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Self-compassion at work: A key for enhancing well-being and innovation across levels.

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Self-compassion at Work: A Key for Enhancing Well-Being and Innovation through Social

Safeness at Multiple Levels

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Self-compassion at Work: A Key for Enhancing Well-Being and Innovation through Social Safeness at Multiple Levels

Keywords: Self-Compassion, Well-being, Innovation, Social safeness, Individual, Group.

Abstract

The purpose of this study is to examine the mechanisms underlying the influence of self-compassion on innovation and well-being at work at multiple levels. Building on the tripartite model of affect regulation, we propose and test a mediation model in which social safeness explains self-compassion's relationship with innovation and well-being at the individual and group levels. The study participants were 101 employees on 26 teams from different organizations in Canada. The data were collected at two measurement times and were analyzed via multilevel modeling. Consistent with our predictions, the results indicated that social safeness mediated the relationship of self-compassion with well-being and innovation at the individual and group levels. We discuss the implications of this research for theory and practice.

Introduction

Self-compassion – defined as the ability to mindfully recognize difficulties as part of the human experience and direct care towards oneself with a present sense of warmth, connection, and concern (Neff, 2003b) – is an important factor for effective psychological and behavioral functioning (Neff, 2003a; Neff, 2011). The definition of self-compassion includes the following three specific elements: mindfulness, described as being present and recognizing intrapersonal reactions to difficulties; self-kindness, which involves being kind and gentle with the self rather than self-critical; and common humanity, which is the concept that all humans experience struggles as part of the human experience (Neff, 2003b). Scholars have suggested that in the workplace, self-compassion might bring both individual and group advantages (Horan & Taylor, 2018).

However, the mechanisms whereby self-compassion exerts its effects on positive outcomes at work remain unclear, and researchers have consistently called for the investigation of the mechanisms underlying the work-related effects of compassion at multiple levels (Dutton et al., 2014). Exploring the mechanisms underlying the impact of self-compassion at both the individual and the group levels constitutes an essential research endeavor. Indeed, as Chen, Bliese and Matthieu (2005) argued, administrative science scholars must consider how their research can be generalized at multiple levels when the findings are applied in organizations. Importantly, given the increased use of work teams in organizations, it is crucial to determine whether the processes and relationships at the individual level are consistent with the processes and relationships at the group level (Aguinis, Henle, & Ostroff, 2001).

By drawing on the tripartite model of affect regulation (Gilbert, 2005), the present study identifies social safeness – the perception of being connected with individuals and the emotional

experience of the social environment as being safe, warm, reassuring, and soothing (Gilbert et al., 2008; Gilbert et al., 2009) – as a key mediating mechanism that could account for both the individual- and group-level effects of self-compassion on individual and group innovation and well-being. The examination of this mediation model, which is depicted in Figure 1, makes the following contributions to the literature. First, well-being and innovation are both crucial resources for organizational effective functioning and competitiveness because they allow employees to be more proficient and contribute to organizational goals (Van de Ven, Polley, Garud, & Venkataraman, 2008). However, research investigating both outcomes simultaneously is lacking. This gap in the literature is a significant drawback, as some studies suggest that as a change-oriented endeavor, innovation can generate conflict and instability for individuals and the environment (Janssen, 2003), which can be detrimental to well-being (González-Romá & Hernández, 2016). By identifying self-compassion as a positive determinant of both innovation and well-being, this study proposes a new and potentially fruitful pathway through which innovation can be promoted without compromising well-being.

[Insert figure 1]

Moreover, this study helps deepen the understanding of the role of social affective states in the workplace. Indeed, the current research has focused on positive and negative affect as determinants of innovation and well-being at work (for a review, see Anderson, Potočnik, & Zhou, 2014). However, social affective states, such as social safeness, have been largely disregarded. Considering the social nature of both innovation (Baer, 2012; Yuan & Woodman, 2010) and well-being (Diener et al., 2010), exploring the role of social safeness in linking self-compassion with work-related innovation and well-being is vital to understanding how to effectively manage and cultivate the affective determinants of employee and team functioning.

This study provides insights into the mechanism of self-compassion in the workplace through the role of social safeness at the individual and group levels, which has important implications for understanding why and how having a caring attitude towards oneself can make individuals and teams increasingly innovative and psychologically healthier.

Theoretical Framework and Hypotheses Development

Self-compassion and Social Safeness

Social safeness is a unique positive affective state (Kelly, Zuroff, Leybman, & Gilbert, 2012). It is conceptually linked with self-compassion such that both constructs involve a relational component. However, the content of this component significantly differs between the two constructs. In the case of self-compassion, the interpersonal relationship with others is limited to the recognition that one is not isolated in his or her suffering and that others also experience difficulties (i.e., common humanity; Neff, 2003a, 2003b), while for the construct of social safeness, such a relational experience implies feelings of being supported, cared for, soothed, and accepted by others, in addition to the experience of contentment with and belonging to others (Kelly et al., 2012). This latter range of affective states is considerably different from the experience of shared suffering and is absent from the conceptualization of self-compassion.

The tripartite model of affect regulation (Gilbert, 2015; Gilbert et al., 2008; Kelly et al., 2012) posits that individuals evolve within three affect regulation systems as follows: 1) a threat-focused system for protection from danger; 2) an incentive/resource system, which refers to gathering resources for survival; and 3) a soothing system, which is a state of calm and appeasement that occurs when there is no threat or resource/competition. To enhance social safeness, it is necessary to ensure that the soothing sensation is heightened (Gilbert; 2005). The soothing system has evolved via attachment, yet research suggests that individuals can be their

own source of soothing and safeness, specifically when they can be caring towards themselves (Gilbert, 2005). Thus, in addition to experiencing social support as a result of being surrounded by kind, warm, and soothing others, developing a self-soothing process is also effective in inducing calm and peace (Gilbert, 2005). Therefore, as individuals develop the ability to self-soothe, they can alleviate negative experiences, such as depression, anxiety, trauma, and self-criticism (Gilbert & Procter, 2006), which increases their functioning. Studies have indicated that self-compassion deactivates the threat system and activates the self-soothing system (Gilbert, 2005). This function is fundamental, as it empowers individuals to become their own source of caring and, therefore, experience the positive outcomes of safeness on their own (Gilbert, 2005).

