

# Institute of Professional Development

The Impact of Psychometric  
Personality Testing on the  
Development of Leadership Skills.  
Perceptions of Senior Managers  
in a Corporate Environment.

**The Institute  
In Professional Development**

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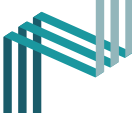


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# Abstract

The 5-factor personality model is routinely used as a tool to predict leadership competency, and yet in the field of leadership development, practitioners appear to favour less reliable models that do not have the same levels of academic credibility and predictive validity. This study explores the extent to which existing leaders in a corporate organisation believe that undertaking a psychometric profiling tool based on the 5-factor model, and receiving feedback as a component of a wider development intervention, has enabled them to develop and improve their leadership ability. Participants found that the tool provided a valuable framework to reflect on their current leadership ability and preferences. They identified that receiving the feedback on their personality traits enhanced self-awareness, and as a result they were able to identify further development actions to improve their leadership capability. Some concerns were raised about the phraseology of some questions and the use of the term Neuroticism, and further areas of for research were highlighted, although the overall results advocate for the use of the 5-factor model in future leadership development initiatives.





# Background and Literature Review

## Introduction

Ever since the formal study of leadership began, a viewpoint has existed that the personalities of leaders differ from their followers (Organ, 1996). Carlyle's 'Great Man' theory (1907), the idea that history is shaped by the activities of great men, evolved into trait theory which stated that leadership is dependent on certain innate qualities (Judge, Bono, Ilies, & Gerhardt, 2002). The identification of these qualities is of significant interest to organisations (Yukl & Van Fleet, 1992), and improving leadership capability is often perceived as a human resources priority (Loew & Leonard, 2012). Organisations invest a significant amount of resource in leadership development; in the US alone, 14 billion dollars were spent on this in 2012 (Loew & O'Leonard, 2012), with psychometric instruments frequently being used as a component of the leadership development process at significant cost (Loew & Wentworth, 2013). Despite the significant outlay, there is limited research into the question of whether these instruments reliably enhance leadership capability when used as professional development tools to complement leadership training. The expectations and demands of today's shareholders continuously grow as virtually all organisations operate in a highly competitive environment (Walker, 2018). As leaders frequently operate across borders in a global context (Walker, 2018) and the leadership role expands to incorporate complex inter-personal capabilities such as Emotional and Cultural Intelligence (Rockstuhl, Seiler, Ang, Van Dyne, & Annen, 2011), it is plausible that the demand for effective leadership development instruments and tools that will support the participant's success will increase. However, the lack of research relating to how these tools enhance leadership capability leaves open the question of whether they represent a sensible investment for organisations. This study will therefore examine the impact of the 5-Factor personality model, which has consistently been shown to be amongst the most validated, reliable and stable personality models (Furnham, 1996; Few et al, 2010), and yet is rarely associated with professional development programmes (Laguna & Purc, 2016), on the leadership capability of 10 leaders in industry, to establish whether the tool effectively enhances competence from the leader's perspective.

## Review of the Literature

The review of the literature will examine the question of whether leadership relates to personality traits, and how this theory compares or interacts with alternative traditional assertions, posited by multiple authors, that leadership is situation specific (Bass, 1990), or dependent on the fluid relationship between leaders and followers (Gibb, 1969). This will begin to ascertain the extent to which personality may account for leadership capability. In order to contextualise the research, this section will examine literature relating to the evolution of personality profiling, how models of personality have developed, and then focus specially on the 5-factor model to examine the correlation between the 5 identified factors and self-reported leadership ability. Limitations and gaps in existing research will be considered, and the opportunity to examine the developmental impact, rather than the predictive ability, of personality profiling will be summarised.

An underpinning premise of using personality psychometric tools to support leadership development is that certain traits are desirable for leaders to have (Baptiste, 2018). However, this premise may not be entirely sound; doubts relating to the validity of the trait theory of leadership are commonplace, and possibly originated from Stodgill's influential analysis suggesting that 'leadership is not a matter of passive status or of the mere possession of some combination of traits' (Stodgill, 1948; p. 66), which led to the 'situation specific' theory of leadership finding greater favour (Bass, 1990). Expanding on the situational approach, Yukl and Van Fleet (1992) posited that the specific traits that pertain to effective leadership depend on the situation. Rather being solely dependent on traits, it is what leaders do in certain situations that is believed to be most significant in their being perceived as leaders (Anderson, 2000; Anderson, 2006). Gibb (1969) also argued that no individual personality type, or group of personality types could characterise leadership, and stated that only social acceptance of followers, based primarily on behaviour and actions, could define positions of leadership. The situational argument states that leadership is a fluid construct that can only be defined by the subjective perception of followers (Gibb, 1969). Hersey and Blanchard's model of 'Situational Leadership', which suggests that effective leadership involves the adaptation of leadership approach to suit the need of the individual follower (Hersey & Blanchard, 1977), has proven to be very popular in industry (Avery & Ryan, 2002). This may be due to its assertion that, equipped with the right tools, effective leadership can be practiced by anyone, regardless of their traits, provided they can adapt their approach (Hersey, Blanchard, & Johnson, 1996). However, in a critical review of the research relating to the model, Graff (1997) identifies a lack of empirical testing, and inconsistent results in what little research exists, concluding that the concept has proven to be conceptually flawed. Perhaps in anticipation of academic criticism, Hersey, Blanchard and Johnson (1996) state that the concept is not a theory, but instead a practical model to support managers and educators, et cetera, in their practice. Other situational models, such as the Contingency Theory of Leadership Effectiveness (Fielder, 1964) are better supported by research, and have been correlated with employee motivation (Ghazzawi, Osta, & Choughri, 2017). Haberfield (2006) considers personality and situational theories of leadership to both be important, although following extensive research with police forces, he associates Transformational Leadership primarily with personality.

Despite the validity of the opposing situational concept, there have been shown to be correlations between personality traits such as Conscientiousness and 'Authentic Leadership' (Baptiste, 2018), and between Extraversion and Agreeableness, and the Transformational Leadership concept (Judge & Bono, 2000). Perhaps in the middle ground is the correlational study by Arvey, Zhang, Avolio, and Krueger (2007) which suggests that there may be a combination of factors involving heritable traits and prior life experiences that 'trigger' an individual's development as a leader. The role of personality continues to be identified as a key component of leadership (Crowne, 2019), and may directly underpin relatively recent requirements such as cross-cultural competence (Wilson, Ward, & Fischer, 2013); competencies which certain personality types may be better suited to than others.

