# RELEVANT BUT EXAGGERATED: THE EFFECTS OF EMOTIONAL INTELLIGENCE ON PROJECT MANAGER PERFORMANCE IN CONSTRUCTION

## Abstract

The construction industry is traditionally seen as slow to adopt new management techniques, especially in the domain of human resource management. Recent studies have argued that emotional intelligence (EI) may be key to improved project manager performance in construction. Indeed, some researchers have argued that EI improves all types of work performance. We dispute this notion, and argue that context and nature of tasks are neglected issues in studies of EI and performance at work. The construction industry provides a unique context to test this proposition. We collected data from a sample of 55 project managers in the UK construction industry using a cross-sectional survey design. Findings suggest that project managers' levels of EI are linked to most relational performance dimensions. However, project manager EI was not associated with cognitive task related performance dimensions. Therefore, we argue that, while contributing to some aspects of project manager performance, the benefits of EI in this present context should not be overstated. Rather, it should only be one of a set of competencies that are required by successful construction project managers.

Keywords: Emotional intelligence, Performance, Construction, Project managers

#### Introduction

The construction industry is traditionally seen as slow to adopt new management techniques (Loosemore et al., 2003), but recent research indicates an accelerating interest in the improvement of project manager performance in construction (Scott and Yates, 2002; Mo et al., 2006). One construct that is increasingly investigated is emotional intelligence (EI) or the ability to be aware of and to manage emotions (Mayer and Salovey, 1997). Indeed, a number of articles published in construction journals and magazines indicate that EI may hold the key to improved project manager performance (Higgs and Dulewicz, 2000; Clarke, 2010). The argument upon which this interest is based is that "successful collaboration requires effective interaction among project participants" and when the quality of that interaction is considered, it "becomes apparent that emotional awareness and emotional regulation are important factors" (Songer and Walker, 2004, pp. 487-488). However, much of the evidence presented in these studies is anecdotal, based on conjecture, or may be subject to common method bias. What these studies do not address are two emerging debates in the field of EI. The first is a disagreement between researchers that managers with high EI will always be better performers regardless of the task (Goleman, 1998; Druskat and Druskat, 2006; Jordan et al., 2007). For instance, in this article we argue that tasks that require more emotional processing, such as tasks involving interpersonal interactions (e.g., communication) are more likely to be related to EI than those tasks that involve thinking ability (e.g., ordering material) or heuristics (e.g., scheduling work). The second debate concerns the importance of considering context when assessing the outcomes of EI (Lindebaum, 2009; Jordan et al., 2010). For example, Lindebaum and Fielden (2011) highlight the need to be mindful of role-obligatory behaviours of project managers, mostly manifested as

angry outbursts, that are seen as prototypical in the context of construction. These behaviours can deviate considerably from what would be expected, for instance, of a manager in a university department where more collegial interactions would be expected.

In relation to these debates, we argue that the impact of EI on work performance will vary depending on the context of work and the specific tasks being completed. The purpose of this study is to examine the relationship between a project manager's EI and context-specific performance indicators within the area of construction. We argue that there will be a difference in the contribution EI makes to project manager performance depending on the tasks at hand. We note that this study will extend our understanding of the human resource management debate in construction management and specifically show how a project manager's EI relates to project manager performance.

## **Emotional Intelligence**

A broadly accepted definition of EI is "the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions" (Mayer and Salovey, 1997, pp. 10). After several years of theorizing and psychometric development (see Mayer et al., 2008), the study of EI has moved into practical fields of application, though criticisms are still leveled at the construct (Antonakis et al., 2009). In their study of EI in managers, Law et al. (2004) comprehensively reviewed a range of EI constructs and measures. They identified core elements of EI and ultimately adopted a four-dimensional definition of individual EI for their business-focused research that largely reflected the domains

of the widely accepted Mayer and Salovey (1997) model of EI. This model comprised: (i) appraisal and expression of emotion in oneself, (ii) appraisal and recognition of emotion in others (iii), use of emotion to facilitate performance, and (iv) regulation of emotion. Extensive research in work-based studies examining workers' performance and managers' performance has adopted this model to date (e.g., Sy et al., 2006). A recent meta analysis by O'Boyle and colleagues (in press) demonstrates that self-report EI measures such as those based on the Wong and Law (2002) model are generally reliable in predicting performance.

