

The Relationship between Emotional Intelligence and the MBTI

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Abstract

This paper reports on two studies, to attempt to replicate findings that correlated the Myers-Briggs Type Inventory (MBTI) and Bar-On Emotional Quotient Inventory (EQ-2). In the first study ($n = 514$), the clearest correlations indicated that overall Introverted, Sensing and Judging types had lower Emotional Intelligence. The second study ($n = 146$) indicated that those scoring high on the Thinking-Feeling dimension had higher Emotional Intelligence scores at both the domain and facet levels. Whilst these results confirmed the hypotheses and the findings from previous studies, they also indicated little correlation between the two measures. Implications and limitations are discussed.

Keywords

MBTI, Emotional Intelligence, Thinking-Feeling

1. Introduction

This paper is concerned with the relationship between the Myers-Briggs Type Inventory (MBTI) and Emotional Intelligence (EQ) (Goleman, 1995). The central question is: what Jungian personality types, as assessed by the MBTI, are most closely associated with the aspects of emotional intelligence? The concept of emotional intelligence is over 30 years old and yet continues to attract a great deal of attention (Furnham, 2009; Furnham & Crump, 2014; Furnham & Rosen, 2016; Furnham et al., 2003; Pérez-Gonzalez et al., 2005; Petrides et al., 2016; Zeidner et al., 2004). It has been related to many other personality tests, but as far as we know, much less with the MBTI.

1.1. Myers-Briggs Type Inventory (MBTI)

The MBTI is one of the most popular of all personality tests (Furnham, 2020).

Despite its many problems (Pittenger, 2005; Sample, 2017; Sato, 2017), there has been a great interest in the assessment of EQ since the start of this millennium (Arnau et al., 2003; Bergner et al., 2016; Caplan, 2003; Capraro & Capraro, 2002; Carlson, 1985; Carlyn, 1977; Dawes, 2004; DeVito, 1985; Diekmann et al., 2015; Fretwell et al., 2013; Furnham, 2006; Ginevra et al., 2014; Lloyd, 2022). There is a continual flow of papers, often in technical journals, reporting how MBTI types behave in a wide variety of work contexts though they are often difficult to access. The following are some of these published over the past decade (Amirhosseini & Kazemian, 2020; Choong & Varathan, 2021; Cohen et al., 2013; Farmer, 2018; Poursafar et al., 2015; Randall et al., 2017; Ross et al., 1996; Sari & Bashori, 2020; Szathmári et al., 2023; Yang et al., 2016; Yoon & Lim, 2018; Zarafshani et al., 2011; Zárate-Torres & Correa, 2023). These studies testify to the range of correlates of the MBTI that researchers have investigated from construction workers' safety behaviour to online social forum usage, and attest to the constant interest in the measure.

The MBTI is considered an easy-to-use personality tool and can be utilised for various purposes (Bower, 2015; Lake et al., 2019; Michael, 2003; Murray, 1990). Annually, over two million, people officially take the MBTI, including employees in 89 of the Fortune 100 companies (Stein & Swan, 2019). It is also used in a number of academic studies (Kruck et al., 2014; Rushton et al., 2007; Tomat et al., 2021), particularly in those studying the psychology of religion (Robbins et al., 2010; Ross et al., 1996). However, it is not the preferred instrument of personality researchers for various psychometric reasons, mainly that it is a typological measure and does not assess essential traits such as Neuroticism and Honesty and Integrity

Myers and McCaulley (1985) developed the original MBTI loosely based on Jung's theory, which essentially identifies four psychological functions of subjective experience. These functions are encompassed in the MBTI, which yields 16 scores assessed on four dimensions: Extraversion/Introversion (E-I), Sensing/Intuition (S-N), Thinking/Feeling (T-F), and Judging/Perceiving (J-P). The manual suggests that *Extraverts* relate more easily to the outer world of people and things, while *Introverts* are engrossed in the inner world of concepts and ideas. *Sensing and Intuition* are ways of perceiving: *Sensing* through the five senses and "known facts", whereas *Intuition* is more "unconscious", looking for possibilities and relationships. The two ways of judging are summed up by the opposites of *Thinking*, which stresses logic and impersonal processes, and *Feeling*, based more on personal values and judgements. The last dimension is a combination of perception and judgement, with judging types exhibiting preferences for a planned, decided, orderly way of life and the Perceiving type preferring a flexible, spontaneous way of life.

