also a possibility of their overestimating themselves. On the other hand, the disciplined group gave only two negative adjectives as being marked more by them—Shy and Confused. On the positive words, the disciplined students have checked more such words as Happy, Wise, Mature, Relaxed, Patient, Well-adjusted and Sympathetic. When the positive and negative scores were combined to

yield a composite score, the disciplined group was found to be getting a statistically significant higher score than the undisciplined group. Thus disciplined students revealed a distinctly different picture of their self-concept indicating a more stable personality as compared to the undisciplined students who gave a picture of maladjustment through high emotions and low estimate of character.

133. *DESAI, D. B., Achievement Motivation in High School Pupils in Kaira District, M. B. Patel College of Education, Vallabh Vidyanagar, 1971. (NCERT financed)*

The project was divided into two parts. The first part was intended to carry out a survey of achievement motive of high school pupils of Kaira district. The second part was intended to try out an experiment in achievement motivation development in high school pupils through the implementation of the curriculum prepared by Mehta.

The survey of the achievement motivation in Kaira district school pupils was undertaken with two specific objectives: (i) to determine the level of the achievement motive in school boys and (ii) to study the relationship between achievement motive and school performance.

The survey was confined to 1,000 pupils—735 boys and 265 girls—selected from 31 schools on the basis of their achieving status and socio-economic status. TAT and the AMI, along with Jayaben Patel's Group Test of Intelligence and a socio-economic status scale were administered. The TAT scores were computed by a team of three trained scorers. The scorers obtained a coding reliability of .84 and above.

The following were the major findings: (i) 487 pupils belonged to 89 to 112 IQ group, whereas 373 pupils belonged to 65 to 88 IQ group and 140 pupils belonged to 113 to 135 IQ group. (ii) In thirty schools, various classes had different mean n-Achievement scores. (iii) There were 284 pupils having 3 to 7 n-Achievement scores, 268 pupils were having -2 to +2 n-Achievement scores, eightyfive were having -7 to -3 n-Achievement scores, and eleven pupils were having 23 to 37 n-Achievement scores. There was no provision for special treatment for high n-Achievement and low n-Achievement pupils. (iv) There seems to be a definite positive correlation between IQ and n-Achievement scores. It is observed that n-Achievement score in-

creases with IQ. Feeble minded pupils had 2.1 as mean n-Achievement, average 6.8, very superior 10.9 and genius 13.4. (v) The n-Achievement score shows positive relationship with SES. (vi) n-Achievement mean score of Madras pupils is 3.76, Delhi pupils is 4.76 and Kaira pupils is 3.92. (vii) School SES is a predominant factor affecting n-Achievement level of pupils. (viii) School achieving status has positive relationship with pupils' n-Achievement score. (ix) The n-Achievement scores of pupils of illiterate parents (3.19), primary educated parents (5.13), secondary educated parents (7.14) and graduate parents (10.03) indicated definite positive and statistically significant relationship with pupils' n-Achievement scores. (x) The wards of those who are in white collared jobs, fourth class staff and business men scored significantly higher n-Achievement scores than those of others. The relationship is statistically significant. (xi) The Ss reflected significant amount of Achievement Th, N, I and Ga+. (xii) The Ss did not reflect considerable amount of G+, G-, Bp, Bw and Ga+. (xiii) The mean AMI score is 5.29. The AR score is 10.15 and TR score is 7.38 and UR score is 4.32. The TR score of Kaira district pupils is higher than that of Delhi pupils. Kaira TR is 7.38 and Delhi TR is 6.16; Kaira AMI score is 6.75. (xiv) There is a positive relationship between AI and AR scores and AMI and n-Achievement scores. (xv) The Achievement Motive Inventory Scores and performance of pupils did not show definite relationship.

Part II of the project aimed at conducting an experiment on achievement motivation development.

Mehta's curriculum was tried out by teachers specially trained in achievement motivation. The gain was measured in three aspects.

Firstly, the pupils gained significantly in their n-Achievement score. Secondly, there was an average gain of 7 percent marks in their examination subjects and thirdly, the gain in the change of their behaviour was recorded in anecdotal records. The pupils showed better aspirational behaviour.

134. *DESAI, D. B., and TRIVEDI, R. S., Achievement Motivation Development in High School Pupils through implementation of a specially designed Curriculum, M. B. Patel College of Education, Vallabh Vidyanagar, 1972. (UGC financed)*

On the basis of previous research studies by the same investigators a few observations were

noted for further research. Firstly, it was felt that anecdotal record cards be prepared and the observations of change in pupil behaviour be noted. Secondly, the change may be studied in terms of pupils' academic performance through objective tests. A third point which is very significant is the possibility of preparation of a new curriculum for achievement motivation development in high school pupils. The hypotheses tested were: (i) the training for achievement motive in teachers would lead to an increase in the achievement motive of their pupils which in turn will result in their better performance and better behaviour; (ii) implementation of specially designed programme by the teachers who have been oriented to the idea of achievement motivation, would lead to an increase in n-Achievement score of pupils; (iii) the increased n-Achievement in pupils will affect their performance positively; (iv) the n-Achievement development in pupils would affect their behaviour positively; (v) the increased n-Achievement in pupils would lead to an increase in pupils' motivation towards school.

The experiment was designed to train the teachers in n-Achievement development. The training was designed for four days. A curriculum was specially prepared and designed by a team of eight people. The printed copies of the curriculum were given to the teachers and on the basis of it, each experience was discussed. The curriculum was based on teaching (a) knowledge, (b) feeling and (c) action aspects of pupils' mind in terms of their perception of themselves. The perception was limited to their own goal setting behaviour, aspirations and planning of action strategies. The entire experiment on pupils was planned for one term i.e. from November 1st 1971 to March 7th 1972. In all, it was 60 periods treatment (curriculum). Each day one period was devoted to achievement motivation development programme. Achievement tests in science, English and geography, JIM scale developed by Frymier and TAT for n-Achievement were administered as pretests. After the end of the instruction for the whole term, tests were again administered to measure achievements of the pupils. The change in the pupils' behaviour worked as a sort of feedback to the teachers who need job satisfaction and when they get it from their job, this itself becomes a motivating factor.

Findings: (i) The total gain in mean achievement score is 10.4 i.e. the score was 5.3 before the

treatment and it came up to 15.7 as a result of treatment (i.e. through the implementation of an n-Achievement development curriculum specially designed by the investigators). (ii) It was observed that the number of UI stories decreased to the extent of 173 from 280 UI stories in the pretest. Similarly TI stories decreased to 310 from the total of 872. The reduction of PI and TI stories suggests that the unrelated and task related imageries in the minds of students took shape of achievement related imageries. As a result of this, 482 AI stories increased in the first test, making the total 980, which was only 498 in the pretest. The highest increase can be observed in the posttest and the resultant increase is 547. Similarly a considerable increase can be seen in I which was 294 in pretest, 711 in posttest, resulting in an increase of 417. The third factor showing considerable increase is N which was 445 in pretest, 896 in posttest and the resulting increase is 451. The other factors which also were induced to a significant extent were Ga+, G+, H and Bp. The factors like G+, Ga- and Bw also increased though not to a very high significant level. (iii) It was observed that all the schools gained in terms of pupil performance to the extent of 11.4 percent of marks. (iv) The gain of the pupil in English and geography reveals a substantial impact of increase in their n-Achievement. This leads us to predict that if proper system, incentives and healthy classroom climate are maintained, perhaps these pupils of grade X will show surprisingly high performance when they reach S.S.C. class. (v) The mean pre-experiment score on JIM scale was 86.8 and the post-experiment mean score on JIM was 87.1. It can be observed from the difference in gain, that the gain is not significant. This suggests that perhaps a large scale study for the entire institution is necessary rather than a study on just one class from each institution.

135. DIXIT, R. C., *Learning and Awareness — an Experimental Study*, Ph.D. Psy., Jod. U., 1967.

The objectives were: (i) to evaluate the combined effect of awareness and motivation to receive the reinforcement on verbal conditioning and (ii) to determine whether the sex of the experimenter and of the subject is important in a factorial design using the Taffel Sentence Construction Task.

The sample consisted of 96 persons. A sentence construction task was chosen as the conditioning

procedure because awareness can be more readily and clearly determined with this task.

Some of the important findings were: (i) Subjects who were aware of a correct contingency between the reinforcement and their own responses gave more personal pronoun sentences over trials than did the unaware subjects; (ii) there was no evidence that unaware subjects learned; (iii) aware subjects desirous of reinforcement, gave more first-person-pronoun responses than those who did not care for it; (iv) close relationship existed between the subjects' performance on conditioning and sex of the experimenter, and also between the sex of the experimenter and motivation to receive reinforcement, and (v) though quadruple interaction of reinforcement, awareness, sex of experimenter and sex of subject did not reach .05 level of significance in the overall analysis of covariance, the results of separate analyses for male and female subjects showed clearly that sex of subject was an important factor; in these analyses it was found that for female subjects the relationship between awareness and conditioning was not influenced by the sex of experimenter, whereas for male subjects the relationship between awareness and conditioning was highly dependent upon the sex of experimenter.

136. GAUR, J. C., *Personality Profiles of Isolates*, Ph.D. Edu., Agra. U., 1967.

The major objectives of the study were: (i) to investigate into the causes which lead to the development of isolatic tendencies in children, (ii) to study the influence of isolatic nature on school achievement, (iii) to compare personality profiles of isolate boys and girls and (iv) to suggest ways and means for education of isolates and their adjustment in the society.

Subjects were selected from eight schools with 499 girls and 551 boys. Sociometric and 'Guess who' techniques were employed in twelve different sections for boys and twelve different sections for girls. Forty isolate boys and isolate girls were selected and an equal number of boys and girls were selected to act as the controlled group. The tools used were the Rorschach Ink-Blot Test, the Thematic Apperception Test, Personality Inventory, an intelligence test, a questionnaire and an opinionnaire. Case study and interviews were also made use of.

It is found that girl isolates are introverts and day dreamers. They possess uncontrollable

emotions and they are afraid of even anticipated limitations. They lack common sense and generally fail to find immediate solution of problems. They are below average in intelligence, weak in studies, quarrelsome, selfish, shabbily dressed, and tell lies. Delinquent isolate girls come from low income group families. Isolate boys are introverts, aggressive, depressed and poor in intelligence. They do not make efforts to make social adaptations. Detached and completely maladjusted in society, isolate boys are weak in studies, proud, selfish and shabbily dressed. They have stealing habits and sex perversions. Their academic achievement is very poor when compared with the academic achievement of the normal group.

137. GHOSH, M., *Fantasy Life of Girls at the Preadolescent and Adolescent Stages*, Ph.D. Edu., All. U., 1956.

The present study proposed to investigate the imaginary emotional (fantasy) life of groups of preadolescent and adolescent girls of higher secondary schools in Uttar Pradesh.

The preadolescent group (11+ and 12+) which consisted of 100 subjects was mainly drawn from classes VII and VIII, whereas the adolescent group consisting of 95 girls (15+ and 16+) was drawn from classes IX to XII. The research tools used in the investigation were the unstructured ink blots, the Thematic Apperception Test (TAT), the Jalota's Group Test of Intelligence, and autobiographies of the subjects.

The results of the study have revealed that (i) the adolescent girls show more variability than the preadolescent girls in respect of fluency of imagination; (ii) preadolescent group has a tendency to give a large portion of "form" responses than the adolescent girls on unstructured inkblots; (iii) perceptive imagery of the older girls seem to have more sharpness of form indicating mental maturity, clarity of associative process, and ability to concentrate; (iv) older girls give a large number of movement responses than the younger girls; (v) a large number of girls in both the groups indulge in fantasies of aggression; (vi) adolescent girls have more romantic touch in their responses; (vii) escape themes occupy a higher place in the preadolescent group than in the adolescent group; (viii) religion occupies almost the same place in the life of both the groups; (ix) both the groups indulge in fairy tales fantasy; themes in

TAT given by the two groups of subjects differ not only in kind but in degree of emotional tone and feeling also, emotional intensity being greater in case of adolescent girls; (x) mother-daughter themes predominate in both the groups; (xi) the feeling of reform-repentance which is the outcome of guilt-feeling is more marked in the adolescent girls than in the preadolescent girls; (xii) both the groups wish to escape from their anxieties and depression, however, the proportion is greater for adolescent girls with respect to escape; (xiii) themes of ambition-success have a much more important place in the life of the adolescent girls than preadolescent girls; and (xiv) some adolescent girls resort to some sort of philosophical rationalisation as a defence mechanism to hide their real feelings and desires which are in conflict with social codes.

138. *GOKULNATHAN, P.P., A Study of Achievement Related Motivation (n-Achievement and Anxiety) and Educational Achievement among Secondary School Pupils, Ph.D. Edu., Dib. U., 1972.*

This is a comparative study of tribal and non-tribal students to study their n-Achievement with reference to racial, socio-cultural, educational and economic background.

The tribals included in study were from Kachari, Miri and Meeh tribes of the early Mongoloid race. The non-tribal people were mostly non-Mongoloids or Vans of Hindu religion. They formed socially and educationally advanced sections. A total of 294 boys and 89 girls drawn from 14 secondary schools of Dibrugarh, Lakhimpur and Sibsagar districts constituted the sample. The method of sampling followed was stratified random sampling. TAT and the Mehta's Achievement Value and Anxiety Inventory (AVAI) were used to assess the achievement motivation and anxiety, respectively. Performance at the SSLC/HSLC examination and test examination served as the index of educational achievement. Form A of the Kuppaswamy's SES Scale was used for classifying students on the basis of their socio-economic status. F ratio and t test were used to study the mean differences.

Among the salient findings were the following :

(i) The tribal pupils obtain significantly higher n-Achievement scores than the non-tribal pupils. (ii) The girls have an overall significantly higher n-Achievement than the boys. (iii) The tribal boys in

the rural and urban samples exhibit more or less the same level of achievement motivation. The non-tribals in the rural sample show significantly greater n-Achievement level than their counterparts. The tribal and non-tribal boys in the rural sample do not show significant difference in their n-Achievement levels, but their urban counterparts show a significant difference. The rural tribal boys show a tendency for greater n-Achievement than the urban non-tribal boys although the difference is not significant. The tribal boys thus, irrespective of the area of their residence, possess a higher level of n-Achievement than the non-tribals. (iv) n-Achievement levels of the tribal boys with middle and low SES are comparatively higher and not significantly different from n-Achievement of non-tribal urban boys with high SES. Moreover, the mean n-Achievement of tribal boys with middle and low SES is significantly greater than the mean score of non-tribal urban boys with low SES. (v) Tribal boys of fathers of low educational level do not differ from non-tribal boys of fathers with high and middle educational levels; the three educational status groups (high, middle and low) within either the tribal or the non-tribal group do not show any significant differences in their mean n-Achievement; both the middle and low educational status tribal boys have greater mean n-Achievement than the tribal boys with fathers of low educational level. (vi) In both tribal and non-tribal groups the mean n-Achievement scores become lower when moved from higher to lower income groups. The drop in the mean is more prominent in the case of the non-tribal boys. Father's income appears to be related in some way to n-Achievement scores in non-tribal sections, but it is not so in tribal sections. Tribal boys from each of the income groups show considerably greater n-Achievement, and in many cases, their achievement motivation level far exceeds that of non-tribal boys from the upper middle or group II, lower middle or group III and the lower or group IV income groups. None of the three income groups of tribal boys differ significantly from the income group I of non-tribal boys. Group II tribal boys, however, show significantly greater mean n-Achievement score than the non-tribal groups III and IV. Group III tribal boys show significantly greater n-Achievement level than the three non-tribal income groups, II III and IV. (vii) There was no urban tribal boy in the sample with father doing professional work; it consisted mostly of skilled or unskilled workers' families. They do not show

difference in their levels of n-Achievement. Within the non-tribals, the professional group of boys shows significantly greater n-Achievement than boys of the semi-skilled or unskilled workers. The tribals compared with the non-tribals show greater n-Achievement in each occupational group.

