The Moderating Role of Attachment in the Associations Between Group Variables and OCB

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Abstract
The current study expands previous knowledge by investigating the moderating role of attachment styles in the associations between perceived group cohesion, perceived collective efficacy, and changes in the individual report of organizational citizenship behavior (OCB). Data were collected from 180 employees, who took part in a 9-week organizational training course. Upon start of training, participants completed questionnaires assessing their attachment orientations and their individual-level OCB. Upon conclusion, participants completed questionnaires assessing their perceived group cohesion, perceived group efficacy, and OCB. Using hierarchical linear modeling, both group cohesion and efficacy explained the changes in the individual OCB. In addition, attachment anxiety moderated the associations between group efficacy, group cohesion and the changes in OCB. The results emphasize the joint effects of group-and individual-level variables in predicting OCB in a longitudinal design. Theoretical and practical implications are discussed.

Keywords
organizational citizenship behavior, group cohesion, group efficacy, attachment

Researchers contend that organizations benefit when employees are willing to contribute above and beyond the formal definition of their job requirements (Organ, 2018); that is, when they display what is known as organizational citizenship behavior (OCB). OCB is a discretionary behavior, not directly or explicitly recognized by the formal reward system, and promotes the organization’s effective functioning (Podsakoff et al., 2014). In today’s increasingly dynamic and competitive environment, many organizations rely heavily on employees’ willingness to perform OCB. It is considered a highly valuable contribution to organizational and career success (Banwo & Du, 2020; Bolino & Grant, 2016; Bolino et al., 2018), and provides the organization with a competitive advantage (Ocampo et al., 2018; Reizer, Galperin et al., 2020). It is not surprising, therefore, that OCB continues to be a fruitful ground for research given the importance of social connections in organizations (Xiao et al., 2020), and the impact of OCB on the overall functioning of the organization (Podsakoff et al., 2014, 2018).

As OCB became a dominant topic in organizational research in the last decades (Ocampo et al., 2018), a major focus of research attention is to identify the factors that are related to employees’ OCB. Previous research has identified various antecedents of OCB, including work related attitudes (e.g., fairness perception and job satisfaction; Organ, 2018) personal values (Harry Gnanarajan & Kengatharan, 2021), and personality factors (e.g., personality profiles; Min & Su, 2020). Updated research has attempted to transcend simply recognizing the complexity of individual behaviors in the multilevel system to address OCB complexity (Guay et al., 2019; Mathieu et al., 2017). Indeed, OCB research distinguished three levels of analysis: (a) studies measuring and analyzing OCB at the individual level (e.g., Dierdorff et al., 2021; Oren et al., 2012; Pletzer et al., 2021); (b) studies focusing on the group or team level of analysis (i.e., Kao et al., 2021; Kim & Vandenberghe, 2020; Tremblay, 2019); and (c) and studies examining OCB at the individual as well as and group levels of analysis (i.e., Kao & Cheng, 2017; Organ, 2018). While the importance of both individual (i.e., personality) and group dimension variables in shaping OCB is readily acknowledged, most of the empirical work focused on the individual level of analysis, while less attention has been devoted to group variables (de Geus et al., 2020; Ocampo et al., 2018; Somech & Khotaba, 2017).

In addition, only a handful of studies have investigated interactions between group characteristics and individual (personality) dimensions in explaining OCB. For example,

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Cohen et al. (2012) suggested that employees’ personal commitment interacts with group cohesiveness and group size in predicting OCB variance. Cuadrado and Tabernero (2015) found interactions in student groups between personal positive affect and group prosocial efficacy levels in predicting prosocial behavior. Arthaud-Day et al. (2012) confirmed interactions between individual value importance and team mean value scores in predicting OCB. Guay et al. (2019) examined the cross-level interaction between leader and follower conscientiousness and follower OCB. In the same vein, in their meta-analysis, Castaño et al. (2013) addressed the need to reanalyze the importance of different moderators while examining the contribution of the group variable (group cohesion) to different organizational performance measures. However, multilevel and longitudinal studies remain relatively scarce (Parke et al., 2020; Podsakoff et al., 2014), and the majority of the studies did not explore moderators of the relationships between OCBs and group (or unit) variables.

