CHAPTER-II

Methodology
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Research in every discipline is a ceaseless effort in search of solutions of the problems of varied nature to add something new to the existing body of knowledge concerning to the variables so that it should be carried out in a systematic manner. A social science researcher should be careful in his/her planning taking into the vital steps that are essentially required to make research investigation more scientific in order to draw some meaningful conclusions. Research investigator has to utilize standard procedure employing adequate sampling technique, selecting standardized and valid tools and applying appropriate statistical tests for data analysis.

The present study was planned to see the impact of emotional competence, self-esteem and social support on need achievement of visually and physically challenged students. In this study it was intended to ascertain the need achievement of the students who are visually and physically challenged and also a group of normal students was included in order to compare these groups regarding emotional competence and its 3 dimensions namely (i) perception and understanding emotions, (ii) expression and labeling emotions and (iii) managing and regulating emotions; self-esteem; and social support and its 3 dimensions namely (i) family Support, (ii) friends support and (iii) significant others support.

Emotional competence, self-esteem and social support have been studied as independent variables and need achievement as dependent variable.

Design

It was therefore necessary to have a design which would appropriately study the prediction of need achievement vis-à-vis these 7 variables. The research design used by the researcher was therefore correlational in nature and multiple comparison
group design. For prediction of need achievement by the 7 variables, stepwise multiple regression was used by the researcher. One way ANOVA and post hoc was used for the multiple comparisons between the groups.

The details of the methodological steps involved in completing this small piece of research are as follows:

**Sample:**

Drawing of sample through random procedures is undoubtedly desirable but even in pure experimental research it is a difficult proposition. According to Broota (1989) "randomization is necessary to ensure validity of independence assumptions, in practice, it is generally difficult to follow dictates set forth by the theory of random sampling. Usually we include, as subjects those members of the population that are easily accessible to us." In social science researches sample size is generally large to make the study more authentic. It is therefore, advisable that the researcher should draw subjects at random from those subjects that are easily accessible to him/her.

The selection of sample for this research was a difficult task because of lesser accessibility of visually and physically challenged students. Therefore the sample size of this study could not be as large as desired. Therefore in the present research investigation we have to put limit on the size of the sample within the reach of the investigator. The sample size is very important for scientific research but the sample of this study involves special type of group thus sample size is sufficient for this type of research work. Thus due to non availability of large number of individuals as per requirements of the study we have put the limit of 100 students in each group. The total sample comprised of 300 subjects (100 visually challenged students, 100 physically challenged students and 100 normal students). The respondents were
drawn by the means of purposive sampling technique. The data was collected from various secondary and senior secondary schools and also from students pursuing for graduation degree from the University campus and also from some schools located in Aligarh city. Physically challenged students were selected from Orthopaedic OPD of JNMCH and also from various halls of residence including various secondary as well as senior secondary schools of A.M.U. Due to lesser number of availability of visually challenged students we have included those students residing in the hostel of a Blind School of A.M.U. Where as sample of normal students comprised of students studying in schools as well as in the University upto graduation level were included in this group. To equate the characteristics the sample of normal students with that of visually challenged and physically challenged students was selected from almost the same socio-economic background and educational qualification. The age range of the normal students was 14-19 and the age range of the disabled students was 15-22. Most of the cases in the physically challenged group were polio affected where as among visually challenged most of the cases were acquired at certain age due to infection and some of them were congenital too.

**Sample structure:**
Keeping in view the objectives of the study the following measures were used for data collection—

- Achievement Motivation (n-ach) Scale
- Emotional Skills and Competence Questionnaire
- Rosenberg Self-Esteem Scale
- Multidimensional Scale of Perceived Social Support

For visually challenged students all the four scales were transformed into Braille.

**Description of the Tools used:**

1. **Achievement Motivation (n-ach) Scale:** It is a self-rating questionnaire developed by Pratibha Deo and Asha Mohan (1985) having both positive and negative items. It consists of 50 items, comprising of factors such as Academic motivation, Need for achievement, Academic challenge, Achievement anxiety, importance of grades/marks, Meaningfulness of task, Relevance of school/college to future goals, Attitude towards education, Work methods, Attitude towards teachers, Interpersonal relations, Individual concern, General interests, Dramatics and Sports etc. Out of 50 items 13 are negative and 37 are positive items. This questionnaire can be administered in a group as well as individually with 5 points to rate viz Always, Frequently, Sometimes, Rarely and Never. In the present research the test was administered individually. It has no time limit.