When embracing a self-compassionate attitude, individuals recognize that they are suffering (mindfulness), experience care (self-kindness), and make connections (common humanity) through their own efforts rather than depending on a person from their environment. Each of these dimensions is vital for the soothing system. More precisely, recognizing difficulty or distress in the moment can lead to caring for the self, thereby internally disengaging the threat system and activating safeness. Likewise, recalling that suffering is part of the human condition leads individuals to experience connectedness to humankind, again deactivating the sense of threat or competition. The dimensions of self-compassion are not only able to decrease the sense of threat and competitiveness but can also increase positive emotions (Park, Long, Choe, & Schallert, 2018). In summary, through the cultivation of self-compassion, individuals become their own caregivers and can independently experience safeness and social connection (Gilbert, 2005). The following hypothesis is thus proposed:

Hypothesis 1: Self-compassion is positively related to social safeness.

The literature on personal characteristics (i.e., self-compassion) and affective states (i.e., social safeness) suggests that both factors can emerge not only at the individual level but also at the group level. More precisely, according to personality theory and research, team members' personal characteristics, on average, represent a pooled resource involving specific patterns of thinking feeling and acting that team members combine, share and draw on to assist each other when needed (Somech & Drach-Zahavy, 2013). As such, the combination of the team members' patterns of self-compassion reflects a configural property of the team that emerges from the individuals' self-compassion (Kozlowski & Klein, 2000) and constitutes a pooled resource that the group members bring to the team. Likewise, the literature on affective states has suggested that while such states occur individually, they are also shaped by other people (i.e., colleagues or team members) (Collins, Lawrence, Troth, & Jordan, 2013). In particular, the theory and research on affect suggest that individuals within the same work group can share similar affective states due to emotional contagion in social interactions (Bartel & Saavedra, 2000). In such circumstances, affective experiences emerge as a group state that is amplified by team members' interactions and manifests as a collective phenomenon (Kelly & Barsade, 2001). Thus, at the group level, social safeness constitutes an emergent group-level affective state that is shaped by interaction patterns among team members.

At the group level, the relationship between self-compassion and social safeness can be explained via the process of emotion contagion, whereby team members' aggregated personal characteristics (i.e., self-compassion) facilitate the spread of affect (i.e., social safeness) from one group member to another (Hatfield, Cacioppo, & Rapson, 1994), thus leading to the emergence of a shared group affect within the team. Consistent with this, we argue that when team members tend to exhibit similar levels of self-compassion, a collective state of social safeness is likely to

emerge within the group. Indeed, team members' common self-compassion propensities lead them to manifest similar feelings of calm and warmth via the emotion contagion process, which is facilitated by social interactions. As a result, such affective experiences converge towards a shared affective experience of social safeness at the group level. Accordingly, we propose the following hypothesis:

Hypothesis 2: Group-level self-compassion is positively related to group-level social safeness.

While we have argued for a positive effect of self-compassion on social safeness, at both the individual and group level, there are also theoretical reasons to believe that a possible reverse relationship between the two variables might occur. Indeed, a study by Kelly and Dupasquier (2016) provided evidence for a positive effect of social safeness on self-compassion, which showed that social safeness predicts self-compassion. However, the tripartite model of affect regulation suggests that the individuals' propensity for self-compassion contributes to reducing the threat system by enhancing the feelings of warmth, contentment and connectedness that ultimately lead to higher social safeness (Gilbert, 2010). Self-compassionate people have also been shown to report feeling higher levels of social safeness (Akin & Akin, 2015). It is also worth noting that while self-compassion constitutes an ability that can be acquired through intervention (Gilbert & Procter, 2006; Shapiro, Brown, & Biegel, 2007), the majority of the literature conceptualizes it as a personal disposition or tendency (Ferrari et al., 2019). Since testing an intervention's effects on the ability of self-compassion was out of the scope of this study, consistent with this research stream we examined self-compassion as an individual's stable disposition. Social safeness, in its original conceptualization, is a specific type of positive affective state and is not a trait or a personal disposition (Gilbert, 2005, 2009; Kelly et al., 2012).

Indeed, as Kelly et al. (2012) explained, “Gilbert (2005, 2009a) suggests that social safeness is a separable emotional *state*,” (p. 816). As such, social safeness is supposed to be influenced by, rather than being the source of, the individual’s tendency for self-compassion. Thus, our theoretically and empirically grounded line of reasoning suggests that in the present study, it is more appropriate to hypothesize an influence of self-compassion on social safeness at both the individual and group levels rather than a reverse relationship between the two constructs.

Social Safeness, Well-being and Innovation

The increased sense of social safeness elicited by self-compassion is, in turn, expected to contribute to innovation and well-being at both the individual and group level. It is proposed that social safeness shapes the interpersonal and social reality in organizations as a result of social safeness being a “social” affective state. The individual- and group-level effects of social safeness are outlined below.

Social safeness, individual well-being, and individual innovation. At the individual level, well-being is often captured by the concept of flourishing – a positive psychological state characterized by having enriched and supportive interpersonal relationships, contributing positively to others’ lives and happiness, being respected by others, leading a significant and meaningful life, and having an optimistic world view and self-respect (Diener et al., 2010). The present study used flourishing as the indicator of employee well-being instead of work engagement because work engagement is primarily a motivational construct (Bakker & Xanthopoulou, 2009) and, correspondingly, was largely regarded and examined as a proximal predictor of job performance (Menguc, Auh, Fisher, & Haddad, 2013). Flourishing is also conceived of as being at the top end of the well-being spectrum and provides a more comprehensive representation of its multiple components when compared to work engagement

(Demerouti, Bakker, & Gevers, 2015). Innovation refers to the individual's introduction of new ideas and processes that are useful and valuable for an organization (West & Sacramento, 2006).