Examining each of these four factors in more detail, Law et al. (2004) argue that the appraisal and expression of emotion in oneself pertains to an individual's ability to understand their deep-seated emotions and the ability to express them naturally. Songer and Walker (2004) suggest that emotional awareness is an important factor contributing to functioning interpersonal relationships in construction. By the same token, the accurate appraisal of emotions can facilitate the use of emotional information in forming judgements and decisions (George, 2000).

The second factor, appraising emotions in others, pertains to an individual's ability to perceive and understand the emotions of others including perspective taking to see issues from another person's point of view. The accurate perception of another individual's emotions in terms of type and intensity (i.e., identifying frustration or anger) can facilitate the prediction as well as understanding of that individual's subsequent actions (Elfenbein et al., 2002), which is a key feature of EI.

The third factor, the use of emotion to facilitate performance, is an ability that enables emotions to be used in specific forms of cognitive processing. For instance, positive moods can enhance creativity, integrative thinking, and inductive reasoning, whilst negative moods impel one toward attention to detail, exposure of

errors and problems, and thorough information processing (George, 2000). Ultimately, shifting one's emotions can give rise to more flexible planning, an engineering of multiple solutions, and a broadened vista on problems (Mayer and Salovey, 1997). Interestingly, there is an emerging theoretical debate that suggests that EI might be used to promote self-serving interest (Kilduff et al., 2010), or to manipulate others (Härtel and Panipucci, 2007), though this has not been widely and empirically supported yet.

Finally, the regulation of emotion in oneself refers to the ability to control or manage emotions (Law et al., 2004). Whilst some conceive of angry expressions as an indicator for weakness (Prati et al., 2003), it may also enable emotionally intelligent individuals to undertake controlled anger expression to achieve desired outcomes. For instance, the ability to regulate emotions may be especially prominent in negotiations, which are often infused with emotion (Kumar, 1997).

#### **Performance of Project Managers**

The construction industry provides a unique work context, as it is consistently characterized by aggressive/authoritarian management styles (Smithers and Walker, 2000), fierce competition and the imperative to be able to respond to extreme short-term pressures at work (Loosemore et al., 2003). There has been significant interest in expanding our understanding of the ways in which project managers' performance can be assessed (Dainty et al., 2004). Several studies suggest that important performance dimensions for project managers in construction include (1) Managing project environment and resources (2) Organizing and coordinating, (3) Information handling, (4) Providing for growth and development, and (5) Motivating and conflict handling. These dimensions have been discussed and tested in a series of studies and

been shown to be significant aspects of performance in this context (e.g., Dulaimi and Langford, 1999; Dulaimi, 2005).

Looking at each of these dimensions in more detail, Dulaimi and Langford (1999) argue that 'Managing project environment and its resources' (Dimension 1) pertains to the project manager's role in programming, planning, and controlling the project's environment and resources. Project managers must manage labor, plant, and materials in an effective way by linking them to the nature of the project and its environment to ensure steady and satisfactory progress. The second dimension (Organizing and coordinating) refers to a project manager's role in sequencing a range of different activities and tasks performed by teams and subcontractors on site. 'Handling information' (Dimension 3), in turn, describes the project manager's role in sorting and prioritizing information and establishing the flow of communication both within the project and between project parties. The dimension 'Providing for growth and development' (Dimension 4) centers upon the project manager's role in providing opportunities for all members of the project team to learn and develop their job skills. By means of careful counseling and observation, the project manager is able to offer the team the opportunity to get involved in the kinds of tasks that foster the development of their skills and experience, and give them the chance to get involved in the work that they can perform best. Finally, 'Motivation and conflict handling' (Dimension 5) illustrates the project manager's role in effectively motivating team members toward the achievement of the project's objectives. This will require both the development of an appropriate motivation system and the elimination of possible conflicts, which may emerge from incompatible goals experienced by team members.