Recently, there have been calls in several reviews to conduct more careful longitudinal OCB analyses, which generate greater insight on potential antecedents rather than a cross sectional approach or short time-lagged designs such as a diary approach (de Geus et al., 2020; Ocampo et al., 2018; Organ, 2018). These reviews concluded that there is a need to carry out time-sampling studies that explore the antecedents of OCB among individuals over more lasting changes in time (Organ, 2018; Parke et al., 2020), and suggested that this may be the next areas of exploration in the 21st century (Ocampo et al., 2018).

In this current multi-level study, we attempted to expand the current literature by investigating whether attachment personality orientations moderate the associations between perceived group cohesion and efficacy and individual time-lagged OCB. Attachment orientations are personality-related characteristics that reflect internal working models of self, others, and relationships. They represent individual motivations, abilities, and perceptions in an inter-personal environment and provide a unique relationship perspective to relational outcome (e.g., Mikulincer & Shaver, 2017; Yip et al., 2018). Recently, it was suggested that attachment research in organizations need to extend beyond the individual level and to examine attachment as a moderator in group processes (Yip et al., 2018). As OCBs are considered prosocial behaviors (Bolino & Grant, 2016), and based on the conclusion that “context and relationships influence the motivation for engaging OCB” (Dewett & Denisi, 2007, p. 249), it is reasonable to expect that relational attachment relational orientations will facilitate the contextual influence of group dynamics on OCB behaviors.

The current work contributes to the literature in important ways. First, we examine the effects of two dominant group processes: group cohesion, representing group effective state, and group efficacy, representing collective motivational constructs. Although both processes have been previously associated with individual performances, a dynamic framework is needed to address changes in OCB over longer-term perspectives.

Second, our study contributes to the growing use of multilevel theories and designs integrating group constructs and personality effects (Mathieu et al., 2017). In particular, we used attachment orientations as an organizing personality perspective in relational context (Mikulincer & Shaver, 2017) and work-related settings (Reizer, 2019; Reizer, Koslowsky et al., 2020; Richards & Schat, 2011) as a relevant personality theory for group context. Third, interest in OCBs is no longer limited to research by organizational scholars, but has expanded into other disciplines including marketing, engineering, healthcare services, sports science, sociology, computer science, communication, and nursing (Hazzi, 2018), the public sector (de Geus et al., 2020), educational settings (Somech & Khotaba, 2017), and military training (Black et al., 2019). In the current study, we expand previous work by focusing on changes in OCB within the organizational training context.

**Perceived Group Cohesiveness**

Group cohesiveness is one of the most prominent psychological constructs in the group dynamics literature (e.g., Beauchamp et al., 2017; Mathieu et al., 2017; Tulin et al., 2018). It describes emotional bonds of unity, closeness, enjoyment of member companionship (Forsyth, 2021), and commitment to the group’s well-being (Salas et al., 2015). Group cohesion can also be defined as team spirit, indicating the level of coordination, cooperation, support, and consensus among group members that motivates members to stick together (Ehrhart & Naumann, 2004). Group cohesion is reflected in members’ sense of unity and attachment to the group (Marmarosh & Sproul, 2021).

There are several reasons why group cohesiveness may be related to OCB. First, members of cohesive groups, because of their strong social ties and interpersonal interaction, exhibit more OCB (Chen et al., 2005). Second, in a cohesive group, people may experience greater enthusiasm, engage in more positive and frequent interconnection and experience more positive group effect (Barsade & Knight, 2015) which increases altruistic behaviors such as OCB (Bolino & Grant, 2016). Third, voluntary helping is a common norm among cohesive group members, and pressures them to be involved in social exchange relationships that benefit other group members and increase OCB. In contrast, groups with lower cohesiveness are defined by less established structures, norms, and expectations about members’ interpersonal relationships or voluntary help (Liu et al., 2017). Finally, according to social identity theory, members of cohesive groups often share a strong social identity, enabling them to be more sensitive to others, be devoted to the group, and activate emotional relationships between members. These aspects ultimately lead to pro-social
behavior and extra-role behavior among group members (Chiniara & Bentein, 2018).

