Chapter – III
CHAPTER 3

DEVELOPMENT OF EMOTIONAL INTELLIGENCE QUESTIONNAIRE

3.1 NEED TO DEVELOP EMOTIONAL INTELLIGENCE QUESTIONNAIRE:

The research and assertions purpose, emotional intelligence is a significant differentiation in terms of ‘life success’ and ultimately corporate success. There is a strong consensus within the literature that it is developable trait or competency (e.g. Goleman, 1996, Steiner, 1997, Hopfl, & Linstead, 1997; Cooper, 1997; Martinez, 1997). Indeed, much of the popular literature is devoted to processes or programs designated to help individual develop their emotional intelligence (e.g. Martinez, 1997; Farnham, 1996; Harrison, 1997; Cooper 1997). Goleman (1996) comments that, while emotional intelligence is amenable to development, interventions during childhood are most effective. Some doubts are also revised as to the efficacy of learning interventions at later stage.

We are seeing a tremendous increase in aggressive and destructive behavior among our children. The trait of aggression in children often results when they have been severely neglected or abused, similar to when an animal that has been tortured becomes aggressive. When humans are brought up among violent adults, they develop similar aggressive behavior pattern.

When children are not equipped with effective problem-solving skills, good communication / negotiation techniques and positive role modeling or when children consistently feel frustrated from a “lack” of something such as nurturing, the result is a high degree of aggression. Our society as a whole is tolerating more violence, teachers and social-workers are becoming increasingly concerned about children using hostile avenues to solve their problems. At times, the aggression of children reaches to such a height that they become criminals. These adolescent criminals need to be helped to know their feelings, manage their distressing moods well and control impulses, develop social skills to get along well with other people and manage
emotions in relationships. In other words, efforts should be made to develop their emotional intelligence.

In the present study Yoga and Meditation practices are used as a treatment to improve emotional intelligence of adolescent criminals. The researcher could not find any tool to assess the emotional intelligence of Indian adolescent. Hence, a need was felt by investigator to develop emotional intelligence test.

3.2 DEVELOPMENT OF EMOTIONAL INTELLIGENCE QUESTIONNAIRE:

3.2.1 PREPARATION:

For construction of the questionnaire, literature on emotional intelligence was surveyed and scanned. ‘The Multi-factor Emotional Intelligence scale’ (MEIS) developed by Mayer and Salovey in 1996 included four branches of Emotional Intelligence (E I) namely: Identifying, Using, Understanding and managing emotions.

‘The emotional Quotient Inventory’ (EQ-I) by Baron (1996) consists of five composite scales: Intra-personal, Inter-personal, Adaptability, Stress Management and General Mood Scales.


After careful exploration and survey of literature, five dimensions namely Self-regulations, Empathy, Social skills, Motivation and Self awareness were included in the present questionnaire as A, B, C, D and E dimensions.

(A) Self regulation:

Self regulation implies a restrained and channeled state of our emotions in such a manner that the emotions do not create any trouble rather they help in handling our states of emotional distress. It also implies recognizing one’s responsibility and being ready to face the consequences of whatever one does. The practice of Self regulation helps to adjust, train and arrange consciously, the body, mind and senses in
negating the gratification and be committed to the positive decisions in the times of emotional crisis.

(B) **Empathy:**

The ability to understand and share the feelings of someone else is the quality of empathy in a person. The state of being able to accept the point of view of other people in order to expand the sphere of one’s acquaintance with a good rapport with them.

(C) **Social skill:**

The ability of a person to understand the social situations and being able to cope up smoothly with the social network.

(D) **Motivation:**

The incitation, to think and work for others keeping at peace with one’s own emotions are called Motivation. Making use of the innermost liking to guide us towards our goal and to persevere in the times of setbacks.

(E) **Self awareness:**

The ability to read and observe oneself and be aware about one’s feelings by regularly introspecting. Examining one’s actions by keeping in mind their results and consequences, in a way examining and evaluating oneself.

Both the apparent and the non-apparent behaviors are dealt with, in this questionnaire. The subject is made to deal with one’s feelings about one’s own self as well as about others and one’s environment.

3.2.2 **TARGET POPULATION:**

This questionnaire is meant for Indian adolescent ranging between the age group of sixteen to twenty years of age.
3.2.3 TYPE OF QUESTIONNAIRE ITEMS:

In all the questionnaire items, a situation is provided and the subject is supposed to give his/her reactions by selecting one of the four alternatives provided along with the questionnaire item.