Although the underpinning debate relating to whether the personalities of leaders are innate or developed through experience continues, many researchers have attempted to identify the traits which differentiate those who can lead, and those who cannot (Arnold & Randall, 2010). Yukl (1998) identified that the development of a reliable measurement of existing leadership ability would be of great value, if challenging to create, not least because of the semantic debate that arises when differentiating behaviours from traits. Judge and Bono (2000) specify that charisma, often associated with inspiring and transformational leadership, may well be a trait, and yet may also be defined as a behaviour. In case of the latter, the authors reconcile the situation by considering that there may be an underlying trait that it originates from.



## Models of Personality

In 1990, Bass stated there may be no definitive theory relating to the personality of leaders, but through lived experience in organisational contexts it may still be reasonable to conclude that 'personality traits differentiate leaders from followers' (p. 86). Some precision has been brought to this statement by the evolution of personality profiling which enables a degree of measurement to be applied to personality. Since the 1980's the use of psychometric testing has become increasingly widespread, particularly within larger organisations (Jenkins, 2001). The concept was trialled in the 1950's by Kahneman, who identified that recruitment interviews being used by the Israeli Army were 'almost useless' in predicting the success of recruits (Kahneman, 2011; p.230). By structuring specific questions around desirable personality traits and encouraging recruiters to rate applicants against these rather than through intuition, a notable improvement in the level of performance of recruits was identified (Kahneman, 2011). Multiple copyrighted tools have been developed to measure personality traits (Zheng et al, 2008), with one of the most well-known of these branded personality models being the Myres-Briggs MBTI personality model (Lake, Carlson, Rose, & Chlevin-Thiele, 2019), which is delivered by licensed HR professionals to a variety of Fortune 500 companies (Cunningham, 2012). This, and several similar tools such as DISC and Insights, are based on Carl Jung's personality archetypes; conscious and unconscious patterns that he believed were apparent in all people, of all cultures (Feist & Feist, 2009). However, Cooper (2010) states that it impossible to scientifically test Jung's underpinning theory, and the dichotomous personality tools that have emerged from it have been routinely criticised by scholars for lacking consistency (Zickar & Kostek, 2013). Nonetheless, many are popular products; despite the academic criticism they are perceived as being useful by learning and development practitioners (Lake, Carlson, Rose, & Chlevin-Thiele, 2019), demonstrating a potential tension between academic research and the practitioner viewpoint, the latter being informed more by client interest and organisational culture rather than empirical evidence. Several psychometric measures of leadership tend to be structured around a leadership concept, such as 'Authentic Leadership' (Baptiste, 2018), and there is considerable disagreement about their validity on conceptual, as well as consistency, grounds. Crawford and Kelder (2019), for example, challenge the use of psychometrics in this area on the basis that they consider leadership to be the fluid relationship between leaders and followers, whereas psychometrics are static tools which measure an individual's personality at one moment in time.

## The 5-Factor Model

Although several personality models may generate inconsistent results, there is increasing agreement in the validity of the empirically derived 'Big Five' personality traits (Mlacic & Goldberg, 2007), perhaps the strongest proponents of this being McCrae and Costa (Cooper, 2010) who developed the NEO-PI(R) questionnaire which enables personality to be measured (Costa & McCrae, 1992). Developed from the International Personality Item Pool (Goldberg, 1999), the NEO-PI(R) questionnaire has been developed to support academic research in this area, with considerable validity. Using the abbreviated version, a 6-year study on neuroticism, extraversion and openness demonstrated validity coefficients of 0.86 to 0.83, and the validity coefficient of the factors of agreeableness and conscientiousness in two years interval was shown to be 0.79 and 0.63 respectively (Costa & McCrae, 1992b). The 'Big 5 Markers'; Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism, have driven personality research into multiple areas and have been translated into many languages (Mlacic & Goldberg, 2007). The model has been used as a basis to examine personality difference across cultures (Zheng et al, 2008), and between sexuality (Lippa, 2006). In a critical analysis of the model, Almlund, Duckworth, Heckman, and Kautz (2011) make the case that personality, as a non-cognitive entity, is likely to change in response to parenthood, work experience, or policy interventions, and therefore scores against the five factors may be volatile throughout adulthood. However, a study of working age adults by Cobb-Clark and Schurer (2012) does not support this, instead showing remarkable consistency in personality results across a four-year period, regardless of life events.

The Big 5 personality traits are used to predict a wide variety of social, organisational, interpersonal and individual outcomes (Ozer & Benet-Martinez, 2006), and the concept has been tested extensively in professional settings; Conscientiousness, for example, has been shown to accurately predict the level of mistakes people will make (Babaei, Mohammadian, Abdollahi, & Hatami, 2018), and Extraversion has reliably predicted occupation success in highly interactive work situations such as sales (Barrick & Mount, 1991). The empirical research is not always consistent; Bing, Davison, and Smothers (2014) identify that the predictive validity of Big 5 models can be limited, a claim supported by several meta-analyses from across disciplines (Swift & Peterson, 2019). Predictive validity is enhanced when personality profiles are contextualised, and given a frame of reference (Bing, Davison & Smothers, 2014); this may be just as simple as asking participants to keep a certain context in mind, ie, performance at work, rather than life in general, which can be achieved by careful phrasing of the questions asked (Holtrop, Born, & de Vries, 2014).

## 5-Factor Markers and Leadership

There appears to be little agreement in regard to how the 'Big Five' factors relate to leadership ability, indeed whether leadership ability relates to personality traits at all, with Bass (1998) describing the empirical support for this as 'spotty' (p.122). However, a wide ranging study examining the link between personality traits and leadership ability of leaders from over 200 organisations by Judge and Bono (2000) showed that Extraversion and Agreeableness positively predicted Transformational Leadership; 'the ability to inspire followers to identify with a vision' (Judge & Bono, 2000; p.751), as measured on another self-report questionnaire. Agreeableness showed the strongest correlation (.40) with Transformational Leadership, which is perhaps unsurprising given that trust, compassion and empathy are considered to be subsets of this factor (Cooper, 2010; Judge & Bono, 2000).

