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LMX and Well-Being: Psychological Climates as Moderators of their Concurrent and Lagged Relationships

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Abstract

The importance of the quality of leader member exchange (LMX) for workers' health and well-being is acknowledged in the literature, and empirical research addressing this issue is beginning to accumulate. However, recent reviews on this topic recommend making a greater effort to include time and boundary conditions in this relationship. The present study aims to analyze the effects of LMX on employees' well-being, and the moderating role of psychological climate, by means of a longitudinal study with a 12-month time lag. Data were obtained from 119 employees working in the Public Health Service . Results show that LMX had concurrent and lagged positive effects on well-being. Perceptions of higher levels of innovation climate increased the positive effects of LMX on well-being. Perceptions of higher levels of goals orientation decreased the positive effects of LMX on well-being. In practical terms, organizations must pay attention to the environment where LMX emerges in order to promote its positive effects or reduce its potential negative effects on workers' health.

Keywords: leader-member exchange, well-being, organizational climate.

LMX e Bem-Estar: Climas Psicológicos como Moderadores de seus Relacionamentos Simultâneos e Retardados

Resumo

A importância da qualidade do relação líder-liderado (*leader member exchange* - LMX) para a saúde e o bem-estar dos trabalhadores é reconhecida na literatura, e pesquisas empíricas que abordam essa questão estão começando a se acumular. No entanto, revisões recentes sobre este tópico recomendam fazer um esforço maior para incluir as condições de tempo e limites desta relação. O presente estudo tem como objetivo analisar os efeitos do LMX no bem-estar dos funcionários e o papel moderador do clima psicológico, por meio de um estudo longitudinal com 12 meses de distância. Os dados foram obtidos junto a 119 funcionários que atuam no Serviço Público de Saúde. Os resultados mostram que o LMX teve efeitos positivos simultâneos e díspares no bem-estar. As percepções de níveis mais elevados de clima de inovação aumentaram os efeitos positivos do LMX no bem-estar. Percepções de níveis mais elevados de orientação para metas diminuíram os efeitos positivos do LMX no bem-estar. Em termos práticos, as organizações devem prestar atenção ao ambiente onde o LMX emerge, a fim de promover seus efeitos positivos ou reduzir seus potenciais efeitos negativos na saúde dos trabalhadores.

Palavras-chave: relação líder-liderado, bem-estar, clima organizacional.

LMX y Bienestar: Climas Psicológicos como Moderadores de sus Relaciones Concurrentes y Diferidas

Resumen

La importancia de la calidad del intercambio de miembros líderes (*leader member exchange* - LMX) para la salud y el bienestar de los trabajadores se reconoce en la literatura, y la investigación empírica que aborda este tema está comenzando a acumularse. Sin embargo, revisiones recientes sobre este tema recomiendan hacer un mayor esfuerzo para incluir el tiempo y posibles factores condicionantes de dichas relaciones. El presente estudio tiene como objetivo analizar los efectos de LMX en el bienestar de los empleados y el papel modulador del clima psicológico, mediante un estudio longitudinal con un desfase de 12 meses. Los datos se obtuvieron de 119 empleados del Servicio de Salud Pública. Los resultados muestran que LMX tuvo efectos positivos simultáneos y diferidos sobre el bienestar. Las percepciones de niveles más altos de clima de innovación aumentaron los efectos positivos de LMX en el bienestar. Las percepciones de niveles más altos de orientación a metas disminuyeron los efectos positivos de LMX en el bienestar. En términos prácticos, las organizaciones deben prestar atención al entorno en el que surge LMX para promover sus efectos positivos o reducir sus posibles efectos negativos en la salud de los trabajadores.

Palabras clave: intercambio líder-miembro, bienestar, clima organizacional.

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The pivotal role leaders play in subordinates' occupational health has been addressed in recent reviews on the topic (Inceoglu et al., 2018; Montano et al., 2017; Peiró, 2017; Skakon et al., 2010). Leaders are the visible heads of organizations, and they are responsible for designing and defining the environment where employees carry out their work (Skakon et al., 2010). Thus, they are in charge of promoting different features and processes that might influence employees' work experiences. Leadership's important role in the health and well-being of workers has been acknowledged, focusing on both sides of the coin: the consideration of leaders as potential stressors and as health enhancers (Diebig, Bormann & Rowold, 2016; Kelloway et al., 2004; Peiró & Rodríguez, 2008). Leaders can act as stressors when they make high demands and/or exercise poor or abusive leadership (e.g. Mackey et al., 2020; Schyns & Schilling, 2013). Moreover, ineffective leadership can expose employees to other workplace stressors, such as role overload (Jian & Dalisay, 2018) and job insecurity (Olaniyan & Hystad, 2016). Effective leadership can also be a key factor in developing healthy employees and sustainable organizations (Di Fabio & Peiró, 2018). The social context of the workplace is a key factor in determining employees' well-being (Consiglio et al., 2016; Tetrick & Peiró, 2012), in which the relationship with the leader plays a central role. Leaders can facilitate the access to valuable resources, such as autonomy, recognition and rewards, or opportunities for self-development. These resources can directly foster well-being or buffer the negative effects of job demands (Gregersen, Vincent-Höper & Nienhaus, 2016).

