The relationship between personality preferences and the emotional intelligence of postgraduate management students

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ABSTRACT

Effective management is often related to emotional intelligence. The emotional intelligence of managers may relate to their personality characteristics. The objective of this study was to assess the relationship between emotional intelligence and personality preferences. A cross-sectional design was used. The study population consisted of Management students at a business school (N = 71). The Bar-On Emotional Quotient Inventory (EQ-i) and the Myers-Briggs Type Indicator (MBTI) were used as measuring instruments. The results showed that there is a significant relationship between emotional intelligence and preferences for Extraversion, Intuition, Feeling and Perception.

INTRODUCTION

Educational institutions have traditionally focussed primarily on logical and linguistic intelligence, with less attention given to other types of intelligence. Yet many researchers are beginning to argue that intrapersonal and interpersonal competencies, or emotional intelligence, may be more important for success in life than logical or linguistic intelligence (Tucker, Sojka, Barone & McCarthy, 2000). In addition, studies of managerial derailment indicate a lack of emotional intelligence. Derailment is frequently attributed to personality characteristics (such as a lack of self-awareness), an inability to change, poor treatment of others and problems with interpersonal relationships (Tucker et al., 2000).

The current widespread interest in the topic of emotional intelligence has been fuelled by Daniel Goleman's book (Goleman, 1995) and the publicity associated with it. Little research has been conducted into emotional intelligence in work context. According to Goleman (1995), emotional intelligence entails the following aspects:

- knowing what you are feeling and being able to handle those feelings without having them swamp you;
- being able to motivate yourself to get jobs done, being creative and performing at your peak, and sensing what others are feeling, and handling relationships effectively.

Cooper (1998) highlighted research that showed that emotions, when properly managed, drive trust, loyalty and commitment and account for productivity gains, innovations and individual, team and organisational accomplishments. According to Goleman (1995), where leadership is concerned, emotional intelligence may be more important than cognitive intelligence and technical skills combined. Leaders with emotional intelligence have been seen to inspire employees and instil within them an enthusiasm to perform beyond their job descriptions (Mason, 1999).

This research is based on Bar-On's (1997) model of emotional intelligence. The model relates to potential rather than performance and therefore is process, rather than outcomes-based. The focus is thus placed on the potential to succeed rather than success itself (Bar-On, 1997). Bar-On (1997) defined success as the outcome of that which an individual strives to achieve. The Bar-On EQ-i, developed by Bar-On to measure emotional intelligence, is the first empirically constructed test of emotional intelligence which was made available commercially and which was regarded as the premier...
measure of emotional intelligence available at the time of this research. Emotional intelligence, according to Salovey and Mayer (1997), involves the ability to perceive accurately, appraise and express emotion, access and/or generate feelings which facilitate thought, understand emotion and emotional knowledge, and regulate emotions to promote emotional and intellectual growth.

Goleman (1995) and Bar-On (1996) conceived emotional intelligence as a disposition and an affect rather than a cognitive ability. Bar-On's (1997) definition of emotional intelligence specifically states that “… it is an array of non-cognitive capabilities, competencies, and skills” (p. 14). Currently little research has been done regarding the relationship between emotional intelligence and personality characteristics. However, Dulewicz and Higgs (2000) concluded that it is possible to see a relationship between the concept of emotional intelligence and broad-based measures of personality. In a study by Bar-On (1997) it was found that emotional stability correlated significantly with emotional intelligence. Furthermore, Newsome, Day and Catano (2000) found that extraversion, independence and self-control correlated significantly with emotional intelligence. Dawda and Hart (2000) found that emotional intelligence is significantly positively related to extraversion, agreeableness and conscientiousness.