The feeling of social safeness is expected to increase flourishing through the dimension of having supportive interpersonal relationships and being optimistic. Indeed, social safeness is associated with a decrease in the threat and drive systems, allowing individuals to experience enriched, supportive, and connected social relationships in their environment. More specifically, those who experience social safeness may be more apt to experience support from others and to perceive the world as less threatening through the deactivation of the drive system (competition) and may therefore have a more optimistic outlook on life (Kelly & Dupasquier, 2016; Kelly et al., 2012). Recent research has demonstrated that caring reciprocal relationships create the perception of psychological safety (a construct similar to social safeness), which, in turn, generates innovation (Binyamin, Friedman, & Carmeli, 2018). Finally, social safeness can help attenuate the threat that may arise with the instability that comes from the implementation of new ideas (Janssen, 2003). When new ideas are implemented in organizations, difficulties can arise as a consequence of the change. The experience of connection that is sensed through social safeness can temper the perception of threats, help individuals feel better, and possibly generate additional innovations within the change that inevitably occurs when new ideas are installed in organizations. Thus, the following hypotheses are proposed:

Hypothesis 3: Social safeness is positively related to individual well-being.

Hypothesis 4: Social safeness is positively related to individual innovation.

Group-level social safeness, group well-being, and group innovation. At the group level, well-being is conceived of as the collective feeling of having group spirit (comradeship and cooperation), energy, morale, and enthusiasm towards and pride in the group (Young, 2000).

Group innovation refers to the introduction and application of new ideas, processes, or services that are beneficial for the group (de Dreu, 2002). Conceptually, these variables are significantly different from each other. The collective experience of positive affective states, such as those characterizing group well-being, was shown to be a key condition for making innovative teams (Madrid, Niven, & Vasquez, 2019). However, enhanced innovation at the group level is not necessarily conducive to higher levels of well-being. Indeed, team innovation can lead to more frequent conflicts among team members and intensified workloads, thereby increasing the risk of team stress (Janssen, Van De Vliert, & West, 2004).

At the group level, social safeness is likely to be an important factor for group well-being. At this level, social safeness entails having shared feelings of warmth and connectedness in social relationships (Gilbert et al., 2009). In addition, social safeness increases the ability to feel safe and even to receive compassion (Kelly & Dupasquier, 2016). Social safeness can thus act as a key team-level social process that fosters well-being at the group level. Social connections in teams also inspire members to communicate and build off each other's ideas to generate new ideas. The social safeness mechanism is valuable in its deactivation of the threat and drive systems at the group level, as positive and supportive relationships between members are helpful for mutual support and feedback in the promotion and implementation of new ideas. The mutual support that results from a collective feeling of safeness could, hence, optimize the team innovation process by using the expertise of multiple individuals. The following hypotheses are thus proposed:

Hypothesis 5: Group-level social safeness is positively related to group well-being.

Hypothesis 6: Group-level social safeness is positively related to group innovation.

The Mediating Role of Social Safeness

Two important frameworks can be used to explain the mediating role of social safeness in the relationship between self-compassion and both well-being and innovation at the individual and group levels: affective events theory (AET; Weiss & Cropanzano, 1996) and the input-process-output (IPO) model for team effectiveness (Mathieu, Maynard, Rapp, & Gilson, 2008). AET suggests that personal characteristics influence the degree to which people positively or negatively regulate their affective experience regarding an event (Kokkonen & Pulkkinen, 2001) and that the affect regulation process generates subsequent patterns of behavioral responses and psychological states (Kokkonen & Pulkkinen, 2001). The IPO model argues that group-level aggregated personal characteristics constitute a pooled resource (input). Team members can share and can draw on the resource to assist each other, and these benefits for the team lead to the emergence of shared positive affective experiences (process). These experiences ultimately boost team effective functioning (output) (Mathieu, Gilson, & Ruddy, 2006).

Studies have shown that individuals who are high in self-compassion are likely to have compassionate goals (support and care for others) in their relationships (Crocker & Canevello, 2008), which implies that they support others, encourage trust, and increase the sense of being at ease in interpersonal relationships (Canevello & Crocker, 2015). This outcome suggests that individual self-compassion may have a positive influence on relationships and, thereby, on groups as well. Hence, as organizations are social contexts, it is likely that the effects of self-compassion and the underlying mechanisms are applicable to interpersonal relationships at work. In line with our theorizing and the above discussed empirical evidence, the soothing and calming affective experience activated by self-compassion is expected to have a positive effect on well-being and innovation at both the individual and the group level. We thus hypothesize the following:

Hypothesis 7. Social safeness will mediate the positive relationship between self-compassion and individual well-being.

Hypothesis 8. Social safeness will mediate the positive relationship between self-compassion and individual innovation.

Hypothesis 9. Group-level social safeness will mediate the positive relationship between group-level self-compassion and group well-being.

Hypothesis 10. Group-level social safeness will mediate the positive relationship between group-level self-compassion and group innovation.

Method

Design, Participants and Procedure

A two-wave, time-lagged study was conducted at two distinct measurement points, with a three-month interval between Time 1 and Time 2. A convenience (nonrandom) sampling method was used to recruit individuals and teams. The introduction of the temporal separation between measurements was recognized as an important procedural remedy to reduce method bias and allow for more precise conclusions concerning the relationships between variables (Podsakoff, MacKenzie, & Podsakoff, 2012). The Time 1 questionnaire measured the independent variable, the control variables, and the mediator, while the Time 2 questionnaire measured the dependent variables. All participants were above 18 years of age and had been working in the participating organizations for more than 6 months. The partnering organizations involved in the study were businesses that implemented innovations (e.g., healthcare, information technology, small businesses). Although the management and implementation of innovations among the different industry sectors could vary, our examination was exclusively focused on the overarching behavioral aspects of the innovation process, namely, the generation and realization of new and

useful ideas (Hammond, Farr, Schwall, & Zhao, 2011), rather than on the management and implementation procedures that were specific to each particular sector. A general rather than industry-specific reference to the innovation process ensured that all the participants could link each innovation-related survey question to the types of innovations that related specifically to the organization and its respective industrial sector.

