Before describing the method and procedure followed to verify the various hypotheses put forward, it would be desirable to have a glance on the area from where the subjects were taken for this purpose.

The study was conducted on the nursing personnel, employed in Nehru Hospital, attached to the Post-Graduate Institute of Medical Education and Research, Chandigarh. The Post-Graduate Institute (PGI) started functioning in 1962, with the following broad objectives: to train post-graduates
in all the important disciplines of medical sciences, to conduct research of the highest order, and to provide patient care of the highest standard in the country. It became an Institute of national importance by an Act of Parliament in 1967. P G I is now an autonomous body functioning under the Ministry of Health and Family Welfare, Government of India. In addition to imparting post-graduate medical and nursing education, the Institute also undertakes the training of medical technologists in many important fields, like Radio-diagnosis, Radio-therapy, Microbiology, Bio-chemistry, Bio-physics, Pharmacology, Ophthalmology, Pathology, Hematology, Hearing and Speech Therapy, and Operation Theatre Management. Today, P G I is regarded as an island of excellence in the medical world, and is a name to reckon with both nationally and internationally.

Nehru Hospital attached to the Institute has an ever-increasing inflow of patients, from various states including Chandigarh, Panjab, Haryana, Himachal Pradesh, Jammu and Kashmir, Rajasthan, Uttar Pradesh, and even far off places like Tamil Nadu, Kerala, Karnataka, Orissa, Bihar, Bengal, and Maharashtra for specialised medical treatment. This is quite evident from the number of patients attending the hospital. During the year 1980-81, 5,66,395 patients attended the out-patient departments as against 5,31,512 during 1979-80. The number of admissions was 24,674-
against 22,742 during the previous year. These figures indicate the popularity of this hospital and the fine image it has created on the national scene. The official bed-strength of the hospital is 774, but the large number of emergencies that have to be admitted, has pushed this figure to 818. An increase of 1,932 admissions during the year represents only a part of the increase in the number of patients who were looked after in the hospital, as with the cooperation of the faculty, nursing staff and para-medical staff, many patients were investigated in the out-patient departments.

The nursing department of the Nehru Hospital is very well-planned and highly organised, manned by highly skilled and experienced nursing personnel. The Organisation Chart of Nursing Services of Nehru Hospital is produced here for understanding the line of authority and the strength of the nursing personnel (given in parentheses).

The duties of Ward sister and Staff nurse are different. The former holds the supervisory/administrative position, whereas the latter is responsible for providing direct nursing care to the sick people, round the clock. The duties and responsibilities of the Ward sister and the Staff nurse have been given in their respective job descriptions, which follow hereafter.
ORGANISATION CHART OF NURSING SERVICES

MEDICAL SUPERINTENDENT
  1

NURSING SUPERINTENDENT
  1

JOINT NURSING SUPERINTENDENT
  1

MATRON
  1

CLINICAL NURSE SUPERVISOR
  10

WARD SISTER
  70

STAFF NURSE
  403
Job Description of Ward Sister

The Ward sister is a professional nurse who is responsible for an organised hospital unit within which nursing care is directly or indirectly provided. Her functions are those relative to patient care and those relative to unit management. These are:

Patient Care:
1. Plans to meet total nursing needs of the patient.
2. Allocates the type and the amount of care to meet the individual needs of each patient.
3. Supervises all nursing activities related directly and indirectly to patient care.
4. Evaluates the effectiveness of patient care.
5. Promotes the improvement of patient care.
6. Gives direct nursing care to patients when judged advisable.
7. Is responsible for the execution of doctor's orders.
8. Is responsible for the accurate reporting and recording of patient's symptoms, reactions, and progress.
10. Interprets community resources available for continuity of patient care.

