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Emotional INtelligence and performance in Groups

There continues to be strong interest regarding the emotional intelligence construct as a potential predictor of workplace behaviour in organisations (Goleman, 1998). Little research, however, has considered the implications of emotional intelligence for group performance. This paper explores the links between emotional intelligence, conflict management, and individual and group performance. One hundred and sixty-three respondents working in 48 groups were administered the Workgroup Emotional Intelligence Profile (WEIP6: Jordan, 2000), a measure of group members emotional intelligence when working in teams. Participants then completed a problem-solving task, first individually and then as a member of a group. The results of this exercise were used as an indicator of individual and group performance. After the task participants' were asked to reflect on the style of their conflict resolution tactics (Rahim, 1983) used to achieve the group outcome. In line with expectations, emotional intelligence indicators were positively linked with group performance and were differentially linked to conflict styles at the individual and group level. Limitations and implications for future research are also discussed.

Key Words: Emotional Intelligence; Group Performance; Conflict

A growing number of writers suggest that emotional intelligence influences work performance (Goleman, 1998; Mayer, Salovey & Caruso, 2000). More recently this interest has extended to the role of emotional intelligence and its effect on group performance (Druskat & Wolff, 2001, Jordan, Ashkanasy, Hartel &Hooper, in press). It is thought that individuals with higher emotional intelligence will be aware of, and be able to manage, their own and others emotions within groups. Such abilities will contribute to relationship maintenance an important ingredient for group performance. There are also suggestions in the literature (e.g. Goleman, 1998) that emotion management abilities will facilitate functional rather than dysfunctional conflict and consequently contribute to group performance. The study outlined in this paper attempts to empirically examine these assertions by investigating the links between emotional intelligence and individual and group performance, and between emotional intelligence and conflict resolution tactics.

Emotional intelligence

In the early 1990's, Salovey and Mayer (1990) defined the emotional intelligence construct as involving the ability of an individual to monitor one's own and others' emotions; to discriminate among the positive and negative effects of emotion; and to use emotional information to guide one's thinking and actions. In later work, Mayer and Salovey (1997) argued that emotional intelligence is differentiated from other forms of intelligence (e.g. Gardner's (1983) constructs of interpersonal or intra-personal intelligence) because it deals specifically with the management of emotions and emotional content. While there is broad agreement that emotional awareness and emotional control are core factors of emotional intelligence, there is disagreement over other factors that contribute to the construct (Mayer, Salovey & Caruso, 2000). For instance, Mayer and Salovey's (1997) conceptualisation of emotional intelligence focuses on emotional abilities that link emotion and cognition, while Goleman's (1998) broader definition incorporates social and emotional competencies including some personality traits and attitudes.

The current study adopts Mayer and Salovey's (1997) model of emotional intelligence that encompasses a) perception, b) assimilation, c) understanding, and d) management of emotions. This model emphasises that emotional intelligence is a multi-dimensional construct and that these four steps are iterative, rather than linear. Perception refers to an ability to be self-aware of emotions and to express emotions and emotional needs accurately to others. A part of this self-awareness is the ability to distinguish between accurate and inaccurate expressions of emotions, and honest and dishonest expressions of emotions. Assimilation refers to an individual's ability to use emotions to prioritise thinking by focusing on important information that explains why feelings are being experienced. This factor also includes the ability to adopt multiple perspectives to assess a problem from all sides including pessimistic and optimistic perspectives. Understanding, the third component of emotional intelligence, refers to an individual's ability to understand complex emotions such as simultaneous feelings of loyalty and betrayal. This factor also refers to an ability to recognise the likely transitions between emotions, for example, moving from feelings of betrayal to feelings of anger and grief. Finally, emotional management revolves around the regulation of emotions. That is, an individual's ability to connect or disconnect from an emotion depending on its usefulness in any given situation. Each of these abilities has implications how individuals perform within groups.

Emotional intelligence and group performance

Jordan et al (in press) asserted that emotional intelligence should facilitate group performance. Druskat and Wolff (2001), in a theoretical paper, made a similar claim and made an important point that the majority of discussion about emotional intelligence revolves around individual competencies yet groups or teams generally complete the majority of tasks in organisations. They argued that group emotional intelligence is more complex than individual emotional intelligence based on the premise that group emotional intelligence involves an array of emotional interactions at the individual and group levels, as well as beyond the boundaries of that group. To date, however, no empirical investigation has attempted to link individual and group emotional intelligence to group performance. A major purpose of the study outlined in this paper is to undertake such an examination.