This study recruited participants working in organizations across North America. Upon agreeing to participate in the research project, the organizations were sent an e-mail providing a link to the questionnaire on an online platform with secure data collection. Informed consent was built into the questionnaire by being presented on the first page of the survey. After giving their consent, the participants could access the online questionnaire. The data were matched across time using an anonymous code composed of letters and numbers that participants were asked to create. At Time 1, 315 employees provided usable responses and, consequently, were contacted at Time 2 for the second part of the survey. Among these participants, 143 returned the questionnaire, while 42 provided incomplete answers, thus yielding a final sample of 101 employees across time (overall response rate = 22.40%) who were part of 26 teams (average team size = 4, $SD = 1.22$). Most participants were female (69.3%) and held at least an undergraduate degree (67.3%). Moreover, they were on average 39.13 years of age ($SD = 10.51$) and reported an average organizational tenure of 9.19 years ($SD = 8.63$).

An issue that arose during this research was that privacy-related restrictions from the participating organizations impeded the use of other-reported ratings of innovative work behavior. According to the theory and research on the measurement of work-related behaviors, self-report measures might lead to misleading interpretations due to implicit theories, common method bias and self-service biases (Podsakoff, MacKenzie, & Podsakoff, 2012). Thus, the use

of other-ratings, such as supervisor ratings, is recommended. However, it is worth noting that in the case of employee innovative behavior, the adoption of other-ratings might not be recommended because employees have more information than their colleagues regarding the background of their own work activities (Janssen, 2000) and the extent to which they have developed ideas or promoted those ideas to others in the organization (Shalley, Gilson, & Blum, 2009). Therefore, other colleagues' ratings might miss important parts of this process, thus augmenting the risk of construct deficiency and deflation in hypothesis testing (Madrid, Patterson, Birdi, Leiva, & Kausel, 2014). Moreover, research has indicated that self-ratings of innovation-related behaviors are consistent with other-ratings (e.g., Janssen, 2000). Accordingly, the adoption of a self-report measure of innovative work behavior is justifiable.

Measures

The questionnaires for this study were available in both English and French. The questionnaires were translated from English to French using Vallerand's (1989) transcultural method (see the French version in the appendix). A five-point Likert-type scale from 1 (almost never) to 5 (almost always) was used for each of the scales in the questionnaire.

Self-compassion (Time 1). Self-compassion was evaluated using the Self-Compassion Scale-Short Form (SCS-SF) (Raes, Pommier, Neff, & Van Gucht, 2011), which is a 12-item measure that examines the three subscales of self-compassion, i.e., self-kindness ("I try to be understanding and patient towards those aspects of my personality that I do not like"), common humanity ("When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people"), and mindfulness ("When something painful happens, I try to take a balanced view of the situation"). In the current study, this scale had an internal consistency of 0.79.

Social safeness (Time 1). Social safeness was measured using the Social Safeness and Pleasure Scale (SSPS) developed by Gilbert and colleagues (2009). The SSPS is an 11-item measure that specifically assesses the felt sense of warmth, safety, and reassurance individuals experience in their social relationships. A sample item is as follows: “I find it easy to feel calmed by people close to me.” The internal consistency of this scale was 0.93.

Group-level self-compassion (Time 1) and group-level social safeness (Time 1). To measure self-compassion and social safeness at the group level, we adopted an additive composition model, whereby individuals’ ratings of self-compassion and social safeness were averaged at the group level. This approach is consistent with the theories and research adopted in the present study (and discussed above) to conceptualize personality characteristics (i.e., self-compassion) and affective states (i.e., social safeness) at the group level. Kozlowski and Klein (2000) suggested that for phenomena that emerge in the same way and are functionally equivalent at the individual and group levels (i.e., self-compassion and social safeness), the most appropriate way to operationalize these constructs at the group level is through a sum or average. Accordingly, to assess self-compassion and social safeness at the group level, we obtained the group self-compassion and the group social safeness scores by aggregating the individual self-compassion and individual social safeness scores, respectively. The internal consistency was 0.86 for group-level self-compassion and 0.95 for group-level social safeness.

Individual well-being (Time 2). Individual well-being was measured using the Flourishing Scale (FS; Diener et al, 2010), which is an eight-item measure describing aspects of social-psychological functioning ranging from feelings of competence to the presence of positive relationships to having purpose and meaning in life. Consistent with prior research examining work-related well-being (e.g., Warr, 2007), participants were asked to indicate their feelings of

well-being experienced *in the workplace* to emphasize the reference of this measure to the work domain. A sample item is “In my work, I lead a purposeful and meaningful life.” The reliability of this scale was 0.90.

Individual innovation (Time 2). Individual innovation was measured with Janssen’s (2000) nine-item scale. This scale assesses the frequency with which employees were involved in three interrelated behaviors, namely, the generation, promotion, and realization of new and useful ideas at work (Janssen, 2000). Three items refer to idea generation (e.g., “Generated original solutions for problems”), three items measure idea promotion (e.g., “Mobilized support for innovative ideas”), and three items assess idea realization (e.g., “Transformed innovative ideas into useful applications”). This scale had an internal reliability of 0.94.

Group well-being (Time 2). Group well-being was measured using an adapted version of Young’s (2000) five-item teacher morale scale. The choice of this scale is consistent with Peterson, Park, and Sweeney’s (2008) theoretical framework, which identifies morale as a key indicator of group well-being. The authors also emphasized the relevance of adopting a referent shift model of aggregation to measure morale (Chan, 1998), according to which groups tend to develop characteristic levels of morale as a function of factors operating in the group. Accordingly, they recommended the adoption of specific group-level measures that are methodologically independent of individual-level measures. Consistent with this approach, the teacher moral scale was specifically developed to capture the perceptions of the morale of employees (i.e., teachers) in the work environment using the group unit as a reference (“Employees take pride in this team”). This scale had an internal consistency of 0.95.

Group innovation (Time 2). To measure group innovation, De Dreu’s (2002) four-item measure, which was originally adapted from Anderson and West (1998), was utilized. Anderson

and West's (1998) original scale was used to measure team innovativeness. This scale examines employee perceptions regarding the degree of innovativeness of their team. A sample item is "In this team, employees often implement new ideas to improve the quality of our products and services". The internal consistency of this scale was 0.71.

Control variables (Time 1). Based on the prior literature on well-being and innovation at work, we controlled for gender, age, education, and organizational tenure (Hammond et al., 2011; Mäkikangas & Kinnunen, 2003).

