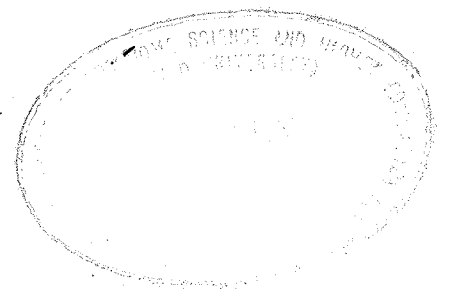
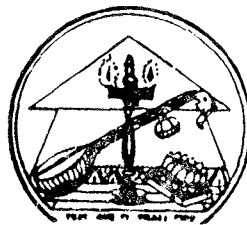


NATIONAL CADET CORPS AS A MEANS OF DEVELOPING
PERSONALITY TRAITS AMONG STUDENTS OF
HIGHER EDUCATION-AN ANALYTICAL STUDY

By
G. Baradha



A Thesis Submitted To Avinashilingam Institute for Home Science and Higher
Education for Women (Deemed University), Coimbatore
In Partial Fulfilment of the Requirements For
the Degree of

DOCTOR OF PHILOSOPHY

FEBRUARY 1996

CERTIFICATE

This is to certify that the thesis entitled "National Cadet Corps as a Means of Developing Personality Traits Among Students of Higher Education - An Analytical Study", submitted to Avinashilingam Institute for Home Science and Higher Education for Women (Deemed University), Coimbatore, for the award of the Degree of Doctor of Philosophy in Human Development is a record of original research work done by G.BARADHA, during the period of her study in the Faculty of Home Science, Avinashilingam Institute for Home Science and Higher Education for Women (Deemed University), Coimbatore, under my supervision and guidance and the thesis has not formed the basis of the award of any Degree/Diploma/ Associateship/Fellowship or similar title to any candidate of any University.

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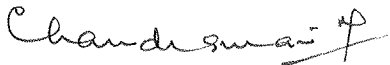
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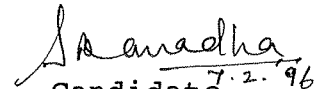
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DECLARATION

I hereby declare that the matter embodied in this thesis titled, "National Cadet Corps as a Means of Developing Personality Traits Among Students of Higher Education - An Analytical Study", submitted to Avinashilingam Institute for Home Science and Higher Education for Women (Deemed University), Coimbatore, is the result of investigation carried out by me in the Faculty of Home Science, Avinashilingam Deemed University, under the supervision of Dr. M.CHANDRAMANI, Professor and Dean, Faculty of Education, Avinashilingam Institute for Home Science and Higher Education for Women (Deemed University), Coimbatore and it has not been submitted for the award of any Degree/Diploma/Associateship/Fellowship or similar title of any other university or institute.


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Candidate
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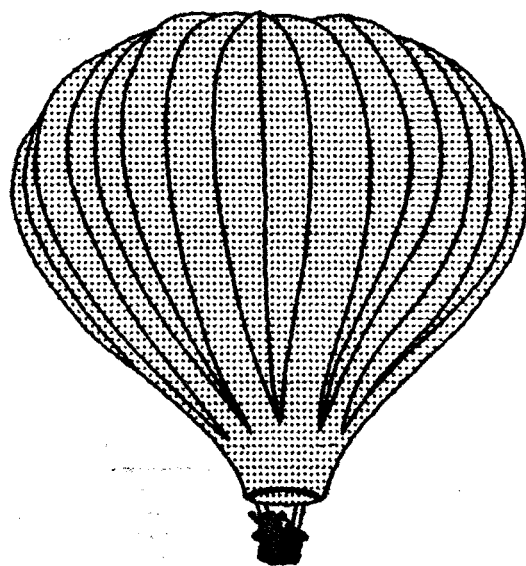
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INTRODUCTION

I. INTRODUCTION

Youth are the future architects of India, on whose shoulders lie the responsibility of conserving all that is best in the Indian culture. Swami Vivekananda, the great saint and philosopher of the century had spoken time and again about the urgent need to awaken the youth in India and involve them in nation building activities (Avinashilingam, 1990 and Swami Deshikatmananda, 1996).

Sharma and Shehrawat (1992) have contended that the country's socio-economic development and all round prosperity, utilisation of resources for nation building, internal peace and tranquillity, strength of defence forces and politico-economic role in the world depend, to a great extent, on the effective and purposeful channelisation of the potential and energy of our youth. By all means, the youths are the most powerful human resources of a nation.

National Youth Council (1991) and The Ministry of Human Resource Development (1991) estimated that the youth of India represents a third of the country's population. According to the 1991 census, there are 214.5 million youth in India comprising 121.3 million in the age group of 15 to 24 years and 93.2 million in the age group of 25 to 34 years (Singh et al., 1992). Today, in India we have around five million students in higher education system (Gopalan, 1995).

While the country is passing through social, economic, political, cultural crisis and jeopardy, the whole nation is looking towards youth, as they alone can serve as vanguards of the country. The dream which Mahatma Gandhi, Subash Chandra Bose, Acharya Narendra Dev, Jai Prakash Narain and Ram Manohar Lohia had visualised during the fight for freedom and after independence about the youth is yet to be fulfilled (National Youth Council, 1991 and Mathur, 1992). Chary (1993), Pahl et al. (1993) and Gopalan (1995) view that it has now been established beyond doubt that education is the most crucial input for socio-economic development. It provides strength and resilience to people to respond to changing situations and chief support of all national endeavours. It has the responsibility for transferring human beings into human resources.

The development of human resources is the main function of education, along with the task of preparing leaders for different walks of life - social, intellectual, personal, political, cultural, scientific and technological. Education produces trained manpower required for industry, agriculture, administration services, defence and all other sectors (Rao and Rao, 1993 and Prasad, 1994). In this context, Rao (1993) and Devadas (1995) have expressed that the very concept of education acquires its meaning from the fact that personality development is a major outcome of

education and environment and that education can make or mar a person. The purpose of education should be to transmit knowledge, skills, attitudes and values essential to lead a good life.

Challenges of the modern world and demands such as global application of science and technology, democratic ideas and demands on personality have necessitated revolutionary changes in education (Lakshmi, 1993 and Sharma, 1995). Pahl et al., (1993) affirm that the preparation for life in the contemporary world requires a great multicultural and global dimension in undergraduate general education. National Policy on Education (1986) has rightly stressed the need to strengthen a system of value education that would foster universal and eternal values oriented towards the unity and integration of the people and help to eliminate obscurantism, fanaticism, violence, superstition and fatalism. Value oriented education will go a long way in inculcating in students a spirit of service, nationalism and patriotism. Value education aims at the evolution of a total man thereby shaping one's personality (Sheth, 1992; Srivastava, 1993 and Gopalan, 1995). Provision of opportunities for the integrated development of the students is very important for their integrated growth, personality development and decision making (Cheeran, 1993 and Khosla, 1995).

Sharma and Gairula (1990) opined that personality is essentially the product of a long process of many sided development such as physical, motor, mental, emotional, social and moral. Block (1995) has stressed that the personality structure of an individual is energized by motivation, perceptions, cognitions and behaviour so as to achieve certain goals.

Each personality pattern is shackled to its own past, yet it is the determinant of its own future, strongly influenced by the action of significant person/event/experience in the environment (Rai, 1983 and Sinha and Madnawat, 1989). Asthana and Srivastava (1992) stated that learning and the self concept are the important factors for the development of personality of an individual. Human learning continues throughout life and every experience influences the individual concerned. After every experience, an individual is slightly different from what he/she was before. The difference in quality depends upon the type of experience he/she had. Thus the personality of an individual is influenced by his/her learning, which is obtained from his/her experiences (Lal, 1995). Different type of study courses provide different types of learning experience and hence are expected to develop different types of self concept and personality. This includes visible behaviour patterns as well as apparent but relatively enduring characteristics such as values, motives, attitudes, abilities and self image (Price et al., 1982).

According to Kapur (1982) and Chinara (1992) desires, needs, expectations, changing attitudes, behaviours, problems, tensions, happy and unhappy experiences, relations with people outside home and with members of the family, especially with parents - all these play a very important role in the development of the adolescent's personality and shape the pattern of his/her behaviour. In the words of Salkind and Ambron (1987) and Natesan and Srilatha (1995) one's behaviour is influenced by various internal factors such as physical, psychological and external factors that include all the stimuli in the environment. Sound personality development indicates development of all the potentialities of the individual to the maximum extent possible.

Sangita (1991) and Narayanan (1993) are of the opinion that the main emphasis in most of the programmes for youth has been on the development of their personality by promoting participation in social and community development activities. As Devadas (1995) points out western culture, industrialisation, changing political and social ideologies are highly competitive in manipulating the mind and the community at large needs to be sensitive to the cause of value deterioration. She suggested that the social values in extra-curricular activities like National Cadet Corps (NCC) and National Service Scheme (NSS) could be well reflected in

community services. Well planned extracurricular activities can impart multifarious values - physical, emotional, academic, intellectual, social, ethical, cultural, aesthetic, recreational and disciplinary. In addition these activities can also contribute to the entire personality development of youth. Organising extra-curricular activities renders the educational climate of an institution attractive and stimulating. They constitute a powerful means of maintaining sound mental health (Morsy, 1994).

The National Cadet Corps (NCC) is the premier scheme of youth activity and is comprised of students of educational institutions (India Yearbook, 1995). NCC in India came into existence in July 1948 by an Act of Parliament (Act No. XXXI of 1948), primarily to impart essential military and other training to students, to stimulate their interests in the defence of the country and to develop their character, comradeship, ideals of service and capacity of leadership. By the time students complete their three year education for the Bachelor's degree at the university stage, their personality begins to manifest itself. For the successful implementation and achievement of the aims of NCC, the scheme has been interwoven with the educational system of the nation. At the central level, the activities of the NCC are controlled and co-ordinated by the Ministry of Defence and at the state level, by the respective Department of

Education. The Government has thus opened the gates of this organisation to all students (Khan, 1992).

NCC is the country's top youth organisation amongst an age-group who will shape the nation's destiny in the years to come (Bakshi, 1994). It is the largest youth organisation in the world with a membership of over 11 lakhs (Rao, 1996). If the youth can be knitted in one single programme with a definite motto and aim, the end result can be highly productive. This is exactly what NCC has strived for and given to the society (Ngangom, 1992).

The NCC cadets are provided a wide range of activities with a distinct emphasis on military service training, social service and adventure oriented activities through institutional and camp training (Miglani and Sharma, 1994). NCC develops one's overall personality by inculcating the qualities of leadership, comradeship, social, secular outlook, adventure and sportsmanship. Above all, it breeds in the youngsters a sense of discipline, which is the need of the day (Nair, 1995 and Rao, 1996). Thus an education system of integrated curriculum with NCC both at the school and college levels can help young boys and girls to overcome their inhibitions, fears, differences and develop the qualities of good citizenship and leadership.

As perceived by Longer (1983); Priya (1986) and Miglani and Sharma (1994), students' exposure to NCC contributes in many ways to:

- * inculcate discipline, comradeship, sense of responsibility and courage
- * develop skills in communication and decision making
- * imbibe a flair for adventure and experience the joys of sharing
- * foster patriotism which manifests itself in national integration
- * encourage participation in cultural and social activities to bring out latent talents and
- * widen knowledge and scope for jobs in the armed forces.

There is a need to create a human resource of organised, trained and motivated young men/women to provide leadership in all walks of life including the armed forces (Rao, 1994). The programme offers opportunities for the youth to participate in the challenging task of national reconstruction and development (Mohan, 1994 and Sharma, 1994). Here it is apt to quote the words of a cadet:

We the cadets of NCC
 Accept challenges,
 Whatever they be,
 We make no excuses and tell no lies,
 The hardships we face, our smile belies
 We work hard and make no fuss
 The spirit of nationalism is alive on us
 We obey with a smile on our faces,
 We have been to camps to far-off places,
 We accept hardships and do not flee,
 Patriotic and dutiful, we yearn to be,
 Its we who make a better world,
 We the cadets of NCC

(Sait, 1995).

The impact of this premier youth organisation has been excellent especially as an agent of human resource development. The credit must go to the late Prime Minister Jawaharlal Nehru who was keen to have a youth organisation of this type to channelise energies of the youth in the right direction.

While studies published in recent years give great attention to the personality characteristics of different occupational groups and students in different professions, researches in India on personality dimension of students involved in extra curricular activities have been scanty except for a few on the impact of National Service Scheme (NSS). Against this backdrop the investigator formulated an analytical study on "National Cadet Corps as a Means of Developing Personality Traits Among Students of Higher Education". This study attempts to measure different personality traits of the selected sample employing the battery of tests with the following objectives to:

1. study the different personality traits - physical, physiological, socio emotional, intellectual, values and levels of aspiration of the selected NCC and non NCC students,
2. determine difference in personality traits of the selected students in relation to sex and participation in NCC,

3. trace the causal relationship between personality traits and
4. find out the relation between the socio-economic status (SES), birth order and personality traits of the selected students.

It is hoped that the results of this investigation would help the planners of higher education to chalk out the implementation of NCC into the main stream of education in all institutions to develop wholesome personality among student youth.

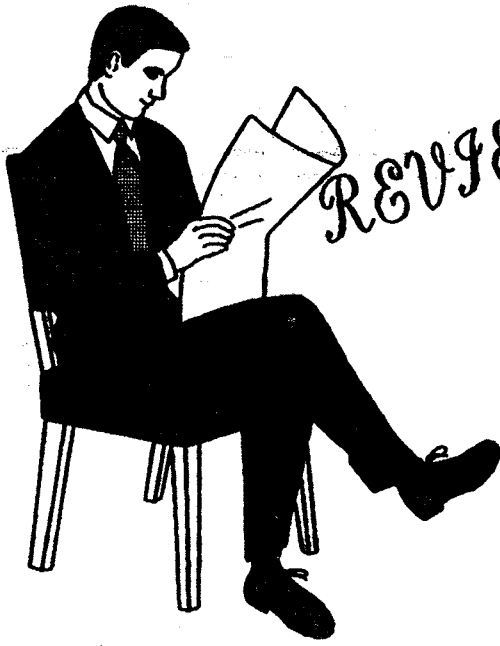
Operational Definition

In this study the personality traits included were physical, physiological, socio emotional, intellectual and motivational (aspiration and values) aspects as they largely contribute to the behaviour pattern of an individual. A healthy development of these traits enhances the level of adjustment.

Limitations of the Study

1. The present investigation is exploratory in nature. The subjects were drawn only from the selected institutions with and without participation in NCC.
2. This investigation is a comparative study of the personality characteristics and hence it does not aim at diagnostic or clinical analysis of personality.

3. Among the correlates of personality traits of students, this study is limited in assessing the influence of socio-economic status and birth order of the selected students.



REVIEW OF LITERATURE

II. REVIEW OF LITERATURE

The review of literature pertaining to this study 'National Cadet Corps as a Means of Developing Personality Traits Among Students of Higher Education - An Analytical Study' has been thoroughly explored and classified under five broad categories.

- A. Significance of youth in nation building
- B. Need for value based education with special reference to extracurricular activities
- C. Personality - concept and theories
- D. National Cadet Corps (NCC) and its contribution to personality development and
- E. Factors influencing personality.

A. Significance of youth in nation building

Desai (1985), Avinashilingam (1991) and Devadas (1991) proclaimed that youth is a young man/woman in heart, vibrating with zeal, drive, innovative and active at all times. They are the hope of the future (Kulandaivel, 1991), torch bearers carrying the message of peace and communal harmony (Jagadeesan, 1991). It is a period during which the body, personality, intellect and social attitudes are susceptible to be developed erratically as it is an age characterised by impatience, curiosity and strong desire to be independent (Rajeswari and Hari, 1985; Campbell and Bickhard, 1986 and Gopalaswamy, 1991).

The young are the product of cultural heritage and the safeguards of the nation. They are the target of development, at the same time, can contribute to development of the society. Youth represents a tremendous potential for society (Gandhi, 1984; World Health Organisation, 1985 and Dworetzky, 1990). However, they are a valuable but untapped human resource (Chowdhry, 1992).

With the advantages of physical well-being and idealism, youth is like a 'critical mass', whose energy, if prevented from venting out, can explode with dire consequences for all, if channelled properly can benefit every one (Dubey, 1983; James, 1986 and Tice, 1989). If the constructive youth force in India are mobilised and motivated, the country's future is assured (Yojana, 1990 and Raj, 1995).

Chauhan (1983), Margaret (1985) and Lahiri (1990) stressed the need to understand and properly channelise the youth's energy in the larger interests of nation building. Joshi (1992) added that the student youth on whose shoulders the burden of carrying our country forward falls, must get involved in constructive activities to bring about communal harmony. They have to recognize their existence and development hinge upon the survival of the nation (Uplaonkar, 1992).

Sachdeva (1988), Jagadeesan (1991) and Bhatia (1992) opined that youth are receptive, flexible and susceptible to change and have a tendency to explore new grounds, embark upon hazardous tasks, defy unworthy traditions and undertake experiments in social and economic fields and hence, they should be prepared to fight all forms of injustice, corruption and wickedness.

Sharma and Shehrawat (1992) suggested that every young person must feel that he/she is an important person who has to share the responsibilities for the socio-economic and cultural upliftment of the country. Alwa (1988) explained that the programmes of the Ministry of Human Resource Development aim at developing the personality of the youth as well as at enabling them to be useful citizens by motivating and providing opportunities for social involvement. Many schemes have been devised to mobilise the youth for the socio-economic development of the country. Although there is a wide variation in the approach and strategies of the schemes, their main emphasis lies in the development of the personality of the youth by promoting their participation in the social and community development activities (Dumas, 1988; Sangita, 1991 and Woman's era, 1993).

To conclude, the wealth of a nation can no longer be measured in terms of economic indicators. The role of youth as a driving force in social uplift and peace at the global level has been highlighted above. The time has come to take stock of the youth force. This force has to be fostered and nourished to achieve the desired results.

B. Need for value based education with special reference to extracurricular activities

Education is not a commodity. Any meaningful process of education goes beyond mere transformation of information, technical skills and necessarily entails in deeper engagement at the level of emotions, sentiments and values (King, 1987; Kumar, 1991 and Dahiya, 1995). In this context, Khanna (1995) puts forth the fact that knowledge, scientific temper, the right attitude to work, keen awareness of the society with reference to its' needs and limitations, courtesy, compassion, discipline and high accomplishments are the traits that one seeks to find in a truly educated person. The intellectual, by the very nature of his/her personality, is expected to have the courage to stand up in support of a cause. The lack of proper guidance at every educational stage leaves an indelible scar on the personality of the youth (Sinha, 1991 and Mehta and Sewani, 1995).

Education is the process of developing the all round personality of a human being and must be tailored to suit the need of the hour. It must try to incorporate values and morals necessary for a healthy development of the character of individuals (The Hindu, 1995). Radhakrishnan commission also stressed that higher education should aim at inculcating in the minds of the young, ideas of fraternity, patriotism, citizenship, intellectual analysis, imaginative insight and integral way of life (Jeyasingh, 1988 and Rao, 1993). Education plays a vital role in developing various dimensions of a man-physical, mental, emotional and spiritual (Kishore, 1990; Kapur, 1992; Unnithan, 1992 and Varindar and Ahuja, 1994). It can achieve its ultimate purpose of making one an ideal human being only if it helps in fostering universal and eternal values in the minds of all its' people (Bhagia, 1986; McKnown, 1989 and UNESCO, 1992).

National Policy on Education (1986) stated that the value education has a profound positive contact based on our heritage, national goals and universal perception, Prasad (1994). Jha (1991); Tripathi (1993) and Sahoo (1995) proposed that the higher education should be updated in such a way that our youth learn the skills of hand, head and heart. If parents, teachers and thinkers are successful in inculcating among the young generation a simple life motto

"Productivity and creativity for Humanity", crisis of character will no more remain in India (Randiwe, 1994 and Ingale and More, 1995).

Alwa (1988) rightly reasoned that indiscipline among students is due to lack of suitable opportunities in educational institutions to participate, in their leisure time in constructive activities suited to their mental and physical ability. The idealism and energy of youth have to be channelised through various programmes which can involve them. Muthu (1993) affirmed that the quality of education depends on the facilities like library, laboratories, co-curricular and extracurricular activities available to the student. Klein (1993) projected that a pre-requisite for an all-round and harmonious development of the personality should be such that everyone should have both basic and a specialised education. No school or college can hope to develop the personality and character of its students unless adequate opportunities are given to them for self-expression (Bhatia, 1973). At every stage of education the following values are to be imparted through curricular, co-curricular and extracurricular activities;

i) sense of service, ii) faith in the nation's future, iii) emotional integration, iv) awakening of the need for development of country, v) equal participation and

contribution according to capacities, vi) belief in raising the standard of life and society, vii) increasing the production capacity of the country, viii) sense of dignity of labour, ix) spiritual awakening, x) vocational and technical competence, xi) promotion of the economic status of the nation and xii) promotion of self confidence (Gandhi, 1993 and Vedantachary, 1993).

According to Walia (1984); Kirpal (1986) and Arora (1987) extracurricular activities are now considered as the media for the realisation of the modern aim of education i.e., the development of the total personality - physical, intellectual, emotional, social, aesthetic, moral and spiritual aspects. They are a source of enrichment and vitalisation of the school curricula.

Krishna (1986); James (1987) and Pryor (1989) remarked that extracurricular activities provide ample scope for leadership. Students acquire the qualities of a leader - thinking, planning, patience, tolerance, self confidence and enthusiasm. They frame the rules and regulations. Nothing is equal to them insignificance. In the words of Dumas (1988) and Nagarajan (1992) extra/co-curricular activities are imperative to,

- * enhance physical fitness to meet the demands of the daily living (Rao, 1987 and Dharmalingam, 1991),

- * improve the body control and increase the movement patterns,
- * expand opportunities to socialise and have fun as one of the gang (Reddy, 1985 and Mehta, 1989),
- * increase the skills for more worthy leisure time activity,
- * inculcate desirable character,
- * develop good cooperation, understanding and team spirit,
- * improve leadership quality and
- * provide an outlet for the flow of the surplus energies (Friedman, 1988 and Nair, 1989).

The individual who is deprived of equal opportunities for the economic, educational and social advantages available to the majority is also handicapped in his/her personality development (Davis, 1981; Chauhan, 1983; Cozby and Perlman, 1983 and Conger and Peterson, 1984) and hence these activities are of immense value in the present day curriculum.

To sum up, the institution of the young can not be separated from the overall development of the country. An integrated approach of curricular and extracurricular activities is the need of the hour. Culture, education, sports, welfare, leisure time activities and youth affairs

could be interwoven with the curriculum. This integrated approach would no doubt benefit the youth who are the citizens of tomorrow.

C. Personality - concept and theories

Like intelligence, personality is difficult to define. Some psychologists use the term 'personality' to refer to all the various ways in which individuals differ from each other, including social behaviour, emotions, intellectual functioning and so on, whereas others limit the term to account only for social and emotional aspects of behaviour (Shankar, 1981 and Natesan, 1991). The concept of personality attempts to encompass all the different psychological processes and presents a coherent picture of the individuals' characteristic ways of thinking, feeling and behaving (Price et al., 1982 and Birch and Hayward, 1994).

Haviland and Scarborough (1981) and Dash (1989) quote Guilford's definition on personality stressing the integration of traits that are distinguishable, relatively enduring way in which one individual differs from the other. He grouped traits into seven modalities. These modalities of traits are interests, attitudes, needs, temperaments, aptitude, morphology and physiology (Maddi, 1976). Adams and Gullotta (1983) referred to personality as the psychosocial

maturity. It denotes the character of the person under consideration the total configuration of individual, interpersonal and social adequacy, skills and personal mechanisms that integrate them.

Hettama (1979) pointed out that the real basis of human personality is the whole of one's societal connections with the world in tune with one's nature. Personality dimensions, by and large, represent consistent patterns of predisposition. With their predispositional propensities - prepotent attitudinal attributes are activated into action and behaviour (Sinha and Madnawat, 1989). Brombey (1986); Dandekar (1991) and Hurlock (1994) defined personality as the dynamic organisation within an individual of those psycho-physical systems that determine his/her characteristic behaviour and thought and distinguish him/her from his/her fellows.

According to Brody (1988); Muralidhar (1989); Shiamberg (1989) and Suriakanthi (1989) personality is the characteristic and relatively stable pattern of thought, feeling and action of an individual. Naidu's (1994) brief description of the traditional Indian personality concepts revealed that in the human beings there are five layers of matter termed sheath. The sheaths are arranged telescopically one within the other, in the order of

increasing subtlety. The grossest is the outer most physical body synthesised out of food. The next is of vital life force breathing, third subtler is the mental health to which belong the sensory, motor, conceptual, memory and ego functions. The fourth is the sheath of discriminative faculty which is responsible for making discriminations, judgement and choices. The fifth, subtlest of all is the sheath of bliss. At this level only a thin veil of egoistic sense of being an individual entity - the 'I' sense - persists. This sheath of bliss is the last part of the material aspect of personality.

According to Robinson (1982), Muralidhar (1989) and Ghosh (1995) personality is considered as a complete structure, develops during the course of his life as a result of his/her experiences. It is a continuously changing structure depending upon the influence of cluster of experiences about his/her physical and psychical entity. Kagan (1988) stated that personality is the total coherence of his/her personal characteristics, some are central and highly resistant as they are related to individual's native endowment and others are secondary and more modifiable.

Allport (1961) tried to fit personality traits under five broad divisions, namely - intelligence, mobility, temperament, self-expression and sociability. Each of these

traits was subdivided into a number of subtraits. Characteristics in Allport's definition are twenty four in number and are grouped as:

Intelligence	Capacity to remove obstacles, memory, see inter-relationship, creative imagination, adjust new situations.
Mobility	Capacity to work, methods of working perseverance, general ability.
Temperament	Emotional strength, breadth or narrowness in the emotional field, capacity to control one's emotions, tendencies and treatment towards other persons.
Self-expression	Capacity to start work, insight, bear loss, extraversion, aggressive or submissive attitude.
Sociability	Social adjustment, capacity to share social activities, self centered or self-evasive attitude and character

(Bhattacharya, 1985).

Kochhar (1989) analysed the views of many psychologists on personality which are as follows :

- i) personality is the sum total of biological innate and acquired dispositions,
- ii) it is a composite of abilities, interests, attitudes, temperaments and other variables characterising thoughts, feelings and behaviour,
- iii) it is a dynamic organisation and
- iv) it refers to the characteristic behaviour patterns, emotions, motives, thoughts and attitudes with which an individual consistently reacts to the environment.

Bhattacharya (1985); Birch and Hayward (1994); Hayes (1994) and Block (1995) reviewed the theories of personality and summarised as under:

- i) Early theories of personality include the cognitive, conative and affective personality domains, the theory of the intellectual, intentional and emotional respectively (Hayes, 1994).
- ii) Freud's (1940) theory of personality showed the ego maintaining a dynamic balance between the demands of reality, the id and the super-ego with ego defence mechanisms protecting the ego against threat from these sources. Early experiences in childhood could produce lasting effects on the adult personality (Bavelas, 1978).
- iii) Jung (1944) believed that human beings had access to a shared collective unconscious, which could operate in a healing way. Some everyday objects became invested with special significance because they were synchronous with archetypes in the collective unconscious (Zimbardo, 1988).
- iv) Fromm (1955) believed that family, society and maturation are important in shaping character. Different types of characters, either productive or negative, could result from the combined influences of any of these sources (Dicaprio, 1983).

- v) Eysenck (1967) proposed that the personality traits of introversion and neuroticism had a biological basis, which is genetic in origin. He believed that these two traits could be taken as accounting for the majority of individual differences in personality (Hayes, 1994).
- vi) Cattell (1960) proposed that personality could be described in terms of combinations of sixteen different traits and that it was therefore useful to identify personality profiles rather than single scores (Cattell, 1973).
- vii) Factor analysis of the outcomes of different personality tests revealed a consistent 'five robust factors' labelled - extraversion, agreeableness, conscientiousness, emotional stability and culture (Costa and McCrae, 1995).
- viii) The behaviourist model (Hull, 1951-53) saw personality as a simply resulting from combinations of stimulus - response connections, barred by the individual throughout life (Zimbardo, 1988).
- ix) Social learning theory (Bandura, 1977) emphasised the importance of imitation in the acquisition of novel forms of behaviour and of identification with role models in learning general styles. Together, these learning processes formed the foundations of individual personality (Brophy and Willis, 1981).

- x) Symbolic interactionism, as proposed by Mead (1939), saw personality as a result of the social roles which the individual was required to play throughout life and with which they were expected to interact (Zimbardo, 1988).
- xi) Social cognitive theory put forward by Mischel (1968) argued that social learning, expectancies, values and self-efficacy beliefs were sufficient to account for individual differences in personality (Zimbardo, 1988).
- xii) Rogers (1961) argued that people had two basic needs, a need for self-actualisation and a need for positive regard from others. Both of these had to be satisfied for healthy personality development (Hilgard and Atkinson, 1975).
- xiii) Kelly (1955) argued that people develop personal construct theories about reality which they use to make sense out of what happens to them. In order to understand some one's personality, Kelly believed that it was necessary to understand their individual personal construct system (Bavelas, 1978).
- xiv) The authoritarian personality theory showed how a number of personality traits clustered together to make a particularly rigid and intolerant type of personality, which was particularly likely to engage in social prejudice and racism (Hilgard et al., 1979).

