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Emotional processes, leadership, gender and workplace affect in interdisciplinary teams

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KEY WORDS

Emotional intelligence, regulation of emotion, workplace affect, multilevel analysis, leaders, interdisciplinary teams

ABSTRACT

The purpose of this study was to analyze the role of emotional skills and gender in the workplace affect through non-hierarchical level and multilevel analyses. Data were collected through self-reported questionnaires completed by 19 directors and 128 subordinates working in interdisciplinary teams of Centers of Educational and Counselling Support. At non-hierarchical level, higher-order emotional skills (use of emotions and cognitive reappraisal) were positively related to positive affect in the workplace. Negative affect was negatively associated with the ability to regulate emotions and positively associated with the strategy of emotional suppression. From the multilevel analyses, cognitive reappraisal was a significant predictor for both positive and negative affect (inversed) of subordinates. Gender differences were observed in multilevel analyses. We also explored possible tensions between emotional competencies and emotional outcomes (workplace affect) at non-hierarchical and managerial level in interdisciplinary teams. We suggest training programs that promote group emotional empowerment and focus on higher-order emotional skills. At managerial level, we suggest training programs that penetrate cognitive reappraisal of emotions since this is an emotion regulation strategy that promotes safer emotional affect in the workplace.

Introduction

There is a growing interest in affective and emotional experiences at work (Brief & Weiss, 2002), including interest in the role of mood and emotions in employees’ motivation (Erez & Isen, 2002), job performance (Law et al. 2004), creativity (George & Zhou, 2002), leadership (Bono et al., 2007) and emotional links between leaders and followers (Bono et al., 2007; Kafetsios et al., 2012; Shamir et al., 1993). Despite many influential theories of transformational and charismatic leadership (Bass, 1985; Shamir et al., 1993), there is limited empirical research linking manager’s leadership behaviors and employee’s emotions. In the current study, we explore whether leader’s emotional intelligence and emotional regulation affect employee’s affect at work in multi-disciplinary teams.

Emotional intelligence and emotional regulation

Emotional intelligence (EI) is a multi-dimensional concept representing the extent to which a person attends to, processes, and acts upon information of an emotional nature, both intra-personally and inter-personally (Mayer & Salovey, 1997). According to Salovey and Mayer (1990, p. 198), EI is the ability “to monitor...
one's own and others' emotions, to discriminate among them and to use the information to guide one's thinking and actions”.

According to Wong and Law (2002), before people can regulate their emotions, they should have a good understanding of them (self-emotional appraisal). As many of our emotional responses are stimulated by the emotions of other individuals, understanding of our own emotions is related to our ability to understand the emotions of others (others’ emotional appraisal). Higher-order emotional skills are composed of how one experiences these emotions (regulation of emotion), as well as how one expresses them (use of emotion) (Gross, 1998; Wong & Law, 2002). A similar hierarchy between dimensions of EI (emotion perception, emotion understanding, and emotion regulation) is found in the model of Joseph and Newman (2010). Therefore, the prerequisite of regulation is perception and understanding of affects.

Emotion regulation is defined as the conscious and unconscious efforts an individual employs to increase, maintain or decrease facets of emotions (Gross, 1999). According to Haver et al. (2013), emotion regulation is considered as a key competence associated with effective and good leadership and is essential in how people deal with negative emotions in order to reduce potentially adverse outcomes. The emotion regulation process takes place through the strategies of suppression and reappraisal. Suppression follows in the emotion regulation process and leads to the consumption of a significant amount of emotional resources. On the other hand, reappraisal, which comes earlier in the emotional regulation process, conserves resources since it regulates emotion at a more basic level (John & Gross, 2004). According to empirical findings, suppression has a significantly negative effect on social interaction, health outcomes and positive emotion, while reappraisal has an important and positive effect on cognitive, affective and social aspects (Augustine & Hemenover, 2009; Gross, 1998; Gross & John, 2003; John & Gross, 2004).

Emotional regulation at work has also received attention, especially given the evidence that regulating emotions is associated with cardiovascular system activation (Gross & Levenson, 1993, 1997), stress, emotional exhaustion (Pugliesi, 1999), and physical symptoms, such as headaches (Schaubroeck & Jones, 2000). However, according to Gross (1998), the two emotion regulation strategies are distinguishable from other forms of affect regulation, such as mood regulation and coping strategies.