Analytical Strategy

To justify the creation of aggregate scores for self-compassion, social safeness, group well-being and group innovation at the group level, the interrater agreement of these measures using the $r_{wg(j)}$ index was calculated (James, Demaree, & Wolf, 1984). The mean $r_{wg(j)}$ was .95 for self-compassion, .96 for social safeness, .93 for group well-being and .83 for group innovation. These values are above the recommended .70 threshold (Bliese, 2000) and indicate strong agreement among the team members on these constructs. The intraclass correlations (ICC[1] and ICC[2]) of self-compassion, social safeness, group well-being and group innovation were also examined (James, 1982). The ICC(1) value was .36 for self-compassion, .34 for social safeness, .65 for group well-being and .57 for group innovation. These values are above the median value of .10 for the ICC(1) value reported in the prior reviews of multilevel research (e.g., Bliese, 2000). The ICC(2) value was .90 for self-compassion, .89 for social safeness, .97 for group well-being and .95 for group innovation. These values are above the recommended cutoff of .47 (Schneider, White, & Paul, 1998). Accordingly, the use of the aggregate scores of self-compassion, social safeness, group well-being, and group innovation at the group level was justifiable.

The multilevel modeling technique was used as the analytical strategy to account for the nested nature of our study, i.e., employees nested within 26 teams (Preacher, Zyphur, & Zhang, 2010). All analyses were conducted using Mplus version 7.11 (Muthén & Muthén, 1998-2013). Research indicates that the sample size of higher-level data, in this case, group-level data, is the most important factor for statistical power (Snijders, 2005) and that a sample of 20-30 clusters constitutes a sufficient size if the aggregation indices (i.e., ICC[1] and ICC[2]) yield acceptable values, as in the present study (Bliese, 2000; Paccagnella, 2011). Taking this indication into consideration and following Cohen's (1988) study, the statistical power analysis suggests that for a study involving 8 predictors (i.e., 4 control variables, self-compassion, social safeness, group-level self-compassion and group-level social safeness), the minimum required sample size to have 80% power to detect an effect size (F^2) of 0.35 would be $N = 52$. Taken together, these considerations suggest that the size of our study sample was unlikely to lead to biased path estimates.

Results

Prior to testing the hypotheses, a confirmatory factor analysis (CFA) with a maximum likelihood estimation was conducted to examine the discriminant validity of the substantive variables. To maintain a favorable indicator-to-sample-size ratio, the high-to-low loadings parceling procedure outlined by Little, Cunningham, Shahar, and Widaman (2002) was used to conduct the confirmatory analysis (CFA), and the observed indicators, rather than the latent scores, of the substantive variables were used to test the hypothesized structural model. As seen from Table 1, the results showed that the six-factor model yielded a satisfactory fit to the data ($\chi^2 [224] = 421.76$, CFI = .91, RMSEA = .09, SRMR = .05), which was also significantly better than that of alternative models ($p < .01$). These findings hence provided evidence of the discriminant

validity of the study variables. Moreover, due to the cross-sectional and self-report nature of the responses to the self-compassion and social safeness items, the relationship between the two variables, at both the individual and group level, could be affected by common method variance. To rule out this possibility, we followed Podsakoff et al.'s (2012) statistical recommendation of adding an orthogonal latent method factor to a four-factor model including self-compassion, social safeness, group-level self-compassion and group-level social safeness to examine the potential improvement of the model fit that would be obtained by this unmeasured method factor. The results revealed that although the fit of the two-factor model with the method factor was significantly better than that of the model without the method factor ($\Delta\chi^2[12] = 74.96, p < .01$), only 9% of the total variance was explained by the method factor; this amount is moderately lower than the average amount of method variance (25%) reported in organizational self-report studies (Podsakoff et al., 2012). These results thus suggest that common method bias was not a serious concern in the present investigation.

[Insert Table 1 here]

Table 2 displays the descriptive statistics, correlations and reliability coefficients for the study variables. Interestingly, the correlation between group well-being and group innovation ($r = .75, p < .01$) was moderately higher than the correlation between these variables at the individual level ($r = .49, p < .01$). This difference can be explained by the fact that, unlike the items of the individual well-being scale, those of the group well-being measure refer primarily to a range of positive affective states (i.e., enthusiasm, positive energy, pride, morale, and team spirit) that have been extensively shown to be strong correlates of group innovation (e.g., Shin, 2014). Instead, the items of the individual-level scale capture additional and more varied aspects of the state of well-being (e.g., meaningfulness of the work life, supportive relationships, self-

esteem, optimism), which have been shown to be indirect predictors or moderators of individual innovation, rather than proximal correlates of it (e.g., Yuan & Woodman, 2010).

[Insert Table 2 here]

Table 3 shows the results for all the main effects on social safeness. At the individual level, self-compassion was positively associated with social safeness ($\beta = .43, p < .01$), which in turn was positively related to individual well-being ($\beta = .63, p < .01$) and individual innovation ($\beta = .25, p < .01$). At the group level, self-compassion was positively related to social safeness ($\beta = .38, p < .01$), and this latter positively predicted group well-being ($\beta = .76, p < .01$) and group innovation ($\beta = .66, p < .01$). Moreover, except for the direct relationship between individual self-compassion and individual innovation ($\beta = .26, p < .01$), none of the direct paths from self-compassion, at either the individual or group level, to individual and group well-being and innovation were significant. Finally, the results from the analyses of the indirect effects revealed that, at the individual level, social safeness significantly mediated the relationship between self-compassion and both individual well-being (indirect effect = .23, 95% CI = .13, .33) and individual innovation (indirect effect = .12, 95% CI = .03, .21). Likewise, at the group level, social safeness significantly mediated the relationship between self-compassion and both group well-being (indirect effect = .76, 95% CI = .24, 1.28) and group innovation (indirect effect = .45, 95% CI = .13, .84). Overall, these results support Hypotheses 1-10.