3.2.4 PRELIMINARY DRAFT OF THE QUESTIONNAIRE:

In the preliminary draft seventy-two items on different dimensions were written and edited.

Distribution of items into five dimensions is presented in Table No. 3.1.

**TABLE NO. 3.1:**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Dimension</th>
<th>Dimension No.</th>
<th>No. of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Self-regulation</td>
<td>A</td>
<td>16</td>
</tr>
<tr>
<td>2.</td>
<td>Empathy</td>
<td>B</td>
<td>14</td>
</tr>
<tr>
<td>3.</td>
<td>Social-skill</td>
<td>C</td>
<td>14</td>
</tr>
<tr>
<td>4.</td>
<td>Motivation</td>
<td>D</td>
<td>14</td>
</tr>
<tr>
<td>5.</td>
<td>Self-awareness</td>
<td>E</td>
<td>14</td>
</tr>
</tbody>
</table>

This preliminary draft was given to six judges for examining the questionnaire. These judges were selected from readers and professors of Psychology, Principals of Colleges of Education and Doctors.

It was just a coincidence that during this period some doctors and psychologists from Netherlands came to Brahmshi Ashram, Virat Nagar, Pinjore, in 78
India for an Ayurveda and Yoga therapy camp. This test was given to five of them also for their suggestions.

The judges were given the questionnaire and the purpose of the questionnaire was conveyed to them that we want to measure the emotional intelligence of the Indian adolescents. They were asked to add or change and delete any item. They were also requested to give their suggestions to improve the questionnaire. Their suggestions were seriously studied and genuine ones were incorporated. Accordingly out of the seventy-two items, seven items were dropped, one added and six were modified. So, the second draft consisted of sixty-six items, distributed into five dimensions. Distribution of items into five dimensions is presented in table No 3.2.

**TABLE NO. 3.2:**

**Distribution of items in the second draft:**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Dimension</th>
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<th>No. of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Self-regulation</td>
<td>A</td>
<td>15</td>
</tr>
<tr>
<td>2.</td>
<td>Empathy</td>
<td>B</td>
<td>12</td>
</tr>
<tr>
<td>3.</td>
<td>Social-skill</td>
<td>C</td>
<td>13</td>
</tr>
<tr>
<td>4.</td>
<td>Motivation</td>
<td>D</td>
<td>13</td>
</tr>
<tr>
<td>5.</td>
<td>Self-awareness</td>
<td>E</td>
<td>13</td>
</tr>
</tbody>
</table>

**3.2.5 DIRECTIONS FOR ADMINISTRATION:**

While administering the questionnaire, the administrator has to simply distribute the questionnaire booklets to the subjects. Although, the directions are written on the first page which are self-explanatory even then assistance in translating the meanings can be given where and when required.

This questionnaire consists of several items about Emotional Intelligence. These items are indicative of some such situations, which occur often in human life.
Each item is accompanied with four options, the subject has to read each item, carefully and mark his/her first response out of the given ones, as it comes to him/her, without thinking about the ideal response. Honesty in answering is required by ticking only one response. The aim of the questionnaire is not to give one more or less marks and this questionnaire is not a test, the aim is to judge one’s emotions. One can put a tick upon any of the four choices i.e. ‘a’, ‘b’, ‘c’ or ‘d’.

One must go through all the items carefully and if the situation does not fit into one’s conditions there is nothing to worry, one can just suppose and give one’s natural response.

3.2.6 PROCEDURE FOR SCORING:

The EIQ can be scored by hand. Scoring of the items is done with the help of the scoring key. One can score 1, 2, 3 or 4 against each item depending upon the response. The scoring key is attached as appendix no IV. Scores are added corresponding to each item for each individual leading to the total scores of the subscales as well as to the total score of the questionnaire.

3.3 TRY OUT OF THE QUESTIONNAIRE:

Before undertaking the work of item analysis, the questionnaire was administered to a sample of ten students to remove the language difficulty, if any, reported by them in understanding clearly the different items.

The sixty-six item questionnaire was administered to 152 adolescents (classes 9, 10, 11 and 12) randomly selecting from Government Senior Secondary Schools in Kalka and Pinjore.

