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Restandardization of Emotional Intelligence Scale for Secondary school students through Pilot study

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Abstract:

This study seeks to revise and adapt the Emotional Intelligence Inventory developed by Dr. S.K. Mangal and Mrs. Shubhra Mangal for secondary school students residing in the Jalpaiguri and Darjeeling districts of West Bengal. The inventory comprises 100 items, categorized into four dimensions of emotional intelligence: intrapersonal awareness, interpersonal awareness, intrapersonal management, and interpersonal management. Among the 100 statements 48 is positive and 52 are negative statement. The Inventory is being re-standardized for Secondary School students of North Bengal region of West Bengal. The test was carried out with a sample of 100 pupils, 50 each from government and private schools. Reliability was established through Cronbach Alpha for correlation between forms and was found to be $r = .908$. Spearman Brown Coefficient for reliability was found to be .953 and Guttman Split half coefficient was found to be .908. Validity correlation was significant at 0.01 level (2 tailed test) and the validity of the re-standardization was established.

Keywords: *Emotional Intelligence, EI models, pilot study, re-standardization.*

Introduction:

"The true purpose of education is to broaden intellectual perspectives, cultivate emotional accountability, and nurture aesthetic appreciation," as stated by Indira Gandhi.

Within the field of psychology, emotional intelligence has emerged as a relatively recent area of study. It refers to an individual's ability to recognize and understand not only their own emotions but also those of others (Goleman, 1998). The concept was first introduced in an article by Peter Salovey and John D. Mayer in the 1980s. Emotional intelligence encompasses a set of skills that enable individuals to perceive, manage, and utilize emotions—both their own and others'—to guide decisions and behavior. Emotions shape our experiences, influence our perspectives and actions, and have a ripple effect on those around us.

Mayer and Salovey further define emotional intelligence as the capacity to recognize emotions, access them, and employ them to enhance cognitive processes; to understand emotional meanings; and to regulate emotions effectively to support mental and physical well-being.

The definition and application of emotional intelligence remain subjects of debate, with three primary models widely recognized:

1. Ability Model
2. Trait Model
3. Mixed Model

An array of EI models has prompted the creation of several tools for measuring the build. Despite the possibility of some overlap, most experts think that these parameters tap independent components.

1. Ability Model:

According to this concept, there are certain skills that one must have in order to be emotionally intelligent. **This model of** emotional intelligence is put forth by **Mayer, Salovey and Caruso**. This model mainly has four types of skills:

1. **Use of emotions:** Being able to use feelings to improve relationships, decision-making, and thought processes is known as emotional intelligence.
2. **Sense of emotion:** It has to do with One's capability to recognize and understand their and others feelings. Since you cannot control emotions until you can recognize them, this is the fundamental Emotional Intelligence ability.
3. **Understanding emotions:** It's about understanding how different emotions could influence a person's conduct and making use of the unique knowledge they supply.
4. **Emotional management:** It speaks about one's ability to regulate their own and other people's emotions. An effective achiever can regulate both good and bad emotions and channel them in a way that makes completing work easier.

Depending on ability-based exams, the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) was formed. A consensus metric called the MSCEIT contrasts each respondent's response with a selection of the participants. The replies are considered emotionally "intelligent" only if they are shared by the majority of the sample.

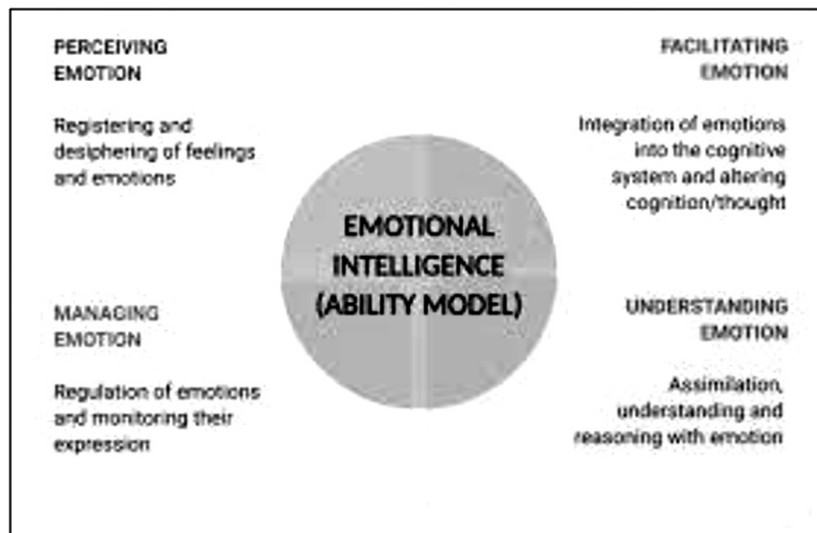


Figure1: Represents Emotional Intelligence Ability model.