Various studies over many years have looked at the location of the MBTI in the personality factor space. Saggino and Kline (1996) explored correlations between the MBTI and Cattell's 16PF. McCrae and Costa (1988) and Furnham (1996) investigated the relationship between the MBTI and the Big Five traits.

Furnham and Crump (2014) and Furnham (2022) examined the relationship between the MBTI and dark-side traits, while Furnham and McClelland (2022) looked at the relationships between the CPI (California Personality Inventory) and the MBTI. Findings revealed a number of predictable correlations.

Results from many studies suggest the *Extraversion-Introversion* scale correlates (predictably) highly with other measures of the same construct. *Sensing-Intuiting* seems to be a unique scale and concept correlated with a few other measures. *Thinking-Feeling* is associated with poor adjustment, and *Judging-Perceiving* is loosely associated but weakly with many other traits.

McCrae and Costa (1988) made a number of criticisms of the MBTI, including three clear issues: the fact that it uses a scale (the JP scale), which is not part of Jung's theory. Also, the measurement identifies people in terms of dominant function, hence, dichotomises preference scores. People are assumed to fit into mutually exclusive groups, yet the scores, when plotted out, are not bi-modally distributed. Further, the MBTI fails to measure Neuroticism, at least openly, despite that all personality researchers have acknowledged this as fundamental to personality description. It seems dated in what it measures and the way traits are assessed.

Stein and Swann (2019) note, "We find that the MBTI theory falters on rigorous theoretical criteria in that it lacks agreement with known facts and data, lacks testability, and possesses internal contradictions" (p. 1). Nevertheless, it is extremely widely used and extensively applied in business settings (Furnham, 2022). Indeed, it is often used in conjunction with measures of Emotional Intelligence in management training and assessment, because of the popularity of both concepts.

1.2. Emotional Intelligence (EQ)

Goleman's (1995) book told a simple and fascinating story about emotional intelligence that helped explain its appeal. Technical training is the essential job knowledge of any career and is easier to teach than IQ skills. That is, as an adult, it is comparatively more straightforward to teach a person the technical aspects of the job than the soft skills. The idea is that there is a critical period to acquire the basis of EQ, likely during early to late adolescence. The young person, often a male, may experience social anxiety, discomfort and rejection while attempting to interact with and influence others (specifically those they are attracted to, which is most often people of the opposite sex). Hence, they may find solace in computers and other activities with a high skills/low contact basis. Thus, in early adulthood, some people appear to be technically competent in certain areas (IT, engineering) but remain undeveloped in people skills and, more specifically, emotional awareness and regulation. They may even be "phobic" about emotional issues and resistant to (social skills) training. It is also assumed that people are less able to pick up EQ "skills" and are less willing to try. To acquire technical skills often requires considerable dedication, so opportunities to acquire social skills (EQ) are, therefore, reduced. Then, the low EQ person chooses tech-

nology rather than people for fun, comfort, and a source of ideas because they do not understand emotions.

Within the extensive rise in the literature on emotional intelligence, two contrasting approaches have emerged, focusing on emotional intelligence as either a measurable *ability* (AEI) or a *self-reported* trait (TEI). TEI is presumed to be represented by behavioral dispositions and self-perceptions of one's ability to recognize and understand emotions (Petrides & Furnham, 2003; Petrides et al., 2016). This is essentially the difference between maximal and typical performance, measured by timed and untimed tests.

Further, whilst EI tests have total scores they nearly all have facets. For instance, the TEIQ (Petrides & Furnham, 2001) is divided into four broad categories or factors (Well-being, Self-control, Emotionality and Sociability), formed of 15 different facets and two additional independent ones that provide a more detailed description and understanding of the measurements.