Indeed, several cross-sectional studies found group cohesiveness to predict OCB (cf. Kim et al., 2017; Liang et al., 2015). According to social exchange theory, cohesive group members tend to expect that their voluntary efforts would be collectively rewarded by the group over time (Liu et al., 2017). Based on this notion we attempted to investigate if perceived group cohesion may predict an increase in individual OCB over a 2-month period.

**H1: Perceived group cohesion increases changes in OCB among group members.**

**Perceived Group Efficacy**

Whereas group cohesiveness represents group affective state, group efficacy represents a rational assessment of group task performance capabilities impacting group outcomes (Ilgen et al., 2005) and is considered a potential collective motivational construct (Mathieu et al., 2017). According to Kozlowski and Ilgen (2006), group cohesiveness and efficacy both demonstrated well-supported relationships with group effectiveness.

Collective efficacy is rooted in self-efficacy, the latter being the core concept in Bandura’s (2012a) social cognitive theory (SCT). Because individuals do not live in isolation, Bandura (2012b) extended his theory to include the group as another form of human agency. He defined collective efficacy as a shared belief in the conjoint capabilities of a group necessary to produce desired effects. Group efficacy represents a positive evaluation of group capability, and a collective belief that specific levels and components of task performance can be attained (Blecharz et al., 2014).

Self-efficacy is considered a powerful individual resource and a part of one’s psychological capital (Paterson et al., 2014). Recent work suggests that it can also be generalized to the group level (Waters et al., 2020). Indeed, group efficacy was found to be strongly associated with group member performance in the organizational setting (e.g., Yaakobi & Weisberg, 2018) and in sports (Eys et al., 2019), and individuals and teams in the educational setting (Heled et al., 2016).

According to Shin and Choi (2010), group efficacy is related to OCB because when members believe that the group is capable of successfully completing its tasks, they will be strongly motivated to exert effort towards achieving collective goals and to collaborate more with other members. Group efficacy may convince individual members that extra efforts and cooperative contributions to the group is worthwhile, because the group is capable of accomplishing its goals. Group efficacy can also be considered as psychological capital from which the member can draw resources when necessary, resulting in increased OCB (Liu et al., 2017; Waters et al., 2020). Indeed, several studies confirmed positive associations between group efficacy and OCB (Chen & Kao, 2011; Lin & Peng, 2010). However, the contribution of group efficacy to OCB in a longitudinal design is unexplored.

**H2: Perceived group efficacy increases changes in OCB among group members.**

**The Moderating Role of Attachment**

Given the interdependence and social nature of groups, it may be reasonable to argue that group processes are more influential for some individuals than others and that personality can moderate group effects across different outcomes (Fisher et al., 2012). Bowlby’s (1982) attachment theory is currently one of the most influential theories in developmental, personality, and social psychology (Mikulincer & Shaver, 2017) and provides a theoretical framework for understanding relational outcomes in the organizational domain (Yip et al., 2018).

According to Bowlby (1982), early interactions between children and their primary caregivers determine individual differences in how people connect with and relate to others and can be manifested over the lifespan. Adult attachment orientations are often conceptualized as regions in a continuous two-dimensional space (Mikulincer & Shaver, 2017). One dimension is attachment-related anxiety which reflects the extent to which a person worries that others will not be available in times of need. It coincides with lower levels of self-esteem and confidence, insistently calling on others for help and care, and can be perceived by others as overly intrusive. Attachment-related avoidance is the second dimension, reflecting degree of individual self-reliance. It coincides with striving to maintain independence, de-emphasizing distress and vulnerability, and self-coping. Attachment orientations are considered a core element of resilience in general (Løkkeholt et al., 2019) and at the workplace in particular. For example, avoidance and anxiety orientations predict employee well-being and burnout (Reizer, 2015, 2019; Richards & Schat, 2011), and influence interpersonal relationships at work (Richards & Schat, 2011). However, shifting the focus on attachment orientations as independent variables which represent the majority of the organizational research to a moderator construct which shape the relationships between work related constructs and employees’ outcomes has been highly recommended (Reizer, Koslowsky et al., 2020; Yip et al., 2018).

