

## CONSTRUCTION AND STANDARDISATION OF EMOTIONAL INTELLIGENCE SCALE

Guneet Toor<sup>1</sup>, Dr Kirandeep Singh<sup>2</sup>

### **Abstract**

*The paper reports details of the development and standardization of scale on emotional intelligence. The scale initially consisted of 80 items. After review and evaluation of statements by the experts, items were reduced to 74, out of which 48 items were positive and 26 were negative. After item analysis, the selected 53 items were put in the final draft of the test. The test-retest reliability of the scale was found to be 0.75 and split half reliability was found to be 0.69. For validity, face and content, construct validity were calculated and test developed was found to be valid.*

**Key words:** Emotional intelligence

Emotional intelligence is a person's ability to deal with his or her own emotions and the emotions of others in a constructive manner, a manner that promotes teamwork and productivity rather than conflict. By adopting this wider perspective, it seeks to improve the way we learn with the view not only to improving performance but also to bringing about increased well being and greater harmony. The majority of us facedly subscribed to the idea that thought is most appropriate when not clouded by emotions and sure enough, storing emotions make it difficult to think straight. Emotional intelligence is the innate potential to feel, use, communicate, recognize, remember, describe, identify, learn from, manage, understand and explain emotions. According to Karnaze (2009) emotional intelligence is the ability to constructively work with all of our emotions by: identifying and communicating them (through appropriate expression and exploration); listening to what they are signaling to us about perceived or real threats (or benefits) to our well-being, so that we may examine these perceptions; and become more aware of how they reflect our socio-cultural beliefs so that we may consciously choose which beliefs to live by. It is an attempt to extend our understanding of intelligence by going beyond what we traditionally measure by intelligence tests. In doing so, emotional intelligence extends our understanding of ourselves, our being with others and with the world around.

### **Why is emotional intelligence important?**

Researchers investigated dimensions of emotional intelligence (EI) by measuring related concepts, such as social skills, interpersonal competence, psychological maturity and

emotional awareness, long before the term emotional intelligence came into use. Social scientists are just beginning to uncover the relationship of emotional intelligence to other phenomenon, e.g., leadership (Ashforth & Humphrey, 1995), group performance, individual performance, interpersonal/social exchange, managing change, and conducting performance evaluations (Goleman, 1995). And according to Goleman (1995), emotional intelligence, the skills that help people harmonize, should become increasingly valued as a workplace asset in the years to come.

Thus, emotional intelligence is developed through experience. Competencies keep on growing through experiences; people get better and better in handling emotions, influencing others and in social adroitness. In fact, studies that have tracked people's level of emotional intelligence through the years show that people get better and better in those capabilities as they grow, handling their own emotions and impulses. Although there is still much to be researched on the constructs and measures, emotional intelligence testing is well on its way to gaining widespread acceptance and credibility.

There are quite a few emotional intelligence scales developed by other investigators in Indian and foreign conditions to measure emotional intelligence for different age groups. But the items in these tools are not in accordance with the present situations. So in a current era of change, the investigator felt the need to construct a scale on emotional intelligence with items suitable to the recent conditions and to construct an ability based measure rather than self report test where testees may provide socially desirable responses rather than realistic ones. The scale will include both positive

<sup>1</sup> Assistant Professor, G.H.G. Khalsa College of Education, Gurusar Sadhar

<sup>2</sup> Associate Professor, P.U., Chandigarh

and negative items under all domains to add variety, reduce students' tendency to respond perfunctorily and for better interpretation and for the exhaustive coverage of all the dimensions.

**Objectives**

The objective of the present study was to construct and standardize scale of emotional intelligence

**Development and standardisation of a tool**

Standardised tests are those tests which are constructed by an individual or by a group of individuals and are being processed and universalized for all the situations and for all the purposes. Thus, standardised tests are carefully constructed tests which have uniformity of procedure in scoring, administering and interpreting the test results.