Emotional intelligence and conflict resolution

Conflict in organisations, if managed correctly, can lead to improved organisational outcomes (Brown, 1983). Organisations where functional conflict is a part of the culture tend to be more creative and responsive to clients and subsequently perform better. There is a small but growing literature that considers the influence of emotional intelligence on conflict resolution styles in organisations (Cooper & Sawaf, 1997; Goleman, 1998; Mayer & Salovey, 1997). For instance, Goleman (1998) believes that employees with higher emotional intelligence will have superior conflict resolution skills and engage in greater collaboration. This is based on the view that individuals with greater emotional intelligence work to maintain relationships. In the first empirical publication examining the influence of emotional intelligence on conflict, Jordan and Troth (in press) found a positive link between emotional intelligence and collaboration as a preferred style of conflict resolution, where emotions are both controlled and generated to develop new solutions that satisfy both parties needs. While not specifically referring to styles of conflict resolution, Cooper and Sawaf (1997) consider flexibility in response a hallmark of emotional intelligence. This suggests to us that the emotionally intelligent individual will more likely adopt effective and appropriate conflict resolution styles commiserate with the situation. Based on the preceding literature, the study outlined in this paper extends empirical work beyond an examination of the emotional intelligence-preferred conflict style link at the individual level to investigate the links between emotional intelligence and conflict behaviours when decisions are made within a group.

In considering the role of group conflict, Tannen (1994) found that workers are generally dissatisfied in situations where one party dominates a working relationship. This suggests that conflict resolved through competition, accommodation or avoidance (where one or both parties capitulate) might lead to negative consequences for ongoing working relationships and consequently work performance. We believe one explanation for the use of these conflict tactics might be an inability to control one's own or others emotions. On the other hand, Jamieson and Thomas (1974) found compromise to be an appropriate workplace action when time and resources are limited. For the emotionally intelligent individual, compromise in the appropriate circumstances may be a sign of their ability to recognise and regulate their emotions to enhance the relationship with their fellow workers and to achieve their goals. Nevertheless, it is important to note that conflict scholars argue that the most effective conflict resolution strategy is contingent on the situation (Borisoff & Victor, 1998). For example, in the spirit of "choosing one's battles wisely", conflict resolution scholars argue that collaboration may be most effective when conflict matters greatly to you, whereas accommodation may be the most effective when the conflict matters greatly to the other party but matters little to you.

In summary we expect to find a link between emotional intelligence and team performance. We anticipate that teams with higher average emotional intelligence will perform better than teams with lower average levels of emotional intelligence. Indeed, one explanation for this is that more emotionally intelligent groups will have a greater ability to manage intra-group conflict in a functional manner. We also expect to find emotionally intelligent team members adopting a range of appropriate conflict resolution tactics in order to facilitate a positive outcome in terms of performance. In other words, team members with higher emotional intelligence will be aware of their emotions and use emotional control to ensure the team performs at a high level. This may require them to dominate decision making in their areas of expertise, collaborate on issues where they and the other party feel strongly about their own position, or accommodate on some decisions with a view to ensuring that the overall decisions made by the group indicate high performance.

Method

Participants

The participants in this study were 163 university students enrolled in an introductory management course. The students were randomly allocated to groups comprising 2 to 5 members (mean = 3.20 members). Random allocation ensured that group members were, for the most part, working together for the first time. The average age of the respondents was 21.73 years (ranging from 17 to 44 years) and 57.7% were female with the mean ratio of males to females in the groups (1:1.45) reflecting the gender make-up of the overall sample. The majority of students reported having full-time (28.8%) or part-time (54.1%) work experience.

Measures

Emotional Intelligence. Respondents' emotional intelligence was measured using the 36-item self reporting section of the Workgroup Emotional Intelligence Profile – Version 6 (WEIP6:Jordan, 2000). The measure employs a 7-point response format ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) and captures the two dimensions of emotional intelligence: Ability to Deal with Own Emotions (Scale 1) and Ability to Deal with Other's Emotions (Scale 2) discerned by Jordan et al. (in press). Alpha reliability coefficients of .81 (Self) and .85 (Other) were adequate and the two scales were significantly correlated at r = .46, $p < .01$. Team emotional intelligence was measured by calculating the average of scores on the self-WEIP3 for all team members. This method of calculating team emotional

intelligence was based on research which shows that the weaknesses of individuals in a team are generally moderated by the strengths of other team members (Stout, Salas & Fowlkes, 1997).

Performance. Participants were first asked to individually complete a survival situation exercise by ranking 15 items according to their importance for survival. After completing the individual ranking, participants were allocated to a group and asked to again rank the 15 items within the group. The ranking given by the individuals and the groups were then compared with an 'expert's' ranking of the items to determine the best and worst performing individuals and groups. The lower the summed difference scores between individual and expert ranking, the better an individual's performance. The lower the summed difference scores between group and expert ranking, the better a group's performance. In essence, higher scores indicate poorer performance.

