

# An Evidence-based Assessment of the Relationship Between Emotional Intelligence and Transformational Leadership

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## ABSTRACT

*This paper reports the results of a structured content-based review of the published literature on the relationship between emotional intelligence (EI) and transformational leadership (TL). Twenty-four empirical studies were identified in this review, fourteen of which reported findings in support of the relationship between emotional intelligence and transformational leadership, and ten of which found either mixed or no support for the relationship. A detailed content analysis of each study was conducted to determine the relative robustness of the research design in each case. This review reveals that while research design may explain some of the conflicting results, it is the variety of EI instruments utilised that renders investigations into the EI-TL relationship problematic. Suggestions for advancing future research into the hypothesized relationship between EI and TL are posited.*

**Key Words:** emotional intelligence, transformational leadership, research design, leadership

## 1. INTRODUCTION

Research into the relationship between emotional intelligence (EI) and transformational leadership (TL) now spans more than one and a half decades, and despite persistent assertions in the literature that these two constructs are closely linked (eg: Goleman, McKee & Boyatzis, 2002; Goleman, Boyatzis & McKee, 2003), the published empirical evidence indicates inconsistent support for these claims (Harms & Crede, 2010a;

Hunt and Fitzgerald, 2013). Reasoning conceptually, researchers in this field argue that aspects of EI are important dispositional and cognitive antecedents of exhibited transformational leadership behaviours. Notwithstanding these claims, several large-scale empirical studies conducted in the last eight years have failed to find evidence of a consistent relationship between EI and TL. Standing as a counterpoint to these findings are no fewer than fourteen independent published studies that provide empirical evidence to support claims that a significant relationship between EI and TL does in fact exist. This paper investigates the research design elements that underpin each of these studies, in an effort to objectively assess the substantive validity of their respective findings and the subsequent conclusions drawn from each of these studies.

### 1.1. Transformational Leadership

For much of the twentieth century, leadership research in the management literature followed a predictable trajectory that had its origins in the seminal study conducted by Lewin, Lippit and White (1939), who posited three distinctive leadership styles; *democratic*, *autocratic* and *laissez-faire* approaches. These leadership orientations formed the basis of subsequent landmark investigations in the management literature, leading to the incremental development of a range of strikingly similar leadership models over the ensuing decades (Muller & Turner, 2010; Hunt, 2010; Thorn, 2012). Subsequent situational models of leadership (Fiedler, 1967, Hersey & Blanchard, 1969, 1977, 1982) also bore the unmistakable influence of Lewin, Lippit and White's original leadership styles typology.

The first significant departure from these studies emerged with the conceptualization of *transformational leadership* by Bass (1985a, 1985b) who proposed a new perspective on leadership centred around the magnitude of influence that characterised highly effective leader-follower interactions. Drawing upon earlier conceptual work by Downton (1973), House (1977) and Burns (1978), Bass developed a four-factor model of leadership that captured the actions and behaviours of highly inspirational leaders, whilst distinguishing them from other less influential leaders on the basis of the magnitude of cooperative effort and commitment that transformational leaders typically elicit from followers. This four-factor structure was confirmed and refined in subsequent studies by Hater & Bass (1988) and Selzer, Numerof & Bass (1989), leading to the development of Bass & Avolio's (1990b) *Multifactor Leadership Questionnaire*, a research tool that has since emerged as the most widely used quantitative instrument employed to investigate transformational leadership (Van Knippenberg & Sitkin, 2013). Bass & Avolio's (1990a, 1995) four elements that now form the structural basis for the accepted definition of transformational leadership in the management literature are; *idealized influence*, *inspirational motivation*, *intellectual stimulation* and *individualized consideration*.

*Idealized influence* refers to the leader's capacity to act as a role model and to elicit from followers strong feelings of emotional identification and attachment based on admiration, trust and respect for the leader. *Inspirational motivation* refers to the leader's ability to harness high levels of cooperative effort from followers through emotive appeals and captivating messages that articulate a challenging or compelling vision or set of goals, along with messages concerning high performance expectations of followers. *Intellectual stimulation* refers to leaders who encourage followers to broaden their conceptual boundaries to reframe problems, think creatively and embrace innovation, thereby empowering followers to extend and exercise their capacity for ideational fluency, thus heightening their sense of self-efficacy. *Individualized consideration* refers to the leader's willingness to relate to each subordinate as a unique individual, and to recognise and respond to their individual needs, thereby creating a climate of support, through the acknowledgement of individual capabilities and contributions to the collective effort.