## Leadership Development Programmes

Focus on leadership development within organisations has gradually increased over the past two decades, perhaps as leaders are placed under greater levels of scrutiny and are subject to increasing expectations regarding outcomes (Crawford & Kelder, 2019). Leadership development programmes are frequently supported by 360 feedback, and a multitude of psychometric instruments which are supported by varying levels of research and construct validity (Zaccaro & Horn, 2003). The quality and success of leadership development generally is variable, with Lowe and Wentworth (2013) identifying that 75% of programmes were, at the time, perceived as being ineffective. Paine (2016) identifies many interventions fail to bring about lasting change, and recommends that a degree of discomfort for participants should not be avoided if learning is to have a significant impact, and he stresses the importance of 'action learning' communities that enable ongoing learning and collaboration after the immediate intervention. These principles have been engaged by the Leadership Development Programme that provides the context for this study. Delivered by a leading UK University, but developed specifically for industry, the programme contains three modules relating to understanding oneself, leading a team, and leading organisational change. Key to this study is the completion of the NEO-PI(R) 120 Item questionnaire, which was chosen due to its relatively sound construct validity and reliability, as evidenced by Cook and Beckman (2006). Participants were provided with psychometric feedback as a component of the first module, with significant emphasis being placed on the participant gaining an honest and authentic understanding of their personality. Participants receive the feedback in a group setting and discuss it in small 'action learning' groups.

The professional development model used by the University is not uncommon, and psychometric tools are frequently used to support leadership development programmes (Loew & Wentworth, 2013). However, the empirical research relating to the validity of psychometric personality tools is generally focussed on the reliability of their predictive ability rather than as aids to development, and much of this work follows Kahneman's (2011) original work in assessing how to use them to support recruitment. The gap that exists, therefore, relates to whether the use of 5-factor psychometric personality testing enhances, rather than just predicts, leadership capability.





## The Research Question, Focus of the Study, and Objectives

There has been considerable research focussed on the validity of psychometrics as predictors of occupational performance, but little relating to how they enhance or impact leadership capability from the perspective of the leaders who engage with them. The research question therefore focusses on this gap: *does completing a 5-factor personality psychometric tool, and receiving feedback on the result, positively enhance the participant's self-perceived leadership ability in a professional business environment?*

In order to answer the research question, this qualitative study will examine:

- The extent to which undertaking a 5-factor personality profile enhances leaders' self-perception of their own existing leadership ability.
- The extent to which undergoing personality psychometrics can change the leadership behaviours of senior managers, and how they are perceived by their colleagues, as part of a development programme.
- The effectiveness of personality psychometrics to support professional development, learning and increased effectiveness for leaders and managers within their roles, when used as part of a training initiative.

The key objectives for the study were:

1. Explore, from the perspectives of 10 senior leaders, the impact of psychometric personality assessment on self-perception of leadership ability.
2. Examine, from the perspective of leaders, the extent to which results from psychometric personality assessments inform actions that develop and improve leadership ability.
3. Identify other organizational or performance orientated outcomes that result from undergoing a psychometric personality assessment with managers.



# Research Method

## Design

For this study, a qualitative and phenomenological (Patton, 2002) approach was used, drawing upon the experience and beliefs of individuals who have undertaken a personality psychometric assessment as a component of a leadership development programme. The aim of the research was to attempt to capture 'the lived experiences' (Litchman, 2010, p.77) relating to how individuals have developed as leaders, as a result of completing the psychometric and receiving feedback.

An exploratory approach (Babbie, 2007) stemming from the gap identified in the literature review, has been chosen. Qualitative methods are likely to be the most effective when the researcher is attempting to understand a condition, experience, or event from a personal perspective (Hammarberg, Kirkman, & de Lacey, 2015). The aim of this study is to capture the experience, meaning and perspectives of participants relating to how a psychometric personality assessment has impacted their leadership ability and approach. As there is very limited research in this area, the methodology needed to contain a degree of flexibility in order to enable new issues to emerge, and therefore the research approach was aligned to grounded theory (Martin & Turner, 1986), and interviews continued until a saturation point was reached; the point at which there was no new data or themes, the study was replicable, and no new coding was feasible (Fusch & Ness, 2015).

## Participants

Participants work within a large, international engineering and manufacturing company that employs approximately 2000 people. The organisation has delivered a comprehensive talent development programme with three levels of leadership and management training since 2017; introduction to management for junior managers, the Management Development Programme for mid-level managers, and the Leadership Development Programme (LDP) for senior level managers who may be considered for Board level promotion. The participants for this study will be drawn from the LDP as this comprehensive, six-day programme incorporates a 5-factor psychometric personality profiling tool, as well as a 360 appraisal; an increasingly popular tool used to improve the quality of leadership within businesses (Cacioppe & Albrecht, 2000). The programme is focussed on three key areas of professional development; understanding oneself as a leader, team leadership and management coaching, and managing change. The course incorporates 3, 2-day modules, with action learning for participants between each module. The psychometric feedback is presented to delegates during the first module, and delegates have the opportunity to discuss this in small groups of peers. At the point of being interviewed, participants had recently completed the development programme, or were nearing completion. All participants had received the psychometric feedback, and engaged in group coaching discussion.

Participants selected for the LDP Programme typically line manage team leaders as well as front line staff, and will have strategic levels of responsibility within the business. They manage and are accountable for business activity across a region, or run major projects for the business, such as new product design or IT system implementation, which carry risk and encourage significant levels of responsibility. To be selected for the LDP programme and to work at a senior level within the business, participants need to have demonstrated considerable skill and experience in leadership and management. Due to the experience of participants, it was anticipated that interviews would yield sufficiently rich data to support the creation of new knowledge (Dibley, 2011). There were estimated to be approximately 60 senior leaders within the business who had recently completed the programme, or who are currently undergoing it.





## Data Collection

In this study the interviews generally followed a structured methodology to enable some consistency in the collection of the data, although some flexibility was allowed when the interviewee not understand a question and needed it to be rephrased, or when interviewees wish to introduce experiences or views that fell outside of the remit of scripted questions. Questions relating to the participant's experience of having completed a personality psychometric prompted intangible and unquantifiable responses, and therefore a flexible data collection approach was be utilised.

