



Emotional Intelligence (EQ) Test

TECHNICAL REPORT

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Background

The Emotional Intelligence (EQ) Test assesses a respondent's capacity to effectively navigate emotions and emotional interactions. Emotional intelligence represents a critical set of abilities that support personal growth and awareness, meaningful relationships, and professional success. This EQ Test – developed by Truity Psychometrics – consists of five subscales designed to capture core dimensions of emotional intelligence. It was developed over an eight-month period of time and drew on the existing body of literature and available models for EQ.

This report describes the conceptualization and development of the assessment and provides descriptive statistics which support its reliability and validity as a measure of emotional intelligence.

Conceptual Origins and Relevance

The 1990s brought a surge of renewed interest in the concept of emotional intelligence prompted by the 1983 book *Frames of Mind*, which posited the existence of multiple intelligences (Gardner), accelerated by the 1990 academic conceptual model of Emotional Intelligence (Salovey & Mayer), and solidified by the release of the popular book *Emotional Intelligence: Why It Can Matter More than IQ* (Goleman) in 1995. In the early 2000s, significant research was dedicated to the role of emotional intelligence in the workplace, a topic that comprised more than a third of all scientific papers on the subject at the time (Stough et al., 2009). Ultimately, emotional intelligence has been linked to greater potential for social growth, academic achievement, and various aspects of career success (Sharma & Tiwari, 2023; Zeidner et al., 2004).

Emotional intelligence (EQ) was originally conceptualized as a facet of social intelligence, and one that played an important – if not yet fully understood – role in personal, social, and professional fulfillment. EQ was defined as “*the ability to monitor one’s own and others’ feelings and emotions, to discriminate among them and to use this information to guide one’s thinking and actions*” (Salovey & Mayer, 1990, p. 189).

Theoretical Framework and Development

Drawing on Salovey and Mayer’s (1990) conceptual model of EQ, and having reviewed seven existing trait-based, ability-based, and mixed model assessments, Truity Psychometrics’ research team initially identified five core aspects of emotional intelligence: emotional self-control, social awareness, prosociality, flourishing, and expressiveness. Likert-scale items were then developed for each of these five constructs using existing validated test items from publicly available test banks and newly created items based on each of the five aspects of EQ.

The initial version – and one second iteration – of the test were administered to more than 100,000 users of Truity.com. Results were incorporated into the development process, and ultimately, the third iteration of the test represents the final version. The theoretical model underlying the final version is described below.

Facets of Emotional Intelligence

The framework developed for the final version of the test includes five facets of emotional intelligence.



Image 1: EQ Theoretical Model (Quote by Salovey & Meyer, 1990, p. 189)

1. Self-Awareness

Definition: The ability to effectively recognize and identify one's own emotional experiences.

Characteristics: Individuals high in self-awareness are attuned to their emotions and exhibit keen awareness of their feelings at any given moment.

2. Other Awareness

Definition: The ability to effectively perceive and understand the emotions of others.

Characteristics: High scorers are attuned to nonverbal cues including body language and facial expressions that provide information about others' emotional states.

3. Emotional Control

Definition: The ability to regulate and manage one's own emotions.

Characteristics: Individuals with high emotional control can effectively navigate their emotional experiences and direct their emotions to serve their goals and wellbeing.

4. Empathy

Definition: The ability to understand and relate to the emotional experiences of others.

Characteristics: High scorers are deeply attuned to others' emotions and can connect with their experiences.

5. Wellbeing

Definition: An individual's overall state of psychological, emotional, and social prosperity.

Characteristics: High scorers maintain a generally positive attitude towards life and often experience fulfillment, happiness, and satisfaction in daily activities.