Co-efficient of correlation was calculated for each item with the scores of sub-scales and total scores of the whole questionnaire. Items with negative co-efficient of correlation and insignificant correlation were dropped. One item had
negative correlation and three items had insignificant correlation, so these four items were dropped. Finally sixty-two items were left.

**TABLE NO. 3.3:**

**Distribution of items in the final draft:**

<table>
<thead>
<tr>
<th>Sr.No.</th>
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<th>No. of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Self-regulation</td>
<td>A</td>
<td>14</td>
</tr>
<tr>
<td>2.</td>
<td>Empathy</td>
<td>B</td>
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<tr>
<td>5.</td>
<td>Self-awareness</td>
<td>E</td>
<td>12</td>
</tr>
</tbody>
</table>

3.3.1 TIME LIMIT FOR THE QUESTIONNAIRE:

There was no time limit for the completion of the questionnaire but normally the subjects take ninety minutes to complete it.

3.4 RELIABILITY OF THE QUESTIONNAIRE:

Reliability is one of the most important characteristics of measuring tools. The reliability of the test depends upon the stability and consistency of scores. There are different methods to determine reliability of a test. The four, important and widely used procedures are:

i. Kuder-Richardson formula.

ii. Split-half reliability.

iii. Test-retest reliability.

iv. Alternate form reliability.
In the present study, coefficient of reliability was determined by split-half method and test-retest method.

**Split-half method:**

The questionnaire was first divided into two equivalent ‘halves’ by using odd-even method. Items with odd numbers formed one half test and items with even numbers formed second half test. The questionnaire was given to 152 students. Then correlation was found by Product-moment method between the two halves. It came out to be 0.549.

The reliability coefficient of the whole test was estimated by using Spearman Brown Prophecy formula:

\[
\frac{2 r_{1/2 \, I/II}}{1 + r_{1/2 \, I/II}}
\]

Where,

\( r_{1/2 \, II} \) = reliability coefficient of the half-test.
\( r_{1/2 \, I/II} \) = reliability coefficient of the half-test.

The result is shown in Table No. 3.4.

**TABLE NO. 3.4:**

**RELIABILITY OF EMOTIONAL INTELLIGENCE QUESTIONNAIRE:**

<table>
<thead>
<tr>
<th>Method</th>
<th>Number of subjects</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Split-half</td>
<td>152</td>
<td>0.709*</td>
</tr>
</tbody>
</table>

Note: * implies significant at 0.01 level.
The reliability coefficient by Spearman Brown Prophecy formula came out to be 0.709 which is significant at 0.01 level.

**Test-retest method:**

The test-retest reliability was also calculated for the present test, by calculating the coefficient of correlation between two sets of scores of the same individual on the same test at different time intervals. The test-retest reliability after two weeks interval was calculated.

The correlation between the two administrations of the questionnaire of Emotional intelligence was found to be 0.89. This reliability coefficient was found to be significant at 0.01 level of significance.

So it can be inferred on the basis of Split-half reliability coefficient and test-retest reliability coefficient that questionnaire is reliable.

3.5 **VALIDITY OF THE QUESTIONNAIRE:**

Validity of the questionnaire refers to the degree to which it measures accurately what it purports to measure.

Regarding the method of establishing the validity of a questionnaire, Mouley states that it is necessary for all the tests to have content validity. A more adequate approach to validation consists of checking the agreement between the responses elicited by the test against the criterion.

In the present questionnaire, content and concurrent validity was calculated.

For determining content validity, the test items were given to the panel consisting of eleven judges. The experts were requested to give ‘+1’ if the item was related to the trait and ‘-1’ if the item was not related to the trait and zero in case of
uncertainty. On the basis of their responses, index of suitability (IOS) of each item was worked out by using the formula:

\[
\text{IOS} = \frac{\sum R}{N}
\]

Where, \( \sum R \) stands for sum of the expert’s responses and \( N \) stands for the number of experts.

The IOS value for the items ranged from 0.81 to 1, which clearly showed that the content of the questionnaire measures the same trait for which they were written. Thus the content validity was established.

The concurrent validity of Emotional Intelligence Questionnaire was investigated against external criterion of seven-fold emotional intelligence scale by Vinit Khera, Puja and Sarabjit. Both the tests were given to 152 adolescents. The coefficient of correlation was found between the scores of two tests. The coefficient of correlation was found to be 0.512, which is significant at 0.01 level of significance. Hence the concurrent validity of the test is also established.