139. *GOPAL KRISHNA, Personality Patterns of Juvenile Delinquents with special reference to U.P., Ph.D. Edu., BHU, 1956.*

The main objective of this study was to compare delinquent boys within the age range of 16 to 24 years with the normal ones of the same age range and the same socio-cultural and economic level.

The delinquent group consisted of 90 probationers, 40 inmates of the Juvenile Jail, 27 inmates of the Reformatory School and 23 school delinquents. The repeated delinquents were preferred. The feeble-minded were excluded. Both urban and rural areas were represented. The normal or the control group comprised 45 boys from three colleges of two towns of Uttar Pradesh. The Rorschach Ink Blot Test and the Thematic Apperception Test were the primary tools of the study. The Minnesota Multiphasic Personality Inventory (MMPI) and the case histories were used to supplement the main findings. Beck method was followed in testing, scoring and interpreting the Rorschach Test data. Murray's system of interpretation was used in the case of TAT data.

Analysis of responses on the Rorschach Test showed that the Reformatory School inmates had schizophrenic trends and borderline mental deficiency. The school delinquents were found to be more intelligent and aggressive, but their high anatomical responses indicated that intellectual functioning was blocked up owing to inhibition and generalised anxiety. The probationers and the inmates of Juvenile Jail possessed the highest neurotic tendencies. In these two groups delinquency appeared to be the self-expression and mechanism of adjustment owing to the neurotic trends that disturb them. Analysis of responses on TAT indicated that broken homes had been the most important environmental factor causing delinquency. Physical violence was highest in the whole delinquent group. Among all the four delinquent groups, probationers ranked the highest both in behavioural disorders and emotional disturbances, followed by the Juvenile Jail inmates, the

Reformatory School inmates and the school delinquents in the descending order. Scores on MMPI showed that the psychoneurotic trends and the antisocial tendencies coexisted in delinquents. Hypochondriasis, hysteria and depression characterised the probationers' group. The Juvenile Jail inmates also showed psychoneurotic trends. However, they were emotionally less disturbed and had less behavioural disorders. The trend towards schizophrenia was prominent in the Reformatory School cases. The school delinquents were found to possess psychopathic deviation, hysteria and depression besides schizophrenia. The overall inferences of the study were that all delinquents were, more or less, psychoneurotic, their difficulties resulting from emotional disturbances. The TAT analysis revealed that the delinquents were first physically aggressive and then internally emotionally disturbed. The Rorschach finding showed that the delinquents were less intelligent. They always felt overwhelmed with fear and anxiety. The MMPI results confirmed the neurotic trends in delinquents.

140. *GUPTA, B. K., An Experimental Investigation into Personality Patterns of Delinquent Adolescents, Ph.D. Edu., All. U., 1959.*

The present study approaches the problem of adolescent delinquency in our country from a purely psychological standpoint. It aims at discovering the psychological forces—needs, drives and emotions in the personality make-up of adolescent delinquents.

The sample consisted of 50 adolescent delinquents drawn from higher secondary schools of Allahabad and Faizabad. Opinions of school teachers and the guardians formed the basis for considering a boy as delinquent in the psychological sense of the term. The control group of an equal number of nondelinquents, matched for age, intelligence, schooling and the socio-economic status, was also taken up. The projective techniques, namely, the Rorschach Ink Blot Test and the TAT were used. The Bhatia's Battery of Performance Tests of Intelligence was used mainly to match the subjects of both the groups on the basis of their IQs. Personal interviews with each subject, his guardian and his teachers were conducted. Student t test was used for analysis of the data.

Some of the findings with regard to the personality characteristics of delinquent adolescents

were as follows: (i) Emotionally delinquent adolescents are unstable and their behaviour is unpredictable. The ego structure of the delinquents is not properly organised. (ii) The control of aggression is one of the problems of delinquents. A strong interest in sex is suggested although it cannot be said with certainty whether the delinquents had any sex experience. However, their unusual interest in sex matters, at least at the fantasy level, if not at the overt level is strongly suggested. The delinquents are characteristically pessimistic in their general outlook towards life. (iii) The delinquent adolescents as a group are somewhat below the normal in general intelligence. However, this is not a clear differentiating factor. (iv) The capacity for abstract reasoning and the tendency towards major issues of life are somewhat below the normal limits in the delinquent adolescents. Their fantasy life is immature, dominated mostly by primitive instincts and drives. (v) The delinquent adolescents are emotionally unstable and impulsive and their emotional impulses are not under the direct control of their reason. Their sensual instinct is not under the direct control of their critical intellect. (vi) They are anxiety-ridden in their personality pattern.

141. GUPTA, V. P., *A Study of the effect of Age, Personality and Motivation on Persistence*, Ph.D. Psy., Pan. U., 1971.

The purpose of the investigation was to study the effect of age, personality and motivation on mental and physical persistence.

Three experiments were conducted on a sample varying in age from 11 years to 50 years. The first experiment studied the effect of age on persistence while the second one dealt with studying the effect of introversion and neuroticism dimensions of personality on mental and physical persistence. The third experiment which was factorially designed studied the effect of motivation and personality variables on persistence.

The findings were as follows: (i) Both mental and physical persistence are considerably influenced by age. Physical persistence increases with advancing age upto 41-45 and then declines, while mental persistence increases with age from 11 to 25, but declines with advancing age. There is a negative relationship between mental and physical persistence at all age

levels. (ii) Persons scoring low on extraversion and neuroticism increase in mental persistence and decrease in physical persistence as compared to those scoring high on extraversion and low on neuroticism. (iii) Personality differences are more pronounced at the age of 50 and above, in the case of mental persistence. In the case of physical persistence the differences are more apparent between 41 and 45 years. (iv) Mental and physical persistence is affected by motivational situations but the effect varies according to the individual characteristics of a person. (v) In case of introverts, significant increase is observed in mental persistence but not in physical persistence and (vi) the extroverts show significant increase in physical persistence but not in mental persistence.

142. JAIN, K., *Personality Studies of Adolescent Girls with specific reference to the Students in the Girls' Colleges of Allahabad*, Ph.D. Edu., All. U., 1954.

The aim of the study was to explore and see the structure of the personality of the adolescent girls and to devise ways and means for its harmonious development.

One hundred girls in the age group 13 to 18 years studying in a girls' college in Allahabad were selected. The Rorschach Ink Blot Test and the Thematic Apperception Test were administered to these girls. Investigator's personal observations of behaviour in many and varied situations were also taken into account.

The study revealed that an average adolescent girl had indulged in day dreaming about herself and there was more fantasy in her life than the capacity for abstract thought. She was an introvert type. She had a capacity of forming good emotional ties. She was perseverant and her reasoning was good. She had confidence in her own judgement. Socially she was well adjusted. She was ambivalent towards her mother. On the whole, sixty-nine percent of the total sample was found to be introvert type, eight percent extrovert type and three percent ambivalent. There were seventy-nine percent of girls in whom fantasy life was more than the amount of abstract thinking. Aggression widely prevailed among adolescent girls. Hero worship also existed among adolescent girls.

143. JOSHI, D., *Development of Understanding during Childhood (6-12)*, Ph.D. Edu., Luc. U., 1963.

The purpose of this investigation was to study the development of understanding during childhood period from 6+ to 11+ and to suggest improvement in education of children. The hypothesis examined was that development of understanding takes place with age, and that there are sex differences in this regard.

The study was restricted to Lucknow only. Seven hundred and thirty children were selected randomly from six schools. Eight basic concepts, namely, self, social, aesthetic, comic, weight, time, space and number were chosen for the study. For children of six to eight, there were three interview schedules, each containing twentyfour questions based on geometrical figures, pictures, etc. For children of nine to eleven, technique of questionnaire was used for getting data. The questionnaire consisted of 100 questions based on geometrical figures and pictures. Data were analysed by computing various statistical measures and then testing the differences between them for significance. Linear correlation, also, was used as a technique for analysis purpose.

The important findings were: (i) development of understanding goes with the growth of age; however, at certain stages achievement of two age groups for certain concepts is equal; (ii) girls are generally more developed in social, aesthetic and time concepts than boys, while boys are superior to girls as regards comic, weight and space concepts; (iii) girls of 6+, 10+ and 11+ are superior to boys with regard to development of self-concept whereas at 7+, 8+ and 9+ this order is reversed; (iv) only at the age of 9+, boys' aesthetic concept is better than that of girls, (v) as regards the time concept, boys are better than girls at the age of 8+ and 9+; (vi) the comic concept of girls is better developed at the age of 6 and 7+ but that of boys excels that of girls at 8+, 9+, 10+ and 11+; (vii) for all age groups, the weight concept of boys is superior to that of girls; (viii) though the space concept of girls is superior at the age of 6+ and 7+, that of boys is superior at 8+, 9+ and 11+; at 10+ both are equal; (ix) the number concept of girls is more developed at 6+ and 8+, but not at the age of 7+ and 9+, that for both boys and girls are equal at 10+ and 11+; (x) at 6+ the highest developed concept is of space in boys, and space and comic concepts in case of girls

and the lowest developed concept is the social concept; (xi) at 7+ the highest developed concept is the concept of number in boys, and the comic concept in girls, and the lowest developed concept is of self in boys, and of weight in girls; (xii) at 8+ the highest developed concept is number and lowest is self in the case of both; (xiii) at 9+ the highest developed concept is social and lowest is number for both; (xiv) at 10+ and 11+ the highest and lowest developed concepts are social and number respectively.

144. JULKA, G. L., *Aggression, Fear and Anxiety in Children—(their Educational Implications)*, Ph.D. Edu., Raj. U., 1963.

The main aim of the present investigation was to study the nature of children's fear, aggression and anxiety with the help of a specially constructed test suited to Indian conditions, and to find out the causal factors involved in them. The subsidiary aims were to compare two culturally different groups, the Bhil and the non-Bhil, and the two sexes with regard to their fear, aggression, and anxiety responses on the new test; to study the personality traits of highly aggressive, fearful and anxious children through the Rorschach Ink Blot Test; to search out new ways of controlling abnormal manifestations of aggression, fear, and anxiety in young children; and to recommend an educational programme which may be helpful to teachers and parents in dealing with the problems of aggression, fear and anxiety in young children.

One hundred school going children of the age group 7+ to 11+ were included in the sample. Equal number of children were taken from the two sexes and the two different cultural groups known as the Bhil and the non-Bhil groups. The first group, that is the Bhil group belonged to a backward primitive tribe—a tribe which resides in the remote rural and hilly areas of Udaipur District. The children in this group had a very poor socio-economic background. Their parents were mostly labourers and farmers who were working either on daily wages or on a lease basis in the fields of Rajput landlords. The family income of these children in no case exceeded rupees one hundred per month. The second group, that is, the non-Bhil group belonged to the Hindu community. All the children in this group were living in the city of Udaipur. Their socio-econo-

mic condition was high. Their parents were officials in government offices or they held respectable positions in society. The monthly income of the parents of these children was more than five hundred rupees. A new test of fear, aggression and anxiety was constructed by the investigator. The new test comprised twenty pictures representing various situations of child's physical and social environments. The test was developed mainly on the lines of the Murray's Thematic Apperception Test. An attempt was made in the present study to establish the validity of the new test by correlating the test results with the opinion of the teachers regarding children's behaviour. The results were, however, not very encouraging. Case studies of a few selected individuals in the two cultural groups were carried out in detail. In all, twelve children were selected for the purpose.

The research revealed the following. Fear themes occurred more frequently in the records of children than the other themes. This was true in the case of all children—Bhils and non-Bhils, males and females. Next in order of frequency were the themes of aggression and anxiety. The other themes were produced less frequently than the three themes mentioned above. The most common forms of fear expressed by the children, in order of their frequency, were fear of animals such as fear of being killed by tigers, lions, snakes or other wild animals; fear relating to school such as fear of punishment or scolding by the teacher for not doing home work or getting late in the class; fear of persons or supernatural beings such as ghosts, giants, witches, strangers, thieves, dacoits, the police, abductors and kidnapers; fears relating to family situations, such as fear of being scolded or punished by the parents or other family members and fear of illness or occurrence of death in the family; fears of inanimate objects and places, such as jungles, darkness, water, flood and high places. The most common forms of aggressive responses given by children, in order of frequency, were: aggressive ideas, aggressive assaults, aggressive murder and verbal forms of aggression such as rebuking, scolding, complaining, etc. In the group of environmental themes, themes of aggressive punishment by family members, teachers and other persons; aggressive beating or attacking by animals, persons, and family members; and aggressive killing or murdering by animals and family members were among the commonest forms. Children's anxieties were mostly related to their school work. A few

children had also expressed their worries relating to health of their own self or physical well-being of their family members. The non-Bhil children produced significantly more themes of aggression than the Bhil children. No significant differences were found between them with regard to their production of fear and anxiety themes. The female children produced significantly more themes of fear than the male children. There were no significant differences between the two sexes on the production of aggression and anxiety themes. The intercorrelations between fear, anxiety and aggression of themes showed either negative or low positive correlations which might indicate no common factor involved in them. Most of the aggression, fear and anxiety themes were drawn from geophysical and social environments. This might indicate that the causal factors lie mostly in environmental situations rather than in any inherited factor. Bhil children produced more themes of fear of scolding or punishment by the teacher, fear of police, fear of jungle, of being attacked or killed by an animal and the fear of darkness, whereas non-Bhil children produced more themes of fear of strangers, fear of thieves, dacoits and robbers and the fear of abductors and kidnapers. Female children produced more themes of timidity, fear of scolding or punishment by the parents and the teachers and fear of darkness, whereas the male children produced more themes of fear of thieves, dacoits and robbers. Non-Bhil children produced more themes of verbal aggression, aggressive assaults, aggressive punishment, aggressive narrations and social aggression than the Bhil children. Female children produced more themes of verbal aggression and aggressive punishment by someone other than the hero and the male children produced the largest number of aggressive murder themes committed either by hero himself or by someone else in the stories. The fears were found mostly learned or acquired. Most of the children who expressed the highest number of responses in their records were found to be shy and withdrawn children. Physical disability and general weakness was one of the underlying causes of fears in young children. Lack of confidence and feeling of insecurity in the subject himself was another cause. Anxiety was caused mostly by an awareness of disapproving and reflecting attitudes on the part of others, by conflicts between opposing needs, by nonconformity to prescribed standards, by disappointment or loss, by inferiority feelings and the repression of hostile

impulses. The physical conditions arousing aggressiveness were poor health, lack of sufficient sleep, unsuitable sleeping conditions, disturbed sleep due to worry or anxiety, suffering from children's diseases, lack of sufficient vigorous activity or play during the daytime, illness and insufficient recreational facilities. Too high ambitions, inability to achieve goals and inability to meet failures were the other causes contributing to aggressiveness. Disturbed home conditions such as uncontrolled parents, quarrelsome or aggressive members of family, unhealthy relationships between children and parents, etc. were found to be suggestible to the child to learn more aggression.