Dulewicz and Higgs (2000) suggested that the Myers-Briggs Type Indicator (MBTI) be used to obtain a picture of emotional intelligence in the organisational context. The MBTI (McCaulley, Quenk & Hammer, 1998) is often utilised to conceptualise personality. The MBTI measures the following preferences of people (Myers et al., 1998):

- The way people prefer to relate to others: Extraversion (E) - Introversion (I).
- The way people prefer to attend to and gather data: Sensing (S) - Intuition (N).
- The way people prefer to process data and make decisions: Thinking (T) - Feeling (F).
- The way people prefer to organise themselves: Judgement (J) - Perception (P).

Smith and Haar (1990) found that the majority of project managers showed preferences for Sensing, Thinking and Judgement. They focus on facts, impersonal analysis and a practical approach towards situations. The research of Mills, Robey and Smith (1985) also indicated that most managers tend to prefer Sensing, Thinking and Judgement, resulting in their preference to deal with tasks rather than with people. These types concentrate on facts, analyse them objectively and have a practical orientation during problem-solving. They are also assertive and competitive when faced with conflict situations. Rothmann (2001) found that a sample of South African managers showed preferences for Extraversion, Sensing, Thinking and Feeling.

The intra-personal component of emotional intelligence might be related to personality preferences. Personality preferences might be related to some of these characteristics. For example, Tucker (1991) demonstrated that individuals who developed skills associated with Extraversion and Thinking (compared with Introversion and Feeling) preferences tend to be more assertive. Furthermore, individuals who prefer Intuition tend to be more independent (Myers et al., 1998). Regarding the interpersonal component of emotional intelligence, it could be deduced that interpersonal relationships and empathy might be related to personality preferences. For example, Satava (1997) found that individuals who prefer Extraversion seek frequent interaction and conversation with others. In line with the finding of Jenkins, Stephens, Chew and Downs (1992) it could also be expected that the development of skills associated with a preference for Feeling would increase individuals' empathy. Regarding adaptation, it could be expected that flexibility might be related to a preference for Perception (Myers et al., 1998).

The objective of this research was to assess the relationship between emotional intelligence and personality preferences of postgraduate business students.

**METHOD**

**Research design**

A survey design was used to address the research objectives. The specific design was the cross-sectional design, by means of which information is collected from a sample or population at a particular point in time (Shaughnessy & Zechmeister, 1997).

**Sample**

The sample consisted of full-time students enrolled for a Postgraduate Diploma in Management at a SA University, consisting of 71 students. The sample consisted of 24 males and 44 females and most of the participants were younger than 26 years of age.

**Measuring battery**

The *Myers-Briggs Type Indicator (MBTI)* is a forced-choice normative instrument. When taking the test the
individuals self-report and are evaluated on four bipolar scales, namely Extraversion-Introversion (EI), Sensing-Intuition (SN), Thinking-Feeling (TF), and Judgement-Perception (JP). The internal consistency of the MBTI varies between 0.84 and 0.86, while a temporal stability of 0.76 has been obtained (Hammer, 1996). The test-retest reliability of the MBTI is satisfactory and varies between 0.60 and 0.93 (Myers et al., 1998). A test-retest reliability of 0.92 was found in cases of clear preferences, while a coefficient of 0.81 was found in cases where preferences were unclear (Hammer, 1996). The four scales of the MBTI are related to traits as measured by other respected trait-based instruments (Deller, 1997; Frazer, 1994; Furnham & Stringfield, 1993; Myers et al., 1998). Satisfactory construct validity was found in comparison with other recognised instruments (Myers et al., 1998). Several large international samples, using exploratory studies, confirmed the factor structure of the MBTI (De Bruin, 1996; Rytting & Ware, 1993).

The Bar-On Emotional Quotient Inventory (Bar-On EQ-i) consists of 133 items representing 15 sub-scales, each with seven and nine items per sub-scale (Bar-On, 1997). The internal consistency of the Bar-On EQ-i was examined by using the Cronbach Alpha (Bar-On, 1997). The coefficient alphas vary between 0.62 (Social responsibility) and 0.89 (Self-regard). Retest reliability refers to the temporal stability of the instrument (Bar-On, 1997) and the average retest reliability coefficients for groups of South African subjects who were retested on the Bar-On EQ-i after one month were 0.85 and after four months 0.75. Bar-On (1997) concluded that the Bar-On EQ-i is valid and capable of achieving the objectives for which it was designed.