In essence, transformational leadership is a type of leader behaviour underpinned by a powerful capacity to connect emotionally with followers, to enhance their levels of commitment to an espoused cause or goal,

and to lift the valence levels of subordinates in terms of how they perceive that cause or goal. Some of the most recognisable examples of transformational leaders are drawn from high-profile historical figures such as Sir Winston Churchill, John F. Kennedy, Martin Luther King and Nelson Mandela (Northouse, 2010, Hunt, 2006, Black, 2005, MacArthur, 1999), although increasingly, corporate leaders such as Ricardo Semler, Anita Roddick, Andrea Jung, Meg Whitman, Jack Ma, and Jack Welch have been described as notable exponents of the transformational leadership paradigm (Davidson, 2009, Pless, 2007, Strohmeier, 1998).

Transformational leadership has been advanced as a behavioural theory (Bass, 1998) implying that it consists of a set of purposeful actions which can be observed and identified. Several authors have argued that transformational leadership behaviours rest upon the evocation of emotion in subordinates to mobilise support for and commitment to a cause or a set of goals (Barling, Slater & Kelloway, 2000; Lopez-Zafra, Garcia-Retamero & Martos, 2012). Bass (1990) argues that the generation of excitement at work on the part of transformational leaders, along with the creation of heightened expectations of followers and the cultivation of a sense of empathy for individuals, all require an understanding of the affective nature of leader-follower exchanges. Megerian & Sosik (1997) were among the first researchers to propose a conceptual link between transformational leadership behaviour and emotional awareness, a theme which has gained momentum in the ensuing decades. Kupers & Weibler (2006) argue that transformational leadership requires emotional self-awareness and emotional self-control, which in turn are elements inherent in the construct of emotional intelligence (Mayer, Caruso & Salovey, 1999).

## **1.2 Emotional Intelligence and Transformational Leadership**

Thorndike (1927) introduced the concept of social intelligence into the psychology literature in order to provide an explanation for the variety of individual abilities needed to understand, interact with and respond appropriately to others in social settings. Gardner (1993a, 1993b) extended the work of Thorndike by proposing the theory of multiple intelligences, which encompassed both interpersonal and intrapersonal capabilities; the former referring to an individual's ability to understand others, the latter referring to the recognition and comprehension of one's own emotions. Developing a similar theoretical framework, Salovey & Mayer (1990) used the term *emotional intelligence* (EI), defining it as a branch of social intelligence that entails the capacity to recognise feelings and emotions in oneself and others, to discriminate effectively between these feelings and emotions, and to harness this awareness to effectively formulate and shape one's thoughts, intentions and actions. This definition attracted significant attention in the management and leadership literature, leading a number of researchers to propose a conceptual link between emotional intelligence and transformational leadership (eg; Megerian & Sosik, 1997; Dulewicz & Higgs, 1999; Barling, Slater and Kelloway, 2000), whilst others called for empirical investigations into the proposed relationship (eg: Alimo-Metcalfe, 1999).

Corona (2010) argues that transformational leaders exhibit behaviours that enable them to be embraced as role models by their followers (idealized influence) and that these behaviours are the results of emotionally intelligent exchanges between the leader and subordinates. Downey, Papageorgiou & Stough (2006) argue that transformational leadership is essentially dependent upon the effective expression and deployment of emotions, and in an empirical study of a sample of 176 managers, found that "the abilities encompassed by emotional intelligence are intrinsically related to the role of the transformational leader." (Downey et al. 2006: 259). Similar conclusions have been reached in a number of published studies over the last fifteen years. Evidence supporting the positive relationship between EI and transformational leadership is provided in no less than fourteen empirical studies identified by the present authors. These studies are presented in Table 1 and will be referred to in the Results section of this paper.