Since the start of the millennium, there have been many studies on EQ (Petrides & Furnham, 2000, 2001, 2003, 2006; Quebbeman & Rozell, 2002). Two meta-analyses (Joseph & Newman, 2010; O'Boyle et al., 2011) examining the predictive power of EQ on job performance revealed that EQ accounted for unique variance in job performance; that is, it accounts for a portion of any change in job performance. However, there remain questions on how to explain the process and examine possible moderator and mediating factors involved.

1.3. Relationship between the Two Measures

There have been many studies linking certain EQ measures like the TEIQ (Furnham et al., 2003) to personality trait measures, but few to the MBTI. A limited number of studies have indeed examined the relationship between the MBTI and EQ. In an early study, Higgs (2001) tested 177 managers from the UK using the MBTI and the Emotional Intelligence questionnaire devised by Dulewicz and Higgs (1999). The MBTI Extraversion and Intuition were positively correlated, while Introversion and Sensing negatively correlated with EQ. He argued that Extraversion had the most positive correlations with rudiments of emotional intelligence, including motivation, influence, and intuitive decision-making. Intuition also correlated positively with a large number of emotional intelligence components, such as influence, interpersonal sensitivity, and intuitive decision-making.

Furthermore, Perry and Ball (2005) found a significant correlation between intrapersonal and interpersonal intelligence and the MBTI personality types but no significant relationship with trait EQ. Later, Virmozlova and Dimitrova (2013) revealed that Sensing and Introversion negatively correlated with sharing emotions, empathy and optimism, while Extraversion correlated positively with sharing emotions and empathy. In the same year, Potgieter and Coetzee (2013) tested 304 adults on the MBTI and a measure of employability attributes, which had a subscale measuring EQ (emotional literacy). The only significant correlation was between Extraversion and emotional literacy. However, in an investiga-

tion of 81 twelve-year-olds, Séguin and Hipson (2015) used the same EQ measure as used in this study and concluded that Extraversion was positively correlated with many facets of emotional intelligence, and Feeling correlated significantly with the interpersonal variable. Hence, not only is there sparse literature on this topic, but also mixed findings.

Nonetheless, the association between the MBTI and EQ appears to persist across various measures. Dhliwayo and Coetzee (2020) tested 299 Zimbabwean adults on the MBTI and the Wong's Emotional Intelligence Scale (WEIS) (Wong et al., 2004), alongside the Assessing Emotions Scale (AES) (Schutte et al., 1998), which has four subscales (perception of emotion, managing own emotions, managing others' emotions, and utilisation of emotion). They found the WEIS negatively correlated with the sensing-thinking dichotomy and a significant positive correlation was found between trait EQ (AES overall score) and the MBTI intuition-feeling.

Thus, even when using different measures of EQ in very different populations, the MBTI still yields significant positive correlations between the trait EI Extraversion-Introversion, Sensing-Intuition and Thinking-Feeling (Higgs, 2001; Leary et al., 2009). However, it should be acknowledged that the effect sizes are small at best, and not all papers replicate findings. We aim to contribute to the growing literature and expand our understanding of these mixed results, with two studies.

2. This Paper

This study uses the EQ-I 2.0, a scale with five domains, each with a number of facets. The first is *Self-Perception*, which concerns self-awareness. The second is *Self-Expression*, which encompasses three facets. The third factor is called *Interpersonal*, with three facets. The fourth factor is *Decision-making*, which is about planning and completing daily tasks autonomously. The fifth and final factor is *Stress Management*. We were most interested in the first two domains and how they related to the MBTI. We hypothesise that these EQ scores positively correlate with Extraversion: Intuitive and Feelings scales.

We had access to two data files and therefore attempted to replicate our findings on different population groups but using the same questionnaires.

2.1. Study 1

Method

Participants

There were 514 participants in total, of which 93 were female. They ranged in age from 29 to 57 and were all middle managers and English-speaking.

Measures

1) *Myers-Briggs Type Indicator-Form G* (MBTI) (Myers & McCalley, 1985). The Myers-Briggs indicator is a Jungian-based inventory composed of 94 forced-choice items. Respondents are classified into one of 16 personality types based

on the largest score obtained for each bipolar scale. The test provides linear scores on each dimension, usually discussed in terms of personality types based on cut-off scores. The Myers-Briggs Type Indicator has been the focus of extensive research, and substantial evidence has accumulated, suggesting the inventory has satisfactory concurrent and predictive validity and reliability (Furnham & Stringfield, 1993).

