Chapter 3

METHODOLOGY
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As mentioned in the previous chapters the present investigation was initiated to study the academic performance in relation to loneliness, neuroticism, and locus of control among university students. The main objectives of the study were (1) to investigate the relationship between academic performance and loneliness, i.e., to see whether or not high and low lonely subjects differ with respect to academic performance; (2) to investigate the relationship between academic performance and neuroticism, i.e., to see whether or not subjects with high and low level of neuroticism differ with respect to academic performance; (3) to investigate the relationship between academic performance and locus of control, i.e., to see whether or not internally oriented and externally oriented subjects differ with respect to academic performance; (4) to investigate interactional effects between loneliness and neuroticism, between loneliness and locus of control, between neuroticism and locus of control and among loneliness, neuroticism and locus of control on academic performance.

To be more specific the present study was designed to answer the following questions:

1. Do high lonely and low lonely subjects differ in their academic performance?

2. Do subjects with high and low level of neuroticism differ in their academic performance?
3. Do internally oriented and externally oriented subjects differ in their academic performance?

4. Is there an interactional effect of loneliness and neuroticism on academic performance?

5. Is there an interactional effect of loneliness and locus of control on academic performance?

6. Is there an interactional effect of neuroticism and locus of control on academic performance?

7. Is there an interactional effect among loneliness, neuroticism, and locus of control on academic performance?

DESIGN OF THE STUDY

In order to answer the above questions, a 2x2x2 factorial design, in which three personality variables (i.e. loneliness, neuroticism, and locus of control) each variable varying in two ways, was used. Loneliness was varied by selecting high lonely and low lonely subjects. Neuroticism was varied by selecting those who have high level of neuroticism and low level of neuroticism and locus of control was varied by selecting externally oriented and internally oriented subjects. Thus, there were eight groups of subjects as given below:

➢ High lonely-high level of neuroticism externally oriented subjects.

➢ High lonely-high level of neuroticism internally oriented subjects.

➢ High lonely-low level of neuroticism externally oriented subjects.
High lonely-low level of neuroticism internally oriented subjects.

Low lonely-high level of neuroticism externally oriented subjects.

Low lonely-high level of neuroticism internally oriented subjects.

Low lonely-low level of neuroticism externally oriented subjects.

Low lonely-low level of neuroticism internally oriented subjects.

**SAMPLE**

In order to form above mentioned eight groups of subjects, Loneliness Scale developed by Russell, Peplau and Cutrona (1980), Neuroticism Scale Questionnaire, developed by Scheier and Cattell (1961), and Locus of Control (I-E Scale), developed by Rotter (1966) were administered on 800 Post Graduate students randomly selected from the faculties of Arts and Social Sciences, Aligarh Muslim University, Aligarh. They all belonged to same socio-economic and cultural background. The age of the subjects ranged from 18 years to 28 years. On the basis of their scores on these various scales, these eight groups were formed.

To be more specific on the basis of their scores on Loneliness Scale (Russell, Peplau and Cutrona, 1980) two groups, namely high lonely and low lonely subjects were formed. The subjects whose scores on loneliness scale fell on or above 3\textsuperscript{rd} quartile were considered as high lonely subjects. The subjects whose scores on loneliness scale fell on or below 1\textsuperscript{st} quartile were considered as low lonely subjects. The 1\textsuperscript{st} and 3\textsuperscript{rd} quartiles were 38 and 48 respectively.
Neuroticism Scale Questionnaire (Scheier and Cattell, 1961) was administered on these two groups of subjects. In each group, the subjects whose scores on Neuroticism Scale Questionnaire fell on or below 1st quartile were considered as low level of neuroticism subjects and the subjects whose scores fell on or above 3rd quartile were considered as high level of neuroticism subjects. The 1st and 3rd quartiles were 37 and 47 respectively. Thus, on the basis of their scores on Neuroticism Scale Questionnaire, each group was divided into two sub-groups to form four groups of subjects, namely, high lonely-high level of neuroticism subjects, high lonely-low level of neuroticism subjects, low lonely-high level of neuroticism subjects, low lonely-low level of neuroticism subjects.