Despite the apparent persuasive weight of these findings, and notwithstanding the conceptual claims in the literature, the relationship between emotional intelligence and transformational leadership remains unresolved in an empirical sense. One of the reasons for this prevailing uncertainty is that a significant number of quantitative studies investigating the EI-TL relationship have failed to find any significant correlation between the two concepts (eg: Lindebaum & Cartwright, 2010; Cavazotte, Moreno & Hickman, 2012). Other studies have yielded mixed results indicating correlations with *some* of the underlying dimensions of EI and *some* of the TL factors, but producing insignificant correlations in other instances (eg: Barbuto & Burbach, 2006; Lam & O'Higgins, 2012).

Another reason for the prevailing uncertainty concerning the link between EI and transformational leadership lies in the variety of research instruments that have been developed to measure the EI construct. Brown & Moshavi (2005:869) have identified three distinctive conceptualizations of EI, all leading to the emergence of different EI measurement instruments. The first set of instruments is based on the conception of EI as a collection of trait-based elements. These questionnaires seek to measure innate personal qualities thought to assist emotional recognition and reasoning. The second set of instruments is based on the view that EI is an acquired competency. These questionnaires are designed to measure specific skills and competency elements thought to underpin effective performance. The third set of instruments is based on a perspective that views EI in cognitive terms, as an intellectual capacity. These questionnaires seek to measure the thought processes that underlie EI.

Beyond these important conceptual differences, a number of critics have raised concerns relating to methodological issues in several of the published studies that demonstrate a strong positive relationship between EI and TL. Problems of validity, reliability, and common method bias (Antonakis, 2004, 2009; Harms & Crede, 2010b) have led to claims that artificially inflated correlations may have been derived from several of the studies (Cavazotte, Moreno & Hickman, 2012), provoking calls for more robust research designs in future investigative studies into the EI-TL relationship (Lindebaum & Cartwright, 2010).

In light of the competing claims in the literature concerning the link between emotional intelligence and transformational leadership, it appears to be both a timely and worthwhile exercise to review these claims, along with the empirical evidence upon which the findings from each study are based. Our literature review examines 24 published research studies, identifying the key findings in each case, and classifies the studies according to whether their overall findings provide *positive support*, *mixed support*, or *no support* for the EI-TL relationship. An appraisal of the evidence is presented along with suggestions for further research. Careful research design is noted as an important consideration in future efforts to advance rather than confound our understanding of this important area.

## 2. METHOD

An initial literature search was conducted based on two sets of paired key words; *emotional intelligence* and *transformational leadership*, as well as two further single-word terms; *leader* and *leadership*. The search was conducted using the following journal databases; Academic Search Complete – containing scholarly multi-disciplinary full-text articles from over 6,800 peer-reviewed journals; Business Source Complete – containing full-text articles from the world's top scholarly management journals; ProQuest – a multi-disciplinary full-text collection of academic journal articles; and SAGE Journals Online – providing full-text access to journals in the subject areas of business, humanities and social sciences.

The search was limited to full-text, peer-reviewed academic journal articles published over the last 15 years, and was further limited to key words appearing in the title only. A total of 31 potentially relevant journal

articles were identified after a substantial number of marginally related studies were excluded from the sample. Since the focus of the present review is on empirical studies exclusively, a further 7 non-empirical papers were set aside, thus creating a final sample of 24 published papers. These papers were then subjected to a structured review process which formed the basis of our further and more detailed investigations.

Journal articles were arranged chronologically based on date of publication, and read closely, in succession. A content analysis was conducted on each of the 24 articles, in line with the methodological recommendations outlined by Seuring and Gold (2012: 547) for carrying out a systematic content analysis-based literature review. Key findings were noted in each case, along with the data-collection method, sample size and type, and whether the study reported an acknowledgement, where appropriate, of potentially confounding factors such as common method bias. This process enabled the authors to classify each article according to whether its findings provide (i) significant empirical support, (ii) mixed empirical support, or (iii) no empirical support – for the relationship between EI and TL.