2. Mixed Model:

Another prevalent emotional intelligence model is the mixed model. In the Daniel Goleman's definition of emotional intelligence, significance of characterising emotional intelligence in terms of a range of abilities and traits that affect the efficacy of leadership is focused upon.

The five major elements of emotional intelligence in the Mixed Model are:

1. **Knowledge of oneself**- The capacity to make judgements based on intuition while also being aware of and cognizant of one's feelings, motives, faith, and goals, as well as the implication they have on others.
2. **Self-regulation / Self-management**- Involves managing or rerouting erratic feelings and impulses in addition to adjusting to shifting conditions.
3. **Social ability** – The capacity to steer individuals in the right path via relationship management.
4. **Compassion** - is the ability to take into account the feelings of others, especially while passing judgement.
5. **Inspiration** – The drive to be successful just for the purpose of being successful.

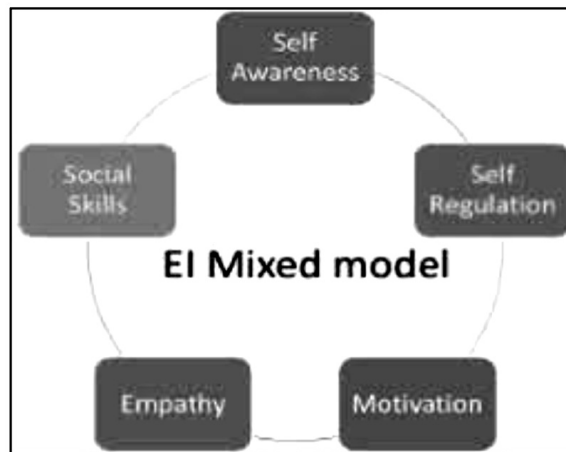


Figure 2: Mixed model for Emotional Intelligence.

2. Trait Model:

The Trait Model refers to an approach used to assess emotional self-perceptions, which are foundational aspects of personality.

Konstantinos V. Petrides introduced this model, describing it as "a constellation of emotional self-perceptions located at the lower levels of personality" (Petrides & Furnham, 2000). This concept, often referred to as "trait emotional self-efficacy," relates to an individual's perception of their emotional intelligence and is distinct from traditional classifications of human cognitive abilities.

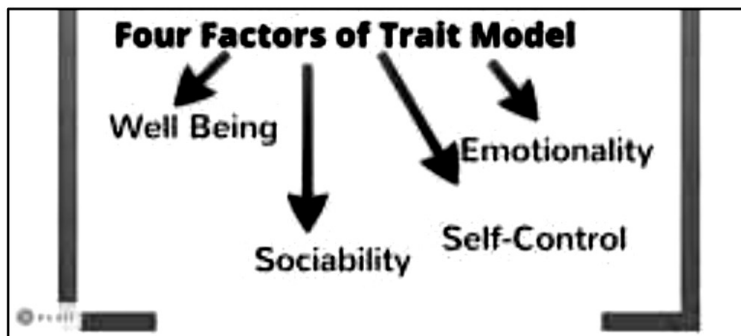


Figure 3: Trait model of Emotional Intelligence.

Emotional intelligence (EI) is a concept explored through various models that have shaped the construction and standardization of tools in this field. Broadly, these models are categorized into three types: ability models, mixed models, and trait models. Among these, the mixed model gained prominence through the work of Daniel Goleman, who introduced it in 1995. This model emphasizes five core components: self-awareness, self-regulation, social skills, empathy, and motivation.

Goleman's mixed model has served as a foundation for the development of numerous tools and inventories aimed at measuring emotional intelligence. Notably, Mangal and Mangal have contributed significantly by creating various tools designed to assess EI. One of their well-known instruments, the Emotional Intelligence Inventory for secondary school students (EII-MM), draws inspiration from the principles of Goleman's mixed model.

In her upcoming research, the investigator intends to undertake the restandardization of the EII-MM to better align it with the specific needs of secondary school students. This initiative aims to enhance the tool's validity and reliability while maintaining its relevance in educational settings.