Test Design

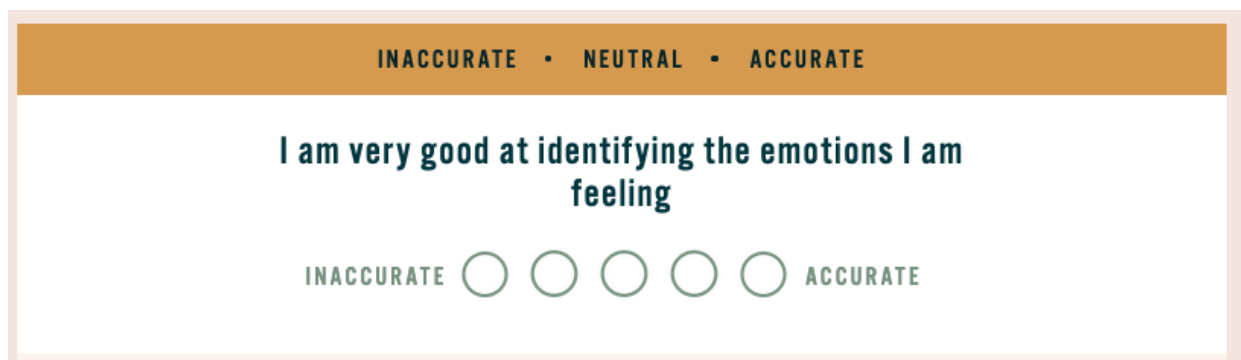
The test is a self-report assessment with 42 total items.

Below is a breakdown of the number of items per facet of emotional intelligence:

Five Facets

- Self-Awareness: 10 scored questions
- Other Awareness: 9 scored questions
- Emotional Control: 9 scored questions
- Empathy: 7 scored questions
- Wellbeing: 7 scored questions

In response to each statement, e.g. “I really enjoy socializing,” respondents select among five Likert-scale options, from “Inaccurate” to “Accurate.” See Image 2 below. The central option represents a “Neutral” response.



The image shows a digital interface for a Likert-scale item. At the top, a dark orange header bar contains the text "INACCURATE • NEUTRAL • ACCURATE" in white, uppercase letters. Below this, the statement "I am very good at identifying the emotions I am feeling" is centered in a bold, dark teal font. Underneath the statement, there are five empty circular radio buttons arranged horizontally. The word "INACCURATE" is positioned to the left of the first button, and the word "ACCURATE" is positioned to the right of the fifth button. The entire interface is enclosed in a light orange border.

Image 2: Example Likert-Scale Item

Facets	Sample Item
Self-Awareness	"I often recognize emotions while I am feeling them"
Other Awareness	"I am good at understanding nonverbal cues and body language"
Emotional Control	"Once something upsets me, I find it hard to calm myself back down"
Empathy	"I am easily upset by the pain of other people"
Wellbeing	"I consider myself extremely lucky to have the life I do"

Table 1: EQ Facets and Sample Items

Reliability

There are many ways to measure the reliability of a psychological assessment. It is critical for tests of this nature to demonstrate internal consistency, and one of the most popular ways to assess this form of reliability is by determining a value known as Cronbach's alpha. Cronbach's alpha values can be determined for each facet of emotional intelligence in the test and reflect the conceptual strength of that facet. In other words, the higher the Cronbach's alpha, the more internal consistency that part of the test has (and therefore, the more reliable the test is). And, as a general rule of psychological testing, there must be reliability in order for a test to be considered valid (Stough et al., 2009).

Cronbach's alpha values typically range from 0.0 to 1.0, indicating how consistently the items hold together for their intended purpose. A Cronbach's alpha value of 0.70 or higher is generally considered to be adequate, and a value of 0.80 or above is recommended (Stough et al., 2009).

Our research team calculated Cronbach's alpha values for a sample of $N = 36,124$ Truity site users who completed the EQ test between September and October of 2025.

Table 2 below indicates the Cronbach's alpha values for each of the five facets of EQ measured by the test – for this sample of users (N).

Facet of EQ	Cronbach's alpha
Self-Awareness	0.884
Other Awareness	0.836
Emotional Control	0.750
Empathy	0.800
Wellbeing	0.666

Table 2: EQ Facets and Cronbach's Alpha

Cronbach's alpha values are acceptable for 4 facets, with Self-Awareness and Other Awareness demonstrating particularly strong internal consistency. Wellbeing is near the acceptable threshold, likely reflecting the complexity of assessing this construct. Given these Cronbach's alpha values, we can thus conclude that the test is internally consistent, and therefore, reliable.

Validity

In addition to the importance of establishing the reliability of a psychological assessment, it is critical to determine its validity – that is, that the test effectively measures what it intends to measure. Our research team used machine learning to conduct three forms of analysis to establish *content validity* – whether test items accurately represent the concept of interest. We assessed *the inter-item correlation* of the test items – how well the items intended to measure the same constructs correlated with each other in practice. We also assessed *factorial validity* – determining what exactly a test measures – and conducted *agglomerative clustering* – a form of analysis that seeks to confirm that test items cluster into meaningful categories that reflect the theoretical model underlying the test. Together these three methods provide justification for the validity of an EQ assessment (Stough et al., 2009). For these analyses, we used the same sample (N = 36,124 Truity site users who completed the EQ test between September and October of 2025).