   As reported in the manual the test-retest method was applied to determine the reliability coefficient of the scale. Taking different sets of sample; the administration of the scale was repeated on several occasions. The present scale reliability coefficients by test-retest method for the total group as well as for the separate male and female groups are very satisfactory and the scale can be taken as quite reliable.
As far as the validity of the scale is concerned, in the first instance the item validity established by the high-low discrimination method was accepted as the validity of the whole measure. Besides, this scale was also used for validating the projective test of Achievement Motivation. The coefficient of correlation between the scale and the projective test was observed to be 0.04 which speaks for the scale also, the validity being of the concurrent nature. Finally the scale scores were also correlated with the scores obtained by administering the Aberden Academic Motivation Inventory of Entwistle (1968) yielding a coefficient of correlation as 0.75 for a mixed sample of 93: this correlation is high enough to establish the validity of the scale. Regarding the r of 0.54 between the scale and the projective test, McClelland (1958) explains that self-descriptive and projective measures are usually not correlating high with each other. Even Carney (1966) observed that questionnaires measures correlated poorly with McClelland's projective measures. These explanations support the results of present scale of achievement motivation to be sufficiently valid for use for measuring achievement motivation.

Two stencil keys are to be used for scoring one for positive items and one for negative items. A positive item carries the weights of 4, 3, 2, 1 and 0 respectively for the categories of Always, Frequently, Sometimes, Rarely and Never. The negative item is to be scored 0, 1, 2, 3 and 4 for the same categories respectively. Separate keys for positive and negative items are provided. The total score is the summation of all the positive and negative item scores. The minimum and maximum score as given in the manual can be obtained between 0 (zero) to 200.
2. Emotional Skills and Competence Questionnaire: developed by Taksic (2000). It is a self reported scale consisting of 45 items divided into three subscales: a) Perception and Understanding emotions scale has 15 items, b) the Expression and Labeling emotions scale has 14 items and c) the Managing and Regulating emotions scale has 16 items. Responses to be rated on a 5 point Likert-type scale, i.e. Never, Seldom, Occasionally, Usually and Always. The scoring procedure was simple stencil type having a numerical weightage from 1 to 5. Responses were added on each dimension to get the total score on all the three dimensions and the total score on ESCQ was calculated by summing up the scores of dimensions. Originally it was developed in Croatian settings using theoretical basis from the emotional intelligence model (Mayer & Salovey, 1997). Target samples were mainly high school and university students, and the Questionnaire was also administered on the samples of older subjects like workers and supervisors. The correlation among subscales is positive (0.35-0.55), and allowed computing overall ESCQ score. The reliability of coefficients of the three subscales was between 0.85 to 0.90 for Perception and Understanding emotions scale, 0.79 to 0.82 for the Expression and Labeling emotions scale and 0.71 to 0.78 for the Managing and Regulating emotions scale respectively. The reliability of three subscales and ESCQ was mainly satisfactory in all the samples, with somewhat less values for subscale of managing and regulating emotion. There were many correlations with relevant construct performed in searching for convergent-divergent validity. In regards to prognostic validity of emotional intelligence and competence, the strongest observed relationship was with the quality of leadership, and life satisfaction. ESCQ was usually positive correlated with positive outcomes like well-being, life satisfaction, and resiliency. The Cronbach’s alpha was further calculated by the present researcher and was found to be 0.83.
3. **Rosenberg Self-Esteem Scale**: (RSE; Rosenberg 1965) is a unidimensional adequate test to measure global self-esteem. It was designed on the pattern of Guttman scale, and the RSE items were designed represent a continuum of self-worth statements ranging from statements that are endorsed even by individuals with low self-esteem to statements that are endorsed only by persons with high self-esteem. Rosenberg (1965) scored his 10-question scale that was presented with four response choices, ranging from strongly agree to strongly disagree, as a six-item Guttman scale. The first item included questions 1 through 3 and received a positive score if two or three of its questions were answered positively. Questions 4 and 5 and questions 9 and 10 were aggregated into two other items that were scored positively, if both questions in the item had positive answers. Questions 6 through 8 counted individually formed the final three items. For the negatively worded RSE questions, responses that expressed disagreement and, hence, were consistent with high self-esteem, were considered positive or endorsed. Five items were reverse scored, items ratings are summed. Scores of a subject can range from 0-30; higher scores indicate higher self-esteem (Wylie, 1989). Rosenberg (1965) demonstrated that his scale was a Guttman scale by obtaining a high enough reproducibility and scalability coefficients.