Objective:

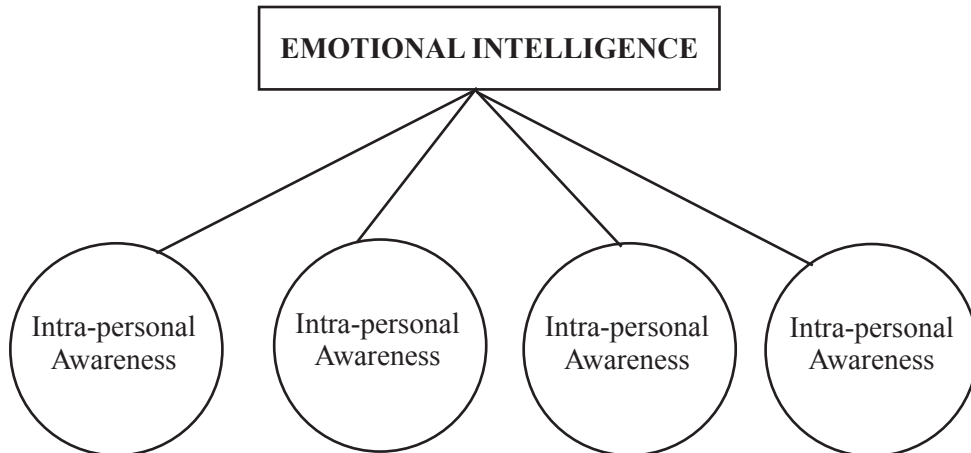
Objective of the present work is to Re-standardize the emotional Intelligence inventory by Mangal and Mangal for Secondary school students.

Delimitations :

Since it was impossible to examine every facet of the issue, the study was limited on the basis of following criteria:

1. The population of the study was taken as Secondary students of class 8 and 9.
3. The selected schools were both from rural and urban areas and had different type of Management (namely government and Private school) of Darjeeling and Jalpaiguri district of West Bengal.
4. The study's sample size was determined to be 100.

Conceptual Flowchart of Emotional Intelligence as designed by Mangal and Mangal:



Methodology:

The researcher used the descriptive survey methods to Re-standardize the emotional intelligence inventory of secondary school pupils in the West Bengal districts of Jalpaiguri and Darjeeling. The method of doing research is defined by the nature of the problem.

The Sample:

A sample of 100 students took part in the current study. They were selected through Stratified random sampling technique from two schools of West Bengal region, namely, Darjeeling and Jalpaiguri District.

Table 1: Sample collected for pilot study.

Total Sample Size (100)	BOYS	GIRLS
	39	61

Tool for the study:

Emotional Intelligence inventory prepared by Dr. S.K. Mangal Department of Education, M.D University and Mrs. Subhra Mangal, C.R.S. College of Education NOIDA.

Description:

The four sections of the Emotional Intelligence Inventory have a total of 100 items, with 25 items

in each category.

1. Inter Personal Awareness.
2. Intra Personal Awareness..
3. Inter Personal Management.
5. Intra-Personal Management.

Area-wise Distribution of Statements:

Scoring:

Scoring system of Emotional Intelligence inventory is as follows:

Sl. No.	Type of Statement	Always	Sometimes	Never
1.	Positive	2	1	0
2.	Negative	0	1	2

Reliability:

The inventory's Reliability was assessed through:

1. Cronbach Alpha for correlation between forms was found to be $r = .908$.
2. Spearman Brown Coefficient for reliability was found to be $r = .953$.
3. Guttman Split half coefficient was found to be $r = .908$.

Validity:

Two distinct methods have been used to establish the authenticity of the inventory, notably, Content and face validity.

Collection of Data:

The investigator visited the schools in person and obtained permission in advance from the principal. The students received the Emotional Intelligence Inventory during a formal visit. The opening page of the Question Booklet contained directions that the students were asked to follow. They were given the opportunity to respond freely and honestly, without holding back or feeling afraid, because their answers would be kept private and used solely for research. Any queries were clarified, and there was enough time to record the answers. The response forms were collected in accordance with the daily and hourly timetable. As soon as the answers were finished, the response sheets were gathered. The administrations of the institutions, as well as pupils and teachers in the classes, fully cooperated with the investigator to gather information.

Statistical Analysis:

To determine Emotional Intelligence of Secondary school students, Descriptive and Inferential Statistics was used.

