The purpose of the study, as stated earlier, was to find out the difficulties experienced by foreign students in India and to determine the relationship of certain variables with different difficulties for the purpose of determining their contribution in the prediction of difficulties. In order to achieve the goal of the study, relevant data were collected at the three Northern Indian universities namely; Aligarh Muslim University (A.M.U.), Delhi University (D.U.) and Panjab University (P.U.). Detailed account of the sampling, instruments used for data collection and statistical analysis are given in this chapter.

Sampling

The present study could not make use of probability sampling because it was not possible to collect data without consent and co-operation of foreign students. An attempt was made to enlist the co-operation of as many foreign students as possible particularly from those countries whose number in Northern universities is large.

A total of 500 undergraduate students were approached but the present study is based on 200 students (aged 18-35 yrs) from African countries and 100 students (aged 18-30 yrs) from ME countries. The reason for this is that many of foreign students could not spare as much time
as was required to fill all the questionnaires in one sitting and they asked the investigator to come again for the completion of the remaining parts of the questionnaires. They were however not available next time. Countries and sex-wise distributions of Ss included in the samples of African and ME countries are as below:

Table 1

<table>
<thead>
<tr>
<th></th>
<th>Number of Students from African Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Kenya (1)</td>
</tr>
<tr>
<td>Males</td>
<td>44</td>
</tr>
<tr>
<td>Females</td>
<td>42</td>
</tr>
<tr>
<td>Total</td>
<td>86</td>
</tr>
<tr>
<td></td>
<td>Sudan (2)</td>
</tr>
<tr>
<td>Males</td>
<td>27</td>
</tr>
<tr>
<td>Females</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>Tanzania (3)</td>
</tr>
<tr>
<td>Males</td>
<td>17</td>
</tr>
<tr>
<td>Females</td>
<td>21</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>Ethiopia (4)</td>
</tr>
<tr>
<td>Males</td>
<td>18</td>
</tr>
<tr>
<td>Females</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>35</td>
</tr>
</tbody>
</table>

G.T. = 200

Table 2

<table>
<thead>
<tr>
<th></th>
<th>Number of Students from Middle East Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Iran (5)</td>
</tr>
<tr>
<td>Males</td>
<td>23</td>
</tr>
<tr>
<td>Females</td>
<td>02</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
</tr>
</tbody>
</table>

G.T. = 100

It may be observed that while there is adequate representation of female students in African sample as shown in Table 1, this is not the case with the ME sample as shown in Table 2. The reason of lack of better representation of female students in the ME sample is that the enrollment of
undergraduate female students from these countries in the 3 universities mentioned earlier is very low and that female students were not willing to co-operate with the investigator, a stranger. It is also worthwhile to mention the fact that the following countries viz., Kenya, the Sudan, Tanzania, Ethiopia, Iran, Jordan and Palestine are considered in the present study because they have substantial representation of students in Northern Indian universities in comparison with other African and ME countries.

Problems in Data Collection

Guest students were apprehensive of giving informations about their experiences and difficulties in an alien land until they were assured that their sharing of informations would not be detrimental to their interest. First of all, they were to be convinced that they could trust the investigator, that the latter would maintain anonymity and would not make use of informations in such a manner that the respondent is harmed in any way. Many Arab and Iranian students who study at A.M.U. and D.U. declined to co-operate with the investigator and were reticent to reveal their experiences in India and to indicate to what extent their culture is similar to or different from the culture of the host country, India.

With the presumption that the guest students who come to India have or have acquired proficiency in English
language, items were formulated in simple English but during the course of investigation it was found that the Ss were to be explained the meanings of some words and sentences. This kind of problem was observed mostly in case of students from Jordan, Palestine and the Sudan.

The problem of congregation of a large number of students from one country at a particular university and low enrollment of students from other countries was also encountered. In Chandigarh, for example, there is a big chunk of Kenyan students, and there is, perhaps, not a single Sudanese student there.

The main problem in data collection in Delhi was distances between different educational institutions and also foreign students are scattered in different localities at long distances from each other. It was not possible to fix appointment because most of the guest students, if not all, do not have telephone facilities. However, one has to be often disappointed by not finding a student to be contacted at his place of residence.

It was not easy to collect data from female guest students from certain countries who were constrained by the tradition of not speaking to a male stranger.