#### Hypotheses

Following from the above, we argue that some of these performance dimensions are more task-oriented and cognitive in nature (e.g., Dimensions 1 and 3), whilst others tend to carry considerable interpersonal and emotional connotations (e.g., Dimensions 2, 4 and 5). For instance, 'Organizing and coordinating' (Dimension 2) is both a planned task and a reactive task on construction sites, as it involves project managers making decisions on sequencing of different activities and tasks executed by a number of discrete groups on site (e.g., concreters, carpenters, electricians). Often, these activities may be unexpectedly delayed and outside of the project manager's control (e.g., ordered construction materials not being delivered). As a key element of management identified by Mintzberg (1989), organizing and coordinating requires project managers to identify processes and personnel and to arrange them in the most efficient and effective way. To do this, project managers need to discuss with their employees the most effective way to arrange work and to negotiate flexibility when there are unexpected delays. Another key task for any manager should be 'Providing for growth and development' for employees (Dimension 4). This aspect of job performance involves engaging employees in developmental initiatives, with the aim of improving the skills and abilities that members of the project team are able to use both professionally and personally. To achieve this, project managers are required to undertake performance management of their employees (Chan and Chan, 2005) which requires project managers to communicate with employees on a one to one basis. Finally, 'Motivation and conflict handling' (Dimension 5) involves dealing with emotional issues around goal-setting. Motivation is clearly linked to goal-setting (Locke, 2005), while conflict most often emerges in organizations due to frustrations experienced in goal

achievement. In other words, conflict emerges when individuals with competing goals are at odds with one another. Although past research highlighted that managing one's own emotions and the emotions of others is required to achieve a successful conflict resolution (Jordan and Troth, 2004), controlled emotional outbursts are often used in construction to resolve a conflict in the project managers' favor if he/she deals with lower power parties on site (Lindebaum and Fielden, 2011), and this also requires emotional management skills.

The focus of our study is on the performance dimensions of 'Organizing and coordinating', 'Providing for growth and development', and 'Motivation and conflict handling' that require emotional abilities and emerge as relational aspects of performance. On this basis, we propose that:

- Hypothesis 1: As a relational aspect of performance, 'Organizing and coordinating' (Dimension 2) will be positively related to EI.
- Hypothesis 2: As a relational aspect of performance, 'Providing for growth and development' (Dimension 4) will be positively related to EI.
- Hypothesis 3: As a relational aspect of performance, 'Motivation and conflict handling' (Dimension 5) will be positively related to EI.

We offer no hypotheses for 'Managing project environment and its resources' (Dimension 1) or for 'Handling information' (Dimension 3). We argue that there are no sound theoretical reasons as to why EI should be related to these performance dimensions. Examining each of these dimensions in more detail, 'Managing project

environment and resources' and 'Information handling' are more task-oriented and, therefore, we argue that in undertaking this work project managers will require skills that are cognitive and not emotional in nature (Baloi and Price, 2003). The former involves managing budgets and making decisions on the best location of personnel during a shift and ordering materials, whilst the latter is linked to established communication policies and procedures on a construction site (Calvert et al., 1995). We argue that project managers will draw primarily on rational thinking skills in deciding budgets and arranging rosters and work locations. We further note that heuristics based on prior experience of project management can be used to determine where, when and in what format information is being distributed. In terms of both 'Managing the project environment' and 'Informational handling', we note that there may be overriding organizational rules and procedures that project managers follow in undertaking these tasks (see also Peansupap and Walker, 2006). On this basis, we do not offer any predictions, as we cannot draw conclusions from null hypotheses (Kluger and Tikochinsky, 2001).

#### Method

## Context

This study focuses on project managers within the UK construction industry. Project managers control the day-to-day process of construction including on-site liaison with professional and technical staff and contractors (Harris and McCaffer, 2001). As a result, they require both people management skills and technical skills to achieve their goals.

## **Procedure and Analysis**

Data were collected using a cross-sectional design. Project managers were asked to complete a survey using two formats, a Likert-type scale containing a measure of EI and a Behaviorally Anchored Rating Scale (BARS) to capture a measure of performance. While a single administration of a survey may be affected by common method variance, Blanz and Ghiselli (1972) noted that the differing formats of questionnaires can reduce this effect, especially when the scoring is not readily apparent to the test taker. This view is also echoed in a comprehensive review offering advice on how to avoid method variance distorting findings (Podsakoff et al., 2003).

We used Pearson's product-moment correlations as well as hierarchical regression to examine the impact of the total EI score on the performance dimensions. In our analysis, we controlled for age and years of experience, as they have been shown to influence project manager performance in construction (Dulaimi and Langford, 1999).