Statistical analysis

The statistical analysis was carried out with the help of the SAS-program (SAS Institute, 2000). Cronbach alpha coefficients and inter-item correlation coefficients were used to assess the reliability and validity of the measuring instruments (Clark & Watson, 1995). Descriptive statistics (e.g. means, standard deviations, skewness and kurtosis) were used to analyse the data. T-tests were used to determine differences between sub-groups in the sample. Effect sizes (Cohen, 1988) rather than statistical significance were used to determine the significance of findings. A reason for the use of effect sizes (which indicate practical significance of findings) is that inferential statistics cannot be used because the study population could not be regarded as a probability sample (Steyn, 1999). Furthermore, effect sizes indicate whether obtained results are important (while statistical significance may often show results which are of little practical relevance). A cut-off point of 0.50 (medium effect, Cohen, 1988) was set for the practical significance of differences between means.

RESULTS

The descriptive statistics in terms of continuous scores of the MBTI for the total population are reported in Table 1.

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Range</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraversion/Introversion</td>
<td>92.24</td>
<td>23.71</td>
<td>108</td>
<td>0.38</td>
<td>-0.21</td>
</tr>
<tr>
<td>Sensing/Intuition</td>
<td>93.90</td>
<td>23.06</td>
<td>100</td>
<td>0.24</td>
<td>-0.49</td>
</tr>
<tr>
<td>Thinking/Feeling</td>
<td>84.77</td>
<td>21.77</td>
<td>84</td>
<td>0.05</td>
<td>-0.79</td>
</tr>
<tr>
<td>Judgement/Perception</td>
<td>88.21</td>
<td>25.07</td>
<td>110</td>
<td>0.75</td>
<td>0.45</td>
</tr>
</tbody>
</table>

Concerning skewness and kurtosis, Table 1 suggests relatively small deviations from zero, indicating that the scores are, in general, relatively normally distributed.

The descriptive statistics, Cronbach alpha coefficients and mean inter-item correlations of the measuring instrument for emotional intelligence, for the total population, are reported in Table 2.
According to Table 2, the internal consistency of the Bar-On EQ-i is 0.93. The alpha coefficients are also acceptable for all the sub-scales, varying from 0.62 for reality testing to 0.89 for self-regard. This supports findings generated by Bar-On (1997), who recorded an overall internal consistency coefficient of 0.76 across the sub-scales, with the highest being self-regard at 0.86. These findings indicate that the sub-scales provide a reliable measure of emotional intelligence and its components. The inter-item correlation coefficients vary between 0.15 and 0.50 and are acceptable (Clark & Watson, 1995). Concerning skewness and kurtosis, Table 2 shows relatively small deviations from zero, with the exception of social responsibility, indicating that the scores are relatively normally distributed.

Next, the differences between the emotional intelligence of various personality types (on nominal level) were analysed. This was done because Myers et al. (1998) ultimately regard individuals' personality types as more important than their continuous scores on the various dimensions. The practical significance of differences between the mean EQ-i scores of business students who prefer Extraversion compared with those who prefer Introversion is given in Table 3.
Table 3 shows that business students who prefer Extraversion (compared with those who prefer Introversion) obtained practically significant higher scores on Interpersonal relationship, Flexibility and Stress tolerance (all large effects). Business students who prefer Extraversion also obtained practically significant higher scores on Emotional self-awareness and Assertiveness (both medium effects). However, those students who prefer Introversion (compared with those who prefer Extraversion) obtained practically significant higher scores on Impulse control (medium effect).

The practical significance of differences between the mean EQ-i scores of business students who prefer Sensing compared with those who prefer Intuition is given in Table 4.
Table 4 shows that business students who prefer Intuition (compared with those who prefer Sensing) obtained practically significant higher scores on Flexibility and Stress tolerance (both large effects). Students who prefer Intuition also obtained practically significant higher scores on Emotional self-awareness, Independence and Optimism (all medium effects).