Content Validity

Inter-Item Correlation

First, we conducted a review of all of the test items, to establish content validity by determining inter-item correlations. We created an inter-item correlation matrix, which reflects the strength of correlations among items and reveals correlative patterns for each facet of EQ.

Image 3 below includes the full inter-item correlation matrix for the test. The two axes of the image describe each of the test items (a_1 through e_7). The corresponding facets for each letter are: Self-Awareness (a), Other Awareness (b),

Emotional Control (c), Empathy (d), and Wellbeing (e). Thus, item “a_8” represents the 8th item used to assess Self-Awareness, and so on.

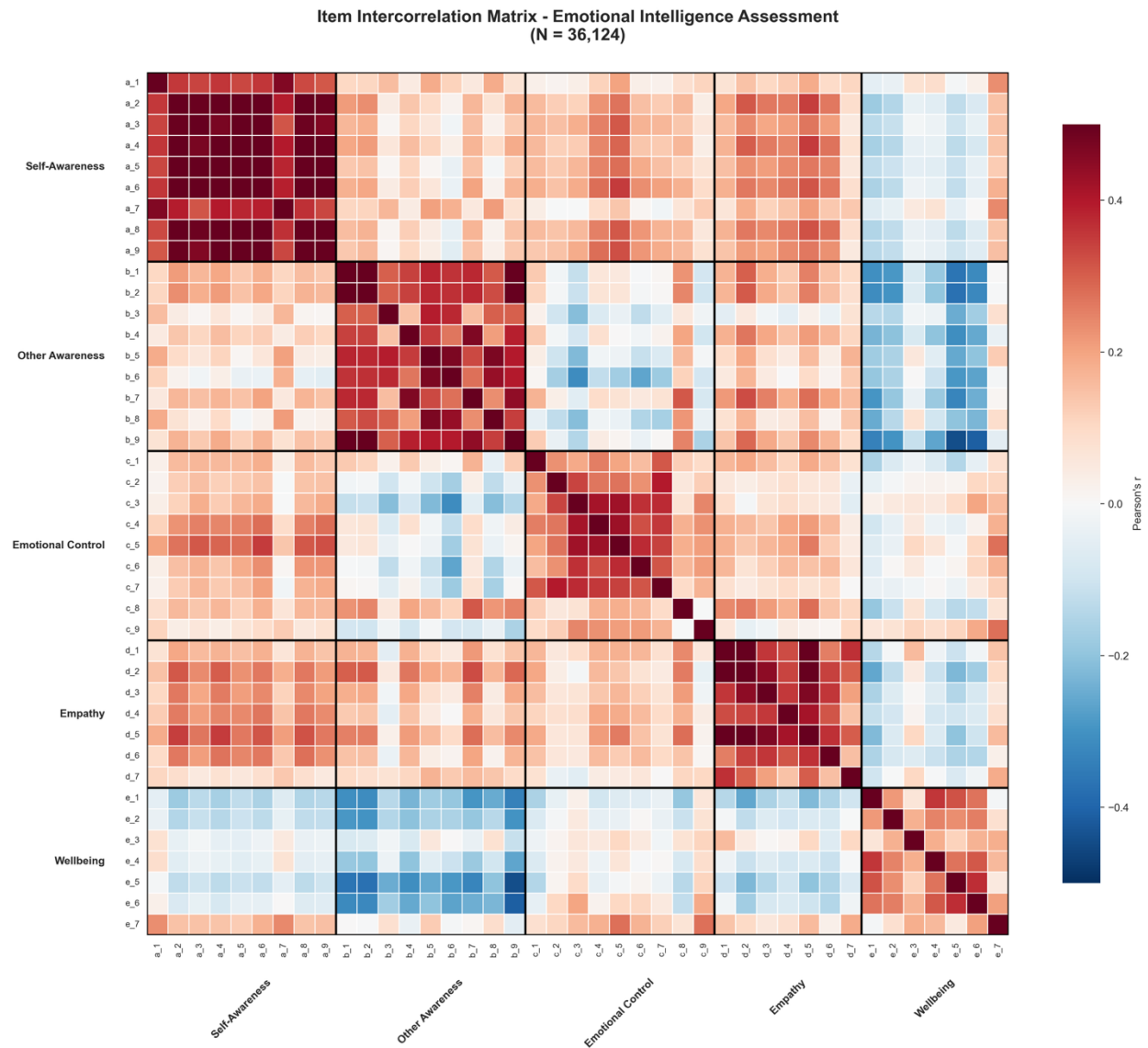


Image 3: Inter-Item Correlation Matrix

In this image, it is possible to discern correlative patterns for each item, and each facet, in the data.

The red cells in the image represent higher correlations (these items tend to be answered in similar ways), and the blue cells represent lower or negative correlations (that is, these items tend to be answered dissimilarly or in opposite ways).

The darker red squares at the intersections of each facet, i.e. (a) and (a) questions, (b) and (b) questions, and so on, indicate that test questions used to assess each facet tended to produce similar responses. In other words, each facet holds together as a concept. Of note are the particularly robust correlations in Other Awareness and Emotional Control.

Along these same lines, the items intended to measure Emotional Control appear to be inversely correlated with the items intended to measure Empathy. That suggests *discriminant validity* (Stough et al., 2009) for these facets – that Emotional Control and Empathy are being effectively measured as distinct from one another, and that higher scores in one facet may