- xv) Type A and B personality theory (Friedman and Rosenman, 1959) is a cognitive - emotional one. This deals with the ways that people go about working in high-pressure environment (Papalia et al., 1989 and Berk, 1991).
- xvi) Nomothetic theories of personality seek to compare people on general criteria; idiographic ones seek to describe the individual in depth. Normative psychometric tests are used to compare different people, but ipsative tests look at the balance of different traits within the single individual (Birch and Hayward, 1994).

In this chapter a range of approaches to understand the concept and theories of personality is given. This depicts the various traits of an individual that constitute his/her personality different from one another.

D. National Cadet Corps (NCC) and its contribution to personality development

Forming the National Cadet Corps was perhaps the finest thing that happened to the students of India. From the outlying Andamans in the Bay of Bengal and Laccadives in the Arabian Sea to the remote regions of Ladakh and Arunachal Pradesh in the Himalayas, majority of schools and colleges have an NCC unit. The girls were brought into NCC in 1949. The corps got an inter-services look in 1950 when the

Airwing was added, followed by the Naval Wing in 1952. The NCC is neither a second line of defence nor a paramilitary force (Miglani and Sharma, 1994).

The boys and girls at the school stage are enrolled in the Junior Division (JD) and Junior Wing (JW) of the NCC respectively. Here, they learn the basic requirements of upright bearing and are introduced to a disciplined behaviour and corporate living. The programme is continued at the colleges where boys and girls are enrolled in the Senior Division and Senior Wing (SD & SW) respectively. With no distinctions made on the basis of caste, creed, status, community and province, the Government has opened the gates of this organisation to all students (Sangita, 1991).

Who can join NCC ?

All those on roll of any college/school, above 13 years but less than 26 years of age, being a citizen of India or a subject of Nepal, not been convicted for any offense involving moral turpitude. Such a student should not be a member of any communal or political organisation. He/she should also conform to the prescribed standards of physical fitness. The NCC was established to stimulate interest among youth in the defence of the country and to act as a reserve in case the need arises (The Ministry of Human Resource Development, 1985).

NCC began in a small way with an initial strength of 38,305 cadets. Now 11,15,377 cadets are on roll in the three divisions as given below.

Division	Strength		
	India	Tamil Nadu	Coimbatore
Senior Division	3,73,722	21,440	15,100
Junior Division	6,80,755	38,970	4,010
Girls Division	- 60,900	8,590	725
Total	11,15,377	69,000	19,835

(Director General NCC, 1995)

At present NCC training is imparted at 3640 colleges and 6440 schools under the jurisdiction of 105 universities. Rao (1996) admitted that the strength of the NCC had touched 11.2 lakhs but it is not proportionate to the size and population of the country. On account of limitations of sanctioned strength of cadets, it has not been possible to provide NCC coverage to a large number of educational institutions which have been kept on the waiting list (Miglani and Sharma, 1994).

Aims of the NCC

- i. To develop qualities of character, courage, comradeship, discipline, leadership, secular outlook, spirit of adventure, sportsmanship and the ideals of selfless service among the youth to make them useful citizens.

ii. To create a human resource of organised, trained and motivated youth, to provide leadership in all walks of life including the Armed Forces and be always available for the service of the nation (Migliani and Sharma, 1994).

Cardinal principles

i. Obey with a smile, ii. Be punctual, iii. Work hard without fuss, iv. Make no excuses and tell no lies.

Motto of the NCC

The NCC motto was framed as "Unity and Discipline". Unity implies our basic oneness, the brotherhood of all the Indian people and is the essential ingredient of our strength. It connotes the identity of purpose and is a major contribution of the NCC towards national integration. The stress on discipline is the backbone of any organisation and the bedrock of any social order (Sharma, 1980; Longer, 1983 and Dhupker, 1992).

Organisation - command and control setup

The organisational structure of NCC is closely knit with the educational programme of the country. Infact the backbone of the organisation are thousands of men, women and Associate Officers who are on the teaching staff of schools and colleges. Upon their shoulders, rests the responsibility of providing the necessary thrust and inputs

of the NCC activities. The NCC has a four tier administration. The Directorate General NCC is at New Delhi headed by a Lieutenant General; under the Directorate General there are 16 Directorates which are headed by Officers of the rank of Brigadiers or its equivalent drawn from all the three services. These Directorates look after the NCC activities of the State where it is located and in a few cases, those of the neighbouring State/Union Territory administration as well. The NCC Directorates have under them two or more in the case of Uttar Pradesh, as many as 14 group head quarters. The group headquarters are headed by officers of the rank of colonels or equivalents. At present there are 91 group head quarters and 756 units in the NCC. Units are further divided into sub-units commanded by the Associate NCC Officers (Khan, 1992).

Training

Training which is the basic input, the organisation provides to achieve the said goals is conceived and planned at the highest level i.e., the Army Head Quarters level by the Director General of NCC and his staff. Training policy and its' manner of execution percolates downward to battalion level in the form of training directives issued time to time. The nucleus staff for the command and training of NCC units are provided by the three services that is

Army, Navy and Air Force. They are assisted in this by the NCC commissioned officers; some of whom are employed whole time and others only part time in NCC units. Training schedules are divided into various activities aimed at all-round development of the cadets (Miglani and Sharma, 1994).

Camp training

The aim of the camps is to provide collective training to the cadets in addition to institutional basic training. It also provides opportunity to the cadets to learn team work and develop qualities of leadership, discipline and character. The number of cadets who attend camps has been gradually increasing every year. It is hoped that in the foreseeable future 50 per cent of the NCC cadets will attend the camps annually (Bakshi, 1994).

Banerjee (1989) stated that the NCC over the last 47 years of its existence worked towards the development of our young cadets into men and women of character and courage, so that they become worthy and responsible citizens of our country. Today an important concern for the parents and their wards is the right choice of a career after completion of education. Today's youth would like a career which is adventurous, progressive, rewarding, satisfying, interesting and challenging. The NCC tries to provide some answers to these perplexing problems for which no fool - proof solution

is easily available. Rastogi (1986) and John (1989) added that NCC is an excellent agent of human resource development. Rao (1996) encouraged the NCC cadets in the words, "your training in NCC will stand you in good stead".

In addition to a basic knowledge of military training, all-round development of various faculties in a cadet is being aimed at. This venture is to bring the youth closer to the community and make use of the human potential in national reconstruction (Bakshi, 1994). The monster of unrest, freely moving about in our temples of learning could easily be curtailed, if the youth are directed to take up NCC training seriously and discipline in the path of progress and prosperity. The amount of money, time and energy spent for NCC is a worthy investment and is bound to pay rich dividends in future (Jayaraj, 1989). The camps help in bridging the gaps among the people of different states, religions and languages (Anu, 1994).

Devadas (1995) and Ganapathy (1995) praised the NCC cadets for striving hard for the unity and integrity of the nation. The NCC is striving hard to create a nucleus of discipline to dedicated youth by taking up this noble cause of moulding future leaders in all walks of life (Bakshi, 1994 and Sharma, 1994). Since its' inception, it has been instrumental in inculcating the values of dedication, discipline and esprit de corps (Takkar, 1994). The NCC is

the building block of the new nation of tomorrow where liberty, equality, love and fraternity will be its guiding principles and there would not be any discrimination on the basis of colour, caste, sex and race (Dutta, 1994).

It is apt to quote Pradeep's words (1991) to portrait the significance of NCC :

Fortunate we are to be in NCC
 Our troop is strong and adventurous
 Hard work means nothing to us
 And we do it without any fuss
 Indeed we are proud to be in NCC.
 Toiling diligently, lo! for three hours
 Is nothing - nothing after all of us
 Its' a joy whose worth is priceless
 With abiding satisfaction boundless.
 Not a single second do we waste
 In idle gossip on the parade ground
 To say is lovely, no ordinary word to
 praise lo! aloft
 Fortunate we are to be in NCC.

To conclude, the benefits of NCC training flow to each and every cadet who joins the NCC. The NCC continues marching ahead to keep the youth of our country together and make them ideal citizens to serve its motto of 'unity and discipline' throughout their lives.

E. Factors influencing personality

Development of personality is a multidimensional process and influenced by many factors and forces such as heredity, biological and environmental. These factors act, interact and mould the young individual's personality (Hurlock, 1994).

A review of research literature directly and indirectly related to the present study, can be conveniently classified into:

1. extracurricular/co-curricular activities
2. family context
3. physical and physiological factors
4. socio emotional aspects
5. cognitive factor
6. values and aspirations and
7. sex.

1. Extracurricular/co-curricular activities

Umapathy (1991) strongly said that personality is not a marketable commodity. It has many components such as human values and man making values. Education alone cannot develop personality. Participation in extracurricular/co-curricular activities serves this purpose and enables the members to:

- * develop physically (Sullivan, 1988)
- * learn social etiquettes (Mehta, 1989)
- * maintain sound mental health (Friedman, 1988)
- * feel emotionally satisfied (Rao, 1987)
- * involve in experimentation outside the class room (Kirpal, 1986)
- * give civic training to the students (Dharmalingam, 1991)
- * put an end to the boredom and drudgery of class room (Nair, 1989)

- * acquire virtues like honesty and responsibility (Reddy, 1985)
- * become self-disciplined, frame the rules and regulations and maintain reputation and prestige (James, 1987) and
- * acquire clear thinking, initiative, patience, tolerance, self-confidence and enthusiasm which are qualities of a leader (Pryor, 1989).

i. Participation in NCC

An interesting research was carried out by Sinha (1989) on the evaluation of NCC training in the development of leadership qualities among students. He found that NCC students were the better planners, more independent, more industrious and more self confident than the others. He concluded that college students who received NCC training were definitely superior to non-NCC students. In Baradha and Vallimalar's study (1993 - unpublished), NCC cadets opined that this (NCC) primary youth organisation of the country prepares the youth for the best career, produces disciplined and trained man power, channelises youth's energy and promotes national integration. Gopalakrishnan (1989) referred to Radhakrishnan's saying that student's career is not complete if he/she does not join the NCC. The NCC is a centre of diffusion in the society, spreading out the basic virtues of character, leadership, comradeship, discipline and adventure in an atmosphere permeated by the fragrance of national integration. Discipline is a must for success in life. It is a fundamental requisite for an orderly life and

is the oxygen that sustains the life of a nation. The NCC training prepares the youth to be disciplined in his/her mental and physical activities (Sharma, 1985 and NCC Souvenir, 1989).

ii. Participation in sports

The National Policy on Education (1986) laid down a policy that sports and physical education are an integral part of the learning system and would be included in the evaluation of performance. Dowell (1982) and Bhatia (1988) reported that the benefits of sports are found to involve the youth's physical health, body strength, emotional and social development. They contribute to later educational and financial betterment; reduce delinquency, encourage fitness, increase sportsmanship and are the desirable leisure time activities (Raj, 1992 and Baldwin, 1994).

O'Connor and Webb (1976) examined and compared the personality traits of four groups of inter-collegiate female athletes and one group of non-competitive students (N:55) of under graduates aged 18-24 years. Forms A and B of 16 PF test and a personal information questionnaire were administered to all. Results indicated that the five groups were similar on 12 personality factors and significantly different on four personality factors such as intelligence, radicalism, self-sufficiency and control.

2. Family context

According to Peterson (1988) better adjustment in all levels of life is possible if the adolescent's family is satisfactory. Adams and Gullotta (1983) were of the opinion that most of the adolescents' learning occur in spontaneous family setting. Values and the goals are moulded. It exercises a great influence on the personality development of adolescents (Mahale, 1987). Steinberg (1989) showed great concern to the characteristics of families of adolescents, not just because of the changing needs and concerns of the young person, but also because of changes in the adolescents' parents' needs and functions of the family as a unit. According to Zandon (1978) different child rearing practices have an effect in shaping the personality and behaviour, the major dimensions emerge from the techniques. Adolescents raised in authoritative homes are more responsible, self-assured, adaptive, creative, curious and socially skilled. Their counterparts raised in authoritarian homes are more dependent and less intellectually curious (Pulkimen, 1982).

The larger the family, higher will be the degree of economising the family resources which may create a parent - adolescent conflict. Adolescents from small families develop different personality pattern than that of their counterparts from large families. The larger the family

group, the greater the diversity of roles, depend upon the roles already played by older siblings, Mahale (1987), James and Mott (1988) and Sarkar (1989) were of the opinion that in small families parents can more easily promote intellectual growth and achievement in children because more attention generally is given to each individual which is difficult in large families. The oldest child initially receives, greater deal of attention and stimulation, therefore might be more motivated than their siblings.

The ratio of boys and girls amongst the siblings and the ordinal position have a significant role in personality development. The eldest one is expected to be responsible and set the pace for the younger ones. The second or third child does not get as much parental attention as the eldest and youngest off springs (NCERT, 1986 and Bharsakle and Srivastava, 1992).

Ying and Liese (1994) stated that adjustment is related to the personality of the students. Investigations were carried out on 172 Taiwanese students regarding their initial adjustment in the United States. The overall adjustment score indicates a moderately high level of adjustment. In terms of demographic variables, younger respondents were found to be better than the older participants. No sex difference was found. Socio-economic

status was not a significant predictor of adjustment, possibly because of the relative homogeneity of the sample. Of the three personality variables examined, internality and externality emerged as significantly predictive of adjustment. Those who were more external and more likely to actively engage in their environment were better adjusted.

Berg and Kugelmass (1994) investigated the influence of socio-economic status (SES) on cognitive development of Israeli Bedowin children. The results supported the hypothesis that SES influences cognitive development. Kapur and Gill (1993) and Hurlock (1994) predicted that variations in personality sickness are influenced by age, sex, socio-economic status, family size, popularity and the kind of personality sickness. Sujatha et al., (1993) did a study on factors influencing adjustment among urban and rural adolescents in Dharwad block of Karnataka. The study revealed significant differences in the adjustment of male and female adolescent students of rural area. Early and late adolescents from both the urban as well as rural areas did not differ significantly in their adjustment. Significant association was found between academic achievement and adjustment level among rural respondents.

Seth et al., (1982) administered the 16 PF test to 50 male and 50 female deprived and to same number of

non-deprived young adults aged 17 to 20 years. Results showed that deprived girls were more reserved, less emotionally stable, shy, more conservative and dependent than non-deprived girls who were described as more outgoing, stable, adventuresome and relaxed. Deprived boys were more reserved, less stable, more imaginative and more tense than non-deprived boys who were described as more outgoing, more practical and more experimental. This finding is similar to the statement of Santrock (1981) that socio-economic status influences the adolescent's socialisation.

Shanthamani (1970) investigated the influence of certain SES factors in relation to intelligence test score of 300 students of VIII to X standard. It is concluded that,

- * there seems to be some influence of optional subject on mean performance in intelligence,
- * order of birth has an influence on intelligence though the effect is not in a single direction,
- * educational qualification of the fathers has no effect upon the intelligence of their children,
- * positive relationship exists between the economic status of the parents and intelligence of their children,
- * there is no effect of single or joint family on intelligence of children,

- * rural and urban environment has no considerable effect on intelligence and
- * caste has an influence on intelligence of students.

Krishnan (1965) studied 981 male students in different colleges in Mysore and Bangalore with respect to SES factors on leadership qualities. Mysore Personality Inventory was used. Emotional and social adjustment and realistic attitude contributed to the development of leadership in a marked degree. Pessimistic and delinquent tendencies had a negative influence on leadership. Factors like age, educational status and size of the family influenced the leadership qualities. Khan et al., (1988) compared the level of aspiration of school going boys and girls belonging to upper and lower socio-economic status (SES) group. One hundred boys and 100 girls were randomly selected from the schools of Aligarh city on the basis of their scores on revised SES scale. The results clearly revealed that the boys of upper SES group showed higher level of aspiration than their lower SES group though the difference was insignificant.

3. Physiological and physical factors

According to Susman et al., (1987) and Steinberg (1989) endocrine constitutes an interlocking system in certain glands, affect particular personality trait directly. The biological factor is a general factor in shaping the

personality traits. Simmons and Blyth (1987) were of the opinion that the physical maturation regardless of whether it occurs early or late, affects the adolescents' self-image, mood and relationship with peers. Alagesan (1992); Barton and Smith (1992); Hasrani (1992) and Amirthaveni and Shobha (1995) opined that a person who participates regularly in a well designed physical activity can overcome and challenge all unevenly spread troubles, stay healthy, lose weight, increase strength, become fit, strengthen heart and lungs, socialise and make new friends for recreation and enjoyment.

Chandrasekhar's (1992) study revealed that the sports boys were taller and heavier than their counterparts in Tamil Nadu and at All India level except the boys from Coimbatore, whose mean weight was lesser than the standard norm. In this study, all the groups showed a lowered blood pressure than normal which is 120/80 mm Hg. She quoted Todrey's (1981) statement that physical activity is actually a double asset in blood pressure control. Exercise helps to lower blood pressure appreciably. Endurance training tends to reduce systolic and diastolic blood pressure. Contrary to this, Kaplan (1994) said that the systolic blood pressure typically rises significantly during isotonic exercise and both systolic and diastolic rise during isometric exercise. A failure of the systolic blood pressure to rise is

indicative of high risk for cardiovascular death. The systolic blood pressure may rise above 195 mm Hg during isotonic exercise.

4. Socio emotional aspects

The strongest factor in the development of personality is undoubtedly the adolescents' individual social history. Social mobility whether horizontal or vertical, upward or downward affects personality by disturbing the customary patterns of a person's life. Regardless of what form it takes, it leads to anxiety, insecurity and feeling of social isolation. The upward mobile person, in addition, becomes an over conformist and a status symbol conscious, while the downwardly mobile person feels guilty and ashamed (Davis, 1984).

Mohan and Banerji (1994) affirmed that communication plays a vital role in the smooth functioning of day-to-day activities. It enables one to interact with the environment, regulate social behaviour, sustain the tempo of growth, enhance the decision making and handle the conflict situations effectively. Adair (1994) puts forth that researches concede that leadership implies personality. The functions of leadership are to achieve the common task, work as a team and respect individual members. Research evidences indicate that 70 to 80 per cent of the total working time is

spent on communication. Assertive and non-defensive are the basic skills enhance communication and understanding between people (Johnson and Johnson, 1987). Leadership is a function of the personality and of the social situation and the two in a transactional relationship (Kumar, 1965).

5. Cognitive factor

Kundu (1977) quoted the results of Suri's (1973) study on different personality traits in intellectually superior, average and below average students. The intellectually superior boys in comparison to the average and below average were found to be emotionally stable, assertive, conscientious, venturesome, tough - minded, placid, controlled and relaxed. On the other hand the average and below average students were found to be sentimental, obedient, expedient, shy, tenderminded, apprehensive, undisciplined, self-conflicted and tensed. The average students were found to be more assertive and relaxed than the below average ones. The intellectually superior girls were different from others, by more assertive, venturesome, relaxed, emotionally stable and conscientious.

Pal (1970) traced out the relationship between the intellectual level and the courses opted. The findings revealed that the engineering students have been differentiated significantly in intelligence from law,

medical and teacher training students, while these groups did not differ significantly from each other on this variable.

Bimaleswar (1966) conducted a study on 76 male students, using Mandsley Personality Inventory and Raven's Progressive Matrices Test. There was no significant correlation between extraversion, neuroticism and intelligence. Kakkar (1965) undertook an investigation with an aim to study the role of intelligence in adolescent's adjustment. The data revealed that there was a close correspondence between the scores on (i) Adjustment Inventory and Personality Inventory (ii) Adjustment Inventory and Intelligence test (iii) Personality Inventory and Intelligence test. Evidently the brighter the student, the larger are the number of problems.

6. Aspirations and values

Asthana and Srivastava (1992) made an attempt to compare the level's of aspiration of science and Arts students. The result revealed that the Arts students were higher aspirants than that of science students. It implies that the arts students over aspire, they seldom attain their goals they set for themselves, while the science students under aspire. Similar results have been found by Madho (1986) and Thadani and Raizada (1986). The levels of

aspiration of science students significantly differed from that of Arts students. The science students did not have aspirations and goals beyond their capacity.

In Mohanty's (1971) study there was significant inter correlations between goal discrepancy score and mean aspiration score. This indicates that the levels of aspiration is a constant general trait of the personality regardless of the similarity or dissimilarity of the tasks.

Prakash (1979) opined that aspiration level is a component of the individual's 'self' concept and may be defined as the feeling a person has, concerning his potential for performance. It is related to the personality trait, need for achievement, self-confidence and the total feelings an individual has, also his capacity for intellectual as well as motor functioning. Aspiration level is influenced to a marked degree by past experience. Successful past experiences will tend to raise an individual's aspiration level, while past failures will tend to lower aspirations. People with high aspiration perform best. The unique characteristics of the task influence the aspiration level. Various sub-cultures influence aspiration level set by individuals.

Values

Fogarty and White (1994) researched on differences between values of Australian Aboriginal and non-aboriginal students. It was found that the aboriginal group scored higher on tradition, conformity and security. It had lower scores on achievement, self direction, benevolence, stimulation and hedonism. Result indicated that family security was the most highly rated item by both groups. Five other values were common to both lists, although their rankings were not identical. The four unique items in the list for the aboriginal group were honouring parents, equality, politeness and social justice. The four unique items in the test for non-aboriginal group were inner harmony, freedom, mature love and success. These results support earlier findings that both individualistic and collective values were seen important by Australians (Bond, 1988; Schwartz and Bilsky, 1990 and Feather et al., 1992).

Adhikari and Adhikari (1994) studied national defence attitude and values of 480 boys and 210 girls belonging to Kumoun Region with the help of National Defence Attitude Scale and value measurement test.

- i) National Defence Attitude was correlated with economic, social, political and religious values at one per cent level for male students. Whereas among girls aesthetic, social, political and religious values were correlated with National Defence Attitude.

- ii) Theoretical and aesthetic values were correlated with National Defence Attitude at five per cent level.

Development and transmission of moral values in the case of adolescents are important concerns of the present day Indian Society. Jyoti et al's., study (1994) investigated that the fragmentation of the joint family system is another reason for problems and conflicts in values. Pal's (1970) findings in general lead to the conclusion that differences in values do exist between students preparing for the profession. Engineering students yielded a significantly higher value on the economic role, while law students revealed significantly higher value on the political scale. Whereas medical students yielded significantly higher values on the theoretical and social scales. In the case of student - teachers, political value emerged as the highest value, followed by theoretical.

Sex

Asprer (1977) administered the 16 PF test to 198 male and 100 female Filipino undergraduates to assess personality difference between the two groups. It was found that Filipino and American males differed significantly on factors A, B, F, G, H, L, N, O, Q₂, Q₃. And the two groups of males differed significantly from each other in more factors than did the female groups.

Kundu (1977) referred Saraswat's investigation which compared the personality patterns of adolescent girls and boys. The salient findings of the study were,

- * there was no difference in the normal functioning of the ego of boys and girls,
- * girls were more optimistic and sociable than boys,
- * boys tend to be more aggressive and girls more timid in social situations,
- * boys and girls did not differ significantly on stability, dependability, confidence and inferiority,
- * girls tend to be more troubled by the feeling of depression,
- * both the girls and boys had almost same problems in the health area and
- * the problems in the areas of social and emotional were noticed among the boys and girls of above average and average intelligence.

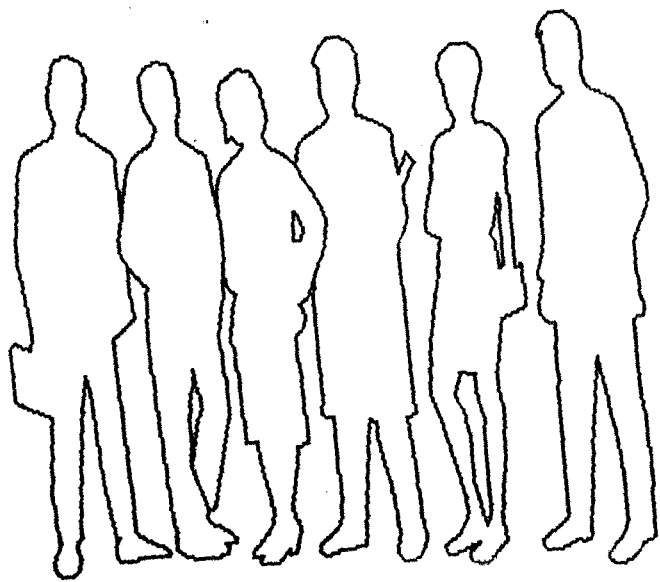
Dutt (1967) studied the personality characteristics using Eysenck's Personality Inventory with 200 male and 200 female PG students of Punjab university. It was found that neuroticism was almost normally distributed in the population under study while extraversion was a little more than was normally supposed to be. Female group was more

variable than the male group on extraversion whereas both the groups were equally variable in neuroticism. There was no significant difference in the means of male and female groups on both extraversion and neuroticism. It was concluded that the N scale was more reliable than E scale.

In another study Evans (1964) compared the reasoning abilities and personality characteristics of university graduates (N:140) and training college students (N:145). Three different kinds of standardised group tests were administered uniformly to both sample to measure verbal reasoning ability, mental speed and accuracy and personality attributes. Significant differences were found on the extraversion and sociability scale with training college students gaining higher scores than the graduates. On the sociability test, training college women obtained better scores than men of the two groups. The neuroticism and self confidence scales, however, produced no difference between any of the groups, though there was a tendency for training college men to be more confident than university women.

To sum up, this review of literature was available with respect to the personality characteristics of students with diverse tools, techniques and designs, hence, it is difficult to derive common conclusions. However, an attempt is made to draw some conclusions.

- * A large number of comparative studies have been undertaken on the personalities of students. These studies cover a wide variety of student population, but not with those involved in extracurricular activities.
- * The techniques employed in these studies mainly consist of ratings, personality inventories and projective tests.
- * Main areas of personality measured in these studies include intelligence, adjustment, aspiration, values, socio-economic factors and birth order.
- * Very few informations were available for physical and physiological aspects in relation to personality.



DESIGN OF THE STUDY

III. DESIGN OF THE STUDY

The design of the study on 'National Cadet Corps as a Means of Developing Personality Traits Among Students of Higher Education - An Analytical Study' is set under the following headings:

- A. Locale and sample
- B. Tools and techniques
- C. Collection of data
- D. Analysis and statistical procedure and
- E. Hypotheses.

A. Locale and sample

The subjects for this study were drawn from various colleges/universities of Coimbatore, Erode, Salem, Udumalpet, Kumarapalayam, Pollachi and Tirupur having NCC units. The administration, training, personnel, camps and examinations for all the selected colleges/universities are organised by the NCC Group Head Quarters, Coimbatore. Due to the availability of the sample with similar training in NCC and easy accessibility, the investigator selected these areas (Figure 1).

LOCALE OF THE SAMPLE SELECTED

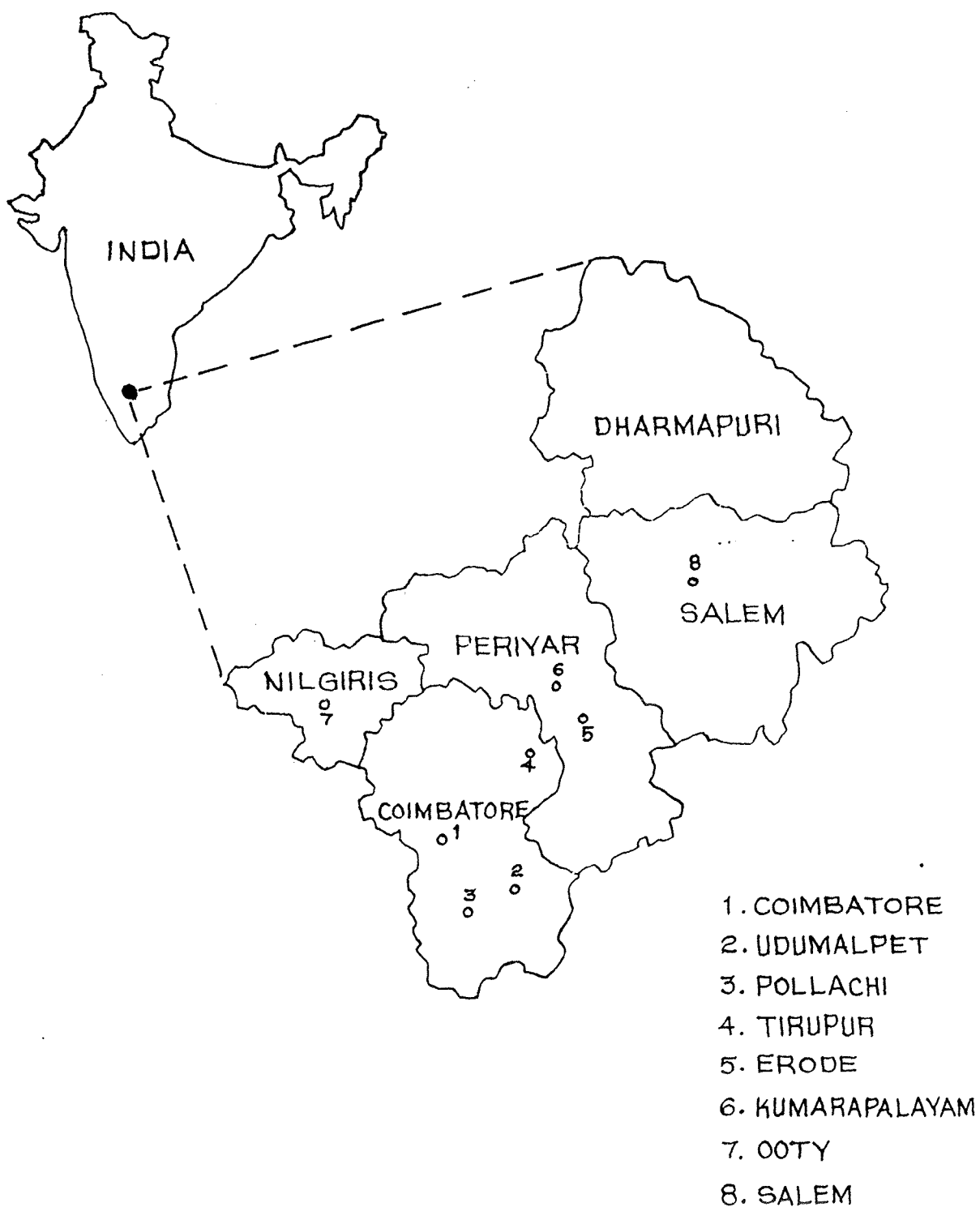


Figure.1

For selecting the respondents at the first level the sample were stratified into NCC and non NCC group. At the second level, they were further stratified into male and female in the age group of 20 to 22 years. Due to easy accessibility of the investigator the NCC cadets were selected from the camps. With a view to compare different traits of personality of NCC cadets with those of non NCC students, equating them in terms of number and sex was done as much as possible, though perfect equating was impossible. NCC training area (NCC Group Head Quarters, Coimbatore), completion of two years of NCC training, sex and age were the parameters for selection. Table I indicates the women's and men's colleges/universities from where the sample were drawn.