145. *KAKKAR, A., Adjustment Problems of Adolescents, Ph.D. Edu., All. U., 1964.*

The investigation sought to study (i) the adjustment problems of adolescents in home, school, health and social areas; (ii) sex differences in the problems; (iii) the relationship between intelligence and adjustment; (iv) the influence of the problems on learning efficiency; (v) the relationship between personality structure, psycho-social structure and adjustment; and (vi) implications for mental hygiene and educational guidance.

Conducted on a random sample of 75 girls and 75 boys of class XI from the nine higher secondary schools of Allahabad, the study used tools which included the Raven's Progressive Matrices test, the Asthana's Adjustment Inventory, Personality Inventory prepared by Allahabad Bureau of Psychology, the Rorschach Ink Blot Test and the Thematic Apperception Test by Murray. Information regarding family, school background, etc., was collected through different schedules. Data were processed through chi-square and correlational techniques.

Results showed that 43 percent cases had serious adjustment problems; the school area posed the greatest number of problems, while in the home area the adolescents were overdependent on parents; girls accepted parental control, but boys grumbled about it; a feeling of insecurity in the home was mirrored in their attitude towards school situations. Boys were more aggressive and curious about the new knowledge while girls were shy, withdrawn and nervous. Adolescents were deeply concerned about their health. Shyness, nail biting, day-dreaming, lack of self-confidence, sex and problems relating to nervousness were conspicuous. Boys were possessed with

sex problems, while girls with those like fear in the dark, fear in the crowd, etc. In social areas, problems like 'how to be popular, how to get along with others' worried the adolescents. The positive inter-correlations between the different areas of adjustment showed that problems that disturbed the psychic equilibrium in one area brought about disturbance in other areas too. The data also revealed that adjustment and personality problems increased with an increase in the level of intelligence. Three types of personality structures according to Rorschach Test influenced adjustment of adolescents. The results based on TAT data indicated that the verbal ability of the above average cases was richer as compared with that of others. Analysis of information schedules revealed that the parents and teachers lack insight into the private world of adolescents. Adjustment problems were seen to have adversely affected the learning efficiency of adolescents. On a comparison of the findings of this investigation with those in an American study, it was found that the social problems reflected cultural differences. The school problems of Indian adolescents were more serious than those of their counterparts in U.S.A.

146. *KUMAR, K., Social Climate in School and Characteristics of Pupils, Ph.D. Psy., MSU, 1972.*

The aim of the study was to examine the effect of six types of social climate in schools on student behaviour in terms of personal social adjustment, value orientation and attitude toward certain educational objects, and scholastic achievement. The hypotheses tested in the study were: different social climates in the school tend to produce difference in student behaviour in terms of (i) personal, social adjustment, (ii) value orientation, (iii) attitude towards certain educational objects and (iv) scholastic attainment.

The school climate was derived from the hierarchical and collegial interactions between the principal and teachers in a school system. Six types of social climate in school considered in the study were: the open, the autonomous, the controlled, the familiar, the paternal, and the closed. The criterion variables examined in the study included personality characteristics like activity, hypomanic temperament, moral values, dominance, paranoid tendency, depressive tendency, emotional instability, and introversion. Value orientation towards basic

values of Indian society and particular groups within this society included attitude towards eight aspects of student behaviour, namely, norms relating to behaviour towards parents, teachers, boy-girl relationship, education, moral, social, civic and religious values. Attitudinal variables related to student behaviour comprised attitude towards school in general, towards certain educational policies and practices on the strict-lenient continuum, and students' perceptions of non-teachers teaching. The scholastic achievement was assessed in terms of pass percentage in the Board's examination.

The groups-within-treatment design (with the school as the unit of sampling) was adopted to study the effect of social climate in school upon the criterion variables. A sample survey was carried out to identify the prevailing social climate in schools. The non-governmental and coeducational high schools in Gujarat State, in existence for at least ten years, served as the population. An objective measure of social climate was used to identify and classify schools into six climate groups. Each of six climate groups of schools was treated as forming a hypothetical population, and a random sample of three schools was drawn from these hypothetical populations. Observations on criterion behaviours were collected from students of class X of selected schools and statistical analysis was carried out on school means to examine the effect of social climate in schools on student behaviour. Univariate as well as multivariate analysis of variance were performed to study the significance of obtained differences in the criterion measures under different climates.

The findings suggest that different social climates have differential effects on certain aspects of student behaviour. Personality characteristics such as emotional instability, depressive tendency, moral values, activity, paranoid tendency, and introversion differentiate between climate groups, and to a lesser extent, characteristics such as hypomanic temperament and dominance tend to differentiate them. But all these studied 'simultaneously' discriminate significantly between school climates. Other criterion variables related to attitudes, values, scholastic attainment, however, do not discriminate between climate groups. Among the climates, the schools with open climate, tend to show better personal adjustment of pupils than the other groups of climate. Next to open climate is the closed climate group of schools on this criterion; the autonomous, the controlled, and the paternal occupy

the mid position in this respect, and the familiar being the last among the climates. The findings demonstrate empirically what so far has been assumed on a priori basis regarding the effectiveness of the open climate for the proper development of personality and adjustment of pupils. The results of the present study point to a possibility of basic causal link between climate characteristics and pupil variables.

147. LAL, K., *A Comparative Study of Emotional Stability of Mentally Superior and Average Adolescents*, Ph.D. Edu., Agra U., 1968.

The objectives of this investigation were (i) to compare emotional stability of mentally superior and average pupils of different age; (ii) to find out prominent emotional characteristics of superior and average pupils; (iii) to find out emotional characteristics of adolescents; and (iv) to give suggestions for special education of superior and gifted children.

The study was confined to 14+ to 16+ boys of grades IX and X of some urban higher secondary schools of Madhya Pradesh. Seventyone superior and an equal number of average boys were selected on the basis of their performance on the Prayag Mehta's Group Test of Intelligence, the Bhatia's Battery of Performance Test of Intelligence and teachers' ratings. Emotional stability was assessed by the personality inventory (Vyaktitva Parakh Prashnavali) by Lal, the Rotter's Incomplete Sentence Blank and the Rorschach Ink Blot Test. The average and superior pupils were equated on the basis of their socio-economic status using the Kuppuswamy's Socio-Economic Status Scale.

Groupwise comparison of superior and average pupils revealed that the former had a slightly better tendency towards adjustment in general, but the difference was not significant. At 14+ and 15+ the superior pupils were better adjusted. At 16+ the average group was better adjusted. The superior group was slightly better adjusted at home but the difference was not significant. Pupils of both groups showed a slight tendency to improve from 14+ to 15+ and to deteriorate from 15+ to 16+. The superior group was significantly better adjusted in situations relating to health. They deteriorated in health adjustment from 14+ to 15+ and improved from 15+ to 16+ but the average group showed a gradual improvement from 14+ to 15+ and from

15+ to 16+. Superior and average pupils were almost equally well adjusted in most social situations and differed significantly only in some situations. The superior group had a slight tendency to improve from 14+ to 15+ and to deteriorate from 15+ to 16+. Superior pupils were significantly better adjusted emotionally. They showed a slight tendency to improve from 14+ to 15+ and to deteriorate from 15+ to 16+ in emotional adjustment, whereas the average group showed gradual improvement in successive age levels. The average group was better adjusted in situations related to the school and the difference was significant. Superior pupils showed a slight tendency to improve from 14+ to 15+ and deteriorate from 15+ to 16+ in school adjustment. The average group showed improvement throughout. In the analysis of responses to the Incomplete Sentence Blank where each group was taken as a whole the superior group showed a slight tendency towards better adjustment, but the difference between the two groups was not significant. As regards attitudes towards society and sex, the superior group had more favourable attitudes. The average group had more favourable attitudes towards life and morals. Effect of age on attitude change was not appreciable. The Rorschach Test revealed that superior group was emotionally more stable and better adjusted. They had comparatively fewer tensions and conflicts. While emotional stability increased with age in the superior group, it deteriorated with age in the average group. Both groups were ruled by immediate need for gratification, but the superior group was ruled to a lesser degree. The average group showed a more withdrawing type of behaviour. Both groups were almost similar in their relationship with others in society.

148. *MATHEW, V. G., Personality Patterns of College Students Specialising in Different Fields. Ph.D. Psy., Ker. U., 1971.*

The aim of the present study was to find out whether there were significant differences in values, temperament and vocational interests among college students specialising in different fields (science, humanities, engineering, commerce, medicine, education, law, agriculture and veterinary). Only four groups (science, humanities, medicine and education) were considered in the case of women, as their numbers in the other groups were very small.

In the first phase of the study, three personality inventories were developed. AVL Study of Values and the Guilford-Zimmerman Temperament Survey were adapted to suit conditions present in Kerala. A new vocational interest inventory was developed along lines similar in certain respects to the Kuder Preference Record. The trial forms of the three tests were administered to about 370 college students and item analysis for internal consistency was undertaken. The reliability of scales was found by using the odd-even method. An attempt was made to validate tests by seeing how they differentiated certain groups and also by correlating with scores on other available tests. T score norms were found by using representative samples of students. The tests were administered to a minimum of 30 men from each of the nine groups and 30 women from each of the four groups. An analysis of variance was done for each of the 23 traits to see whether the nine groups of men differed in the traits concerned. A similar analysis was done for each scale in the case of women also. For men, F ratio was significant for all the six values, nine out of the ten traits of temperament and all the seven vocational interest scales. For women, F ratio was significant for three value traits, two traits of temperament and all vocational interest scales. In the case of each scale, for men and women separately, the relative positions of the different groups of students were examined. Then in the case of each group of students, the personality pattern obtained on the 23 traits was delineated graphically and the results were discussed. Lastly, the differences between men and women in each scale were tested for significance in the case of the representative men and women student groups and for the four fields of study having both sexes. Many significant differences were obtained and they were in line with logical expectations.

The conclusion is that significant differences in values, temperament and vocational interests exist among college students specialising in different fields in Kerala.

149. *MATHUR, C. B. L., An Analytical Study of Children's Paintings as Indications of their Personality Patterns, Ph.D. Edu., Udaipur U., 1972.*

The study was undertaken (i) to develop a usable objective tool for the prediction of certain

personality traits in school going children in the context of Rajasthani socio-cultural background and (ii) to explore the possibility of using free expression paintings for prediction of an individual's personality.

A sample of 86 boys and 71 girls of thirteen plus representing various levels of intellectual ability, was selected from all over Rajasthan.

Necessary data were collected with the help of the Thematic Apperception Test, the Raven's Progressive Matrices, the Jalota's General Mental Ability Test and paintings sketched by the sampled children. The scoring blank for TAT stories and scoring blank for the paintings were developed. For analysis, the main components considered were human figures, animal figures, inanimate objects, scenery, geometrical designs, maps, blue prints, diagrams and abstracts. These components were analysed from the point of view of factors like Form, Placement, Perspective, Column, etc.

The findings of the study have emerged in the form of a suitable scoring manual which can be used by the classroom teachers or counsellors to interpret children's paintings for purposes of diagnosis, prediction and guidance.

150. *MATHUR, T. B., Causes of Frustration in Adolescents and its Relation with the level of Aspiration, Ph.D. Edu., Agra U., 1970.*

The aims of the study were : (i) to investigate into various causes of frustration in adolescents; (ii) to study the relationship between frustration on one hand and the level of educational aspiration and the level of vocational aspiration on the other; (iii) to determine whether frustration is higher in adolescents having low academic achievement; and (iv) to determine whether or not frustration was related to socio-economic status.

Seven hundred and seventytwo adolescent students of class XI of Mathura District in Uttar Pradesh formed the sample. Adolescent students whose frustration scores were above 75th percentile in frequency distribution of scores formed the high frustration group and the students whose total frustration scores were below 25th percentile formed the low frustration group. The tools used in the study were the Socio-Economic Status Scale of Kuppuswamy, the Jalota's General Mental Ability Test, the Saxena's Personality Inventory and questionnaires

to study frustration. Frustration in four areas viz., home, health, school and socio-personal, and levels of educational and vocational aspirations were determined by scoring and analysing questionnaires 'F' and 'A' respectively. Coefficient of correlation was calculated between the scores on areas of frustration and scores on levels of educational and vocational aspirations. Mean, standard deviation, standard error of mean and critical ratio were the statistical techniques used for the analysis of results.

The conclusions drawn from the findings were: (i) causes of frustration were found mainly in home, health and socio-personal areas; (ii) the foremost causes of frustration were found to be health and economic problems; (iii) adolescents were found to have a higher level of educational aspiration and vocational aspiration than their socio-economic condition would permit; (iv) all types of frustration and the level of educational aspiration were not found to be significantly related except home frustration and the level of educational aspiration, the correlation being negative at .01 level of significance; (v) no significant difference was found between frustration scores of adolescents having high academic achievement and those having low academic achievement; and (vi) the incidence of frustration was found to be significantly higher in adolescents belonging to low socio-economic status than those from high socio-economic status.

151. *MATTOO, B., Adjustment Differences at Different Levels of General Intelligence and Socio-Economic Status among Urban Adolescent Boys and Girls, Ph.D. Edu., Kur. U., 1972.*

The present study intended to test the significance of the differences in home, health, social, emotional and school adjustments of urban adolescent boys and girls of age group 14+ years of higher, middle and lower levels of general intelligence and socio-economic status along with the interaction of sex, general intelligence and socio-economic status in these areas.

From a pool of about 4000 boys and girls, from 20 boys and 20 girls schools in Delhi, Chandigarh, Faridabad and Ambala Cantt., 40 representative students for each of the 18 treatments were selected by stratified random cluster sampling. The tools used were—(i) Verbal Group Test of Intelligence (Bureau of Psy., Allahabad), (ii) Kupp-

swamy's Urban Socio-Economic Status Scale and (iii) Personality Adjustment Inventory of M.S.L. Saxena. For each of the five areas of adjustment a separate three-way analysis of variance was made by setting the design in the 2 x 3 x 3 factorial form.