correlate with lower scores in the other. In fact, the discriminant validity ratio for this analysis is 6.55, indicating that items within each of the five facets are about 6.5 times more strongly correlated with each other than with items from other facets. These data further support the validity of the facets and the test as a whole.

Factorial Validity and Agglomerative Clustering

Factorial validity is a statistical method that searches for relevant factors within a data set. Establishing factorial validity is considered particularly relevant to the study of emotional intelligence, due to the complexity of the construct (Stough et al., 2009).

For this EQ test, we sought to establish the feasibility of our five facets of emotional intelligence through the use of factor analysis. The analysis revealed key distinctions among the five facets of EQ measured, with Self-Awareness, Other Awareness, Emotional Control represented by three distinct factors. Another factor distinguished the self-related facets of EQ – Wellbeing and Self-awareness, from the two other-related aspects – Other Awareness and Empathy. A distinction between the awareness-oriented facets and the

action-oriented facets also emerged, suggesting that the items related to these facets were well-differentiated.

The agglomerative clustering process also revealed strikingly clear connections between the items in the test and the theoretical facets they were intended to measure. Agglomerative clustering can be applied to test items to assess the strength of the connection between the test questions and the concepts being measured. In this case, we sought to validate the five facets underlying the design of the test by exploring whether or not usage data for the items clustered into meaningful groups. Image 4 below captures the results of the agglomerative clustering.