TABLE I
THE SAMPLING FRAME

Institutions	Boys		Institutions	Girls	
	NCC N:200	Non-NCC N:200		NCC N:200	Non-NCC N:200
PSG Arts and Science College	20	15	Avinashilingam Deemed University	38	35
PSG College of Technology	15	12	Government Polytechnic for Women	25	22
PSG Polytechnic for Men	17	25	Nirmala College	22	18
Government Polytechnic for Men	23	20	PSGR Krishnammal College	23	29
Government Arts College Coimbatore	10	13	Sri Saradha College	26	30
Sri Ramakrishna Mission Vidhyalaya	18	15	Vellalar College	25	17
NGM College	22	25	Alamelu Angappan College	15	26
Nachimuthu Polytechnic	25	22	GVG Visalakshi College	26	23
Government Arts College Tirupur	16	10			
Government Arts College, Ooty	10	12			
CBM College	12	16			
Kongunadu Arts College	12	15			

NCC imparts two broad types of basic training: the institutional and camp. Primary activities are enumerated below in Table II.

TABLE II
ACTIVITIES IN NCC TRAINING

Activities	Inculcation of traits
1. Drill/training parades	Discipline, regularity, bearing, sincerity, command and control.
2. Physical training	Physical efficiency
3. Civil defence, first aid, home nursing, social service	Service before self
4. Weapon training	Courage, confidence, co-ordination
5. Map reading	Mental process
6. Camps	Corporate living
7. Sports and games	Physical and mental strength for a balanced life.
8. Cultural activities	Cultural and emotional integration
9. Blood donation*	Sacrifice
10. Service during natural calamities like floods, cyclone and earth quake	Service mentality
11. Ship and aero modelling*	Skills in creation
12. Basic and advanced leadership courses	Leadership

(Table II Contd..)

13.	Mountaineering, rock climbing, trekking*, cycling, para jumping, hang gliding and sky diving	Initiativeness, interest, ability to face life efficiently in various circumstances
14.	Exchange programme*	International understanding

*	For the selected cadets	

Through these activities NCC offers a variety of training for balanced self development of the youth. The selected NCC cadets had the opportunity of two years training in the above listed activities (Plate I to XII) (Longer, 1983; National Cadet Corps of India, 1990; The Cadet Director General NCC, 1994 and India Year Book, 1995). NCC syllabus and type of camps are given in Appendix I.

WEAPON TRAINING



Plate I.

SIGNAL AND COMMUNICATION



Plate II.

TRAINING ON HOME NURSING



Plate III.



PHYSICAL TRAINING AND DRILL



Plate IV.

SOCIAL SERVICE ACTIVITIES

CARING THE SICK



Plate V.

ENVIRONMENTAL PROTECTION

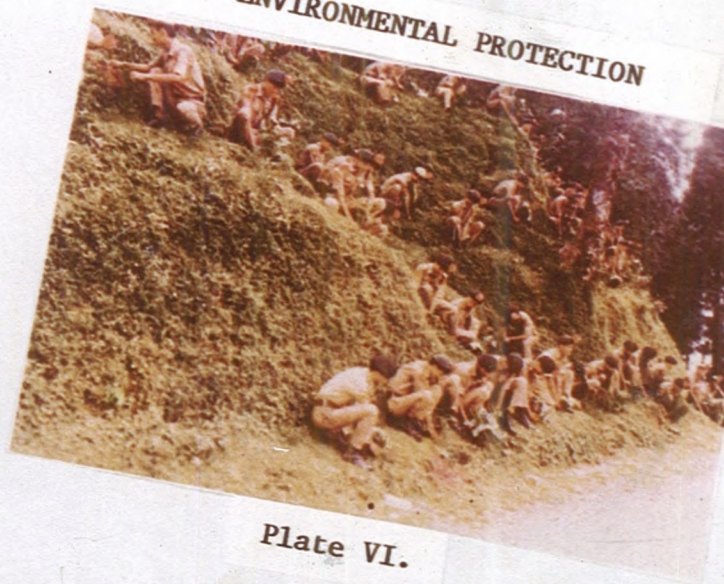


Plate VI.

ADULT LITERACY



Plate VII.

TRAFFIC CONTROL



Plate VIII.

BLOOD DONATION

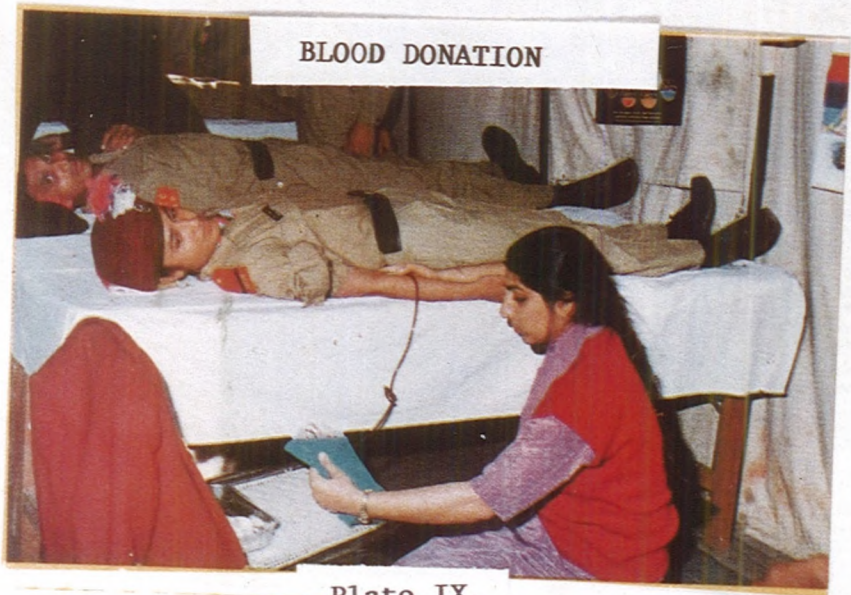


Plate IX.



Plate X.

PARTICIPATION IN THE CONSTRUCTION WORK



Plate XI.

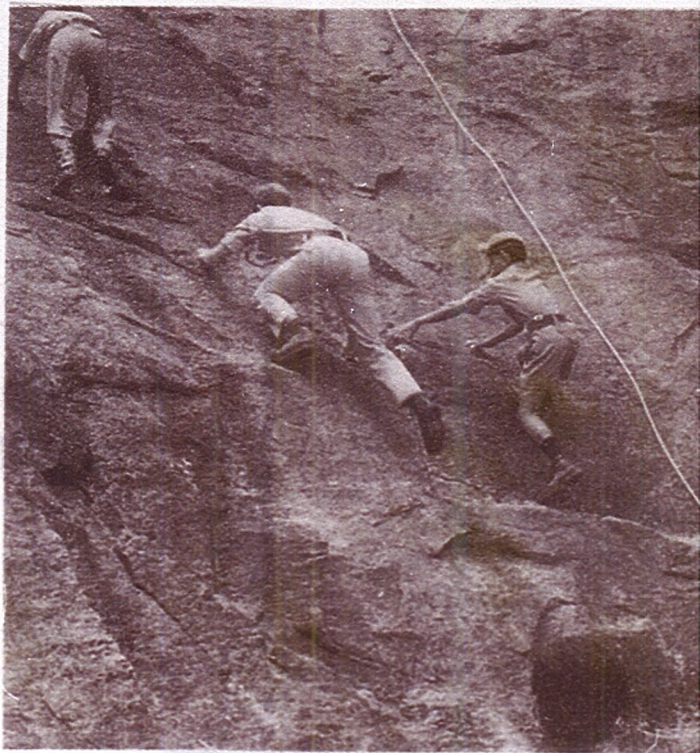


Plate XII.

B. Tools and techniques

The selection of tools for this study depended upon the objectives of the study, availability of suitable tests and the personal competence of the investigator to administer, score and interpret the test results. Personality has three distinct measurable aspects namely physique, chemique and psychique which include physical and behavioural characteristics and physiological contributions. In order to know the individual fully well, all the aspects and segments of personality need to be assessed (Kochhar, 1989). There are five segments of personality - character, adjustment, temperament, interest and attitude. Taking into consideration these factors, a carefully selected battery of tests was used to collect the data regarding the personality traits of NCC and non NCC students (Appendix II). These materials were scrutinized by five experts from Avinashilingam Deemed University, Bharathiar University and a visiting Professor from Netherlands. Table III gives 'The battery of tests' employed in the study:

TABLE III
THE BATTERY OF TESTS

S.No.	Aspects	Tools	Details
1.	Physique (height, weight).	Anthropometry	ICMR
2.	Physiological (heart rate, respiratory rate, systolic and diastolic - blood pressure)	-	-
3.	Skills (communication, observation, problem solving, social relationship, leadership, morale building, emotional effectiveness and facing emotional situations)	Self analysis	Canada World Youth (1991)
4.	Personality type	Eysenck's Personality Inventory	Eysenck (1967)
5.	Intellectual capacity	Standard Progressive Matrices	Raven (1960)
6.	Adjustment pattern (home, health, educational)	Adjustment Inventory for College Students	Sinha and Singh (1980)
7.	Human values	Ranking Scale	Rokeach (1967)
8.	Levels of aspiration	Card Sorting test	Psychological performance test
9.	Socio-Economic Status (SES)	Schedule	Developed by the Investigator

Assessment of personality traits

An individual's personality reflects his/her characteristic behaviour traits and the way he/she consistently reacts to his/her environment. Different approaches exist for the assessment of personality. Hence in this study six different tests were applied in addition to physical and physiological records (Plates XIII to XVI).

1. Physique

Personal fitness relates to health and well-being. Health includes five aspects: Physical, emotional, social, mental and spiritual. When physical fitness is achieved the other components are balanced at high level. One can achieve high level of well-being by maximizing and integrating the five components of health. Personal fitness implies the ability of each person to live most efficiently within his/her potentialities which in turn shapes the personality (Rosato, 1990; Hasrani, 1992 and Stroot, 1992). As the investigator was interested in studying the relationship of height and weight with the personality of an individual, height and weight were recorded with the help of the trained Army Medical Personnel.

- i. Height - Height was measured from the floor to the head nearest to 0.1 cm, using fibre glass tape.
- ii. Weight - Weight was recorded separately using the spring balance and recorded nearest to 0.1 kg.



PHYSICAL - PHYSIOLOGICAL TESTS



Plate XIII.

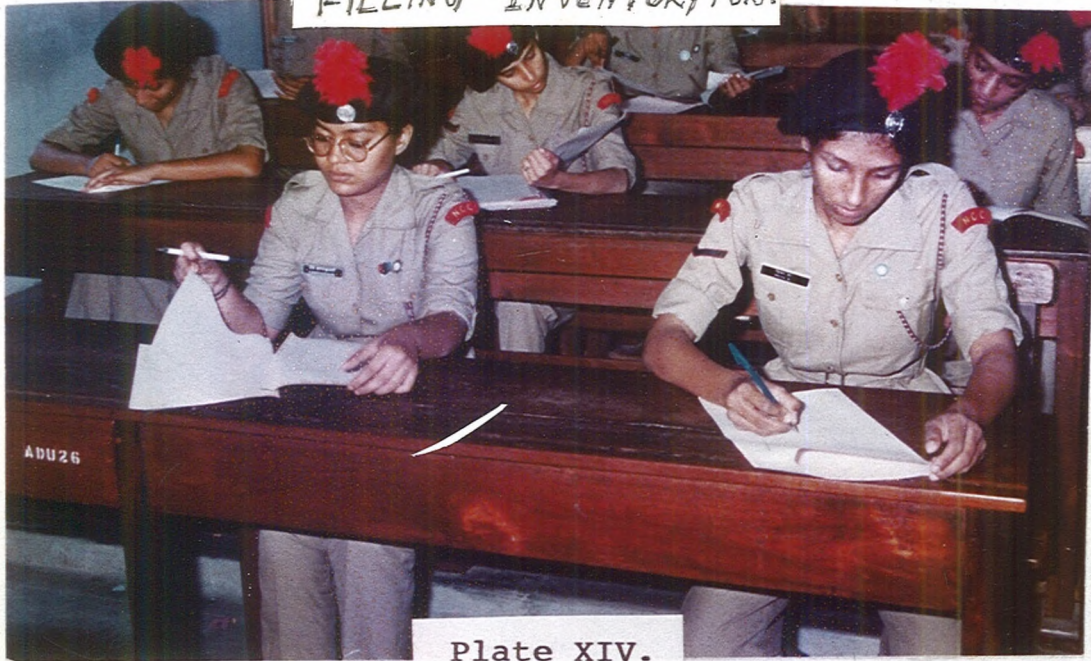


Plate XIV.

CARD SORTING TEST



Plate XV.

STANDARD PROGRESSIVE MATRICES TEST

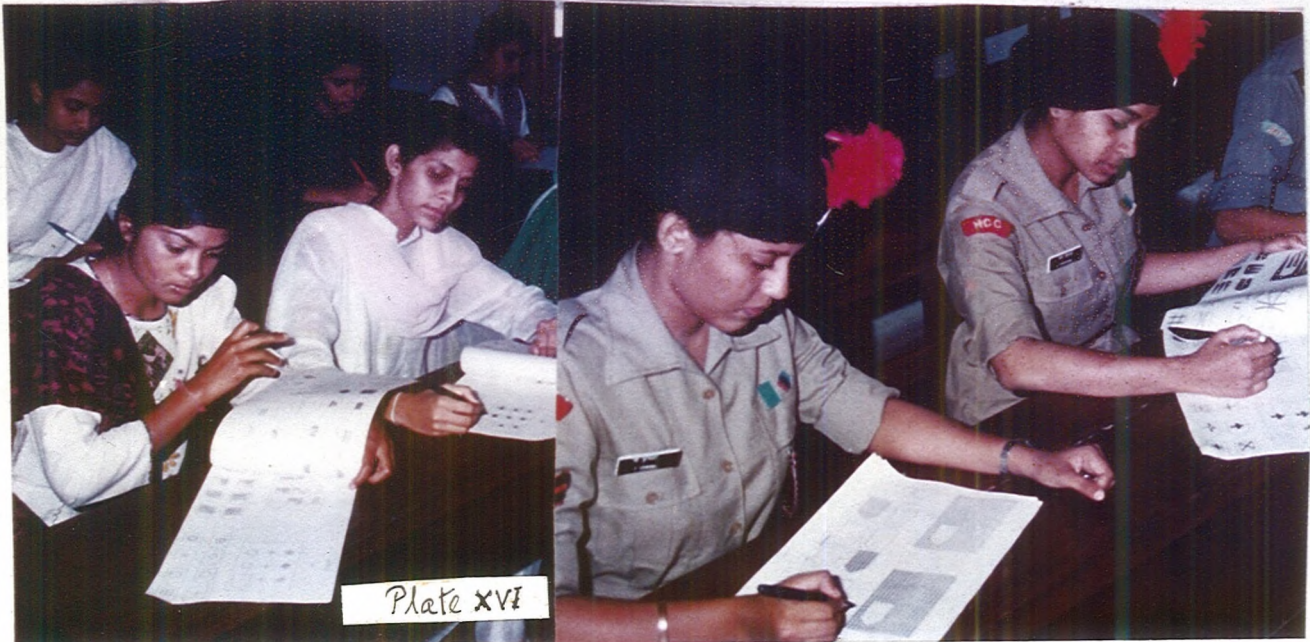


Plate XVI

Indian Council for Medical Research (ICMR) norm was used to compare the values of this study. Mean height specified for male 163 cm and female 151 cm (Reddy et al., 1993). Mean weight specified for male 60 kg and female 50 kg (Gopalan et al., 1994).

2. Physiological aspects

The most important health benefits of regular exercise/physical activity are those associated with its effect on the heart, circulation and respiration. The capacity to utilize oxygen is improved by chronic exercise (Kaplan, 1994). Holland and Davis (1975) and Guyton (1991) stated that the effect of physical activity improves the functional response of the various physiological systems. Beyrer et al., (1977) are of the opinion that the social environment influences the individual's personality. An individual is born with physiological drives and possibly to a limited extent, with some psychological strive. These compel him/her to satisfy personal needs. If needs are not satisfied, the deprivation state leads to physiological and emotional alternations. Ultimately the adjustment pattern may be disturbed, which in turn will affect the normal personality of an individual. Hence, physiological factors such as the blood pressure, heart rate and respiratory rate were measured in a lying down position.

- i. Heart rate - The heart rate was noted down by using stethoscope. The average heart rate per minute for the young adult is 70 to 80 (Georgiva, 1989).
- ii. Respiratory rate - The respiratory rate of a normal healthy individual may range from 16 to 20 per minute (Bhaskar, 1994). The medical assistant measured the respiratory rate, without the subjects' awareness so as to get the normal respiratory rate.
- iii. Blood pressure - Both systolic and diastolic pressure were measured by Auscultatory method using sphygmomanometer and stethoscope. Systolic pressure is the maximum pressure during systole and diastolic pressure is the lowest pressure during diastole of the heart (Boyd, 1995). The manometer reading at which the sound is first heard is the systolic pressure. The reading at which the arterial sound disappears is the diastolic pressure (Lawton et al., 1980 and Strasser, 1995). In order to avoid the error and to have a reliable value, the second value was recorded. The normal blood pressure of an individual aged 20 to 24 is 120/80 mm.Hg., (Kaplan, 1994; Swartaut, 1994 and Basu, 1996).

3. Self analysis of skills

Self rating inventory is also known as personality inventory when the individual reveals his/her own feelings, involvement and reactions of others towards himself/herself (Singh, 1986). According to Brown (1983) one widely used method of measuring personality characteristics is to have the individual describing himself/herself. The basic assumption behind this approach is that the individual alone

is in the best position to report upon his/her own behaviour.

The tool for self analysis of skills used in this study was formulated by Canada World Youth (1991). It consists of 50 skills categorised into eight areas such as communication, observation, problem solving, social relationship, leadership, morale building, emotional effectiveness and facing emotional situations. The individual rates himself/herself through a three point scale: 'doing alright', 'have improved' and 'need to improve' for which scores three, two and one are assigned respectively. An individual's score is the sum of all the scores for 50 items. The maximum score for favourable analysis towards self is 150.

4. Personality type

Eysenck (1967) proposed that personality can be sufficiently described by the following two dimensions:

Extraversion - Introversion

Neuroticism - Stability

- i. Extraversion/Introversion (E): Typical extraverts are sociable, thrive on human company, frequently seek exciting activities and are willing to take risks. They are impulsive, restless, optimistic and not always reliable. Introverts are typically more serious and

reserved individuals who prefer solitary activities. They are more cautious, pessimistic, orderly and restrained.

- ii. Neuroticism/Stability (N): Highly neurotic individuals tend to be more prone to worries, anxiety and are often touchy and irritable. They are more likely to complain of headaches and suffer from eating and sleeping difficulties. Highly stable individuals are less likely to make strong emotional responses and tend to be relatively calm, even tempered and controlled.

The two dimensions are thought to be normally distributed, in that the majority of people can be placed in the middle of the dimension and relatively few at either extremes (Birch and Hayward, 1994). Eysenck's personality inventory is a self-report questionnaire made up of 56 questions, to which respondents are required to state 'Yes' or 'No'. It contains a Lie Scale, which assesses an individual's tendency to give a socially-accepted score. Each correct answer is to be given one score.

Phenomenon -----	Interpretation of the score -----
Extraversion score (Total score 24)	: a. 17 and above - extravert b. 7 and below - introvert
Neuroticism score (Total score 24)	: a. 14 and above - neurotics b. 4 and below - stable

If the total Lie Score is five and above, the data is to be rejected (total score 8) (Hayes, 1994). In order to have the decided sample number, sample with lie score above 5 were replaced.

5. Intellectual capacity

In order to assess the general intellectual capacity of the selected students, Standard Progressive Matrices by Raven (1960) and modified in 1986 was used, as it is originally designed to cover the widest possible range of mental ability with persons of all ages, regardless of education, nationality or physical condition (Raven et al., 1992).

The scale is made up of five sets or series of dramatic puzzles exhibiting serial change in two dimensions simultaneously. Each puzzle has a part missing, which the person taking the test has to find among the options provided. It consists of 60 problems divided into five sets (A, B, C, D and E), each made up of 12 problems. Approximately one hour was allowed for the completion of the test. Each correct answer is given one score, so the total score for an individual is 60. Higher the score, higher the intellectual capacity of the student.

6. Adjustment pattern

To trace the adjustment pattern of the selected students in the areas of home (16), health (16) and educational (19), 51 items were taken from the 'Adjustment Inventory for College Students' by Sinha and Singh (1980). The inventory consists of 'Yes' or 'No' response. The individual's total scores range from 0 to 51. The higher the scores the lower is the adjustment pattern.

7. Human values

It is essential to study the values of students and to prepare remedial measures to foster secular spirit and to respect the values (Sahoo, 1995). Rokeach Value Survey was administered because of its high reliability. The Rokeach value survey consists of 18 terminal values - ideal-end states of existence and 18 instrumental values - ideal modes of behaviour. These two sets of values were arranged in alphabetical order, respondents were instructed to arrange them in order of their importance, as guiding principles in their life (Rokeach, 1979). The composite ranking was calculated by adding the ranks of observations and dividing it by the total number of observations.

8. Levels of aspiration

Levels of aspiration is the degree of difficulty of that task chosen as a goal for the next action. Bhargava

(1975) and Singh and Tiwari (1981) are of the opinion that the levels of aspiration has an important place in the psychology of personality because it is intimately related to the human self especially the individual's self picture which gives knowledge of a person not only as he/she is but as he/she would like to be.

The selected students were oriented about the objectives of this test. Card sorting test was administered, in which all the four designs of the playing cards were drawn on a cardboard, the cards were reshuffled and then sorted out on the cardboard as per the design. One minute was given for one trial of sorting the cards. The subject's expected number of cards to be sorted out is known as aspiration level (expected score). The actual number of cards sorted out for one minute is known as attainment level (actual score). Five trials were given.

The difference between the expected score and the actual score on the same trial may be called as attainment discrepancy score. Levels of aspiration can be measured by attainment discrepancy score, i.e., the actual performance is subtracted from the expected performance. If the attainment discrepancy is positive, the individual is over aspirant and if negative he/she is under aspirant. The zero level is the correct measure (Sharma et al., 1981).

9. Socio-economic profile

To understand the complex nature of the personality of an individual, which is the product of a nature of psychosocial forces, it is necessary to know the socio-economic profile of the individual. The measurement of social status is of basic importance since one's position in the social hierarchy is correlated with economic and political attitudes, emotional stability, verbal behaviour and many other phenomena (Young, 1994). For collecting relevant information on various background factors, the investigator prepared a schedule which provides data regarding subject's age, birth order, type and size of the family, area of residence, economic status, educational and occupational level of the parents.

In order to find out the correlation of Socio-Economic Status (SES) of the individual with his/her personality traits, the facts collected were quantified using the norms given by Rao (1977), (Appendix III). After assigning the numerical scoring weights as prescribed for the items concerned, the total score was obtained by simple addition of all the scores. The total score was then converted into sten score from 1 to 9 which denotes the disadvantaged to the privileged respectively.

C. Collection of data

Initially the investigator approached the NCC Commanding Officer, explained the nature and purpose of the study and sought permission to conduct the tests for the NCC cadets during the camp. Associate NCC Officers of various institutions and trained Army Medical Personnel provided necessary help in the conduct of the study for the NCC and non NCC students.

The investigator gave a short orientation of the study to the selected students and personnel involved, prior to the commencement of the study. The tests were administered in the camp - after the training time and in the colleges after the college hours or on holidays. A separate room was taken in the camp where these tests were administered according to schedule. In order to administer the tests effectively, a batch of 20 to 30 students were given the schedule pertaining to background information, Self Analysis of Skills, Eysenck's Personality Inventory, Human Values and Adjustment Inventory. Then the various aspects of physical and physiological dimensions were measured and recorded. The performance tests such as Levels of Aspiration and Standard Progressive Matrices were given at the end to a small group of 10 to 15 students for effective management.

The testing time for an individual averaged about three hours. To ensure objectivity and uniformity in the investigation, the entire testing was done by the investigator and two other NCC personnel (Permanent Instructional Staff - Subedhar Cadre), who were oriented about the study.

After the testing, the responses of the sample were scored according to the instructions and norms given in the test manual or scoring procedure evolved by the investigator (Appendix IV).

D. Analysis and statistical procedure

The following statistical procedures were adopted for the analysis of data.

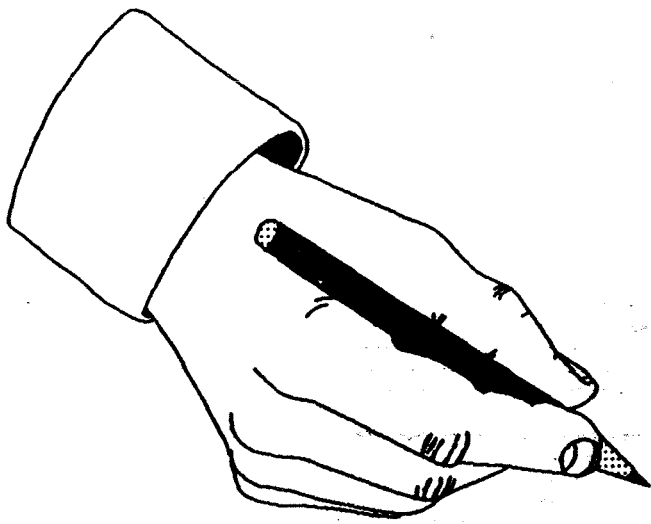
1. The raw scores of height, weight, heart rate, respiratory rate and systolic and diastolic blood pressure for the selected students were tabulated separately in the form of frequency table. Arithmetic mean, standard deviation, confidence interval and 't' values were calculated for these scores.
2. Scores on all the skills, intellectual capacity, adjustment pattern related to home, health and education, arithmetic mean, standard deviation, coefficient of variance and 't' test were calculated.

3. Intelligence Quotient (IQ) percentiles were worked out for the selected students based on the obtained raw scores as per the norms given by Raven et al., (1992).
4. Multiple regression analysis was used to find out the relationship between the traits of personality and the percentage of contribution between them. Formulae are given in Appendix V, (Rangaswamy, 1995).
5. The association of socio-economic status and order of birth of the selected students with various traits of personality was studied by calculating the mean scores.

E. Hypotheses

The following hypotheses were set up for testing:

1. There is difference in the personality traits - physique, physiological, skills, personality type, intellectual capacity, adjustment pattern, human values and levels of aspiration of the selected students in relation to sex.
2. The personality traits of NCC cadets differ from the non NCC students' traits.
3. Socio-economic status and birth order are related with the personality traits of the selected students.



REPLY AND RETURN

IV. RESULTS AND DISCUSSION

The results of the study on 'National Cadet Corps as a Means of Developing Personality Traits Among Students of Higher Education - An Analytical Study' are discussed under the following heads:

- A. Comparison of personality traits of the selected NCC and non NCC students
- B. Causal relationship between personality traits
- C. Personality traits in relation to socio-economic status (SES) and birth order.

A. Comparison of personality traits of the selected NCC and non NCC students

1. Physique

Aspects of an individual's emotions, skills and aptitude are related directly or indirectly to the body structure. Feelings about body image underlie many social interactions. Changes in physical growth and development influence a person's emotions or behaviour (Dworetzky, 1990). Hence height and weight of the selected students were recorded and compared with the ICMR standards.

a. Height

i. Comparison of the mean height of the selected groups with the ICMR standards

The mean, standard deviation (SD) and 't' value calculated based on the height of the selected students are presented in Table IV.

