The initial step of the study was the translation of the original questionnaire measure of emotional empathy devised by Mehrabian and Epstein (1972). It was carried out with the assistance of teachers from University teaching departments and colleges at Rohtak. In total, ten teachers of Hindi, English and Psychology acted as judges. A tentative translation of the said scale was prepared which was based on the original scoring system as specified by the inventors. In preparing the Hindi version, special care was taken, as far as possible, to retain the original content or emotional expression of each of the items. If an original statement did not fit into the Indian culture, the same was modified according to the context. The finally prepared items along with the original statements were given to the judges who were requested to review each statement and to give their opinions regarding the adequacy of the translation and
suggestions for improving the Hindi translation of the scale. After obtaining their judgements, the final list of the 33 items was prepared and subjected to certain tests.

PROCEDURAL DETAILS OF DEVELOPMENT OF THE HINDI VERSION OF
THE QUESTIONNAIRE MEASURE OF EMOTIONAL EMPATHY

The original questionnaire measure of emotional empathy developed by Mehrabian and Epstien (1972), along with the Hindi version was, first of all, administered to 100 bilingual subjects (50 males, 50 females) drawn from the general population, all with good knowledge of Hindi and English. The questionnaire was administered to subjects of different age groups, the range of age being 20 to 78 years. The present study excluded the student population for reasons of unreliability and undependability of responses usually given by students. Instead, the sample was gathered from different fields of activity such as medical and teaching professions, business, banks and private firms. Even a few retired persons were included in the sample. Out of the total sample, 23 subjects belonged to different places other than Rohtak and were drawn from Uttar Pradesh, Rajasthan, Himachal Pradesh, Maharashtra and New Delhi.
The questionnaires were presented in a counterbalanced order i.e., to half of the subjects the original English Questionnaire was presented first and then the Hindi version and half of the sample was presented the Hindi version first followed by the original questionnaire. In this manner, two sequences were followed:

Sequence I: English Empathy Scale - Hindi Empathy Scale.

Sequence II: Hindi Empathy Scale - English Empathy Scale.

Subjects in Sequence I: 50 (25 males + 25 females)
Subjects in Sequence II: (25 males + 25 females)

After the administration of the Hindi and English Empathy Scales, the mean, standard deviation (SD), and t ratio for scores on the Hindi as well as English Empathy Scales were obtained with the help of the following formulas:


$SD : \sqrt{\frac{Ex^2}{N} - c^2}$ (Garrett, 1989, p. 52)

$t : \frac{M_1-M_2}{SE_D} - 0$ OR $\frac{D-O}{SE_D}$ (Garrett, 1979, p. 215)
EQUIVALENCE OF HINDI AND ENGLISH QUESTIONNAIRE MEASURES OF EMOTIONAL EMPATHY

For determining the equivalence of the Hindi and English Empathy Scales, correlation was found between the two scales for the total 100 subjects in Sequences I and II. The correlation was also found between the two scales for 50 males and 50 females, separately. The correlations were obtained with the help of Pearson's Product Moment Method as per formula given below:

\[
    r = \frac{\hat{b}_{xy}}{\sqrt{\frac{x^2}{x} \cdot \frac{y^2}{y}}} \quad \text{(Garrett, 1981, p. 139).}
\]

INTERNAL CONSISTENCY RELIABILITY:

The internal consistency reliability of the Hindi version of the original questionnaire measure of emotional empathy was determined in two ways:

(i) It was determined in terms of the coefficient alpha reliability. As the S gave his choice response out of eight possible choices, it was considered appropriate to compute alpha reliability in order to determine the internal consistency reliability of the scale. The formula for the computation of coefficient alpha was as follows:
Further evidence for internal consistency reliability was provided by the item-total correlation. In the item-total correlation, scores obtained on each item were correlated with the total scores obtained on the scale for 100 subjects. In this way, 33 item-total correlations were computed, as the scale consisted of 33 items. These correlations were determined with the help of Pearson's Product Moment Method.

**Split-Half Reliability:**

The split-half reliability of the complete Hindi scale was determined. For computing this reliability, scores on odd- and even-numbered items of the Hindi scale for 100 subjects (50 males, 50 females) were noted separately. Since the questionnaire contained 33 items: 17 odd-numbered items and 16 even-numbered items, a problem arose in computing correlation between the unequal number of odd and even items. Out of 33 items, 16 items were positive and 17 items were negative. The last 33rd negative item was left out in order to equalize the number...
in both groups of odd and even items. The correlation was computed again with the help of Pearson's Product Moment Method. However, this correlation actually provides reliability of only a half test. The reliability of the whole test was tested with the Spearman-Brown Prophecy formula (for estimating reliability from two comparable halves of a test). The formula is given as below:

\[ r_{II} = \frac{2r_1 \frac{1}{2} - I_{II}}{1 + r_1 \frac{1}{2} I_{II}} \]  


**TEST-RETEST RELIABILITY:**

In order to determine the stability of the Hindi Empathy Scale, test-retest reliability was found. For this purpose some part of the total sample i.e. 25 subjects (13 females and 12 males) were retested after 30 days by re-administering the Hindi Empathy Scale to them. The product moment correlation was found between the test scores and the retest scores of the subjects.