The primary focus of the research questions was to ascertain the participant's view of what effective leadership is, and the extent to which having completed the personality psychometric tool as a component of a leadership development programme has enhanced their own leadership effectiveness and ability. To achieve these aims, descriptive and structural questions will need to be asked (Harrell & Bradley, 2009). Open, descriptive questions were used to elicit a narrative response and ascertain participants' understanding, and structural questions were asked to examine the relationship between the experience of completing the profiles and receiving feedback, and the impact on leadership ability.

The interview questions relating to individual's views on the impact of completing are at Appendix A.

## Analysis of the Data

Following the transcription of interviews, thematic analysis, as defined by Braun and Clarke (2006), has been used to analyse and report themes in the data, and patterns in individuals' responses have been identified. This process has followed Braun and Clarke's (2006) defined stages, and the aim of the final report is to present an interesting account of the data, and the themes that have been identified (Braun & Clarke, 2006). This is also an account of the assumptions that may be involved in the interpretation of the theme, and their implications within the context of the research question. As recommended by King (2004), direct quotes from participants to reinforce specific points of interpretation were embedded to add depth to the account of the data. The logical method that was used to interpret the data and arrive at the themes is explained in detail, supported by observations gathered in the reflective journal.

## Ethical Considerations

In order to preserve the confidentiality of participants, a discreet office was made available by the organisation, in a location away from the main office and production areas. The office had no external windows, and blinds could be pulled down to cover internal windows. This ensured that any participants who wished to take part, but did not wish their participation to be known, would not be identified during the interviews. The only identifier for individuals was the participant consent form, which was signed in hard copy, then scanned and securely stored. The hard copy was destroyed.

The researcher knew the head of HR within the organisation, having trained her on a coach and mentor development programme. The head of HR supported the research within the organisation as an act of goodwill. No incentives were offered, and the organisation had no expectation that the data from the study would be shared with them. No participants were known to the researcher prior to the study.

# Results

10 senior leaders from a large, corporate construction business were interviewed in order to establish how completing a 5-factor psychometric profile, and receiving feedback, has impacted the self-perception of their leadership ability, how this has informed changes or developmental actions, and the wider impact on the organisation these changes may have had. Participants all had a minimum of 5 years' experience in a leadership role, and some had held leadership positions in other organisations and sectors.

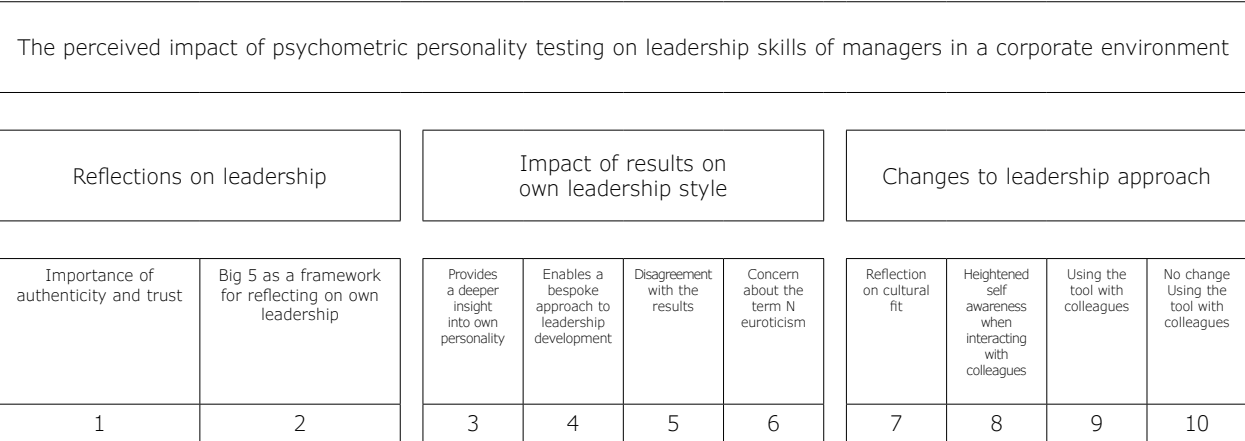
## Participant Information

Participant	Job Role	Gender
P1	HR Professional	Female
P2	Learning and Development	Male
P3	Architect	Male
P4	Learning and Development	Male
P5	Finance	Female
P6	PR	Female
P7	Marketing	Male
P8	Sales	Male
P9	Facilities Management	Male
P10	Distribution	Male

Three superordinate themes were identified; reflections on leadership, impact of results on own leadership style, and changes to leadership approach.

## Themes Map

Number = number of participants for whom this was a theme.





## Theme 1: Reflections on Leadership

### *Importance of authenticity and trust*

Participants were asked to define their perceptions of effective leadership. Authenticity was considered as leaders acting with integrity and being true to their own value system. The associated concept of trust was considered in terms of being trustworthy, and being willing to trust subordinates and colleagues.

All participants had a considered, practical view of good leadership. There was significant overlap in regard to the definitions of effective leadership provided, which tended to align with Authentic (George, 2003) and Democratic (Lewin, Lippert, & White, 1939) leadership styles. Different perspectives were apparent, although an underpinning belief that leaders should be honest, emotionally intelligent, and courageous enough to confront challenges. The theme of engendering trust was raised by all participants.

The following quotes are indicative of the wider view of effective leadership elicited from the participants. P9 stated: "Trust is incredibly important, and I work hard to foster trust within my team... my job [as a leader] is to build trust in the team so I can get the best out of them" (line 3). P10 identified the need for leaders to be developers of people: "Leaders should accompany people on their development journey" and "leading from the front can be quite controlling; EQ is very important...this leaves your audience feeling calm and convinced [in the leaders ability], and trust can be established" (line 9).

A slightly different perspective was presented by P2 considered that leaders should "not be afraid to make decisions", and that leaders "should be wary of being labelled as nice" as this can lead to them being "walked over" (line 9-11). Authenticity and courage were discussed by P6 who stated that effective leaders are "not afraid to be challenged, and enter into some sort of dialogue...they should listen and engage with what is actually being discussed" (line 13).

### *Big 5 as a framework for reflecting on own leadership*

When asked about own strengths and weaknesses as leaders, all participants provided a balanced view. It was apparent that leadership ability is highly regarded in the organisation, and there is an organisational expectation that leaders work proactively to develop their leadership abilities.