We assume that attachment anxiety can moderate the effect of group efficacy over OCB. As attachment anxiety is represented by ineffective stress management mechanisms, individuals with lower levels of attachment anxiety tend to remain emotionally stable in the face of threat, efficiently coordinate, and lead group problem-solving strategies (Mikulincer & Shaver, 2017). They are judged by others as better task-oriented leaders and provide effective
problem-solving plans (Davidovitz et al., 2007; Mikulincer & Shaver, 2017). However, the moderating role of anxiety on the contribution of group efficacy across different organizational outcomes has yet to be adequately examined. Based on previous findings, we can nevertheless assume that group efficacy will be strongly associated with OCB and promote extra role involvement among people with lower levels of anxiety, as they would more strongly appreciate group focus on task and problem-solving and can handle stress more effectively.

**H3: The relationship between group efficacy and OCB is moderated by attachment anxiety. Specifically, the positive association between perceived group efficacy and OCB is stronger under low levels of attachment anxiety.**

The moderating role of attachment anxiety on the associations between group cohesion and OCB is more complicated. On the one hand, workers who are low on attachment anxiety possess positive mental representations of interpersonal relationships and enjoy intimacy and closeness in the group context (Mikulincer & Shaver, 2017) and, therefore, lower levels of attachment can benefit to the associations between cohesion and OCB in a group context. However, preliminary work in the organizational setting indicated that anxious individuals can benefit from group dynamics and improve their group performances, accordingly (Lavy et al., 2015; Rom & Mikulincer, 2003). According to DeMarco and Newheiser (2019), anxious individuals are concerned about group closeness and group acceptance, and make efforts to please the group and fit in. Anxiously attached people experience an extreme need for acceptance (Reizer et al., 2021) and are more sensitive to any signs of emotional security among group members (Rubinstein et al., 2012) and therefore group outcomes can be positively affected by anxiety (Tasca, 2014). Based on recent findings, we suggest that group cohesion may be more meaningful and effective for anxious individuals who seek acceptance and psychological safety provided by the group, possessing stronger needs for acceptance, love, and desire to feel close to others (Lavy et al., 2015; Reizer et al., 2021).

**H4: The relationship between group cohesion and OCB is moderated by attachment anxiety. Specifically, the positive association between perceived group cohesion and OCB is stronger under high levels of attachment anxiety.**

As for avoidant people, they tend to distance themselves from the group and are less likely to actively invest (DeMarco & Newheiser, 2019), underestimate the effectiveness of group membership (Davidovitz et al., 2007), focus on their own survival needs (Ein-Dor et al., 2010), and prefer nonsocial responses in times of stress and danger (Ein-Dor & Perry-Paludi, 2014). Bowlby (1982) referred to this as “compulsive self-reliance.” In the organizational domain interaction between avoidance and group cohesion did not predict any organizational outcomes such as performance (Lavy et al., 2015; Reizer et al., 2021). Based on these findings, we did not make specific predictions regarding the moderating role of attachment avoidance.

**Method**

**Participants and Procedure**

This research took part in a security organization in Israel. Participants were trainees from the organization, who were recruited for a nine-week course focused on professional and technical skills. Although the participants worked in the same organization, they were not previously acquainted with each other. During the course, they trained and lived together in training dormitory settings. After the course, participants returned to their original units. In the first week, participants were randomly assigned to groups of approximately 18 individuals. Our sample consisted of 10 groups. Each group had a trainer who tasked them with learning and social group objectives.

Research participants consisted of 180 adults (74 women, 101 men, and 5 participants who did not answer the gender question). The average participant age was 20.10 years (SD=2.31). They held non-management positions, with an average organizational tenure of 16.26 months (SD=8.15). We collected the survey data during training sessions. Questionnaires were administered at two different time periods. Time 1 was on the third day of training: attachment questionnaires were completed, and the first measurement of OCB was conducted. Time 2 occurred at the end of the course. A second measure of OCB was administered as well as perceived group efficacy and group cohesion measures. The participants were recruited informally, they were assured anonymity, and their participation was voluntary.

