



# Flower Power: Women Score Higher on Emotional Intelligence

Dalton J. Terry, Ryuhei Kawamoto, Theresa Ross, Ashley A. Anderson, and Kimberly A. Barchard  
University of Nevada, Las Vegas



## ABSTRACT

We use Emotional Intelligence (EI) daily to handle each emotional exchange. These interactions take place everywhere, especially in high emotion environments like the workplace. The most commonly used maximum performance measure of EI is the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer, Salovey, Caruso, & Sitarenios, 2003). It measures four branches of EI: Perceiving, Facilitating, Understanding, and Managing Emotion. Previous research shows that women score higher on all branches of the MSCEIT (e.g., Mayer, Salovey, & Caruso, 2000). The purpose of this research was to replicate that finding using an online version of the test. A total of 179 individuals (117 females, 62 males) completed this study for course credit. Women scored higher on average than men on three of the four branches. On the remaining branch (Facilitating Emotion), the differences approached significance. We conclude that women are more emotionally intelligent than men.

Sex differences in EI may be important in the workplace. First, social skills appear to be related to EI (Schutte et al., 2001). There may be a threshold for EI – a minimum level needed to function effectively in social situations – and women would be more likely to meet that threshold (Brackett et al., 2006). Second, researchers argue that EI can be improved (Dacre Pool & Qualter, 2012), so workplaces may attempt to increase the EI of employees. However, the employees who have the lowest EI are likely to be disproportionately male. Therefore, interventions should take into account gender norms, particularly regarding the expression of emotion (Saurer & Eisler, 1990). Third, because the MSCEIT is maximum-performance, it would be appropriate for personnel selection. However, future research needs to ensure that the test is not biased, by demonstrating that there is a comparable difference in job performance between men and women.

## INTRODUCTION

Emotional Intelligence (EI) is defined as the capacity to reason about emotions to enhance thinking. It includes the abilities to accurately perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth (Mayer, Salovey, & Caruso, 2004). We use these abilities daily to handle each emotional exchange. They dictate how we perceive, understand and regulate our interactions with the world. For example, a father fights with his daughter. She is upset that her father went through her belongings without her permission. He is irritated because he noticed that his daughter had been acting unusually, and he was simply worried. When both of them are arguing, it is easy for them to think that the other is upset for no reason. EI helps the father understand that his daughter is more embarrassed than angry, and that her anger comes from her demand for privacy rather than her refusal of help. EI also helps the daughter figure out that her father is worried rather than upset, and that his anger comes from the fact that she declined his offer to help. The ability to accurately perceive emotion can help them communicate more effectively and thus develop more appropriate solutions to the problem. In general, higher EI is associated with better mental, physical, and psychosomatic health (Schutte, Malouff, Thorsteinsson, Bhullar, & Rooke, 2007) and greater life satisfaction (Austin, Saklofske, & Egan, 2005). Also, individuals with high EI view group members more positively and give higher ratings to their group members when compared to those who had lower EI scores (Day & Carroll, 2004). Thus, EI is helpful in a number of different ways.

The purpose of this study is to examine sex differences in EI. More specifically, we will compare the scores of men and women on the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT). Previous research has shown that women score higher than men on the MSCEIT (Brackett, Mayer, & Warner, 2004; Brackett et al., 2006; Palmer, Gignac, Manocha, & Stough, 2005). This is true both for total scores and for branch scores (Perceiving, Understanding, Facilitating, and Managing Emotion; Mayer, Salovey, Caruso, & Sitarenios, 2003). One study examining EI in military personnel found that women are especially good at Perceiving Emotion (Livingstone & Day, 2005). Some researchers believe that women are more skillful in communicating their emotions as well as showing empathy, while men are more skillful at inhibiting their emotions. This is evidenced by higher scores by women on the Perceiving, Facilitating, and Understanding Emotion branches (McIntyre, 2010). Sex differences have also been found cross-culturally. Women taking the Spanish Version of the MSCEIT score higher on all branches (Extremera, Fernández-Berrocal, & Salovey, 2006). Women from Pakistan scored significantly higher on Perceiving Emotions (Karim & Weisz, 2010). Finally, women from France scored significantly higher on Managing Emotion, with the differences on all other branch scores approaching significance (Karim & Weisz, 2010). Overall, previous research has shown that women consistently score higher than men branches of the MSCEIT, especially Perceiving Emotion. We plan to replicate that research with an online version of the MSCEIT. We hypothesize women will score higher on all branches.

## METHOD

### Participants

A total of 179 students (117 females, 62 males) completed this study for course credit. They ranged in age from 18 to 48 years (mean 22.62, SD 6.02). Participants identified themselves as follows: Caucasian (59.8%), Black (10.1%), Hispanic (8.4%), Asian (15.1%), Native American (0.6%), and other (6.1%).