Data Analysis and Interpretation:

Table 2: Participants profile

Sl. No.	Demographic variable	Sample with specification(100 participants)	
		N (no. of respondents)	Percentage (%)
1.	Gender		
	Male	39	39
	Female	61	61
2.	Type of Management		
	Private school	1	50
	Government school	1	50

Pilot Study:

The children were instructed to complete the questionnaire according to the subsequent guidelines given below.

1. A test booklet and an answer sheet have been handed to you. The instructions are on the opening page of the booklet, and subsequent pages have 100 test statements that may be marked as "Always," "Sometimes," or "Never."
2. The purpose of all these statements is to assess your emotional intelligence. Answers to the questions in the booklet are not deemed correct or incorrect. You just need to answer the question after reading it carefully and deciding what is right for you.
3. It's crucial to keep in mind that writing anything on the booklet is not necessary. It is only a survey form. Marking "Always," "Sometimes," or "Never" next to the serial number of each phrase on the answer sheet indicates your response.
4. Although there is no timeframe for responding, you are asked to complete your work in 30 to 40 minutes.
5. You can ask questions if you're uncertain.

The data received were verified to ensure the completion of the statistical analysis. Next, the emotional intelligence scale's variability and central tendency were identified. In order to determine if the data matches a normal probability curve, skewness and kurtosis were computed.

According to the findings, every number fell within a range that was statistically significant. . (Kurtosis < 7 and skewness < 2).

Table 3: Table displaying the pilot study's mean, median, mode, standard deviation, skewness, and kurtosis:

Topic	MEAN	MEDIAN	MODE	SD	SKEWNESS	KURTOSIS	Percentile			
Emotional Intelligence of Students	117.61	118.50	113	15.108	-.073	-.611	25	50	75	100
							106.25	118.5	127.75	146

Reliability:

Reliability was established through Cronbach Alpha, Split- half reliability technique and Guttman Spilt half coefficient. Cronbach Alpha for correlation between forms was found to be $r = .908$. Spearman Brown Coefficient for reliability was found to be .953 and Guttman Split half coefficient was found to be .908.

Validity:

A tool's validity is determined by its truthfulness. If a test measures the items it is intended to measure, it is considered authentic. Because it contains items from every chosen emotional intelligence assessment dimension, including interpersonal awareness, interpersonal management, and intrapersonal awareness, the scale is known as having "universe of content." The scale has 100 elements, which symbolize the scope of the material and the validity of the scale's content. An education specialist reviewed the results to ensure the scale's face validity, and the items on the scale were found to be pertinent to the study's goals. It also has face validity as a result.

Table 4: Results of Inferential statistics for data collected for pilot study:

Sl. No.	Emotional Intelligence of Secondary School Students	Reliability coefficients	Result	Validity
1.		Cronbach Alpha for correlation between forms	.908	Significant at the two-tailed test level is 0.01.
2.		Split- half reliability technique	.953	
3.		Guttman Spilt half coefficient	.908	

Relevance of the study:

Standardization/ Re-standardization of a tool are essential to measure the accuracy of the results in a particular study. Re-standardization of a tool helps to tweak the tool according to the needs of the investigator. It helps to meet the desired results that the investigator aims to achieve through the process of pilot study. Re-standardization of the tool was essential in this particular study to

check whether the results obtained after pilot study were consistent with the standardized results of the tool and that the tool used for the study would actually suffice to obtain the desired results the investigator aims to achieve through this study. If the results would have been inconsistent, the investigator would have to either reject the tool or design a new one to align with the specific needs of the secondary school students as well as relevance of the study according to the educational setting of the area of study.

Conclusion:

The area of study chosen by the investigator has strategic relevance in terms of trade and commerce, also that North Bengal caters to the North eastern states of India and its proximity to three SAARC countries (Nepal, Bhutan and Bangladesh) cannot be ignored. North Bengal especially the districts of Darjeeling and Jalpaiguri has long been neglected for research. The investigator finds it imperative to bring these regions to focus in order to study whether there is any regional influence on the study or not. It is also important to study whether there is any impact on emotional intelligence due to these differences. The results obtained after pilot study by the investigator concludes that the scale chosen for the study is a viable and trustworthy tool for assessing emotional intelligence. With strong item homogeneity, internal consistency, and a significant pattern of validity, the Scale is a promising tool. To summarize, the study yielded noteworthy findings, demonstrating the excellent reliability and validity of the test through a considerably high correlation coefficient. Restandardization of the scale was important for the study as new studies are crucial to the growth and advancement of the country. The current study came to the conclusion that the emotional intelligence inventory chosen for further study by the investigator is a trustworthy instrument for carrying out the research work.

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