However, empirical research on leadership has mainly focused on leadership effectiveness, whereas subordinates' health has mostly been ignored as a relevant factor (Kelloway & Day, 2005), considering it only as a mediator (Grant et al., 2007) or less relevant outcome (Inceoglu et al., 2018). This is also the case for the LMX literature. Indeed, LMX research has been prolific (Bauer & Erdogan, 2015), and it originally focused on the effects of leadership on performance-related issues. Thus, more research with well-being as a criterion for leadership effectiveness is needed to further understand these processes. Moreover, most of the research on this issue has primarily focused on subordinates' job satisfaction through cross-sectional designs, leaving out other aspects of well-being, such as general health or affect (Inceoglu et al., 2018). All these aspects limit the possibility of drawing conclusions about causal relationships and obtaining a complete picture of the link between leadership and well-being (Inceoglu et al., 2018).

Different theoretical approaches have proposed and explored a positive relationship between effective leadership and employee well-being. The leader-member exchange theory has been shown to be an appropriate framework for studying these relationships (Montano et al., 2017). Compared to other leadership approaches, it has been suggested as the best one for exploring these connections (Gregersen, et al., 2014). For instance, in their meta-analysis on leadership and health, Montano and colleagues (2017) found that LMX was associated with higher levels of well-being and functioning. They also found that LMX was related to lower levels of affective symptoms, such as burnout, stress, and health complaints. Moreover, well-being mediated the relationship between LMX and performance.

As in the general leadership literature, in the context of the LMX approach, the analysis of the influence of LMX on other dimensions of subordinates' well-being, such as affect, is relatively poor (Ellis et al., 2019). Moreover, most of this research has been cross-sectional (Montano et al., 2017; Nielsen & Taris, 2019), which keeps researchers from drawing conclusions about possible causal relationships. In addition, research has also pointed out the need to explore potential boundary conditions that might interact with LMX when its effects on employees' well-being are considered. In this regard, in their meta-analysis on the relationship between different leadership operationalizations (including LMX) and well-being and health, Montano and colleagues (2017) called for better data collection in the leadership context, in order to understand potential situational and organizational moderators of the relationship between leadership and health and well-being indicators. In a similar vein, recent reviews have recommended studying the moderating role of factors such as organizational change or organizational climate (Inceoglu et al., 2018).

Thus, the aim of the present study is to analyze the effects of LMX on two different indicators of employees' well-being, namely, work satisfaction and job-related affective well-being, and the moderator role of two psychological climates, specifically, innovation climate and goal orientation climate, in this relationship. For this purpose, we employ a 12-month time-lagged longitudinal design.

LMX and Well-being

The influence of leadership on stress and well-being has been approached from different theoretical frameworks that contribute to understanding these phenomena. As mentioned earlier, some authors have found a statistical advantage of the LMX approach when systematically comparing the relevance of different leadership constructs for employees' perceived well-being (Gregersen et al., 2014). Indeed, this approach has evolved into a useful framework with which to understand leadership's effects on several perceptual, attitudinal, and behavioral outcomes. LMX theory is based on the premise that leaders do not use the same style or behaviors uniformly with all subordinates. Instead, leaders tend to form unique relationships with each subordinate (Graen & Cashman, 1975; Martin et al., 2018). Reciprocal high-quality exchange relationships are usually described as having positive levels of respect and trust. Accordingly, high LMX subordinates represent the "in-group", which is characterized by privileged communication, whereas those who do not have a high quality LMX relationship form the "out-group".

On the one hand, individuals who achieve an in-group status benefit from receiving desirable work assignments and increased levels of support from their supervisor. Moreover, the in-group members are often offered more decision latitude at work (Choy et al., 2016). On the other hand, out-group members are expected to adhere to the basic elements of the employment contract, where work is simply exchanged for a wage, with little opportunity for a favorable superior–subordinate interaction (Bauer & Green, 1996). Out-group members rarely, if ever, meet with supervisors, they receive little performance feedback, and they are frequently given unexciting, monotonous tasks, which led Lagace (1990) to classify these individuals as "hired hands" (p. 12).

Leaders in high-quality dyads have been described as important resources for employees, and research has found that subordinates who enjoy high LMX are more likely to receive training opportunities, control over their work, information, support (Liden, Wayne, & Sparrowe, 2000;), or better communication quality (Nielsen, 2017). For those reasons, high-quality LMX is expected to positively affect employees' well-being.

In this regard, the relationship between LMX quality and stress has been explored, and research has found that LMX is negatively related to the perception of stressors at work, such as role ambiguity, role conflict, role overload, and work–life conflict (e.g. Culbertson et al., 2010; Dunegan et al., 2002; Gerstner & Day, 1997; Tordera et al., 2008). Similarly, LMX has been negatively

related to the overall experience of stress and lower levels of burnout (Huang et al., 2010; Son et al., 2014). These results were confirmed in a recent meta-analysis by Harms et al. (2017).

Research has also extensively studied the relationship between LMX and cognitive aspects of job related well-being, such as job satisfaction, consistently finding positive relationships (Dulebohn et al., 2012, Gerstner & Day, 1997; Liao, Chung & Chen, 2017). Some studies have also considered context-free well-being indicators, such as life satisfaction, and found them to be related to LMX quality (González-Navarro et al. 2019; Kacmar et al., 1999).