The practical significance of differences between the mean EQ-i scores of business students who prefer Thinking compared with those who prefer Feeling is given in Table 5.

<table>
<thead>
<tr>
<th>Item</th>
<th>Sensing (n = 45)</th>
<th>Intuition (n = 26)</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Self-regard</td>
<td>33.89</td>
<td>6.62</td>
<td>35.54</td>
</tr>
<tr>
<td>Emotional self-awareness</td>
<td>28.91</td>
<td>5.49</td>
<td>32.04</td>
</tr>
<tr>
<td>Assertiveness</td>
<td>25.89</td>
<td>5.14</td>
<td>27.89</td>
</tr>
<tr>
<td>Independence</td>
<td>24.93</td>
<td>4.03</td>
<td>27.85</td>
</tr>
<tr>
<td>Self-actualisation</td>
<td>38.04</td>
<td>4.27</td>
<td>38.54</td>
</tr>
<tr>
<td>Empathy</td>
<td>34.09</td>
<td>4.07</td>
<td>33.46</td>
</tr>
<tr>
<td>Social responsibility</td>
<td>43.18</td>
<td>4.56</td>
<td>42.00</td>
</tr>
<tr>
<td>Interpersonal relationship</td>
<td>45.42</td>
<td>5.62</td>
<td>45.73</td>
</tr>
<tr>
<td>Reality testing</td>
<td>38.82</td>
<td>4.37</td>
<td>39.27</td>
</tr>
<tr>
<td>Flexibility</td>
<td>28.11</td>
<td>4.99</td>
<td>32.27</td>
</tr>
<tr>
<td>Problem-solving</td>
<td>31.33</td>
<td>3.81</td>
<td>31.39</td>
</tr>
<tr>
<td>Stress tolerance</td>
<td>31.87</td>
<td>5.64</td>
<td>36.39</td>
</tr>
<tr>
<td>Impulse control</td>
<td>34.44</td>
<td>4.58</td>
<td>32.35</td>
</tr>
<tr>
<td>Optimism</td>
<td>31.84</td>
<td>3.55</td>
<td>34.81</td>
</tr>
<tr>
<td>Happiness</td>
<td>37.67</td>
<td>4.63</td>
<td>38.42</td>
</tr>
</tbody>
</table>

* Practically significant difference: \( d \quad 0.5 \) (medium effect)

** Practically significant difference: \( d \quad 0.8 \) (large effect)
Table 5 shows that business students who prefer Feeling (compared with those who prefer Thinking) obtained practically significant higher scores on Empathy, Social responsibility and Interpersonal relationship (all large effects). Students who prefer Feeling also obtained a practically significant higher score on Happiness (medium effect).

The practical significance of differences between the mean EQ-i scores of business students who prefer Judgement compared with those who prefer Perception is given in Table 6.
Table 6 shows that business students who prefer Perception (compared with those who prefer Judgement) obtained practically significant higher scores on Flexibility and Stress tolerance (both medium effects).

RESULTS

The predominant preferences of the business students are in line with those of the general South African population, namely Extraversion (orientated and energised by the outer world), Sensing (use senses to gather information), Thinking (use logic in making decisions) and Judgement (live in an orderly, planned and organised way). This result confirms the findings of Rothmann, Coetzee, Fouche and Theron (2000) with business students in a different context. Fudjack and Dinkelaker (1994) and De Beer (1997) reported a strong bias towards Sensing, Thinking and Judgement preferences in society. These preferences may lead to conservatism, rigidity and an inability to cope with changing demands of the marketplace (Kroeger & Thuesen, 1993).