**Planning**

For a given tool, planning was done on the behalf of the investigator regarding the purpose of the test, time and resources at the disposal of the test maker, nature of the population, length of the test, type and nature of test items, method of scoring etc. which was decided in advance.

**Target population**

This scale is meant for Indian adolescents studying in class XI and XII.

**Type of test items**

Emotional intelligence scale is a Likert type five point scale. Every item is in a statement form. Positive and negative items were included in the scale to add variety and reduce students' tendency to respond perfunctorily. Five response categories were provided for responding to every item. In these response categories the subject is required to select the most appropriate response indicating his/her response to the given statement.

**Preparation of preliminary draft of the scale**

While preparing the preliminary draft of the scale, review of related literature and available tests were consulted, on the basis of which a list of 80 statements distributed over the five areas was pooled, which have been

described as under

**Self-awareness (SA):** Observing yourself and recognizing a feeling as they occur, being able to identify and label specific feelings in yourself and others; being able to discuss emotions and communicate clearly and directly

**Managing emotions (ME):** Handling feelings so that they are appropriate; realizing what is behind a feeling; finding ways to handle fears and anxieties, anger, and sadness.

**Motivating oneself (MO):** Channelling emotions in the service of a goal; emotional self control; delaying gratification and stifling impulses.

**Empathy (E):** Sensitivity to others' feelings and concerns and taking their perspective; appreciating the differences in how people feel about things.

**Handling relationships (HR):** Managing interpersonal interaction, conflict resolution and negotiations. Increased ability to analyse and understand relationships, better at solving problems in relationships, more assertive and skilled at communication

**Table 1.** Dimension wise distribution of items in emotional intelligence scale

Sr. No.	Domain	No. of items
1.	Self awareness (SA)	15
2.	Managing emotions (ME)	15
3.	Motivating oneself (MO)	17
4.	Empathy (E)	13
5.	Handling Relationship (HR)	20
	<b>Total</b>	80

**Pre-try out of scale**

The first draft containing 80 items was provided to 10 experts and 15 peers in field of education with a request to review the statements and evaluate their content accuracy and coverage, their repetition, editorial quality with suggestion for additions, deletions and modifications of items.

Looking into the consensus of experts, preliminary draft of 74 items was finalized by deleting item nos. 6, 20,31, 39,40,70

Finally, 74 items were retained after consultation with experts and distribution of these items in form of positive and negative items have been given in table 2

**Table 2.** Distribution of items in preliminary draft of emotional intelligence test

S.No.	Domain	Sr. No. of items in preliminary draft	Total negative items	Total no. of items
1.	Self awareness	1, 10, <b>15</b> , 19, 24, <b>29, 34, 37, 42</b> , 47, 52, 57, <b>62</b> , 65	7	14
2.	Managing emotions	<b>2, 6, 11, 16, 20</b> , 25, <b>30, 35, 38</b> , <b>43, 48, 53, 58</b> , 63, 66	11	15
3.	Motivating oneself	3, 7, 12, 17, 21, 26, 31, 39, 44, 49, 54, 59, <b>64, 67, 69</b> , 71	3	16
4.	Empathy	4, <b>8, 13</b> , 18, 22, 27, 32, <b>40</b> , 45, 50, 55, 60	3	12
5.	Handling relationship	5, 9, 14, 23, <b>28</b> , 33, 36, 41, 46, 51, 56, 61, <b>68</b> , 70, 72, 73, 74	2	17
	Total		26	74

\*item numbers in bold represents negative items

Finally, these 74 statements were provided with 5 response categories: namely always, most often, occasional, rarely and never. This preliminary draft was administered to ten adolescents and average time taken for the completion of test was calculated.

#### The try-out

The 74 statements were randomized and were provided with standard directions and administered on a sample of 200 school students (adolescents) of Ludhiana city i.e. 100 students from Government Senior Secondary School, PAU, Ludhiana and 100 students from R.S. Model Senior Secondary School, Ludhiana. Regarding the administration of emotional intelligence scale, which is a self administering inventory and could be administered individually or in group, the testees were requested to fill in personal information as required in test form. Formal instructions for testees were printed on the first page. The tester read the instructions while the testee also followed her sub-vocally.