However, it should be noted that employee well-being is a broad concept that comprises several conceptualizations and operationalizations, ranging from physical health to job satisfaction, engagement, or psychological well-being. As Inceoglu et al. (2018) state, research needs to extend the criterion pool to better understand the relationship between leadership behaviors and employees' well-being. One important area of research in organizational and occupational health psychology is the study of the affective aspects of work (Brief & Weiss, 2002; Mäkikangas et al., 2016). Affect is a central indicator of individuals' subjective well-being, which, when related to work, can help to understand how specific work characteristics contribute to employees' well-being (Laguna et al., 2016; Van Horn et al., 2004). Whereas cognitive aspects of well-being such as job satisfaction have received considerable attention, the affective components have been explored less. In the context of LMX research, an increasing number of studies have addressed its relationship with affective facets of job-related well-being (Audenaert et al., 2017; Epitopraki & Martin, 1999, 2005; Martin et al., 2005), mainly using cross-sectional research designs. The incorporation of time in the simultaneous study of affective and cognitive facets of well-being might be especially important because their structural differences might be linked to the way they are affected by personal and contextual factors over time (Diener et al., 2018).

Longitudinal research on the relationship between leadership and well-being in general is scant (Inceoglu et al., 2018). However, in recent years, the LMX approach has addressed these questions through some type of longitudinal design. For instance, using a diary methodology, Ellis et al., (2019) tested the relationship between daily fluctuations in LMX quality and daily reports of employees' emotional exhaustion and vigor. The authors found that daily LMX perceptions were positively related to reports of vigor and negatively related to emotional exhaustion. Gregersen and colleagues (2016) also found support for the lagged relationship between LMX quality and lower levels of emotional exhaustion in a sample of healthcare workers. Nevertheless, further longitudinal research is needed, so that inferences about causality can be made and conclusions can be generalized to other operationalizations of well-being. Moreover, in this type of longitudinal research, there is not yet a clear understanding of the similarity of the associations between LMX and well-being in the short and long term. In addition, there is a need for research about whether these associations are different depending on the facet of subjective well-being considered (i.e. affective and cognitive components). Previous research has pointed out conceptual and functional differences in the way affective and cognitive components of subjective well-being are associated with personal and external factors, suggesting differences in the association over time (Luhmann et al. 2012; Luhmann, 2017). However, research remains mainly focused on cognitive facets of well-being.

Thus, taking previous research into account, we aim to test the relationships between LMX quality and four different indicators of well-being, namely job satisfaction and three facets of job-related affective well-being (Enthusiasm-depression, Comfort-Anxiety, and Vigor-tiredness). Moreover, to analyze these relationships in the short and long term, we included a two-wave design with measures separated by 12 months to test concurrent and cross-lagged effects. Accordingly, we propose the following hypotheses:

Hypothesis 1a. In Time 2, LMX quality will be positively related to job satisfaction and job-related affective well-being, after controlling the levels of well-being in Time 1

Hypothesis 1b. LMX quality in Time 1 will be positively related to changes in job satisfaction and job-related affective well-being between Time 1 and Time 2

The Context of LMX: Organizational Climate as a Boundary Condition

Leadership does not occur in a vacuum (Nielsen, 2017). As the social ecological approach to well-being highlights, the context where this relationship evolves and the conditions leaders and employees experience can influence leadership's effects on several outcomes, such as well-being (Diener et al., 2018). To date, little research has approached the study of the boundary conditions of good leadership (Inceoglu et al., 2018; Nielsen & Taris, 2019), but potential moderators have been suggested at different organizational levels. In this regard, empirical research shows that factors such as employees' type of contract (Kanste et al.,2007), leaders' support from peers (Tafvelin et al., 2019), or culture (Zwingmann et al., 2017; González-Navarro et al., 2019) moderate the relationship between leadership behaviors and/or style and employees' well-being.

The relevance of the organizational context has been pointed out in LMX research. For instance, Dienesch and Liden (1986) stated that the values and norms of the organizational context might influence the effects of LMX on different behavioral outcomes. Thus, some authors have suggested examining the possible moderators of the relationship between LMX and outcomes (Cogliser & Schriesheim, 2000; Gerstner & Day, 1997). Moreover, some research has found support for a curvilinear relationship between LMX and certain aspects of well-being (Harris & Kacmar, 2006), again suggesting the need to consider potential moderators that may represent the conditions under which LMX quality leads to lower or higher levels of well-being. However, as Schriesheim et al. (2001, p. 525) pointed out, for a long time "situational moderators of LMX have infrequently been proposed and studied". In recent decades, a number of studies have considered these contextual variables.

For instance, Audenaert et al. (2017), using a time-lagged design, analyzed the role of the employment relationship, a composite measure formed by different indicators of HR policies, as a moderator of the relationship between LMX quality and two well-being indicators (i.e., job satisfaction and emotional exhaustion). The authors found that consistency between HRM and leader behavior was a key in determining employees' well-being through its effects on employees' empowerment. More specifically, the effects of LMX quality on well-being were found to be stronger when the context involved social exchange. Moreover, LMX could compensate for the lack of resources encountered in less favorable employment relationships.