TABLE IV
MEAN HEIGHT OF THE SELECTED GROUPS IN COMPARISON WITH THE
ICMR STANDARDS

Parameter	Sex	ICMR standards	All N : 400 (398 df)	NCC N : 200	Non NCC N : 200
Mean	Boys	163 (cms)	169.97	169.89	170.05
SD			7.45	6.68	8.16
't' value			18.7056**	14.5724**	12.2143**
Mean	Girls	151 (cms)	154.98	158.98	150.97
SD			8.64	7.27	8.05
't' value			9.1994**	15.5350**	-0.0527

** Significant at one per cent level;

All the boys of this study were taller than the ICMR standard by 6.97 cms irrespective of being in NCC or not. Of the two groups, the non NCC boys were taller than the ICMR norm by 7.05 cms and the difference between the selected NCC boys' mean height and the ICMR norm was 6.89 cms. The mean height of all the girls was higher than the ICMR norm by 3.98 cms. NCC girls mean height was higher by 7.98 cms. The 't' value clearly depicts, the difference between the means of ICMR standard and NCC boys, NCC girls and non NCC boys are highly significant at one per cent level.

ii. Comparison of height : sexwise

Class interval, frequency, percentage, mean, SD, 't' value and confidence interval for the height of the selected students are presented in Table V.

TABLE V

COMPARISON OF HEIGHT : SEXWISE

Number NCC : 200
Non NCC : 200

Group	Class interval (cms)	Frequency		Percentage		Mean		Standard deviation		't' value	Confidence interval		
		NCC	Non NCC	NCC	Non NCC	NCC	Non NCC	NCC	Non NCC		NCC	Non NCC	
Boys	140 < 150	0	4	0.00	2.00								
	150 < 160	12	14	6.00	7.00								
	160 < 170	84	77	42.00	38.50								
	170 < 180	88	80	44.00	40.00								
	180 < 190	16	25	8.00	12.50								
Total	200	200	100	100	169.89	170.05	6.68	8.16	-0.2146	176.57	178.02	153.21	161.88
Girls	130 < 140	0	18	0.00	9.00								
	140 < 150	5	55	2.50	27.50								
	150 < 160	105	89	52.50	44.50								
	160 < 170	71	38	35.50	19.00								
	170 < 180	12	0	6.00	0.00								
180 < 190	7	0	3.50	0.00									
Total	200	200	100.00	100.00	158.98	150.97	7.27	8.05	10.4505**	166.25	159.02	151.71	142.92

** - Significant at one per cent level

The height of the NCC boys and their non NCC counterparts ranged from 140 to 190 cms. The non NCC boys' mean height was higher than that of the NCC boys. Though there was difference in the mean height, statistically the difference was not significant. The fact that there was no difference among the boys may be due to the preferential treatment for boys in the families.

Analysis reveals that the height of NCC girls ranged from 140 to 190 cms while for non NCC girls height ranged from 130 to 170 cms. NCC girls were taller than the non NCC girls by 8.01 cms, the difference being highly significant at one per cent level. It is interesting to note that according to Chandrasekhar's study (1992) the female adolescent athletes' mean height was 155.2 cms which is lesser than the mean height (158.98 cms) of NCC girls in this study, but higher than the height of non NCC girls (150.97 cms).

b. Weight

Physical activity is extremely beneficial in weight management since it helps to regulate appetite and increase the basal metabolic rate and hence weight is considered as a contributing factor for personality trait.

i. Mean weight of the selected groups in comparison with the ICMR standards

Table VI enlists the mean weight of the selected sample as compared to the ICMR standards.

TABLE VI
MEAN WEIGHT OF THE SELECTED GROUPS IN COMPARISON WITH THE ICMR STANDARDS

Parameter	Sex	ICMR standard	All N : 400 (398 df)	NCC N : 200	Non NCC N : 200
Mean	Boys	60 (kg)	57.36	57.05	57.67
SD			6.49	6.24	6.72
't' value			-8.1380**	-6.6811**	-4.9003**
Mean	Girls	50 (kg)	50.24	50.90	49.59
SD			4.53	4.78	4.19
't' value			1.0704	2.6677**	-1.4017

** Significant at one per cent level

The mean weight of all the boys of this study was lower than the ICMR norm by 2.64 kg, while for the girls it was higher (0.24 kg).

As for individual groups, the non NCC boys' and NCC boys' mean weight was lesser by 2.33 kg and 2.95 kg respectively. While, the mean weight of the NCC girls was higher by 0.90 kg than the ICMR norm, for the non NCC girls

it was lesser by 0.41 kg. The difference between the mean weight of the selected NCC boys, NCC girls, non NCC boys and the ICMR standard was highly significant at one per cent level.

Though the NCC activities like drill, posture training, self defence and trekking meant for physical training increase muscle growth and corresponding increase in strength, the mean weight of all the boys was lower than the ICMR norm.

ii. Comparison of weight : sexwise

Table VII presents the weight of the selected boys and girls with statistical appraisal.

TABLE VII
COMPARISON OF WEIGHT : SEXWISE

Group	Class interval (kg)	Frequency		Percentage		Mean		Standard deviation		't' value		Confidence interval	
		NCC	Non-NCC	NCC	Non-NCC	NCC	Non-NCC	NCC	Non-NCC	NCC	Non-NCC	NCC	Non-NCC
Boys	40 < 50	32	25	16.00	12.50								
	50 < 60	105	108	52.50	54.00								
	60 < 70	54	58	27.00	29.00								
	70 < 80	7	9	3.50	4.50								
	80 < 90	2	0	1.00	0.00								
Total	200	200	100	100	57.05	57.67	6.24	6.72	0.9555	63.29	64.39		
Girls	30 < 40	17	42	8.50	21.00								
	40 < 50	126	112	63.00	56.00								
	50 < 60	47	43	23.50	21.50								
	60 < 70	7	3	3.50	1.50								
	70 < 80	3	0	1.50	0.00								
Total	200	200	100	100	50.90	49.59	4.77	4.19	2.9297**	55.67	53.78	46.13	54.40

** - Significant at one per cent level

The difference between the mean weight of the NCC and non NCC boys was only 0.62 kg, the 't' value being insignificant. It is evident that the NCC girls' mean weight was higher by 1.31 kg than the non NCC girls and the difference was highly significant.

2. Physiological aspects

Physical activity improves the functional response of the various physiological systems, with the most dramatic changes taking place in the neuromuscular, skeletal, cardiovascular and pulmonary systems, as well as in the oxygen transport mechanism. Physical activity which is one of the components of the NCC programme might lead to improvements in physiological functions. Hence, heart rate, respiratory rate and blood pressure of the selected sample were recorded and compared with the standard values group-wise.

i. Selected physiological observations of the selected groups

The results of the selected physiological tests along with the standard values and statistical appraisals are depicted in Table VIII.

TABLE VIII
 SELECTED PHYSIOLOGICAL OBSERVATIONS OF THE SELECTED GROUPS

Physiological observations	Standard value	Boys			Girls		
		NCC	Non NCC	NCC	Non NCC	NCC	Non NCC
Heart rate	75	75.86	75.37	75.44	75.23		
SD		6.11	5.74	4.99	7.18		
't' value		3.9904**	0.9115	1.2318	0.4431		
Respiratory rate	20	19.79	19.79	20.26	19.28		
SD		1.62	2.43	2.16	1.91		
't' value		-1.8814	-1.2547	1.7041	-5.3759**		
Systolic Blood pressure	120	118.02	118.50	112.64	108.09		
SD		7.68	3.79	18.23	11.59**		
't' value		-3.6441**	-5.6222*	-12.6569**	-14.54		
Diastolic Blood pressure	80	79.85	79.07	77.91	75.77		
SD		3.40	7.82	5.32	8.48		
't' value		-0.6246	-1.6811	-5.5587**	-7.0556**		

** - Significant at one per cent level

* - Significant at five per cent level

Number NCC : 200
 Non-NCC : 200

Heart rate

The mean heart rate for the sample was slightly higher (75.23 to 75.86) than the standard value of 75 per minute. The 't' value pictures that the difference between the value of NCC boys and standard value was highly significant at one per cent level. Though, there were differences between the mean value of the girls of both the groups and non NCC boys with the standard value, they were not statistically significant. The findings of this study fall in line with the study by Amirthaveni and Shobha (1995) in which heart rate reading of the selected athletes was 75.70.

Respiratory rate

It is evident from Table VIII that the mean respiratory rate of all the four groups was slightly different from the standard value of 20. While NCC girls' mean respiratory rate was higher by 0.26, the other three groups' mean rates were lower than the standard value. The significant difference could be observed between the standard norm and the non NCC girls' respiratory rate. The difference in respiratory rate for the other groups was not statistically significant.

Blood pressure

The mean systolic and diastolic blood pressure recorded for the NCC and non NCC students was lower than the normal value 120/80 mm Hg. Of all the four groups, NCC and non NCC

boys' values were higher when compared to girls of both groups. Mean systolic and diastolic pressure of NCC girls was more than that of non NCC girls. The difference between the normal systolic rate and those of the boys and girls of NCC and non NCC is significant. The mean diastolic reading of NCC and non NCC boys did not reveal any significant difference. Similar results were observed with male and female athletes by Chandrasekhar (1992).

ii. Selected physiological observations : sexwise

Calculated values of heart rate, respiratory rate and blood pressure of the selected students sexwise are shown in Table IX.

TABLE IX
SELECTED PHYSIOLOGICAL OBSERVATIONS : SEXWISE

				Number NCC : 200 Non NCC : 200		
Physiological observations	Groups	Mean	SD	't' value	Confidence interval	
Heart rate	NCC boys	75.86	6.11	3.3603**	83.50	71.36
	Non NCC boys	75.37	5.74		81.11	69.63
	NCC girls	75.44	4.99	0.3395	80.43	70.45
	Non NCC girls	75.23	7.18		88.41	68.05
Respiratory rate	NCC boys	19.79	1.62	0.0000	21.41	18.17
	Non NCC boys	19.79	2.43		22.22	18.17
	NCC girls	20.26	2.16	4.8371**	22.42	18.10
	Non NCC girls	19.28	1.91		21.19	17.37
Systolic Blood pressure	NCC boys	118.02	7.68	0.7843	125.70	110.34
	Non NCC boys	118.50	3.79		122.29	114.71
	NCC girls	112.64	8.23	4.5273**	120.87	104.41
	Non NCC girls	108.09	11.59		119.68	96.50
Diastolic Blood pressure	NCC boys	79.85	3.40	1.2933	82.25	76.45
	Non NCC boys	79.07	7.82		86.89	71.25
	NCC girls	77.91	5.32	3.0240**	83.23	72.59
	Non NCC girls	75.77	8.48		84.25	67.29

** Significant at one per cent level

The NCC boys' mean heart rate was slightly higher than that of the non NCC boys. The difference was statistically significant at one per cent level. It was interesting to

observe the same mean value (19.79) for respiratory rate for both the NCC and non NCC boys. The calculated mean value of systolic and diastolic pressure of the NCC and non NCC boys differed from each other though the difference was not significant. While mean systolic pressure was higher for the non NCC boys, the mean diastolic pressure was higher for the NCC boys.

For the four physiological observations considered in this study, the mean values were higher for NCC girls than the non NCC girls. As for the heart rate, the difference between the NCC and non NCC girls was not significant. The difference between the recorded values of NCC and non NCC girls for respiratory rate, systolic and diastolic blood pressure was statistically significant at one per cent level.

3. Skills

To be responsible for directing and controlling one's own life is no small matter. Personal effectiveness requires certain skills and competencies such as the ability to know oneself, plan ahead, control one's emotions and meet one's problems intelligently. Raj (1995) rightly observed that every individual has to raise the level of skill in all aspects of life. It implies both competence and hard work. Eight skills namely communication, observation, problem

solving, social relationship, leadership, morale building, emotional effectiveness and facing emotional situations were studied. The selected NCC and non NCC students analysed their skills themselves. The calculated values are tabulated groupwise for comparison.

i. Communication skill

To communicate effectively in various situations, one needs a variety of skills. Effective interpersonal communication means information is passed and relationships are built (Tuffs and Moss, 1991 and Ludlow and Panton, 1995). These skills are aimed at clarifying issues and feelings of both parties, in a way that is both assertive and non-defensive. There were five statements related to communication skill. The selected students were informed to rate themselves using a three point scale. The statistically treated scores are presented in Table X groupwise.

TABLE X
COMMUNICATION SKILL

Total score : 15				
Groups	Mean	SD	't' value	CV (%)
(N : 200)				
NCC boys	11.03	2.76	-2.2486**	25.10
NCC girls	11.62	2.51		21.65
Non NCC boys	9.79	2.82	-2.9199**	28.86
Non NCC girls	10.56	2.39		22.68
NCC boys	11.03	2.76	4.4135**	25.10
Non NCC boys	9.79	2.82		28.86
NCC girls	11.62	2.51	4.3350**	21.65
Non NCC girls	10.56	2.39		22.68
(N : 400)				
NCC cadets	11.32	2.65	6.1325**	23.48
Non NCC students	10.17	2.64		25.98

** Significant at one per cent level.

Of all the four groups (NCC boys, NCC girls, non NCC boys and non NCC girls), NCC girls' mean score for communication skill was higher. The next highest score was obtained by the NCC boys, followed by the non NCC girls and the lowest mean was scored by the non NCC boys. The 't' value indicated that there was a significant difference (one per cent level) in the communication scores of the NCC boys and girls. The trend was similar with the non NCC students too.

The NCC cadets and in particular the NCC girls analysis revealed that they listened alertly, drew people out,

understood and told others what they thought explicitly. Learning signals and communication, oral tests and execution of word of commands in NCC had contributed to acquiring the appropriate communication skills such as listening, clarifying, responding and expressing.

ii. Observation skill

In order to be aware of others' behaviour and feelings observation skill is essential. The analysis of scores in this aspect from the selected subjects are projected in Table XI.

TABLE XI
OBSERVATION SKILL

Total score : 12				
Groups	Mean	SD	't' value	CV (%)
(N : 200)				
NCC boys	9.49	2.15	-2.4273**	22.64
NCC girls	10.00	2.05		20.50
Non NCC boys	8.46	2.45	-2.8342**	29.06
Non NCC girls	9.11	2.07		22.79
NCC boys	9.49	2.15	4.4589**	22.64
Non NCC boys	8.46	2.45		29.06
NCC girls	10.00	2.05	4.3374**	20.50
Non NCC girls	9.11	2.07		22.79
(N : 400)				
NCC cadets	9.75	2.11	6.1684**	21.18
Non NCC students	8.78	2.29		25.98

** Significant at one per cent level.

The mean score of the subjects ranged from 8.46 to 10. Out of the total score 12, NCC girls in particular, topped the scoring with 10 as mean, while the NCC boys' mean score was 9.49, followed by the non NCC girls' with a mean score 9.11. Difference in mean score between the groups was highly significant.

iii. Problem solving skill

If an individual understands his/her own abilities to solve the problems, the stress situations can be faced effectively. The scores obtained for the problem solving skill of the NCC and non NCC students are figured in Table XII.

TABLE XII
PROBLEM SOLVING SKILL

Total score : 18				
Groups	Mean	SD	't' value	CV (%)
(N : 200)				
NCC boys	13.52	3.59	0.1711	26.59
NCC girls	13.47	2.78		20.65
Non NCC boys	11.28	3.65	0.1175	32.35
Non NCC girls	11.24	3.14		27.93
NCC boys	13.52	3.59	6.1813**	26.59
Non NCC boys	11.28	3.65		32.35
NCC girls	13.47	2.78	7.5000**	20.65
Non NCC girls	11.24	3.14		27.93
(N : 400)				
NCC cadets	13.49	3.21	9.5456**	23.79
Non NCC students	11.26	3.40		30.19

** Significant at one per cent level

Out of a total score of 18 for problem solving ability, the highest mean score obtained in this study was 13.52 by the NCC boys followed by the NCC girls (13.47). In contrast, the non NCC boys and girls scored lower than their counterparts. The difference between the mean scores of the boys and girls of non NCC was only 0.04. Hence, there was no significant difference in the problem solving scores sexwise among the NCC and non NCC groups. The difference in the mean score between the NCC cadets and non NCC students was higher as revealed in the 't' value being significant at one per cent level.

The NCC cadets of this study were better in stating problems, offering ideas and opinions, evaluating ideas critically, summarising discussions and clarifying issues than the non NCC students.

iv. Social relationship skill

Students, being in the adolescence stage, are tremendously sensitive to social stimuli, no other problem seems to them as serious as the establishment of themselves in their own society. They react faster to prestige within their own group than to most forms of adult approval. The scores related to social relationship skill are figured in Table XIII.

TABLE XIII
SOCIAL RELATIONSHIP SKILL

Total score : 24				
Groups	Mean	SD	't' value	CV (%)
(N : 200)				
NCC boys	17.64	3.78	-3.4438**	21.44
NCC girls	18.82	3.02		16.09
Non NCC boys	16.59	4.21	1.8878	25.43
Non NCC girls	15.80	4.09		25.92
NCC boys	17.64	3.78	2.6329**	21.44
Non NCC boys	16.59	4.21		25.43
NCC girls	18.82	3.02	8.3839**	16.09
Non NCC girls	15.80	4.09		25.92
(N : 400)				
NCC cadets	18.23	3.47	7.5075**	19.04
Non NCC students	16.19	4.17		25.75

** Significant at one per cent level.

The NCC cadets' mean score in social relationship domain was higher than the non NCC students and the difference was significant statistically. The NCC girls' social relationship score was higher by 1.18 than that of the NCC boys which depicts that NCC girls' social relationship were superior and statistically significant at one per cent level. The non NCC boys' scores were slightly higher than that of the non NCC girls, though the difference was not statistically significant. The NCC boys and girls seem to have acquired better skills related to social relationship as per their analysis. Priya's (1986) findings reveal that NCC broadens students' perspective on

social relationship and enhances their participation, which is in line with the results of this study.

v. Leadership skill

Leadership is a complex motivational/social phenomenon. It is a function of the personality qualities as perceived by an individual and the members of one's group. Some may possess this personality trait while others do not, or at least some achieve in high degree and others scarcely at all. Self analysis of this skill by the selected NCC and non NCC students is summarised in Table XIV.

TABLE XIV
LEADERSHIP SKILL

Total score : 33				
Groups	Mean	SD	't' value	CV (%)
(N : 200)				
NCC boys	23.95	5.50	-0.0688	22.97
NCC girls	23.99	4.63		19.33
Non NCC boys	19.20	5.34	2.0549*	27.83
Non NCC girls	17.99	6.38		35.50
NCC boys	23.95	5.50	8.7573**	22.97
Non NCC boys	19.20	5.34		27.83
NCC girls	23.99	4.63	10.7400**	19.33
Non NCC girls	17.99	6.38		35.50
(N : 400)				
NCC cadets	23.97	5.08	13.7809**	19.04
Non NCC students	18.60	5.91		31.79
** Significant at one per cent level. * Significant at five per cent level				

The highest mean score obtained by the NCC girls was 23.99. The difference in the mean score of the NCC boys and girls was meagre and insignificant. The mean score of the NCC and non NCC groups irrespective of their sex was 5.37, which is highly significant. This affirms that NCC cadets' leadership skill was superior to that of the non NCC students. The NCC cadets were better than their counterparts in introducing, summarising and bridging an activity, possessing initiative, adaptability, insight, self confidence, facilitating co-operativeness and ability to solve the problems.

When the means were compared between the boys of the two groups as well as girls, NCC girls and NCC boys surpassed significantly than their non NCC counterparts. Among the boys and girls of the non NCC group, boys fared better than the girls, the difference being significant at five per cent level.

vi. Morale building skill

Skills such as helping people, showing interests, resolving tension, upholding individual's pressure and expressing appreciation were parts of this skill. The selected students' self rating on their morale capacities is shown in Table XV.

TABLE XV
MORALE BUILDING SKILL

Total score : 18				
Groups	Mean	SD	't' value	CV (%)
(N : 200)				
NCC boys	13.76	3.25	-3.1119**	23.63
NCC girls	14.67	2.51		17.15
Non NCC boys	10.88	3.20	-6.5240**	29.42
Non NCC girls	13.08	3.53		27.01
NCC boys	13.76	3.25	8.9228**	23.63
Non NCC boys	10.88	3.20		29.42
NCC girls	14.67	2.51	5.1665**	17.15
Non NCC girls	13.08	3.53		27.01
(N : 400)				
NCC cadets	14.21	2.93	9.6978**	20.68
Non NCC students	11.98	3.54		29.57

** - Significant at one per cent level.

As for the morale building skill, the NCC cadets fared better than the non NCC students. Genderwise analysis revealed that the girls of both NCC and non NCC groups surpassed the boys, remarkably as proved by statistical appraisal at one per cent level. Groupwise comparison reflected that the NCC boys and girls scored higher than the non NCC boys and girls. These results clearly indicate that the NCC cadets in general, NCC girls in particular, were better in helping others, showing interests, resolving tension, expressing appreciation and upholding individual's demands.

vii. Emotional effectiveness skill

Emotions are normal and help to adjust to situations. Feelings and moods are merely differing degrees of emotions. Control of basic feelings is accomplished through conscious effort. If the controlling measures are rightly applied, personal effectiveness will be improved, which in turn adds on to the personality. Table XVI projects the emotional effectiveness skill of the selected groups.

TABLE XVI
EMOTIONAL EFFECTIVENESS SKILL

Total Score : 15				
Groups	Mean	SD	't' value	CV (%)
(N : 200)				
NCC boys	11.47	2.79	0.0000	24.40
NCC girls	11.47	2.29		19.98
Non NCC boys	9.32	2.67	-3.0623**	28.66
Non NCC girls	10.19	3.00		29.46
NCC boys	11.47	2.79	7.8763**	24.40
Non NCC boys	9.32	2.67		28.66
NCC girls	11.47	2.29	4.8116**	19.98
Non NCC girls	10.19	3.00		29.46
(N : 400)				
NCC cadets	11.47	2.55	8.9505**	22.27
Non NCC students	9.75	2.87		29.43

** Significant at one per cent level

Similar to other skills contributing to personality development discussed earlier, the emotional effectiveness skill among the NCC cadets was better than the other group. No gender difference was found in the NCC group. Girl students had higher mean scores than the boys of the non NCC group. It may be contended that the NCC group irrespective of sex were more effective than the non NCC group in dealing with emotions such as control of emotions and expressing warm feelings towards others. By attending intercollegiate/inter district/interstate camps, the NCC cadets, had the opportunity to develop the emotional effectiveness skill.

viii. Facing emotional situations

Conflict management or resolution can involve people in a high level of tension and stress. Facing conflict, anger, closeness, affection, disappointment and ability to withstand tension were the areas rated in this skill by the selected sample. The calculated mean score, standard deviation, 't' value and coefficient of variance related to this aspect are given in Table XVII.

TABLE XVII
FACING EMOTIONAL SITUATIONS

Total score : 15				
Groups	Mean	SD	't' value	CV (%)
(N : 200)				
NCC boys	11.46	2.44	-0.4973	21.37
NCC girls	11.58	2.57		23.88
Non NCC boys	9.65	2.88	-3.2476**	29.93
Non NCC girls	10.55	2.61		24.79
NCC boys	11.46	2.44	6.7395**	21.37
Non NCC boys	9.65	2.88		29.93
NCC girls	11.58	2.57	3.9870**	23.88
Non NCC girls	10.55	2.61		24.79
(N : 400)				
NCC cadets	11.52	2.51	7.5682**	21.79
Non NCC students	10.10	2.78		27.60

** Significant at one per cent level

The data revealed that the NCC group scored higher than their counterparts and the difference between the groups was significant at one per cent level. Similar significant difference existed between the boys and girls of non NCC group, the boys of NCC and non NCC and the girls of NCC and non NCC group. However, there was no significant difference between the mean scores of the NCC boys and NCC girls.

ix. Overall skills

The potential for youth to make an impact on society has vastly increased. The requirements for independent

decision making, separate identity and individual responsibility have shifted over the last few generations and may continue to change in accordance with the family and society. Each individual has to acquire a lot of skills, and be able to analyse those skills so as to apply them at an appropriate time and situation (Haviland and Scarborough, 1981).

The total raw scores of the self analysis of skills of the selected students were treated statistically and are presented in Table XVIII.

TABLE XVIII
OVERALL SKILLS

Total score : 150				
Groups	Mean	SD	't' value	CV (%)
(N : 200)				
NCC boys	112.53	17.85	-2.0733*	15.57
NCC girls	115.51	9.71		8.41
Non NCC boys	94.89	16.72	-2.3062*	17.62
Non NCC girls	98.39	13.40		13.63
NCC boys	112.53	17.85	10.1983**	15.57
Non NCC boys	94.89	16.72		17.62
NCC girls	115.51	9.71	14.6277**	8.41
Non NCC girls	98.39	13.40		13.63
(N : 400)				
NCC cadets	114.02	14.43	16.5653**	12.65
Non NCC students	96.64	15.23		15.76

** Significant at one per cent level.

* Significant at five per cent level.

The results related to overall skills revealed a highly significant difference between the mean scores of the NCC cadets and non NCC students leading to the conclusion that the selected NCC cadets' skills related to communication, observation, problem solving, social relationship, leadership, morale building, emotional effectiveness and facing emotional situations were superior as compared to the skills of their counterparts who had not been involved in NCC activities. The gender difference among the selected NCC cadets and non NCC students revealed that the girls surpassed boys in overall score. This difference was statistically significant at five per cent level.

Between the boys of both the groups the NCC boys scored better. Among the girls of both the groups, NCC girls' score for overall skill was higher and the difference was significant at one per cent level (Figure 2,2a). Although by the time the students are in college and the basic personality is some what fixed, this study warrants the fact that they can continue to consciously improve their self - direction by analysing the strengths and weaknesses of their skills and by their participation in extracurricular/co-curricular activities.