6 participants identified that the Big 5 language provided a useful framework to self-analyse. P9: "I am very agreeable which is a strength, but can be a weakness as well...I can see their point of view [and as a result] I carry a lot of the issues with me" (line 17). The trait of Agreeableness was also considered by P2 who stated "I don't naturally enjoy conflict. [A former manager] told me she expected a leader to be more authoritative. But that wasn't really my style and that led me to leave the organisation" (line 22).

## Theme 2: Perceptions of Results

### *Provides a deeper insight into own personality*

Participants were asked to reflect on how the results of the psychometric tool impacted the perception of themselves as leaders, and whether the results had increased their self-awareness within this context.

Participants received 360 feedback in addition to the psychometric tool. This feedback was generally very honest, and some participants stated that they had found it difficult to read and take on board. In a minority of cases, participants refused to accept the feedback, but most who mentioned it in the interview stated that they found it difficult but very helpful exercise. 4 participants identified a correlation in the 360 feedback and their personality profile, with the latter providing some insight into why others perceive them a certain way. This correlation assisted participants in identifying action plans with the aim of improving how they are perceived by their colleagues. P6 stated: "The 360 feedback did trouble me, and the personality profile really helps to explain why I got that feedback...I'm going to make a concerted effort to enhance my Agreeableness score by responding better to people I disagree with" (line 18).

Overall, 8 participants identified that the results in the report enhanced their self-awareness. The extent to which this occurred varied from a marginal increase through to being revelatory. P5 stated: "I think it just reinforces what I already know about myself and highlights a few things that I need to be aware of when I'm under pressure. My low Agreeableness score suggests why I might be overly direct at times; I've had that feedback, but this explains why" (line 28). This relatively mild statement of impact contrasts against P8's experience: "It's been very significant for me. The low extrovert score has helped to explain why I find networking, and unstructured communication, so difficult and I'm always exhausted afterwards. I had a long talk with my line manager about this as he believes it's a requirement of the role, and I need to develop tools, or the resilience, to be more comfortable in that space" (line 31).

4 participants stated that in general, the personality feedback reinforced what they already knew about themselves. This tended to be the case where participants agreed with the feedback they had received. In the majority of cases there were instances of disagreement relating to subdivisions of personality traits. P2, for example, identified that their 'achievement striving' result was surprisingly low; "I set goals, I run marathons" (line 52). However, they rationalised the result in terms of not striving for praise, or recognition from others, and reconciled that their goals are internally motivated.

### *Enables a bespoke approach to Leadership development*

4 participants identified that they found that the personalised, specific insight the report gave them significantly enhanced the impact of the professional development programme. The individual feedback, and peer to peer discussions, focussed the development initiative specifically on them as individuals, and resulted in detailed, personalised action plans.

6 participants developed actions relating to better management of themselves based on their personality profile, and 2 identified both intent and related actions to attempt to alter their personality type to some degree, in order to enhance their leadership impact. P6 stated: "I am going to pay close attention to my reactions during meetings and work hard to moderate these. Hopefully this will enhance how I am perceived in regards to Agreeableness, and improve the perception others have in regards to me as a colleague and role model" (line 44). The profile feedback helped participants to develop very specific actions relating to where they wish to bring about a change in their trait profile.





## *Disagreement with the results*

3 participants disagreed with the outcome of 2 or more sections of the personality report. In each case disagreement occurred where the participant scored low on Agreeableness, or high on Neuroticism. P1 stated: “The Agreeableness and Neuroticism results do not resonate with me. I don’t see myself being either disagreeable, or neurotic. I agree the low score on Extraversion, but I don’t think this makes me less agreeable” (line 51)

6 participants identified one section that they disagreed with. This tended to be related to low scores on personality traits that they perceived to be advantageous, primarily Conscientiousness and Agreeableness, or a high score for Neuroticism, which they perceived to be problematic for an individual in a leadership role.

One more controversial subsection of Openness was ‘Intellect’, and several participants identified that the profile result related to questions concerning engagement with art and culture. Several people questioned this connection, particularly where they scored low. P7 stated: “I discussed this with colleagues; I enjoy doing puzzles and challenging my mind, but the report suggests I don’t, so I disagree with that aspect” (line 49). The relationship between engaging with culture and intellect evidently caused some disagreement, perhaps brought about by the semantics associated with Openness. It also suggests that the frame of reference and context of questions may be significant in obtaining accurate results.

Although only considered by two interviewees, the consequences of an individual becoming categorised, either in their own self-perception, or the perceptions of their colleagues, was raised as a challenge to the use of psychometrics. This may lead to the individual developing limiting beliefs about their capabilities, or potentially lead to limitations in their career options. P5 stated: “The person might not put themselves forward for a leadership job, or might not be encouraged to do so, if for example they score low on Agreeableness, or high on Neuroticism... If they don’t have the perfect role profile it might limit their options when they are still fundamentally capable” (line 49).

This concern relates to the ethics of using psychometric tools to make professional judgements relating to people’s careers. It also raises the question of whether undertaking psychometrics, and associating with one’s profile, might create self-limiting beliefs relating to one’s own competency. Rather than providing a learning framework to enable the development of leadership capability, a profile which doesn’t correlate with typical or expected leadership norms might lead to the belief that one is unsuited to leadership roles.

## *Concerns about the term Neuroticism*

The language used to describe the personality trait of Neuroticism created a degree of confusion with several participants. Concerns regarding the trait fell into two categories; those who did not agree with their own profile, and those who question the terminology in a professional development environment. For example, P2 stated that it is different to language used with other personality profiles which tend to be more positive, and that examining this trait could be “quite challenging” (line 41). When using the same profiling tool with one of his colleagues, the discussion relating to Neuroticism led to the colleague disclosing they were undergoing Cognitive Behavioural Therapy. This raises the question of whether the Neuroticism personality factor is suitable for a professional development discussion, or whether it relates more to therapeutic interventions.

## Theme 3: Changes to Leadership Styles

### *Reflection on cultural fit*

The language presented by the Five Factor Model was used to define the culture of the organisation. P2 and P4 focussed on Conscientiousness, specifically and identified that this is a highly sought-after trait in the company. P2 stated: "My company is highly structured, and that seems to be valued, rightly or wrongly...corporate environments create a structure for people who get things done" (line 39).