The respondents demonstrate the highest levels of emotional intelligence in terms of Emotional self-awareness and Flexibility. The higher levels of Emotional self-awareness may be accounted for by the fact that the respondents are engaged in postgraduate studies in management and are therefore mature young adults who

**TABLE 6**

THE PRACTICAL SIGNIFICANCE OF DIFFERENCES BETWEEN THE EQ-I SCORES OF BUSINESS STUDENTS WHO PREFER JUDGEMENT AND THOSE WHO PREFER PERCEPTION

<table>
<thead>
<tr>
<th>Item</th>
<th>Judgement (n = 52)</th>
<th>Perception (n = 19)</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Self-regard</td>
<td>34.90</td>
<td>6.69</td>
<td>33.37</td>
</tr>
<tr>
<td>Emotional self-awareness</td>
<td>31.12</td>
<td>5.46</td>
<td>31.05</td>
</tr>
<tr>
<td>Assertiveness</td>
<td>26.37</td>
<td>4.79</td>
<td>27.32</td>
</tr>
<tr>
<td>Independence</td>
<td>25.56</td>
<td>3.81</td>
<td>27.21</td>
</tr>
<tr>
<td>Self-actualisation</td>
<td>38.54</td>
<td>4.28</td>
<td>37.37</td>
</tr>
<tr>
<td>Empathy</td>
<td>33.42</td>
<td>4.82</td>
<td>35.05</td>
</tr>
<tr>
<td>Social responsibility</td>
<td>42.69</td>
<td>5.73</td>
<td>42.90</td>
</tr>
<tr>
<td>Interpersonal relationship</td>
<td>45.19</td>
<td>5.70</td>
<td>46.47</td>
</tr>
<tr>
<td>Reality testing</td>
<td>39.21</td>
<td>4.29</td>
<td>38.37</td>
</tr>
<tr>
<td>Flexibility</td>
<td>28.77</td>
<td>4.92</td>
<td>32.00</td>
</tr>
<tr>
<td>Problem-solving</td>
<td>31.75</td>
<td>3.76</td>
<td>30.26</td>
</tr>
<tr>
<td>Stress tolerance</td>
<td>32.71</td>
<td>5.64</td>
<td>35.74</td>
</tr>
<tr>
<td>Impulse control</td>
<td>34.00</td>
<td>4.64</td>
<td>32.79</td>
</tr>
<tr>
<td>Optimism</td>
<td>32.56</td>
<td>3.73</td>
<td>33.95</td>
</tr>
<tr>
<td>Happiness</td>
<td>37.71</td>
<td>4.80</td>
<td>38.58</td>
</tr>
</tbody>
</table>

* Practically significant difference: $d \geq 0.5$ (medium effect)
have demonstrated managerial potential. Similarly, the respondents are encouraged, by means of a self-management programme offered at the business school, to spend time clarifying personal strengths, weaknesses and preferences. Heightened Emotional self-awareness may be a consequence of having participated in this programme. The higher levels of Flexibility demonstrated by the respondents may be attributed to the age of the respondents. Bar-On (1997) indicated that the Flexibility sub-scale is a function of age, with younger individuals generally being more able to adapt to changing circumstances. Compared with the norm tables provided by Bar-On (1997), the respondents demonstrated the lowest levels of emotional intelligence in terms of self-regard and impulse control.

It is clear from the results that extraverts (compared with introverts) obtained practically significant higher scores (of large effect) on Interpersonal relationship, Flexibility and Stress tolerance. Extraverted business students are more inclined to establish mutually satisfying relationships that are characterised by emotional closeness, adjust their emotions, thoughts and behaviour to changing situations and cope actively and positively with stress. Practically significant differences (of medium effect) were also found regarding the Emotional Self-awareness and Assertiveness of Extraverts and Introverts, with extraverts obtaining higher scores on both the dimensions of emotional intelligence. Introverts, on the other hand, tend to control their impulses better than extraverts do.