**Workplace affect**

Positive and negative affect are key components of work experience. It has been empirically demonstrated that affect at work predicts several aspects of employee’s behavior, including decision making (Caitriona & Kevin, 2010), stress and job satisfaction (Fiori et al., 2015). Positive affect is associated with job satisfaction and job performance (Fisher, 2000; Mäder & Niessen, 2017; Todorova et al., 2014), while negative affect is often associated to withdrawal and counter-productive work behaviors (Bauer & Spector, 2015; Fox et al., 2001). An operational definition describes affect as a ‘subjective feeling state’ that includes mood, dispositional affect and emotions (Ashforth & Humphrey, 1995). Exogenous, organizational and intra-individual factors may have an impact on affect at work (Brief & Weiss, 2002). In this study, we investigated how the relative effect of EI and the two emotion regulation strategies (reappraisal and suppression) predict positive and negative affect states at work not only at the individual but also at group level.

Leadership is viewed as a process of social influence through which a leader affects subordinates' feelings, perceptions, and behavior (Humphrey, 2002; Pirola-Merlo et al., 2002). Within this context, leader's emotional expression and emotional skills are expected to have an important impact on followers' emotions and behaviors (Ashkanasy & Humphrey, 2011; Rajah et al., 2011). According to the Emotions as Social Information Model (Van Kleef et al., 2011), leader's emotional skills influence followers' attitudes and performance at work. This occurs due to the impact on followers' affective reactions or the impact on followers' judgments or perceptions of those emotions and emotional displays. Often these two mechanisms occur simultaneously. Under this theoretical framework, leaders can also indirectly influence followers' emotional states by controlling affective events in the workplace by allocating work tasks and demands to followers (Weiss & Cropanzano, 1996). On the other hand, emotional synchronization, considered as leaders' and followers' accordance in positive affect in the workplace, can result in higher performance through processing affect-congruent information (Damen et al., 2008). In addition, Affective Events Theory suggests that leader's positive and negative moods influence directly subordinates' work affect (Johnson, 2008; Žy et al., 2005). Furthermore, although leader's negative
mood increases followers' motivation, it is leader's positive mood which affects job performance (Sý et al., 2005). To conclude, research suggests that different processes in leader–subordinates interaction evolves both at an inter-personal and inter-group level, e.g. group of leaders' emotional skills and group of followers' shared affect at workplace.

**Gender and emotional processes**

Previous research indicates that individuals respond to stressors differently as a function of roles determined partly by their gender (Ivanecvich & Matteson, 1980). However, workplace affectivity has not been widely investigated, and there are only few occupational stress studies that support that women report more negative affect than men (Beena & Poduval, 1992; Heinisch & Jex, 1997). According to Heinisch and Jex (1997), negative affectivity is more salient for women than for men. However, in a recent study, no gender differences in positive and negative workplace affect were found (Scheibe et al., 2019).

Furthermore, workplace affect, gender and leader - followers relationships have also not been widely addressed. Leadership roles are considered traditionally as masculine roles and according to role congruity theory, women who serve in such roles are defying gender stereotypes (Eagly & Karau, 2002). According to Eagly and Karau (2002), women in leadership roles who fail to be interpersonally sensitive are evaluated less favorably than men, while men leaders are not subject to the same expectations and do not receive negative evaluations for failing to exhibit communal characteristics. Leadership's stricter codes of emotional display rules intensify female leadership experience, who may be encouraged to undergo more extensive reshaping of the self.

Regarding gender diversity in managerial positions, while male status position comes under pressure when women enter male domains, it results in men's negative response to gender diversity (Nielsen & Madsen, 2017); on the other hand, men are welcomed warmly in typically female-dominated occupations, such as nursing (Heikes, 1991; Hultin, 2003; Williams, 1992). Together, all these perspectives on gender provide significant insights into some of the universal processes involved in women-dominated interdisciplinary teams.

While EI has been integrated into the process model of emotion regulation, there is a gap in the literature on how the different EI components relate to emotion regulation resulting in either an adaptive or maladaptive functioning (Bodrogi et al., 2020). As suggested by Bodrogi et al. (2020), emotion regulation skills and EI have distinctive routes and different impact on the affective outcome (Bodrogi et al., 2020). Furthermore, Kafetsios et al. (2013), through two multilevel studies, proposed the combined study of the concepts Emotion Regulation and Emotional Intelligence.