#### Sample

In total, 14 UK construction organizations of various sizes participated in this study. Questionnaires were distributed to 101 project managers, and a total of 55 project managers returned their questionnaires via reply paid envelope (i.e., a response rate of 55%). The mean age of the sample was 44 years (Median = 43; SD = 8.91), with age ranging from 26 to 66 years (n = 55). The total number of years working in construction ranged between 1 and 35 years, the mean being 12.3 years (Median = 8.50; SD = 9.49). All project managers were men. Although this sample appears to be skewed towards men, this sample reflects the profile of the general population of construction project managers in the UK.

#### Measures

EI was measured using the 16-item Wong and Law Emotional Intelligence Scale (WLEIS), a self-report measure of EI (Wong and Law, 2002). Self-reporting EI measures in general have been found to be reliable in predicting performance (O'Boyle et al., in press). This measure of EI is favored in applied settings due to its short format (Lindebaum and Cartwright, 2010). The four dimensions of the WLEIS are self-emotion appraisal (SEA), others' emotion appraisal (OEA), use of emotion (UOE), and regulation of emotion (ROE). Sample items are 'I really understand what I feel' (SEA), 'I have good understanding of the emotions of people around me' (OEA), 'I would always encourage myself to try my best' (UOE), and 'I can always calm down quickly when I am very angry' (ROE). The response rate is a 7-point Likert-type scale (1= totally disagree to 7 = totally agree). Several studies demonstrate the incremental and predictive validity of the WLEIS over and above

the Big Five personality factors in terms of life satisfaction and job performance (e.g., Law et al., 2004).

#### **Performance**

Performance was assessed using a context-specific version of a 'Behaviorally Anchored Ratings Scale' (BARS). The BARS combines the description of explicit job behaviors (i.e., anchors) with a score, and these behavior descriptions are subsumed under several performance dimensions. Details concerning the development of the BARS can be found in Atkin and Conlon (1978). A contextspecific BARS version was developed by Dulaimi (1991). In the BARS, critical incidents are rated on a spectrum from 1 to 5, where 5 represents effective and 1 represents ineffective behavior. The BARS contains a list of 57 statements representing different examples of project managers' behaviors. Project managers were asked to tick those statements which they believed were illustrative of their own behavior on site. Those statements which were not considered by project managers to be a part of their experience remained blank. These scales are considered to be less susceptible to the influence of social desirability as the rating system is not apparent to the rater (Blanz and Ghiselli, 1972). To calculate the scores for each dimension, all numerical values are summed and then divided by the number of ticked boxes. High scores indicate effective performance (Dulaimi, 1991). From the scoring protocol follows a significant implication for calculating the reliability coefficients for the scale. That is, a project manager may only tick one box (e.g., the box pertaining to very effective behavior) and ignore other behaviors that

are not scored. This scale is, therefore, similar to ipsative scales which are difficult to assess using Cronbach's alpha (Hicks, 1970).

#### Results

Given our relatively small sample size, we first computed the power of our analyses, so as to better gauge the confidence we can have in our findings. Based on a sample of 55 respondents, we calculated the power of our analyses using GPower (Faul et al., 2009) to be .92 for medium effect sizes and .99 for large effect sizes (Cohen, 1988). This provides us with confidence that our results would not differ greatly with a larger sample. Table 1 provides the means, standard deviations, correlations and Cronbach alpha reliabilities for all EI and performance dimensions.

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Insert table 1 about here

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In terms of Hypothesis 1, the dimension 'Organizing and coordination' is related to the total EI scale (r = .32, p < .01) and three dimensions of the WLEIS ('Selfemotion appraisal' (r = .27, p < .05), 'Other-emotion appraisal' (r = .23, p < .05), and 'Regulation of emotion' (r = .35, p < .01). Only the 'Use of emotion' dimension of the EI scale does not correlate with this dimension. We regressed this relational performance dimension on the EI total score. Having controlled for age and experience, EI still predicted significant additional variance on this dimension ( $\mathbb{R}^2$ change = 10%, p < .05, F (3, 48) = 2.25, p = .1). Thus, there is support for Hypothesis 1. Hypothesis 2 suggested that EI is significantly related to the dimension 'Providing for growth and development'. Based on the results from Table 1, we note that EI is not related to this performance dimension. Therefore, Hypothesis 2 is not supported.