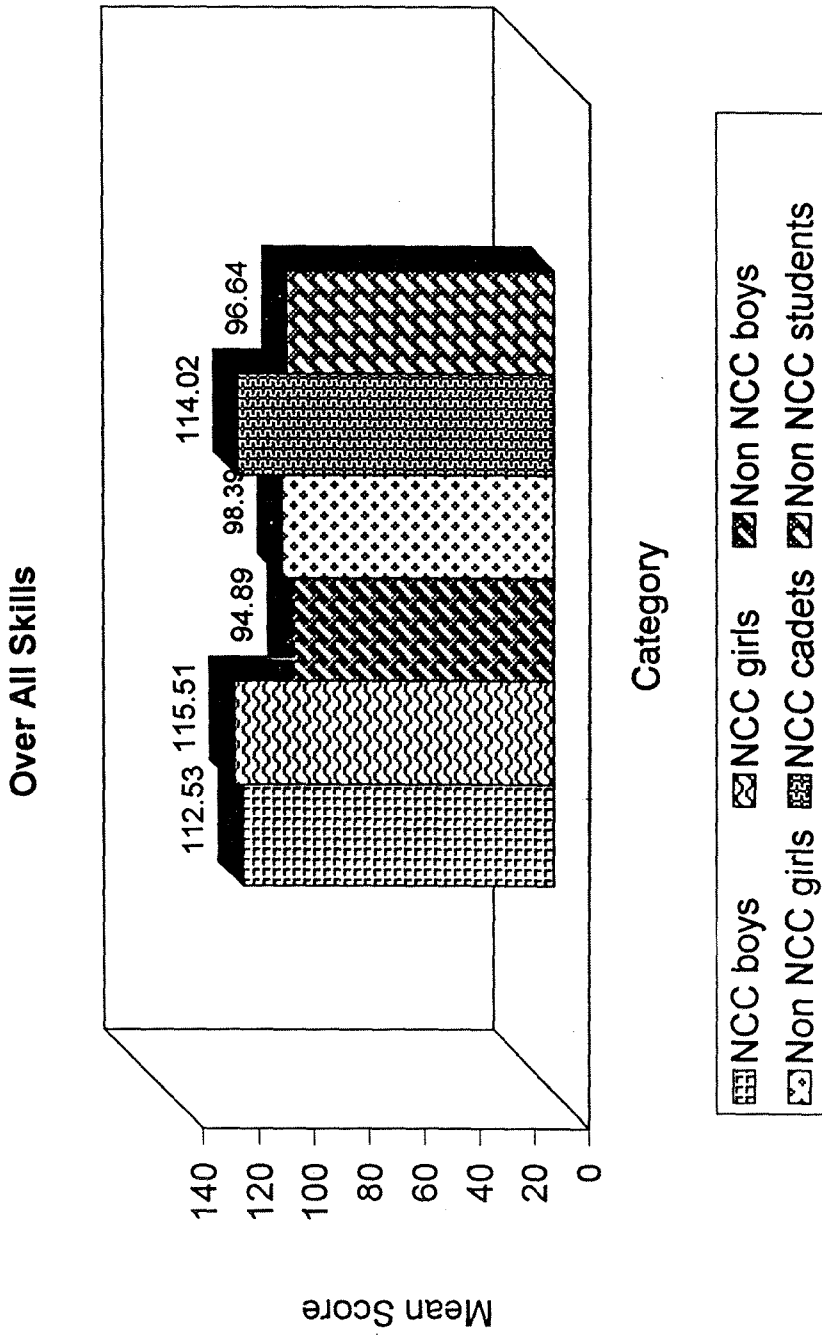


FIGURE. 2

Mean scores of the selected students: skillwise

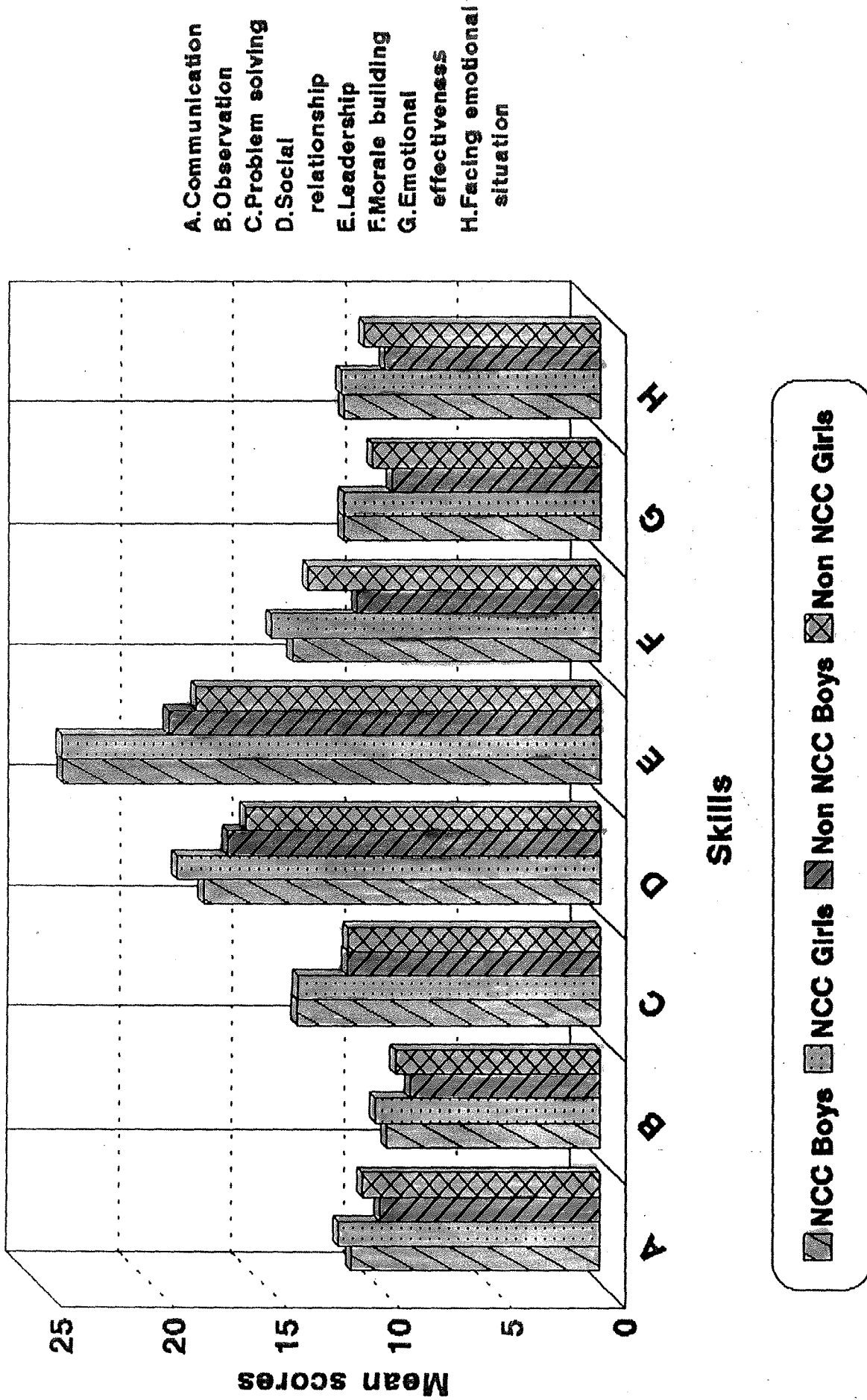


FIGURE. 2a

4. Personality type

An individual's personality is an account of his/her appearance, abilities, motives, emotional attitudes, mental integration, values and other distinctive traits. Each person develops his/her personality by the slow process of day to day learning in various situations and roles. Eysenck's personality inventory was used to gather data from the selected students, on their personality characteristics, later categorised them into two main personality groups namely, Extraversion and Neuroticism. While, Neuroticism includes the emotional stability aspect, the extraversion depicts the degree of social contact in the individual. Table XIX categorises and places the selected groups in terms of Eysenck's personality types.

TABLE XIX
COMPARISON OF THE PERSONALITY : PHENOMENONWISE

Personality type	Groups	Phenomenon	Groups	Number
Extraversion (108)	NCC cadets:64 Non NCC :44 students	Extravert	(N : 200)	
			NCC boys	33
			NCC girls	26
			Non NCC boys	19
			Non NCC girls	15
			Total : 800	93
	Boys : 61 Girls : 47	Introvert	(N : 200)	
			NCC boys	3
			NCC girls	2
			Non NCC boys	6
Non NCC girls			4	
		Total : 800	15	
Neuroticism (123)	NCC cadets:65 Non NCC :58 students	Neurotic	(N : 200)	
			NCC boys	10
			NCC girls	6
			Non NCC boys	17
			Non NCC girls	12
			Total : 800	45
	Boys : 63 Girls : 60	Stable	(N : 200)	
			NCC boys	20
			NCC girls	29
			Non NCC boys	16
Non NCC girls			13	
		Total : 800	78	

The personality inventory identified 108 students belonging to extraversion type and 123 with neuroticism out of 800 selected students irrespective of their sex and participation in NCC (Figure 3). Totally 93 students were extraverts of whom 59 were NCC cadets and 34 were non NCC students. Sexwise, 33 NCC boys, 26 NCC girls, 19 non NCC boys and 15 non NCC girls were extraverts. As per the theory the identified students are to be more sociable, impulsive, co-operative, attentive to people, ready to be in groups and socially impressive.

Comparison of the Personality - Phenomenonwise

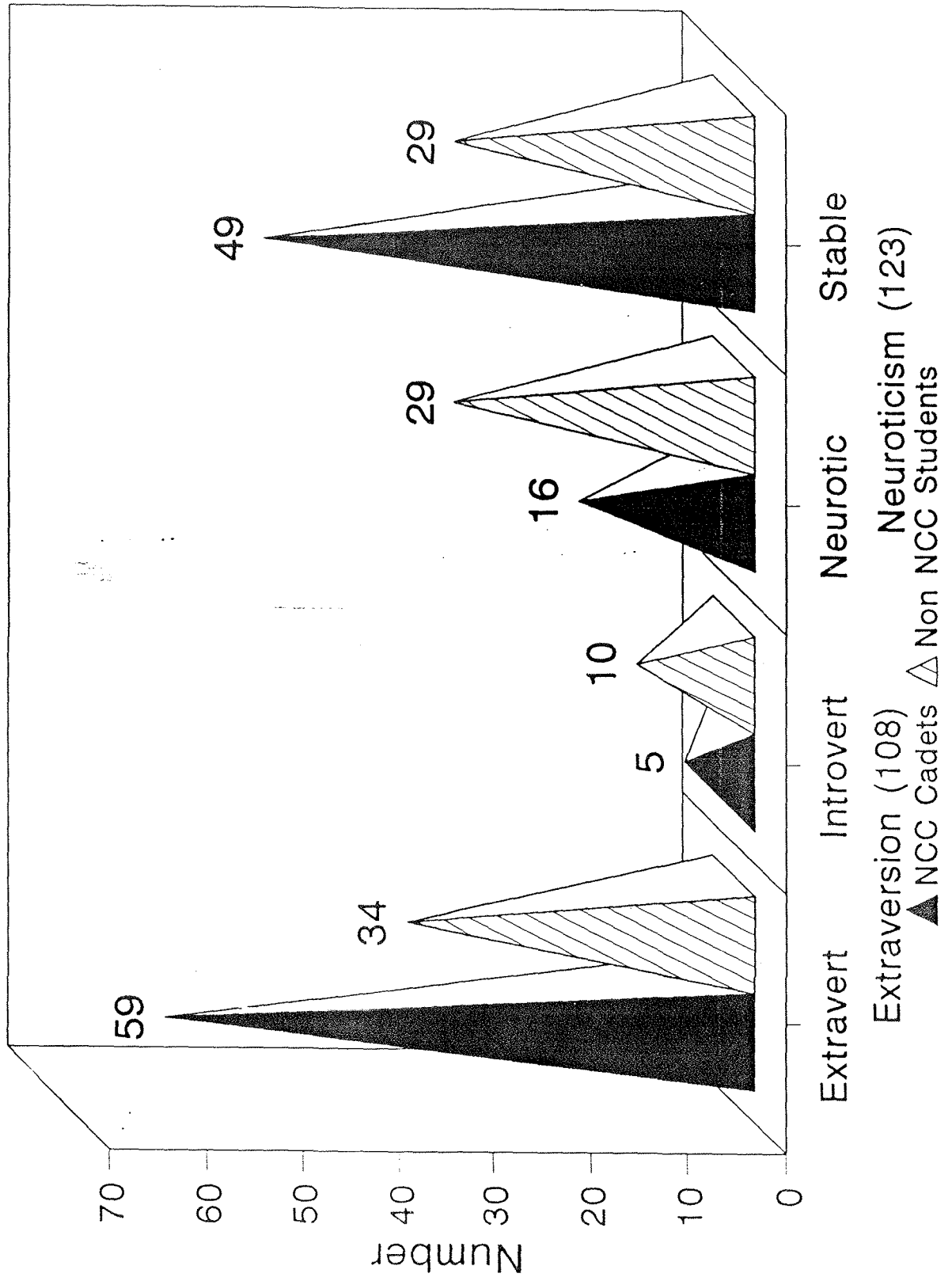


FIGURE 3

The introverts were fewer (15) in general when compared to extraverts (93). In the NCC and non NCC groups 5 and 10 were observed to be introverts respectively. These 15 students are characterised by a relative lack of sociability, persistence, high level of aspiration, accuracy, inner standards of conduct and a stress on conscience. Yadav and Shyam's (1992) research on 'stimulus exposure, sex and personality' revealed that the differences in mean scores for extraverts and introverts, neurotics and stables for both male and female were found to be non significant which is on par with the results of this study related to introvert, neurotic and stable type.

Table XIX clearly shows that the number of neurotics were less (45) than the stables (78) out of 800 students chosen. Among the NCC girls only six cases of neurotics and 29 stables were identified. Among the non NCC boys higher number of neurotics (17) were found. It is interesting to note that the number of neurotics was higher among the boys than the girls both in the NCC and non NCC groups. The results of this investigation contradicts the findings of Mohan and Purang (1969) in which lesser number of boys were neurotics.

5. Intellectual capacity

For Piaget, the adolescent is typically one who has entered the stage of formal operations and is developing, or

has developed, the cognitive skills and effective reasoning characteristics of that age. The qualitative development of cognitive structures is presumed complete. He/She has the mental ability to solve problems logically (Wadsworth, 1989).

In the present study the Standard Progressive Matrices were used to measure the general mental ability (g) as defined in Spearman's Theory of Cognitive Ability. This is the ability to forge new insights, perceive and identify relationships. Since perception is primarily a conceptual process, the essential features of this is general and includes largely non-verbal concepts which make it possible to think clearly (Raven et al., 1992).

The intellectual capacity of the selected NCC and non NCC students and percentile points from the actual scores of the selected students are presented in Table XX.

TABLE XX
INTELLECTUAL CAPACITY OF THE SELECTED NCC AND NON NCC
STUDENTS

Total score : 60				
Groups	Mean	SD	't' value	CV (%)
(N : 200)				
NCC boys	46.75	5.96	-3.0628**	12.74
NCC girls	48.54	5.73		11.81
Non NCC boys	42.80	7.69	0.3547	17.97
Non NCC girls	42.52	7.81		18.38
NCC boys	46.75	5.96	5.7435**	12.74
Non NCC boys	42.80	7.69		17.97
NCC girls	48.54	5.73	8.7781**	11.81
Non NCC girls	42.52	7.81		18.38
(N : 400)				
NCC cadets	47.64	5.91	10.2326**	12.40
Non NCC students	42.16	7.74		18.15

** Significant at one per cent level

It is apparent from the present investigation that the NCC cadets scored 47.64 as mean score out of 60, against 42.16 scored by their non NCC counterparts. The 't' value confirmed significant difference between the groups at one per cent level. The intellectual capacity of the selected NCC cadets surpassed the selected non NCC students. The training given in NCC necessitates the cadets to follow the instructions carefully, execute them perfectly, observe the situations thoroughly, solve the problems ably and to

respond to changes immediately might have enhanced the mental functioning of NCC cadets.

Among the NCC cadets, girls scored higher and the difference was statistically significant. There was no difference between the general intellectual capacity of the boys and girls of the non NCC group.

The most satisfactory method of interpreting the significance of a person's total score is to consider it in terms of the frequency with which a similar score is found to occur amongst a group of his/her own age. This method shows at once his/her intellectual capacity relative to other people of his/her own age. Viewed thus, the intellectual level of the selected NCC and non NCC students is presented in Table XXI.

TABLE XXI

INTELLECTUAL LEVEL OF THE SELECTED NCC AND NON NCC STUDENTS

Groups	Category	Intellectual level			
		Superior (95)	Above Average Percentile points (75-90)	Average (25-75)	Below Average (Below 25)
Groupwise	NCC N:400	37 (9)	120 (30)	219 (55)	24 (6)
	Non NCC N:400	2 (-)	91 (23)	184 (46)	123 (31)
Sexwise	Boys N:400	13 (3)	109 (27)	194 (49)	84 (21)
	Girls N:400	26 (7)	102 (25)	209 (52)	63 (16)
NCC group	Boys N:200	12 (6)	52 (26)	122 (61)	14 (7)
	Girls N:200	25 (12)	68 (34)	97 (49)	10 (5)
Non NCC group	Boys N:200	1 (1)	57 (28)	72 (36)	70 (35)
	Girls N:200	1 (1)	34 (17)	112 (56)	53 (26)

Percentage is given in parentheses

Percentile points were calculated based on the raw scores of the selected students. Comparative analysis in Table XXI reveals that intellectually superior students of this study belonged to the NCC group (9 per cent), in particular, NCC girl cadets (12 per cent). Nearly 31 per cent of the non NCC students were below 25 percentile of IQ,

Intellectual level of the selected NCC and Non NCC Students

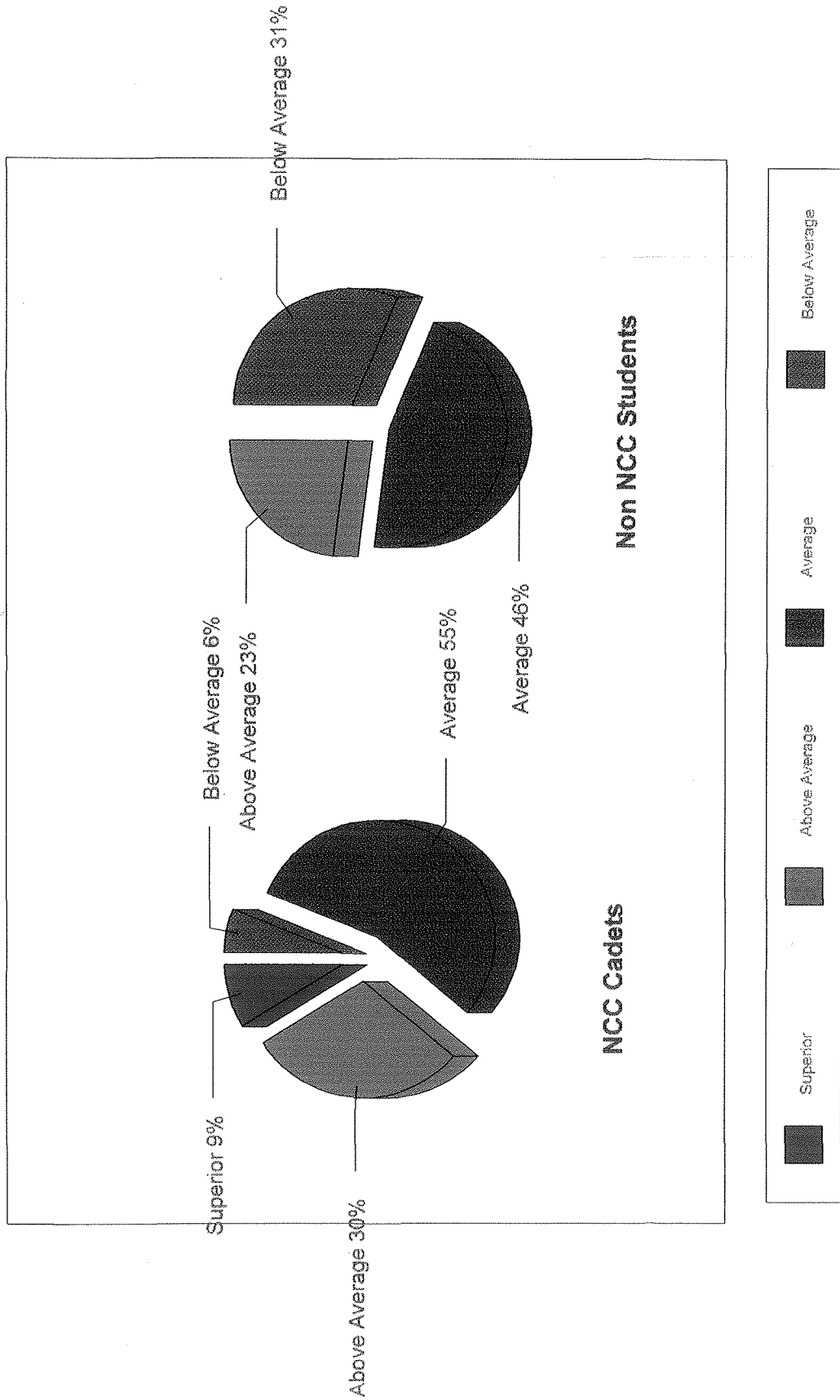


FIGURE. 4

6. Adjustment pattern

Broadly speaking adjustment refers to accommodation of an individual in order to fit certain demands of his/her environment. It is a continual process by which a person varies his/her behaviour to produce a more harmonious relationship between himself/herself and his/her environment. The adjustment Inventory for College Students was used to collect the data related to the adjustment pattern of home, health and in education.

i. Home adjustment

Table XXII shows the mean score, standard deviation and 't' ratios of the selected students in relation to home adjustment.

TABLE XXII

HOME ADJUSTMENT SCORES OF THE SELECTED NCC AND NON NCC
STUDENTS

Total score : 16				
Groups	Mean	SD	't' value	CV (%)
(N : 200)				
NCC boys	5.24	3.46	3.6031**	66.06
NCC girls	4.12	2.71		65.76
Non NCC boys	5.02	3.06	-0.5490	60.99
Non NCC girls	5.19	3.13		60.32
NCC boys	5.24	3.46	0.6732	66.06
Non NCC boys	5.02	3.06		60.99
NCC girls	4.12	2.71	-3.6545**	65.76
Non NCC girls	5.19	3.13		60.32
(N : 400)				
NCC cadets	4.68	3.15	-1.9236	67.41
Non NCC students	5.11	3.09		60.60

** Significant at one per cent level

A scrutiny of the data in Table XXII reveals that the mean score difference between NCC cadets and non NCC students was not significant, in the area of home adjustment. Probably the level of adjustment was similar.

The NCC girls scored lower in the home adjustment pattern. Since lower the score better the adjustment, the NCC girls were found relatively well adjusted in the home. They differed significantly at one per cent level when compared to NCC boys and non NCC girls. All the boys

selected had adopted similar adjustment patterns within the home. Gender difference prevailed only among the selected NCC cadets. This finding is contradictory to that of Ying and Liese's (1994) finding, in which no gender difference was found in relation to home adjustment.

ii. Health adjustment

The comparison of mean scores on health adjustment is depicted in Table XXIII.

TABLE XXIII
HEALTH ADJUSTMENT SCORES OF THE SELECTED NCC AND NON NCC STUDENTS

Total score : 16				
Groups	Mean	SD	't' value	CV (%)
(N : 200)				
NCC boys	4.19	3.30	2.3483*	78.14
NCC girls	3.51	2.42		68.86
Non NCC boys	4.23	2.99	-2.1618*	70.77
Non NCC girls	4.88	3.06		62.76
NCC boys	4.19	3.30	-0.1110	78.14
Non NCC boys	4.23	2.99		70.77
NCC girls	3.51	2.42	-4.9601**	68.86
Non NCC girls	4.88	3.06		62.76
(N : 400)				
NCC cadets	3.85	2.91	-3.3353**	75.54
Non NCC students	4.55	3.04		66.79

** Significant at one per cent level

* Significant at five per cent level

NCC cadets, NCC girls in particular, scored lower, implying that they were better adjusted to health related aspects as compared to the non NCC students, the difference being highly significant at one per cent level. It was heartening to note that non NCC boys (among the non NCC students) also had lower scores projecting positive health adjustment. The difference between the boys and girls of non NCC group was significant at five per cent level.

iii. Educational adjustment

The scores obtained on educational adjustment by the selected NCC and non NCC students statistically analysed are summarised in Table XXIV.

TABLE XXIV
EDUCATIONAL ADJUSTMENT SCORES OF THE SELECTED NCC AND NON
NCC STUDENTS

Total score : 19				
Groups	Mean	SD	't' value	CV (%)
(N : 200)				
NCC boys	6.54	4.09	3.2274**	62.59
NCC girls	5.30	3.58		67.54
Non NCC boys	4.98	3.11	-5.6479**	62.57
Non NCC girls	6.96	3.86		55.47
NCC boys	6.54	4.09	4.2917**	62.59
Non NCC boys	4.98	3.11		62.57
NCC girls	5.30	3.58	-4.4622**	67.54
Non NCC girls	6.96	3.86		55.47
(N : 400)				
NCC cadets	5.22	3.89	-0.1878	65.71
Non NCC students	5.97	3.64		61.00

** Significant at one per cent level

NCC cadets did not differ from the non NCC students in their educational adjustment. The average score of the NCC girl cadets and non NCC boys was lower than their counterparts indicating that the NCC girls and the non NCC boys had desirable educational adjustment.

Adjustment pattern of the sample (groupwise and sexwise) towards home, health and educational areas is shown in Figure 5.

Adjustment of the selected NCC and Non NCC Students

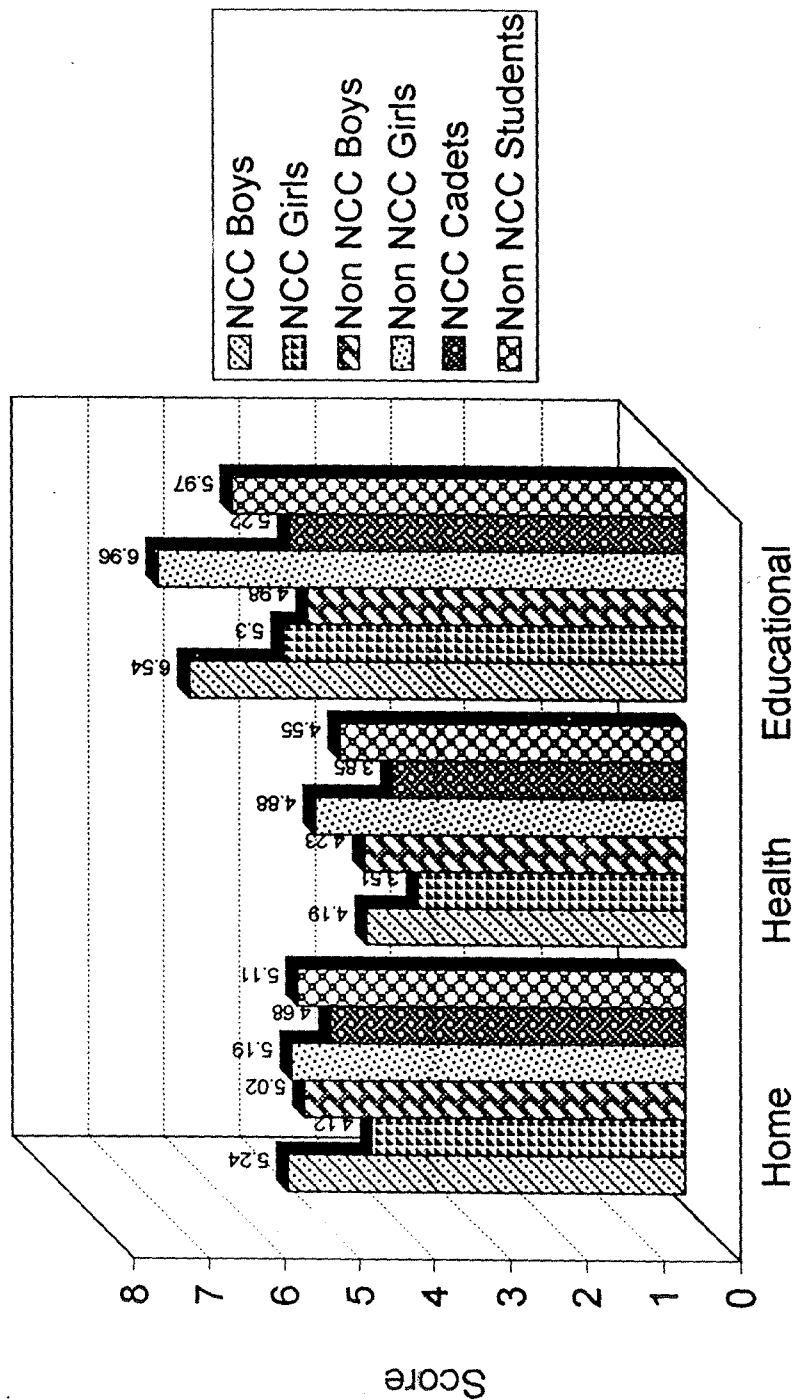


FIGURE. 5

7. Human values

Values play an important role in shaping individuals' behaviour in social context as they are a type of norm and also closely related to attitudes and motives.

Two sets of values known as terminal and instrumental were studied. The selected sample were asked to rate the value on priority basis.

i. Instrumental values

Table XXV illustrates 18 values termed as instrumental values. Composite ranking was calculated for each value groupwise, sexwise and for total sample.

TABLE XXV
 INSTRUMENTAL VALUES - COMPOSITE RANKING

Values	Composite ranking				
	NCC		Non NCC		Total sample (800)
	Girls (200)	Boys (200)	Girls (200)	Boys (200)	
Ambitious (hardworking, aspiring)	3	1	5	4	2
Broad minded (open-minded)	5	7	6	14	8
Capable (competent, effective)	14	16	13	18	16
Cheerful (light hearted, joyful)	12	12	11	8	10
Clean (Neat, tidy)	8	8	4	1	5
Courageous (standing up for your beliefs)	6	10	12	15	12
Forgiving (willing to pardon others)	11	14	7	11	11
Helpful (working for the welfare of the others)	1	3	1	7	1
Honest (sincere, truthful)	2	2	3	10	3
Imaginative (daring, creative)	16	13	16	6	14
Independent (self reliant, self sufficient)	13	6	9	5	9
Intellectual (intelligent, reflective)	17	18	15	13	15
Logical (consistent, rational)	18	17	17	16	18
Loving (affectionate, tender)	9	9	2	2	4
Obedient (dutiful, respectful)	4	4	10	12	7
Polite (courteous, well mannered)	15	15	18	17	17
Responsible (dependable, reliable)	10	11	14	9	13
Self-controlled (restrained, self-disciplined)	7	5	8	3	6

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Cheerful (light hearted, joyful)	12	12	11	8	10
Clean (Neat, tidy)	8	8	4	1	5
Courageous (standing up for your beliefs)	6	10	12	15	12
Forgiving (willing to pardon others)	11	14	7	11	11
Helpful (working for the welfare of the others)	1	3	1	7	1
Honest (sincere, truthful)	2	2	3	10	3
Imaginative (daring, creative)	16	13	16	6	14
Independent (self reliant, self sufficient)	13	6	9	5	9
Intellectual (intelligent, reflective)	17	18	15	13	15
Logical (consistent, rational)	18	17	17	16	18
Loving (affectionate, tender)	9	9	2	2	4
Obedient (dutiful, respectful)	4	4	10	12	7
Polite (courteous, well mannered)	15	15	18	17	17
Responsible (dependable, reliable)	10	11	14	9	13
Self-controlled (restrained, self-disciplined)	7	5	8	3	6

Among the values tested, helpfulness, honesty, ambition, obedience, broadmindedness and courage were the first six values prioritized by the NCC girls. The order of values ranked by the selected NCC boys were ambition, honesty, helpfulness, obedience, self-control and independence as the most important values. In the case of non NCC girls, helpfulness, love, honesty, cleanliness, ambition and broadmindedness were the first six values listed. Cleanliness, love, self-control, ambition, independence and imaginative were the most significant values as per the ranking by non NCC boys. Ambitious nature was ranked by all the students within the first six rank. Helpfulness and honesty, were the other two values considered important by the girls of both the groups and also the NCC boys.