**Interdisciplinary teams**

For the past decade, interdisciplinary teams have promoted holistic client-centered care within many urban primary care settings (Craig et al., 2016; Wynn & Moore, 2012). As suggested by Salazar et al. (2012), collaboration among members of interdisciplinary teams faces barriers to effectively integrating knowledge due to distinct norms, goals, and approaches. These challenges are even more pronounced where membership boundaries and pluralistic goals of team members from different disciplines exist (Morgeson et al., 2010). Empathy, Emotional intelligence, and communication skills are identified as key skills for the success of interdisciplinary work (Glatte et al., 2017). Reappraisal as an emotion regulation strategy efficiently reduces the experience of fear, which results in lower levels of emotion-related biases on rational decision-making (Hellman et al., 2010), which is critical in interdisciplinary teamwork. Team leaders with integrative capabilities foster interaction and discussion among team members to generate affective, motivational, and cognitive emergent states that are essential for knowledge integration and creation (Hackman, 2012). The leader’s hierarchical level in psycho-educational interdisciplinary teams, which is the focus of our study, is low. Furthermore, according to Miao et al. (2016), when leader’s hierarchical level is low, leaders will have more opportunities to interact with their direct followers and, therefore, more opportunities to use their EI to influence their subordinates. According to Vine et al. (2008), distributed leadership describes those constellations in which teams lead their work 'collectively and independently of formal leaders'. Various activities and processes typically associated with leadership in interdisciplinary teams (such as decision-making, negotiating and reaching consensus) are performed conjointly by the team members, who are often at
the same hierarchical level within an organization (Choi & Schnurr, 2014; Day et al., 2004; Gronn, 2002). Therefore, leaders with integrative capabilities have greater success in helping disciplinary diverse teams to overcome the obstacles of cross-boundary collaboration (Salazar et al., 2019).

**The present study**

Our study aims to investigate the relationship between emotional skills and workplace affect in interdisciplinary psycho-educational teams. As suggested by Lakhani et al. (2012), there are limited studies focusing on interdisciplinary teams’ effectiveness. To the best of our knowledge, this is the first study investigating emotional processes at no hierarchy and multilevel (leaders-subordinates) in interdisciplinary teams. The novelty of this study is that it explores how emotional intelligence and emotion regulation skills are related to workplace affect in interdisciplinary teams. Our first hypothesis is that higher-order emotional competencies (e.g. regulation and use of emotions) contribute to the prediction of workplace affect. The second aim of this study is to explore emotion in leader-follower interaction by testing hypothesis regarding relationships between leader's emotional skills (managerial level) and subordinates’ affect in the workplace. More specifically, we anticipate that higher order leader's emotional competencies would predict 'subordinates’ workplace affect. Regarding gender and workplace affect, there is no coherent body of previous research and empirical findings. At the level of the overall sample (non-hierarchy analyses), gender differences were not expected. Still, at the multilevel level, we will explore whether leader's gender has an effect on workplace affect. Multilevel random coefficient models (Nezlek, 2008) are applied to test the second research question.

**Method**

**Participants**

Nineteen directors and 128 subordinates employed for a large Greek organization that provides psychological and educational services all around the country (Centers of Educational and Counselling Support), participated in the study. The directors’ average age was 48.53 years ($SD = 7.06$), while subordinates’ age was 39.23 years ($SD = 8.00$). From each regional interdisciplinary team three to nineteen subordinates participated. Eleven (57.9 %) of the directors were women, and eight (42.1 %) were men. In the group of subordinates, 87 (79.1 %) were women and 23 (20.9 %) were men. Directors’ specialities included teachers, special educators, psychologists and physiotherapists. Most of the subordinates were teachers, psychologists and social workers, while others were special educators, speech therapists, and social workers, including other specialists (i.e. child psychiatrists, nurses etc.). The average length of total service for the directors was 22.92 years ($SD = 7.92$), and for the special scientific personnel 9.92 years ($SD = 8.02$).