The findings reveal that (i) the adolescents at the lower intelligence level are the worst adjusted and need the greatest attention; (ii) the adolescents of the higher intelligence group, born in poor homes have a significantly poorer home adjustment than their equals born in middle and upper class homes, and their emotional and social adjustments register a significant drop in coming down from higher to the middle socio-economic status; (iii) though the boys are, on an average, significantly superior to girls in emotional adjustment, those belonging to the 'low intelligence' group show almost as poor an emotional adjustment as the girls of the same group; (iv) though the boys and the girls of higher intelligence group are almost at par in social adjustment at higher socio-economic status level, the girls are significantly superior to the boys at the middle level, and there is a reversal at the lower level, girls being significantly inferior; (v) the differences in the adjustment of adolescents of the three levels of socio-economic strata are significantly different in the areas of home, health and emotional adjustment; (vi) the difference in social adjustment is not significant; (vii) the average home adjustment in the lower socio-economic stratum is significantly inferior to that in the upper and the middle strata between which the difference is not significant; (viii) the emotional adjustment of adolescents of the middle and the lower strata, though almost at par, is significantly inferior to that of their equals of the higher stratum; (ix) the health adjustment at the middle socio-economic stratum is poorer than at the higher and better than at the lower stratum; and (x) the two sexes do not differ from one another in any area of adjustment except in the 'emotional'.

152. MEHTA, K. R., *Language Development of Gujarati Children upto the Age of Twelve*, Ph.D. Edu., Bom. U., 1964.

The study intended to measure the language development of Gujarati children upto the age of twelve.

The sample consisted of 800 children selected

from 16 places in Gujarat, Saurashtra and Bombay. Fifty children in each group were tested orally. The children's responses were recorded during three visits at the interval of seven days. The correlation coefficient between the two response recorders was 0.99. Mechanical, nonmechanical toys, charts, models story books, maps, drawings and paintings were used. By following the usual procedure of test construction, 17 tests were prepared for standards III to VIII and 14 for standards V to VIII for children between 8 to 12 years. Norms were also established. In order to test written vocabulary, children had to write for 30 minutes on a topic of their choice. Oral and written responses were analysed under various heads. Oral responses were classified into 13 and the written compositions into 10 categories. In order to test language development, 31 tests consisting of 1278 items were constructed. The reliability was calculated by test-retest method as well as by the split-half method. The validity was calculated by computing the correlation between tests and teachers' ratings. It was 0.56. Percentiles, stanines, age norms, grade norms and sex norms were calculated.

Following were the important findings: (i) Analysis of the oral responses indicate that children develop language as they grow older; (ii) repetitions go on decreasing with age from birth to about eighth year and then remains steady; (iii) imitation increases till eighth year and then remains steady; (iv) recognition of colours increases with age; (v) children utter numbers before they can count things; (vi) children start asking questions at the age of 1½ years, and do so more till fourth year, but this tendency decreases after eighth year; (vii) vocabulary increases upto 4054 words from birth to eighth year; (viii) speaking of sentences begins to appear at the age of six months; (ix) the length of sentences also increases with age; (x) children construct simple, compound, complex sentences as they grow; (xi) the analysis of compositions reveals that the mean length of sentences increases with age from 3.7 words to 9.8 words; (xii) the mean number of sentences increases with age; (xiii) the number of simple and compound sentences decreases with age while the number of complex sentences increases; (xiv) the vocabulary also increases with grade and age; (xv) the use of present tense increases with age while that of past tense decreases whereas the future tense is used only after the VI grade; and (xvi) nouns dominate all other parts of speech whereas verbs come second but their use

decreases gradually. Pronouns and adjectives, however, continue to decrease with age and grade.

153. MEHTA, P., *The Achievement Motive in High School Boys*, NCERT, New Delhi, 1969.

The objectives of the present study were to determine the level of achievement motive in high school boys and to study the relationship of achievement motive with school performance.

It was hypothesised that (i) boys with high achievement perceive their peers, teachers, fathers as having high expectations about their school performance as well as having high vocational aspirations, and (ii) boys with high n-Achievement perceive their best teachers, fathers and best friends as having achievement qualities.

Out of 165 schools in Delhi, some higher secondary schools were scrutinised regarding their achievement and socio-economic status. These schools were first arranged according to the percentage of successful candidates at the higher secondary school examination in 1963. These schools were then divided into two groups—one having higher percentage and the other having less percentage than the average which was 63.90. The schools were then arranged according to the number of candidates securing first division. Thus the first 28 schools in each of the two groups were selected to form the high achieving group and the low achieving group of schools. These schools were from all the zones of Delhi. Each zonal inspection committee rated each school on a designed socio-economic status scale. Thus finally 32 schools were selected on the basis of their achieving status (AS), socio-economic status (SES) and geographical location. The total sample consisted of 975 class IX boys (375 belonging to the science group and the rest to the non-science i.e. humanities and commerce group). The following tools were used: (i) Mehta's Verbal Group Test of Intelligence, (ii) Kuppaswamy's Socio-Economic Status Scale, (iii) a self rating type thematic apperceptive measure known as the Achievement Motivation Inventory (AMI) developed in a side study.

The important findings were: (i) the n-Achievement level of boys in Delhi is higher than that in Madras, it compares well with the teenage boys in Germany and the USA, but it is lower than that of Brazilian and Japanese boys, (ii) the rural and urban high school boys show no difference in their

n-Achievement levels, (iii) those in low SES and low AS have n-Achievement level equal to that shown by boys studying in schools with high SES and high AS, but is higher than those studying in middle SES and high AS schools, (iv) the boys whose fathers' educational level is either high or low show higher n-Achievement level than those whose fathers' have received only secondary education, (v) the n-Achievement shows positive correlation with the total performance at the schools annual examination, (vi) the Achievement Motivation Inventory (AMI) provided two distinct measures, one on n-Achievement related motive which is similar to the motive of avoiding failure and the other on achievement related values, these two measures show negative correlation with each other, (vii) the achievement related motive shows negative correlation with n-Achievement, with the total school performance and with the self-expected vocational success whereas the measure on achievement related values shows positive correlation with these three variables; and (viii) the rural boys show higher score on achievement values but lower on MAF than the urban boys.

154. MEHTA, P., KUMAR, K., SHARMA, B. R., and KANADE, H. M., *Level of n-Achievement in High School Boys*, NCERT, New Delhi, 1967.

The investigation attempted (i) to study the level of n-Achievement in boys in Indian higher secondary schools and its relationship with school performance and (ii) to compare the n-Achievement of middle class and working class boys.

A sample of 975 pupils from class IX was drawn from thirtytwo higher secondary schools of Delhi. Of the thirtytwo schools, fifteen were identified as high achieving schools (HAS) and seventeen as low achieving schools (LAS). The fifteen HAS comprised six high socio-economic status schools (HSES) and nine middle socio-economic status schools (MSES). The seventeen LAS comprised MSES schools. About five percent of the boys were from HSES, fiftythree percent from MSES, and thirty percent from LSES. No data were available for twelve percent. The subjects ranged in age between eleven and twenty years, with mean age at 14.21 years and median age at fourteen years. Three hundred and seventy students were studying in the science

group. The rest were either studying commerce or some subjects from the humanities group. Thematic Apperceptive Instrument consisting of six pictures (stability coefficients .39 and .56; split-half reliability .58) which were selected out of thirty pictures, developed and tried out was used to measure n-Achievement of each student. Prayag Mehta's Intelligence Test, and Kuppaswamy's Socio-Economic Status Scale were the other instruments used in the study.

The analysis of the stories revealed that only 9.07 percent of the stories showed emotions—positive or negative—compared to fortyfour percent of stories from a sample of rapidly growing economy and thirtythree percent of stories from a sample of slowly growing economy. Thirtyfive percent of obstacles in the self or in the world were found in the group of slowly growing economy and twentyone percent in rapidly growing economy against 8.27 percent in the present study. The mean n-Achievement score was little higher though not significant than that of German boys. It was lower than the n-Achievement shown by boys in Brazil ($t=2.62$; $p=.01$), and considerably lower than that shown by Japanese boys ($t=3.37$; $p=.01$). The mean n-Achievement scores for schools high in both AS (Achieving Status) and SES (Socio-Economic Status), ranged from 6.45 to 9.67, for schools with middle SES and low AS, ranged from 2.68 to 10.00, and for schools with low SES and low AS, it ranged from 4.13 to 10.31. The location of schools (urban, rural) did not produce any significant difference in the n-Achievement levels of the pupils. The pupils studying in schools with high AS appeared to show higher n-Achievement than those studying in schools with low AS. The school SES was found to be significantly related to the pupils' n-Achievement levels. The subjects from the high SES and low SES schools revealed similar n-Achievement, whereas the former showed higher n-Achievement than the subjects from middle SES schools ($t=2.56$; $p=.05$). With AS controlled, high SES and low SES separately showed higher n-Achievement scores than middle SES. Subjects studying in schools with high SES and high AS showed a significantly higher n-Achievement score than those studying in schools with middle SES and low AS ($t=3.28$; $p=.01$). The school AS had shown a significant relationship with n-Achievement with the subjects from schools with high AS showing higher mean n-Achievement. On the other hand, subjects studying in the schools with high SES and high AS showed little difference in

n-Achievement from those studying in schools with low SES and low AS. Fathers' SES did not show any relationship with the boy's level of n-Achievement. Subjects belonging to income category two (less than Rs. 750 p.m.) showed the highest mean n-Achievement score. The subjects coming from the highest income group (more than Rs. 750 p.m.) showed the lowest mean n-Achievement, which was still lower than that of the subjects from the lowest income groups (Rs. 50 and less). The variations in n-Achievement levels were, however, not significant. The subjects whose fathers (and/or guardians) possessed professional or semiprofessional qualifications tended to show higher n-Achievement than those whose fathers possessed high school education. The subjects whose fathers possessed university degrees showed a very significantly higher n-Achievement than those whose fathers had only high school education. The latter's n-Achievement level was also significantly lower than those whose fathers possessed intermediate education. They also showed a significantly higher n-Achievement level than those who possessed middle school education. The mean n-Achievement level of subjects whose fathers belonged to the semiprofessional group was consistently higher than that of professional, skilled and unskilled workers. Subjects whose fathers belonged to the skilled workers' group showed higher n-Achievement score than those whose fathers were professional workers or semiskilled workers. Their n-Achievement score was lower than that of subjects coming from semiprofessional group and about the same as that of those from the unskilled workers' group. Boys whose fathers had low educational level (EL) were found to have lower n-Achievement level than those whose fathers had middle educational level (EL). In the lower middle class group, the boys whose fathers had high educational level (EL) showed higher n-Achievement but the boys whose fathers had low EL failed to show higher n-Achievement than those whose fathers had middle EL. The boys with a lower middle class background showed lower n-Achievement level than those with a working class background. The lower middle class boys whose fathers had low EL showed a considerably lower n-Achievement than working class boys whose fathers had low EL. Those boys (working class boys with fathers low EL) tended to show a somewhat low n-Achievement than the lower middle class boys whose fathers had high EL. The highest mean n-Achievement score was obtained by 12 year old

boys. However, it did not differ significantly from age groups of 13, 14, 15, 16 and 17. The n-Achievement scores showed a highly significant positive relationship with marks in English, mathematics, and with the total marks; high positive relationships with marks in science subjects and marks in Hindi and nonscience subjects. The n-Achievement also showed a positive correlation with intelligence. Low SES schools which had a N of 20 or more showed no relationship between n-Achievement and academic achievement, whereas some schools with high SES showed a significant positive relationship. The combined group of boys studying in low SES schools showed a positive correlation between n-Achievement and school performance. The high SES school boys showed no relationship either between n-Achievement and performance or between n-Achievement and intelligence, whereas the low SES school boys showed a definite relationship between their performance and n-Achievement. Among these boys those with high n-Achievement showed higher school performance. They also showed a significant relationship between n-Achievement and intelligence. Within the occupational groups, boys with high n-Achievement and those with low n-Achievement showed no differences in their school performance, although subjects with high n-Achievement tended to show higher performance. Within the low educational (EL) group, boys with high n-Achievement showed higher mean school performance than those with low n-Achievement. The low EL subjects showed a markedly steeper upward performance for increasing n-Achievement. The boys with low n-Achievement in middle and high EL groups showed higher school performance than those in low EL groups. The boys with low n-Achievement in the middle and high EL groups not only showed the same performance as other boys with high n-Achievement in their own or other groups, but also showed higher performance than those with low n-Achievement in low EL group.

155. *MERCHANT, S. J., The Language Development of Gujarati speaking Bohra Girls of Standard IV of a typical Bohra Girls' School, Ph.D. Edu., Bom. U., 1961.*

The study was undertaken (i) to scrutinize and study pupils' compositions as well as various aspects of language development and teaching, namely, subject matter, vocabulary, grammar, philology, orthography, punctuations, abbreviations, length of com-

position, structure of the sentence, paragraph construction, and expression; (ii) to study the methods followed by teachers for teaching composition; and (iii) to help the language teachers to improve the language skills of Bohra girls.

Composition exercises written by 70 girls of standard IV of a Bohra school in Bombay were utilized to study the language development. Information was also collected from previous related studies as well as by a questionnaire which was sent to forty primary teachers in Bohra schools and four non-Bohra Gujarati schools. Composition exercises of seventy girls (six from each) of standard V were examined to trace further development. The 1190 composition exercises were classified and grouped according to the description, events, letters and stories, and then according to the subject matter. The root words used by children of standard IV were arranged alphabetically and classified according to grammar and philology. A similar list was prepared for standard V and later on a combined list of 1000 words was prepared for standards IV and V. The methods followed by different teachers for teaching composition were studied by interviewing several teachers.

The findings revealed that (i) the teachers are not aware of language development in children; (ii) 3,530 different words are used in all compositions in standard IV and 2,209 in standard V; (iii) the number of running words is 1,47,414 in IV standard, whereas, it is 51,596 in standard V; and (iv) the orthographical study of compositions reveal the following type of mistakes—substitution of one letter for another, omission, incorrect use of numbers, inaccurate spelling of words and incorrect sentences. Statistical information regarding each type of error, average number of words in each paragraph and the average number of paragraphs in each exercise is also presented in the study.

156. *MIRCHANDANI, D. V., Differential Personality Profiles of Delinquent and Non-Delinquent Girls, Ph.D. Edu., Agra U., 1970.*

The purpose of this study was to make a comparative study of personality profiles of delinquents, non-delinquents, and girls with different behavioural problems. Four types of variables, namely, intelligence, personality traits (neurotic tendency, self sufficiency, introversion and dominance), attitudes (familial, general, social, sexual and character traits), and values (theoretical, economic, aesthetic, social,

religious and political) were studied.