Finally, as prior research has documented a reverse relationship between social safeness and self-compassion (Kelly & Dupasquier, 2016), we tested an alternative model in which social safeness indirectly predicted innovation and well-being through the mediating role of self-compassion. The results revealed that the reverse relationship between social safeness and self-compassion was significantly positive at both the individual ($\beta = .30, p < .01$) and group ($\beta = .38,$

$p < .05$) level and that self-compassion was positively associated with individual innovation ($\beta = .25, p < .05$). However, the self-compassion–individual well-being relationship ($\beta = .05, ns$), the group-level self-compassion–group innovation relationship ($\beta = -.06, ns$) and the group-level self-compassion–group well-being relationship ($\beta = -.03, ns$) were all nonsignificant. These findings suggest that while self-compassion and social safeness can mutually influence each other, social safeness is a more pertinent and effective mediator than self-compassion, which yields further support for our hypotheses.

[Insert Table 3 here]

Discussion

Theoretical and practical implications

The results from this study have important theoretical implications for the research on self-compassion, social safeness, well-being, and innovation at work. Prior research has suggested and empirically demonstrated that mindfulness – i.e., a quality that underlies self-compassion – emerged as a group-level property through interactions and shared experiences among team members and that it helped prevent team relationship conflict (Yu & Zellmer-Bruhn, 2018). By documenting the benefits of group-level self-compassion on group well-being and innovation through the mediating role of group-level social safeness, our investigation suggests that team members are able to not only be collectively mindful (of their own suffering) but can also mutually develop soothing and caring attitudes towards themselves (i.e., common humanity and self-kindness). Moreover, and importantly, the present study indicates that when all these properties are combined together at the team level, they can trigger positive social affective experiences and thereby uniquely contribute to increasing group functioning (i.e., higher innovation and well-being), rather than preventing the occurrence of negative group

experiences – as in the case of team mindfulness alone. As such, our findings take a new and important step forward into the disclosure of the different roles that self-compassion and mindfulness can exert at the team level in shaping work groups' dynamics and their related outcomes.

By providing evidence for the emergence of self-compassion and social safeness as group-level phenomena, our investigation provides new inputs for future administrative science research on the role of group-level personality characteristics and affective states in group functioning in organizations. Indeed, separate streams of research have shown that deep-level composition variables, such as a creative team personality (Somech & Drach-Zahavy, 2013), and group-level affective states, such as an affective team tone (Barsade & Knight, 2015), are associated with higher levels of team creativity in the workplace. This study breaks new ground by integrating these streams of literature for the first time to suggest that group-level affective states (i.e., group-level social safeness) play a key role in explaining the benefits of group-level personality characteristics (i.e., group-level social safeness) in group functioning. Likewise, by providing evidence for an analogous input-process-output path at the individual level, our investigation combines and extends the prior studies that have separately documented the benefits of personality characteristics and affective states for employee creativity/innovation (Anderson et al., 2014) and well-being (Alarcon, 2011).

By empirically documenting the beneficial effects of self-compassion, this study has important practical implications for management. Indeed, the research suggests that self-compassion can be trained and fostered through the use of specific interventions, such as compassionate mind training (CMT; Gilbert & Procter, 2006) and mindful self-compassion (MSC; Neff & Germer, 2012). The results suggest that organizations can improve their

innovation and well-being management practices by combining them with approaches that are focused on developing the core skills underlying employees' and groups' self-compassion. Caring approaches towards oneself represent core components of a compassionate organizing in the workplace (Dutton et al., 2007; Worline & Dutton, 2017). This study suggests that to promote innovation and well-being at multiple levels, organizational policies should encourage not only the application of self-compassion training programs but also the implementation of other types of relevant human resource management and the development of practices that highlight an organizational emphasis on and support of (self-)compassionate approaches at work (Williams & Shepherd, 2018).

Limitations and Directions for Future Research

The findings from this study are tempered by certain limitations. First, the self-report nature of the research could lead to common method bias. However, the procedural (i.e., temporal separation between measurements) and statistical (i.e., common method factor approach) remedies recommended by Podsakoff and colleagues (2012) to alleviate method bias were followed. Second, although this study adopted a time-lagged design, the findings are correlational in nature and therefore cannot imply causality. Thus, while a positive relationship between the variables exists, experimental and longitudinal research (i.e., full-panel studies and diary studies) would be necessary to draw causal conclusions. Third, the sample size and the related number of groups were small, hence limiting the generalizability of the findings. Future research could enhance the validity of this study with a larger sample. However, it is worth noting that multilevel research on small samples and with a relatively low number of groups (i.e., 20-30) can still provide accurate estimates (Paccagnella, 2011), especially if the aggregation indices are satisfactory (Bliese, 2000). Finally, despite the limitations associated with the small

sample size, the high heterogeneity our data, as represented by the varied range of industry sectors to which surveyed participants belonged (i.e., healthcare, entertainment, finance, wholesale and retail, manufacturing, and agriculture), contributed to the external validity of our findings.

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Table 1

Fit Indices for Confirmatory Factor Analyses

| Model | χ^2 | <i>df</i> | $\Delta \chi^2$ | Δdf | CFI | RMSEA | SRMR |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------|-----------------|-------------|-----|-------|------|
| Hypothesized eight-factor model | 421.76* | 224 | – | – | .91 | .09 | .05 |
| Seven-factor models | | | | | | | |
| Combining self-compassion and social safeness | 552.92* | 231 | 131.16* | 7 | .85 | .12 | .10 |
| Combining group-level self-compassion and group-level social safeness | 598.53* | 231 | 176.77* | 7 | .83 | .13 | .10 |
| Combining individual well-being and group well-being | 538.39* | 231 | 116.63* | 7 | .86 | .11 | .08 |
| Combining individual innovation and group innovation | 569.43* | 231 | 147.67* | 7 | .84 | .12 | .10 |
| Six-factor models | | | | | | | |
| Combining self-compassion and social safeness, and individual well-being and group well-being | 669.29* | 237 | 247.53* | 13 | .80 | .13 | .11 |
| Combining group-level self-compassion and group-level social safeness, and individual well-being and group well-being | 714.21* | 237 | 292.45* | 13 | .78 | .14 | .11 |
| Combining self-compassion and social safeness, and individual innovation and group innovation | 700.79* | 237 | 279.03* | 13 | .79 | .14 | .13 |
| Combining group-level self-compassion and group-level social safeness, and individual innovation and group innovation | 745.18* | 237 | 323.42* | 13 | .77 | .15 | .13 |
| Five-factor models | | | | | | | |
| Combining self-compassion and social safeness, group-level self-compassion and group-level social safeness, and individual well-being and group well-being | 795.95* | 242 | 374.19* | 18 | .74 | .15 | .12 |
| Combining self-compassion and social safeness, group-level self-compassion and group-level social safeness, and individual innovation and group innovation | 826.33* | 242 | 404.57* | 18 | .73 | .15 | .14 |
| Four-factor model (Combining self-compassion and social safeness, group-level self-compassion and group-level social safeness, individual well-being and group well-being, and individual innovation and group innovation) | 941.76* | 246 | 520.00* | 22 | .68 | .17 | .15 |
| Three-factor model (Combining self-compassion and social safeness, group-level self-compassion and group-level social safeness, and individual well-being, group well-being, individual innovation and group innovation) | 1166.15* | 249 | 744.39* | 25 | .58 | .19 | .16 |
| One-factor model | 1422.62* | 252 | 1000.86* | 28 | .46 | .21 | .15 |