**Measures**

**Emotional Intelligence Scale.** Similarly to previous research on EI in leader-subordinates relationships (Kafetsios et al., 2011; Şê, et al., 2006; Wong & Law, 2002), we used the Wong-Law Emotional Intelligence Scale (Wong & Law, 2002) that conceptually adheres to the ability approach and measures the four self-perceived EI components suggested by Mayer and Salovey (1997): awareness of emotion in self and in others, use of emotion, and emotion regulation. The scale consists of 16 items in four subscales corresponding to the four components of EI. The Self-Emotion Appraisal (SEA) subscale measures people’s self-perceived ability to understand their own emotions. The Appraisal of Others’ Emotion (AOE) subscale measures person’s ability to perceive other peoples’ emotions. The Use of Emotion (UOE) subscale measures the self-perceived tendency to motivate oneself to enhance performance. Finally, the Regulation of Emotion (ROE) subscale measures individuals’ ability to regulate their own emotions. Items are scored on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Higher scores represent higher levels in subscales of EI. The EI measure was completed by the directors and their subordinates. Coefficient alphas for the four subscales were high for directors (SEA = 0.93; OEA = 0.81; UOE = 0.78; ROE = 0.87), subordinates (SEA = 0.82; OEA = 0.76; UOE = 0.77; ROE = 0.81), as well as for the total sample (SEA = 0.84; OEA = 0.77; UOE = 0.77; ROE = 0.82). The scale has been used in similar studies in Greece in the past (Kafetsios & Zampetakis, 2008).
Emotion Regulation. To measure individual differences in emotion regulation, we used the Emotion Regulation Questionnaire - ERQ (Gross & John, 2003), adapted in Greek by Kafetsios and Loumakou (2007). The ERQ assesses the adoption of the two main strategies of emotion regulation and consists of ten items that focus on the chronic use of strategies of reappraisal or emotional suppression. Items’ content is deliberately limited to emotion-regulatory strategies, avoiding potential confounding with positive or negative affect, well-being or general social functioning (John & Gross, 2004). The scale was completed by the directors and their subordinates. Coefficient alphas for the reappraisal were 0.87 for the directors, 0.89 for the subordinates and 0.87 for the total sample. Coefficient alphas for the emotional suppression were 0.76 for the directors, 0.73 for the subordinates and 0.74 for the total sample.

Job affect. The Job Affect Scale (JAS) (Brief et al., 1988), adapted in Greek by Kafetsios & Loumakou (2007), consists of 20 emotion adjectives where participants rate how they felt at work during the previous week. In the present study, we used 17 of these adjectives: nine positive emotion (JAS-PA) terms (active, strong, excited, enthusiastic, elated, calm, relaxed, at rest, and placid) and eight negative emotion (JAS-NA) terms: distressed, scornful, hostile, fearful, nervous, jittery, sleepy, dull). 5-point Likert type scale from 1 = “strongly disagree” to 5 = “strongly agree” was used. The scales were all sufficiently reliable (for the total sample, positive affect $\alpha = 0.79$, and negative affect $\alpha = 0.72$; for the subordinates, positive affect $\alpha = 0.79$, and negative affect $\alpha = 0.70$).

Procedure

The first author approached each director individually, and subsequently, each director informed their team members about the research project. Following the team’s agreement to participate in the study, the researcher contacted directors and their subordinates in order to provide them with more information about the topic of the study, “Management of emotions at the workplace”, its purpose as well as in order to ask for their consensus to participation. Administering issues of the questionnaires were addressed by the first author. Supervisors and subordinates completed the same questionnaire. The sample should therefore be considered a convenience sample (Cohen et al., 2000). Participation was voluntary, and no incentive was provided. The study was approved by the Bioethics Committee of the National School of Public Health, additionally to the written permission provided by the Directors of each regional organization.

Results

Analyses at the individual level

We explored the relationships between affect in the workplace, sociodemographic factors, emotional intelligence and regulation of emotion of leaders and subordinates at an individual level. In order to determine which aspects of emotional intelligence, emotional regulation and gender were influential on positive and negative affect, we carried out a series of hierarchical multiple regressions. For these analyses, we included all participants, and we considered the dimensions of emotional intelligence and gender in the first step, and the two emotion regulation strategies in the second step. Table 1 shows the corresponding results.

Confirming our first hypothesis, the results indicate the relationships between participants’ higher-order emotional skills and workplace affect, although they varied to a degree. A possible explanation for this might be the function of the specific outcome (positive and negative affect in the workplace) and the aspect of emotional skills. More specifically, use of emotions and cognitive reappraisal were significant predictors of positive affect ($R^2 = 0.18$, $F(2,140) = 5.39, p = 0.006$). On the other hand, regulation of emotions (ROE) and suppression were significant predictors of negative affect ($R^2 = 0.07$, $F(2,140) = 15.15, p < 0.001$).