With the help of case history, interviews, rating scales and questionnaires, three groups of girls in the age range of fifteen to eighteen were selected. The first group, consisting of delinquent girls who were convicted and institutionalised, belonged to rescue homes, social welfare centres and remand homes. The second group consisted of girls belonging to educational institutions who were not convicted and institutionalised but had behavioural problems and showed marked tendency towards delinquency. The third group comprised non-delinquent girls who had no behaviour problems and were well adjusted in their schools. The Raven's Progressive Matrices Test, the Rorschach Ink Blot Test and Indian adaptation of the Bernreuter's Personality Inventory, the Rotter's Incomplete Sentence Blank and Indian adaptation of the Allport-Vernon-Lindzey Study of Values were used to collect data. One way analysis of variance was employed to analyse the variance of the scores on the fifteen personality variables of the institutionalised delinquents and girls with behavioural problems in educational institutions. F test and t test were used to study group differences.

The analysis revealed inverse relation between intelligence and intensity of behaviour problems. Institutionalised delinquent girls were less intelligent, whereas, the non-delinquent school girls with behaviour problems were more intelligent than the girls in the norm group. A direct relationship was established between nature of behaviour problems and degree of neuroticism and introversion. The non-delinquent school girls with behaviour problems were emotionally better adjusted, while the institutionalised delinquent girls were emotionally more disturbed than the girls in the norm group; the three groups differed from each other on emotional stability. All three groups lacked self-sufficiency and depended on others for encouragement and advice. The three groups did not differ on dominance trait. The institutionalised delinquent girls had the most unfavourable familial attitude and were different from the non-delinquent school girls with behaviour problems. There was an inverse relationship between behaviour problems and the general attitude. None of the three groups had favourable social and sexual attitudes and none of them differed from one another on these attitudes. The school girls with the behaviour problems had the most favourable attitude towards character traits but the difference between the groups

was not significant. The theoretical value of institutionalised girls was lower while that of the other two groups was higher than that of the norm group. The economic values of all the three groups were slightly less than that of the norm group. The non-delinquent school girls with behaviour problems differed significantly from the remaining two groups on aesthetic value and had higher social and political values. But the difference for the social value was not significant while that for the political value was significant. The institutionalised girls had the highest religious values, which differed significantly from those of the other two groups.

157. MISRA, B. K., *Significance of Cultural Background in Learning Process*, Ph.D. Edu., BHU, 1968.

The investigation aimed at (i) studying the operation of learning process in terms of cultural background; (ii) determining the relationship, if any, between cultural background and the learning process, and (iii) studying the kind, direction and degree of significance of cultural background in learning process under varying conditions of culture and learning.

The investigation was limited only to studying the problem analytically and critically and drawing inferences based there on. The verification of the inferences drawn was not attempted. The documents, informatory lectures by persons of authority, past strikes, seminar discussions were referred to for this study. So far as learning process is concerned, the transmission process from the source/sources, the medium/media and the factors facilitating learning world were examined. As regards cultural background such backgrounds of individual and social groups were considered. A few cases were observed to ascertain the part played by cultural background. Inferences were based on critical examination of the observations.

The major findings of the study could be summarised as: cultural background plays a significant role in the determination of learning; it determines the philosophy of education and learning; it should be considered while stipulating aims of education and learning, framing courses of studies, deciding about the medium of instruction, offering proper educational guidance and evaluating acquired learning meaningfully.

158. NAIR, R. S., *A Study on the Effect of N.C.C. Training on Physical Growth, Adjustment, Academic Achievement and certain Personality Traits of High School Pupils in Kerala State*, Ph.D. Edu., Ker. U., 1972.

The main objective of the study was to assess the effect of N.C.C. training on physical growth, adjustment, academic achievement and certain personality traits of high school pupils. The hypotheses tested were: (i) N.C.C. training has significant influence on the physical growth and development of secondary school pupils; (ii) N.C.C. training has a significant influence on the development of ability for adjustment of secondary school pupils; (iii) N.C.C. training helps to improve significantly the academic achievement; and (iv) N.C.C. training has a significant effect on the development of certain personality traits.

The sample consisted of students of standard VIII from all high schools having N.C.C. troops in Trivandrum district in 1963-64. A controlled group was selected by having a matched pair for each pupil in the experimental group on the basis of age, school achievement, socio-economic status and teaching-learning situations. In all, 240 matched pairs were included. Only the experimental group was exposed to N.C.C. training. After two years, assessment of both the groups was made with regard to height, weight, measurement of chest, and measurement of the hand around biceps muscles. The Bell's Adjustment Inventory (student form) was adapted and translated into Malayalam. The reliability was calculated using the Hoyt's method. The validity was established by correlating the scores on the inventory with teachers' ratings and by the use of critical ratio. The adjustment of pupils was measured using this inventory. The academic achievement was taken from the quarterly examination marks. The personality traits, namely, leadership qualities, integrity, sociability, persistence, emotional stability, attitude to school, self-confidence, assertiveness, attention to details, and concentration were measured by using rating scales. The statistical techniques used in the analysis of the results included descriptive statistics, coefficient of correlation and critical ratio. Factor analysis of the variables was also made by using centroid method.

The following were major findings: (i) significant gain in physical development, adjustment, achievement in English, general science and social

studies, and personality traits was found in experimental group; (ii) no significant difference was found in the achievement in mathematics and Hindi in both the groups; and (iii) the factor patterns were almost identical for both the groups in the initial measurement but in the final measurement the factor patterns of the experimental group contained five significant factors whereas the controlled group contained only three factors. The result of factor analysis showed that the adjustment of individuals in all areas was considerably improved in the case of experimental group.

159. NANDA, A., *Psychological Needs of Adolescent Girls and their bearing on Individual Adjustment*, Ph.D. Edu., Del. U., 1957.

The study was designed to find out how far the psychological needs such as needs of security, adventure, freedom, intellectual curiosity, religious craving, aesthetic appreciation and heterosexual relations are being met in the lives of adolescent girls and what adjustment difficulties are being experienced by them as a result of some of the needs unfulfilled.

A sample of 300 adolescent girls from high and higher secondary schools was selected randomly. A detailed questionnaire, an adjustment schedule, a self rating scale, an attitude scale and a sentence completion test were administered to these girls. On the basis of responses on these tests a sample of 100 girls who were identified as having some difficulties in adjustment was selected to study the effect of unsatisfied needs on the girls' personal adjustment.

The study revealed that (i) a great deal of insecurity among the girls prevailed as a result of worry and anxiety about future and success both in the academic and social life of the school; (ii) those girls who were not able to get the affection of their parents and who did not get recognition from any quarter experienced feelings of insecurity; (iii) a large number of girls desired parental affection, recognition of their individuality and respect for their points of view; (iv) they wished their parents to exercise less control over them and not to expect unquestioned obedience from them; (v) the adolescent girls were keen to have new experiences, to get thrill and excitement of venturing into the unknown, and about eighty percent of them appear-

ed to have feelings of restlessness by staying in one place; (vi) the intellectual awakening in girls made them have a philosophy of life; (vii) they had certain inhibitions regarding heterosexual behaviour; (viii) they were hesitant in answering questions on sex and had been influenced much by their elders in this respect; (ix) girls were not given any scientific information about sex and in most cases they were kept in dark, which resulted in worry and emotional stress; and (x) a number of girls had difficulties in adjustment due to inferiority feelings and wrong attitudes of their parents about their success and failure in school.

160. NATH, P., *Personality Correlates of Attitudes towards Social Change*, Ph.D. Psy., Pan. U., 1971.

The study aimed at measuring the attitudes of the young college students, both male and female, towards social change covering six areas, viz., marriage, technology, education, women's place in Indian society, religion and tradition.

A Conservatism-Radicalism scale was prepared by dividing 606 statements into eleven categories ranging from extreme conservatism to extreme radicalism. This was done by 25 judges, and 300 items were retained. This scale with scores from 0 to 5 assigned to the response categories was administered to 300 postgraduate students and the resulting data were analysed by computing point biserial r . The scores of the final administration of the scale were factor-analysed by Burt's Simple Summation Method. One common factor alone contributed 49 percent of the total variance. The test-retest reliability of the total scale and the six subscales, as well as the split-half reliability showed that the scale enjoyed a high reliability. The C-R scale was administered to 1,116 postgraduate students and to the chosen extreme sample of 112 conservatives as well as radicals. The Raven's Progressive Matrices, the BPI and ten scales of the CPI were administered to study the personality correlates. The relationship between radicalism and the 17 chosen personality traits were found by the methods of point biserial r , phi coefficient, Pearson r and t test for the difference between means. All the values were found to be statistically significant.

The findings of the study reveal that (i) radicalism is positively correlated with fourteen of the seventeen chosen traits, (ii) negative relationship

exists between radicalism and neuroticism, introversion and sociability, (iii) the C-R scale shows that mean of the scores on radicalism is higher on fourteen traits and lower on other three traits as compared to the mean of scores on conservatism, and (iv) the personality traits are better predictors of attitudes.

161. NAYAR, E. S. K., *A Study of Certain Personality Characteristics of Leaders among High School Students*, Ph.D. Psy., Mys. U., 1962.

The present investigation aimed at studying personality traits associated with leadership at high school level.

Four levels of leadership, viz., academic, social, extracurricular (indoor) and extracurricular (outdoor) were covered in this study. A sociometric test developed by the author was used in selecting 'leaders', 'non-leaders' and 'isolates'. After segregating the groups of leaders (maximum sociometric choice), non-leaders (maximum rejection) and isolates (score ranges between 6 percent positive and 6 percent negative choice), scholastic aptitude test, ascendance-submission test, self portrait and Indian adaptation of TAT having 20 cards were administered, along with taking personal data of all the subjects by means of a personal data form.

The findings revealed that (i) leaders are, in general, superior in scholastic aptitude regardless of their areas, compared to non-leaders and isolates; (ii) on scholastic aptitude, academic leaders are superior to other leadership groups, extracurricular (outdoor) leaders being superior to social leaders, extracurricular (indoor) leaders being superior to the other two groups; (iii) academic leaders are less ascendant and more submissive, while extracurricular (outdoor) leaders are more ascendant and less submissive; (iv) on TAT, the leadership groups are superior to non-leaders and isolates; and (v) the comparison among the various leadership groups shows no clear-cut pattern.

162. PAL, S. K., *Personality Study of Engineering, Law, Medical and Teacher Training Students*, Ph.D. Edu., All. U., 1969.

The study compared selected personality characteristics of students of engineering, law, medical

and teaching faculties and investigated the distinguishing personality characteristics of each group of students.

Hypotheses tested in the study related to intellectual, motivational, emotional and social aspects of personality. Variables included under each of the above personality dimensions were as follows: (a) intellectual—intellectual level, creative potential, power of organization, investigation and linguistic abilities; (b) motivational—values, level of aspiration and needs; (c) emotional—adjustment of control, introversive-extraneous balance; (d) social—interpersonal.

Fifty students in the final year of their training from each of the four professional groups constituted the sample. The Allport-Vernon-Lindzey Study of Values, the Saxena's Adjustment Inventory, the Rorschach Ink Blot Test and the Thematic Apperception Test were used to measure various personality characteristics of professional groups. An information blank was employed to get students' background data. The *t* test was used to test the significance of difference between various measures.

The findings on the variables undertaken under the four broad areas of personality were: (i) the intellectual level of engineering students was found to be superior to and significantly different from law, medical and teacher training students; (ii) between law and medical students and teacher trainees, however, difference was not significant; (iii) creative potential of medical students was significantly different from other groups; (iv) except law students and student-teachers, other groups were found to differ significantly on power of organization; (v) comparison of means suggested overall superiority of engineering students; engineering students showed significant higher scores than other groups on imagination variable; (vi) on language variable student-teachers exhibited significantly higher score than the engineering and medical students; (vii) engineering students were found to have significantly higher score on the economic value, while law students and teacher training students produced significantly higher score on political value; (viii) engineering students yielded higher scores on the economic and the aesthetic scales, while medical students scored significantly higher on theoretical and social scales; (ix) in the case of engineering students, economic value emerged as the highest single value variable and religion the lowest; (x) with law students, political value emerged as the highest value variable followed by economic value;

(xi) in student-teachers, political value emerged as the highest value variable followed by theoretical; (xii) no significant difference was found among engineering, law, medical and teacher training students on aspiration variable; (xiii) majority of the groups were differentiated on the needs of achievement, assessment, autonomy and nurturance; on other needs, viz., deference, aggression, dominance, succourance and affiliation, there was no significant difference between various groups; (xiv) on the general adjustment scale, student-teachers were found to be different from the engineering and law students; (xv) on home adjustment, no significant difference was found among different groups; (xvi) social adjustment was found to be the most discriminating adjustment area—medical students scored significantly higher than the engineering students, student-teachers higher than the engineering and the law students; (xvii) on control variables, the difference between groups was not significant; and (xviii) law and medical students were found to be different from others on introversive-extraneous balance variable, and student-teachers were different from the engineering and medical students on social variable. The study concluded that significant differences do exist among engineering, law, medical and teacher training students on majority of the personality variables under investigation.

163. PAREEK, U., *Children's Reactions to Frustration*, Ph.D. Edu., Del. U., 1958.

This investigation attempted to study the developmental patterns of children's reactions to frustration.

The children's form of the Rosenzweig Picture Frustration Test was adapted and standardised for this study. For scoring reliability 100 protocols of children of age group 6 to 11 were independently scored by two persons, including the investigator. The average percentage of agreement was .79. The reliability of the instrument was examined by studying its stability. A sample of 50 boys of 12 years of age was used. The instrument was administered to the children in two groups. After a period of 22 months, it was again administered. The investigator administered it at both times. The protocols were scored by the investigator immediately after administration each time. The results of the test-retest reliability were analysed both in terms of the factors and the items. The reliability (stability) coefficient

(both for matrix reliability and item reliability) were quite high, and indicated satisfactory reliability of the instrument. The validity of the instrument was found out by using four different methods—comparing P.F. scores with teachers' ratings, comparing delinquents with sample norms, effect of artificially induced frustration on P.F. scores and a statistical procedure of regional analysis of the P.F. protocols. The Indian adaptation of the P.F. study was administered to a population of 1,002 children of ages 4 to 13 of Delhi schools. The administration procedure followed was the standard one as indicated by Rosenzweig. For the final sample only those protocols were taken into consideration which were complete in all respects. Protocols with one or more missing responses were excluded. The study was administered in groups to children of ages 9 to 13. The standard procedure of allowing each child to use a separate answer blank was followed. For children of ages 6 to 8 individual administration was preferred. Children of both sexes as well as from the various socio-economic strata were selected. The method of stratified random sampling was used for selecting the sample. A total number of 9 schools were selected.

