The relationship of emotional intelligence with task and contextual performance: More than it meets the linear eye

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ABSTRACT

The relationship of emotional intelligence (EI) with job performance was investigated in 188 individuals working as expatriates. Job performance was considered in terms of task and contextual performance - helping (OCB-H) and voice (OCB-V) organizational citizenship behaviours - and was assessed by line managers. In line with expectations, most identified relationships were of quadratic U-shaped form. Specifically, all three relationships of the global EI construct, and eight out of the 11 identified relationships of its four facets, were of U-shape. That included the relationships of all four EI facets with task performance, and the relationships of two dimensions, self-emotional appraisal (SEA) and regulation of emotion (ROE) with OCB-H and with OCB-V. The findings illustrate the link of global EI and its facets with contextual performance apart from task performance that has been the primary focus of research thus far. The findings also suggest that although those with the highest scores on EI receive the strongest job performance ratings those who are most disadvantaged in terms of job performance are not the lowest EI scorers but rather those who find themselves near the middle of the EI scores continuum.

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1. Introduction

Emotional intelligence (EI) has attracted considerable attention in the past quarter of a century (e.g., Petrides et al., 2016). According to Mayer and Salovey’s (1997) conceptualization, EI is a multi-faceted construct that reflects the capacity of an individual to (a) understand one’s own emotions along with expressing these in a natural way (self-emotional appraisal or SEA), (b) discern and accurately appraise the emotions of others (other’s emotional appraisal or OEA), (c) manage or regulate one’s own emotions so he/she is not overwhelmed by emotional arousal (regulation of emotion or ROE); and (d) utilize one’s emotions in order to achieve valued outcomes including personal growth (use of emotion or UOE) (also Salovey & Mayer, 1990, but also Petrides et al., 2016). In the present work we adopt the trait perspective of EI (also referred to as “emotional self-efficacy”, Petrides & Furnham, 2001) that views the construct as reflective of the way individuals perceive and evaluate their own emotional abilities (Petrides, 2011; Petrides, Pita, & Kokkinaki, 2007) and acknowledges the subjective nature of the emotional experience (De Raad, 2005; Petrides, 2011).

A substantial amount of empirical research has linked EI with job performance (Joseph, Jin, Newman, & O’Boyle, 2015; O’Boyle, Humphrey, Pollack, Hawver, & Story, 2011). The importance of job performance needs not be stressed. Work is a significant aspect of life for most individuals, and successes or failures in the work domain, such as performing well or poorly, have serious spillover effects on personal outcomes such as psychological health and family life (e.g., Winefield, Boyd, & Winefield, 2014).

However, despite its enlightening character the knowledge we have accumulated on the link is not yet exhaustive: (1) the relationship of EI with job performance, and in fact all other assumed and tested outcomes of EI, has so far been presumed to be linear. It is conceivable, however, that the direction of the relationship is not constant across the spectrum of EI scores, meaning a non-linear relationship. If this is the case then our current understanding of the nature of the relationship and its magnitude may be compromised (e.g., Jorm & Christensen, 2004; Vasilopoulos, Cucina, & Hunter, 2007); (2) as noted by O’Boyle et al. (2011) in their meta-analytic review, extant research has nearly exclusively focused on task performance or in-role behaviours (i.e., how well the individual performs on tasks and roles that are formally part of the job, Borman & Motowidlo, 1997), and has paid only scant attention at contextual performance or organizational citizenship behaviours (OCBs). OCBs reflect behaviours that are not formal parts of the job, yet they nevertheless contribute to the success of the unit or the organization (Borman & Motowidlo, 1997; Organ, 1997) and they compose an equally important aspect of job performance (Rotundo & Sackett, 2002). The situation has not been noticeably improved in the five years that elapsed since O’Boyle et al.’s remark; (3) most empirical research thus far has been confined to testing hypotheses for the higher-order factor or global EI only. This, however, may
obscure the development of a nuanced picture because the facets of EI may demonstrate differential relationships with outcomes (Greenidge, Devonish, & Alleyne, 2014; Petrides et al., 2016).

In light of these three limitations of extant research, the present work investigated from a non-linear quadratic perspective the relationship of global EI and its facets with job performance, viewed in terms of both task performance and OCBs. We considered OCBs in terms of helping and voice behaviours (Van Dyne & LePine, 1998). Helping OCBs (OCB-H) refer to acts of support for others (e.g., offering to assist, co-operating even if personally inconvenient, going out of one’s way to help), while voice OCBs (OCB-V) refer to making innovating suggestions for improvement or modifications of existing practices and procedures. Due to their promotive nature (i.e., facilitative, constructive, encouraging) helping and voice OCBs are instrumental to improvement and accomplishment (LePine & Van Dyne, 2001; Van Dyne & LePine, 1998), which makes them of key importance.