Multilevel analyses

Two multilevel analyses were performed in order to investigate the effect of leader’s emotional skills (level 1) on subordinates’ workplace affect (level 2) while adjusting for the effect of gender in two levels. Table 2 presents inter-correlations of all the study variables at the individual and group level.
Table 1
Hierarchical regression analyses of positive and negative affect, adjusting for gender, Emotional intelligence and emotional regulation

<table>
<thead>
<tr>
<th>Positive affect</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>$B$</td>
<td>$SE$</td>
<td>$\beta$</td>
<td>$R^2$</td>
</tr>
<tr>
<td>Step 1</td>
<td>.14</td>
<td>.14</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>1.94</td>
<td>0.28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UOE</td>
<td>0.24</td>
<td>0.05</td>
<td>0.37</td>
<td>***</td>
</tr>
<tr>
<td>Step 2</td>
<td>.18</td>
<td>.04</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>1.73</td>
<td>0.29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UOE</td>
<td>0.17</td>
<td>0.06</td>
<td>0.26</td>
<td>**</td>
</tr>
<tr>
<td>Reappraisal</td>
<td>0.12</td>
<td>0.05</td>
<td>0.23</td>
<td>*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Negative affect</th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>$B$</td>
<td>$SE$</td>
<td>$\beta$</td>
<td>$R^2$</td>
</tr>
<tr>
<td>Step 1</td>
<td>.04</td>
<td>.04</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>1.36</td>
<td>0.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suppression</td>
<td>0.09</td>
<td>0.04</td>
<td>0.20</td>
<td>*</td>
</tr>
<tr>
<td>Step 2</td>
<td>.07</td>
<td>.03</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>1.81</td>
<td>0.24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suppression</td>
<td>0.09</td>
<td>0.04</td>
<td>0.21</td>
<td>**</td>
</tr>
<tr>
<td>ROE</td>
<td>-0.09</td>
<td>0.04</td>
<td>-0.17</td>
<td>*</td>
</tr>
</tbody>
</table>

*Note: *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

We used the multilevel framework to examine the cross-level relationships between supervisor’s and subordinates’ measures. The analyses investigated the relationships between supervisor’s emotional skills (dimensions of emotional intelligence and emotional regulation strategies) and subordinates’ affect at workplace (positive and negative affect). These analyses had one predictor (subordinates’ gender) at level 1, and supervisor’s emotional skills and gender at level 2. The model is presented below, and the results are presented in Table 3:

Level 1: $y_i = \beta_{0j} + \beta_{ij} (\text{subordinates’ positive affect}) + \beta_{3j} (\text{gender}) + r_{ij}$
Level 2: $\beta_{0j} = \gamma_{00} + \gamma_{01} (\text{gender}) + \gamma_{02} (\text{supervisors’ SEA}) + \gamma_{03} (\text{supervisors’ OAE}) + \gamma_{04} (\text{supervisors’ UOE}) + \gamma_{05} (\text{supervisors’ ROE}) + \gamma_{06} (\text{supervisors’ Reappraisal}) + \gamma_{07} (\text{supervisors’ Suppression}) + U_{0j}$

Level 1: $y_i = \beta_{0j} + \beta_{ij} (\text{subordinates’ negative affect}) + \beta_{3j} (\text{gender}) + r_{ij}$
Level 2: $\beta_{0j} = \gamma_{00} + \gamma_{01} (\text{gender}) + \gamma_{02} (\text{supervisors’ SEA}) + \gamma_{03} (\text{supervisors’ OAE}) + \gamma_{04} (\text{supervisors’ UOE}) + \gamma_{05} (\text{supervisors’ ROE}) + \gamma_{06} (\text{supervisors’ Reappraisal}) + \gamma_{07} (\text{supervisors’ Suppression}) + U_{0j}$

Initially, all coefficients were modeled as random, and coefficients were fixed following the guidelines suggested by Nezlek (2001). The results of these analyses are summarized in Table 3.
Table 2
Means, Standard Deviations and Correlations among study variables