Research has also proposed that organizational climate is an appropriate measure of the way the context can influence the relationship between LMX and well-being. Organizational climate is a broad concept encompassing employees' perceptions of the work environment, in terms of procedures, practices, and behaviors (Rousseau, 1988; Schneider, 1990) that reflect the values, normative beliefs, and assumptions that characterize the

organization's culture. Moreover, different dimensions have been proposed and examined leading to the definition of both generic and focused climates. For both types, many studies have shown that organizational climate is positively related to employees' well-being (Paulin & Griffin, 2016, Viitala et al., 2015). LMX is a valuable resource for employees that provides them with high levels of trust, support, and autonomy and, in turn, affects their well-being. However, these resources might be especially beneficial for the well-being of employees in more enriched and/or demanding work contexts. Indeed, in these contexts, the autonomy and support provided by leaders are more helpful for dealing with opportunities to accomplish tasks, implementing new ideas, or reaching higher levels of achievement and self-development. In this regard, LMX quality and organizational climate could create unique synergies that will positively influence employees' well-being.

Previous research has examined certain facets of psychological climate as moderators of the relationship between LMX and desirable employee outcomes. For instance, Hofmann and colleagues (2003) found that safety climate moderated the relationship between LMX and subordinates' safety citizenship, so that for employees with higher perceptions of safety climate, the relationship between LMX and the consideration of safety citizenship behaviors as part of their formal role was stronger. In a similar vein, research has found that fairness climate moderates the relationship between LMX and OCB (Sun et al., 2013), and procedural justice climate moderates the relationship between LMX and voice behavior (Hsiung, 2012).

In the case of well-being, we propose that certain dimensions of psychological climate could be moderating its relationship with LMX because, in certain work environments, employees could benefit more from the quality of their exchanges with their leaders than in others (Britt et al., 2004). Indeed, previous research has shown that different psychological climate dimensions moderate the relationship between LMX and the perception of role overload (Tordera et al., 2008). More specifically, perceptions of highly enriched climates oriented toward support, innovation, goals, and rules were found to strengthen the negative relationship between LMX and role overload. In another study, Radulovic and colleagues (2019) found that forgiveness climate moderated the indirect effect of follower LMX quality on follower job satisfaction and subjective well-being, showing that contextual features related to climate perceptions contributed to strengthening the relationship between LMX and well-being.

Two important features of the work environment that characterize today's organizations are their orientations toward goals and innovation. Work environments characterized by a high orientation toward innovation might provide a more enriching context where employees can find higher levels of meaningfulness and opportunities for growth. This would be achieved by looking for new solutions to problems, finding new ways of working, elaborating new products or services, or implementing novel ideas. Indeed, innovation climate has been positively related to well-being and negatively to stress reactions (González-Romá et al., 2002; Newman et al., 2019). At the same time, innovative environments require a high level of cognitive and emotional resources (Montani et al., 2019). In such contexts, the resources provided by high LMX quality, such as information, support, and autonomy, will be more valuable. Hence, we propose that employees with higher perceptions of innovation climate will benefit more from LMX in staying well.

Hypothesis 2a. Innovation climate moderates the relationship between LMX and well-being, so that the higher the level of innovation climate, the stronger the positive relationship between LMX and well-being

Goal achievement is a key factor in organizations' success. Work environments oriented toward goals could make greater demands for high performance. At the same time, they can be defined as environments oriented towards mastery, where knowledge and skill development, learning, and growth are emphasized (Andriaenssens et al., 2015). High levels of mastery goal orientation have been related to higher levels of engagement and lower levels of burnout (Andriaenssens et al., 2015). With regard to climate perceptions, a goal orientation climate has been positively related to occupational well-being (González-Romá et al., 2002). In a context with a higher orientation toward goals, the resources provided by leaders can create synergies that might increase their effect on employees' well-being. At the same time, the resources provided by LMX, such as autonomy, support, and trust, can be more useful in work environments characterized by a goal orientation climate. Therefore, we hypothesize the following:

Hypothesis 2b. Goal orientation climate moderates the relationship between LMX and well-being, so that the higher the level of goal orientation climate, the stronger the positive relationship between LMX and well-being

In sum, the relationship between leaders and employees can be important for employees' affective well-being. When LMX quality is high, the resources provided by the leaders can positively affect employee well-being. Moreover, LMX quality can have a stronger impact under certain environmental conditions reflected in psychological climates. When the work environment highlights the importance of innovation and goal attainment, the resources provided by leaders can become more critical in helping employees to actively and effectively participate in innovation activities and achieve work-related goals. Therefore, we expect these facets of climate to have a relevant moderating role that can help to understand and optimize the relationship between LMX and employee well-being.

Methods

Sample and Procedure

The two-wave longitudinal sample employed in this study was composed of 119 non-supervisor employees who worked in 19 health care centers of a Regional Public Health Service in Spain. Questionnaires were distributed among the non-supervisor employees by a member of our research team who visited each of the 19 centers asking for cooperation and guaranteeing confidentiality of data. Participation was voluntary. The health care centers were composed of different health care professionals and support staff (i.e., psychiatrists, psychologists, family physicians, pediatricians, nurses, social workers, and auxiliary and administrative personnel). In each of these centers, a physician performed the role of supervisor. Questionnaires were returned by mail. Three hundred and twenty-four non-supervisor employees responded to all the questionnaire items in the first wave. The second data collection took place 12 months later. Two hundred and forty-three non-supervisor employees responded in the second wave. Coincidences were obtained from 119 subjects. This sample composed of 119 subjects was used to test the study hypotheses. Thirty-nine percent of the sample was composed of males. Average age was 35.84 years (SD = 6.6), average organizational tenure was 9.6 years (SD = 5.4), and average professional tenure was 10.7 years (SD =5.7).