1.1. Hypotheses development

As noted, there is substantial empirical work that attests to an overall positive relationship between global EI and job performance. Along with task performance, which has already been the subject of a respectable number of studies (Joseph et al., 2015; O’Boyle et al., 2011), we expect that high levels of EI will also relate to OCBs. The reason is that helping and voice OCBs are manifested via prosocial behaviours such as helping others, volunteering, and making constructive suggestions. Domain characteristics of EI include amongst others empathy, optimism, positive mood, assertiveness and capacity to adopt different perspectives (De Raad, 2005; Petrides & Furnham, 2001; Petrides et al., 2016) that should render those with high EI scores more likely to engage in such behaviours.

Though empirical work with the facets of EI is not abundant, there is sufficient reason for expecting that scores on all EI facets are associated with ratings in both task performance and OCBs. To illustrate, understanding and acknowledging one’s own emotions (SEA) should enable dealing better with frustration (Carmeli & Josman, 2009), and should facilitate prosocial actions due to the generated positive emotions (Tsai, 2009); hence, enabling avid engagement in formally prescribed tasks or contributions beyond the formal job description. Similarly, ability to discern and accurately appraise the emotions of others (OEA) renders the person caring and altruistic (De Raad, 2005; Mayer & Salovey, 1997), thus more prone to engage in contributory behaviours within or outside prescribed roles. Regulation of emotion (ROE) turns individuals more prone to accept help and advice from others (Brackett, Palomera, Mojsa-Kaja, Reyes, & Salovey, 2010), meaning learning faster to improve performance, but also potentially reciprocating the actions of others, hence, engagement in OCBs. Finally, all four dimensions of EI are linked with positive affective states in general (Kafetsios & Zampetakis, 2008; Petrides & Furnham, 2001) and at work (Yang & Lee, 2015) in particular, which are causal antecedents to task performance and OCBs (e.g., Ritiketa, 2008; Tsai, Chen, & Liu, 2007).

1.2. Quadratic relationships

As seen, there is well-founded expectation that both global EI and its facets are linked with task performance and OCBs. Beyond this, however, there are reasons to believe that the nature of the relationship varies according to the point of the EI continuum one finds him/herself. EI is a trait that lies at the lower levels of personality hierarchies, such as the Big Five or the Great Three, and comprises scattered aspects of these (De Raad, 2005; Petrides et al., 2007). Recent thinking and empirical evidence suggests that quadratic rather than linear equations may often provide more accurate descriptions of the relationship between personality traits and important work outcomes (e.g., Bozionelos, 2017; Chang, Wang, Liang, & Liang, 2014; Grant, 2013; Lin, Liang, Chang, & Liang, 2015; Vasilopoulos et al., 2007). A quadratic, and especially U-shaped, relationship is also in line with theory of trait EI, which derives that low scores on EI are not de facto associated with poorer outcomes (Petrides, 2011; see also Petrides, Vernon, Aitken Schermer, & Veselka, 2011).

Here we contemplate that higher EI scores are not associated with greater job performance ratings across the whole EI continuum. In particular, we ponder that in the range of low EI scores the relationship with job performance will be negative: that is movement away from the mean EI score and towards the low end of the trait distribution will be accompanied by increases in job performance. This suggests a U-shaped curve. The reason for expecting such a relationship is that absence of particular domain characteristics of EI may provide a performance advantage over presence of these in medium or medium-low degrees. To illustrate, individuals who lack social awareness and sociability, key features of EI (De Raad, 2005; Petrides & Furnham, 2001), may be able to engage without interruption on the performance of their tasks, and hence achieve better task performance than their counterparts who possess mediocre levels of these features. Furthermore, very low impulse and emotional control, which also represent low poles of EI characteristics (Petrides et al., 2016), may bring increased creativity and faster decision-making that at cases can offer performance advantages (Halbesleben, Wheeler, & Shanine, 2013; White & Shah, 2011). In the same line, very low levels of particular EI characteristics may lead to higher probability of engaging in OCBs because of decreased concern with social conventions that may inhibit such behaviours. For example, engagement in OCB-V requires making comments, suggestions and observations that may be challenging existing practices and may not be to the liking of others (Van Dyne & LePine, 1998). Absence of EI characteristics such as empathy, social awareness, emotional perception and impulse control may therefore facilitate such behaviours. Indeed, EI is negatively associated with social desirability (Petrides et al., 2007), which should render the individual less constrained by the desire to be liked by others when expressing his/her own views. Similarly, low emotional and impulse control and low assertiveness, which find themselves in the low pole of EI (Petrides & Furnham, 2001; Petrides et al., 2016), could increase the probability of spontaneous engagement in helping behaviours (Halbesleben et al., 2013). Hence, the following hypotheses were posed:

Hypothesis 1. Quadratic U-shaped curves will describe the relationship of global EI with task performance (H1a), OCB-H (H1b) and OCB-V (H1c) more accurately than linear equations; while the overall linear trend of the relationships will be positive (H1d, H1e, H1f).