**Instruments of Data Collection (Scales)**

In all, seven questionnaires, were used in the study. The measures were that of foreign students'
expectations and fulfilment of their expectations, perceived dimensions of similarities between the country of origin and India, communication skills, personality traits which can contribute to the problems they face in India, and social difficulties. Detailed account of the questionnaires is given below:

(i) Why Questionnaire (WHY)

All the aspects that are most likely to motivate foreign students to come to India for further studies were short-listed in relation to the goals of study in a foreign country, India. The items included in the scale were to be used to assess how much positive were the expectations of guest students regarding culture, living conditions or lifestyle, transportation network, educational aspect and related facilities such as library, recreational activities, laboratories, teaching methods and standard, expectations regarding acceptance by the host population, easy adjustment to cultural life in the receiving country, among other things.

The respondents were instructed to put tick-mark (✓) against either "YES" or "NO" depending on one's feeling. There is no right or wrong choice. "YES" response is assigned score of 1 and "NO" response is assigned score of zero (0). There are 34 items in all. Thus high score on the scale indicates high positive expectations. Maximum and minimum credit scores are 34 and 0 respectively. The
reliability of the WHY scale was determined with the help of a variation of Kuder-Richardson formula # 21 (Guilford, 1954, p. 381). It was found to be .83.

(ii) Cultural Similarity Scale (CSS)

The items in the scale are about the perception of similarity between the country of origin of the international students and the receiving country. Included in the scale are items related to life in general, climatic conditions, philosophy of life of common man, body language, clothes, expression of love, concern and respect etc.

The responses are obtained on a 5-point scale according to the following scheme:

5: to indicate very high level of similarity.
4: to indicate high level of similarity.
3: to indicate moderate level of similarity.
2: to indicate little level of similarity.
1: to indicate very little level of similarity.

The maximum and minimum possible scores on the scale are 80 and 16 respectively. The split-half reliability of the scale as determined with the help of Rulon formula (Guilford, 1954, p. 379) was found to be .71.

(iii) Communication Skills Scale (CoSks)

This scale was constructed to evaluate the ability of guest students to communicate in two languages i.e. English and any Indian language. There is no doubt that most
of the difficulties experienced by the students crop up due to communication gab between them and the receiving population particularly the common man; this makes the measure of this variable to be important. It is to be noted that most of the African students who come to India are more proficient in English language as compared to their ME counterparts. The latter group of the students has higher grasping power for Indian languages as compared to the former group.

The Ss were instructed to indicate against each statement how fluent they were in a given language. The following system was adopted:

3: to indicate very much.
2: to indicate much.
1: to indicate to some extent.
0: to indicate almost not at all.

The maximum and minimum possible scores are 24 and 0 respectively. Those who score very low are considered to have difficulty in their verbal communication in either both the languages or one of them, hence more social difficulties they are likely to encounter in India. The split-half reliability was calculated using Rulon formula (Guilford, 1954, p. 379) was found to be .5.

(iv) Fulfilment of Expectations Scale (EFS)

The scale was constructed to measure the fulfilment of expectations foreign students had when they come to India
for further studies. The scale has same items as WHY scale. The Ss were instructed to indicate in respect of each item as to how far their expectations have been fulfilled. 5-point scale that was used to evaluate the responses is as below:

5: to indicate that the expectation is met fully.
4: to indicate that the expectation is met to a large extent.
3: to indicate that the expectation is met to some extent.
2: to indicate that the expectation is fulfilled a little.
1: to indicate that the expectation is not almost fulfilled.

The maximum and minimum scores are 170 and 34 respectively. The split-half reliability determined by using Rulon formula (Guilford, 1954, p. 379) was found to be .69.

(v) The Ego-Strength Scale (E-SS)

The original Ego-strength Scale (E-SS) was developed by Barron (1963) to predict the responses of psychoneurotic patients to psychotherapy. The scale consists of 68 of 550 items of Minnesota Multiphasic Personality Inventory (MMPI) pool which were found to be correlated with the rated improvement in 33 psychoneurotic patients who had been treated for six months in a clinic. Keeping in view the psychological homogenites of the items, Barron divided them
in the following groups: (a) physical function and physiological stability, (b) psychasthenia and seclusiveness, (c) attitudes towards religion, (d) moral postures, (e) sense of reality, (f) personal adequancy, (g) phobias, infantile anxieties and miscellaneous functions.