The scrutiny of the data reveals that logic, intellect, imagination, politeness, capability and independence were ranked last in the descending order respectively by the NCC girls, While intellect, logic, capability, politeness, forgiving and imagination were given the least ranks by NCC boys as per their evaluation. Politeness, logic, imagination, intellect, responsibility and capability were the least ranked values for the non NCC girls. Non NCC boys ranked 18 to 13 for capability, politeness, logic, courage, broadmindedness and intellect respectively. Among the least

ranking values discussed here, logic, intellect, politeness and capability were common for all the four groups though the ranking differed. Except the non NCC boys who ranked six for imaginative nature, it appeared to be least important for the others (NCC boys 13, NCC and non NCC girls, 16). It is surprising to note that independent nature (self reliance and self sufficiency) was ranked 13 by NCC girls, whereas the rank went to 6 for NCC boys, non NCC boys 5 and non NCC girls 9. So the boys of both the groups were of independent nature than the girls. In spite of the NCC training the girls underwent, they did not attach much significance to this value.

Similarity in the ranking was an interesting feature noted between NCC boys and girls in terms of values such as honesty, obedience, cleanliness, love, cheerfulness and politeness. From the values ranked we can infer that NCC activities/programmes such as community and social service activities, cultural programmes, national integration camps and other camp life had provided the ground for inculcation of certain common values among the cadets.

Helpful nature as a virtue was similar for the girls of NCC and non NCC and it was ranked first. Loving nature ranked second was found common among the girls and boys of non NCC group. This study did not reveal any common values among the boys of both the groups.

In general, for the selected students of this investigation irrespective of the groups and sex, helpfulness, ambition and honesty were the first, second and third values respectively. It is apt to refer Rokeach's (1979) finding in which American young adults ranked honesty, ambition and responsible nature in the order of priority. Among the first three values, honesty and ambition were common among the selected students of this study and the young Americans. While, the American sample attached the third position to responsibility, sample of this study ranked honesty.

ii. Terminal values

The composite ranking calculated for 18 aspects of terminal values of the selected students of different groups is given in Table XXVI.

TABLE XXVI
 TERMINAL VALUES - COMPOSITE RANKING

Values	Composite ranking				
	NCC		Non NCC		Total sample (800)
	Girls (200)	Boys (200)	Girls (200)	Boys (200)	
A comfortable life (prosperous life)	4	1	1	1	2
An exciting life (stimulating, active life)	7	9	16	4	10
Sense of accomplishment (lasting contribution)	15	18	18	18	18
A world at peace (Free of war and conflict)	8	3	5	10	5
A world of beauty (beauty of nature and arts)	9	6	8	11	8
Equality (Brotherhood, equal opportunity for all)	11	16	14	16	17
Family security (Taking care of loved ones)	6	7	6	15	7
Freedom (independence, free choice)	3	2	4	8	3
Happiness (contentedness)	1	4	2	2	1
Inner harmony (freedom from inner conflict)	16	17	12	12	13
Mature love (sexual and spiritual intimacy)	12	8	11	5	11
National security (protection from attack)	13	11	17	13	12
Pleasure (An enjoyable, leisurely life)	18	13	9	14	16
Salvation (saved, eternal life)	17	15	15	9	14
Self respect (self-esteem)	5	12	10	3	9
Social recognition (respect, admiration)	14	14	13	17	15
True friendship (close companionship)	2	5	3	7	4
Wisdom (A mature understanding of life)	10	10	7	6	6

NCC boys, non NCC boys and non NCC girls gave comfortable life the top priority while sense of accomplishment was given the least priority. Happiness (2) and inner harmony (12) were ranked similarly by the boys and girls of non NCC group. Girls of this study irrespective of being in NCC or not, considered family security as the sixth important value. Boys of both the groups gave similar ranking for comfortable life, sense of accomplishment and equality.

Overall analysis of terminal values irrespective of the groups revealed that happiness, comfortable life and freedom were the most significant values of the selected groups. In Rokeach's (1979) research, a world at peace, family security and freedom were the top ranked values. Obviously, the finding in this study traces the changes in value system in that adolescents seek freedom, happiness and comfortable life. The type and structure of family, economic status, age, environmental exposure including the mass media, social customs and taboos, area of residence, neighbourhood and friends are the other determinants of values. The family, school, locality, people's attitude and parent-adolescent relationship might have also contributed to the manifestation of human values.

8. Levels of aspiration

The experience of success or failure is related to the goals one sets for himself/herself ie., the levels of aspiration. It acquires a motivational feature. One of the important aspects of personality includes the levels of aspiration. It is intimately connected with the social context. The individual is constantly involved in comparing his/her performance with social expectations for his/her age and ability.

Based on the raw scores obtained by the selected NCC and non NCC students of both the sex in the card sorting test, positive and negative aspirants were identified and the results are presented in Table XXVII.

TABLE XXVII

LEVELS OF ASPIRATION OF THE SELECTED NCC AND NON NCC
STUDENTS

Groups	Positive	Negative	Total number
NCC boys	138 (69)	62 (31)	200
NCC girls	115 (58)	85 (42)	200
Total	253	147	400
Non NCC boys	86 (43)	114 (57)	200
Non NCC girls	74 (37)	126 (63)	200
Total	160	240	400
NCC boys	138 (69)	62 (31)	200
Non NCC boys	86 (43)	114 (57)	200
Total	224	176	400
NCC girls	115 (58)	85 (42)	200
Non NCC girls	74 (37)	126 (63)	200
Total	189	211	400
NCC cadets	253 (63)	147 (37)	400
Non NCC students	160 (40)	240 (60)	400
Total	413	387	800

Percentage is given in parentheses

The results revealed that 63 and 37 per cent of the selected NCC cadets were positive and negative aspirants against 40 and 60 per cent of the selected non NCC counterparts respectively (Figure 6). Sexwise comparison revealed that 69 and 58 per cent of the NCC boys and girls were high aspirers, while the corresponding figures were 43 per cent and 37 per cent among the non NCC group.

Levels of Aspiration of the selected NCC and Non NCC Students

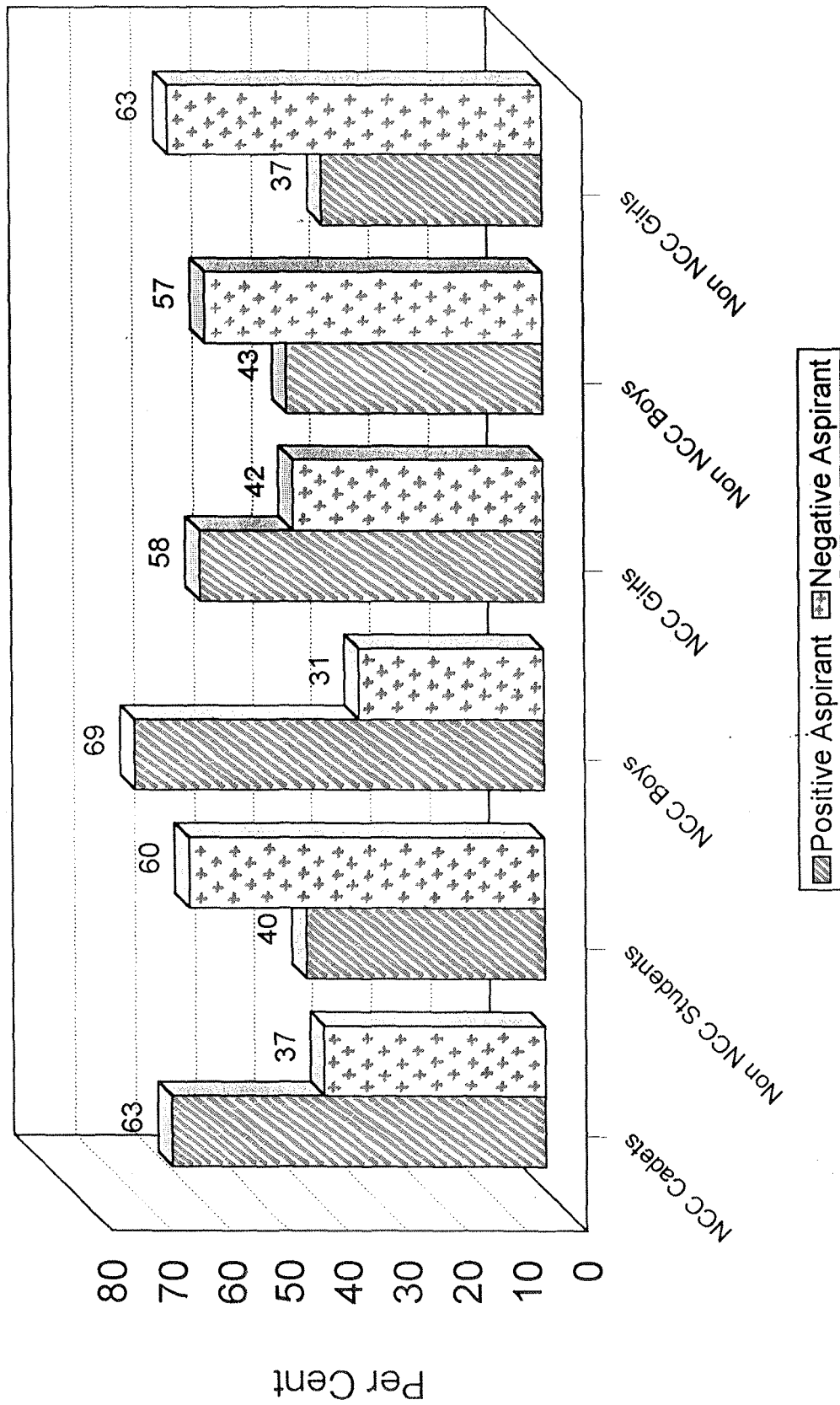


FIGURE. 6

Of the selected boys of both the groups high aspirers were more from the NCC group. On the otherhand more low aspirers belonged to the non NCC group. Similar results emerged in the case of girls of both the groups too.

B. Causal relationship between personality traits

The causal relationship between the personality traits of the sample was scrutinised with the help of multiple regression analysis (Appendix VI). The predictability coefficient (R^2) and F ratio of all the selected dependent and independent variables are portrayed in Table XXVIII.

TABLE XXVIII

CAUSAL RELATIONSHIP BETWEEN PERSONALITY TRAITS

Dependent variable	Independent variables	Contribution of independent variables (percentage)			
		NCC Boys	NCC Girls	Non NCC Boys	Non NCC Girls
Over all skills	SES, height, weight, extraversion, neuroticism, levels of aspiration, adjustment towards home, health and education and intellectual capacity.	9 (1.835)*	7 (1.318)	4 (0.736)	5 (1.025)
Extraversion	SES, heart rate, systolic BP, diastolic BP, respiratory rate, height, weight, overall skills, neuroticism, levels of aspiration, adjustment towards home, health and education and intellectual capacity.	7 (0.960)	12 (1.732)	9 (1.235)	10 (1.429)
Neuroticism	SES, heart rate, systolic BP, diastolic BP, respiratory rate, height, weight, overall skills, extraversion, levels of aspiration, adjustment towards home, health and education and intellectual capacity.	3 (0.346)	3 (0.449)	6 (0.859)	5 (0.758)
Intellectual capacity	SES, order of birth, height, weight, overall skills, extraversion, neuroticism, levels of aspiration, adjustment towards home, health and education.	9 (1.649)	10 (1.804)	4 (0.636)	10 (1.949)*
Educational adjustment	SES, overall skills, extraversion, neuroticism, levels of aspiration, adjustment towards home and health and intellectual capacity.	47 (20.985)**	26 (8.435)**	6 (1.433)	36 (13.255)**

specifically boys (35 per cent). A majority (85 per cent of NCC cadets and 69 per cent of non NCC students) of the selected student population belonged to the intellectually above average and average categories. The weapon training in NCC activities enhances the concentration; listening and execution of word of command during drill improves memory power; lessons on map reading and signals promote reasoning ability. These inputs in NCC might have made them alert intellectually.

The intellectually average students distinguished themselves from the below average on two factors, that of being more assertive and relaxed. In the present study 55 and 46 per cent of the NCC and non NCC students respectively were intellectually average. They are more assertive and relaxed as per Eysenck (Figure 4). This result is supported by Natesan and Srilatha's (1995) findings in which NCC cadets were more assertive than the other students. The present research revealed that only 31 per cent of the non NCC group and six per cent of the NCC group belonged to the Intellectually below average category.

(Table XXVIII Contd..)

Home adjustment	SES, overall skills, extraversion, neuroticism, levels of aspiration, adjustment towards health and education and intellectual capacity.	36 (13.624)**	14 (3.781)**	10 (2.587)**	26 (8.429)**
Health adjustment	SES, heart rate, systolic BP, diastolic BP, respiratory rate, height, weight, overall skills, extraversion, neuroticism, levels of aspiration, adjustment towards home and education and Intellectual capacity.	41 (9.331)**	26 (4.583)**	7 (1.024)	29 (5.369)**
Levels of aspiration	SES, overall skills, extraversion, neuroticism, adjustment towards home, health and education and intellectual capacity.	4 (0.994)	6 (1.555)	3 (0.810)	8 (2.058)*

** Significant at one per cent level

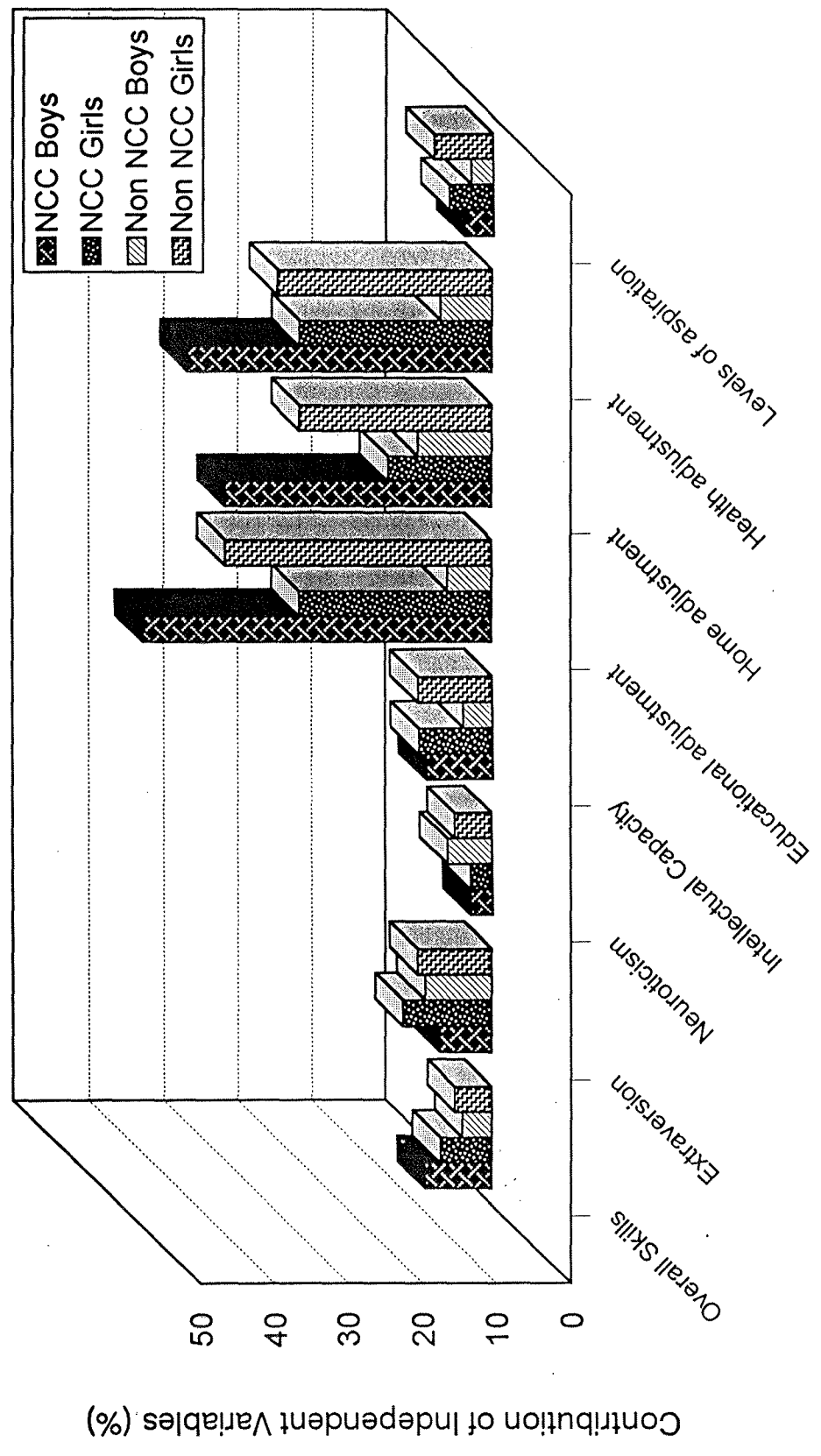
* Significant at five per cent level

F ratio is given in parantheses

Of all the eight dependent variables selected, highly significant (one per cent level) relationship existed between the home adjustment and the independent variables of all the four groups - NCC boys, girls, non NCC boys and girls. Adjustment towards health and educational areas of the NCC boys, NCC girls and non NCC girls had significant relationship with the independent variables. Intellectual capacity and levels of aspiration of the non NCC girls had ten and eight per cent of contribution by the independent variables respectively. Also the overall skills of the NCC boys were influenced by the selected independent variables up to nine per cent and had significant relationship at five per cent level.

The contribution by the independent variables towards the extraversion and neuroticism traits of all the sample was not significant. Since, neuroticism and extraversion are undesirable traits, the non-significant relationship between the variables is an acceptable one (Figure, 7).

Causal Relationship between Personality Traits



Dependent Variable

FIGURE.7

C. Personality traits in relation to socio-economic status and birth order

1. Socio-economic status (SES)

The measure of social status is of basic importance since one's position in the social hierarchy is correlated with many factors. The research problems involving relationships between socio-economic status (SES) and psychological, biological, educational and other correlates are dependent on quantitative measures of social status.

In this study, the raw score assigned to SES of the selected students were converted into sten score and 't' test was applied to see the extent of difference between the groups and sex. There was only a slight insignificant variation in the sten score between the NCC and non NCC groups, indicating that the selected students did not differ significantly in their socio-economic status.

The mean values of the selected personality traits in relation to socio-economic status of the selected NCC and non NCC students are figured in Table XXIX.

TABLE XXIX

SELECTED PERSONALITY TRAITS IN RELATION TO SOCIO-ECONOMIC STATUS (Mean Values)

Groups	Categories	Sten score	Number of students	Height cms	Weight kg	Overall skills	Extraversion	Neuroticism	Intellectual capacity	Overall adjustment	
NCC cadets N : 400	Weaker section	3	5	163.66	51.75	119.17	13.58	10.92	51.92	3.05	
	Lower middle	4	12	166.70	56.15	112.25	12.20	12.35	47.15	3.65	
	Middle	5	23	165.57	53.48	112.80	13.69	10.94	48.86	4.47	
	High middle	6	31	165.26	54.39	113.69	14.26	11.09	48.31	4.96	
	Well offs	7	34	164.88	53.23	118.41	13.82	9.62	47.35	4.93	
	High	8	51	164.07	53.78	113.84	14.15	10.42	47.32	4.93	
	The privileged	9	244	164.33	54.10	114.42	13.38	10.87	47.58	4.84	
	Non NCC students N : 400	Weaker section	3	14	162.44	54.09	100.71	13.03	11.64	41.22	4.17
		Lower middle	4	17	160.40	52.14	92.03	13.36	11.74	41.47	4.67
Middle		5	18	157.72	53.39	95.39	13.11	10.89	42.83	6.81	
High middle		6	31	158.02	52.90	96.81	13.13	10.81	38.25	5.44	
Well offs		7	34	161.00	54.65	95.38	13.94	10.32	44.76	5.28	
High		8	45	160.44	53.79	98.52	13.74	10.95	43.63	5.15	
The privileged		9	241	160.89	53.61	96.42	13.61	11.47	42.84	5.15	

Among the selected NCC cadets, those belonging to the lower middle group were taller (166.70 cms) and heavier (56.15 kg) than the others. The mean score of overall skills and intellectual capacity of the cadets of weaker section was higher than that of their counterparts hailing from the other categories of SES. The cadets of different SES groups scored between 12 to 14 for extraversion type and 9 to 13 for neuroticism type indicating that there is no relationship between the levels of SES and extraverts, introverts, neurotics and stable nature. It is amazing to find from the results that the cadets of weaker section were better in overall adjustment than their counterparts.

The values of the non NCC students in relation to SES, illustrate that students of weaker section were taller (162.44 cms), better in overall skills and adjustments. The selected students from well off families were heavier (54.65 kg) and better in intellectual capacity than their counterparts. Similar to NCC cadets, non NCC students' extraversion and neuroticism traits did not have relationship with the socio-economic status.

2. Birth order

Hall and Lindzey (1985) stated that birth order of the individual is one of the social determinants of personality, the first, middle and last born in a family are likely to be quite different. Vockell et al's., (1973) survey revealed that 272 studies on personality related to birth order were published between 1967 and 1972. Therefore, the investigator being interested in this aspect analysed the mean of the selected personality traits of the sample. Table XXX shows the analysis.

TABLE XXX

SELECTED PERSONALITY TRAITS IN RELATION TO BIRTH ORDER (Mean Values)

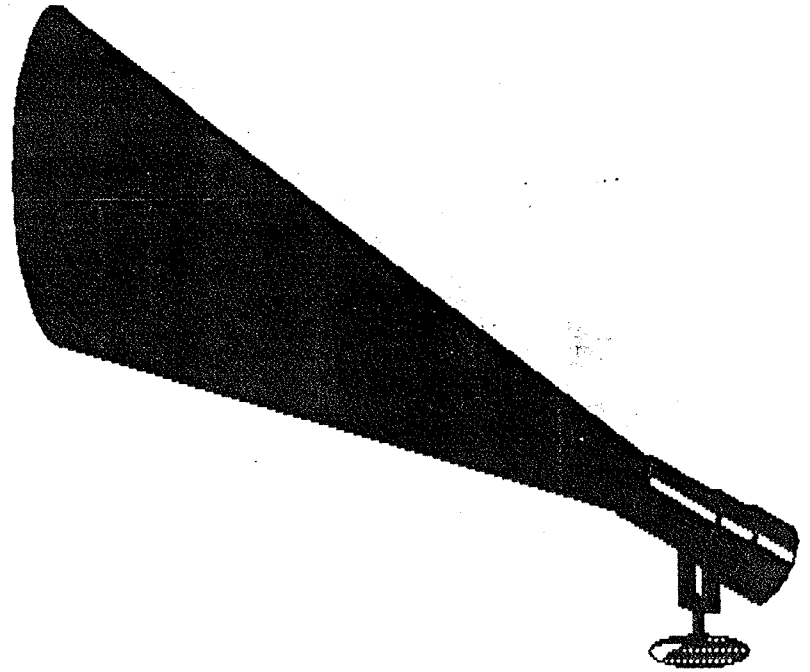
Groups	Categories	Height cms	Weight kg	Overall skills	Extraversion	Neuroticism	Intellectual capacity	Overall adjustment
NCC cadets N : 400	First born N:205	164.51	53.73	114.23	13.66	10.81	47.67	3.19
	Middle born N:66	164.47	53.95	112.42	12.61	11.40	49.26	3.60
	Last born N:129	164.69	54.41	114.53	13.57	10.57	47.60	3.54
Non NCC students N : 400	First born N:197	160.36	54.00	96.90	13.62	11.24	42.20	3.29
	Middle born N:83	159.79	54.67	96.79	13.26	11.29	42.45	3.60
	Last born N:120	161.00	53.40	96.26	13.60	11.26	43.26	3.53

The last born among the selected NCC and non NCC students were slightly taller than the first and middle born. Among the first and middle born, the first born were taller. As for the weight, the last born among the NCC cadets and the middle born among the non NCC students were heavier than their counterparts.

The last born among the NCC cadets' and the first born of non NCC students' mean score was higher indicating that their overall skills were superior to those of their counterparts. The middle born of the NCC group and the last born of the non NCC group were intellectually superior to those of their counterparts. From the mean score on overall adjustment of the selected NCC and non NCC students it is amazing that the first born were better adjusted than the middle and last born. The mean scores for extraversion and neuroticism traits proved that the birth order and the personality types (extravert, introvert, neurotics and stable) were not related.

To sum up, this study revealed that the last born were taller, middle born were heavier and intellectually superior and the first born were better adjusted than their counterparts irrespective of being in NCC or not. The findings of the present study differ from that of George and Abraham (1967) indicating that the first born were better in intellectual capacity (verbal) and to some extent more maladjusted than the others.

SUMMARY AND CONCLUSION



V. SUMMARY AND CONCLUSION

Development of human resources is the main function of education. Provision of opportunities for students is very important to help them in integrated growth, decision making and personality development. Well planned extracurricular activities can inculcate multi-farious values - physical, emotional, intellectual, social, ethical, cultural, aesthetic, recreational and disciplinary. National Cadet Corps channelises energies of the youth in the right direction significantly as an instrument of human resource development. Studies in India on personality dimension of students involved in extra-curricular activities have been scanty except for a few on the impact of NSS. Against this backdrop the investigator formulated an Analytical Study on "National Cadet Corps as a Means of Developing Personality Traits Among Students of Higher Education". This study attempts to assess different traits of personality, employing the battery of tests. The specific objectives of the study included,

- * different personality traits - Physical, physiological, socio emotional, intellectual, values and levels of aspiration of selected NCC and non NCC students.
- * differences in personality traits of selected students in relation to sex and participation in NCC

- * causal relationship between personality traits and
- * relation between the SES, birth order and personality traits of selected students.

Keeping these objectives in view, 800 third year undergraduate students, aged 20 to 22 years were selected. NCC training area (NCC Group Head Quarters, Coimbatore), completion of two years of NCC training, sex and age were the parameters for selection. A carefully selected battery of tests was used to collect the data regarding the personality traits of NCC and non NCC students. The battery of tests included anthropometry for physical, physiological tests, self analysis for socio emotional skills, Eysenck's Personality Inventory for personality type, Standard Progressive Matrices for intellectual capacity, Adjustment Inventory for adjustment pattern, Rokeach Ranking Scale for human values, Card Sorting Test for levels of aspiration, a schedule for collection of data of socio-economic status of the selected students was also formulated and used. Data was collected during the camp from the NCC cadets and during holidays from the non NCC students with the help of Army Medical Personnel.

The major findings are presented below :

A. Comparison of personality traits of the selected NCC and non-NCC students

Height

- * All the boys of this study were taller than the ICMR standards by 6.97 cms irrespective of their participation in NCC.
- * Height of the selected boys ranged from 140 to 190 cms. The non NCC boys were slightly taller by 0.16 cms than the NCC boys.
- * The minimum and maximum height of the NCC girls were 140 to 190 cms respectively. The height of the non NCC girls ranged from 130 to 170 cms. The NCC girls were taller than the non NCC girls by 8.01 cms.
- * The difference between the ICMR norm and the means of the boys of both groups and girls of NCC were highly significant (one per cent level).

Weight

- * The mean weight of the boys was lower than the ICMR norm by 2.64 kg while the mean weight of girls' was higher by 0.24 kg.
- * As for individual groups, the non NCC boys' mean weight was more by 0.62 kg than the NCC boys, while the mean weight of the NCC girls was more by 1.31 kg than the non NCC girls. The differences among the two groups were highly significant at one per cent level.

Heart rate

- * The heart rate (mean) for all the students was slightly higher (75.23 to 75.86) than the standard value of 75 per minute.
- * The NCC boys' mean heart rate was slightly higher than that of the non NCC boys the difference being statistically significant. The heart rate of the NCC and non NCC girls did not differ significantly.

Respiratory rate

- * While the NCC girls' mean respiratory rate was more by 0.26 than the standard value, the other three groups' mean rates were lesser.
- * The respiratory rate for both non NCC and NCC boys was 19.79.
- * The recorded value of the non NCC girls in relation to respiratory rate was lesser than the standard value, the difference being statistically significant.

Blood pressure

- * The mean systolic and diastolic blood pressure recorded for the NCC and non NCC students were lower than the normal value 120/80 mm Hg.
- * The mean systolic and diastolic pressure were higher for the NCC girls than the non NCC girls and the differences were significant at one per cent level.

- * The mean systolic pressure was higher for the non NCC boys, whereas the mean diastolic pressure was higher for the NCC boys and the difference was insignificant.

Skills - NCC cadets Vs non NCC students

- * The NCC cadets fared better than the non NCC students with regard to various skills namely communication, observation, problem solving, social relationship, leadership, morale building, emotional effectiveness, facing emotional situations and overall skills. The difference between the scores of the NCC and non NCC students was highly significant at one per cent level.

NCC boys vs NCC girls

- * The selected NCC boys and girls differed in their score for skills of communication, observation, social relationship and morale building. Girl cadets' scored higher than those of NCC boys and the difference was highly significant at one per cent level.
- * No gender difference was found for skills of problem solving, leadership, emotional effectiveness and facing emotional situations.
- * The NCC girls surpassed the NCC boys in the scores of overall skills, the difference being significant at five per cent level.

