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# The Role of Emotional Intelligence in the Manager's Psychophysiological Activity During a Performance-Review Discussion

Mikko Salminen, Niklas Ravaja

*Abstract*— Emotional intelligence (EI) consists of skills for monitoring own emotions and emotions of others, skills for discriminating different emotions, and skills for using this information in thinking and actions. EI enhances, for example, work outcomes and organizational climate. We suggest that the role and manifestations of EI should also be studied in real leadership situations, especially during the emotional social interaction. Leadership is essentially a process to influence others for reaching a certain goal. This influencing happens by managerial processes and computer-mediated communication (e.g. e-mail) but also by face-to-face, where facial expressions have a significant role in conveying emotional information. Persons with high EI are typically perceived more positively and they have better social skills. We hypothesize, that during social interaction high EI enhances ability to detect other's emotional state and controlling own emotional expressions. We suggest, that emotionally intelligent leader's experience less stress during social leadership situations, since they have better skills in dealing with the related emotional work. Thus the high-EI leaders would be more able to enjoy these situations, but also be more efficient in choosing appropriate expressions for building constructive dialogue. We suggest, that emotionally intelligent leaders show more positive emotional expressions than low-EI leaders.

To study these hypotheses we observed performance review discussions of 40 leaders (24 female) with 78 (45 female) of their followers. Each leader held discussion with two followers.

Psychophysiological methods were chosen because they provide objective and continuous data from the whole duration of the discussions. We recorded sweating of the hands (electrodermal activation) by electrodes placed to the fingers of the non-dominant hand to assess the stress-related physiological arousal of the leaders. In addition, facial electromyography was recorded from cheek (zygomaticus major, activated during e.g. smiling) and periocular (orbicularis oculi, activated during smiling) muscles using electrode pairs placed on the left side of the face. Leader's trait EI was measured with a 360 questionnaire, filled by each leader's followers, peers, managers and by themselves.

High-EI leaders had less sweating of the hands ($p = .007$) than the low-EI leaders. It is thus suggested that the high-EI leaders experienced less physiological stress during the discussions. Also, high scores in the factor "Using of emotions" were related to more facial muscle activation indicating positive emotional expressions (cheek muscle: $p = .048$; periocular muscle: $p = .076$, almost statistically significant).

The results imply that emotionally intelligent managers are positively relaxed during s social leadership situations such as a performance review discussion. The current study also highlights the importance of EI in face-to-face social interaction, given the central role facial expressions have in interaction situations. The study also offers new insight to the biological basis of trait EI. It is suggested that the identification, forming, and intelligently using of facial expressions are skills that could be trained during leadership development courses.

***Keywords***—Emotional intelligence, Leadership, Psychophysiology, Social interaction, Performance review discussion.

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