**Measures**

**Attachment insecurity.** Attachment anxiety and avoidance were assessed with the Experiences in Close Relationships scales (ECR; Brennan et al., 1998). Participants rated the extent to which each item was descriptive of their experiences in close relationships on a 7-point scale ranging from *not at all* (1) to *very much* (7). In the current study, attachment orientations were assessed with a short 20-item version of the ECR. Ten items tracked attachment anxiety (e.g., “I worry about being abandoned”) and 10 items avoidance (e.g., “I prefer not to show a partner how I feel deep down”). Cronbach’s α was .85 for the attachment anxiety items and .84 for the avoidance items. Composite reliabilities were .81 and .78 respectively. Both reliability values were above the recommended .70 threshold, providing support for the reliability values of the scale.
Organizational citizenship behaviors. The 16-item OCB scale from Lee and Allen (2002) was used to assess individual OCB towards the training group members (e.g., “I help my group members to fulfill their obligations”). Responses were provided on a 7-point Likert scale from 1 (never) to 7 (very often). Following Hoffman et al.’s (2007) recommendations, we used an average of the 16 items for a single general construct of OCB. Cronbach’s alpha of the OCB measure was .88 at Time 1 and .94 at Time 2. Composite reliabilities were .82 and .83 respectively.

Perceived group cohesion. A 10-item scale (Rom & Mikulincer, 2003) measured the basic definitional components of group cohesion (e.g., “Group members are committed to the group”). Participants were asked to rate how much each item characterized their group on a scale of 1 (not at all) to 7 (very much). The scale’s Cronbach α in the present study was high (.94). In addition, composite reliability was .95.

Perceived group efficacy. Group efficacy was measured using the Collective Efficacy Beliefs Scale (Riggs & Knight, 1994). This consists of seven items (e.g., “This group is not very effective;” “The members of this group have excellent job skills”) and was scored using a 5-point Likert scale ranging from 1 (very inaccurate) to 5 (very accurate). The scale’s Cronbach α in the present study was high (.86). Consistent with previous studies (e.g., Goncalo et al., 2010), the group efficacy score was computed by averaging individual participant evaluations. In addition, composite reliability was .80 (i.e., above the recommended .70 threshold).

Statistical Analysis

In order to examine our research hypotheses, we ran HLM analysis. HLM is a statistical technique that provides statistical analysis for nested databases, where individual level units of data are nested within group level data (Lee et al., 2018). For example, in the current study, the employees are nested within work groups. Prior to conducting the HLM analysis, we centered all the predictor variables using the grand mean centering method. In order to predict the change score of OCB in our longitudinal analysis, we included OCB time 1 when predicting OCB time 2. The HLM equations included OCB time 1, two independent variables: perceived group cohesion and perceived group efficacy, the moderators (anxiety and avoidance), and the interactions between avoidance, anxiety, and perceived group variables. Initially, we ran the cross-level interactions on both anxiety and avoidance predictors. However, we found no support for the hypotheses using avoidance interaction measures. Hence, we proceeded to test our interaction hypotheses using the anxiety predictor.

Results

The descriptive statistics for the study variables are presented in Table 1. Correlations indicated that group cohesion as well as group efficacy were associated with OCB behavior at Time 1 and Time 2. Baron and Kenny (1986) suggested that the moderator should be uncorrelated with predictor and criterion in order to provide clearly interpretable interaction term. Following their suggestion, our findings indicated that perceived group cohesion did not correlate with relational personality dimensions or with OCB.

First, we ran a null model in which we partitioned the variance in the dependent variable (OCB time 2) into its individual and group-level components (see Table 2). Employees’ variability in OCB (σ²=.95) accounted for 89% of the overall variance, and group-level variability (τ=.12) accounted for the remainder (ICC=.11). This supported our decision to use HLM to conduct our analysis.

In our HLM analysis, the independent variables were grand-mean-centered. In addition, and based on previous methodological recommendation (Cohen et al., 2013), in order to predict OCB change, we controlled for a group member’s OCB at Time 1. OCB scholars have pointed out that when studies control for the previous level of the outcome measures, “the researchers were actually examining the effect of the OCBs on changes in the outcome measure over the time period” (Podsakoff et al., 2014, p. 100). Therefore, when testing the effect of group members’ OCBs at Time 1 on OCB level at Time 2, we actually predict the group member’s OCB change. Furthermore, we included the independent measures (group cohesion and group efficacy)
In order to examine whether the interactions between attachment avoidance and group variables are significant, we performed an additional HLM analysis. The analysis produced similar results, and as expected, both interactions were non-significant for group cohesion ($\gamma = -.12, \text{SE}_\gamma = .08, p = .12$) and group efficacy ($\gamma = .14, \text{SE}_\gamma = .10, p = .17$). Therefore, we excluded these interactions from the HLM analysis.