### 3. RESULTS

A close investigation of the reported findings from each of the 24 peer-reviewed research papers enabled us to categorise these studies according to the level of support that each affords in relation to the proposed EI-TL relationship. Table 1 lists fourteen studies that present conclusive evidence in support of a significant positive relationship between emotional intelligence and transformational leadership. These studies were published between 2000 and 2012, with the majority of them appearing in print on or before 2006. Table 2 presents a tabulation of five studies that provide mixed results for the EI-TL relationship, indicating some support for connections between ‘particular aspects’ of emotional intelligence and ‘specific individual factors’ within the transformational leadership paradigm, but no conclusive support for a significant relationship between emotional intelligence and transformational leadership, when each is investigated as a broader construct. The studies identified in Table 2 were published between 1999 and 2012, with the majority of them appearing between 2006 and 2012. Table 3 lists five studies that provide conclusive empirical evidence in support of the proposition that no strong or significant relationship exists between emotional intelligence and transformational leadership. These studies were published between 2006 and 2013.

**Table 1**

**Published Empirical Studies Providing Significant Support for the Relationship between Emotional Intelligence and Transformational Leadership**

Authors	Sample Size & Data Set	Findings
1. Barling, Slater & Kelloway (2000)	<i>N</i> = 236 multi-source data	A positive relationship between <b>EI</b> and 3 aspects of <b>TL</b> .
2. Palmer, Walls, Burgess & Stough (2001)	<i>N</i> = 43 same-source data	Positive correlations between some components of <b>TL</b> and the <b>EI</b> sub-scales.
3. Gardner & Stough (2002)	<i>N</i> = 110 same-source data	<b>EI</b> correlated strongly with all components of <b>TL</b> .
4. Sivanathan & Fekken (2002)	<i>N</i> = 302 multi-source data	Leaders high on <b>EI</b> were viewed by followers as higher in <b>TL</b> .
5. Duckett & MacFarlane (2003)	<i>N</i> = 13 same-source data	A strong relationship was found between <b>EQ</b> profiles and <b>TL</b> profiles.
6. Mandell & Pherwani (2003)	<i>N</i> = 32 same-source data	A significant relationship was shown between <b>EI</b> and <b>TL</b> .

7. Leban&Zulauf (2004)	<i>N</i> = 24 + raters multi-source data	<b>EI</b> ability contributes to a manager's <b>TL</b> approach.
8. Downey, Papageorgiou&Stough (2006)	<i>N</i> = 176 same-source data	A positive relationship was found between <b>EI</b> and <b>TL</b> .
9. Hayashi &Ewert (2006)	<i>N</i> = 46 same-source data	A strong relationship was found between the social factors of <b>EI</b> (such as interpersonal skill) and all components of <b>TL</b> .
10. Polychroniou (2009)	<i>N</i> = 267 same-source data	Leaders' <b>EI</b> components are positively correlated with <b>TL</b> .
11. Wang & Huang (2009)	<i>N</i> = 303 multi-source data	<b>EI</b> is positively related to <b>TL</b> .
12. Corona (2010)	<i>N</i> = 103 same-source data	There is a strong positive correlation between <b>EI</b> and <b>TL</b> .
13.Hur, Van Den Berg &Wilderom (2011)	<i>N</i> = 859 same-source data sample randomly split to produce separate-source subordinate evaluations of TL and EI	<b>EI</b> is positively related to <b>TL</b> .
14. Lopez-Zafra, Garcia- Retamero&Martos (2012)	<i>N</i> = 431 same-source data	<b>EI</b> predicts <b>TL</b> .

**Table 2**

**Published Empirical Studies Providing Mixed Evidence for the Relationship between Emotional Intelligence and Transformational Leadership**

Authors	Sample Size & Data Set	Findings
15. Sosik & Megerian (1999)	<i>N</i> = 318 multi-source data	Correlations between <b>EQ</b> predictors of leadership behaviour differed based on categorizations of leader self-awareness.
16. Rubin, Munz & Bommer (2005)	<i>N</i> = 625 multi-source data	One aspect of <b>EI</b> (recognising emotion in others) has a strong relationship to <b>TL</b> .
17. Barbuto&Burbach (2006)	<i>N</i> = 468 multi-source data	Only one aspect of <b>EI</b> (empathetic response)correlated with rater perceptions of leader's <i>intellectual stimulation</i> and <i>idealised influence</i> .
18. Clarke (2010)	<i>N</i> = 67 same-source data	One aspect of <b>EI</b> (using emotions to facilitate thinking) correlated significantly with two elements of <b>TL</b> ( <i>idealized influence</i> and <i>individualized consideration</i> ).
19. Lam & O'Higgins (2012)	<i>N</i> = 323 multi-source data	The findings were not uniform. In some instances, <b>TL</b> style translates from <b>EI</b> , and in others <b>TL</b> operates independently of <b>EI</b> .