Barron (1963) was fully aware of the fact that the sample size employed by him in developing the scale was quite small. He however, reasoned out that a small number of well studied cases who were classified with high accuracy as well would serve better than a practical alternative which was to get a large sample in which therapist's ratings of outcome were accepted uncritically. The prediction scale was labelled as Ego-Strength scale because consideration of scale content and its correlates have suggested that somewhat broader psychological interpretation be placed upon it, making it useful as an assessment device in any situation where some estimate of adaptability and personal resources are wanted.

Stein and Chu Cheu-Lin (1967) conducted studies to determine the validity of Barron's E-S scale. Their studies provided confirming evidence regarding the validity of the scale. However, the E-S scale failed to discriminate between delinquents and non-delinquents. Therefore, the scale may be a sign of psychic energy as such even if it comes from ego or id. The inference as to the source in particular instance would be based on the case history material and rest of MMPI profile.
The E-S scale used in the present study is adopted version of Hasan's (1974), it contains 32 statements. The respondents were instructed to put either "T" (True) or "F" (False) against each statement as was desired by them. "F" is assigned score of 1 and "T" is assigned score of 0. Maximum and minimum possible scores are 32 and 0 respectively. The reliability of the E-S was determined with the help of Kuder-Richardson formula # 20 (Guilford, 1954, p. 380). It was found to be .83.

(vi) The Intolerance of Ambiguity Scale (IAS)

The symbolic measure of tolerance of ambiguity used in the present study was developed by Hogan (1970a) who administered 15 items symbolic test and 28-items F-scale on a group of 73 students at Tulane University in New Orleans. The symbolic test was constituted of 12 pairs of geometric designs and 3 pairs of digit arrangements. One symbol of each set is designed to be more elicitable than its companion symbol the authoritarian related phenomenon of intolerance of ambiguity. A score of 1 is assigned to less authoritarianism choice, while a score of 2 is assigned to those symbols expected to be positively associated with high scores on the F-scale. In order to test the hypothesis that those who score high on the verbal scale will also score high on the symbolic test, Goodman and Kruskal's coefficient for ordinal association (G) and appropriate significance test were employed. The correlation between the two
instruments was found to be .64. Thus Hogan (1970b; 1977) furnished evidence that the symbolic test is a reliable and valid measure of at least one of the important dimensions of authoritarianism i.e., intolerance of ambiguity.

A symbolic test of authoritarianism has the following advantages: (a) it can be used on Ss who lack adequate verbal skills, (b) much of the potential for response prejudice may be eliminated because the items in a symbolic test would be less transparent to the more sophisticated and educated Ss, (c) it has potentiality for reduction of response set and/or acquiescence response which are considered to be phenomenon inherent in the very nature of verbal statements, (d) it can be universally administered without regard to language, (e) it is more efficient and economical particularly in field-survey set-up.

In the present study, the Ss were instructed to look at each pair and then decide which member of the pair they prefer. The responses were to be indicated by putting cross-mark (X) on the chosen member of the pair. Score of 1 was awarded to non-authoritarianism, while score of 2 was awarded to authoritarianism. Therefore maximum score for authoritarianism is 30 and minimum score for non-authoritarianism is 15.

The split-half reliability determined by using Rulon formula (Guilford, 1954, p. 379) was found to be .48.
(viii) Development of Social Difficulty Questionnaire (SDFS)

The questionnaire is constituted of measures of eight dimensions of difficulties identified with the help of factor analysis (Odera, 1992). Steps for the construction of the scale are as below:

(A) Collection of Items

First 104 bits of informations were given by the international students to elicit their difficulties in India during informal interview (pilot study). In the interest of proper content coverage, the investigator added 32 other social situations that were not mentioned by the respondents. 14 more items borrowed from Furnham and Bochner's (1982) questionnaire were also added to serve as markers of different factors identified by them. The markers extracted from Furnham and Bochner's study were used to ascertain whether the dimension of social difficulties of foreign students in India are the same as the difficulties faced by foreign students in England or not. Thus the total number of social situations items collected is 150. The contents of the items enlisted covered different categories of problems viz.: educational system, dietary, communication, economic, transportation system, climatic conditions, health, cheating or unfair dealings, socio-cultural, political, accommodation, religious, personal and time taken to render services.
(B) The Administration on a Sample

The sample of the students that were interviewed was drawn from the four Northern Indian universities, namely, A.M.U., D.U., Jamia Millia Islamia and P.U. 280 students from the four universities were randomly selected by the investigator. The Ss were instructed to attempt the questionnaire according to the instructions therein. Out of 280 copies of questionnaire that were accepted by the Ss, 200 were returned. The percentage of the copies of questionnaire returned was 71.4.