The analysis of the data showed that as far as the categories are concerned, extrapunitive predominates all age groups. Similarly ego-defensive behaviour seems to be an important characteristic at all age levels. The percentages of E and C-D are quite high at every age group, though there are some developmental changes as far as their predominance is concerned. From the point of view of scoring factors, the factors E and I (tendency to excuse oneself from blame) seem to be important at all age levels. Since M (tendency to excuse others) and I have a very close relationship, this shows a tendency of excusing oneself and others being an important factor in the child's life. Also it is found that for direction of aggression, although extrapunitive predominates at all age levels, there is a definite trend in the decline of extrapunitive with the increase in age. A corresponding increase in intrapunitive and impunitiveness is noticeable. The increase in these cases is also steady. There are some variations in the rate of increase from one age level to the other; and there is increased percentage shown at four year age level than at five year age level. These trends show that children tend to be less extrapunitive as they develop, and perhaps learn to be self-critical (intrapunitive) and oblivious of the frustrating experiences (impunitive). There is an

indication that percentage for group conformity rating scores steadily rises with increase in age, although there is slight reversal at the age levels of 12 and 13. The rise is quite steady. This is an indication of the increase in conformity to group behaviour with an increase in age. Calculations regarding the various nine scoring factors reveal the consistent predominance of the factor F throughout the age levels. It is followed by factors E and I and then by M. There are some distinct trends of steady change visible in super-ego factors. E steadily decreases with advance in age. The tendency to deny any responsibility for the offence seems to decline with age. Similarly E-E has also a declining tendency, although not so distinct. There is a steady increase in I, and the differences between the frequency at four year level and thirteen year level is highly significant. This shows that although there is an increase in self-critical tendency with age (I) and the child does not offensively deny the responsibility as he grows older (decrease in E), the tendency to excuse oneself from blame becomes more marked with advance in age. The category M, as has been shown above, also increases with age. Since I and M have so much in common, these are combined and it may be seen that the variant M-I steadily increases in strength with age. As observed by Rosenzweig, "The tendency for the two types of response here in question to increase with maturity may be taken to reflect one result of socialisation."

The above findings were compared with those from America and Japan in order to show the cultural differences in the field of personality development.

164. PAREEK, U. and RAO, T. V., *Motivation Training for Mental Health (A Study of Teacher Behaviour and Student Mental Health)*, National Institute of Health Administration and Education, New Delhi, 1971. (ICMR financed)

The objectives were: (i) to make a survey of the important mental health variables among school children; (ii) to make a survey of patterns of classroom behaviour of teachers; (iii) to make a study of the relationships of teacher's classroom behaviour and positive aspects of pupils' mental health; and (iv) to experiment with methods of motivation train-

ing of teachers with a view to improving pupils' mental health.

To survey the mental health among school children, the variables studied were adjustment of children towards home, school, friends, teacher and a few general matters as self-perception, dependence level, initiative level, trust on teacher as well as class fellows, activity level, socio-economic status, intelligence level and ways of meeting the frustrating situations. Tests were developed to measure the first six variables. Prayag Mehta's Intelligence Test and Pa-reek's Indian Adaptation of Rosenzweig Picture Frustration Test were also used. For survey of the mental health variables, the tests were administered to 1,700 pupils of class V drawn from fifty primary and middle schools of Delhi. All the students were from single teacher classrooms. For this, school-wise means, itemwise percentages of student responses and sex differences were calculated. Teacher behaviour was surveyed by Flanders Interaction Analysis Category System. Teachers from the fifty schools were observed for an hour and a half on the average. Indirect|direct influence ratios and teacher|student talk ratios were calculated to measure the influence patterns. To find out associations between teachers' interaction behaviour and students' mental health levels, 25 percent of teachers from the sample showing highest indirect influence and 25 percent showing highest direct influence were chosen. Chi-square was computed to test whether highly indirect or highly direct influencing teachers had significantly more number of high scoring students on each test showing an association between the two sets of variables. In the motivation training it was intended to study whether a change in students' mental health can be brought about where teachers were trained in interaction analysis, but as it could not be done, the experiment was conducted with a group of nine teachers who were observed before training. After a ten-day training programme in interaction analysis feedback was given to teachers regarding their classroom behaviour and an opportunity to experiment with new patterns of interaction. Post-training observations immediately after training and a few months later, were made. An untrained group was also observed for comparison.

Results of the mental health survey revealed that (i) the pupils were fairly well adjusted with regard to parents and home; (ii) seven percent pupils did have problems; (iii) adjustment levels with peers, teachers, school and other general areas were posi-

tive though not very high, particularly in adjustment towards school; (iv) they were neither too dependent nor independent; (v) they showed a considerable amount of trust in teachers and class fellows; (vi) they had above average initiative and activity levels; (vii) their intelligence levels were the same as that of VII and VIII grade students of Rajasthan; (viii) when faced with frustrating situations they had more extrapunitive and ego-defensive reactions; the Flanders Interaction Analysis revealed that (ix) teachers talked fiftyfive percent of the time (less than in other countries); (x) student talk was thirtyone percent of the time; data for associations between teacher behaviour and student mental health revealed that (xi) teachers using high indirect|direct influence had significantly higher number of well adjusted students, high in intelligence, high in initiative, more impunitive and ego-defensive but less need-persistent reactions to frustration; (xii) classrooms with low teacher|student talk ratios had more well adjusted and highly intelligent students; training results revealed that (xiii) as a result of training, teachers started using more and more interaction, using the categories of praising, encouraging, accepting and classifying the ideas of students and questions without changing the amount of classroom talk; and (xiv) teachers sustained changed behaviour for six to seven months after training; they showed differences on these categories when compared with a group of untrained teachers.

165. PATEL, R. N., *A Critical Study of the Character Traits of Dull Children Studying in the Secondary Schools in rural area and the problem of their Education*, Ph.D. Edu., MSU, 1967.

The study aimed at (i) locating the dull and educationally backward boys and finding out approximately the proportion of such students in secondary schools chosen for the study; (ii) determining those traits that may be said to be differentiating such students from the average ones; and (iii) knowing the educational difficulties of such children along with the teachers' problems in dealing with them.

A sample of 111 dull and backward, and 125 normal students was drawn from nine secondary schools situated in rural areas of Broach and Surat districts on the basis of I.Q., school achievement and teachers' opinions. Data collection was done through (i) ratings of the selected students on the

Character Trait Rating Scale by teachers, (ii) ratings on the Character Trait Rating Scale by students, (iii) two case record forms, (iv) recording of parent's observation, and (v) getting information about the difficulties of the students. Statistical measures of median, chi-square test by contingency table and F test were used for analysing the data.

It was found that (i) tardiness, truancy, unpunctuality and non-talkativeness are the differentiating traits of the dull and backward students; (ii) dull backward students have less educated parents and generally come from poor families; (iii) their families have less hold on the social life of the village and spend less on study; (iv) dull backward students are slow learners and are careless and irregular in their studies and attendance; and (v) students who fail are disturbed at home while studying.

166. PRASAD, A., *Fatigue of School Children*, Ph.D. Psy., Gor. U., 1966.

The aim of the present study was to evolve a measure of fatigue of the children.

The investigator used a form of letter cancellation test at the start and the end of the school day and evolved an empirical formula for the assessment of a psychomotor task. The test consisted of 31 letters of Devanagari alphabet, arranged at random with a frequency of 33 each. The testees were asked to read and cancel some instructed letters out of 1023 letters. The optimum time for this Choice Letter Cancellation Test (CLC) was five minutes and the optimum number of letters to cancel was four. The sample consisted of 573 boys and 476 girls of classes IX and XI. The nature of influence of different factors, including sex and age differences, on fatiguability of students was explored through chi-square test and analysis of variance of the data. These complex relationships were finally related to problems of scholastic attainment.

The findings of the study revealed the following facts: (i) the conditions of schooling are to be adjusted to the fatiguability of the children; (ii) the results of the study do not support the notion that girls are less tired at the end of the day than boys who are universally considered to be hardier.

167. PRATAP, P., *The Development of Ego-Ideal in Indian Children (A Survey)*, Ph.D. Psy., BHU, 1960.

The study aimed at testing the proposition

that the child's ego-ideal undergoes changes during adolescence.

The tool of research was a questionnaire prepared by the investigator containing the names of six heroes and six heroines and a list of corresponding masculine and feminine qualities. The questionnaire was administered to a sample of 860 students of which 500 were boys and 360 girls. About 150 boys and 100 girls of classes IV to VIII were in the age range of 9-12 years (pre-adolescent group), the adolescent group of age range 12-16 years consisted of 200 boys and 160 girls, while the adult group was composed of 150 males and 100 females.

The investigation revealed that (i) there is a fairly high degree of similarity between the structure patterns of the ego-ideal among both the sexes represented by the scale valued for the given lists of heroes, heroines and qualities; (ii) the ego-ideal patterns shown by the ranking of the male and female are highly correlated for adults; (iii) there can be a common ideal for both male and female; the pattern of ego-ideal for girls undergoes a good deal of revaluation at the adolescent stage specially in the case of ranking of heroes, heroines and the ideal woman; (iv) among the post-adolescent boys there is a certain degree of revaluation for the list of traditional heroes and the pattern continues fairly unchanged in respect to the ranking of heroines and the ideal man and woman; (v) boys show highest correlation between ideal qualities and heroes at pre-adolescent level and lowest at the adolescent level while the girls show highest at adult level and lowest at the pre-adolescent level; (vi) the evaluations of the heroines as well as their qualities are very similar after the pre-adolescent stage; (vii) the pattern of the ego-ideal seems to be independent of class distinction, social status, financial or sex differences; and (viii) the regimentation of preference among both males and females indicates the influences of parents, society, school and religion on the mental set-up of children.

168. RABINDRADAS, L. D., *A Study of Personality Rigidity in relation to Motivation, Learning, Concept Formation, and Perception*, Ph.D. Psy., Madras U., 1969.

This study has sought to investigate the personality rigidity in relation to motivation, learning, concept formation and perception among the high school students. The definition offered by the inves-

tigator for personality rigidity is —choice tendency of an individual to adhere to a type of behaviour, or set developed by him. This rigidity embraces such tendencies as adherence to goal, promise, time, taste, status, one's own point of view, activity, wish, place, and order. The main thesis advanced was that the rigid individual would behave in different manner from non-rigid individual in varied psychological functions in which conflict and choice have roles to play. The rigid individual as specified in this study was expected to show consistence and intense involvement in the task undertaken.

Keeping the generic definition in mind, the investigator pooled a number of test items in consultation with five high school teachers. These items were then presented to ten judges who were working in the area of psychology for comments regarding the item validity for measuring personality rigidity. Twenty six items were finally chosen for inclusion in the test. These items were depicted in picture form. The tool is known as Rigidity Picture Test designed exclusively for the present study. Forty students were selected at random from five schools and the test was administered to them. On the basis of the results, subjects were classified into high, moderate and low rigid groups. Efforts were made to study the effect of these levels of rigidity on motivational and cognitive functions.

The study revealed that (i) the high rigid individuals show less variable behaviour in goal setting tasks than the relatively less rigid individuals; (ii) the high rigid individuals show efficiency in learning even wrong equations because of their adherence to the task and of their tendency to attach significance to what they have undertaken; (iii) high rigid individuals adhere to the clues in the concept formation task significantly better than others; (iv) high rigid individuals are consistently superior in conceptual thinking to the less rigid individuals; (v) the overall picture of the results shows that the rigid individual as postulated in the present study exhibits a distinct pattern of behaviour in the different task situations.

169. RAJGURU, H. P., *A Study of Insecurity among Adolescents as a determinant of Juvenile Delinquency, Ph.D. Edu., Vik. U., 1971.*

This investigation hypothesized that apart from all other factors, psychological or emotional factors

are mainly responsible for creating the feeling of insecurity and imbalance which give rise to delinquent behaviour. The study, therefore, focussed its attention to draw a comparison on insecurity dimension between delinquents and non-delinquents.

The sample consisted of 40 delinquents and 2200 non-delinquents. A group of 40 juvenile delinquents in the age group 12-21 from the Central Jail, Indore, were also studied for verifying the findings of this study. Tools and techniques used for data collection were the Maslow's S.I. Inventory, an interview schedule and case studies.

The investigation revealed that the delinquents possessed a higher index of insecurity than the non-delinquents. It has been highlighted by the study that the various factors that influence the adolescent behaviour first create a state of insecurity in economic, social and emotional aspects of an individual's life. In many cases adolescents had fallen prey to antisocial activities because of the uncongenial environment during their early life. The younger group within the sample of delinquents was specially the victim of the cruelties of home which led them towards various crimes especially when they were emotionally disturbed by the non-satisfaction of their economic and psychological needs. Socio-economic conditions of the home also played a dominant role in the cases of the crime. Companionship, leisure time activities, locality and immediate social circle also seemed to have a considerable effect in stimulating youths to deviate from the norm irrespective of place of residence, age, education and home.

170. RAJPUT, C.L.L., *A Comparative C.A.T.-cum-Case History Approach to the Study of Personality of Stars as well as Isolates among Primary School going Boys of Agra, Ph.D. Psy., Agra, U., 1970.*

This longitudinal projective study examined the dynamics of the "inner world" of super-ego, ego, defences, conflicts, anxieties, needs, drives, perceptions and action of the stars and the isolates. The stars and isolates were defined as the highest group acceptance—indifferent status respectively.

The basis of the study being the "Family-school Personality" the C.A.T. study of the personality of both the groups was supplemented by case history results. The stars and the isolates were iden-

tified by a sociometric test and a teacher opinion test from fifty randomly selected schools. The design was basically an ex post facto one. The unidimensional character of variables, underlying the multivariate complexes of stars and isolates showed the importance of the between-variance study, through a pluralistic comparison with a control group—the normals.

Analysis of the family background of stars and isolates showed that the isolates' families, either poor or rich, were educated. The highly child-involved parents were submissive. Mothers were more liberal. The stars' families were related to business men and labourers. Child-looking liberal parents were better educated. The mothers were better caretakers and also decision-makers. Stars had better scholastic achievement, more aggressive behaviour, and social participation. They possessed better self-reliance, drive and ego and were physically and mentally superior. Isolates compared to normals were hypo-achievers in studies and participation, inferior in self-reliance, dependent and aggressive in behaviour, weak in drive, ego and physical fitness and adopted a resigned mode of behaviour. Results of C.A.T. indicated that strength and integration of ego was better in the stars and normals than isolates. Stars' and isolates' maturity was hyper and hypo respectively. Defence mechanisms in the stars and normals were repression, reaction formation, regression, and sublimation, while in isolates they were regression, flight, withdrawal and fantasy. All three groups feared physical harm and disapproval. Only isolates feared death and inadequacy, while stars feared castration. Stars suffered from conflict about super-ego aggression while isolates about achievement pleasure. Stars had a paranoid character and isolates had a schizophrenic character. Multivariate complex of isolation and stardom was basically a carryover phenomenon of the family.

171. RAO, K. S., *Socio-Economic and Educational Factors in Mental Disorders—a Study of Hospital Admission*, Ph.D. Psy., Ran. U., 1963.