### Measures

The Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer, Salovey, Caruso, & Sitarenios, 2003) contains 141 items that measure the four branches of EI: (a) Perceiving Emotion, (b) Using Emotion, (c) Understanding Emotion, and (d) Managing Emotion. There are two tasks for each branch. The Faces and Pictures tasks measure Perceiving Emotion; the Sensations and Facilitation tasks measure Using Emotion; the Blends and Changes tasks measure Understanding Emotion; and the Emotion Management and Emotional Relationship tasks measure Managing Emotion. The MSCEIT yields total scores, branch scores, and task scores. However, we are only concerned with the four branch scores.

The MSCEIT is scored using proportion consensus scoring. There are two types of proportion consensus scoring: general consensus scoring and expert consensus scoring. In general consensus scoring, each participant's score is calculated based on the proportion of the norm group who answered with the same response. For example, if you answered A for an item and 50% of the other individuals who took the test selected A, then you would receive a score of .5 for that item. On the other hand, with expert consensus scoring, a participant's response is compared against the responses by an expert group. For the MSCEIT, the expert group consists of 21 members of the International Society for Research on Emotions. In this study, we used general consensus scoring because this is the scoring method that is recommended by the authors (Mayer, Salovey, & Caruso, 2004).

### Procedures

Participants individually completed the MSCEIT as a part of a larger study. The study was conducted online in two parts. Each part took approximately 1 hour and 30 minutes to complete.

### Data Analysis

In order to see if there were sex differences on the MSCEIT, we used independent samples t-tests. The grouping variable was sex and the dependent variables were the four branch scores.

## RESULTS

Females scored higher than males on all branches of the MSCEIT. These differences were statistically significant for all branches except for Facilitating Emotions (see Table 1).

**Table 1**

*Means (and Standard Deviations) for Women and Men on the MSCEIT*

Branch	Women	Men	t-test
Perceiving	100.24 (13.78)	95.20 (16.41)	t(177) = 2.18, p = .031
Facilitating	95.55 (13.93)	91.48 (14.23)	t(177) = 1.85, p = .066
Understanding	89.23 (10.97)	85.40 (14.26)	t(176) = 1.99, p = .048
Managing	86.19 (12.73)	81.05 (11.91)	t(176) = 2.63, p = .009

## DISCUSSION

The purpose of this study was to examine sex differences on the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT). We found that women scored significantly higher than men on the Perceiving, Understanding, and Managing Emotion branches. On the remaining branch (Facilitating Emotion), the differences approached significance.

Sex differences in EI may be important in the workplace, especially for high-level management jobs, "where complaints about lacking emotional, social skills and consequent failure of executives are quite common" (Sjoberg, 2008, p.181). If women are more emotionally intelligent than men, then they may have better social interactions and fewer personal problems. This could be due to a threshold effect for EI. The threshold effect is a minimum level of EI needed to function effectively in social situations. Women tend to have higher MSCEIT scores than men; thus, more women may have reached the threshold (Brackett et al., 2006). For example, it has been found that men who scored lower on the MSCEIT engaged in more recreational drug use and alcohol consumption and had less satisfying friendships (Salovey & Grewal, 2005). These results may provide evidence for a threshold effect in which men are less likely to function effectively in social situations. Future research should look for a threshold effect in workplace relationships.

## DISCUSSION CONT.

The reader should keep in mind that just because men score lower than women, on average, this does not mean that all men are less emotionally intelligent than all women. There is more overlap than difference when comparing the distributions of scores. Moreover, EI is not fixed. Many theorists postulate that EI increases from youth to adulthood (Mayer, Caruso, & Salovey, 1999) and can be improved through interventions (Dacre Pool & Qualter, 2012). Indeed, given the importance of EI to the workplace, it may be common for workplaces to attempt to increase EI. However, such interventions should take into account these sex differences. The employees with the lowest EI, who are most likely to be targeted for improvement, are likely to be disproportionately men. In contrast, the trainers – who have high EI – are likely to be disproportionately women. Gender norms may influence the extent to which people develop their emotional abilities and display their emotional abilities in public (Brackett et al., 2006). These differences should be taken into account when developing training materials.

Finally, the MSCEIT may be suitable for use in personnel selection and promotion, because it is maximum performance: It is not easy for respondents to fake good the way it is on self-report measures. However, research is needed to confirm that these sex differences are reflected in differences in job performance. According to Day and Carroll (2004), "unless research demonstrates that gender differences in test performance reflect gender differences in job performance, the MSCEIT should not be used for personnel selection" (p. 1415). We have demonstrated that there are sex differences on the MSCEIT. However, future research needs to determine if these sex differences are related to differences in job performance.