Measures

LMX was measured with the 7-item Leader Member Exchange

scale developed by Scandura and Graen (1984). Examples of items are as follows: "Do you know how satisfied your supervisor is with you?"; "To what extent do you find your supervisor able to understand your problems and needs?"; "To what extent do you think your supervisor recognizes your potential?"). Respondents answered using a 4-point response scale, where 1 indicated high quality LMX and 4 indicated low quality LMX. Prior to computing the LMX scores, we reversed the response scale, so that high scores indicated high quality LMX. Reliability analysis (Cronbach's alpha) yielded an internal consistency coefficient of .85 in Time 1 and .91 in Time 2.

Psychological climate dimensions were measured using the questionnaire developed by the FOCUS (First Organisational Climate/Culture Unified Search) international research group; for a detailed description, see Van Muijen et al. (1999). Innovation climate was measured with 12 items. An example of an item is "How many people are expected to find new forms to solve problems?" Goal orientation climate was measured with 14 items. An example of an item is "How often is individual appraisal directly related to the attainment of goals?". Subjects were asked to describe, not evaluate, the climate of their health center. This process was introduced "to maximize the respondent's use of actual experiences as a basis for describing a climate" (Joyce & Slocum, 1984, p. 727). Respondents answered using a 6-point response scale ranging from 1 (i.e., None or Never) to 6 (i.e., All or Always). The internal consistency coefficients (Cronbach's alpha) computed for each climate scale in Time 1 and 2 were, respectively, .85 and .89 for goals orientation and .81 and .78 for innovation orientation.

Job-related well-being was measured with the Spanish version, validated by Lloret and Tomás (1994), of the measure derived from the three scales of Warr's model of affective job well-being (1990): Job-related Enthusiasm-depression, job-related Anxiety–comfort, and job-related Vigor-tiredness. Each dimension has 6 items. They are pairs of adjectives related to measurable feelings or emotional states. Subjects had to respond by indicating how often they felt like the items reported, using a response scale with six levels (i.e. Never, Seldom, Sometimes, Often, Many times, and Always). The reliability of the scales was, respectively, .77, .83, and .82 in Time 1, and .84, .87 and .88 in Time 2.

Work satisfaction was measured with the questionnaire Work Satisfaction for Health Care Professionals working in Primary CSL-EAP/33 (Lloret et al., 1993). The scale has 33 items. The response scale ranges from 1 (i.e., Very Unsatisfied) to 7 (i.e., Very Satisfied). The reliability of the scale was .94 in Time 1 and .94 in Time 2.

Analyses

Separate hierarchical regression procedures (Cohen & Cohen, 1983) were used to examine the interaction between LMX and psychological climate on each indicator of well-being. We tested two different models, concurrent and lagged. In the concurrent model, we tested the synchronous direct influence of LMX on well-being. In the lagged model, we tested the time-lagged influence of LMX on well-being. In both cases, we examined the effects on well-being measures in T2, after controlling for their previous values in T1. In the concurrent analyses, the independent variables (i.e., LMX and psychological climate) are measured in T2. In the lagged analyses, the independent variables are measured in T1. The variables were introduced stepwise into the regression models as follows: prior levels of each dependent variable in step 1; LMX in step 2; innovation and goals climate in step 3; the interaction terms between LMX and each climate facet in step 4.

Results

Table 1 shows the bivariate correlations among the study variables. Consistent with previous research, the zero-order correlations showed that LMX at Time 1 was positively related to job satisfaction at Time 2, $r = 0.51$, $p < .001$, and to the three dimensions of job-related affect at Time 2: Enthusiasm-depression, $r = 0.25$, $p = .008$; Comfort-anxiety, $r = 0.26$, $p = .004$; Vigor-tiredness $r = 0.36$, $p < .001$. Thus, initial support was found for Hypothesis 1. The higher the quality of LMX, the higher the levels of work satisfaction and job-related affect.

As indicated previously, both concurrent and lagged hierarchical regression analyses were carried out to test the moderation hypotheses. The results for the concurrent analyses show that, after controlling for the previous levels of well-being at Time 1, LMX at Time 2 was significantly and positively related to: Job satisfaction, $F(1, 99) = 27.74$, $p < .001$, with an R^2 of 0.56; and Enthusiasm-depression $F(1, 102) = 4.35$, $p = .04$, with an R^2 of 0.18. The relationship with the other two indicators was significant only at the $p < .10$ level: Comfort-anxiety $F(1, 102) = 2.89$, $p = .09$, and Vigor-tiredness $F(1, 102) = 3.12$, $p = .08$ (see Table 2). Although the levels of significance of the results go beyond the conventional cut off point of $p < .05$, if the sample size is take

Table 1
Descriptive statistics and correlation coefficients of the considered variables