The study was undertaken to investigate the relationship that existed between mental disorders and certain factors such as socio-economic status, education, place of residence, parental background, etc.

The sample population under the study com-

prised 4695 mental patients admitted in Manasik Arogyasala, Ranchi during the years 1958, 1959 and 1960. The relevant information required for the study on sex, age of the patient at the time of onset of mental symptoms, age at the time of admission, socio-economic conditions, education, religion and community, place of residence, ordinal position in the family, occurrence of frustrational situation just before the onset of mental disorder, etc. were obtained from the hospital authorities and recorded on cards. A special technique of computing chi-square was used to find the relationship between the ordinal position of the patient in the family and the use of hospital services.

The conclusions drawn were: (i) out of the psychiatric cases reported at the hospital, there were 18 percent Brahmins, 17 percent Rajputs, 16 percent Banias, 11 percent Goala, 9 percent Kurmi and 8 percent Bhumiher; (ii) among the Brahmins and Kayasthas admission for schizophrenia was more than for any other disease; (iii) the ratio of male and female patients was 11:4; (iv) thirtysix percent of the cases came from the higher economic classes and they were mostly from urban areas; (v) admission was more frequent from the urban area people; (vi) twentytwo percent of the patient population was educated between matriculation and college level; (vii) there was a high positive correlation ($r=.70$, $p=.01$) between the admission rates from seventeen districts of Bihar and general literacy level of the area; (viii) seventy percent of the patients suffered from schizophrenia and their age ranged between fifteen years and thirty years; and (ix) the percentage of patient population above sixty years was 1.4, the percentage of patient population above fiftyfive years was 16.8.

172. SARAN, V., *A Study of Personality Traits of Nursery School Children against the background of their Home Environment*, Ph.D. Edu., Agra U., 1970.

The study aimed at investigating the relationship between the home environment and personality patterns of nursery school children.

The Stanford-Binet Scale of Intelligence and the Children's Apperception Test (Hindi Version) were administered to a group of fifty children both boys and girls. A follow-up study of this group was conducted for a number of years to collect data on other variables. A preliminary snapshot evalua-

tion of the data collected on fifty children was made in terms of two broad complexes of personality traits, viz., social adjustment and individual development. Social adjustment included self confidence, self assertion, friendliness etc. in face to face social situation particularly with equals and near equals. Individual development covered curiosity, creativity, constructiveness, practical competence in the realm of ideas and concrete material objects and school achievement. On the basis of the psychological testing, teachers' ratings and a follow-up study, each child was rated on five point scale for social adjustment and individual development, separately.

It was found that (i) presence of father and adequate availability of his company are essential for satisfactory social adjustment of the child in the nursery school; (ii) expressed love from parents has a positive effect on a child's social adjustment and fear of parents also is an essential factor for child's satisfactory social adjustment, provided the fear is not intense and not occupied by a feeling of not being loved by them; (iii) the basic framework of love and fear in the home and environment at the level of parents having been provided, the type of relationship developed constitutes the most decisive factor for determining the nature of social adjustment of a child; (iv) individual development of child with regard to curiosity, creativity, constructiveness and practical competence depends largely upon the presence of proper environment at home; (v) rank difference correlation between social adjustment and individual development is not high; and (vi) girls are found to have better social adjustment and individual development than boys.

173. SARASWAT, M., *A Comparative Study of the Personality Patterns of Adolescent Boys and Girls*, Ph.D. Edu., All. U., 1964.

The investigator compared the personality patterns of adolescent girls and boys with a view to studying: (i) the common needs and traits in the personality make-up of adolescent boys and girls; (ii) whether any significant difference exists on the personality patterns between boys and girls and if so, to what extent; (iii) the extent to which boys and girls differ in home, health, social and emotional areas and the significant difference between boys and girls on these aspects. Attempt has also been made to study and compare the personality profiles of above average, average and below average boys and girls.

One hundred and sixty normal school-going adolescents of both sexes and of age group fourteen to seventeen drawn from classes IX and XI of local higher secondary schools formed the sample. The subjects were selected with the help of the Asthana's Adjustment Inventory standardised on Indian population. Other research tools used for the study included the Jalota's Group Test of Mental Ability, information blank, the Thematic Apperception Test and the Bell's Adjustment Inventory—student form (adapted). Chi-square test and t test of significance were used for analysing the data.

✓ The salient findings of the study were: (i) there is no difference in the normal functioning of the ego of boys and girls; (ii) the girls are more optimistic than the boys; (iii) girls' vocabulary is richer and better; (iv) the girls tend to behave in an extreme way on the trait of sociability while the boys usually prefer the middle course; (v) the boys tend to be more aggressive and the girls more timid in social situations; (vi) the boys and girls do not differ significantly on stability, dependability, confidence and inferiority; (vii) there is no significant difference between boys and girls as regards the sense of guilt; (viii) the girls tend to be more troubled by the feeling of depression; (ix) the girls have a greater need for succourance and nurturance as compared to boys; (x) the girls are of more dominating nature and have greater need for cognizance; (xi) the girls show need for sex in a greater degree than boys due to early maturity; (xii) the need for exhibition exists more in girls; (xiii) the girls are more passive; (xiv) there is no difference between the two groups on the needs of abasement, achievement, affiliation, affection, introgression activity, autonomy, seclusion, acquisition and deference. Further it has been found, inter alia, that the matched individuals of the three groups have almost the same problems in the health area; and (xv) with regard to the problem in the areas of social, emotional and home, slight similarities are noticed among boys and girls of above average and average intelligence but the matched individuals of below average intelligence disagree individually and their problems are altogether different from each other in all these three areas.

174. SAROJA, M. V., *Art Appreciation in School Children with reference to some Personality Traits*, Ph.D. Edu., Madras U., 1970.

The study aimed at understanding the art appreciation in secondary school children with reference

to a few personality traits, viz., intelligence, imagination, extroversion and neuroticism.

Two hundred boys and girls studying in secondary schools were the subjects of the study. The investigation was confined to visual art only. Out of a large collection of pictures, twentyfive pictures were selected on five different themes—landscapes, religion, portraits, situational, and still life and symbolic art. Each theme consisted of five pictures. All were of uniform size and belonged to the European art. Tools used in the study were: (i) a questionnaire type point scale which included the points as colour, theme, form and drawing, light and shade effect, feeling, three dimensional effect and overall effect. These terms were operationally defined. The maximum score for the whole test was 1000. Besides this questionnaire, the Raven's Progressive Matrices Test, the Rorschach Ink Blot Test, the Maudsley Personality Inventory, the Meier's Art Judgement Test and the Graves' Design Judgement Test were used. Art appreciation was the dependent variable and intelligence, imagination, extroversion and neuroticism were the independent variables here.

The research revealed that: (i) art judgement when measured by Meier's Art Judgement Test is found to be correlated low with intelligence whereas this relationship becomes moderate when the art judgement is measured by the Graves' Design Judgement Test; (ii) negligible correlation has been found between art appreciation and intelligence; (iii) there is no significant relationship between art appreciation and extroversion; (iv) neuroticism and art appreciation are not correlated; (v) there seems to exist effective rapport with many of the pictures used in the test; (vi) attitude towards religious pictures is one of reverence; (vii) there is a preference for conventional beauty and, by and large, for traditional standards in art, modern art strikes them as funny; (viii) they are intolerant with artists' licence; and (ix) many of the subjects do not understand the art well.

175. SEN, A., *An Enquiry into the Incidence of Mental Symptoms in a Cross-Section of School Population of West Bengal*, Ph.D. Edu., Cal. U., 1971.

The objectives of the investigation were: (i) to study the occurrence of neurotic troubles in adolescent students in relation to their age, sex and living conditions; (ii) to find out the relationship between neurotic symptoms and intelligence, parental love,

aggression, economic condition and educational level of parents; and (iii) to estimate the effect of neurotic trait on the academic performance of the student.

The sample consisted of 512 boys and 398 girls of classes VIII, IX and X, age ranging between twelve years and seventeen years from three urban and one rural places in West Bengal. The tools used were (i) an inventory prepared by Girindra Shekhar Bose, revised and adapted by J. C. Dasgupta for measuring neurotic traits; (ii) the FL, ML, FA, MA Inventories constructed by Dasgupta for measuring parental love and aggression; (iii) the D. N. Ray's Group Intelligence Test, Form B for measuring intelligence; (iv) Bengali adaptation of the Bernreuter Personality Inventory and the Eysenck Personality Inventory; and (v) a questionnaire to collect information regarding economic and educational status of parents.

The important findings were as follows: (i) incidence of neuroticism is highest in the refugee group (50 percent in boys, 36.3 percent in girls); (ii) on the whole, it is higher in girls than in boys; (iii) the refugee students' mean score is highest in each of the syndromes (iv) depression, anxiety and anxiety-hysteria are relatively more common than other syndromes; (v) the girls' score is higher in all groups of anxiety and anxiety-hysteria while that of the boys' is higher in depression; (vi) in the industrial group, the boys' score is higher than girls' score in obsession and neurasthania, whereas the mean score of girls is higher in schizophrenia; (vii) there is significant positive relationship between neuroticism and parental aggressiveness, but there is no significant relationship between neuroticism and parental love; (viii) there is negative relationship between neuroticism and intelligence; (ix) the percentage of neurotic students is high in low-intelligence group and low in high-intelligence group; (x) students with high educational attainment are less neurotic and vice versa; and (xi) there is negative correlation between neuroticism and the educational level as well as economic status of the parents.

176. SHARMA, B. C., *To Explore and Identify the Mental Maturity Minimal in Indian School Children (A Longitudinal Study of the Dynamic Organisation of Mental Traits)*, Ph.D. Psy., Agra U., 1967.

The study was designed to explore and identify

the mental maturity minimal in Indian school children.

The study was conducted on 240 boys of class VII of the age group 10+ selected from three different schools of Ferozabad. These boys were first tested for spatial, verbal, numerical, reasoning, clerical and mechanical abilities; their interests in fine arts, literature, science, medicine, agriculture, technology, crafts, sports and household were also measured first in the year 1963. They were retested annually—first in 1964, second in 1965 and finally in 1966 (VII to X). Certain standardised tests were used for the purpose. Intercorrelations for all the possible pairs of the scores were calculated. Differentiation of abilities was investigated by analysing the correlations and disparity among the ability scores. Kelley's method was adopted to calculate the proportion of differences in excess of chance proportion (expressed in percentages) for all pairs of ability scores. Growth and development of abilities was also measured by (i) drawing the age curves, (ii) calculating the difference between the mean scores of successive age groups and by analysing the correlations between the same ability scores obtained after the intervals of one year. Permanence of interest was tested by correlating the test scores of different years and by observing the stability of the mean scores of successive administrations at ages 10+ to 13+. For this, significance of difference between the test and retest means of each test of interest was worked out by employing the t test, taking correlations into account.

It is found that all the ability scores, except the numerical one are normally distributed. Reliability coefficients of the ability test scores by K-R formula-21 ranged between .6 and .9. The analysis of correlations reveals that after 11+, there is a steady drop of correlation amongst the tests, with the growth of age. This trend indicates the increasing independence amongst the abilities with the advance in age. The study also revealed that (i) the mental traits tend to become independent after the age of twelve and half years, and (ii) the permanence of interest is very poor at the lower ages but at the age of 12+ a high degree of permanence of interest scores is indicated. Thus the interests measured after the age of 12+ would be of good predictive value for the future performance of the students.

177. SINGHA, S., *A Study of Some Personality and Background Variables related to the Use of Unfair Means in a Testing Situation*, Ph.D. Edu., Pat. U., 1970.

The present study was designed to explore the difference, if any, between the cheaters and the non-cheaters with regard to some of the background and personality variables. Background variables were sex, age, ordinal position, habitation, caste and socio-economic status. Personality variables were extroversion and neuroticism, security and insecurity, facilitating and debilitating anxieties, personal and social achievement and some other related variables.

The sample comprised 200 students of each sex, of classes IX, X and XI. The age of the subjects ranged from twelve to nineteen years with a SD of 1.29 and 1.26 for the boys and the girls respectively. The tools used were the Kuppaswamy's Socio-Economic Status Scale, the Maudsley Personality Inventory, the Maslow's Security-Insecurity Inventory, the Albert and Harber's FADA Scale, the Bendig's Need Achievement Scale and a Behaviour Determinant Scale. The two groups were compared on background and personality variables by such statistical techniques as chi-square, t ratio and Mann-Whitney U test.

It was found that (i) girls cheat more than the boys in the same testing situation; (ii) subjects belonging to urban areas cheat more than the subjects of rural areas; (iii) cheaters are more extrovert, neurotic and insecure than the noncheaters; (iv) noncheaters have more debilitating anxiety than the cheaters; (v) girl cheaters have more personal and social need achievement than the noncheaters; (vi) noncheaters have more reinforcement value of gain scores than the cheaters; and (vii) cheaters and noncheaters differ with respect to the dimensions of the Behaviour Determinant Scale. The findings of the study, in general, showed that when a situation was nonchallenging, uninvolved and without any apparent reward or punishment, the interplay of personality factors did not bear any significance.

178. SMART, M. S., *Self-Esteem and Social-Personal Orientation in Pre-Adolescence and Adolescence related to Parental Behaviour*, Ph.D. Edu., Del. U., 1970.

This research is concerned with exploring per-

sonality development in Indian youth in terms of two constructs, self-esteem and social-personal orientation of girls.

The first part of the study explores these two measures by contrasting their occurrence in Indian girls of two age levels with that in Indian boys and American girls and boys of comparable ages and socio-economic status. The second part of the study is concerned with parent-daughter relationship, in an effort to see how parents are pertinent in the development of self-esteem and social or personal orientation. The tests used in the study were translated into Hindi. These were: the Carlson's Preadolescent and Adolescent Questionnaires, the Carlson's Parent Questionnaires, the Roe-Siegelman Parent-Child Relations Questionnaire (PCR)-children's form and the Kuppaswamy's Scale of Socio-economic Status (Urban). Subjects for this study were drawn from Delhi schools and colleges. Age groups were selected to match Carlson's (1963, 65) age groups, consisting of preadolescents and adolescents. The preadolescents were drawn from sixth and seventh standards, and the older group comprised college sophomores with an average age of 18 years. The groups were equated for number and for socio-economic status. Analysis of variance was used to interpret the self-esteem scores of older boys and girls, and also to make a comparative study of self-esteem across age, sex and cultures. Factor analysis was performed on each age group for father and mother questionnaire responses.

Results did not show significant relationship between self-esteem and social-personal orientation data and region, mother tongue, parents' education, type of family and language groups. Significant cross sex and cross cultural differences were found in favour of Indians for the self-esteem. When analysed by sex groups, however, there was no significant difference between American and Indian boys. The difference was in the girls. Younger Indian girls were significantly higher in self-esteem than their American peers. Within the Indian sample, non-significant sex difference was observed. In the social-personal orientation, the Indian younger girls exceeded American younger girls; Indian younger girls exceeded Indian younger boys; Indian older boys exceeded Indian younger boys; and Indian older boys exceeded American older boys (Carlson has already demonstrated for American subjects that older girls exceed both older boys and younger girls).