Conflict Resolution. Rahim's (1983) Styles of Handling Interpersonal Conflict measure was used to assess the tactics participants employed to resolve group differences during the problem-solving exercise. The instrument consists of 15 items that differentiate styles of handling conflict in organisations. The measure is scored on a 5-point Likert Scales ranging from 1 (*rarely*) to 5 (*always*) indicating the conflict tactics used to resolve conflict during the performance exercise. The 15 items tap one of five conflict resolution styles: Integrating (high concern for self and others); obliging (low concern for self and high concern for others); compromising (intermediate in both concern for self and others); dominating (high concern for self and low concern for others); and avoiding (low concern for self and others). Alpha reliability coefficients of .70 (dominating and avoiding) and .71 (integrating) were adequate. However, the alpha reliability coefficients of .55 (compromising) and .37 (obliging) were unacceptable and these scales were dropped from further analysis. Instead, a composite scale of a subset of items from the compromising and obliging scales was created and labelled 'accommodating' with an adequate alpha reliability of .70.

Procedure

Participants completed the emotional intelligence measure and individually undertook the problem-solving survival exercise. Participants were then allocated into groups by the researcher and given 15 minutes to complete the same problem-solving task by agreeing on the order of importance of the 15 items. After completing the group exercise, participants were asked to separately complete the conflict resolution measure that asked them to reflect on their own conflict resolution behaviour during the group survival exercise.

Results

As expected, with higher scores indicating poorer performance, groups (M = 52.36) performed better than individuals (M = 61.27) on the problem-solving task, t (161) = 7.47, p < .001. Table 1 shows the means, standard deviations and correlations for the emotional intelligence indicators, conflict scales, and the problem-solving performance task at the individual level of analyses. Significant positive correlations were found between an individual's ability to deal with their own emotions, ability to deal with other's emotions, and the total WEIP6. An investigation of the means also shows that individuals during the performance exercise preferred integrative conflict tactics. Table 1 also indicates that individuals with higher levels of overall emotional intelligence (Self WEIP6) were more likely to use integrative, dominating and accommodating tactics when resolving differences during the group task and were less likely to use avoiding strategies compared to their counterparts with lower emotional intelligence scores. A closer perusal of the WEIP6 scales shows that an individual's ability to deal with own and others emotions is similarly linked to integrative, dominating and accommodating tactics. However, while dealing with own

emotions was negatively correlated with avoidance, no significant correlation emerged between avoidance and dealing with others emotions. Table 1 also shows that participants who performed better individually on the problem-solving task were more likely to use dominating strategies and were less likely to use avoiding strategies in the subsequent group condition.

Table 1

Table 2 shows the means, standard deviations and correlations for the emotional intelligence indicators, conflict scales, and the problem-solving performance task at the group level of analyses. In line with expectations, it appears groups with higher average levels of overall emotional intelligence (Self-WEIP) have a tendency to perform better than groups with lower average levels of emotional intelligence. Further examination of the WEIP6 scales shows that while the ability of group members to manage their own emotions is linked to higher group performance, group members ability to manage others emotions is not linked to group performance.

Table 2

A similar pattern of correlations between emotional intelligence and the conflict resolution scales found at the individual level of analyses emerges when average levels for the group are investigated. Table 2 shows that, overall, emotional intelligence and the ability of group members to manage their own emotions is positively associated with the level of integration, dominance, and accommodation employed during a problem-solving task by the group and negatively linked with the level of avoidance. The average ability of group members to manage others' emotions was correlated with their average usage of dominance strategies only.

Discussion

The results of the present study empirically support the notion put forward by other researchers that groups with higher levels of emotional intelligence will perform better on joint tasks than groups with lower levels of emotional intelligence (Druskat & Wolff, 2001; Jordan et al, in press). More specifically, a group's overall level of emotional intelligence and its members' abilities to deal with their *own* emotions when problem-solving with other group members was conducive to performance. For individuals with high emotional intelligence, the ability to be aware of and control one's own emotions might enable them, as a group member, to listen to others viewpoints and seek superior solutions without their feelings impeding objective cognitive processing. It was, however, unexpected that a member's ability to deal with *other* team members' emotions did not affect group performance. Upon reflection this may have been a direct result of the methodology used. Because these were groups working together for the first time, and because there was only a short timeframe for completing the set task, the ability to influence others may not have been one that emerged in this situation. As influencing others tends to be an ability that requires a deal of time to achieve, it is reasonable that the ability to deal with others' emotions did not emerge as a salient factor during this study.