Both participants identified that their own profiles reflected a stronger preference for Openness than Conscientiousness. P2: "My 'out there ideas' can feel as though they're not valued so much as they are just ideas and not actions. That's the culture" (line 75).

P4 considered the possibility that their personality results might change if they stayed in the company for long enough to become fully aligned to the structured, task focussed culture.

### *Heighted self-awareness when interacting with colleagues*

In most instances (7), participants were able to identify action points they would be able to take from profile results to enhance their leadership ability. Several participants stated that they were more conscious of their personality traits when interacting with others at work. P6 identified that this has already had significant results for her self-confidence: "As a woman, it is a constant battle of being assertive and leading people, and being perceived as bossy...by being assertive I take the risk of undermining more senior colleagues. I've been able to put things into context in my own head" (line 58). The profile has helped her manage the balance of assertiveness and aggression: "I have found a middle ground; don't lose your sense of personality but [make sure you are] respected by your peers" (line 63).

P8 identified that his high Agreeableness and Neuroticism results made him inclined to agree with people, even when he felt he shouldn't: "I will turn my attention to Agreeableness and Neuroticism, and avoid agreeing with people quite so much" (line 77).

Although highly specific to the individual, the action points generally involved participants paying closer attention to their personality traits, and what they perceived to be strengths and weaknesses, when interacting with colleagues in a leadership capacity.

### *Using the tool with colleagues*

Following a review of their own profiles, P2 and P3 asked their colleagues to undergo the assessment, and used this as a basis for one to one management discussions. The leaders with some confidence in relation to coaching and mentoring identified it as a useful tool to enhance their one to one communication with colleagues, and also to enable facilitated discussions between team members. P3 stated: "The profile enables a 'bespoke' management approach. If you understand someone's vulnerabilities, you can adapt your approach" (line 46).

P2 identified that Big 5 language may help improve communication and understanding between team members: "I think it gives us a common language to refer to when it comes to the personalities in the team" (line 81).





## *No changes*

A small minority of participants stated that they hadn't felt the need to make any changes to their leadership approach based on the profile feedback. This seemed to relate to participants who stated they already had a high level of self-awareness, and the profile hadn't told them anything they didn't already know. P10 stated: "I am self aware...I believe I'm conscious of my weaknesses as a person. The round tables are more open, but I'm not sure that the psychometric has done anything particularly" (line 61). P7 stated that they hadn't made any changes, but wouldn't rule this out in the future: "Anything that tells you things about yourself has to be useful...I've had other things to focus on, but there will be actions to be taken here when opportunities to focus on leadership arise" (line 55).



# Discussion


The main findings of the research were:

- Participants agreed that the Five Factor model provides a useful framework to evaluate what is desirable in leaders. All participants specified the importance of building trust, which is associated with a high Agreeableness trait score, as a desirable trait in leaders.
- The majority of participants were able to evaluate their own leadership effectiveness against the Big 5 markers and draw conclusions. In most cases, participants stated that undertaking the profile and receiving feedback on personality traits enhanced their self-awareness.
- Based on self-evaluation using the Big 5 model, the majority of participants have been able to formulate specific actions to enhance leadership practice.
- The feedback provided by the model was not identified as useful by all participants, and a small number found the language employed by the 5-factor model difficult to associate with the leadership role.

The study revealed that the feedback provided by the psychometric profile has enhanced self-awareness in several participants, and that this in turn has impacted how participants perceive themselves as leaders. This finding suggests that the psychometric tool may enhance emotional intelligence, defined by Salovey and Mayer (1990) as the ability to perceive, assess, and express emotions in oneself and others. Goleman (1995) identified self-awareness as a critical component of emotional intelligence, as it enables people to more effectively manage themselves and others. However, it might also be the case that the participants who are more open to feedback already had higher levels than those who are inclined to reject it. Future research could examine whether undergoing a 5 factor psychometric profiling exercise enhances emotional intelligence score by measuring this before and after, although a challenge to tests of emotional intelligence is presented by Cooper (2010), who questions whether EI is in any way different to a personality trait itself.

Several participants felt uncomfortable about the feedback they received from the tool, or didn't agree with it, particularly where the report indicated high levels of Neuroticism, or low levels of Agreeableness. It was evident that in some cases the participants felt the results to be negatively associated with professional effectiveness and leadership ability. Krasman (2009) identified that people with a strong Neuroticism trait tend to deliberately seek feedback from colleagues, but will be more inclined to feel anxious about feedback that isn't positive or reassuring than those who score lower. Participants generally perceived Neuroticism to be a negative trait, particularly within the leadership context. It is difficult to discuss the trait into a positive light; McCrae and Costa (2003) identified that individuals with high scores on this trait respond to challenges, frustration or loss in a manner that may be perceived as out of proportion to the situation. Lahey (2009) posits that high Neuroticism scores may correlate with mental and physical health issues. It was therefore understandable that participants with high scores were uncomfortable about the feedback or unwilling to accept it. To a lesser extent, some participants also objected to the result relating to Intellect as a sub-section of Openness, and called into question the relevance of questions on the IPIP NEO tool relating to engagement with culture. Peterson and Swift (2019) identify that a clear frame of reference significantly improves the predictive validity of personality models. This may relate to how questions are phrased, or even just having a specific context, such as one's role as a leader, in mind at the time of completing the profile (Bing, Davison, & Smothers, 2014). The general nature of the phrasing of questions on the IPIP NEO profile may have reduced the perceived relevance of some results for certain participants, and a clear, occupational frame of reference is likely to enhance the predictive validity of results relating specifically to leadership ability. To better support leadership development initiatives, a profiling tool with a more specific focus on the occupational domain and with questions that present a clearer leadership orientated frame of reference, may be required.