Unit Management:
1. Plans for an environment that is conducive to the physical, spiritual, and emotional well-being of patients and personnel.
2. Participates in formulating, interpreting, and implementing objectives and policies of nursing service.
3. Promotes good inter-personal relationships.
4. Evaluates the effectiveness of nursing service in the unit.
5. Promotes the improvement of nursing service in the unit.
6. Evaluates the work performance and attributes of nursing personnel.
7. Plans for and participates in the continuous learning experiences of nursing personnel.
8. Promotes personal growth and development of personnel.
9. Participates with supervisor of nursing service administrator in planning for the unit budget.
Institutional Objectives:
1. Coordinates the service of the nursing personnel in the unit with other hospital departments.
2. Cooperates in overall educational research programmes.
3. Participates with administration in establishing standards of patient care, policies, and objectives.
4. Interprets hospital objectives and policies to staff, patients, family and community.

The qualifications for practice for a Ward sister should be:

Professional:
1. Graduation from a state accredited school of nursing.
2. Currently licenced to practice professional nursing.
3. Additional educational preparation is desirable.
4. Progressive experience in the nursing field with at least one year's experience as a general duty nurse.
5. Active participation in the professional nursing organisation.

Personal:
2. Possesses those personal qualities desired in a professional nurse.
3. Maintains optimum physical and emotional health.
4. Demonstrates knowledge and competence in area of practice.
5. Exercises good judgement.
6. Possesses the ability to recognise and understand the common needs of all individuals.
7. Possesses qualities of leadership.
8. Demonstrates knowledge of and ability to apply principle of administration, personnel supervision and teaching.
9. Communicates in an effective manner.
10. Maintains an up-to-date knowledge of current trends and new developments.
11. Applies to the current situation new concepts, knowledge, and skills gained from education and experience.
Job Description of Staff Nurse

The functions of the Staff nurse are much broader than they were twenty years ago. Among her functions are:

I. The Staff nurse is aware of the total nursing needs of the patient and is responsible for seeing that they are fulfilled.
   1. Prepares, administers, and supervises a patient-care plan for each patient in the group for which she is responsible.
   2. Applies scientific principles in performing nursing procedures and techniques through constant evaluation in the light of nursing and medical progress.
   3. Performs therapeutic measures prescribed and delegated by medical authority.
   4. Continuously evaluates symptoms, reactions, and progress.
   5. Assists in patient education and rehabilitation, including the promotion of mental and physical health.
   6. Assists in the provision of optimum physical and emotional environment.
   7. Teaches and directs non-professional nursing personnel for whom she or he is assigned responsibility.

II. The Staff nurse participates in the administration of nursing service in a general or special hospital.
   1. Interprets philosophy, aims, and policies of hospital administration to:
      a. Patients and family.
      b. Hospital personnel.
      c. Allied health groups.
      d. Community.
   2. Participates in intra- and inter-departmental activities designed to assist the hospital and nursing administration in improving the service of the hospital.
   3. Establishes and maintains good inter-personal relationships.
   4. Coordinates the objectives and aims of nursing service.
   5. Assumes responsibility for contributing to the educational programme of any student who is having clinical experience under the nurse's guidance.
   6. Contributes to the improvement of nursing care.
III. Fulfils community obligation as a citizen and a nurse.
   1. Assumes responsibility for professional growth and development.
   2. Assumes responsibilities and obligations of citizenship.

Among the qualifications of Staff nurse are:

Professional:
1. Graduation from a state accredited school of nursing with a current licence to practice professional nursing.
2. Evidence of interest in continuous professional growth.

Personal:
1. Appreciation of the value of professional general duty nursing in the care of the patient.
2. Maintenance of optimum physical and emotional well-being.
3. Competence in the area of practice in which the nurse functions.
4. Ability to plan for and evaluate total nursing care.
5. Possession of personal qualities that make it possible for the nurse to maintain good interpersonal relationships; examples of these are kindness, sympathy, understanding, interest in and respect for people as individuals, good judgment, integrity, loyalty, and sense of humour.
6. Evidence of knowledge and ability to use recognised channels of communication.
7. Evidence of knowledge of new trends and developments in the field of nursing based on research.
8. Interest in the profession of nursing as evidenced by membership and active participation in professional nursing organisations.
9. Demonstrated interest and willingness to participate in community affairs.

Population for the present study:
Ward sisters and Staff nurses, as described above, having ten years and three years professional experience (respectively), high proficiency in Hindi, and who consented to participate.
in this investigation, formed the population of this study.