Our findings also support the prediction that the level of emotional intelligence at the individual and group level will influence the type of conflict tactics adopted during a group performance task by an individual and by the group as a whole. In general, individuals and groups were more likely to use integrative and dominance tactics if they were more emotionally intelligent. Conversely, individuals and groups with lower levels of emotional intelligence were more likely to engage in greater use of avoidance tactics. This is particularly interesting because avoidance was associated with lower levels of group performance. The

individual level results correspond to Jordan and Troth's (in press) findings of a link between an individual's level of emotional intelligence and their use of collaboration (akin to integrative conflict resolution).

Similar to the emotional intelligence connections found with performance, the finding that the ability to deal with others emotions was less salient in terms of conflict than the ability to deal with own emotions was unexpected, particularly in terms of integration. In the literature (e.g. Canary & Cupach, 1988), integration is the conflict strategy that relies most on an individual's ability to deal with the opinions and rights of others, as well as their own, to achieve a win-win outcome. According to Carlopio, Andrewartha and Armstrong (1997), effective and appropriate conflict management skills rely strongly on an individual's skills of self-management and the ability to find solutions without negative affect. Therefore, it was expected that both WEIP6 sub-scales would emerge as significant predictors of integrative tactics. On the other hand, individuals and groups with the ability to deal with one's own *and* other's emotions were found to more likely employ dominating strategies to complete the problem-solving task. Again, this finding regarding other's emotions was surprising given dominance involves concern for self but not others. Perhaps one explanation for these results is the nature of the performance task given to the groups. The task was a 'survival' exercise with a time limit for completion. In line with the notion that the most effective conflict resolution strategy is contingent on the situation (Borisoff & Victor, 1998), it is interesting to note that scholars believe dominating strategies might be most effective when the dilemma is important and there are extenuating circumstances (e.g. time constraints or negative consequences).

It is important to acknowledge some limitations with this study. First, our sample consisted of undergraduate students in an introductory management course. Given the average age of the respondents is 21.73 years it is possible that they have less life experience. If emotional intelligence is a result of maturity, the sample may be have exhibited less variance in emotional intelligence, and lower levels overall, compared to experienced workers. To boost the generalisability of our findings we feel it would be highly desirable to transfer this study to a work setting and again examine individual and team performance and its relationship to emotional intelligence. In conclusion, we believe this research has been significant in demonstrating a link between emotional intelligence and the performance of work groups in undertaking ad hoc projects. This study has also provided evidence that emotional intelligence is linked to a range of conflict resolution tactics in practical tasks.

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TABLE 1

Means, standard deviations and correlations for WEIP6 scales, conflict, and performance for individuals (n = 163)

	MMean	SS.D.	11	22	33	44	55	66	77	88
1Dealing with Own Emotions	75.97	10.14	1.00							
2 Deal with Others Emotions	38.05	6.00	0.43**	1.00						
3 Self WEIP total	114.12	13.90	0.92**	0.75**	1.00					
4 Dominate	2.42	0.81	0.17*	0.23**	0.23**	1.00				
5 Integrate	3.37	0.87	0.37**	0.21**	0.36**	0.23**	1.00			
6 Accommodate	3.12	0.72	0.28**	0.16*	0.28**	0.18*	0.67**	1.00		
7 Avoid	2.16	1.01	0.16*	-0.06	-0.17*	-0.17*	0.15	0.14	1.00	
8 Performance–Individual$_a$	60.88	12.82	0.00	-0.05	-0.05	-0.21**	0.09	-0.03	0.19*	1.00

**p<.01

*p<.05

$_a$Lower scores indicate better performance

TABLE 2

Means, standard deviations and correlations for WEIP6 scales, conflict, and performance for groups (n = 48)

	MMean	SS.D.	11	22	33	44	55	66	77	88
1Dealing with Own Emotions	76.18	7.34	1.00							
2 Deal with Others Emotions	38.03	4.21	0.52**	1.00						
3 Self WEIP total	114.21	10.18	0.94**	0.79**	1.00					
4 Dominate	2.38	0.53	0.28†	0.30**	0.32*	1.00				
5 Integrate	3.36	0.55	0.44**	0.19	0.39**	-0.02	1.00			
6 Accommodate	0.12	0.44	0.26†	0.14	0.25†	0.01	0.82**	1.00		
7 Avoid	2.17	0.69	-0.39**	-0.20	-0.36*	-0.31*	0.10	0.21	1.00	
8 Performance– Group$_a$	52.36	13.74	-0.31**	-0.09	-0.26†	0.07	-0.03	0.15	0.39**	1.00

† p < .10

* p < .05

**p < .10

$_a$Lower scores indicate better performance