2) *Bar-On Emotional Quotient Inventory* (Bar-On, 2011) (EQ-2). Different versions of this measure have been developed to assess the Bar-On model of emotional-social intelligence. The EQ-2 is a self-report measure designed to assess a number of constructs related to EQ. The EQ-2 gives an overall EQ score alongside scores for the five composite scales and 15 subscales (Bar-On, 2004, 2006). Earlier versions of the measure have been used in many studies (Butler & Chirkowsky, 2006; Dawda & Hart, 2000; Ekermans et al., 2011).

Procedure

Participants were tested by a British-based psychological consultancy. All participants were given personal feedback on their scores. Most were employed as middle to senior managers in European companies.

Study 1 Results

Table 1 depicts the correlational results revealing the expected pattern: the two opposites (i.e. extraversion and introversion) show opposite correlations. The results suggest that the five EQ scores, particularly Intra and Inter-Personal EQ, were strongly positively associated with Extraversion and negatively associated with Intraversion. Correlations for the S-N dimension indicate that N (Intuition) was positively associated with four EQ factors, particularly Stress and Adaptation, but negatively associated with Interpersonal EQ. The T-F dimension implies that T (Thinking) was positively associated with Interpersonal EQ but negatively associated with Stress and Adaptation. The J-P factors show very little relationship, except that Intrapersonal Intelligence was negatively associated with the J (Judging) factor and positively associated with the P (Perceiving) factor.

Table 2 presents the results of a regression of the eight scores onto the Total EQ score. The findings portray very little relationship, with Introversion being the only significant variable.

2.2. Study 2

Participants

There were 146 participants, of which 122 were male. Their age ranged from 31 - 57 years. All were junior and middle managers employed in Great Britain.

Measures

The same as the first study.

Procedure

The same as the first study but data from a different consultancy based in Great Britain.

Table 1. Correlation between the eight MBTI factors, IQ and the five EQ factors.

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1) Gender	1.18	.39																
2) MBTI-E	15.39	6.00	.07															
3) MBTI-I	10.54	6.33	-.11*	-.92***														
4) MBTI-S	12.56	8.13	-.05	-.05	.08													
5) MBTI-N	12.44	6.22	.10*	.03	-.06	-.90***												
6) MBTI-T	17.79	6.57	-.08	-.02	-.01	.29***	-.30***											
7) MBTI-F	4.28	3.83	.04	.03	-.03	-.30***	.33***	-.82***										
8) MBTI-J	17.00	6.34	-.08	-.09	.10*	.48***	-.48***	.24***	-.28***									
9) MBTI-P	10.65	6.46	.12**	.12*	-.12**	-.49***	.49***	-.22***	.28***	-.94***								
10) EQIntraE	104.61	10.82	.08	.37***	-.41***	-.20***	.11	.13*	-.10	-.15*	.13*	-.05						
11) EQInterE	95.54	12.13	.16**	.38***	-.38***	-.13*	.07	-.18**	.19**	-.06	.05	-.08	.65***					
12) EQStressE	103.87	10.23	-.13*	.01	-.03	-.05	-.00	.19**	-.21***	.02	-.05	-.02	.52***	.34***				
13) EQAdaptE	104.47	10.75	-.07	.08	-.14*	-.11	.06	.21***	-.19**	-.10	.01	-.06	.65***	.50***	.62***			
14) EQGenMoodE	103.87	11.25	.08	.29***	-.33***	-.08	.03	.10	-.09	-.11	.11	.01	.74***	.59***	.53***	.49***		
15) EQTotE	102.79	10.91	.01	.27***	-.31***	-.10	.03	.12*	-.10	-.08	.06	-.08	.88***	.75***	.67***	.76***	.77***	

Note: *** $p < .001$, ** $p < .01$, * $p < .05$.

Table 2. Regression of the MBTI onto total EI.