The personality trait deemed to be most related to leadership ability was Agreeableness, with the caveat that taken to excess it may lead to the avoidance of difficult, yet necessary, conversations relating to performance, et cetera. This finding roughly correlates with Judge, Bono, and Joyce (2000), who identified that Agreeableness and Extraversion scores most positively predict transformational leadership ability, based on a self-reporting survey. In this study, participants did not specify Extraversion as being a necessary or desirable trait for leaders to have. This may relate to the organisational culture participants operate within, and may be influenced by their pre-conceived views of effective leadership; all associated authenticity and the ability to build trust as being crucial aspects of leadership, and it may be that Agreeableness is most closely aligned to these qualities. This conceptual relationship is supported by John and Srivastava (1999) who define Agreeableness as 'willingness to be trusting' (p.121), and on Costa and McCrae's IPIP NEO framework, the propensity to trust is a sub-category of Agreeableness. People who score highly tend to be 'honest and well-intentioned' (Costa & McCrae, 1993, p.17), and it may be that leaders who are willing to trust others are more likely to be trusted themselves. Agreeableness in the occupational context is a divisive trait. Judge and Bono (2000) identified that, when combined with Extraversion, it correlates with transformational leadership qualities. Despite this, many authors suggest that although trait Agreeableness does relate to positive interpersonal relationship at work (Graziano & Tobin, 2002), it does not significantly relate to job performance (Livingston & Hurst, 2011). Employers can see Agreeableness as a negative trait for leaders to have, potentially as they may be required to challenge others at the expense of the relationship (Wojciszke, Abele, & Baryla, 2009). Colder, more aloof leaders are perceived as more competent in certain organisational cultures (Beyus et al, 2009), and the desire to build strong inter-personal relationships and trust may conflict with perceptions of competence or agency (Wojciszke, Abele, & Baryla 2009), financial goals, or individual career success, and as a result, less Agreeable people are more likely to obtain leadership positions (Livingston & Hurst, 2011). Peterson (2016) posits that Conscientiousness is a far higher predictor of occupational success than Agreeableness, as the latter relates to hard work, orderliness and efficiency. This stands in contradiction to Judge and Bono's (2000) findings, which were based on a self-report tool relating to transformational leadership, rather than the judgements of employers or colleagues; Donaldson and Grant-Vallone (2002) are particularly critical of research based on self-reporting methods and tools such as this, as it is impossible to control for employee bias, a perspective founded on research conducted by Borman (1991), who identified that ratings submitted by colleagues tended to be more accurate than those submitted by the employee themselves. That participants in this study value Agreeableness and the ability to build trust as leadership qualities therefore goes against the grain of many, if not all, establishing findings; another recommendation for future research should be to examine how the perceptions of desirable leadership traits differ between employers and followers in organisations.

In summary, it is the recommendation of this study that a lightly adapted (incorporating a clear frame of reference, and Emotional Resilience rather than Neuroticism) 5-factor personality profile will make a valuable addition to a leadership development process as a leadership development tool in itself, rather than just a means of predicting leadership capability, and could replace the plethora of less reliable licensed tools currently favoured by leadership development practitioners.

# Limitations of the Study

This was a small study, and as a result provides only indicative insight into the impact of completing the 5 Factor psychometric model on leadership ability. The study also only focussed on the self-perception of leaders; a wider, future study may examine how self-perception relates to the perception of followers and colleagues as any-self report mechanism can present reliability problems due to innate bias, et cetera (Donaldson & Grant-Vallone, 2002).

The participants chosen for the study hold leadership roles in industry, and all have significant practical experience of leadership and management. However, it became evident that the majority of participants had limited understanding of psychometric tools having only encountered the 5-factor model during a leadership development workshop. As a result, insights relating to the effectiveness of the tool were limited, although they were authentic. To gather more informed insights, future qualitative studies exploring the impact of the 5-factor model on leadership ability could incorporate interviews with professional development practitioners and tutors with a more in depth understanding of personality models, and experience of deploying them to support and enhance leadership development initiatives.





# Conclusion

Although organisational research relating to the 5 factor model has, to date, focussed on the predictive validity of the model, and the extent to which certain traits may predict leadership ability, this study has shown that undertaking the personality questionnaire and receiving feedback on the results can by itself enhance leadership ability. Every participant was able to use the 5-factor model as a framework to review their leadership competence, and the majority stated that understanding their personality traits helped them to identify personal actions and behavioural changes that would result in them becoming more effective leaders.


Participants identified challenges with the process, and improvements that could be made. In order to most effectively focus on leadership development, the IPIP-NEO tool requires a more specific frame of reference, potentially rewriting certain questions with a clearer emphasis on leadership within an organisational context. The factor of Neuroticism could potentially be reversed so as to measure 'Emotional Resilience', which future participants may find more relevant and appropriate terminology.

The 5-factor model is rigorously tested concept, and it is 'abundantly clear' that in terms of construct and predictive validity, it is superior to more commonly used tools such as MBTI (Furnham, 1996, p.306). Using the 5-factor tool instead, potentially lightly adapted to address the concerns identified in this study, will ensure that participants on leadership development programmes self-analyse against a model that is a relatively reliable reflection of personality, rather than less reliable alternatives that do not possess the same conceptual integrity, or level of predictive validity.

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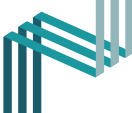
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# Appendices

## Appendix A: Interview Questions

Number	Question	Rationale/Notes
Q1	In your own words, how would you define good leadership?	<ul style="list-style-type: none"> <li>- Rationale: Cherkasky and Wagner (2001) identify that the individual's 'lens' impacts their understanding and definition of leadership. The definition is therefore dependent on the experience and context of the individual.</li> </ul>
Q2	In light of this definition, how would you describe your strengths and weaknesses as a leader?	<ul style="list-style-type: none"> <li>- Self-rating is dependent on an individual's self-awareness, with many leaders rating themselves higher than their colleagues (Fleenor, Smither, Atwater, Braddy, &amp; Strum, 2010)</li> </ul>
Q3	Prior to take the personality assessment, what was your understanding of psychometric testing in general?	<ul style="list-style-type: none"> <li>- There are several thousand psychometric tools available, and Harper (2008) identifies there can be confusion relating the purpose of these tools amongst individuals and the businesses that sponsor them.</li> </ul>
Q4	What was your understanding of the purpose of the specific tool that you undertook?	
Q5	How did you feel about the feedback you received from the process?	
Q6	What action points did you identify upon reading your feedback?	<ul style="list-style-type: none"> <li>- Youker (1985) identified that concrete action planning supports behaviour change following training experiences.</li> </ul>



Q7	How has the psychometric feedback affected your approach to leadership, and what have you changed?	
Q8	How has the process impacted your beliefs about yourself as a leader?	<ul style="list-style-type: none"> <li>- Goleman, Boyatzis and McKee (2013) identify that the attitudes and beliefs one holds about their leadership style and approach directly impacts how they are perceived by others.</li> </ul>
Q9	How has this impacted your colleagues, and what feedback from them have you received?	
Q10	What team or business performance results have you noticed as a result of the changes you have made?	