Sample:
Since the number of Ward sisters and Staff nurses was not too high, it was decided to recruit at least 50 Ward sisters and 250 Staff nurses. No specific selection was made. The nursing personnel were approached, as and when they were available. Those who fulfilled the criteria, were included in the sample.

Tools:
Following tools were used to collect the data for the verification of the hypotheses.

1. Tripathi Personal Preference Schedule (TPPS).
2. I P A T Anxiety Scale.
3. Index of Job Satisfaction.

Description of tools:
It is imperative to have a comprehensive and detailed understanding of the tools used in the present study. The description of the various tools is presented here for the above-said purpose.

Tripathi Personal Preference Schedule (1973):
Tripathi Personal Preference Schedule (TPPS) is a multi-trait scale of 15 normal personality variables, viz., Achievement, Deference, Order, Exhibition, Autonomy, Affiliation, Intracception, Succorance, Dominance, Abasement, Nurturance, Change, Endurance, Hetero-sexuality, and Aggression. These
manifest needs have been suggested by Murray (1938) and adopted by Edwards (1959). Personality statements of these variables have been modified by Tripathi and the statements have been thoroughly scaled on the undesirability–desirability continuum by the method of successive categories based on the judgments of college students of the Hindi speaking areas. Then pairs of statements matched on the basis of their social desirability scale values (SDSVs) have been prepared. Each pair constitutes an item of the scale. Thus the Social Desirability variable has been brought under adequate control.

TPPS is a forced-choice scale with the Social Desirability variable controlled, providing measures of 15 normal personality variables and a measure of test consistency with its items scaled fully under Indian conditions.

TPPS consists of 225 items (paired statements) with 15 items not to be scored. It takes around 50 minutes to complete the TPPS, or a little longer. There is no time limit, but the subjects are asked to work rapidly.

A test of internal consistency, following Edwards and Thurstone (1952), was applied which yielded an average discrepancy of .019, indicating good fit and comparing favourably with the one (.023) reported by Edwards (1953).

During the process of finding the
suitability of this test for the investigation, it was found that nursing personnel were secretive of their Hetero-sexual need, might be because of social-cultural reasons or fear of social repercussions. It was, therefore, decided to drop the items related to the Hetero-sexual need. Thus, T P P S test, representing 14 needs except the Hetero-sexual need, was administered.

The detailed description of the needs has already been given in the chapter of Theoretical Orientation.

The T P P S manual was followed for scoring and interpreting the data.

I P A T Anxiety Scale (1963)

The IPAT Anxiety Scale was developed by Cattell and Scheier from their extensive research and practice. It is a brief, non-stressful valid questionnaire for measuring anxiety. It is applicable to the ages 14 and above, but not for the lowest educational levels. It can be self-administered as well as can be administered on large groups.

The IPAT Anxiety Scale consists of 40 questions, which have been drawn from the factors of 16 P F Questionnaire. These five factors (Q3-; C-; L; O; Q4-) group together as Anxiety components. Out of 40 questions, 20 questions are meant for measuring covert (hidden)
anxiety and other 20 questions for overt (symptomatic) anxiety. Each question has three alternative answers.

Cattell and Scheier have reported a test-retest reliability (one week interval) of .93 and an internal consistancy reliability of .91 for the test.

There are a number of tests available for the measurement of anxiety. The investigator was in a privileged position to choose one of them for this investigation. Amongst the group of Anxiety tests, IPAT Anxiety Scale was the briefest and simple in language. Though the Hindi version of this test is available, the language of the test was found to be difficult, when tried on the population.

According to Pareek and Rao (1974)
"There are in all 10 instruments located that measure anxiety. Five of these are adaptations, and the rest originals. However, even the few originals seem to take quite a bit from foreign instruments. Much information on the standardisation of these adaptations is not available."

The above considerations weighed with the investigator to use the original IPAT Anxiety Scale (1963), instead of any Indian adaptation.
Index of Job Satisfaction

This test was developed by Srivastava in 1974, to determine the relationship between need satisfaction and job satisfaction. It consists of 14 items in simple English language. Srivastava claimed that the test was highly reliable and valid.