**Discussion**

In response to the calls of several researchers in the organizational domain (e.g., Mathieu et al., 2017; Reizer et al., 2021; Yip et al., 2018), the present study sought to expand understanding of the mechanisms that are related to OCB by investigating the joint effects of two group processes over OCB performance as well as the moderating role of attachment. We took into account both collective self-efficacy and group affective state in order to predict OCB. Specifically, we employed group cohesiveness as representing collective motivation of members to help each other and promote collective well-being and group efficacy as representing member belief in group capability as a performing unit. Furthermore, this work is an examination of the moderating role of the relational framework of attachment orientations.

Our findings, consistent with previous research, found that both collective efficacy as well as group cohesion have a unique contribution to OCB. Confirming our hypothesis, group cohesiveness was found to increase OCB. As mentioned, members in cohesive groups tend to experience positive psychological states, maintain social exchange relationships within the group, and are willing to help and be devoted to the group—all of which are related to helping behaviors (Kim et al., 2017; Liang et al., 2015). Group efficacy was found to increase OCB, thus validating our second hypothesis. Compared to group cohesiveness that is more affective, group efficacy is related to rational member assessment of their group capabilities (Ilgen et al., 2005). As a result, it is not surprising that when members see their group as talented and successful, they may feel that it is worthwhile to exert efforts and contribute such that their effort will not be wasted (Shin & Choi, 2010). As with group cohesiveness, several studies have investigated the relationship between group efficacy and OCB, although these associations have yet to be elucidated (Chen & Kao, 2011; Lin & Peng, 2010). Our findings are in line with the common perspective in the literature suggesting that group can be a powerful mechanism for facilitating individual changes in perceptions, attitudes, and behaviors (Mathieu et al., 2017), and that these group contextual variables may determine when and why employees do or do not perform citizenship behaviors (Somech & Khotaba, 2017).

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**Table 2. HLM Coefficients Predicting Organizational Citizenship Behavior in Time 2.**

|                       | OCB-Time 2 |
|-----------------------|------------|
| **Control**           |            |
| OCB-time 1            | $\gamma = .34^{***}$, $\text{SE}_\gamma = .08$ |
| **Main effects**      |            |
| Group Cohesion        | $\gamma = .31^{***}$, $\text{SE}_\gamma = .07$ |
| Group efficacy        | $\gamma = .32^{***}$, $\text{SE}_\gamma = .10$ |
| Avoidance             | $\gamma = -.04$, $\text{SE}_\gamma = .07$ |
| Anxiety               | $\gamma = .03$, $\text{SE}_\gamma = .06$ |
| **Interactions**      |            |
| Anxiety × Cohesion    | $\gamma = .15^*$, $\text{SE}_\gamma = .06$ |
| Anxiety × Efficacy    | $\gamma = -.22^*$, $\text{SE}_\gamma = .09$ |

Note. $\gamma =$ coefficient provided from the last step in the analyses; $\text{SE}_\gamma =$ standard error of $\gamma$.

* $p < .05$, ** $p < .01$, *** $p < .001$.

HLM equations

**Level 1:**

$\text{OCB}_{2t} = \beta_0 + \beta_1(\text{OCB}_{1t}) + \beta_2(\text{ANX}_{t}) + \beta_3(\text{AVOID}_{t}) + \beta_4(\text{COHES}_{t}) + \beta_5(\text{Effic}_{t}) + \beta_6(\text{ANX} \times \text{COHES}) + \beta_7(\text{ANX} \times \text{Effic}) + \epsilon_t$  

**Level 2:**

$\beta_0 = \gamma_0 + \gamma_1; \beta_1 = \gamma_{10}; \beta_2 = \gamma_{11}; \beta_3 = \gamma_{12}; \beta_4 = \gamma_{13}; \beta_5 = \gamma_{14}; \beta_6 = \gamma_{15}; \beta_7 = \gamma_{16}$. 

as well as the moderator (attachment anxiety). Finally, we entered the grand-mean-centered interaction of attachment anxiety with group cohesion and attachment anxiety with group efficacy. HLM results are shown in Table 2.