Hypothesis 2. U-shaped curves will describe the relationship of SEA (H2a), OEA (H2b), ROE (H2c) and UOE (H2d) with task performance more accurately than linear equations; while the overall linear trends will be positive (H2e, H2f, H2g, H2h, respectively).

Hypothesis 3. U-shaped curves will describe the relationship of SEA (H3a), OEA (H3b), ROE (H3c) and UOE (H3d) with helping organizational citizenship behaviours (OCB-H) more accurately than linear equations; while the overall linear trends will be positive (H3e, H3f, H3g, H3h, respectively).

Hypothesis 4. U-shaped curves will describe the relationship of SEA (H4a), OEA (H4b), ROE (H4c) and UOE (H4d) with voice organizational citizenship behaviours (OCB-V) more accurately than linear equations; while the overall linear trends will be positive (H3e, H3f, H3g, H3h, respectively).

2. Method

2.1. Setting and participants

Participants were 188 (48 women and 140 men) full-time expatriate employees in the United Arab Emirates (UAE). Fourteen companies in

UAE chosen for their diverse fields of operation (ranging from aviation to oil & gas to infrastructure to tourism) were randomly selected and subsequently contacted through personal contacts. Within those companies, 358 subordinate-line manager dyads were approached randomly, assured confidentiality and asked to participate (each member of the pair was contacted independently). Responses from 212 dyads were received, 188 of which were usable. The response rate, 56.4%, was above the average of 52.7% for survey research (Baruch & Holtom, 2008), and highly satisfactory given that returns from both members of the pair were sought. Demographic statistics are presented in Table 1. Line managers’ mean age and organizational tenure were 40.27 years (SD = 9.53) and 4.97 years (SD = 4.42), respectively.

2.2. Measures

All measures utilized 1 to 7 response format (1: strongly disagree, 7 strongly agree).

EI was assessed with Wong and Law’s (2002) scale that has been especially developed for use in the work environment, and has four items for each facet. Confirmatory factor analysis (CFA) suggested the elimination of one item each from the SEA and the UOE scale. Based on the conceptual foundations of EI as a higher-order construct that is reflective of its facets, Wong and Law (2002) developed their instrument for each facet. Consequently, the EI construct was defined as the sum of scores on the four facets, and measure of the four facets for use as both measure of the global EI construct, with scores calculated by averaging the items. All measures utilized 1 to 7 response format (1: strongly disagree, 7: strongly agree). The three measures tapped different constructs and, hence, could be meaningfully utilized as independent criteria.

Controls included gender (male: 1, female: 2), age, organizational tenure, job tenure, educational attainment (1: secondary school to 4: graduate degree), and current organizational grade (1: subordinate to 5: senior management). Line manager gender, age and organizational tenure were also controlled for because these may influence supervisor ratings of subordinate performance (Roberson, Galvin, & Charles, 2007).

3. Results

Hypotheses were tested with hierarchical regressions. To preserve power and parsimony, controls were entered first using the stepwise method so the final equations included only significant controls. Following guidance for detecting quadratic relationships (Cohen, Cohen, West, & Aiken, 2003), the first-order terms of the EI variables (the global construct for Hypothesis 1, and the four facets for Hypotheses 2 to 4) were forcibly entered in the second step. These were followed by the second-order (i.e., squared) terms. Scores on EI were centred to reduce the possibility for multicollinearity between first- and second-order terms (Cohen et al., 2003). A significant second-order term signifies a quadratic relationship, while the sign of the second-order regression coefficient informs on the curvature. The sign of the first-order coefficient tells us about the direction of the relationship at the mean score of the predictor and, hence, about the overall linear trend, positive or negative, in the data.