Normally, there are two approaches to measure job satisfaction. These approaches may be termed as the "global" approach and the "summation" approach. The global approach is concerned with eliciting generalised, undifferentiated evaluations of the job or vocation, whereas the summation approach elicits the reactions or attitudes of the individual to specific aspects of the work situation, which are then summated to obtain an overall index of liking or disliking. Srivastava's Index of Job Satisfaction has been constructed on the global approach in measuring job satisfaction.

Before using this test in the present investigation, reliability, validity and practicability of this test was ascertained locally. For reliability purposes, the test was administered to 15 clerks working in PGI. They were retested after a gap of two weeks. The test-retest correlation was found to be .87. For the purpose of validity, 20 cases with below average A C R's and not happy with their jobs and other 20 cases with excellent A C R's and well
adjusted with their jobs, were administered this test. Significant differences were observed in their performance on the test. Each of the subjects was asked to tell if there was any difficulty in understanding the items or in giving the reply. It was found that 3 persons, who were matriculates, reported some difficulty in understanding the import of two questions.

Thus, the Index of Job Satisfaction was considered sufficiently practical, reliable and valid test for the purpose of this study.

Further, the Index of Job Satisfaction was primarily developed for ascertaining the relationship between need satisfaction and job satisfaction. This is the only test available which was developed to understand the relationship between need satisfaction and job satisfaction. This consideration weighed with the investigator to select this test for tapping the area of job satisfaction in this study.

Procedure for Data Collection:

The investigator is a faculty member of the Post-Graduate Institute for the last 15 years. He knows almost all the nursing personnel of the hospital personally. Still an official list of Ward sisters and Staff nurses was obtained from the hospital administration. Each person was contacted personally during the morning hours at the time of duty shift. All the Ward sisters and Staff nurses,
working in a particular ward, were screened for their suitability for inclusion in the study. The suitable subjects were requested to help the investigator in his research work. When the subjects consented, a time and place convenient to the subjects, was fixed. The investigator visited them at the appointed place or he waited for them in his office. In one day, not more than two such appointments were fixed. Each subject thus contacted, was administered three tests in the following order, after giving them assurance of confidentiality.

a. TPPS
b. Anxiety Scale
c. Index of Job Satisfaction

In the end, the subjects were requested to be secretive about the type of tests they had taken. After the subject had completed the tests, her name was ticked on the list, in order to avoid any duplication. This procedure was continued ward after ward, till the requisite number of subjects was recruited in the two groups of Ward sisters and Staff nurses.

The protocols of the tests were scored as per laid-down procedure for the respective tests.

Statistical Procedures:

Demographic characteristics, i.e., Age, Education, and Length of service of the two groups of the subjects were compared, using t test.
For finding out differences in the scores of Ward sisters and Staff nurses on the various need variables, t test was used.

The hierarchical order of needs based on percentile scores was arranged. The ranking was given for each need, in the two groups of subjects, separately. Then rank-order correlation was determined to find out the association of hierarchy of needs of the Ward sisters and Staff nurses.

Similar procedure was used for assessing the association of hierarchy of needs of Staff nurses with general population, i.e., norms as given by Tripathi and Edwards.

Correlations of need variables with age, education, and length of service were worked out by using Pearson's Product Moment method. The correlations of the two groups were compared by t test.

In both groups, subjects were arranged according to their scores on anxiety test. The lowest one-third group is hereafter called low-anxiety group, the middle one-third is called the middle-anxiety group, and the upper one-third is called the high-anxiety group. The mean scores on need variables obtained by the low, middle, and high anxiety groups were compared by using Student's t test.

Similar procedure was followed to find out
differences in the scores of needs of low, middle, and high job satisfied subjects.

Pearson's Product Moment coefficient of correlations were determined to find out the inter-correlations of need variables, and correlation matrix for Ward sisters and Staff nurses were prepared. McQuitty Elementary Linkage Analysis was done to determine the clustering of various needs and to find out how age, education, and length of service are related with these clusters. This was done separately for Ward sisters and Staff nurses.