Factor	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. LMX T1	2.54	.56	(.85)													
2. Job satisfaction T1	3.86	.85	.63**	(.94)												
3. Enthusiasm-depression T1	3.63	.86	.22*	.34**	(.77)											
4. Comfort-anxiety T1	3.77	1.00	.24*	.43**	.71**	(.83)										
5. Vigor-tiredness T1	4.16	.88	.33**	.40**	.73**	.60**	(.82)									
6. Goals climate T1	2.88	.73	.47**	.58**	.22*	.14	.20*	(.85)								
7. Innovation climate T1	2.65	.62	.43**	.41**	.35**	.17	.41**	.65**	(.81)							
8. LMX T2	2.65	.67	.63**	.41**	.08	.08	.18	.35**	.26*	(.91)						
9. Job satisfaction T2	3.91	.87	.51**	.67**	.11	.28*	.25*	.53**	.38**	.59**	(.94)					
10. Enthusiasm-depression T2	4.14	.74	.25*	.38**	.37**	.44**	.37**	.25*	.20*	.23*	.41**	(.84)				
11. Comfort-anxiety T2	3.82	.79	.26*	.38**	.31**	.51**	.36**	.06	.07	.20*	.40**	.71**	(.87)			
12. Vigor-tiredness T2	4.05	.80	.36**	.36**	.25*	.35**	.47**	.13	.15	.25**	.40**	.64**	.68**	(.88)		
13. Goals climate T2	2.92	.78	.41**	.39**	.04	.01	.13	.68**	.41**	.50**	.58**	.22*	.12	.16	(.89)	
14. Innovation climate T2	2.64	.55	.40**	.28**	.09	.00	.22*	.58**	.58**	.51**	.51**	.22*	.07	.15	.74**	(.78)

Note. *$p < .05$, **$p < .01$ Data in brackets correspond to scales' alphas

Table 2
Concurrent hierarchical regression analysis of well-being indicators (T2) on LMX and psychological climate dimensions (T2)

Factors	Model 1			Model 2			Model 3			Model 4		
Job satisfaction (T2)	*B*	*SE B*	β	*B*	*SE B*	β	*B*	*SE B*	β	*B*	*SE B*	β
Job satisfaction (T1)	.59	.07	.66***	.45	.07	.50***	.41	.06	.46***	.40	.07	.45***
LMX (T2)				.33	.06	.39***	.22	.07	.25**	.25	.07	.30**
Goals climate (T2)							.17	.09	.19†	.16	.09	.18
Innovation climate (T2)							.09	.08	.11	.11	.09	.12
LMX*goals climate										-.01	.09	-.02
LMX* innovation climate										.08	.08	.11
R^2	.44			.56			.61			.62		
F for change in R^2	76.94***			27.74**			6.43**			1.02		
Enthusiasm-depression. T2												
Enthusiasm-depression. T1	.28	.07	.38***	.27	.07	.37***	.27	.07	.37***	.28	.07	.38***
LMX (T2)				.14	.07	.19*	.08	.08	.10	.12	.08	.16
Goals climate (T2)							.11	.10	.15	.12	.10	.16
Innovation climate (T2)							.02	.10	.02	.01	.10	.01
LMX*goals climate										-.25	.10	-.40*
LMX* innovation climate										.25	.10	.44*
R^2	.15			.18			.20			.26		
F for change in R^2	17.68***			4.35*			1.28			3.50*		
Comfort-anxiety T2												
Comfort-anxiety T1	.40	.06	.53***	.39	.06	.51***	.39	.06	.51***	.39	.07	.52***
LMX (T2)				.11	.06	.14	.09	.08	.12	.09	.08	.12
Goals climate (T2)							.09	.10	.12	.11	.10	.14
Innovation climate (T2)							-.06	.10	-.08	-.07	.10	-.10
LMX*goals climate										-.07	.10	-.11
LMX* innovation climate										.03	.10	.05
R^2	.28			.30			.30			.31		
F for change in R^2	39.20***			2.89			.46			.38		
Vigor-tiredness T2												
Vigor-tiredness T1	.37	.07	.47***	.34	.07	.44***	.35	.07	.45***	.34	.07	.43**
LMX (T2)				.12	.07	.16	.12	.08	.16	.18	.08	.23*
Goals climate (T2)							.06	.11	.08	.06	.10	.07
Innovation climate (T2)							-.06	.11	-.08	-.06	.11	-.08*
LMX*goals climate										-.22	.11	-.33*
LMX* innovation climate										.25	.10	.42**
R^2	.22			.24			.24			.29		
F for change in R^2	28.52***			3.12			.20			3.29*		

Note. *p < .05 **p < .01 ***p < .001.
Hierarchical regression analyses were conducted in four steps. In a first step, Model 1 included only the control variables as predictors. In a second step, Model 2 LMX was added. In a third step, Model 3 the psychological climate dimensions were also included. Finally, in Model 4, also the interaction terms were included.

into account, assuming that those values are not significant could lead us to commit a Type II error. Thus, altogether, these results support H1a.