Business students who prefer Intuition (compared with those who prefer Sensing) obtained practically significant higher scores (of large effect) on Flexibility and Stress tolerance. Intuitives are more inclined to adjust their emotions, thoughts and behaviour to changing situations and withstand adverse events and stressful situations without falling apart by actively coping with stress. Practically significant differences (of medium effect) were also found regarding the Emotional Self-awareness and Assertiveness of Extraverts and Introverts, with extraverts obtaining higher scores on these dimensions of emotional intelligence. Therefore, business students who prefer Intuition are more inclined to be aware of their emotions, be self-directed in their thinking and action, look on the brighter side of life and maintain a positive attitude, even in the face of adversity.

Business students who prefer Feeling (compared with those who prefer Thinking) obtained practically significant higher scores (of large effect) on Interpersonal relationship, Empathy and Social responsibility. Those who prefer Feeling tend to feel satisfied with their lives and to enjoy themselves and others.

Business students who prefer Perception (compared with those who prefer Judgement) obtained practically significant higher scores (of medium effect) on Flexibility and Stress tolerance. Those who prefer Perception are more inclined to adjust their emotions, thoughts and behaviour to changing situations and conditions, and withstand adverse events and stressful situations without falling apart by actively and positively coping with stress.

Based on the results of this study it can be concluded that preferences for Extraversion and Feeling are related most strongly to the interpersonal component of emotional intelligence (including interpersonal relationships, empathy and social responsibility). Furthermore, preferences for Extraversion and Intuition were strongly related to Adaptation (and specifically Flexibility) and Stress management (specifically Stress tolerance). A preference for Perception was also moderately related to the Adaptation and Stress management components of emotional intelligence. Although no causal relationships could be indicated, it is clear that preferences for Extraversion, Intuition, Feeling and Perception are related to aspects of emotional intelligence.

The results of this study confirm the findings of Newsome et al. (2000) and Dawda and Hart (2000) that personality characteristics correlate with emotional intelligence. Newsome et al. (2000) also found that Extraversion is related to emotional intelligence, while Dawda and Hart (2000) found that Extraversion, Openness (preferences for Intuition and Perception) and Agreeableness (preference for Feeling) are related to emotional intelligence.

LIMITATIONS

The sample used for the study is postgraduate students studying in a specialist area and as such resulted in the limited usefulness of the results of the research, as the results generated cannot be generalised to the total population. The sample was also relatively small. A lack of diversity existed with regard to the composition of the study population's temperament types.
MANAGERIAL RECOMMENDATIONS

From the results of the study it can be concluded that emotional intelligence is related to personality preferences. We do not suggest that students should change their personality preferences, but they need to know their own and others' preferences and development areas arising from those. While business students prefer to focus on detail in gathering information, being analytical in making decisions and having organised lifestyles, concerns arise regarding the following aspects:

- Their tendency to look at the big picture, to grasp essential patterns and developing skills in seeing new possibilities and new ways of doing things.
- Their tendency to consider what is important to themselves or to other people, developing person-centred skills.
- Their tendency to live in a flexible, spontaneous way, preference to stay open to experience, and trusting their ability to adapt to the moment.

Business students should be trained in MBTI terminology, so that they will be empowered to work on the development areas arising from the MBTI (Rothmann et al., 2000). Individual students should be afforded an opportunity, on an individual basis, to receive feedback and counselling on their individual strengths and developmental areas as they relate to their personality preferences. It is suggested that the business school undertake to follow up the session of personality preference assessment with a programme designed to address the various factors related to personality preferences. It is recommended that the programme include workshops designed to address each of the individual components of personality preferences and how they impact on the individual in his or her daily interaction with others.

Lecturers should use the findings of this study in planning their educational strategy. Business students (who will be employees, managers and entrepreneurs in the future) need to adapt to changes, to tolerate stress and to be interpersonally effective. It is a concern that the educational system in South Africa produces so many business students who prefer to organise and control, while fewer of them prefer to report and explore (which were in this study related to emotional intelligence).

Future research should focus on the relationship between emotional intelligence and personality preferences in other educational and organisational contexts. It may also seek to ascertain the relationship between emotional intelligence and personality traits, as well as outcomes such as performance, burnout and job satisfaction.

REFERENCES