## Appendix B: Example Transcribed Interview

### Interview with P2

INT	In your own words, how would you define good leadership?	
P2	<p>I have been a leader in an HR team. I have my own view; I'm a collaborative person, gregarious and friendly, and if you are managing people a big part is getting to know them. It comes naturally to me. I guess it's about not being afraid to make decisions, and difficult decisions. Sometimes when you are the friendly gregarious person you have to be wary of being labelled as nice. I had a few managers in previous jobs who noticed that I got on well with the team, but told me I was a bit of a walk-over, and that she expected a leader to be more authoritative. But that wasn't really my style and that led me to leave the organisation.</p>	<p>Extraversion / Agreeableness</p> <p>Decision Making</p> <p>Personality - agreeable</p> <p>Cultural fit</p>

INT	In light of this definition, how would you describe your strengths and weaknesses as a leader?	
P2	<p>Strengths would definitely be collaboration, I like to work with the team and talk through things. I am very mindful of praising people for a job well done., and finding out what makes them tick. Either a pat on the back or more formal recognition. I am a learning and development person so I'm keen to develop skills and I get a kick out of watching people grow. I'm quite focussed on how people can improve, and as a person I'm approachable, open, I have time for people. I was offered an office but I like to sit with the team. That's part of my extraverted personality; I'd never work in an office withy the door shut.</p> <p>Weaknesses; I don't naturally enjoy conflict, although I'm mindful of it. Not an area I enjoy working in. Can be distracted, not particularly analytical with numbers. Much more a believer in working with other on these things I get them done.</p> <p>I'm resilient and good with change. I believe in trust and respect in the work context. When this doesn't happen I can carry a grudge.</p>	<p>Agreeableness trait</p> <p>Extraversion</p> <p>Leadership challenges associated with Agreeableness</p> <p>Neuroticism</p>
INT	Prior to take the personality assessment, what was your understanding of psychometric testing in general?	
P2	I'm a TMP practitioner, but I'm aware of several including Insights and MBTI.	Jungian models





INT	What was your understanding of the purpose of the specific tool that you undertook?	
P2	<p>It seemed quite familiar in terms of the headings. The only one that was different was the one relating to neuroses, which I liked to be honest. The only thing I would say is that it could be quite challenging when it comes to the 'pain' conversation, if you use it as a coaching tool. Having a low level of emotional resilience might not be healthy and they might need another outlet for that. I have used this tool to support a coaching session with a colleague, and the admission that they were undergoing CBT came out. There were obviously some anxiety issues there. They were fully aware and getting help, but if that hadn't been there it might have been more challenging. On the rest there is a positive and negative wherever you are. However, there is no upside to having a low level of resilience and a high level of neuroticism. It's not a strength to be highly depressed. I think it is useful for people to know about themselves. I don't think this would come as a surprise. I did this with another colleague and they are quite anxious, and it wasn't a surprise.</p> <p>I have some experience of mental health in my family and I'm aware I'm up beat and rarely get down. Things I do I take full part in. It is useful and I don't think it would come as a surprise to anyone to find out they are depressed, or have a high level of neuroticism. It helps you look after yourself.</p>	Challenge with terminology: Neuroticism

INT	How did you feel about the feedback you received from the process?	
P2	Compared to the other tools, I thought this was more accurate. I think maybe better; it's broken down in more detailed. Extraversion is broken down into different definitions. It's not sold as well as the others but the content is very good. I had one issue. I think I know why its lower, but my achievement striving is quite low. I set goals; outside of work I run marathons. It might be more about; for some reason I don't seek others praise. I wouldn't seek that out. I'm not bothered about being recognised in front of others. That may also be why my sense of obligation is lower. There's a section on open to experience and that's much higher, which feels right for me.	Perceived accuracy of the results  Disagreement with a sub—section; achievement striving  Openness
INT	What action points did you identify action points following your reading of the feedback?	
P2	Leadership is not just about managing people. I've had a bit of time out from management. Ultimately I want to get back into a more of a leadership role which feels natural to me. I know I'm very extraverted and sometimes I need to dial that down. Agreeableness; I see that as a positive but it does have some connotations that I will agree to anything. Being aware is useful, and knowing that helps you to plan better, particularly when I know I need to have a difficult conversation and I'm not naturally comfortable with that. So I guess it's reinforced some areas I would like to work on, and be aware of.	Self-reflection against traits  Positives and challenges of with Agreeableness



INT	How has the psychometric feedback affected your approach to leadership, and what have you changed?	
P2	I did this a few months ago. I would definitely revisit it and use it as a tool, amongst others, to keep on opening up the Open window in the Johari model, if you like. It would probably lead me to examine having a bit more order, and being a bit more dutiful, particularly in a corporate environment. This stuff is valued and I need to think about that more. I think Conscientiousness is important. My company is highly structured, and that seems to be valued, rightly or wrongly. My 'out there ideas' can feel as though it's not valued so much as they are just ideas and not actions. That's culture. More creative people, perhaps there is less. Corporate environments create a structure for people who get things done. But I guess that's why I'm attracted to learning and development. I guess there are levels. L&D in my business is structured; we do a lot of programmes such as health and safety. I'd like to have more ideas about what I can do.	Tool for professional reflection.
INT	Do you feel the process has impacted your beliefs about yourself as a leader?	
P2	Difficult for me to say. I was very positive after doing the test. My colleague all did it, just really to give me a bit more understanding and practice as it's a tool I can really see myself using.	



INT	How has this impacted your colleagues, and what feedback from them have you received?	
P2	It is probably too soon to say in terms of my own leadership behaviour, but it has been very interesting to use the tool with my directly colleagues, and I think it gives us a common language to refer to when it comes to the personalities in the team.	
	Use of the tool with colleagues: increased team awareness	
INT	What team or business performance results have you noticed as a result of the changes you have made?	
P2	I think it's a bit too soon to say	
INT	Thank you very much for your time.	