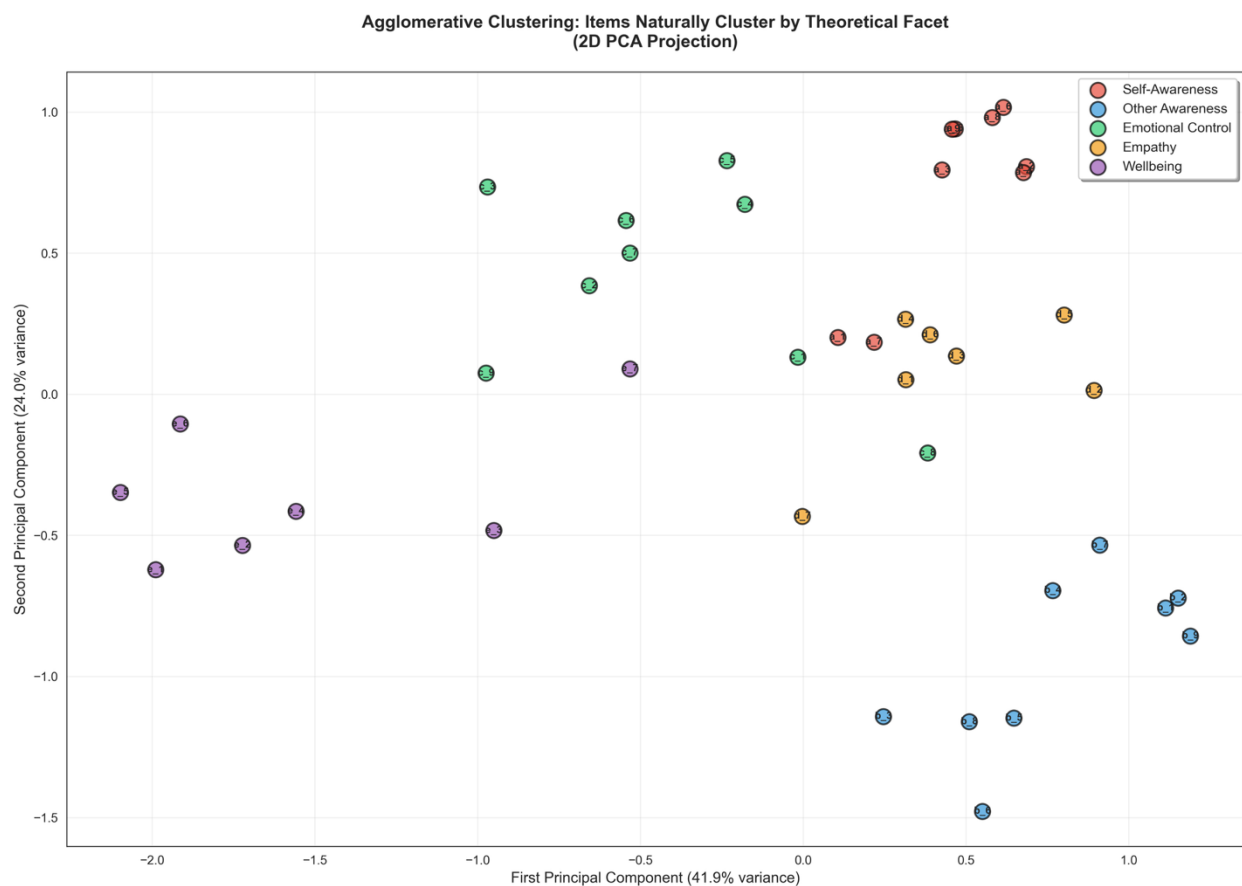


Image 4: Visualization of Agglomerative Clustering for Test Items

The final analysis revealed clear links between the clusters that emerged and our theoretically constructed facets of EQ; the five clusters neatly reflected the five facets themselves. This result further supports the content validity of the test.

Predictive Validity

Two important ways to support the validity of an assessment are to gather demographic data about test users and to measure the extent to which test results correlate with relevant external factors in test user’s lives. For this test, we gathered information about the 36,124 Truity site users who completed the EQ test between September and October of 2025. Please note that of these users, 28,751 provided valid age responses and 28,761 provided valid gender responses. These users’ information is included below in Tables 3 and 4.

Demographic Statistics

Age Ranges	Number of Users	Percentage
Under 18 years	7620	26.50%
18 – 25 years	10964	38.13%
26 – 35 years	5031	17.50%
36 – 45 years	2676	9.31%
46 – 55 years	1585	5.51%
56 – 65 years	635	2.21%
65 + years	260	0.10%
Total	28751	100%

Table 3: Age of EQ Test Users between September – October 2025

Identified Gender	Number of Users	Percentage
Woman	16830	58.52%
Man	11485	39.93%
Other/Non-binary	446	1.55%
Total	28761	100%

Table 4: Identified Gender of Test Users between September – October 2025

Correlative Relationships Between External Dimensions and EQ

We explored the relationship between these two demographic dimensions and EQ score, represented in Image 4 and Image 5 below. Image 4 describes the relationship between a test user's age and their EQ score and Image 5 describes the relationship between a test user's gender identity and their EQ score.