**CRITERION-RELATED VALIDITY:**

For the determination of criterion-related validity, two procedures were adopted.
First, the total sample of 25 subjects was rated by their peers or, for 25 subjects peer-rating was taken. One peer-rating was taken for each subject. These peers were those persons who kept in close contact with the respective subjects. They constituted family members, friends, neighbourers and office-mates of the subjects in question. These peers were provided a 5-point rating scale ranging from 0 to 4 scores and were asked to rate the subject on this scale in terms of three global ratings of empathy i.e. (1) how caring the person was, (2) how considerate of others' feelings and (3) how much sympathetic he was. In addition, a general opinion regarding the empathic nature of the subject was solicited from the peers. The peer rating scores were correlated with the subject's original test scores and the product moment correlation was computed between the two sets of scores.

Second, the empathy scores of 25 subjects were validated against their rating on some pictures containing an element of empathy. For this purpose, some colourful pictures were collected from different magazines in which the incidents shown largely represented empathy-arousing situations. To begin with, ten pictures were selected for
this purpose and given to three judges (old and experienced males and females) who were requested to give their opinions regarding those pictures. They were told about the purpose of the study and then asked whether the incidents or scenes shown in those pictures aroused a feeling of empathy. Based on the empathic content, seven pictures were finally selected. These pictures were shown one by one to 25 subjects who were asked to rate the intensity of their feelings on a 5-point rating scale. The sum total of rating scores, on all the seven pictures, was correlated with the subjects' original test scores with the help of the product moment correlation method.

**DESCRIPTION OF THE PICTURES**

**Picture No. 1:**

It depicts a young man who has lost both his legs in an accident. He is lying on his hospital bed, convalescing. His deep emotions are reflected on his face. But for the loss of his legs he looks quite hale and hearty.

**Picture No. 2:**

The picture depicts a lady with her son. Both are
weeping, the son over some mistake he has committed and the mother while consoling him. Both have soft feelings towards each other.

**Picture No. 3:**

It shows a young boy picking up dried leaves and knick-knacks with a bulging bag on his back. Evidently, he comes from a poor family as he is barefoot.

**Picture No. 4:**

It shows a young woman in flames. Her hair loose and dishevelled, she is crying and trying to escape the flames. She appears to be a married lady.

**Picture No. 5:**

It depicts the near and dear ones of a dead person paying homage to him. In the centre, there are the widow and her daughter. Their faces reflect extreme grief.

**Picture No. 6:**

It depicts two doctors carrying an obviously injured girl who is unconscious. A third doctor is sitting unconcerned. There are certain objects lying scattered, but no other injured person is in view.
Picture No. 7:

It depicts a man entering his bedroom where he finds his wife in the arms of another person. The mental agony of the husband is writ large on his face. He seems to be a well-to-do person.

CONSTRUCT VALIDITY:

The Hindi version of the questionnaire measure of emotional empathy was also tested for its construct validity in terms of its correlation with another measure of empathy. For this purpose, an attitude scale was prepared in Hindi the items of which were taken from the Edward's Personal Preference Scale (EPPS). The items belonged to the two sub-scales of the EPPS i.e. Intraception & Nurturance which reflect empathic concern.

The sample meaning of 'intraception' (Edward, 1959) is to "analyse one's motives and feelings, to observe others, to understand how others feel about the problems, to put one's self in another's place, to judge people by why they do things rather than by what they do, to analyse the motives of others and to predict how other will act."
Nurturance means to "help friends when they are in trouble, to assist others less fortunate, to treat others with kindness and sympathy, to forgive others, to do small favours for others, to be generous with others, to sympathize with others who are hurt or sick, to show a great deal of affection towards others, and to have others confide in one about personal problems."

Nine pairs out of 14 pairs of statements belonging to each sub-scale were selected. One statement out of each pair of statements represented empathic concern; such a statement was combined with a neutral statement. The five statements which were lifted from each category were the repetitions of those selected 9 pairs. In total, 18 pairs were selected. The next step was the translation of these selected 18 pairs into Hindi. This phase was again conducted with the assistance of four experts who mostly belonged to disciplines like English, Hindi and Psychology and who acted as judges. A tentative Hindi translation was prepared and the items which did not fit into the Indian context were modified. The same were then given to the judges for their opinions and suggestions regarding the adequacy of the translation. After desired
modifications were incorporated, the Attitude Scale was administered to 25 subjects. The correlation between the scores on this attitude scale and those on the empathy scale was found with the help of the product moment method in order to determine the latter's construct validity.