3.1. Hypothesis 1: global EI and job performance

The second-order term of Global EI significantly added to the variance accounted for in task performance ($β = 0.28$, $t = 3.5$, $p < 0.01$; $ΔR^2_{adj} = 0.048; FA[1, 181] = 12.28, p < 0.01$) beyond the first-order term ($β = 0.35$, $t = 4.46$, $p < 0.001$; $ΔR^2_{adj} = 0.035; FA[1, 182] = 8.67, p < 0.01$) and the controls ($ΔR^2_{adj} = 0.137; FA[4, 183] = 8.41, p < 0.001$; total $R^2_{adj} = 0.220; FA[6, 181] = 9.78, p < 0.001$). The positive sign of the second-order coefficient indicated a U-shaped curve lending support to H1a. The positive sign of the first-order coefficient suggested that the point of bending (i.e., the point at which the direction of the relationships changes from negative to positive) is below the mean score of global EI (the exact bending point, calculated by resolving the first derivative of the quadratic equation to zero, was at $−0.63$ SDs). This indicates an overall positive linear trend in the data, lending support to H1d. Similarly, the second-order term of global EI significantly contributed to OCB-H ($β = 0.25$, $t = 3.07$, $p < 0.01$; $ΔR^2_{adj} = 0.039; FA[1, 182] = 9.45, p < 0.01$) and OCB-V ($β = 0.19$, $t = 2.31, p < 0.05$; $ΔR^2_{adj} = 0.020; FA[1,$
3.3. EI facets and OCBs

3.3.1. Hypothesis 3: EI facets and OCB-H

The squared terms of SEA (β = 0.25, p < 0.01) and ROE (β = 0.20, p < 0.05) accounted for significant amounts of variance in OCB-H beyond the first-order terms (β = 0.21, p < 0.05; β = 0.23, p < 0.05) and the controls. The positive signs of the second-order and first-order coefficients supported significant OCB-H beyond the significant first-order terms (β = 0.31, p < 0.001; β = 0.21, p < 0.05) and the controls. Therefore, H3b and H3d were not supported because the relationships were described adequately by the linear equations, which made H3f and H3h redundant to test.

3.3.2. Hypothesis 4: EI facets and OCB-V

Finally, the squared terms of SEA (β = 0.17, p < 0.05) and ROE (β = 0.21, p < 0.05) significantly added to the variance accounted for in OCB-V beyond the first-order terms (β = 0.14, p < 0.1; β = 0.31, p < 0.01) and the controls. The positive signs of the second-order and first-order coefficients alike indicated support for H4a, H4c, H4e and H4g (bending points for SEA and ROE were at −0.41 and −0.74 SDs, respectively). On the other hand, the squared term of OEA (β = 0.06, ns) did not add to
The variance accounted for in OCB-V beyond the significant first-order term ($β = 0.25$, $p < 0.01$). This suggested a purely linear positive relationship, leading to rejection of H4b and making redundant to test H4f. Finally, neither the second-order term ($β = 0.05$, ns) nor the first-order term ($β = 0.08$, $t = 0.88$, ns) of UOE made significant additions to the variance accounted for in OCB-V. Hence, H4d and H4h were both rejected.

4. Discussion

The findings imply that in general quadratic equations provide a more accurate picture of how trait EI relates to job performance than linear equations. All three hypothesized relationships of the global construct of EI were U-shaped, while eight out of the 11 significant relationships of its facets were also U-shaped (hypotheses had postulated 12 quadratic relationships overall for the facets). The picture provided by the findings is that while for most part of the EI continuum the relationship is positive, for a range of scores starting below the mean decreases in EI are associated with increases in job performance. Hence, although those with lowest scores on EI and its facets receive inferior job performance ratings than high EI scorers – this is the overall linear trend – their performance ratings are stronger than the performance ratings of those who score around the middle of the EI continuum. This concurs with the idea that low trait EI is not necessarily associated with the poorest outcomes (Petrides, 2011; Petrides et al., 2016), and is also in line with recent discussions about curvilinearity in the relationship between personality traits and work outcomes. Future research should unveil the exact mechanisms behind the job performance benefits of very low EI levels. Some reasoning for why low levels of EI may be associated with performance benefits was provided in the hypotheses development part, and this can serve as basis for more detailed reasoning.

The interesting practical implication of these findings is that people who will benefit most from EI training are those who find themselves around – in fact somewhat below - the middle of the EI distribution. On the other hand, EI training for those who find themselves near the bottom end of the distribution may in fact prove detrimental for performance. And the implication for selection practice is that people low on EI may not need to be always seen as undesirable employees to turn away.

The study also considered the facets of EI, and took into account OCBs in addition to task performance; aspects that the literature so far has paid limited attention at. In general, EI and its facets was related to OCBs and its facets was related to OCBs, while the relation between EI and its facets was related to OCBs. And the implication for selection practice is that people low on EI, considering that trait EI appears developable (e.g., Kotsou, Nelis, Gregoire, & Mikolajczak, 2011). Therefore, replicatory studies with samples composed of domestic workforces are recommended.

### Table 4

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<th>OCB-V</th>
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Notes. For all Tables beta coefficients are from the final models, while variance increments and $F$-$α$ statistics are from the intermediate models. Adjusted $R^2$ values are presented.

References