The results for the lagged analysis show that, after controlling for the previous levels of well-being, LMX at Time 1 was significantly and positively related to three of the four indicators of well-being at Time 2. We found a significant regression equation for Enthusiasm-depression $F(1, 102) = 6.35$, $p = .01$, with an R^2 of 0.21; Comfort-anxiety $F(1, 97) = 5.71$, $p = .02$, with an R^2 of 0.32; and Vigor-tiredness $F(1, 97) = 7.54$, $p = .007$, with an R^2 of 0.32. No significant relationship was found with job satisfaction $F(1, 96) = 2.35$, $p = .13$; (see Table 2). These results partially support H1b.

With regard to the hypotheses that included moderating variables, in the concurrent analysis, we found support for innovation climate (i.e., H2a) and goal orientation climate (i.e., H2b) as moderators in the relationship between LMX at Time 2 and two well-being indicators at Time 2, namely, Enthusiasm-depression and Vigor-tiredness (see Table 2). Interestingly, a positive main effect of LMX on Vigor-tiredness ($\beta = 0.23$, $p = .03$) was detected when the interaction terms were introduced, whereas the main effect on Enthusiasm-depression became non-significant ($\beta = 0.16$, $p = .14$). For the Enthusiasm-depression dimension, a significant regression equation was found $F(2, 98) = 3.50$, $p = .03$, with an R^2 of 0.26 when the interaction terms were introduced in the fourth step. The same was true for the

Table 3
Lagged hierarchical regression analysis of well-being indicators (T2) on LMX and psychological climate dimensions (T1)

Factors	Model 1			Model 2			Model 3			Model 4		
Job satisfaction (T2)	*B*	*SE B*	β	*B*	*SE B*	β	*B*	*SE B*	β	*B*	*SE B*	β
Job satisfaction (T1)	.59	.07	.67***	.51	.09	.58***	.43	.09	.48***	.36	.09	.41***
LMX (T1)				.14	.09	.15	.10	.09	.10	.10	.09	.11
Goals climate (T1)							.18	.10	.20	.23	.10	.25*
Innovation climate (T1)							.03	.09	.03	.04	.08	.04
LMX*goals climate										-.31	.10	-.37**
LMX* innovation climate										.30	.11	.33**
R^2	.45			.46			.49			.55		
F for change in R^2	78.08***			2.35			2.89†			4.98**		
Enthusiasm-depression. T2												
Enthusiasm-depression. T1	.29	.07	.39***	.25	.07	.34***	.25	.07	.35**	.27	.07	.37***
LMX (T1)				.18	.07	.23*	.14	.08	.19	.17	.08	.22*
Goals climate (T1)							.15	.09	.20	.12	.09	.17
Innovation climate (T1)							-.09	.09	-.12	-.08	.09	-.12
LMX*goals climate										-.15	.10	-.23
LMX* innovation climate										.24	.11	.33*
R^2	15			.21			.23			.27		
F for change in R^2	17.74***			6.35*			1.42			2.38†		
Comfort-anxiety T2												
Comfort-anxiety T1	.42	.07	.53**	.38	.07	.48***	.38	.07	.49***	.37	.07	.47***
LMX (T1)				.16	.07	.21*	.21	.08	.27**	.20	.08	.26*
Goals climate (T1)							-.04	.09	-.06	-.06	.09	-.07
Innovation climate (T1)							-.07	.09	-.08	-.05	.08	-.06
LMX*goals climate										-.23	.09	-.33*
LMX *innovation climate										.25	.11	.32*
R^2	.28			.32			.33			.37*		
F for change in R^2	37.83***			5.71*			.87			3.17*		
Vigor-tiredness T2												
Vigor-tiredness T1	.41	.07	.52***	.35	.07	.44***	.38	.07	.48***	.39	.07	.49**
LMX (T1)				.20	.07	.23**	.23	.08	.28**	.21	.08	.27**
Goals climate (T1)							.03	.09	.04	.02	.09	.02
Innovation climate (T1)							-.13	.09	-.17	-.11	.09	-.14
LMX*goals climate										-.30	.09	-.43**
LMX* innovation climate										.32	.11	.40**
R^2	.27			.32			.34			.40		
F for change in R^2	35.43***			7.54**			1.17			5.33**		

Note. †p < .10 *p < .05 **p < .01 ***p < .001. Hierarchical regression analysis were conducted in four steps. In a first step, Model 1 only the control variables were considered as predictors. In a second step, Model 2 LMX was added. In a third step, Model 3 the psychological climate dimensions were also considered. Finally, Model 4 the interaction terms were included

Vigor-tiredness dimension when the interaction terms were introduced in the fourth step $F(2, 98) = 3.50$, $p = .03$, with an R^2 of 0.26. To better understand the interaction effects, we plotted these results (see Figure 1). As hypothesized, the graphs show that the relationships between LMX and both Enthusiasm-depression (β = 0.44, $p = .01$) and Vigor-tiredness (β = 0.42, $p = .01$) were stronger when the levels of innovation climate were higher. On the other hand, contrary to what we hypothesized, we found that the relationship between LMX and both dimensions of well-being was stronger when the levels of goal orientation climate were lower (β= -0.40, $p = .02$; and β= -0.33, $p = .04$, respectively). Thus, the results partially support our hypotheses.