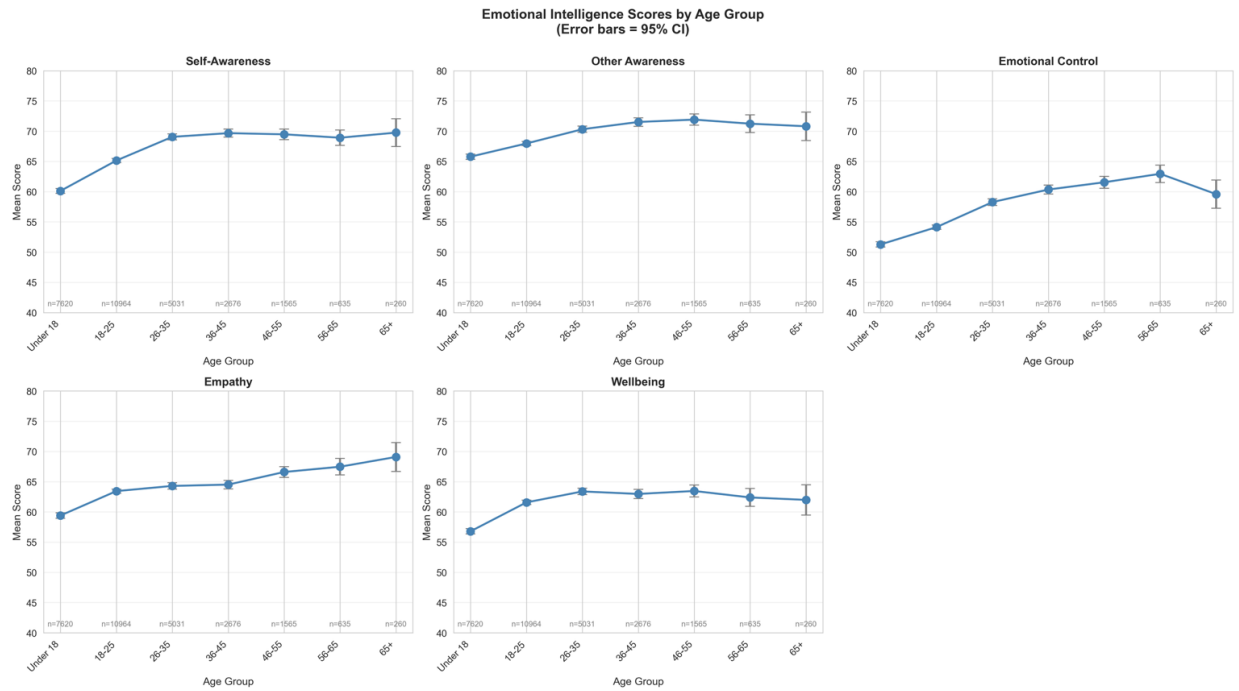


Image 4: Age and Five Facets of EQ

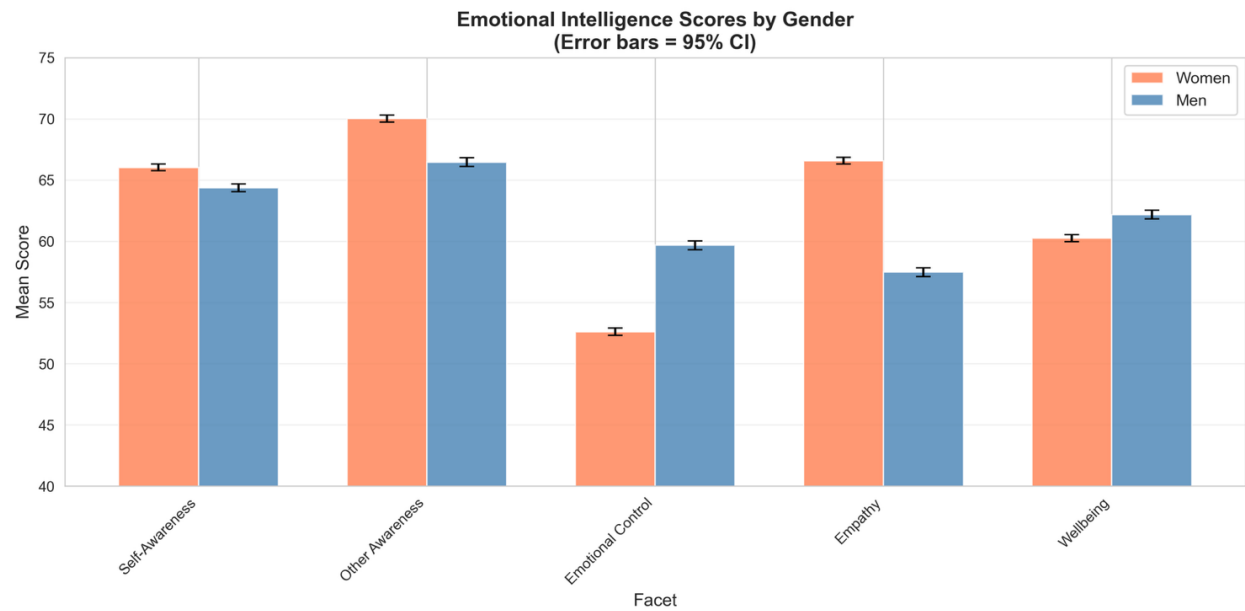


Image 5: Gender and Five Facets of EQ

It is possible to see here that EQ scores generally increase with age. A test of p values for age confirmed that the positive relationship between age and EQ score is statistically significant for all five facets. In particular, Empathy seems to steadily increase, while the other four facets may plateau around mid-life.

In terms of gender, there are observable differences in Other Awareness, Emotional Control and Empathy, and what appear to be slight differences in Self-Awareness and Wellbeing.

We used Cohen's d to measure effect size, and found the following:

Self-Awareness (d = 0.093)

Women slightly higher than men.

→ Very small effect

Empathy (d = 0.489)

Women higher than men.

→ Moderate-to-large effect

Other Awareness (d = 0.188)

Women higher than men.

→ Small effect

Wellbeing (d = -0.098)

Men slightly higher than women

→ Very small effect

Emotional Control (d = -0.358)