<table>
<thead>
<tr>
<th>Level 1 (Subordinates)</th>
<th>Pearson r</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
</tr>
<tr>
<td>1. Positive affect</td>
<td>3.27</td>
</tr>
<tr>
<td>2. Negative affect</td>
<td>1.64</td>
</tr>
<tr>
<td>3. Gender</td>
<td>0.21</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level 2 (Leaders)</th>
<th>Pearson r</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
</tr>
<tr>
<td>1. SEA</td>
<td>5.81</td>
</tr>
<tr>
<td>2. OAE</td>
<td>5.53</td>
</tr>
<tr>
<td>3. UOE</td>
<td>5.37</td>
</tr>
<tr>
<td>4. ROE</td>
<td>5.34</td>
</tr>
<tr>
<td>5. Reappraisal</td>
<td>5.29</td>
</tr>
<tr>
<td>6. Suppress</td>
<td>3.39</td>
</tr>
<tr>
<td>7. Gender</td>
<td>0.42</td>
</tr>
</tbody>
</table>

*Note: N_subordinate = 128; N_leader = 19. *p < 0.05; **p < 0.01. Regarding gender value 0 is for females and 1 for males

Table 3
Relationship between supervisors' emotional intelligence and regulation of emotions strategies and subordinates' positive and negative affect in the workplace

<table>
<thead>
<tr>
<th>Fixed effects</th>
<th>Coefficients</th>
<th>Standard error</th>
<th>T-ratio</th>
<th>p-value</th>
<th>Coefficients</th>
<th>Standard error</th>
<th>T-ratio</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Level 1: Subordinates' positive affect in the workplace</td>
<td>Level 1: Subordinates' negative affect in the workplace</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept β₀</td>
<td>-0.129</td>
<td>0.122</td>
<td>-1.055</td>
<td>0.306</td>
<td>-0.194</td>
<td>0.083</td>
<td>-2.339</td>
<td>0.031</td>
</tr>
<tr>
<td>Gender β₁</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept γ₀₀</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Fixed effects</th>
<th>Coefficients</th>
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<th>p-value</th>
<th>Coefficients</th>
<th>Standard error</th>
<th>T-ratio</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Level 2: Supervisors' emotional skills</td>
<td>Level 2: Supervisors' emotional skills</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Intercept β₀</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept γ₀₀</td>
<td>3.101</td>
<td>0.079</td>
<td>39.381</td>
<td>0.000</td>
<td>1.711</td>
<td>0.112</td>
<td>15.291</td>
<td>0.000</td>
</tr>
<tr>
<td>Gender γ₁</td>
<td>0.375</td>
<td>0.137</td>
<td>2.734</td>
<td>0.020</td>
<td>-0.154</td>
<td>0.204</td>
<td>-0.756</td>
<td>0.466</td>
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<tr>
<td>SEA γ₂</td>
<td>-0.054</td>
<td>0.096</td>
<td>-0.564</td>
<td>0.583</td>
<td>-0.098</td>
<td>0.125</td>
<td>-0.788</td>
<td>0.447</td>
</tr>
<tr>
<td>OAE γ₃</td>
<td>0.017</td>
<td>0.077</td>
<td>0.224</td>
<td>0.827</td>
<td>0.067</td>
<td>0.061</td>
<td>1.093</td>
<td>0.298</td>
</tr>
<tr>
<td>UOE γ₄</td>
<td>-0.128</td>
<td>0.065</td>
<td>-1.972</td>
<td>0.074</td>
<td>0.016</td>
<td>0.072</td>
<td>0.219</td>
<td>0.831</td>
</tr>
<tr>
<td>ROE γ₅</td>
<td>0.087</td>
<td>0.030</td>
<td>2.906</td>
<td>0.015</td>
<td>-0.022</td>
<td>0.034</td>
<td>-0.651</td>
<td>0.528</td>
</tr>
<tr>
<td>Reappraisal γ₆</td>
<td>0.112</td>
<td>0.038</td>
<td>2.922</td>
<td>0.014</td>
<td>-0.089</td>
<td>0.035</td>
<td>-2.534</td>
<td>0.028</td>
</tr>
<tr>
<td>Suppress γ₇</td>
<td>-0.015</td>
<td>0.054</td>
<td>-0.276</td>
<td>0.787</td>
<td>0.077</td>
<td>0.079</td>
<td>0.981</td>
<td>0.348</td>
</tr>
</tbody>
</table>

Note: Regarding gender value 0 is for females and 1 for males
As Table 3 shows, subordinates’ positive affect was positively related to supervisors’ ability to reappraise their own emotions ($\gamma_06 = 0.11, p = 0.014$), supervisors’ ability to regulate their emotions ($\gamma_05 = 0.087, p = 0.015$) and supervisors’ gender ($\gamma_01 = 0.38, p = 0.020$). Also, groups with a male supervisor demonstrated higher levels of positive emotions. On the other hand, subordinates’ negative affect was negatively associated with supervisors’ cognitive reappraisal of emotion ($\gamma_06 = -0.089, p = 0.028$) and subordinates’ gender ($\beta_01 = -0.194, p = 0.031$).