**Table 3****Published Empirical Studies Providing No Support for the Relationship between Emotional Intelligence and Transformational Leadership**

Authors	Sample Size & Data Set	Findings
20. Brown, Bryant & Reilly (2006)	$N = 2,572$ multi-source data	No indication that <b>EI</b> is of any value in exploring leadership.
21. Moss, Ritossa&Ngu (2006)	$N1 = 526, N2 = 332$ multi-source data	Individuals with high <b>EI</b> were not found to be more inclined to exhibit <b>TL</b> .
22. Lindebaum& Cartwright (2010)	$N = 227$ multi-source data	No relationship between <b>EI</b> and <b>TL</b> was found.
23. Cavazotte, Moreno &Hickmann (2012)	$N = 459$ multi-source data	The predictive power of <b>EI</b> on <b>TL</b> is not strong, when 'other' individual differences are accounted for.
24. Follesdal&Hagtvet (2013)	$N = 563$ multi-source data	Neither the four branch scores of <b>EI</b> , nor the total <b>EI</b> score (from <b>MSCEIT</b> ) predicted transformational leadership.

A comparison of the reported sample sizes employed in each of the independent studies documented in Tables 1, 2 and 3 provides evidence of some notable differences. Five of the research studies in Table 1 derive their findings from remarkably small samples, where  $n < 50$ ; a further nine studies present conclusions based on more representative samples, where  $n > 100$ , however, just two of these have drawn upon substantial samples, where  $n > 400$ . In sharp contrast, the reported findings presented in Tables 2 and 3 are derived from considerably larger samples. Table 2 contains only one relatively small sample ( $n = 67$ ), while the remaining 4 studies in this grouping present findings based on samples of 318, 323, 468 and 625 respectively. Similarly, Table 3 documents the conclusions reached by five separate studies, all of which derive their findings from substantial samples of 227, 459, 563, 858 and 2,572 respectively.

An additional salient comparison between the published papers recorded in Tables 1, 2 and 3 reveals an important methodological difference that further separates the studies in Table 1, from those in Tables 2 and 3. Notably, ten of the studies documented in Table 1 derive their findings from same source data, with only four drawing upon multi-source data, thereby avoiding the pitfalls of common method bias. In contrast, 80 percent of the studies and Table 2, and 100 percent of the studies in Table 3 base their findings on multi-source data.

#### 4. DISCUSSION

Notwithstanding the published evidence presented by each of the fourteen studies in Table 1, there appears to be a growing set of empirical research studies that collectively and individually contests the strength of the EI-TL relationship. The majority of these studies, reported in Tables 2 and 3, have emerged after 2006, they draw upon significant sample sizes that permit generalizable conclusions to be reached, and they employ multi-source data for the purposes of their investigations, thereby avoiding questions concerning the contamination of results from common method bias. These studies present findings which unmistakably challenge the intuitive appeal of claims in both the popular and academic literatures, that emotional intelligence is an important dispositional antecedent of transformational leadership.

Accordingly, in order to make sense of the contrasting findings presented in Tables 1, 2 and 3, it is necessary to consider three crucial elements inherent in each study. The first is *the size of the data set* used in each case, the second is *the nature of the data source* used in each study, and the third is *the selection of research instruments* employed to measure the constructs under consideration; emotional intelligence and transformational leadership. These three considerations are addressed below.

*The size of the data set:* Sample size is not only an influential feature in the potential rigour of any research investigation and analysis (Bryman, 1992), it is also an important determinant in the level of generalizability of the reported results (Brown, Bryant & Reilly, 2006). This is an especially crucial consideration in quantitative research studies seeking to investigate the strength of correlations between salient constructs, as well being important in the exploration of relationships between underlying factor structures or elements within particular constructs. Charter (1999) notes that larger data sets permit significantly higher degrees of statistical analysis. With this consideration in mind, studies 5, 6 and 7 in Table 1 - drawing upon samples of  $n = 13$ ,  $n = 32$  and  $n = 24$  respectively - are vulnerable to questions about the generalizability of their findings. By contrast, the substantive sample sizes reported in all five studies in Table 3, provide evidence in support of the high level of generalizability attributable to the findings from each of these empirical investigations.