179. SODHI, T. S., *A Comparative Study of the Personality Patterns of the Students of Religious and Secular Institutions*, Ph.D. Psy., Agra U., 1970.

The objectives of the study were (i) to find out the personality make up of the students studying in religious and secular schools; (ii) to compare the personality developments of the students in these two categories of schools; and (iii) to offer some useful suggestions in the light of the findings.

Thirteen pairs of schools were selected from Panjab. The religious schools had 696 students and the secular ones had 1,476. By stratified random sampling 149 pairs of students were selected. Tools used were (i) Socio-economic schedule prepared for the study; (ii) The Jalota's Test of General Mental Ability; (iii) Attitude Scale prepared for this study; (iv) Occupational Inventory prepared for the purpose; and (v) Indian Adaptation of TAT.

It is found that religious group developed better attitudes towards teachers, parents, life, humanity, country and religion. However, no significant difference was noticed with regard to discipline. Comparison of the two groups for occupational interest revealed no significant difference. Comparison of religious and secular groups of students with regard to personality needs revealed no significant difference, but it seemed to exist with regard to achievement, autonomy, aggression, human avoidance and sex. Religious group students were found to have more of affiliation, dependence and nurturance. The secular group students were found to have need abasement and succorance.

180. SRIVASTAVA, J. P., *A Synthetic Approach to the Problem of Personality*, Ph.D. Edu., All. U., 1953.

This study attempted to posit the existence of a capacity for effecting synthesis and adjustment of all the inner motives and drives within the individual and of the inner with the outer environment a person is born in. The capacity for effecting synthesis and adjustment has been defined as the capacity for integration or "I" factor, which even under diversities of human behaviour in relation to his environment persists and its continuity is maintained. The strength of unit capacity for integration spells sanity and its weakness results in personality

disorder. The field of action of this capacity for integration is the point of interaction between environmental forces and the inner drives.

Before designing the final study the investigator conducted a pilot study on a group of ten men and ten women. Observations of their behaviour were made under the following headings: (i) appearance; (ii) response during interview; (iii) personality traits; (iv) area of adjustment; (v) total personality and (vi) prognosis. A **personality rating inventory** was developed which was used for the final study. The sample of final study consisted of 160 males and 100 females in the age range of 18 to 35 years. The *t* test and factor analysis were used for analysis of the data.

Results of the study showed that the mean scores on response during interview are higher for males as compared to that of females. On personality traits, viz., self-confidence, forcefulness, freedom from internal and external obsessions, freedom from inferiority complex or easy acquiescence in defeat, mean for females is 57.59 as against 55.58 for males. In areas of adjustment the mean scores of the two sexes differ far more than elsewhere. The women have a larger mean score (62.8) than men (56.66). There is also significant difference in the overall personality rating of the male and female population, the females scoring higher. The women are significantly different in appearance between 24 and 26 years from that they were between 21 and 23 years. Women mature sexually and mentally five years earlier than men. The stabilising forces come in man's life between 33 and 35 years, while in the case of women they come between 27 and 29 years. On total personality ratings, there is no significant difference between women of different castes. Among males, there is significant difference between Brahmins and Kshatriyas. The most important factor emerging from the factorial analysis is the "Capacity for Integration" (I). This capacity is inherent in the individual, but is modified in varying measures by the environment. The capacity has got two aspects, namely, cognitive insight and general emotionality. Both the aspects act and react. They are inborn and yet are influenced by the environment a person is surrounded by. The peculiar feature of "I" factor is that it stands for a dynamic urge to bring in an ever increasing measure a synthesis of the outer and the inner and the different constellations of the personality where emotionality and cognitive insight are supplementary

and not in conflict. If they are violently in conflict, disintegration in varying measures results.

181. SRIVASTAVA, V., *Study of Neurotic Behaviour among school-going Adolescent Girls*, Ph.D. Edu., Gor. U., 1970.

The purposes of the present investigation were: (i) to study the behavioural stigmata of the neurotic, (ii) to identify specific social and emotional deviation of neurotic girls, (iii) to locate their specific behaviour deviation in home and school adjustment, and (iv) to investigate the specific somatic disorder among neurotic girls.

The sample was selected from the schools of three districts—Gorakhpur, Deoria and Azamgarh. As many as 50 students of classes XI and XII, selected by using rating scale with the help of teachers, comprised the experimental group. A second sample of 100 students from the same classes selected randomly, comprised the control group. For collection of data the following tools were used: (i) a three point rating scale, (ii) the Vyaktivva Parakh Prashnavali by M. S. L. Saxena, (iii) the Hindustan Adjustment Inventory by H. S. Asthana, and (iv) a questionnaire on neurotic symptoms by C. Burt. For analysis of data, significance of mean difference and tetrachoric correlation were computed. Skewness and kurtosis of curves were tested by using Fisher's K.

The findings of the investigation revealed that (i) the neurotic girls suffer from the four prominent behavioural stigmata, viz., anxiety, withdrawal, stage-fright and shyness, which originate from the non-fulfilment of the will to power or gratification of libido; (ii) neurotic girls also suffer from fantasy, want of confidence, timidity and projection of failure, originating from shutting in personality; (iii) in all aspects of personality adjustment, viz., home, health, social, emotional and school, the neurotic girls show poor adjustment; (iv) these girls are inefficient in work, unable to concentrate, irritable, restless, sleep poorly and show marked and chronic fatigue; (v) they find it difficult to get normally along with their family and other people; (vi) they show least interest in school work, and they do not try to solve their difficulty with the help of the teacher; and (vii) they always try to escape themselves from unpleasant situations at home, school and society, and settle into habitual day-dreaming.

182. SYAMALA, V., *Reasoning and Problem-Solving: Development of Productive Thinking in Children (A Study of Concept Formation)*, Ph.D. Psy., BHU, 1961.

The aim was to make a comparative study of the development of concepts like dreams, thought, God, beauty, birth, cleverness, death, life, family relations and the origin of things in the Hindi speaking and Telugu speaking children. The experimental part of the study was based on the work of Piaget.

The sample consisted of 83 Hindi speaking girls in Varanasi and 80 Telugu speaking girls of Vuyyar in Andhra Pradesh, ranging from five to fourteen years in age. The selected concepts were studied in the case of the Hindi speaking girls but the concepts of life, family relations and the origin of things were dropped in the case of the Telugu speaking girls. The controlled interview method was used.

The study revealed that (i) the environmental influences ignored by Piaget are established by the fact that there is no systematic change in the location of dreams; (ii) the concept of thought is more advanced among the Telugu speaking girls as compared to the Hindi speaking girls; (iii) the concept of God is more advanced in the Hindi speaking girls than in the Telugu speaking girls; (iv) according to the majority of the girls, the concept of beauty is determined by colour and the proportion of the features; (v) the concept of cleverness is more developed in the Hindi speaking girls than in the Telugu speaking girls; (vi) the concept of birth is more developed in the Telugu speaking girls of lower age groups and among the Hindi speaking girls of higher age groups; (vii) the concept of death is more developed in the Hindi speaking girls than in the Telugu speaking girls; (viii) the concept of life is seen to develop by the age of 12 years and the thought tendencies are found similar to those of Piaget's study; (ix) with regard to the development of the concept of 'family relations', the relationship of sister is better understood by girls than the other relationships and it is concluded that a correct understanding of all the relationships may be expected at the age of eleven years; (x) there is no correlation between age and the selected concepts except the concepts of life and family relationships; and (xi) differences in sex, mental age, socio-economic status, educational facilities and other environmental influences produce differences

in children's training.

183. TAMHANKAR, V. S., *A Study of Achievement Motivation among the Young Adolescent Boys in Poona City*, Ph.D. Psy., Poona U., 1968.

The objectives were (i) to study how far the n-Achievement arousal technique is useful for measuring the strength of need achievement in Indian children; (ii) to evolve an n-Achievement scoring manual in Marathi; and (iii) to study the relationship of n-Achievement with some socio-economic variables, Spranger's six values, vocational choice of students and certain other variables like age, intelligence and academic performance.

Boys within the age range of 12.5 to 18+ years and of average and above average intelligence were chosen from eighteen well established Marathi medium boys' schools. 95 boys comprised the relaxed condition group, 97 the neutral condition group, 85 the aroused condition group and 975 formed the general group. Four pictures were selected for the n-Achievement test. The paper-pencil test consisted of eight subjects in Marathi. Personal data and their vocational choices were obtained through a questionnaire. The Marathi version of the Allport-Vernon-Lindzey Study of Values and the Advanced Progressive Matrices (Sets I and II) were also used. Correlation techniques, analysis of variance and t test were used for analysing the data.

The important findings were that (i) the relaxed condition represents a significantly lower level of achievement motivation than the neutral condition, but the arousal condition does not present a higher degree of n-Achievement than the neutral condition (the mean n-Achievement score under aroused condition was even lower than that under relaxed condition); (ii) boys from middle class families have higher achievement motivational level than those of upper and lower classes; (iii) parental occupation is related to some extent to motivational level; (iv) n-Achievement is positively and significantly related to theoretical value, but negatively and significantly to aesthetic value; (v) the hypothesis of positive correlation between economic value and n-Achievement is not accepted; (vi) those preferring theoretical occupations have highest mean n-Achievement, whereas those preferring aesthetic values have lowest n-Achievement; (vii) those choosing big business have very low n-Achievement score,

while those choosing salaried services have a relatively higher level of n-Achievement. The majority of students are not attracted to economic occupations; and (viii) n-Achievement is not related to age and has a low positive correlation with intelligence and academic performance.

184. *TYAGI, A. K., Individual and Sex Differences in Personality in Students for Graduation in Delhi in relation to TAT, Ph.D. Psy., Del. U., 1960.*

The purpose of the study was to extend the scope of the T.A.T. to study problems of the university population.

The study was carried out with ten pictures only. These pictures were selected based on Bellack's Evaluation of Individual Pictures. Seven pictures were common for boys and girls. The study was conducted on randomly selected 300 boys and girls of I year, II year and III year classes of all the colleges of Delhi University and the Campus colleges. Selection of a college for testing was determined by throw of a coin. The science students—boys and girls—were selected from the university classes only. The adapted test is based on broad principles laid down by Murray for his T.A.T. An attempt was made to validate the test with the self-rating of the male students. The author assessed the TAT stories of the students on similar rating scales that were used by the students. The scale was given linear values—16, 13, 10, 7 and 4. Each scale was scored and the product-moment correlation was worked out. Two types of reliability studies were taken up. In the first study, 50 male students were reassessed after a year on a five point rating scale for each quality. Reliability coefficient was .72. After 2 years, second study of reliability was taken up. A batch of 75 male students was administered the same set of pictures of the T.A.T. that was administered to the first sample.

The study revealed that: (i) the differences among boys and girls on two qualities, viz., 'strong interest in opposite sex' and 'responding to practical appeals' are significant at .01 level with the set of ten T.A.T. pictures as well as with the set of seven T.A.T. pictures; (ii) the reliability coefficients (inter-judge as well as self) of these two qualities are significant at .01 level; (iii) the validity coefficients are also found to be significant at .01 level; (iv) on another quality, viz., 'thoughtful', boys and girls show significant differences at .05

level; and (v) one finds different results on three qualities, viz., 'trustful', 'assertive' and 'placid', but this does not lead to any conclusion.

185. *UPPAL, U., Personality Traits of Adolescent Girls in Meerut (Urban area), Ph.D. Edu., Agra U., 1971.*

The present study aims at finding out some socio-emotional personality traits of adolescent girls of Meerut district.

The study was conducted on a sample of 1,294 girl students reading in classes IX, X, XI and XII in the schools of Meerut city and cantonment, Ghaziabad city, Hapur city and Modinagar city. Every fourth student from an alphabetical list of the total student population was included in the sample. Eight traits, viz., sociability, imitability, shyness, concern over sex, carelessness, concern for puberty changes, courage and desire for independence were selected on the opinion of fortyfive experts. On the basis of the selected traits, a questionnaire was prepared with 56 questions in all, distributed over eight traits. Factor analysis of the scores was done by centroid method.

The main findings were: (i) narcissistic pre-occupation and extroverted social interests are the two clusters grouping all the eight—first factor clustering imitability, concern for sex, concern for puberty changes, carelessness and desire for independence and the second factor clustering shyness, sociability and courage; (ii) the curve of shyness shows positive skewness revealing lack of shyness among the adolescent girls; (iii) the trait of sociability is quite prominent in adolescent girls; (iv) mass behaviour of girls shows prominence in courage; (v) girls are careless in general, curve showing negative skewness; (vi) mass behaviour of the girls is not marked by imitability; (vii) mostly adolescent girls lack the trait—concern for sex, as suggested by the mass behaviour; (viii) the concern for puberty changes is quite prominent in adolescent girls, the curve being negatively skewed; and (ix) girls, in general, are in favour of independence.

186. *VAIDYA, M. P., Bilingualism in Education (Descriptive and Experimental Survey with special reference to Greater Bombay), Ph.D. Edu., Bom. U., 1954.*

The objectives were: (i) to determine whether bilingualism is a hurdle in education, (ii) to

assess the extent of relationship that exists between bilingualism and attainment in the school, (iii) to assess the relationship between bilingual background and socio-economic status of children, and between the attainment and socio-economic status, (iv) to know the hobbies of bilingual children, and (v) to ascertain the results of drawing tests on bilingual children.

The study was conducted on 1,010 children of 8 to 10 years drawn from seven schools—two boys', two girls' and three coeducational institutions of the city of Bombay. The medium of instruction was either Gujarati or English. Arithmetic tests in English and Gujarati, a group test of intelligence, a non-verbal test of intelligence and a bilingual schedule were prepared. The arithmetic test, verbal group test and vocabulary test were administered to 1,010 children. While administering the vocabulary test, children were asked to write as many Gujarati and English words as they knew. Fifty bilingual and fifty monolingual children were tested individually

to know how far their scores agreed with the scores on group tests. Data on socio-economic status were also collected.

Findings of the study revealed that: (i) the teachers' assessment regarding their pupils' attainment coincides in most cases with the test results; (ii) high correlation exists between the test results and class ranks; (iii) bilingual children are found to pick up the language instinctively; (iv) better achievement is noticed in higher socio-economic group children; (v) children in Gujarati medium are found to be better in arithmetic than the Parsi children in English medium schools, (vi) bilingualism does not prove to be a handicap, but, bilingualism, in the sense of a foreign language (medium) is found to be a handicap, even in cities; (vii) lack of suitable emotional attitude towards a language is a hindrance in acquiring that language; and (viii) when another tongue is the medium of instruction, a second language can be started at an early age.