Men higher than women.

→ Moderate effect

The most pronounced differences occur in Empathy – women scored higher – and Emotional Control – men scored higher. In general, these results reflect the existing literature on gender impacts on emotional intelligence (Tommasi et al., 2023; Tsaousis & Kazi, 2013).

To assess the predictive validity of our EQ measure for test users' professional lives, we compared EQ scores to users' reported management level. Image 6 describes the correlation between a test user's five EQ facet scores and whether they identified as a manager or non-manager. Table 5 includes the Cohen's d values for these correlations to indicate effect size.

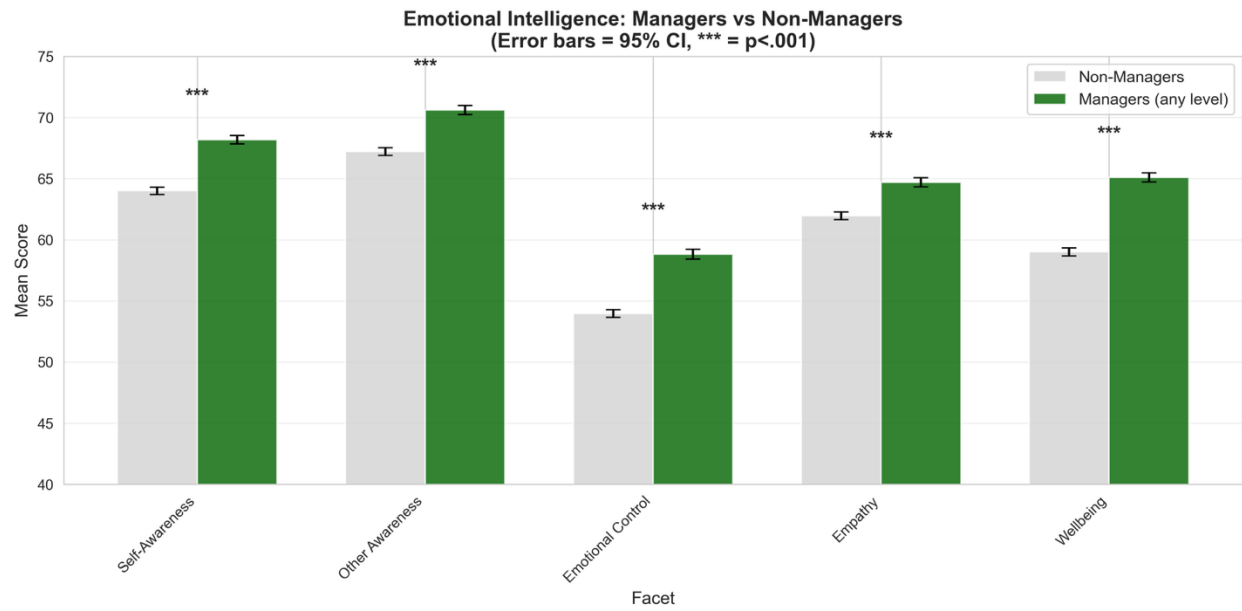


Image 6: Five Facet Scores for Managers and Non-Managers

Facet	Mean (M)	SD (M)	Mean (NM)	SD (NM)	Difference	Cohen's d
Self-Awareness	68.18	17.11	64.01	18.41	4.17	0.235
Other Awareness	70.61	18.17	67.22	19.49	3.39	0.180
Emotional Control	58.82	19.32	53.97	20.15	4.85	0.246
Empathy	64.70	18.42	61.96	19.14	2.74	0.146
Wellbeing	65.10	18.86	59.01	19.78	6.10	0.316