Examining the performance dimension of 'Motivation and conflict handling', our data reveal that it is correlated to 'Self-emotion appraisal' (r = .31, p < .05), 'Use of emotion' (r = .46, p < .01) and 'Regulation of emotion (r = .36, p < .01). At the total EI scale level, there is a significant correlation between 'Motivation and conflict handling' and EI (r = .41, p < .01). However, we found no link between 'Other-emotion appraisal' on this performance dimension. EI also predicts additional variance over and above age and experience on this dimension ( $R^2$  change = .15, p < .01, *F* (3, 48) = 3.84, p < .05). In total, the evidence supports Hypothesis 3. We made no specific predictions in relation to 'Managing project environment and resources' (Dimension 1) and 'Information handling' (Dimension 3). In examining Table 1 we note only one dimension of EI was correlated with either of these dimensions. 'Information handling' was related to 'Regulation of emotions' (r = .29, p < .05).

#### Discussion

The purpose of this study was to examine the impact of task and context on the relationship between EI and project managers' performance. In line with recent arguments about the importance of context and task in predicting the impact of EI on performance, we hypothesized that EI would be linked to relational aspects of performance only.

The findings of this study are consistent with the hypotheses we developed, in that EI predicted significant variance in two of the three hypothesized relational

performance dimensions. In terms of Hypotheses 1 and 3, which linked EI to 'Organizing and coordinating' and 'Motivating and conflict handling' respectively, our data reveal that these aspects of a project manager's performance are significantly correlated with total EI scores, and that EI predicts variance beyond the project manager's age or years of experience. Again, these data provide evidence that support our central premise that the link between EI and work performance will be task-specific and related to work that involves emotion processing. We note that the support for Hypotheses 1 and 3 indicate that EI is especially important in the context of interpersonal interaction.

Contrary to expectation, Hypothesis 2 was not supported by the data, and that requires some further exploration. Specifically, the literature suggests that project managers who have high EI would be interested in personal development and growth (Brown and Moshavi, 2005). More recent studies maintain, however, that in organizations characterized by intense time pressure, leaders may find it difficult to provide feedback and guidance to followers (Hunter et al., 2010). This would be even more evident in workplaces such as construction sites where there is high turnover and frequent job rotation. Specifically, project managers may engage in less development activities due to the time-sensitive and pressured nature of working on a construction site (Lindebaum and Fielden, 2011). Another explanation may also reside in findings that innovation implementation in construction is often hindered by a lack of time to develop quality personal contacts (Peansupap and Walker, 2006). This, in turn, may also impact the working relationships between project managers and team members on site in a way that project managers do not have the time (or do not want to spend the time) to develop their team members. While we cannot draw too many conclusions from non-significant results, we note, in line with

our earlier argument, that this may provide an example where the context (as well as task-nature) has influenced the relationship between EI and criterion variables.

These findings significantly advance our understanding of how the constructs of EI and project manager performance relate in a given context. Whereas previous studies demonstrate that EI significantly predicts performance at work (e.g., Sy et al., 2006), this study shows that there is a complex relationship in which both task and context play a role. From this perspective, the use of a context-specific performance measure enabled a more fine-grained analysis, something that generic performance measures cannot necessarily capture. We also note that the small size of our sample provides a conservative test of our hypotheses and thus the significant findings we have discussed become even more important.

## Implications for theory

In this article, we argued that EI abilities are not only context, but also task-specific. While there have been researchers who argue that EI affects all performance (Goleman, 1998), our findings question this view. Managers who work in contexts that are person-oriented or those that deal with tasks that are interpersonal in nature potentially benefit from EI. Those tasks and contexts that require more cognitive skills in nature will not require EI, just as overriding organizational procedures (Peansupap and Walker, 2006) may effectively imply that one cannot harness one's EI, despite being motivated to do so. We argue that an implication for our results is that researchers need to pay more attention to specific contexts and specific tasks when developing theoretical models regarding the impact of EI in the workplace.