*The nature of the data-source:* Podsakoff, MacKenzie, Lee & Podsakoff (2003) indicate that studies relying exclusively on same-source data to test the strength of relationships between two or more variables are susceptible to common method bias. Also known as common method variance (Chang, Van Witteloostuijn & Eden, 2010), this form of measurement error tends to occur when data are obtained from the same source within the same temporal frame using identical or closely related measurement techniques. Common method variance stemming from same-source data sets has a tendency to produce inter correlations that are falsely inflated (Williams & Brown, 1994). Table 1 shows that ten of the fourteen studies providing evidence for a significant relationship between EI and TL, have relied upon same-source data to derive their conclusions. Moreover, only one of these studies has taken steps to attenuate for the inherent limitations of this data gathering approach. Study 13 by Hur, Van Den Berg & Wilderom (2011) randomly split the large same-source data set ( $n = 859$ ) to produce separate source subordinate evaluations of EI and TL. Hence, of the fourteen studies reported in Table 1, only five can claim to have sufficiently addressed the issue of common method variance that can give rise to falsely inflated correlations. By contrast, all of the studies listed in Table 3 have derived their findings from multi-source data sets, thereby ensuring against one of the most obvious forms of common method bias.

*The selection of research instruments:* Whilst there is a broad consensus among leadership researchers that transformational leadership can be effectively measured using the Multifactor Leadership Questionnaire, commonly known as the MLQ (Avolio, Bass & Jung, 1999), several authors have questioned the construct validity of this questionnaire (Yukl, 2010; Northouse, 2010). Nevertheless its ubiquity has meant that the majority of published empirical studies seeking to establish correlations between TL and a number of other constructs, have at least been measuring the same broad TL construct, thus facilitating comparisons between studies of transformational leadership. This certainly holds true for the current set of studies reported in Tables 1, 2 and 3. With just a few notable exceptions, the studies captured in the present review have either used the MLQ or the MLQ-5X Short Version. In sharp contrast, the array of instruments used to measure emotional intelligence in the current set of studies is simply breathtaking. This diversity bears testimony to the lack of consensus among management and leadership scholars as to how best to measure the EI construct (Van Rooy & Viswesvaran, 2004). Table 1 alone consists of studies drawing upon Bar-On's (1997) self-

report Emotional Intelligence Inventory, Salovey's modified Trait Meta Mood Scale (Salovey, Mayer, Goldman, Turvey & Palfai, 1995), Palmer & Stough's (2001) Swinburne University Emotional Intelligence Test, and Mayer, Salovey & Caruso's (2000) Emotional Intelligence Ability Test. The studies listed in Tables 2 and 3 bear further testimony to the extensive array of EI instruments employed in empirical research in the management and leadership fields. Questionnaires utilised in these studies include the Composite Emotional Intelligence Questionnaire (Sosik & Megerian (1999), Carson's Emotional Intelligence Instrument (Carson, Carson & Birkenmeier, 2000), The WLEIS (Wong & Law, 2002), and its variant, the Wong Emotional Intelligence Scale (WEIS). As noted earlier, three quite distinct approaches to the measurement of emotional intelligence have been developed for research purposes. First, there are the *trait-based* measures that identify underlying dispositional features of individuals. Second, there are the *competency-based* EI measures that seek to identify performance-related skills from the perspective of emotional and social capabilities. Third, there are the cognitive EI measures that view emotional intelligence in terms of specific *cognitive processing abilities*. Since the competency-based EI measures often employ a blend of items reflecting a broad combination of capabilities, these are referred to in the literature as mixed models (McCleskey, 2014: 79). While these distinctions are explicitly understood and acknowledged in the psychology literature, where separate ability-EI and trait-EI research streams have established themselves, the management literature concerned with emotional intelligence remains corralled by a proliferation of different conceptual models in which the term EI remains a contested construct, both empirically and theoretically. In definitional terms, this lack of common ground continues to inhibit rather than advance our understanding of the potential relationship between the EI construct and other important concepts such as transformational leadership.