Multiple studies have been conducted to investigate the validity and reliability of the RSE. Wylie (1989) reported coefficient alphas ranging from 0.74 to 0.87 and test-retest reliabilities ranging from 0.63 to 0.91 across studies. In terms of validity, RSE scores have been linked negatively to depressive affect, anxiety, psychosomatic symptoms and interpersonal insecurity (Wylie, 1989).

4. **Multidimensional Scale of Perceived Social Support (MSPSS)** developed by Zimet, Dahlem, Zimet and Farley, 1988. It contains 12 items measure of subjectively assessed social support. It measures three different sources of support with three
subscales: (a) Significant Others, (b) Family and (c) Friends. Responses are fully rated on a 7 point Likert-type scale, and range between a low-point anchor of very strongly disagree to a high-point anchor of very strongly agree. The scores on all the three dimensions of a subject will range between 1-28. The Significant Other subscale does not assume the presence of such a person but rather the perceived presence or absence of such a person/ support. Sample items include “There is a special person who is around when I am in need” (Significant Other subscale), “I get the emotional support I need from my family” (Family subscale), and “I can count on my friends when things go wrong” (Friends subscale). Responses were added on each dimension to get the total score on all the three dimensions.

Using data from university undergraduates (n = 275; 49% females, 51% males), the authors of the scale reported internal reliability for the total scale to be 0.88, and 3 month test-retest reliability was reported to be 0.85 (Zimet et al., 1988).

In reporting construct validity using the same undergraduate sample, Zimet et al. reported statistically significant relationships of the Family, Friends and Significant Other subscales with a measure of psychological distress in the expected directions (the Hopkins Symptom Checklist; Derogatis, Lipman, Rickels, Ulenhuth and Covi, 1974). The Family subscale was inversely related to both depression (r = -.24, p< .01) and anxiety (r = -.18, p< .01); the Friends subscale was inversely related to depression symptoms (r = -.24, p< .01); and the Significant Other subscale was also inversely related to depression (r = -.13, p < .05), as was the scale as a whole (r = .25, p < .01). Clara, Cox, Enns, Murray and Torgrude (2003) reported a confirmatory factor analysis of the MSPSS, using two separate samples: one of university students (n = 549; 42% male, 58% female), another of psychiatric outpatients (n = 156; 35% male, 65% female) in a mood disorders clinic. Their results supported the three factor
structure of this measure for both samples \([GFI = .95 \text{ (students)} \text{ and } .90 \text{ (outpatients)};\]
adjusted \(GFI = .92 \text{ (students)} \text{ and } .85 \text{ (outpatients)}\) Comparative Fit Index (CFI) = .97
for both samples; root mean square error of approximation (RMSEA) = .07 \text{ (students)}
.08 \text{ (outpatients)}.\) Internal consistency reliability for the total scale in the sample was 0.89. The present researcher further calculated Cronbach’s alpha and it was found to be 0.87.

Data Collection Procedure:

The present investigator approached the Coordinator of Disability Unit of Aligarh Muslim University where records of such type of students are maintained to obtain relevant information about visually and physically challenged students studying in various classes and dwelling in various hostels of the University. At the outset, prior to data collection the investigator took consent of the School Authorities. The present investigator first of all contacted the teachers to get in touch with the respondents.