Hypothesis 1, which examined whether group cohesion predicted OCB, was supported ($\gamma = .31, p < .001$). The association between group efficacy and OCB was significant ($\gamma = .32, p < .001$), thus supporting H2 as well. Furthermore, significant interactions were identified in the variables. Attachment anxiety moderated the associations between group efficacy and OCB ($\gamma = -.22, p < .01$). The plot of the significant two-way interaction is provided in Figure 1. A simple-slope analysis using Preacher et al. (2006) method indicated that the relationship between group cohesion and OCB was significant for those low in attachment anxiety ($\gamma = .46, p < .01$) as opposed to the slope for those who are low in attachment anxiety ($\gamma = .16, p < .05$). Thus, H3 was supported.

Finally, attachment anxiety moderated the associations between group cohesion and OCB ($\gamma = .15, p < .01$). The plot of the significant two-way interaction is provided in Figure 2. A simple-slope analysis using Preacher et al.’s (2006) method indicated that the relationship between group cohesion and OCB was stronger for individuals who are high in attachment anxiety ($\gamma = .46, p < .01$) as opposed to the slope for those who are low in attachment anxiety ($\gamma = .16, p < .05$). Thus, H4 was supported.
Our study was carried out in a training context, and adds support to the relationship between group efficacy and OCB. These findings make two more contributions. First, addressing Mathieu et al.’s (2017) call for more longitudinal studies, we implemented a design to measure OCB at different points in time. Similar to Parke et al. (2020), we sought to understand OCB changes over time. Although several studies indicated that there are momentary fluctuations in OCB at a daily level (e.g., Reizer, Koslowsky et al., 2020), we addressed the need to explore both individual and group level antecedents that explain longer-term change in OCB. Our results point to specific advantages of the unique
aspects of perceived cohesiveness as well as perceived group efficacy in increasing OCB, which hasn’t been investigated in depth previously and can be a basis of future organizational and training interventions. In addition, our study examined OCB phenomena during organizational training setting. As OCB has become an important topic that has been significantly researched, we addressed the need to identify the predictors, concepts, and moderators that operate with OCB under different contexts (Ocampo et al., 2018). This unique training context allowed us to explore OCBs changes from the early formation phase at the beginning of the training, which is characterized by uncertainty and confusion through later phases of the process, where OCBs norms and standards have been formed (Parke et al., 2020).

In addition, the associations between correlations between the two measurements of OCB and attachment dimensions are non-significant, which is in line with previous studies indicating inconsistent or non-significant results. For example, previous studies found non-significant associations between anxiety and OCB (Little et al., 2011; Richards & Schat, 2011), as well as between anxiety and avoidance and OCB—both in a cross sectional study and diary studies (see Reizer, Koslowsky, et al., 2020, study 1 and study 2).

Other interesting findings relate to the role of attachment as a moderator of the associations between group cohesion and group efficacy to OCB. In line with our third research hypothesis, workers with lower levels of attachment anxiety tend to remain emotionally stable and efficiently coordinate and lead group problem-solving efforts even in time of stress and work challenges (Rom & Mikulincer, 2003). For them, group effectiveness and task progression are more beneficial for OCB performance as opposed to those who are high on anxiety. Indeed, our results illuminate that the positive association between group efficacy and changes in OCB is weaker under high levels of attachment anxiety.

Finally, our results show that attachment anxiety moderates the contribution of group cohesion to OCB. Group cohesion promotes feelings of safety, acceptance, positivity, and trust in group members (Barsade & Knight, 2015). These benefits are more important to the anxious individuals thus enabling manifestation of group cohesion over OCB among anxious members. The ability of anxiously-attached individuals to benefit from group cohesiveness is also supported by Social Defense Theory (SDT) (Ein-Dor et al., 2010). According to SDT, anxious individuals possess unique adaptive advantages to promote group effectiveness in appropriate situational circumstances. For example, people with high attachment anxiety are better at detecting if an individual is lying (Ein-Dor & Perry-Paldi, 2014). They can, therefore, be on guard and serve a protective group function (Ein-Dor & Hirschberger, 2016) and may moderate other group dynamic processes at the workplace. For example, future studies should investigate other relational aspects of group dynamics such as group member conflicts and decreased levels of OCB both on individual and group levels which can be moderated by attachment orientations.