Note. *N* = 101. CFI = comparative fit index; RMSEA = root-mean-square error of approximation; SRMR = standardized root mean square residual.

* *p* < .01.

Table 2

Descriptive Statistics and Correlations

| Variables | <i>M</i> | <i>SD</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|--------------------------------|----------|-----------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1. Gender | – | – | – | | | | | | | | | | | |
| 2. Age | 39.13 | 10.51 | .08 | – | | | | | | | | | | |
| 3. Education | – | – | –.15 | .00 | – | | | | | | | | | |
| 4. Organizational tenure | 9.19 | 8.63 | .64** | –.04 | –.13 | – | | | | | | | | |
| 5. Self-compassion | 3.63 | 0.55 | .23* | .03 | –.08 | .14 | (.79) | | | | | | | |
| 6. Social safeness | 3.82 | 0.71 | –.00 | .12 | –.14 | –.02 | .33** | (.93) | | | | | | |
| 7. Group-level self-compassion | 3.36 | 0.36 | –.02 | .19 | –.18 | .17 | .65** | .25* | (.86) | | | | | |
| 8. Group-level social safeness | 3.82 | 0.46 | .12 | –.04 | –.19 | –.10 | .25* | .65** | .38** | (.95) | | | | |
| 9. Individual well-being | 4.09 | 0.63 | .04 | .21* | –.23* | .08 | .28** | .65** | .19 | .39** | (.90) | | | |
| 10. Group well-being | 3.25 | 1.12 | –.17 | .26** | –.23* | –.12 | .19 | .55** | .22* | .63** | .59** | (.95) | | |
| 11. Individual innovation | 3.18 | 0.80 | –.04 | .14 | .01 | .00 | .30** | .44** | .17 | .41** | .49** | .44** | (.94) | |
| 12. Group innovation | 3.11 | 0.88 | –.15 | .19 | –.02 | –.13 | .16 | .41** | .12 | .52** | .51** | .75** | .51** | (.71) |

Note. $N = 101$. Internal consistency coefficients (Cronbach's alphas) appear along the diagonal in parentheses.

* $p < .05$; ** $p < .01$

Table 3

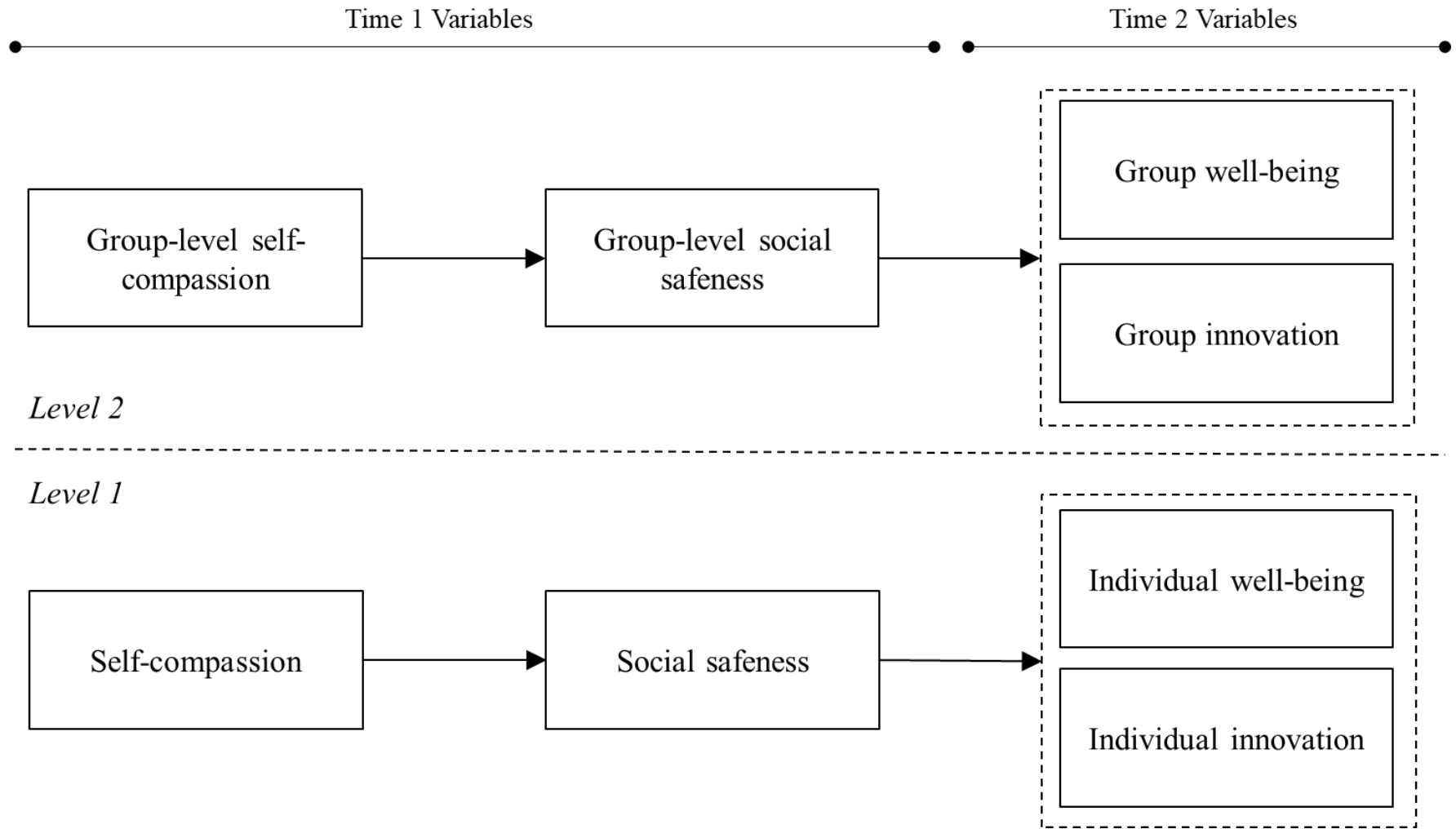
Multilevel Model Predicting Social Safeness, Individual Well-being, Group-level Social Safeness, Group Well-being and Group Innovation