**Discussion**

In the current study, we investigated the effect of emotional skills on workplace affect. The results from the total sample (non-hierarchical level) confirmed our hypothesis that higher order emotional skills (emotion regulation and use of emotion skills) influence affect at workplace. The emotional skills of use of emotion and cognitive reappraisal were positively related to positive affect at workplace. Our findings are in accordance with the study of Schutte et al. (2002) where higher emotional intelligence was associated with positive mood. Negative affect at workplace was negatively related to the ability to regulate emotions and positively with the strategy of emotional suppression. Similar findings regarding the relationship between emotional suppression and negative affect at workplace were also found in Kafetsios and Loumakou (2007) and Tsouvelas and Koulierakis (2021).

The results from the multilevel analyses supported our hypotheses for the effect of 'leader's emotional skills on director-subordinates interaction and workplace affect. Collins et al., (2016) came up with similar findings about the role of leader's emotional regulation skills in subordinates' positive affect. Cognitive reappraisal emerged as a significant predictor for the positive and negative affect of subordinates. According to Haver et al.(2013), leader’s use of positive display and reappraisal by labeling stressful events as opportunities rather than threats is therefore of significance to support the followers' positive emotions and resilience. Our findings regarding the cognitive reappraisal, as a strategy of regulation of emotions were in contrast with Kafetsios et al. ’s (2012) findings, where the use of emotional suppression was associated with 'subordinates' positive affect. In addition, Thiel et al. (2015) demonstrated that leader's emotional suppression reduces subordinates’ negative affect, as long as the leader displays empathy. This difference could be partly explained by the different organizational role of a leader in a school setting and in an interdisciplinary team where it is usually applied distributed leadership and reaching consensus is conjointly performed by the team members. A similar connection of cognitive reappraisal with positive emotion in multilevel analyses is also found in Kafetsios et al. (2013) between a doctor’s reappraisal and a patient's positive affect.

Our findings showed no gender differences at the non-hierarchy level, and surprisingly significant gender differences only at multilevel analyses. Multilevel analyses suggested that inter-disciplinary teams with female leaders reported more negative affect in the workplace. Our results validate in a degree, the role of congruity theory (Eagly & Karau, 2002). At the same time, they may be related to positive male's receptivity to female-dominated workplaces. Furthermore, higher levels of positive affect were reported by male subordinates. Our findings partially validate that women report more negative workplace affect (Beena & Poduval, 1992; Heinisch & Jex, 1997). However, no gender differences were identified in negative workplace affect. According to Burke et al.'s (2006) meta-analysis, and consistent with the idea that gender roles spill over to organizational roles, several social scientists have claimed that female leaders and managers experience conflict between their gender role and their leadership role. Moreover, Powell (1988) supports that this conflict arises for female leaders because of the stereotype that accompanies being a manager and the normative expectations that being a good manager includes more masculine than feminine qualities.

Our results should be interpreted with caution due to a number of limitations. The cross-sectional nature of the study raises questions about causality. Future research should investigate the possible behavioral and inferential mediators of the associations identified here. Addressing the causality issue using longitudinal design through emotional diaries of the subordinates (Zhou et al. 2015) could be a fruitful field of future research. A second limitation is the use of self-reports only, which raises the concern of common method variance (Podsakoff et al., 2003). However, according to Conway and Lance (2010), self-reports are appropriate or even the preferred choices in some situations. In our study, we were interested in subordinates’ own workplace affect and its relationship with emotional skills of their leaders; as a result, the use of self-report
measures was probably the most appropriate data collection method. Finally, convenience sampling limits the generalizability of the results.

The results of our study can be utilized for understanding the possible tensions between emotional competencies and emotional outcomes (workplace affect) at non-managerial and managerial level. Key components for the emotional climate were emotional regulation skills as dimensions of emotional intelligence and emotional regulation strategies. At the managerial level, the protective impact of the strategy of cognitive reappraisal emerged as a key factor that promotes emotional affect in the workplace. The present findings suggest that not all emotion regulatory strategies lead to positive workplace affect and that such effects may be moderated by the organizational role, gender of the leader and the nature of the social interaction between leader and follower. According to Van Kleef (2009), it is important to define the impact of organizational roles, contexts and expectations on outcomes and then to inform related theory and practice.