Non NCC boys Vs non NCC girls

- * The mean score for the skills such as communication, observation, morale building, emotional effectiveness, facing emotional situations and overall skills was higher for the girls than the boys. The difference was highly significant.
- * There was no gender difference for the skills related to problem solving and social relationship.
- * The non NCC boys were better in leadership skill than the non NCC girls and the difference was significant statistically (five per cent level).

NCC boys Vs non NCC boys

- * The NCC boys' skills in all the eight areas were found to be significantly better than the non NCC boys.
- * Between the boys of NCC and non NCC group, the former had higher scores for the overall skills, which was statistically proved and significant at one per cent level.

NCC girls vs non NCC girls

- * Comparing the scores of the NCC girls with those of the non NCC girls, NCC girls scored higher than the non NCC girls for all the areas and overall skills and the difference being statistically significant at one per cent level.

Personality type

- * Out of 800 selected students the personality inventory categorised 108 students as of extraversion type and 123 as of neuroticism type irrespective of sex and participation in NCC.
- * Totally 93 students were extraverts of whom 59 were the NCC cadets and 34 were the non NCC students.
- * Sexwise, 33 NCC boys, 26 NCC girls, 19 non NCC boys and 15 non NCC girls were extraverts. These students were more sociable, impulsive, co-operative, attentive to people, ready to be in groups and socially impressive.
- * The introverts were lesser (15) in general, when compared to extraverts. There were 5 and 10 introverts in the NCC and non NCC groups respectively. These students lacked sociability, persistence, high level of aspiration, accuracy, inner standards of conduct and a stress on conscience.
- * Out of 123 neuroticism cases, 45 students were neurotics and 78 of them were of emotionally stable personality. Less number of (6) neurotics and more number of stables (29) were found among the NCC girls. The highest number of neurotics (17) were found among the non NCC boys. It was found that the number of neurotics were more among the boys than the girls in the groups of NCC and non NCC.

Intellectual capacity

- * As for intellectual capacity, the NCC cadets scored 47.64 out of 60, against 42.16 scored by their non NCC counterparts. The 't' value confirmed significant difference between them at one per cent level.
- * The NCC girls scored higher and surpassed all the others in their intellectual capacity.
- * Comparative analysis of the percentile points revealed that nine per cent of the intellectually superior (95 percentile) students belonged to NCC group, in particular the NCC girls (12 per cent).
- * A majority of (85 per cent of the NCC cadets and 69 per cent of the non NCC students) the selected student population belonged to intellectually above average (75-90 percentile) and average (25-75 percentile) category.
- * Nearly 31 per cent of the non NCC students were below 25 percentile of IQ, specifically non NCC boys (35 per cent).

Home adjustment

- * The NCC girls were credited with good adjustment in the home area. They differed significantly (one per cent level) when compared to the NCC boys and non NCC girls.
- * All the selected boys had similar adjustment pattern in home related aspects.

Health adjustment

- * The NCC cadets scored lower in health adjustment inventory, implying that they were better adjusted to health matter as compared to the non NCC students. The difference was highly significant at one per cent level.
- * The non NCC boys (among the non NCC students) also had lower scores projecting positive health adjustment. The difference between the boys and girls who had not involved in NCC was significant at five per cent level.

Educational adjustment

- * The NCC cadets did not differ from the non NCC students in their educational adjustment.
- * The NCC girls and the non NCC boys had desirable educational adjustment.

Instrumental values

- * It was evident that helpfulness, honesty, ambition, obedience, broad-mindedness and courageous were the first six values prioritized by the NCC girls.
- * The order of values considered by the selected NCC boys were ambition, honesty, helpfulness, obedience, self-control and independence by ranking them within the first six.

- * In the case of non NCC girls, helpfulness, love, honesty, cleanliness, ambition and broadmindedness were the first six values listed.
- * Non NCC boys indicated cleanliness, love, self control, ambition, independence and imaginative were the predominant values as per their ranking.
- * For the selected students irrespective of the groups and sex, helpfulness, ambition and honesty were the first, second and third values opted respectively.
- * It was amazing to note that courage was ranked in the first six only by the NCC girls, along with independent nature ranked 13 by the same group.
- * Helpful nature was ranked first by girls of both the groups.
- * Loving nature was ranked second by the girls and boys of the non NCC group.

Terminal values

- * Overall analysis of this study revealed that happiness, comfortable life and freedom were the most significant values of the selected students in general.
- * NCC boys, non NCC boys and girls ranked comfortable life as the first value.
- * Happiness (2) and inner harmony (12) were ranked similarly by the non NCC group.

- * Girls of this study irrespective of being in NCC or not, considered family security significant by ranking it sixth.

Levels of aspiration

- * Sixty three and 37 per cent of the selected NCC cadets were positive and negative aspirants against 40 and 60 per cent of the selected non NCC counterparts respectively.
- * Sexwise comparison revealed that 69 and 58 per cent of the NCC boys and girls respectively were high aspirers, while the corresponding figures in the non NCC group were 43 per cent and 37 per cent among boys and girls.
- * Among the selected boys positive aspirers were more in NCC group. On the otherhand more negative aspirers were identified in the non NCC group. Similar trend emerged in the case of girls of both the groups.

B. Causal relationship between the selected personality traits

The correlation analysis among the traits revealed that the contribution of the independent variables altogether towards the home adjustment was 36 per cent (NCC boys), 26 per cent (non NCC girls), 14 per cent (NCC girls) and 10 per cent (non NCC boys). Six, 26, 36 and 47 per cent of the contributions were made by the independent variables towards

the educational adjustment of the non NCC boys, NCC girls, non NCC girls and NCC boys respectively. The percentage contribution by the independent variables towards the health adjustment of the NCC boys, NCC girls, non NCC boys and non NCC girls were 41, 26, 7 and 29 respectively. The percentage of contribution by the independent variables towards overall skills, intellectual capacity, extraversion, neuroticism and levels of aspiration was lower.

C. Personality traits in relation to socio - economic status and birth order

NCC cadets

- * There was only insignificant variation in the sten score of the NCC and non NCC groups. This indicates that the selected students did not differ drastically in their SES.
- * The NCC cadets who hailed from the lower middle groups were taller (166.70 cms) and heavier than the others.
- * The cadets of weaker section were better in overall adjustment, scored higher for overall skills and intellectual capacity.

Non NCC Students

- * The selected students of weaker section were taller (162.44 cms) and better in overall skills and adjustment.
- * The selected students who belonged to well off families were heavier (54.65 kg) and better in intellectual capacity than their counterparts.

Birth order

- * The first born in the NCC and non NCC groups were better in adjustment. The first born from the non NCC group scored higher for overall skills.
- * The middle born of the non NCC group were heavier than that of their counterparts. Middle born from the NCC group were intellectually superior.
- * The last born of the selected NCC and non NCC students were slightly taller than the first and middle born. The last born from the NCC group were heavier and scored higher for overall skills. The last born of the non NCC group were intellectually superior.

Conclusion

- * The study reveals that the selected NCC cadets fared better in relation to acquisition of skills namely communication, observation, problem solving, social relationship, leadership, morale building, emotional effectiveness, facing emotional situations and overall skills. As for intellectual scores the NCC cadets scored higher than their non NCC counterparts. The NCC cadets were better adjusted in the aspects related to health as compared to non NCC students. Extraverts were more (59) and introverts were less (5) among the NCC cadets, whereas vice-versa picture emerged for the non

- NCC students. Positive aspirers were more in the NCC group (63 per cent) and negative aspirers were more in the non NCC group (60 per cent).
- * The selected girl cadets surpassed the non NCC girls distinctly and also boys of both the groups in all the traits studied.
 - * Among the selected boys, NCC boys scored better than the non NCC boys in all the skills. Extraverts were more (33) and introverts were less (3) among the selected NCC boys. Positive aspirers were more among the NCC boys.
 - * The selected non NCC boys were taller and heavier than the NCC boys. They projected positive health adjustment and had desirable educational adjustment.
 - * Highly significant relationship (one per cent level) existed between the independent variables and the adjustment towards home, educational and health aspects of all the selected groups.
 - * Intellectual capacity and levels of aspiration of the non NCC girls, and the overall skills of the NCC boys had significant relationship with the independent variables at five per cent level.
 - * Personality traits of the sample hailing from different socio-economic groups differed.

- * The last born of the NCC and non NCC students were slightly taller than the first and middle born. The first born were better adjusted than the others, which may be a chance factor.

Recommendations

To Defence Ministry

- * The present authorised strength of cadets in NCC is 11.5 lakhs. This number does not constitute even four per cent of our target student population between the ages of 13 to 21 in the country. Therefore, there is a definite need to identify resources to increase the strength of NCC along with consequent benefits to a much larger segment of students, as an investment for nation's future.

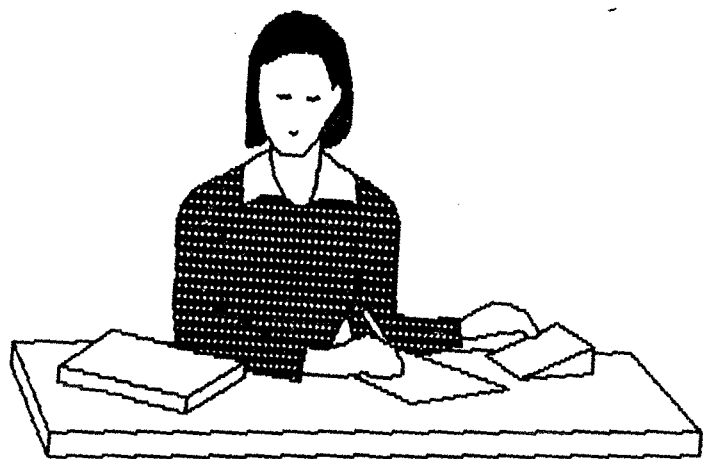
To Universities/University Grants Commission

- * It will be good if NCC could be included in the regular academic curriculum in all the universities to suit the needs of the students.
- * Infrastructure facilities such as classroom, paradeground, firing range, an assistant and stenographer be provided for better functioning of NCC in every institutions.
- * Projects may be conducted to establish the norms for testing the personality traits of boys and girls.

- * Workshops at the regional level be organised to discuss the issue of incorporating NCC into the academic curriculum.
- * Hours for NCC training could be included in the workload on par with physical education, so students who are mainly committed to the academic betterment, may also take part in NCC activities.
- * Follow up study be taken to find out the impact of NCC on the development of personality traits of the students in different regions.

To Director General NCC office

- * In the present set up of implementing NCC, no research and feed back system is in existence. In the absence of the system a correct perspective can not be formed and futuristic trends remain concealed. Hence, a research cell may be set up at DG NCC Office to carry out periodic research.
- * The percentage of cadets selected for Republic day parade, adventure training, exchange programme and for specialised training with the armed forces is very limited in comparison to the total strength. Hence, number of vacancy may be increased.
- * Wide publicity be given through mass media/competitions about the significance of NCC activities to create awareness among the students and the public in general.



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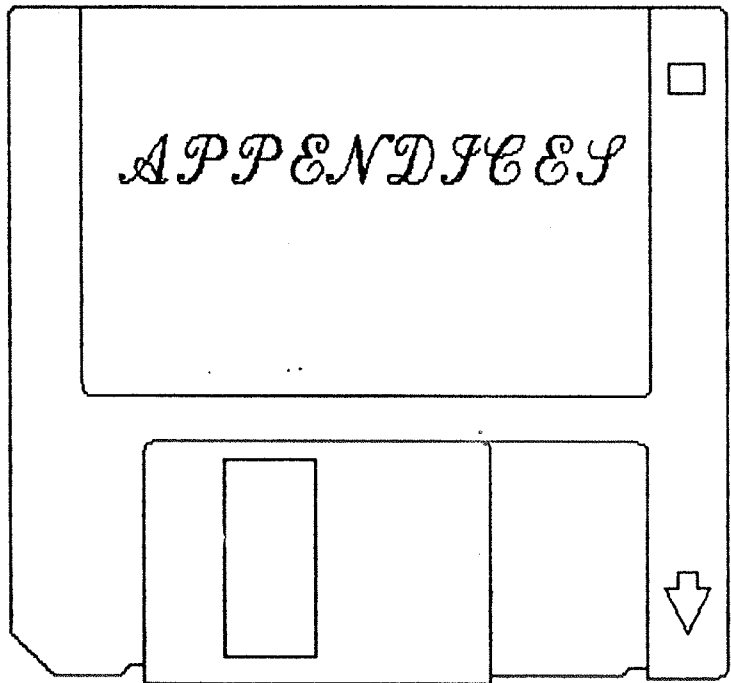
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APPENDIX - II

THE BATTERY OF TESTS

NATIONAL CADET CORPS AS A MEANS OF DEVELOPING PERSONALITY

TRAITS AMONG STUDENTS OF HIGHER EDUCATION - AN ANALYTICAL STUDY

A. Socio-Economic Details of the Selected Students

Name of the Respondent :
Address of the Respondent :
Sex :
Age :
Ordinal Position :
Religion :
Community/Caste :
Family : Joint/Nuclear
Size of the family : Small (upto 5)
: Large
Area of Residence : Urban/Rural
Enrolled in NCC : Yes/No

Background information of the respondent

S. No.	Name	Relation to the respondent	Age	Sex	Education	Occupation	Income
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B. Physical

1. Height
2. Weight

C. Physiological

1. Heart rate :
2. Respiratory rate :
3. Systolic-blood pressure :
4. Diastolic-Blood pressure:

D. Self-analysis of skills

Satisfied	Not satisfied	
Doing Alright	Need to Improve	Have Improved

Communications skill

1. Telling others what I think
2. What I express is clearly understood
3. Understanding others
4. Drawing others out
5. Listening alertly
6. Others

Observation skill

1. Being aware of others' behaviour
2. Sensing feelings of others
3. Aware of others' reactions to my behaviour
4. Aware when people avoid something
5. Others

Problem solving skill

1. Stating problems or goals
2. Asking for ideas and opinions
3. Giving ideas
4. Evaluating ideas critically
5. Summarizing discussion
6. Clarifying issues
7. Others

Social relationships skill

1. Competing to outdo others
2. Acting dominant toward others
3. Trusting others
4. Being helpful
5. Being protective
6. Needing attention
7. Standing up for self
8. Seeking comments (feedback) on my behaviour

Leadership skill

1. Introducing an activity
2. Summarizing an activity
3. Bridging an activity
4. Leading a reality
5. Possessing initiative
6. Leading a group discussion
(clarifying, stimulating,
asking pertinent questions,
giving direction)
7. Facilitating co-operativeness
8. Adaptability
9. Insight
10. Self confidence
11. Able to solve the problems

Morale Building skill

1. Showing interest
2. Helping people who are ignored
3. Helping people to reach agreement
4. Resolving tension
5. Upholding individual's rights in
face of group pressure
6. Expressing praise or appreciation
7. Others

Emotional Effectiveness skill

1. Telling others what I feel
2. Hiding my emotions
3. Avoid disagreeing openly
4. Expressing warm feelings
5. Avoid expressing anger
6. Others

Facing Emotional situations skill

1. Facing conflict and anger
 2. Facing closeness and affection
 3. Facing disappointment
 4. Able to stand silence
 5. Ability to stand tension
 6. Others
-

E. Personality Inventory

Yes No

1. Do you often long for excitement?
2. Do you often need understanding friends to cheer you up?
3. Are you usually carefree?
4. Do you find it very hard to say no for an answer?
5. Do you stop and think things before doing anything?
6. If you say you will do something, do you always keep your promise, no matter how inconvenient it might be to do so?
7. Does your mood often go up and down?
8. Do you generally do and say things quickly without stopping to think?
9. Do you ever feel "just miserable" for no good reason?
10. Would you do almost anything for a dare?
11. Do you suddenly feel shy when you want to talk to an attractive stranger?
12. Once in a while do you lose your temper and get angry?

13. Do you often do things on the spur of the moment?
14. Do you often worry about things you should not have done or said?
15. Generally, do you prefer reading to meeting people?
16. Are your feelings rather easily hurt?
17. Do you like going out a lot?
18. Do you occasionally have thoughts and ideas that you would not like other people to know about?
19. Are you sometimes bubbling over with energy and sometimes very sluggish?
20. Do you day dream a lot?
21. Do you prefer to have few but special friends?
22. When people shout at you, do you shout back?
23. Are you often troubled about feelings of guilt?
24. Can you usually let yourself go and enjoy yourself a lot at a gay party?
25. Are all your habits good and desirable ones?
26. Do other people think of you as being very lively?
27. After you have done something important, do you often come away feeling you could have done better?
28. Are you mostly quiet when you are with other people?
29. Do you sometimes gossip?
30. Do ideas run through your head so that you cannot sleep?
31. If there is something you want to know about, would you rather look it up in a book than talk to some one about it?
32. Do you get palpitations or thumping in your heart?
33. Do you like the kind of work that you need to pay close attention to?

34. Do you get attacks of shaking or trembling?
35. Would you always declare everything at the customs, even if you know that you could never be found out?
36. Do you hate being with a crowd who play jokes on one another?
37. Are you an irritable person?
38. Do you worry about lawful things that might happen?
39. Are you slow and unhurried in the way you move?
40. Do you like doing things in which you have to act quickly?
41. Have you ever been late for an appointment or work?
42. Do you have many nightmares?
43. Do you like talking to people so much that you never miss a chance of talking to a stranger?
44. Are you troubled by aches and pains?
45. Would you be very unhappy if you could not see lots of people most of the time?
46. Would you call yourself a nervous person?
47. Of all the people you know, are there some whom you definitely do not like?
48. Would you say that you were fairly self-confident?
49. Are you easily hurt when people find fault with you or your work?
50. Do you find it hard to really enjoy yourself at a lively party?
51. Are you troubled with feelings of inferiority?
52. Can you easily get some life out of a dull part?
53. Do you like playing pranks on others?
54. Do you sometimes talk about things you know nothing?

55. Do you worry about your health?

56. Do you suffer from sleeplessness?

Total score E = (), N = ()

L = ()

Please check to see that you have answered all the questions.

F. Intellectual Capacity - Standard Progressive Matrices

Name -----

Date : -----

Place -----

Test ended -----

Age -----

Test begun -----

A	B	C	D	E
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9
10	10	10	10	10
11	11	11	11	11
12	12	12	12	12

Time Total Grade

Notes :

Tested by -----

G. Adjustment Inventory

1. Home adjustment

1. Have you ever strongly desired to go home?

Yes No

2. Do you feel that true love and affection is lacking in your home?

Yes No

3. Has your home become full of problems for you due to lack of money?

Yes No

4. Have your parents interfered or objected to the company of some of your friends with whom you more around?

Yes No

5. Does your father or mother get irritated soon?

Yes No

6. Do you often quarrel with your brothers and sisters?

Yes No

7. Do you feel that your parents are more strict with you than they should be?

Yes No

8. Do you get contrary ideas of love and hate towards your family members?

Yes No

9. Have any one of your respected family members made you unhappy by passing comments on your appearance?

Yes No

10. Are you happy and satisfied with the present atmosphere at home?

Yes No

11. Do you get very little help from home?

Yes No

12. Do you feel inferior that your friend's home atmosphere is happier than that of yours?

Yes No

13. Do you understand that your parents are of old ideas?

Yes No

14. Do you feel that you are a burden to your parents?

Yes No

15. Are you satisfied with the behaviour of your brothers and sisters?

Yes No

16. Do you have to be often out to have peace at home?

Yes No

ii. Health adjustment

1. Do you often day dream?

Yes No

2. Is it difficult for you to sleep sometimes even when there is no noise disturbing you?

Yes No

3. Do you feel quite tired by the end of the day?

Yes No

4. Have you ever had a major operation?

Yes No

5. Do you often feel dizzy?

Yes No

6. Do your eyes get exerted when you see?

Yes No

7. Do you feel tired when you get up in the morning?

Yes No

8. Do you often have throat trouble?

Yes No

9. Do you often complain about sickening feeling or vomiting feeling?

Yes No

10. Were you sick for a long time in your childhood?

Yes No

11. Do you sometimes get strong headaches?

Yes No

12. Are you often absent from college due to sickness?

Yes No

13. Are you sometimes affected with skin disease?

Yes No

14. Are you always worried because of physical morbidity?

Yes No

15. Does your health always trouble you?

Yes No

16. Does the idea of being infected with a contagious disease often terrify (frighten) you?

Yes No

iii. Educational adjustments

1. Do you feel that many of your friends have better educational background than you in many subjects?

Yes No

2. Are you often worried because of your poor memory?

Yes No

3. Are you more interested in cinema actors than the learned people?
Yes No
4. Do you forget easily what you have read?
Yes No
5. Do you worry over what your future job will be?
Yes No
6. Do you feel that your friends get better results in the examination because they have better facilities.
Yes No
7. Is it difficult for you to grasp the subject matter taught in the class?
Yes No
8. Is it difficult for you to get your mind into studies?
Yes No
9. Is it difficult for you to write notes in the class?
Yes No
10. Do you know how to get ready for examination?
Yes No
11. Do you feel sleepy in class even after you have enough sleep during the night?
Yes No
12. Do you think of leaving the college sometimes?
Yes No
13. Do you have any doubts on the value of things you read?
Yes No
14. Is it difficult for you to express your ideas in writing?
Yes No

15. Do you think your teachers have no interest in you?

Yes No

16. Do you think you get encouragement from your teachers?

Yes No

17. Do you think that you have chosen subjects that are most appropriate for you?

Yes No

18. Is it difficult for you to keep up with the progress in class?

Yes No

19. Does it worry you that your teachers think of you less than you really are?

Yes No

H. Human Values

Below is a list of 36 values arranged in alphabetical order

Study the list carefully. Then place a 1 next to the value which is most important for you. Arrange them in order of your importance, as guiding principle in your life. Please take all the time you need to think about this, so that the end result is a true representation of your values.

i. Terminal values

- A comfortable life (A prosperous life)
- An exciting life (A stimulating, active life)
- A sense of accomplishment (Lasting contribution)
- A world at peace (Free of war and conflict)
- A world of beauty (Beauty of nature and the arts)

- *Equality (Brotherhood, equal opportunity for all)*
- *Family security (Taking care of loved ones)*
- *Freedom (independence, free choice)*
- *Happiness (Contentedness)*
- *Inner harmony (Freedom from inner conflict)*
- *Mature love (Sexual and spiritual intimacy)*
- *National Security (Protection from attack)*
- *Pleasure (An enjoyable, leisurely life)*
- *Salvation (Saved, eternal life)*
- *Self-respect (Self-esteem)*
- *Social recognition (Respect, admiration)*
- *True friendship (Close companionship)*
- *Wisdom (A mature understanding of life)*

ii. Instrumental values

- *Ambitious (Hard-working, aspiring)*
- *Broadminded (Open minded)*
- *Capable (Competent, effective)*
- *Cheerful (Lighthearted, Joyful)*
- *Clean (Neat, tidy)*
- *Courageous (Standing up for your beliefs)*
- *Forgiving (Willing to pardon others)*
- *Helpful (Working for the welfare of others)*
- *Honest (Sincere, Truthful)*
- *Imaginative, (Daring, Creative)*

- *Independent (Self-reliant, self sufficient)*
- *Intellectual (Intelligent, reflective)*
- *Logical (Consistent, rational)*
- *Loving (Affectionate, tender)*
- *Obedient (Dutiful, respectful)*
- *Polite (Courteous, well-mannered)*
- *Responsible (Dependable, reliable)*
- *Self-controlled (Restrained, Self-disciplined)*

I. Levels of Aspiration - Card sorting test

<i>Trials</i>	<i>Attainment</i>	<i>Aspiration</i>	<i>Difference</i>
1.			
2.			
3.			
4.			
5.			

Positive/Negative

APPENDIX III

THE SOCIO-ECONOMIC STATUS RATING SCALE

S. No.	Factor	Scores for urban	Scores for semi urban	Scores for Rural	
1.	Income	1. 1501 - above	12	15	12
		2. 1001 - 1500	9	12	12
		3. 750 - 1000	7	12	12
		4. 500 - 749	5	9	12
		5. 250 - 449	3	7	9
		6. Add for other income	+2	+1	+1
2.	Occupation	1. Labour - Dhobi, Cobbler, carpenter	-	-	1
		2. Peon/shop worker	-	1	1
		3. Elementary teacher, Postman, bus driver, nurse, bus conductor, carpenter, blacksmith, mechanics, police	1	2	3
		4. Clerk, high school teacher, pharmacist, TTE, Railway guard, driver	2	3	4
		5. Medium scale businessman, office manager, station master, police inspector, forest ranger, Inspector of schools	3	4	5
		6. Army JCO, large shop owner, medium scale agriculturist, Veterinary Doctor, Head master, deputy Tahsildar	4	5	6

	7. Lecturer, Tahsildar, BDO/DC TO, CI of police	5	6	7	
	8. Contractor, large scale agriculturist sub magistrate, district Munsif, engineer, doctor	6	7	8	
	9. Principal, district officers, CA, Lawyers, Bankers and University professors	10	10	10	
	10. All India services, zilla parishad chairman, MLA, MP, industrialist	10	10	10	
<hr/>					
3. Locality	1. Metropolitan Municipality GI Municipality GII	3			
	2. Taluk Head Quarters, Town	2			
	3. Big villages	1			
	4. Remote villages	0			
<hr/>					
		Father	Mother	B/S	Total
4. Education	Ph.D., MD., MS	15	15	8	38
	ME/Mr Sc/M.Sc., (Agri.)	14	14	7	35
	BE., CA., M.B.B.S.,	13	13	7	33
	MCA, MA., M.Com., M.Ed	12	12	6	30
	BL, Bv.Sc, B.Sc., (Agri.)	11	12	6	29
	BA./B.Ed./B.Sc.,	9	11	5	25
	LEE, LME, LCE	9	10	4	23
	BA., B.Sc., B.Com., BOL	8	10	3	21

APPENDIX IV
SCORING PROCEDURE

Eysenck Personality Inventory-Key

Extraversion		Neuroticism		Lie scale	
Q.No.	Score one for	Q.No.	Score one for	Q.No.	Score one for
1.	Yes	2	Yes	6	Yes
3	Yes	4	Yes	12	No
5	No	7	Yes	18	No
8	Yes	9	Yes	24	Yes
10	Yes	11	Yes	30	No
13	Yes	14	Yes	36	Yes
15	No	16	Yes	42	No
17	Yes	19	Yes	54	No
20	No	21	Yes		
22	Yes	23	Yes		
25	Yes	27	Yes		
26	Yes	28	Yes		
29	No	31	Yes		
32	No	33	Yes		
34	No	35	Yes		
37	No	38	Yes		
39	Yes	40	Yes		
41	No	43	Yes		
44	Yes	45	Yes		
46	Yes	47	Yes		
49	Yes	48	Yes		
51	No	50	Yes		
53	Yes	52	Yes		
56	Yes	55	Yes		
Total	24	Total	24	Total	8

- 1) a) 17 and above - Extravert
b) 7 and below - Introvert
- 2) a) 14 and above - Neurotic
b) 4 and below - Stable
- 3) If the total lie score is 5 and above reject the data

Scores assigned for calculating 'r' was as follows

Extraversion	Less than 7	-	1
	7 to 17	-	2
	More than 17	-	1

Neuroticism Less than 4 - 3
 4 to 14 - 2
 More than 14 - 1

Standard

Progressive matrices

Sets A, B, C, D & E

Score Sheet

Name _____
 Place _____
 Age _____
 Test begun _____

Date _____
 Birthday _____
 Test ended _____

Correct Answer

S.No.	A	S.No.	B	S.No.	C	S.No.	D	S.No.	E
1.	4	1.	2	1.	8	1.	3	1.	7
2.	5	2.	6	2.	2	2.	4	2.	6
3.	1	3.	1	3.	3	3.	3	3.	8
4.	2	4.	2	4.	8	4.	7	4.	2
5.	6	5.	1	5.	7	5.	8	5.	1
6.	3	6.	3	6.	4	6.	6	6.	5
7.	6	7.	5	7.	5	7.	5	7.	1
8.	2	8.	6	8.	1	8.	4	8.	6
9.	1	9.	4	9.	7	9.	1	9.	3
10.	3	10.	3	10.	6	10.	2	10.	2
11.	4	11.	4	11.	1	11.	5	11.	4
12.	5	12.	5	12.	2	12.	6	12.	5
	12		12		12		12		12

Time _____
 Total score _____
 Grade _____
 60

Tested by _____

Adjustment Inventory for College Students

Scoring

Each correct answer to be given one score. The answer schedule is given below:

i) Home Adjustment

Yes	No
1,	2, 7, 13,
10,	3, 8, 14,
15,	4, 9, 16,
	5, 11,
	6, 12

ii) Health Adjustment

Yes	No
-	1, 2, 3, 4, 5, 6, 7, 8,
	9, 10, 11, 12, 13, 14, 15, 16

iii) Educational Adjustment

Yes	No
10, 16, 17	1, 2, 3, 4, 5, 6, 7, 8,
	9, 11, 12, 13, 14, 15, 18, 19

APPENDIX V

STATISTICAL PROCEDURE

1. The Pearson's Correlation coefficient (r) is given as the ratio of covariance of the variables X and Y to the product of the standard deviations of X and Y. Symbolically,

$$r = \frac{\frac{1}{n-1} \sum (X-\bar{X})(Y-\bar{Y})}{\sqrt{\frac{1}{n-1} \sum (X-\bar{X})^2 \times \frac{1}{n-1} \sum (Y-\bar{Y})^2}}$$

r value is tested for its significance by using

$$t = \frac{r}{\sqrt{\frac{1-r^2}{n-2}}}$$

2. The problem of predicting the role of a dependent variable by incorporating a number of independent variables simultaneously is known as multiple regression analysis. The MLR form is given by

$$Y_j = a + b_1X_1 + b_2X_2 + \dots + b_nX_n + E$$

Where 'a' is the intercept, 'b's are the partial regression coefficients and E is the error term. The coefficient of multiple determination (R^2) explains the total contribution (variations) of the independent variables taken for the study. This R^2 is tested for its regression by using Analysis of variance.