Locus of Control Scale as developed by Rotter (1966) was administered on these four groups of subjects. In each group, the subjects whose scores on I-E Scale fell on or above 3rd quartile were considered as internally oriented subjects. The subjects whose scores on the I-E Scale fell on or below 1st quartile were considered as externally oriented subjects. The 1st and 3rd quartiles were 11 and 15 respectively. Thus, on the basis of their scores on I-E Scale, each group was divided into two sub-groups to form eight groups of subjects as mentioned above.

TOOLS: The following tools were used in the present study.

(A) UCLA Loneliness Scale: The UCLA loneliness scale developed by Russell, Peplau and Ferguson (1978) and revised by Russell, Peplau and
Cutrona (1980) was used to measure the loneliness level of students. The UCLA is a 20-item Likert type scale to measure the general loneliness levels of participants. The reliability coefficient of the UCLA was calculated as .94 by the Retest Method and the Cronbach's Alpha Reliability Coefficient of the UCLA was found to be .96. The parallel form validity of the UCLA was tested with the Beck Depression Inventory and the correlation coefficient was found to be .77 (Demir, 1990). There were four alternatives to one statement, i.e., never (1), rarely (2), sometime (3), and often (4). The subjects were asked to indicate how often they felt the way described in each of the statement and were asked to circle one number accordingly. And on the basis of scores on this scale the subjects were divided into high and low loneliness groups.

(B) Neuroticism Scale Questionnaire: The scale developed by Scheier and Cattell (1961) to determine high level of neuroticism and low level of neuroticism. The subjects were given the neuroticism scale questionnaire, which was in booklet form with clear instruction printed on that. Questions were about attitude and opinions- what do and how you feel about certain situations. Some people feel one way; others feel another way. Thus, there was no “right” or “wrong” answers to the questions.

The following instructions were written on NSQ booklet:

1. Make sure you have put your name and whatever is asked for at the top of this page.
2. Never pass over a question, but give some answer to every single one.
    Your answers will be kept entirely confidential, so answer truthfully.

3. Do not spend time puzzling things out. Answer each question immediately, the way you want to at this moment (not last week, or usually). You may have answered questions like this before, but answer them as you feel NOW.

To record the total score, total of each page were put in the place provided at the bottom of that page, then added those two subtotals and placed the combined and final total in the place provided at the bottom and extreme right of the right-hand test booklet page. That yielded the “raw scores” which was further converted to normative scores according to instructions provided in the handbook. On the basis of scores yielded, the Ss were divided in two groups, i.e. Low level of neuroticism subjects and High level of neuroticism subjects.

(C) Locus of Control Scale (I-E Scale) The scale was developed by Rotter (1966) and it was employed to determine internally oriented and externally oriented subjects. The scale is 29 items, forced choice test including six filler items intended to make somewhat more ambiguous the purpose of the test.

A careful reading of the items makes it clear that the items deal exclusively with the subjects’ belief about the nature of the world, i.e. they were concerned with the subjects expectations about how-reinforcement is
controlled. Consequently, the test is considered to be a measure of a
generalized expectancy.

The I-E scale was administered with the following instructions:

"This is a questionnaire to find out the way in which certain important events
in our society affect different people, each items consists of a pair of
alternatives lettered ‘a’ or ‘b’. Please select the one statement of each pair
which you more strongly believe to be the case of as far as you are concerned.
Be sure to select the one you actually believe to be true rather than the one you
think you should choose or the way would like to be true. This is a measure of
personal belief; obviously there are no ‘right’ or ‘wrong’ answers. Please
answer these items carefully but do not spend too much time on any item. Be
sure to find any answer for every choice. In some instances you may discover
that you believe both statements or neither one. In such cases, be sure to select
the one you more strongly believe to be the case as far as you are concerned.
Also try to respond to each item independently when making your choice, do
not be influenced by your previous choice”. The score is the total number of
external choice made by the subjects.

**PROCEDURE**

Academic performances of these eight groups of subjects, so formed,
were assessed by recording their average performance in three consecutive
examinations (two promotional and one final year examination).
The data, thus, obtained were tabulated group wise and were statistically analyzed by means of three way analysis of variance (ANOVA) and necessary inferences were drawn.