Training programs in interdisciplinary teams, which aim to promote group emotional empowerment, should focus on higher-order emotional skills (e.g. regulation of emotion and use of emotion). Furthermore, at managerial level, training programs can benefit if they emphasize the strategy of cognitive reappraisal of the emotions as a strategy of emotions regulation that promotes safe emotional affect in interdisciplinary team members. In this study, we focused only on workplace affect, but future research should also examine if a high-quality emotional relationship with the leader facilitates challenge demands (employees’ personal growth and achievement) and prevents hindrance demands (role conflict and role overload) (Breevaart et al., 2015).

In conclusion, findings from individual-level analyses found that the use of emotion and cognitive reappraisal were positively related to positive affect. Negative affect was negatively related to the ability to regulate emotions and positively with the strategy of emotional suppression. Further, the findings from multilevel analyses showed that cognitive reappraisal emerged as a significant predictor of the positive and negative affect of the subordinates. There were no gender differences at the non-hierarchy level, while gender differences in multilevel analyses were observed. Teams with female leaders reported more negative affect in the workplace, and male subordinates reported higher levels of positive affect.

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References


Διεργασίες συναισθήματος, ηγεσία, φύλο και συναισθημα στο χώρο εργασίας σε εργαζόμενους σε διεπιστημονικές ομάδες

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Συναισθηματική νοημοσύνη, ρύθμιση συναισθήματος, συναισθήμα στο χώρο εργασίας, πολυεπίπεδη ανάλυση, ηγεσία, διεπιστημονικές ομάδες

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Σκοπός της παρούσας μελέτης είναι να διερευνήσει το ρόλο των συναισθηματικών ικανοτήτων και του φύλου αναφορικά με το συναίσθημα στο χώρο εργασίας μέσω μη ιεραρχικών και πολυεπίπεδων αναλύσεων. Η συλλογή των δεδομένων έγινε με αυτοσυμπλήρωμα ερωτηματολόγια και συμμετείχαν 19 προϊστάμενοι και 128 υφιστάμενοι που εργάζονταν σε διεπιστημονικές ομάδες των Κέντρων Διαφοροδιάγνωσης Διάγνωσης και Υποστήριξης ειδικών εκπαιδευτικών αναγκών (ΚΕΔΔΥ). Όπως προέκυψε από τις αναλύσεις σε μη ιεραρχικό επίπεδο, οι ανώτερης τάξης συναισθηματικές ικανότητες (χρήση συναισθήματος και η γνωστική επανεκτίμηση) συνδέθηκαν με το θετικό συναίσθημα στο χώρο εργασίας. Το αρνητικό συναίσθημα στο χώρο εργασίας συνδέθηκε με την στρατηγική της εκφραστικής καταστολής και με την ικανότητα ρύθμισης του συναισθήματος (αντίστροφα). Όπως προέκυψε από τις πολυεπίπεδες αναλύσεις, η γνωστική επανεκτίμηση αποτέλεσε σημαντικό προβλεπτικό παράγοντα τόσο για το θετικό όσο και το αρνητικό συναίσθημα (αντίστροφα) των υφισταμένων. Διαφορές ως προς το φύλο εντοπίστηκαν μόνο στις πολυεπίπεδες αναλύσεις. Μέσα από την μελέτη επιχειρούμε να διερευνήσουμε σχέσεις μεταξύ συναισθηματικών ικανοτήτων και συναισθηματικών αποτελεσμάτων σε διεπιστημονικά πλαίσια εργασίας. Εξειδικευμένα προγράμματα παρέμβασης θα μπορούσαν να προάγουν σε επίπεδο ομάδας την ενδυνάμωση του προσωπικού μέσω από εστίαση στην συμβολή και χρήση συναισθηματικών ικανοτήτων ανώτερης τάξης. Προγράμματα παρέμβασης με έμφαση στην ηγεσία διεπιστημονικών ομάδων, μέσω της ευαισθητοποίησης των προϊσταμένων στη λειτουργική χρήση της γνωστικής επανεκτίμησης, θα μπορούσαν να συμβάλουν στην προαγωγή αισθήματος συναισθηματικής ασφάλειας στο χώρο της εργασίας.

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