After the instructions were over, the testees were asked to register their responses to the various items of the test. Though there was no time limit, usually it took 40-50 minutes to complete the test. Special care was taken to avoid any omission by the testees.

**Scoring** : Since the test measured emotional intelligence in terms of 5 domains, so each sub-area contained both type of items i.e. positive and negative items. Table 2 gives a summary of sub-areas and serial number of the two types of statements.

The scores to be awarded for different response

categories according to the type of statements are given in the table 3

**Table 3.** Scoring of the positive and negative items

Response category	Positive-item score	Negative-item score
Always	5	1
Most often	4	2
Occasional	3	3
Rarely	2	4
Never	1	5

#### Item Analysis and Item Selection

The preliminary draft consisting of 74 items was administered to a group of 200 school students (adolescents). This being a Likert type scale, the subjects indicated their response on a 5 point scale, with scale points ranging from always to never. The scripts were scored and items were analyzed employing the 't' values method. The method involves calculation of 't' values for the difference between the means of high (upper 27% on the basis of total scores) and low (lower 27% on the basis of total scores) groups for each statement for the purpose of item analysis, i.e. to determine the discriminatory power of each item, total scores of each testee were arranged in descending order. Then top 27% and bottom 27% subjects were identified. It may be mentioned that the score of high scoring group ranged from 284 and above and low scoring group comprised of students having a score of 139 and below. Then item wise mean and S.D. of high group and low group were computed to apply t-test in order to find out the difference between two groups for each item in preliminary

draft of emotional intelligence test.

The length of any psychological instrument should neither be too long or too short. On the basis of significance of t-value at 0.05 and 0.01 level of significance, of different items of E.I. test being measured, only those items were selected which had significant discrimination power between high and low group which were item no. 1, 2, 4, 5, 6, 8, 9, 12, 15, 17, 19, 20, 21, 23, 24, 26-32, 34-38, 40-42, 45, 47-52, 54-56, 58, 61, 62, 64-67, 69-74

**Final Draft**

Finally after item analysis, the selected 53 items were put in the final draft of the test.

**Reliability of the Test**

Reliability was established by taking a second try-out on 50 school students (adolescents) from the city of Ludhiana by Test-retest and Split-half reliability techniques. The Test-retest reliability co-efficient of correlation was found to be 0.75 with a time gap of 15 days. Split half reliability (odd even method) was calculated and after Spearman brown's prophecy formula was found to be  $r = 0.69$  for the total scale as shown in table 4

**Table 4.** Showing reliability of emotional intelligence scale

S. No.	Reliability	Coefficient of correlation (r)	Reliability index
1.	Split-half reliability	0.69	$X_{tt} = 0.83$
2.	Test-retest reliability	0.75	$X_{tt} = 0.79$

**Validity of the Test**

**Face and content validity:** In Emotional intelligence scale, content validation was achieved by showing it to and getting it validated from 10 experts and 15 peers from field of education. The Index of Suitability (IOS) was worked out and experts were requested to give +1 if the item was related to the trait, -1 if the item was not related to the trait and 0 in case of uncertainty. On the basis of their responses Index of Suitability (IOS) was calculated and the value of IOS ranged from 0.85 to 1 which clearly showed that the content of emotional intelligence measures the same trait for which it was written.

**Construct Validity:** For construct validity, correlations between all domains of emotional intelligence

scale were drawn out, which has been given in Table 5

**Table 5.** Interrelationships between domains of emotional intelligence scale

Domain	SA	ME	M.O.	E	HR	EI
SA		0.362	0.484	0.301	0.343	0.662
ME			0.423	0.392	0.344	0.604
MO				0.405	0.512	0.724
E					0.415	0.682
HR						0.790

Table 6 reveals that all correlations are positive and significant at 0.01 and 0.05 level of significance. Thus, it could be inferred that all items are highly correlated and test developed is valid.

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