Table 5: Correlative Effect Size of Five Facet Scores for Managers and Non-Managers

While the differences between manager and non-manager EQ facet scores were generally small, they were statistically significant. The strongest difference occurred in Wellbeing, perhaps not surprisingly.

Assessing test user's EQ scores by their level of management responsibility provided a more robust picture, described in Image 7.

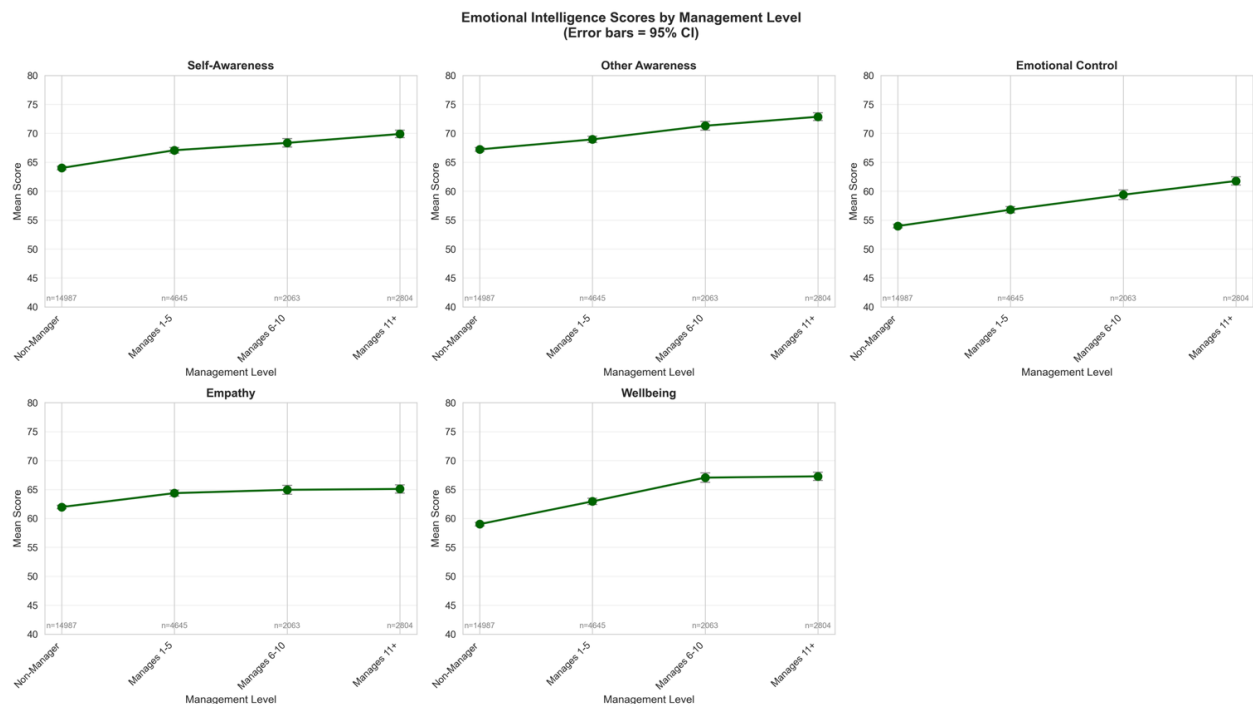


Image 7: Five Facet Scores by Management Level

As management level increased for these test users, each of the five facet scores generally increased, though Empathy and Wellbeing appeared to plateau slightly for managers of 10 or more people. This correlative pattern suggests that the five dimensions of EQ do have predictive validity for management by level.

In summary, this report evaluated the EQ test created by Truity Psychometrics in multiple ways consistent with standards provided by Stough et al. (2009) and found significant support for the conceptualization, reliability, and validity of the assessment as an effective measure of emotional intelligence.

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