| Variables | Social safeness | Individual well-being | Individual innovation | Group-level social safeness | Group well-being | Group innovation |
|-----------------------------|-----------------|-----------------------|-----------------------|-----------------------------|------------------|------------------|
| <i>Level 1</i> | | | | | | |
| Gender | .04 | .08 | .07 | | | |
| Age | -.10 | .01 | -.10 | | | |
| Educational level | -.04 | -.04 | .00 | | | |
| Organizational tenure | .10 | .14 | .12 | | | |
| Self-compassion | .32** | .05 | .26** | | | |
| Social safeness | | .63** | .25* | | | |
| <i>Level 2</i> | | | | | | |
| Group-level self-compassion | | | | .38* | -.03 | -.06 |
| Group-level social safeness | | | | | .76** | .66** |
| <i>Quality criteria</i> | | | | | | |
| R^2 within | .11 | .47 | .19 | .15 | .56 | .41 |
| R^2 between | .49 | .66 | .80 | . | | |

Note. $N = 101$. Except for R^2 row, entries are standardized multilevel regression coefficients.

* $p < .05$; ** $p < .01$.

Figure 1. Conceptual model.



Appendix
French Version of Scale Items

Self-compassion (Raes et al., 2011)

1. Lorsque j'échoue devant quelque chose d'important, je suis rongé(e) par un sentiment d'incompétence (R)
2. J'essaie d'être compréhensif(ve) et patient(e) vis-à-vis des aspects de ma personnalité que je n'aime pas
3. Lorsqu'un événement douloureux survient, j'essaie d'envisager la situation de manière équilibrée
4. Lorsque je suis déprimé(e), j'ai l'impression que la plupart des gens sont probablement plus heureux que moi
5. Je me dis que mes échecs font partie de la condition humaine
6. Lorsque je traverse une période très difficile, je m'accorde l'affection et la tendresse dont j'ai besoin
7. Lorsque quelque chose me perturbe, j'essaie de relativiser mes émotions
8. Lorsque j'échoue devant quelque chose d'important, j'ai tendance à me sentir seul(e) devant mon échec (R)
9. Lorsque je suis démoralisé(e), j'ai tendance à faire une obsession et une fixation sur tout ce qui ne va pas (R)
10. Lorsque je me sens incompétent(e), j'essaie de me rappeler que la plupart des gens partagent ce sentiment d'incompétence
11. Je désapprouve et je juge mes propres défauts et mes imperfections (R)
12. Je suis intolérant(e) et impatient(e) envers les aspects de ma personnalité que je n'aime pas (R)

Social safeness (Gilbert et al., 2009)

Au travail...

1. Je me sens satisfait de mes relations
2. Je me sens facilement apaisé par ceux qui m'entourent
3. Je me sens lié aux autres
4. J'ai l'impression de faire partie de quelque chose plus grand que moi
5. J'ai le sentiment que les autres se soucient de moi
6. Je me sens en sécurité et apprécié des autres
7. Je ressens un sentiment d'appartenance
8. Je me sens accepté des autres
9. Je me sens compris des autres
10. Je sens que mes relations avec les gens sont empreintes de chaleur
11. Je me sens facilement calmé par les gens proches de moi

Individual well-being (Diener et al., 2010)

Au travail...

1. Je mène une vie qui a un but et du sens
2. Mes relations sociales me soutiennent et sont enrichissantes
3. Je suis impliqué(e) et intéressé(e) par mes activités quotidiennes
4. Je contribue activement au bonheur et au bien-être des autres

5. Je suis compétent(e) et appliqué(e) dans les activités qui sont importantes pour moi
6. Je suis quelqu'un de « bien » qui a une « bonne » vie
7. Je suis optimiste quant à mon avenir
8. Les gens me respectent

Individual innovation (Janssen, 2000)

1. Développer de nouvelles idées pour régler les difficultés rencontrées
2. Chercher de nouveaux outils, méthodes ou techniques de travail
3. Produire des solutions originales afin de résoudre des problèmes
4. Mobiliser le support des autres pour des idées innovantes
5. Obtenir l'approbation des autres pour des idées innovantes
6. Rendre les membres importants de l'organisation enthousiastes au sujet des idées innovantes
7. Transformer les idées innovantes en applications utiles
8. Introduire systématiquement des idées innovantes en milieu de travail
9. Évaluer l'utilité des idées innovantes

Group well-being (Young, 2000)

1. Il y a un bon esprit d'équipe dans ce groupe
2. Il y a beaucoup d'énergie positive dans ce groupe
3. Le moral est bon dans ce groupe
4. Dans ce groupe, les employés font leur travail avec enthousiasme
5. Les employés sont fiers de ce groupe

Group innovation (de Dreu, 2002)

1. Dans ce groupe, les employés mettent souvent en place de nouvelles idées pour améliorer la qualité de nos produits et des services
2. Ce groupe accorde peu d'importance à des méthodes et procédures de travail nouvelles ou différentes (R)
3. Dans ce groupe, les employés créent souvent de nouveaux services, méthodes ou procédures
4. C'est un groupe innovant