Residual	P	R^2	S_r^2	S_r^2/S^2_e
Error	$n-P-1$	$1-R^2$	S^2_e	
Total	$n-1$	1		

For the significance of the b values t test is applied
 by $t = b/SE(b)$

$$t = \frac{\bar{X} - \mu}{s/\sqrt{n}} \sim t \text{ distribution } n-1 \text{ degrees of freedom}$$

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{S_1^2/n_1 + S_2^2/n_2}} \sim n_1 + n_2 - 2$$

APPENDIX VI

MULTIPLE REGRESSION ANALYSIS (A to H)

TABLE A

Overall skills as related with the other selected variables

Number : Each Group : 200

Groups	Variables	SES	Height	Weight	Extraversion	Neuroticism	Levels of aspiration	Home adjustment	Health adjustment	Educational adjustment	Intellectual capacity
Boys	b	-.4007	-.3167	-2.3806	1.5122	5.7001	-.0480	.6839	-1.1583	.0244	.0244
	Std Error	.9681	.1976	.2115	2.7971	3.2559	2.7201	.4506	.4800	.4069	.2179
	t	-.414	-1.602	-.268	-.851	.464	2.096*	-.107	1.425	-2.847**	.112
	r	-.053	-.110	-.057	-.069	.045	.117	-.091	-.027	-.195*	-.049
	R ²	.0885									
NCC	Ratio	1.835*									
	b	-.0234	-.1116	-.0088	-3.2245	-1.2899	1.023	-.3233	-.3836	.1968	.0994
	Std Error	.4121	.0981	.1469	1.8327	1.6837	.4244	.2740	.3259	.2218	.1249
	t	-.057	-1.137	-.060	-1.759	-.766	.718	-1.180	-1.177	.887	.795
	r	-.005	-.088	-.020	-.128	-.027	.061	-.116	-.156*	-.150*	.008
Girls	R ²	.0652									
	Ratio	1.318NS									
	b	.5525	.0471	-.0571	-.5254	.7190	1.8215	.8398	.2734	-.2617	-.1242
	Std Error	.8018	.1501	.1819	2.7066	2.9898	2.4458	.4059	.4095	.3956	.1574
	t	.689	.316	-.314	-.194	.240	.745	2.069	.668	-.662	-.789
Non	r	.055	.009	-.017	-.035	-.000	-.055	.149*	.658	-.032	-.657
	R ²	.0375									
	Ratio	0.736NS									
	b	-.5833	-.1192	-.2404	-3.2656	1.6981	1.8519	.2308	-.4100	-.0271	.1488
	Std Error	.5013	.1213	.2292	2.5895	2.7488	2.0568	.3532	.3642	.3075	.1278
NCC	t	-1.164	-.983	-1.049	-1.261	.681	.900	.653	-1.126	-.088	1.164
	r	-.090	-.100	-.072	-.088	.069	.086	.004	-.077	-.048	.073
	R ²	.0514									
	Ratio	1.025NS									

** - Significant at one per cent level; * - Significant at five per cent level; NS - Not Significant

TABLE B

Extraversion as related with the other selected variables

Number : Each Group : 200

Groups Variables	SES	Heart rate	BP systolic	BP diastolic	Respiratory rate	Height	Weight	Overall skills	Neuroticism	Levels of aspiration	Home Adjustment	Health Adjustment	Intelligence
b	.0078	-.0018	.0027	-.0102	-.0268	.0024	.0081	-.0012	.0750	.0649	.0098	.0268	.0053
Std Error	.0253	.0056	.0047	.0098	.0228	.0054	.0055	-.0019	.0848	.0719	.0119	.0126	.0057
t	.310	-.320	.572	-1.037	-1.173	.440	1.480	.621	.884	.902	.823	-2.120*	.930
r	.010	-.064	-.014	-.061	-.092	.065	.106	-.069	.055	.072	.006	-.119	.067
R ²	.0677												
F Ratio	.960NS												
b	.0072	-.0108	9.26097E-04	-.0024	.0067	.0058	-.0056	-.0050	-.0330	.0135	-.0117	-.0050	.0155
Std Error	.0167	.0057	.0035	.0056	.0132	.0039	.0058	.0029	.0666	.0571	.0109	.0129	.0049
t	.431	-1.908	.265	-.429	.509	1.488	-.970	-1.744	-.496	.236	-1.077	-.385	3.190**
r	.010	-.139*	.012	.011	-.002	.152*	-.058	-.127	-.029	-.019	-.065	.011	.225**
R ²	.1159												
F ratio	1.732NS												
b	-.0289	-.0051	-.0179	.0049	.0146	-.0020	-2.7677E-04	-3.9548E-04	-.0451	-.0310	-.0204	.0194	-2.38113E-04
Std Error	.0214	.0059	.0085	.0042	.0138	.0040	.0050	.0020	.0806	.656	.0111	.0109	.0107
t	-1.350	-.864	-2.091*	1.184	1.052	-.505	-.056	-.201	-.559	-.473	-1.846	1.774	-.022
r	-.094	-.100	-.155*	.064	.045	-.037	-.015	-.035	-.035	-.033	-.126	.112	.013
R ²	.0854												
F ratio	1.235NS												
b	.0150	-9.1573E-04	-.0032	.0055	.0115	-4.5735E-04	-.0017	-.0025	-.0027	-.1372	.0038	-.0109	-.0152
Std Error	.0141	.0040	.0026	.0036	.0155	.0034	.0066	.0021	.0772	.0574	.0100	.0103	.0036
t	1.062	-.228	-1.214	1.515	.741	-.133	-.266	-1.204	-.035	-2.390*	.385	-1.064	-1.761
r	.082	.018	.001	.081	.080	.010	-.024	-.088	.066	-.138*	-.098	-.138*	-.156*
R ²	.0976												
F ratio	1.429NS												

** - Significant at one per cent level; * - Significant at five per cent level; NS - Not Significant

TABLE C

Neuroticism as related with the other selected variables

Groups	SES	Heart rate	BP systolic	BP diastolic	Respiratory rate	Height	Weight	Overall skills	Aspiration	Home Adjustment	Health Adjustment	Educational Adjustment	Intelligence
	b	.0144	-1.8998E-04	.0010	-0.0094	2.21852E-04	-0.0050	8.59029E-04	.0338	-0.107	.0044	-0.0020	-0.0040
	Std Error	.0219	.0040	.0085	.0198	.0047	.0048	.0017	.0623	.0103	.0110	.0094	.0050
NCC	t	.657	-.047	.121	-.473	.048	-1.050	.519	.542	-1.044	.398	-.216	-.812
Boys	r	.049	-.024	.006	-.031	-.025	-.070	.045	.031	-.073	-.027	-.043	-.032
	R ²	.0255											
	F Ratio	.346NS											
	b	-.0071	8.50795E-04	-.0061	.0012	-.0028	-.0073	-.0025	.0546	-.0130	-8.0269E-04	-.0054	-5.4681E-04
	Std Error	.0185	.0039	.0062	.0145	.0043	.0064	.0032	.0629	.0120	.0142	.0098	.0055
NCC	t	-.384	.221	-.996	.081	-.638	-1.132	-.803	.869	-1.077	-.056	-.554	-.099
Girls	r	-.022	-.009	-.046	-.015	-.043	-.089	-.027	.083	-.080	-.052	-.070	-.029
	R ²	.0329											
	F ratio	.449NS											
	b	-5.8101E-04	.0098	-7.98231E-04	-.0034	-.0011	.0059	4.59516E-04	-.0527	-.0202	.0097	-.0050	-.0015
	Std Error	.0196	.0053	.0038	.0127	.0037	.0045	.0018	.0597	.0101	.0100	.0097	.0039
NCC	t	-.030	1.850	.209	-.271	-.300	1.306	.256	-.882	-2.007*	.967	-.519	-.395
Boys	r	.024	.125	.027	-.016	-.009	.102	-.000	-.039	-.133	.030	-.079	-.008
	R ²	.0611											
	F ratio	.859NS											
	b	-.0156	-.0017	-.0013	.0034	-.0049	-.0034	.0013	-.0508	.0054	-.0166	-.0028	-.0027
	Std Error	.0135	.0033	.0035	.0148	.0033	.0063	.0020	.0554	.0095	.0097	.0093	.0035
Non	t	-1.155	-.447	-.381	.230	-1.512	-.543	.641	-.918	.567	-1.703	-.338	-.771
NCC	r	-.101	-.044	-.010	-.002	-.106	-.029	.069	-.040	-.005	-.134	-.070	-.037
Girls	R ²	.0542											
	F ratio	.758NS											

** - Significant at one per cent level; * - Significant at five per cent level; NS - Not Significant

TABLE D

Intellectual capacity as related with the other selected variables

Number : Each Group : 200

Groups	Variables	SES	Order of birth	Height	Weight	Over-achievement	Failure	skill	Extraversion	Neuroticism	Levels of aspiration	Home Adjustment	Health Adjustment	Educational Adjustment
	b	-.4188	.1708	.1021	-.0993	.0027	.9848	-.8003	.7817	-.1789	.1270	-.2680		
	Std Error	.3226	.4626	.0662	.0705	.0243	.9362	1.0884	.9231	.1509	.1613	.1377		
NCC	t	-1.298	.369	1.542	-1.408	.109	1.052	-.735	.847	-1.185	.788	-1.947		
Boys	r ²	-.112	.013	-.058	.101	.049	.067	-.032	.066	-.170*	-.095	-.205**		
	F Ratio	1.649NS												
	b	.0382	.3922	.0418	-.1068	.0376	3.1415	-.0477	-2.0759	.0318	.0951	.0025		
	Std Error	.2409	.4904	.0576	.0856	.0426	1.0516	.9853	.8179	.1601	.1903	.1293		
NCC	t value	.159	.800	.726	-1.248	.885	2.987**	-.048	-2.538*	.199	.500	.020		
Girls	r ²	.024	.042	-.075	.060	.008	.225*	-.029	-.178*	.015	.054	.038		
	F ratio	1.804NS												
	b	.0611	.4946	.0557	-.0560	-.0276	-.8400	-.2009	.9673	-.1418	.2524	.2120		
	Std Error	.3705	.5245	.0699	.0844	.0335	1.2483	1.3809	1.1328	.1904	.1883	.1823		
Non	t value	.165	.943	.796	-.664	-.824	-.673	-.145	.854	-.745	1.340	1.163		
NCC	r ²	.027	.064	-.029	.043	-.057	-.034	-.008	.063	-.045	.089	.079		
Boys	F ratio	.636NS												
	b	.3310	.0863	-.1407	-.0292	.0481	1.8342	-1.2799	-1.2187	-.4966	.0138	-.0915		
	Std Error	.2857	.5418	.0686	.1307	.0412	1.4727	1.5642	1.1701	.1979	.2078	.1751		
Non	t	1.158	.159	-2.050*	-.223	1.166	1.245	-.818	-1.042	-2.509*	.066	-.523		
NCC	r ²	.086	-.004	-.037	-.138*	.073	.123	-.037	-.048	-.232**	-.091	-.138*		
Girls	F ratio	1.949*												

** - Significant at one per cent level
 * - Significant at five per cent level
 NS - Not Significant

TABLE E

Educational adjustment as related with the other selected variables

Groups	Variables	SES	Overall skills	Extraversion	Neuroticism	Levels of aspiration	Home adjustment	Health adjustment	Intellectual capacity
	b	.1350	-.0355	.1768	-.1025	.6715	.3897	.4846	-.0727
	Std Error	.1684	.0123	.4843	.5653	.4728	.0729	.0758	.0372
NCC	t'(Dt 191)	.802	-2.884**	.365	-.181	1.420	5.344**	6.390**	-1.952**
Boys	r	.090	-.196*	-.016	-.043	.072	.556**	.570**	-.205**
	R ²	.4678							
	F Ratio	20.985**							
	b	-.0989	-.0213	.5628	-.2980	.0110	.2590	.5954	3.6859
	Std Error	.1331	.0235	.5944	.5461	.4633	.0863	.0972	.0406
NCC	t'(Dt 191)	-.675	-.906	.947	-.546	.024	3.000**	6.126**	9.084**
Girls	r	-.009	-.150*	.061	-.070	-.059	.309**	.460**	.038
	R ²	.2611							
	F Ratio	8.435**							
	b	-.0764	-.0085	.1244	-.4768	-.6770	.1583	.0599	.0348
	Std Error	.1468	.0133	.4961	.5445	.4456	.0744	.0748	.0288
Non	t'(Dt 191)	-.520	-.636	.251	-.876	-1.519	2.129	.801	1.211
NCC	r	-.054	-.032	.013	-.079	-.110	.162*	.071	.079
Boys	R ²	.0566							
	F Ratio	1.433NS							
	b	.1306	-.0026	-1.0389	-.2497	-1.3163	.3925	.4239	-.0168
	Std Error	.1181	.0171	.6080	.6437	.4726	.0782	.0797	.0299
Non	t'(Dt 191)	1.160	-.152	-1.709	-.388	-2.785**	5.020**	5.317**	-.583
NCC	r	.024	-.049	-.156*	-.070	-.171*	.450**	.478**	-.138*
Girls	R ²	.3570							
	F Ratio	13.253**							

** - Significant at one per cent level

* - Significant at five per cent level

NS - Not Significant

TABLE F

Home adjustment as related with the other selected variables

Number : Each Group : 200

Groups	Variables	SES	Overall skills	Extraversion	Neuroticism	Levels of Aspiration	Health Adjustment	Educational Adjustment	Intellectual Capacity
	b	-.1032	4.8315	.4052	-.4685	-.0992	.2766	.3338	-.0424
	Std Error	.1559	.0116	.4474	.5222	.4399	.0747	.0625	.0347
NCC	't'(Dt 191)	-.662	.042	.906	-.897	-.225	3.702**	5.344**	-1.224
Boys	r	.020	-.091	.006	-.073	.025	-.488**	.556**	-.170*
	R ²	.3633							
	F Ratio	13.624**							
	b	-.1421	-.0195	-.6508	-.3839	-.2696	.1610	.1737	.0056
	Std Error	.1086	.0193	.4857	.4467	.3789	.0863	.0579	.0332
NCC	't'(Dt 191)	-1.308	-1.012	-1.340	-.859	-.712	1.866**	3.000**	.170
Girls	r	-.068	-.116	-.065	-.080	-.078	.258**	.309**	.015
	R ²	.1367							
	F Ratio	3.781**							
	b	-.1072	.0264	-1.0011	-.9771	-.1987	.1092	.1465	-.0241
	Std Error	.1411	.0127	.4717	.5200	.4309	.0717	.0688	.0277
Non	't'(Dt 191)	-.760	2.083*	-2.122**	-1.879	-.461	1.524	2.129*	-.868
NCC	r	-.040	.149*	-.126	-.133	-.036	.095	.162*	-.045
Boys	R ²	.0978							
	F Ratio	2.587**							
	b	-.0562	.0088	.1412	.2911	.4259	.1723	.2970	-.0658
	Std Error	.1030	.0148	.5329	.5598	.4182	.0733	.0592	.0256
Non	't'(Dt 191)	-.546	.593	.265	.520	1.018	2.352*	5.020**	-2.571**
NCC	r	.047	.004	-.098	-.005	-.004	.345**	.450**	-.233**
Girls	R ²	.2609							
	F Ratio	8.429**							

** - Significant at one per cent level

* - Significant at five per cent level

NS - Not Significant

TABLE 6

Health adjustment as related with the other selected variables

Groups	Variables	SES	Heart rate	BP systolic	BP diastolic	Respiratory rate	Height	Weight	Overall skills	Extraversion	Nurturism	Levels of aspiration	Home Adjust-ment	Educational Adjust-ment	Intelli-actual capacity
NCC	b	.0688	.0205	-.1066	.0365	.0245	.0151	.0299	.0153	-.8868	.1947	-.1686	.2556	.3553	.0341
	Std Error	.1456	.0323	.0562	.0268	.1320	.0310	.0317	.0110	.4183	.4890	.4148	.0658	.0567	.0331
	t' value	.472	.636	-1.897	1.364	.185	.487	.945	1.393	-2.120*	.398	-.406	3.882**	6.264**	1.032
	r	.063	-.012	-.118	-.090	.025	.050	.068	-.027	-.119	-.027	.036	.488**	.570**	-.095
	R ²	.4139													
F Ratio		9.331**													
NCC	b	.1693	.0066	.0081	.0026	-.0509	.0135	.0135	-.0819	-.1614	-.0214	-.2371	.1213	.2774	.0107
	Std Error	.0947	.0327	.0319	.0199	.0750	.0224	.0332	.0163	.4188	.3796	.3250	.0617	.0462	.0284
	t' value	1.789	.201	.255	.132	-.679	.604	.406	-1.156	-.385	-.056	-.729	1.966**	6.006**	.375
	r	.114	-.033	-.038	-.017	-.022	.024	.054	-.156*	.011	-.052	-.106	.258**	.460**	.054
	R ²	.2575													
F Ratio		4.583**													
Non	b	.1766	-.0671	-.0065	-.0074	-.0264	-.0260	.0059	.0078	.8616	.5186	.2399	.1253	.0478	.0462
	Std Error	.1428	.0389	.0279	.0575	.0925	.0268	.0331	.0131	.4858	.5360	.4372	.0738	.0710	.0285
	t' value	1.237	-1.724	-.234	-.129	-.285	-.972	.180	.595	1.774	.967	.549	1.699	.672	1.622
	r	.063	-.105	-.028	-.027	-.011	-.070	-.010	.058	.112	.030	.038	.095	.071	.089
	R ²	.0719													
F Ratio		1.024NS													
NCC	b	-.0663	-.0020	.0114	-.0173	-.0979	-.0124	-.0723	-.0195	-.5569	-.9319	-.1491	.1577	.3088	.0053
	Std Error	.1013	.0287	.0261	.0189	.1107	.0245	.0467	.0147	.5237	.5472	.4162	.0703	.0577	.0262
	t' value	-.655	-.068	.436	-.918	-.884	-.505	-1.549	-1.324	-1.064	-1.703	-.358	2.245*	5.352**	.201
	r	-.029	.019	.011	-.063	-.076	-.007	-.062	-.077	-.137	-.134	-.073	.345**	.478**	-.091
	R ²	.2889													
F Ratio		5.369**													

** - Significant at one per cent level; * - Significant at five per cent level; NS - Not Significant

TABLE H

Levels of aspiration as related with the other selected variables

Groups	Variables	SES	Overall skills	Extraversion	Neuroticism	Home Adjustment	Health Adjustment	Educational Adjustment	Intellectual Capacity
	b	-.0202	.0036	.0785	.0358	-.0027	-.0011	.0156	.0056
	Std Error	.0256	.0019	.0735	.0860	.0119	.0127	.0110	.0057
NCC	t'value	-.786	1.912	1.068	-.416	-.225	-.087	1.420	.987
Boys	r	-.058	.117	.072	.031	.025	.036	.072	.066
	R ²	.0400							
	F Ratio	.994NS							
	b	-.0292	.0027	.0350	.0848	-.0098	-.0123	2.6792	-.0152
	Std Error	.0207	.0037	.0930	.0851	.0138	.0166	.0113	.0062
NCC	t'value	-1.409	.724	.376	.996	-.712	-.744	.024	-2.439*
Girls	r	-.109	.061	-.019	.083	-.078	-.106	-.059	-.178*
	R ²	.0612							
	F Ratio	1.555NS							
	b	.0261	.0016	-.0342	-.0684	-.0056	.0067	-.0176	.0042
	Std Error	.0236	.0021	.0801	.0879	.0121	.0121	.0116	.0046
Non	t'value	1.105	.726	-.427	-.778	-.461	.554	-1.519	.911
NCC	r	.096	.055	-.033	-.039	-.036	-.038	-.110	-.063
Boys	R ²	.0328							
	F Ratio	.810NS							
	b	.0206	.0027	-.2047	-.0767	.0127	-.0024	-.0297	-.0036
	Std Error	.0177	.0026	.0908	.0965	.0125	.0128	.0106	.0045
Non	t'value	1.161	1.052	-2.255**	.794	1.018	-.184	-2.785**	-.801
NCC	r	.054	.086	-.138*	-.040	-.004	-.073	-.171*	-.049
Girls	R ²	.0794							
	F Ratio	2.058*							

** - Significant at one per cent level

* - Significant at five per cent level

NS - Not Significant

APPENDIX - I

NCC - TRAINING SYLLABUS/CAMPS

I. Syllabus

Subtopics for Different Groups				
S.No.	Topics	Army wing boys	Air wing boys/girls	Senior wing girls
1.	Introduction to defence services	Army, Navy, Airforce		Army, Navy, Airforce ranks equivalent
2.	System of NCC training	a) Institutional training b) Camp training		Same as in column two
3.	Foot Drill	1. General 2. Attention, stand at ease, stand easy, turning and inclining at the halt. 3. Sizing, forming up in three ranks, numbering, open and close order march and dressing. 4. Getting on parade, dismissing and falling out 5. Saluting at the halt. 6. Marching, length of pace and time of marching, marching in quick time and halt. 7. Turning at the March and wheeling. 8. Saluting at the March 9. Side pace, pace forward and to the rear. 10. Marking time, forward halt in quick time and changing step.	Same as in column two	Drill, turns, sizing, forming in three ranks, dressing, getting on parade, dismissing, saluting turning at the mark.
4.	Arms Drill/Squad Drill	1. Attention, stand at ease and stand easy. 2. Getting on parade with rifle and dressing at the order. 3. Dismissing and falling out 4. Ground and take up arms	Same as in column two	Drill with Arms, Guard mounting, guard of Honour, ceremonial drill.

5. Shoulder from the order and vice versa
6. Present from the order and vice versa
7. Saluting at the shoulder, at the halt and on the march
8. Short/long trail from the order and vice versa.
9. Examine arms
10. Guard mounting
11. Guard of honour
12. Ceremonial drill.

5. Weapon training rifle

Characteristics of rifle
Ammunition, stripping, assembling, loading and unloading, lying position, Aiming trigger control, Range procedure, Group and snap shooting, range firing.

6. Weapon training bayonet

On guard and hip firing, the training stick.

7. Weapon training light machine gun

Introduction and characteristics, loading unloading and sight setting, stripping and assembling piston group and barrel, stripping and assembling butt group Aiming, holding and firing mechanism, immediate action and stoppages, elementary Handling, range firing.

8. Weapon training sten machine carbine

Introduction and characteristics, stripping assembling and cleaning, loading, unloading and carriage, firing and immediate action drill.

Same

Same

as in

as in

column

column

two

two

9. Civil defence	Organisation, fire fighting, protection, home guards.	Organisation, fire and fire fighting operations, fire fighting equipment, Air raid, practice against bombing, raid rescue party, clearance of debris	Principles, warden's service, ABC warfare, psychological warfare, Air Raid warnings and problems of Air raid, psychological first aid, principles of protection and shelters problems of evacuation, emergency medical and health service, engineering and welfare service, fire fighting, role of woman in CD.
10. Self defence	General principles, precaution and training, vulnerable parts of the body, Attacking, Basic throws, release and counter attacks, disarming and counter attacking.	Unarmed self defence, vulnerable points of body, disabling blows.	General principles, precautions and training, vulnerable parts of the body, attacking, basic throws, counter attacks, marching.
11. Field craft	Visual training, recognition and description of targets, personnel camouflage and concealment, judging distance movement with & without arms, fire discipline and fire control orders.		
12. Battle craft	Field signals, description of ground, section formations, fire and movements, section battle drill, section post, simple verbal orders.		
13. Scouts and patrols	Scouts, patrols Ambush.		
14. Field engineering	Digging tools and drill for their uses, knots and lashes, field defences, obstacles.		

21. Airmanship		What airmanship implies, definition, rules of the air, squadron flying orders
22. Air navigation		Why pilot should study Navigation, lines on the earth, direction on the earth, reporting position on the earth, measurements of distance on the earth
23. Air craft recognition		Importance of air craft recognition, air craft recognition practices.
24. Aero - modelling		Origin of Aero - modelling, type of models, materials used glider model construction, trimming and flying of chuck gliders, catapult gliders construction of tow line gliders, tow line glider flying, wing designing
25. First aid	The principles of first aid structure and functioning of the body. Haemorrhage and fractures, Injuries to internal organs, Air raid casualties, first aid emergencies.	Structure and function of the human body, principles of first aid, first aid equipment bandages, first aid for haemorrhages, fracture dislocation, wounds, burns, artificial respiration, snake bite, insect bite.
		Same
		as in
		column
		two
26. Hygiene and sanitation	Personal hygiene, preventive diseases, water supply and purification, latrines, urinals, soakage pits and disposal of garbage.	Public health, purification of water, conservancy, refuse, communicable disease, water borne disease, disinfection, malaria, typhoid, Jaundice, diphtheria, worm infestation, T.B. Leprosy, diarrhoea, camp sanitation, oral hygiene, measles mumps, skin care.

15. Map reading	Introduction to map and conventional signals, topographical forms and technical terms, the grid system, cardinal points and type of bearings. The use of service protractor relief, Contours and gradients, setting a map and finding North, finding own position prismatic compass and its use	Same	Same
		as in	as in
		column	column
		two	two
16. Leadership training and motivation	Discipline and duty, duties of a good citizen, customs of the services, leadership traits, man management.		
17. Organisation of Indian Airforce and weapon training		History of IAF, role of IAF during peace, rank, badges services, introduction and characteristics of pistol, Revolver shooting, shooting.	
18. Principle of flight		Elementary mechanics, Principle of flight-atmosphere, venture effect and bernaullis theorem glossary of terms, pressure distribution lift/drag ratio curve, stall and stalling angle, characteristics of an ideal aerofoil, stright an level flight.	
19. Air craft components		Principle of flight, gliding stability.	
20. Airmanship		Airframe structure, main parts of air craft, contrets, landing gears and propellers.	

27. Ceremonial drill	Ceremonial drill with rifle, guard of honour, ceremonial parade.	Ceremonial drill with rifle, guard of honour, ceremonial parade.	Ceremonial drill with rifle, guard of honour, ceremonial parade.
28. Meteorology		Importance of meteorology in aviation, types of weather observations, weather charts and information, Effect of change of atmospheric pressure.	
29. Home nursing	-	-	Preparation of a sick room, care of the sick, application of heat and cold, care of infectious disease, principles of nutrition and dietetics, artificial feeding, management of child birth in home.
30. Child care	-	-	Introduction to child care anti-natal, post natal, care, growth and development, infant feeding, immunisation schedule, minor ailment, development of children.
31. Family welfare	-	-	Importance of family welfare, family welfare, education in schools and colleges, reproductive system and pregnancy methods of family planning for men and for women.
32. Administration	History of NCC, Aims, motto, NCC organisation, service etiquette, mess Terms and conditions of part time NCC officer and girl cadet Instructors, raising of unit. Enrolment and discharge of NCC cadets, promotion, unit accounts, camp accounts, discipline and power of officers.	Same as in column two	Same as in column two

33. Quarter master duties	Care and preservation of store, losses, discrepancies, stock taking.	Same	Same
34. Signals	Message writing, 10 line magnets exchange, operation procedure, connecting, single and multiple calls, principles of radio-telephony, radionet link sign, calling and answering RT procedure, establishing	as in column two	as in column two
35. NCC song, patriotic song, National Anthem	NCC song, patriotic song, National Anthem	NCC song, patriotic song, National Anthem	NCC song, patriotic song, National Anthem

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- Source : 1. Cadets' Hand Book - Senior Division Boys - Army Wing - By Directorate General NCC
2. Cadet's Hand Book - Girls Division Girls - Army Wing - By Directorate General NCC
3. Lesson plans - Senior Division - Air Wing - By Directorate General NCC

II. CAMPS

National Level Camps

- i. Annual Training Camps
- ii. Military Attachment Training Camps
- iii. Basic Leadership Camps
- iv. Advance Leadership Camps
- v. Vayu Sainik Camps
- vi. Nau Sainik Camps
- vii. National Integration Camps
- viii. Attachment Camps to Military Hospitals
- ix. Republic Day Camps

Adventure Activities

- i. Rock climbing training camps
- ii. Basic mountaineering course
- iii. Advance mountaineering course
- iv. Trekking
- v. Cycle expedition
- vi. Moped expedition
- vii. Micro light flying
- viii. Hang glyding
- ix. Para sailing

Social Service Activities

- i. Blood donation campaign
- ii. Tree planting
- iii. Pledge on eye donation, national integration, antiodowri,
- iv. Jathas for environmental awareness, human rights and good cause.

International Level Camps

- i. Youth exchange programmes with Canada, UK, Singapore, Bangladesh and Srilanka.