	<i>B</i>	<i>SE</i>	Beta	<i>t</i>
MBTI-E	.03	.25	.01	.10
MBTI-I	-.50	.24	-.29	-2.06*
MBTI-S	-.35	.18	-.25	-1.96 (*)
MBTI-N	-.31	.22	-.18	-1.37
MBTI-T	.17	.17	.10	1.01
MBTI-F	-.23	.29	-.08	-.80
MBTI-J	-.57	.30	-.33	-1.91(*)
MBTI-P	-.47	.29	-.28	-1.61
Adjusted R^2			.12	
<i>F</i>			5.44	
<i>p</i>			.000	

Note: (*) $p < .09$, * $p < .05$.

Study 2 Results

Table 3 exhibits that four of six correlations with the T-F dimension were significant, but none with any other dimension were. Four of six correlations were also positively associated with T-F, indicating that those with an F (Feeling) orientation were more likely to have higher EQ.

Table 4 conveys the regressions onto the EQ total and each of the five sub-scale scores. Results revealed some consistency: while each regression was (marginally) significant, none accounted for more than 8% of the variance. Further, in five of six regressions, the only significant relationship was with the T-F dimension, reinforcing the finding that Feeling types tended to have higher EQ.

3. Discussion

The results of these studies are broadly in agreement with various other studies in the field, which have used very different measures of EQ (Dhliwayo & Coetzee, 2020; Higgs, 2001; Perry & Ball, 2005; Potgieter & Coetzee, 2013; Virmozelova & Dimitrova, 2013). Essentially, we conclude that people with higher EQ tend to be more Extraverted than Introverted, Intuitive than Sensing, and Feeling than Thought-oriented. In MBTI terms, they are more likely to be ENF type.

However, we make three key observations: *First*, while several correlations were significant, they were very small and had low effect sizes. *Second*, although these two studies used identical measures on similar samples, the results were not completely comparable. *Third*, the second study reveals the T-F dimension to be consistently, but modestly, related to the EQ facet scores.

The different results between the two studies may be a result of a number of different reasons: different sizes and representativeness of the different populations test unreliability and impression management on the part of the participants all partaking in a business assessment setting.

Table 3. Correlations between the four MBTI dimensions, the five scales and total score from the EQ measure.

	Mean	SD	1	2	3	4	5	6	7	8	9	10
1) MBTI_EI	22.21	14.62										
2) MBTI_SN	21.91	14.45	.03									
3) MBTI_TF	27.37	15.85	.05	-.01								
4) MBTI_JP	23.13	14.56	.03	.14	.10							
5) EQ Intra	104.53	13.74	.10	-.12	.17*	-.15						
6) EQ Inter	96.26	12.39	.14	-.12	-.14	-.16	.64***					
7) EQ Stress	104.25	13.13	-.02	-.14	.21*	-.14	.64***	.56***				
8) EQ Adapt	105.21	12.07	-.14	-.13	.24**	-.07	.68***	.62***	.82***			
9) EQ GenMood	104.16	12.51	.12	-.10	.25**	-.11	.80***	.65***	.72***	.71***		
10) EQ Total	103.31	11.59	.04	-.16	.16	-.16	.88***	.79***	.85***	.89***	.88***	

Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 4. (a) Regressions with EQ scores as criterion variables and MBTI as predictor variables; (b) Regressions with EQ scores as criterion variables and MBTI as predictor variables.

Criterion variables	and MBTI as predictor variables.											
	(a)											
	EQ Total				EQ General Mood				EQ Adaptability			
	<i>B</i>	<i>SE</i>	<i>Beta</i>	<i>t</i>	<i>B</i>	<i>SE</i>	<i>Beta</i>	<i>t</i>	<i>B</i>	<i>SE</i>	<i>Beta</i>	<i>t</i>
MBTI_EI	.03	.05	.05	.66	.10	.06	.14	1.77	-.08	.05	-.12	-1.43
MBTI_SN	-.08	.06	-.12	-1.47	-.04	.06	-.06	-.67	-.05	.06	-.07	-.82
MBTI_TF	.11	.05	.17	2.06*	.19	.06	.27	3.25**	.15	.06	.23	2.76**
MBTI_JP	-.12	.06	-.17	-2.07*	-.10	.06	-.13	-1.56	-.07	.06	-.10	-1.27
Adjusted <i>R</i> ²			.05				.08				.06	
<i>F</i>			2.89				4.05				3.34	
<i>p</i>			.03				.004				.01	

Note: * $p < .05$, ** $p < .01$.