#### Implications for the practice of construction project managers

There are several important practical implications of this project. Contrary to what some popular writers suggest (e.g., Goleman, 1998), EI does not contribute to all aspects of performance. On this basis, funding development schemes to develop EI in construction may not result in an improvement of overall work performance. Equally, recruiting project managers according to their EI is perhaps equally futile, as 'newcomers' are often quickly socialized into the culture of an organization (Ashkanasy and Daus, 2002) and project managers feel reluctant to engage with the topic 'EI' in the first place (Lindebaum and Cassell, in press). Yet, an important limitation must be borne in mind concerning the project manager's time to provide for growth and development on the part of junior staff. We speculate that erratic demands, the high-pressure environment of construction, and the involvement of numerous subcontractors may imply that project managers have less time to attend to these issues, and may attach less importance to it as the project is time limited. By extension, this calls into question the notion of EI being an altruistic concept. While this issue has been raised previously (e.g., Härtel and Panipucci, 2007) our study provides some empirical evidence that may support these arguments.

## Limitations and future directions

This study has several limitations. The first concerns our sample. In relation to the sample size our data collection was constrained by the number of project managers that were prepared to participate in this study. Prior research suggests that gaining access to construction companies is notoriously difficult (Naoum, 1998). While our return rate was over 50%, it resulted in only 55 project managers participating in this study. We have conducted a power analysis that indicates that even with increased sample size we would not expect our findings to change dramatically. The second

limitation of our sample which may have an impact on the generalizability of our results is that the sample was exclusively comprised of males in the UK. We note that this sample reflects the general population of construction project managers who are primarily male.

The final potential limitation of our study is that the data are based on selfreport which means the responses may have been affected by social desirability. In this case, however, we have limited the effect of social desirability by using the BARS, a rating system that has been developed to be not apparent to the rater (Blanz and Ghiselli, 1972). Though the self-ratings of project managers' EI cannot be thought of as entirely free of bias, we do not think that this significantly affects our findings. For future studies, we believe a potent way forward would be to include the use of multirater-assessments in studies administering self-reported EI measures and the collection of objective performance data. This would enable a more rigorous test of the work we have started. A study of this type would strengthen our findings that the link between EI and performance is indeed context- and task-specific.

## Conclusion

In this article, we set out to draw attention to two neglected streams of inquiry in EI research. First, we highlighted that scholars need to be more attentive to the nature of the task when assessing how EI might impact upon it. Specifically, we show that distinguishing between individual cognitive tasks and tasks that are relational in nature and require interpersonal interaction is expedient for future research. Second, the role of context has been an empirical focus of our study, and we demonstrate through our analysis that the benefits of EI in construction may have been overstated. While some researchers present EI as an altruistic construct our data can be

interpreted to suggest that this may not accurately represent how individuals act in what are often competitive organizational environments. The links between altruistic behavior in organizations and EI is clearly an important area for further research.

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		М	SD	1	2	3	4	5	6	7	8	9	10	11	12	
1.	Age	44.00	8.91	-		-	_	-		-	_	-	-	-	-	
2.	Years of experience	12.30	9.49	.61**	-											
3.	Managing project environment & resources	3.92	.24	.13	04	(.83)										
4.	Organizing & coordinating	3.76	.24	.14	.03	.31**	(.74)									
5.	Information handling	3.77	.29	.21	.05	.14	.28*	(.58)								
6.	Providing for growth & development	3.55	.06	.08	14	01	.18	.09	(.61)							
7.	Motivation & conflict handling	3.63	.18	.17	03	.23*	.48**	.27*	.26*	(.58)						
8.	Total BARS	18.62	.66	.26*	.01	.59**	.74**	.68**	.27*	.70**	-					
9.	Self-emotion appraisal	6.16	.59	.18	.25*	.08	.27*	01	08	.31*	.17	(.72)				
10.	Others-emotion appraisal	6.00	.75	.16	.21	.08	.23*	.19	08	.19	.22	.61**	(.86)			
11.	Use of emotions	6.40	.59	.11	.12	09	.17	.17	.19	.46**	.25*	.56**	.45**	(.71)		
12.	Regulation of emotions	6.10	.68	.20	.11	.13	.35**	.29*	.06	.36**	.39**	.58**	.41**	.44**	(.75)	
13.	Total Emotional intelligence	6.17	.17	.21	.22	.07	.32**	.21	.03	.41**	.33**	.86**	.79**	.75**	.77**	(.76)

Table 1: Means, Standard Deviations, Cronbach alpha reliabilities and Correlations for BARS and EI subscales

\* p < .05 \*\*p < .01 (1-tailed) Note: Numbers in parentheses are Cronbach's alphas, (n=55).