## 5. CONCLUSION

Methodological concerns have raised questions in the minds of a growing number of researchers concerning the positive correlations reported in the early literature investigating the EI-TL relationship. Concerns relating to the lack of generalizability of findings reported from exceedingly small data sets have combined with doubts about the validity of reported correlations drawn from same-source data. Balanced against these reservations, is the evidence presented in four methodologically robust studies listed in Table 1, showing strong empirical support for the proposition that EI is positively related to TL. First is the study by Barling, Slater & Kelloway (2000) which drew upon a sample of 236 respondents, using multi-source data. This study found a positive relationship between emotional intelligence and three aspects of transformational leadership. Second is the study by Sivanathan & Fekken (2002) which drew upon multi-source data from a sample of 302 respondents, and reported the significant finding that leaders high on emotional intelligence were viewed by followers as highly transformational. Third is the study by Wang and Huang (2009) which drew upon a multi-source data set with a sample size of  $n = 303$  to report that emotional intelligence is positively related to transformational leadership. Fourth is the very large study by Hur et al. (2011) which drew upon a sample of 859 respondents, randomly split to produce separate source subordinate evaluations of TL and EI. Their empirically validated conclusion is that emotional intelligence is positively related to transformational leadership. Considering the findings of these four studies alongside the conclusions reached by the five equally methodologically rigorous studies listed in Table 3, what are we to make of the apparent contradictions?

It is important to note that despite persistent claims in the literature that emotional intelligence is closely associated with transformational leadership, this position remains a contested one in an empirical sense. A careful examination of the published empirical literature on the EI-TL relationship reveals a relatively small number of methodologically sound studies supporting the relationship, and an equally small number of

rigorous and credible studies producing evidence of no support for this relationship. Accordingly, a clear and definitive statement about the EI-TL relationship is not yet possible without further research.

Nevertheless, there are some evident parameters that need to be established in order to ensure that future research endeavours clarify rather than confuse our understanding of this potentially important EI-TL relationship. First there is the issue of the sample size. The advancement of EI-TL research is largely dependent on the generalizability of reported findings, and accordingly, there seems to be no further advantage to be accrued in conducting correlation analysis on exceedingly small samples. Second, there is the issue of the data source. Multi-source datasets are known to alleviate some of the problems associated with common method bias, and are therefore likely to be useful in establishing meaningful and uncontested correlations with respect to EI-TL research. In cases where single-source data sets are used, the method of randomly splitting responses to derive separate sources is a useful approach to adopt in order to address some of the concerns relating to common method variance.

Beyond these considerations, there remains a third issue to be addressed by future researchers; the issue of construct clarity. This issue continues to cloud our understanding of emotional intelligence, at least in the management literature (McClesky, 2014; Mayer, Salovey & Caruso, 2008). Drawing upon lessons from the psychology literature, clearer distinctions need to be made between *trait-based* conceptions of EI and *cognitive* or *ability-based* models of EI. Unless future studies can effectively and sharply differentiate between these two conceptual parameters, researchers run the risk of continuing to confound efforts to establish the nature and strength of the EI-TL relationship. Petrides (2011) points out that the scientific literature clearly distinguishes between trait-based EI and ability-based EI, by treating them as quite different constructs. It is important that future research into the EI-TL relationship pays heed to this critical distinction. Accordingly, future research into the EI-TL relationship would benefit from seeking to more openly address two important but potentially distinct questions. The first is the relationship between *trait-based* emotional intelligence and transformational leadership, and the second is the relationship between *ability-based* EI and TL. While proponents of each approach have begun to emerge in the academic literature -with Mayer, Salovey & Caruso(2008)favouring the ability-based approach, and Petrides & Furnham (2001) arguing the merits of the trait approach – there remains a need to continue to investigate both models. Lindebaum and Cartwright (2010) correctly point out that mixing both EI constructs is not conducive to reaching the level of construct clarity necessary to advance our understanding of the EI-TL relationship. Nevertheless, properly designed research studies have the capacity to explore both forms of EI whilst maintaining the integrity of the construct distinctiveness that has emerged in recent years from the psychology literature.

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