Criterion variables	(b)											
	EQ Stress Management				EQ Interpersonal				EQ Intrapersonal			
	<i>B</i>	<i>SE</i>	<i>Beta</i>	<i>t</i>	<i>B</i>	<i>SE</i>	<i>Beta</i>	<i>t</i>	<i>B</i>	<i>SE</i>	<i>Beta</i>	<i>t</i>
MBTI_EI	-.01	.06	-.01	-.09	.09	.06	.12	1.51	.09	.06	.11	1.35
MBTI_SN	-.07	.06	-.09	-1.08	-.11	.06	-.14	-1.69	-.07	.07	-.08	-1.01
MBTI_TF	.16	.06	.21	2.52*	-.10	.06	-.14	-1.69	.15	.07	.19	2.24*
MBTI_JP	-.13	.07	-.16	-1.91	-.09	.06	-.11	-1.37	-.13	.07	-.16	-1.89
Adjusted <i>R</i> ²			.05				.05				.05	
<i>F</i>			2.967				2.70				2.91	
<i>p</i>			.02				.03				.02	

Note: * $p < .05$.

Even though few academic studies still use the MBTI to measure personality, it remains a popular instrument among consultants and trainers eager to help people understand their own personality (Furnham, 2018). One of the most consistent messages of the “gifts differing” philosophy of the MBTI is that all profiles are “equally good” or desirable. The same is not true of more traditional approaches, which measure things such as Neuroticism or Psychoticism. Furnham (2022) found that traits of Narcissism and Paranoia correlated with the Feeling dimension. Similarly, five aberrant traits, particularly Schizoid, Histrionic and Avoidant, were associated with the Perceiving dimensions. Overall, the ten aberrant traits were related very differently to the MBTI traits. However, the MBTI is very rarely used as a “select out” or dark-side detection measure even though extreme scores may indicate evidence of psychopathology.

This study and the literature review suggest a dark side to the Feeling (TF)

dimension of the MBTI. The test implies that Thinking and Feeling are essential decision-making (judging) functions. Those with a high thinking score favour all forms of decision-making from a logical, causal, consistent, and rules-based perspective. On the other hand, those favouring Feelings are influenced by issues like harmony, consensus, and fit. The results of various “dark-side” studies suggest that this dimension may be mislabelled and also assesses poor emotional regulation. It is often the case that when professional groups are investigated, there are some “Feeling types” that are considered a problem for the group. However, the data from this and other similar studies suggest that this is not true, instead aligning with the philosophy of the MBTI that all profiles are equally good. It should not be surprising that feeling types are more emotionally sensitive, though this may not always be advantageous in the work setting

Over the years, various studies have related other personality measures, mainly the Big Five to measures of emotional intelligence (Alegre et al., 2019; Petrides et al., 2010; Veselka et al., 2009). In a recent study, Kumar and Tankha (2023) confirmed the results of many other studies noting that Neuroticism was a negative and most significant predictor of trait EI. This comes as no surprise because emotional regulation is at the heart of Neuroticism/Stability, and it is not measured in the MBTI. This may account, in part for the limited association between the MBTI and EI measures as found in this study.

This study, like all others, had limitations. Most studies comparing two personality tests suffer from method invariance, which often inflates the size of the relationship between the two measures. Furthermore, it would have been desirable to obtain more information regarding the participants, such as their work and relationship status. Finally, it would have been particularly interesting to use different measures of EQ, which though positively correlated, pick up different aspects of EQ.

Data Availability

This is obtainable from the author upon request.

Ethics

This was sought and obtained (CEHP/514/2017).

Informed Consent

Participants gave consent for their anonymised data to be analysed and published.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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