(C) Factor Analysis

Factor analysis was used to identify dimensions of social difficulties experienced by the students. Inter-correlations among 150 items were obtained with the help of Pearson's product moment correlation. The 150 x 150 matrix was factor analysed using principle component method. The analysis yielded 14 factors with more than 1 Eigen value. Out of these, 8 factors were obtained which made 5% contribution to the percentage of common variance. The retained factors were orthogonally rotated by Varimax method.

The 8 obtained factors were named in order to identify dimensions of difficulties experienced by the guest students in India, these included the following : (a) relations with the host stewards, (b) stress due to habits and lifestyles of the hosts, (c) treatment meted out, (d)
pleasure-unpleasure of interaction, (e) suspiciousness of hosts-guests relations, (f) reaction to unfamiliar people and situations, (g) accommodation and crowding, finally (h) problems of interaction and freedom of choice.

(D) Selection of Items

The factor scores of the 8 retained factors were obtained and 8 pairs of high and low groups were found on the basis of Q1 and Q3 as the cutting points. Items analysis charts were prepared for each of the 8 factors in which the responses of the Ss classified as high and low were tabulated. Significance of difference between means of high and low groups for every item was determined by using "t" test. The selection of the items included in each subscale was done on the basis of certain criteria: high loadings; discriminative index as indicated by significant "t" value; if an item has substantial loading on more than one factor it was to be included in the scale of the factor on which it has relatively higher loading; an item which has high loading on more than one factor was to be included in the factor scale which had inadequate number of items; finally, 10 items which met the above criteria were selected for each of the 8 factor scale so as to have 80 items in all.

The SDFS scale is composed of 80 items, 10 for each factor subscale. The Ss were instructed to give their responses on a 5-point scale; very low or almost absent (VL), slight difficulty (SD), moderate difficulty (MD), high
difficulty (HD) and very high difficulty (VHD). The responses given by the Ss were scored in the following manner:

Response category: VL SD MD HD VHD
Credit: 1 2 3 4 5

Items that were not attempted by the Ss were not given any credit. The maximum and minimum possible scores are 400 and 80 respectively. A student who attains at least 240 score is however considered to have social difficulties, hence psychological stress; experience of fear, embarrassment, thwarted efforts etc. The scale has advantage of allowing the students to express intensity of difficulties they face in India.

The reliability of each factor scale was determined by modified Kuder-Richardson formula (Guilford, 1954, p. 383). The reliability coefficients are as follows:

RHS = .67, SLH = .76, TM = .69, PUI = .67, SHG = .78, RPS = .60, AC = .70 and IFC = .66, however, weight assigned to the right response to every item was 3*.

* The obtained reliability coefficients are lower bound estimates of reliability. Had we used 2 as weight then the reliability coefficients would have been more than what are reported.
Analysis of Data

Keeping in view the hypotheses proposed in chapter 1 two kinds of statistics were used for the analysis of the data. The "t" test was applied to find the significance of difference between the means of different groups on the measures of variables involved in the study. To determine the contribution of different variables in the prediction of each one of the 8 factors of difficulty, Standard Multiple Regression Analysis was applied using Statistical Package for the Social Sciences (SPSS). This package provides the following:

i) Matrix of intercorrelation among all the variables-predictors and the criterion.

ii) Partial correlation between each predictor and the criterion.

iii) Part correlation between each predictor and the criterion.

iv) Regression coefficient of each predictor for the prediction of the criterion.

v) Standardized regression coefficient (Beta) for each predictor for the prediction of the criterion.

vi) Standard errors of regression weights and standardized regression weights (Beta).

vii) "t" value of each of the regression coefficient.

viii) Multiple R, R², adjusted R² and F-ratio to indicate the level of significance of obtained value of R.

The outcome of this analysis is reported in the next chapter.