Theoretical and Practical Implications

The theoretical implications of our research are significant. First, the current findings extend OCB research by looking at the role of group constructs and their impact on individual-level change in OCB. Specifically, our results illuminate group cohesion and group efficacy as significant predictors of individual changes of OCB. This stands in contrast to the conventional view that group cohesion and group efficacy exert the same influence on all group members.

Second, this study addresses the need to examine the relational attachment orientations as potential moderators to organizational group processes (Yip et al., 2018). In line with Waller et al.’s (2016, p. 592) call to “account for group members as persons who have pre-thought ideas and preferences,” these findings offer us deeper understanding into how individual members contribute to group dynamics. Indeed, as group affects and dynamics of emotional culture represents a growing research area (Barsade & Knight, 2015), the moderating role of attachment in affective processes form the basis of future investigations. Finally, our findings support a common claim in OCB research (e.g., Grant & Mayer, 2009), emphasizing that citizenship behaviors are driven by a sense of group inclusion and group success as well as personality factors. These findings support the conclusion of Lai et al. (2013) that a more complete understanding of OCB phenomena would take into consideration the social as well as the psychological aspects.

These results also carry important practical implications. As teams and groups are emerging as the basic building blocks in modern organizational design, new methods for studying complex multilevel phenomena are needed and are only now under formation (Mathieu et al., 2017). Therefore, further research on the impact of teams on both individual and group processes is an important area of inquiry.

As showed by previous research, organizations can enhance effects of group dynamics on group results by encouraging supervisors to develop closer supportive relationships with subordinates and navigate the group into more effective work habits. In addition, our results also suggest that attachment can increase the effects of group dynamics in OCB. The practical significance of this is evident in that managers often inherit employees and lack the opportunity to select based on personality. Yet managers should take into consideration individual differences when implementing group processes in the organizational world. For example, for non-secure individuals, group cohesiveness seems to be more dominant. However, for less anxious individuals the effect of group efficacy is more influential on contextual performance. Therefore, future work incorporating intervention to boost group efficacy or cohesion (e.g., Eatough et al.,
2015) should take into consideration member personality types.

**Limitations**

This research is not without limitations. First, we used subjective participant perceptions of OCB. A large majority of surveys are self-reported, which may lead to biased responses. However, we do acknowledge that other-reports can also be biased compared to self-reports, as the managers and colleagues can miss or not notice OCB acts (de Geus et al., 2020). In order to reduce measurement context effects, our study variables were measured at two separate time periods. We assume that the time lag in our sample can be beneficial in OCB studies. Second, our study was done in a training context. However, as previous studies argued, it is important to focus on characteristics that may make newcomers more likely to engage in OCB during the socialization process itself (Black et al., 2019; Britt et al., 2006). Third, in the current work we focused on the individual level of OCB. Previous research supported the notion that unit-level OCB is a different construct, with unique measurement (Organ, 2018; Podsakoff et al., 2014), and it is recommended to use this frame of analysis in future studies.

**Future Investigations**

Future studies may extend our approach by investigating group citizenship behavior. Therefore, future work conducting unit-level OCB research, should consider reexamining the current results by obtaining data regarding the group rather than the individual citizenship behaviors (Podsakoff et al., 2014). Future studies might consider examining other group measurements such as group capital and resource (Bogler & Somech, 2019), and reexamine whether OCB changes might be affected by them. Organizational culture (Uliyah & Ariyanto, 2021) may also impact changes in OCB. Finally, future studies should also look at the potential group setting contributions of avoidant individuals, who are less interested in relational consequences and benefit less from group settings (Reizer et al., 2021). However, they tend to perform relatively well in individualistic scenarios such as tennis playing and computer science (Ein-Dor et al., 2012). Future research should investigate if avoidance can affect group dynamics in a social environment marked by low levels of intimacy such as virtual teams. Also noteworthy for further study are other types of behaviors such as mentoring, knowledge sharing, and compassion that may be incorporated into broadening the scope of prosocial behaviors (Bolino & Grant, 2016).

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