One student was contacted at a time and standard procedure was used to gather relevant information. Utmost care was taken with the help of the Principal and teachers concerned to reduce the possibility of disruption while the data collection was in progression. The investigator received the respondents with a smile and asked them to sit at ease on the seat. The investigator spoke a few customary sentences in straightforward language to remove any suspicion or hesitation from the mind of the respondent to arouse the interest and to get cooperation.

Administration of questionnaire is one of the most important activities in the conduct of research. It has to be conducted with sensitivity and because the respondents serious and genuine reactions will come if rapport is properly established and confidence in the researchers’ integrity and respect for confidentiality is also created, the researcher made sincere and concerted efforts in this direction as disabled subjects
are very sensitive, shy and inhibited in giving responses. In order to make the questionnaires easily comprehensible for the visually challenged students the questionnaires were transformed in 'Braille' with the help of Braille Section of the Maulana Azad Library of Aligarh Muslim University, Aligarh. The questionnaires in Braile were given to visually challenged students. They read themselves all the statements given in the questionnaires as per instructions and the responses given were recorded by the researcher herself. For the collection of data the investigator established good rapport with the respondents. The respondents were assured that their responses will be kept confidential and will be used for research work only. The respondents were instructed individually to read each statement carefully give their response by encircling only one alternative response against each statement. If anything is written vaguely, they were told to make the same comprehensible by inquiring from the investigator, each and every point regarding completion of the questionnaires were explained in simple language. If there was any query it was clarified at the same moment. The questionnaires were administered individually after establishing a healthy and trustworthy relationship. If any subject made queries about any statement was helped. The questionnaires on which responses desired were not very long, so that the respondents did not show any difficulty, because the researcher created a conducive and interactive environment to get the questionnaires completed.

The administration of questionnaires on visually and physically challenged students was a great learning experience for the present researcher. It was a time taking venture to motivate respondents and to ensure that they all understand what is being asked, all the precautionary measures were taken to this research work to the possible extent free from lapses. On an average one respondent took 40-50 minutes in completing their responses on the need achievement, emotional competence, self-esteem and social support scales and only 3-4 children could be tested in one day. The
investigator checked up to ensure that each subject had worked out the questionnaires in the approved manner. The children were parted with thanks and appreciative comments for their earnest involvement in the test. The teachers were thanked for their unconditional co-operation and assistance.

For this kind of research ethical considerations play important role. The following steps were taken in order to fulfill ethical issues- in this research confidentiality and anonymity were respected. The information given was kept safe and was not used unfairly. The subjects were convinced that the results will have no personal consequences against them. The researcher is obliged to maintain the confidentiality. The subjects participated voluntarily; no one was forced to participate. There was no payment for completing the survey. Students were free to withdraw anytime they feel like without any penalty/ adverse remark.

Statistical Analysis

Tabulation of data was done very carefully for analyzing the data. Once the data were collected, researcher transformed and summarized data so that results can be interpreted and communicated in a brief comprehensive manner. So, statistical methods are very important. Statistics, using the probability theory and mathematics simply make the process more exact. In other words it is to say that through statistics we always make inferences, attach probabilities to various outcomes or hypotheses and make decision on the basis of statistical reasons. Selection of an appropriate statistics is very important objective of the study which helps in drawing the precise and accurate inferences.

Since the major purpose of the study was to find out the predictor variables for need achievement the analyses of the data were carried by applying the stepwise multiple regression on the three groups. Regression analysis was applied to the
dimensions of the variables i.e. Emotional Competence and Social Support separately so as to get a comprehensive picture of this research work. The analysis of data using Stepwise Multiple Regression through SPSS has given the entire picture of analysis concerning to variables studied in different steps. As self-esteem has no dimensions it was studied as a whole. Thus instead of applying stepwise multiple regression, Simple Linear Regression was applied to see the impact on need achievement of all the three groups of students. Before applying simple linear regression Scatter Plot was computed, to check the assumptions of regression, to make sure that the model can be generalized beyond the sample. This technique was applied in all the three groups. Further additional statistical analysis was done by applying One way ANOVA for the purpose of comparing the groups; Q-Q plot was plotted for the dependent variable to fulfill the assumption of normality for ANOVA. In the end, to answer the questions raised earlier to interpret the results and observe the significance of difference the post hoc test was also applied.