## REFERENCES

- Austin, E. J., Saklofske, D. H., & Egan, V. (2005). Personality, well-being and health correlates of trait emotional intelligence. *Personality and Individual Differences, 38*(3), 547-558. doi: 10.1016/j.paid.2004.05.009
- Brackett, M. A., Mayer, J. D., & Warner, R. M. (2004). Emotional intelligence and its relation to everyday behaviour. *Personality and Individual Differences, 36*(6), 1387-1402. doi: 10.1016/S0191-8869(03)00236-8
- Brackett, M. A., Rivers, S. E., Shiffman, S., Lerner, N., & Salovey, P. (2006). Relating emotional abilities to social functioning: A comparison of self-report and performance measures of emotional intelligence. *Journal of Personality and Social Psychology, 91*(4), 780-795. doi: 10.1037/0022-3514.91.4.780
- Dacre Pool, L., & Qualter, P. (2012). Improving emotional intelligence and emotional self-efficacy through a teaching intervention for university students. *Learning and Individual Differences, 22*(3), 306-312. doi: 10.1016/j.lindif.2012.01.010
- Day, A. L., & Carroll, S. A. (2004). Using an ability-based measure of emotional intelligence to predict individual performance, group performance, and group citizenship behaviours. *Personality and Individual Differences, 36*(6), 1443-1458. doi: 10.1016/S0191-8869(03)00240-X
- Extremera, N., Fernández-Berrocal, P., & Salovey, P. (2006). Spanish version of the mayer-salovey-caruso emotional intelligence test (MSCEIT). version 2.0: Reliabilities, age and gender differences. *Psicothema, 18*, 42-48.
- Karim, J., & Weisz, R. (2010). Cross-cultural research on the reliability and validity of the mayer-salovey-caruso emotional intelligence test (MSCEIT). *Cross-Cultural Research: The Journal of Comparative Social Science, 44*(4), 374-404. doi: 10.1177/1069397110377603
- Livingstone, H. A., & Day, A. L. (2005). Comparing the construct and criterion-related validity of ability-based and mixed-model measures of emotional intelligence. *Educational and Psychological Measurement, 65*(5), 757-779. doi: 10.1177/0013164405275663
- Mayer, J. D., Caruso, D. R., & Salovey, P. (1999). Emotional intelligence meets traditional standards for an intelligence. *Intelligence, 27*(4), 267-298. doi: 10.1016/S0160-2896(99)00016-1
- Mayer, J. D., Salovey, P., & Caruso, D. R. (2000). Test Manual for the MSCEIT Version 2.0. *Toronto ON: Multi-Health Systems.*
- Mayer, J. D., Salovey, P., & Caruso, D. R. (2004). Emotional intelligence: Theory, findings, and implications. *Psychological Inquiry, 15*(3), 197-215. doi: 10.1207/s15327965pli1503\_02
- Mayer, J. D., Salovey, P., Caruso, D. R., & Sitarenios, G. (2003). Measuring emotional intelligence with the MSCEIT V2.0. *Emotion, 3*(1), 97-105. doi: 10.1037/1528-3542.3.1.97
- McIntyre, H. H. (2010). Gender differences in the nature and linkage of higher-order personality factors to trait and ability emotional intelligence. *Personality and Individual Differences, 48*(5), 617-622. doi: 10.1016/j.paid.2009.12.019
- Palmer, B. R., Gignac, G., Manocha, R., & Stough, C. (2005). A psychometric evaluation of the mayer-salovey-caruso emotional intelligence test version 2.0. *Intelligence, 33*(3), 285-305. doi: 10.1016/j.intell.2004.11.003
- Salovey, P., & Grewal, D. (2005). The science of emotional intelligence. *Current Directions in Psychological Science, 14*(6), 281-285. doi: 10.1111/j.0963-7214.2005.00381.x
- Saurer, M. K., & Eisler, R. M. (1990). The role of masculine gender role stress in expressivity and social support network factors. *Sex Roles, 23*(5-6), 261-271. doi: 10.1007/BF00290047
- Schutte, N. S., Malouff, J. M., Bobik, C., Coston, T. D., Greeson, C., Jedlicka, C., . . . Wendorf, G. (2001). Emotional intelligence and interpersonal relations. *The Journal of Social Psychology, 141*(4), 523-536. doi: 10.1080/00224540109600569
- Schutte, N. S., Malouff, J. M., Thorsteinsson, E. B., Bhullar, N., & Rooke, S. E. (2007). A meta-analytic investigation of the relationship between emotional intelligence and health. *Personality and Individual Differences, 42*(6), 921-933. doi: 10.1016/j.paid.2006.09.003
- Sjöberg, L. (2008). Emotional intelligence and life adjustment. In J. C. Cassady, & M. A. Eissa (Eds.), (pp. 169-183). New York, NY US: Peter Lang Publishing.