Lagged analysis (Table 3) shows a significant regression equation for all the well-being dimensions when the interaction terms were introduced: Job satisfaction, $F(1, 92) = 4.98$, $p = .009$, with an R^2 of 0.54; Enthusiasm-depression, $F(1, 93) = 2.38$, $p = .01$, with an R^2 of 0.27; Comfort-anxiety, $F(1, 93) = 3.17$, $p = .05$, with an R^2 of 0.37; and Vigor-tiredness $F(1, 93) = 5.33$, $p = .006$, with an R^2 of 0.40. Main effects were found for LMX on Enthusiasm-depression (β = 0.22, $p = .04$), Comfort-anxiety (β = .03, $p = .01$), and Vigor-tiredness (β = 0.27, $p = .01$), but not job satisfaction (β = 0.11, $p = .26$). Innovation climate (H2a) moderated the relationship between LMX (T1) and the four indicators of well-being (T2): Job satisfaction (β = 0.33, $p = .01$), Enthusiasm-depression (β = 0.33, $p = .03$), Comfort-anxiety (β = 0.32, $p = .02$), and Vigor-tiredness (β = 0.40, $p \leq .01$), thus supporting our hypothesis. The goal orientation climate (H2b) moderated the relationship between LMX (T1) and three indicators of well-

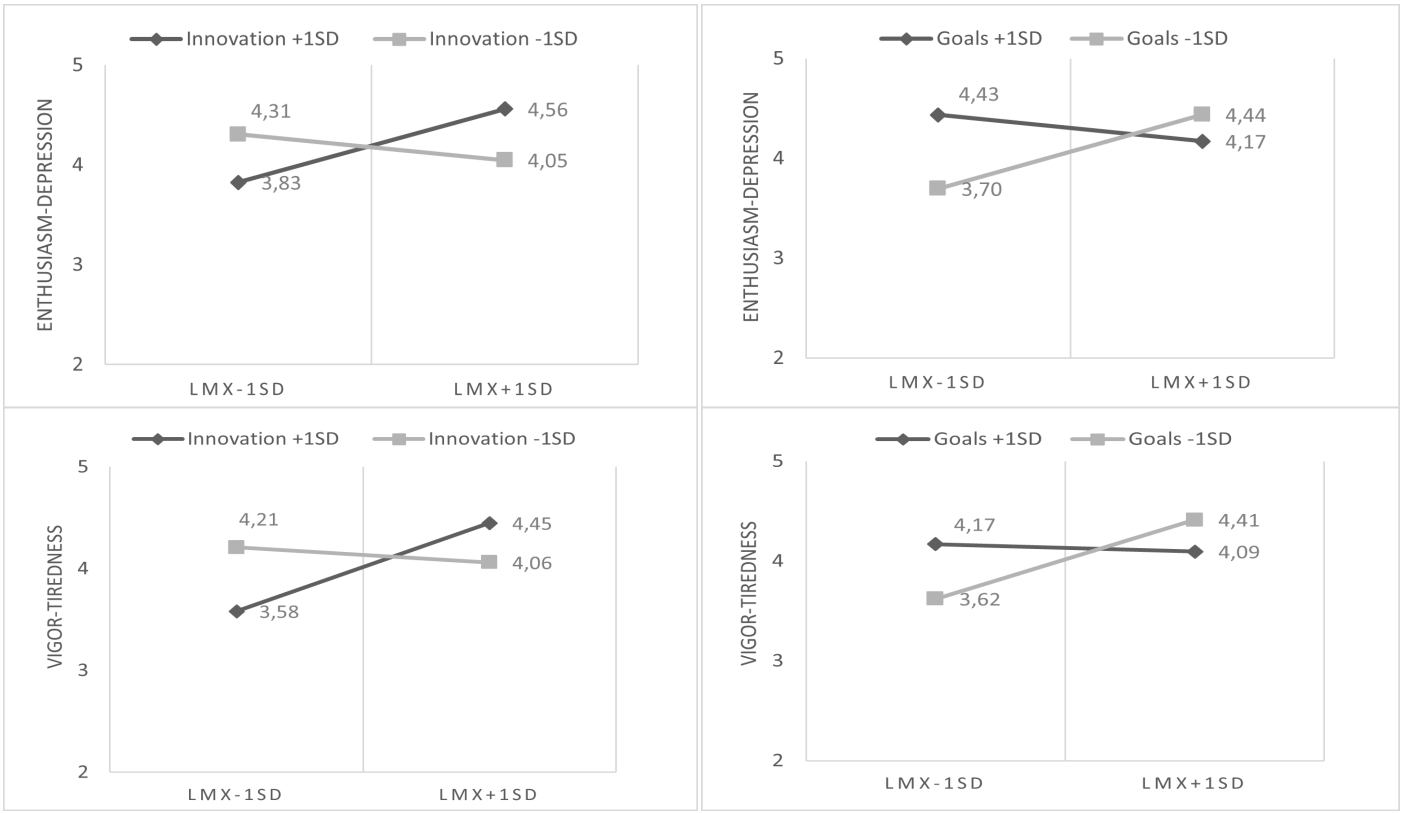

Figure 1. Moderated concurrent effects between LMX (T2) and well-being (T2)

being (T2), namely, Job satisfaction (β = -0.37, $p \leq .01$), Comfort-anxiety (β = -0.33, $p = .02$), and Vigor-tiredness (β = -0.43, $p \leq .01$). As hypothesized, those subjects with higher perceptions of innovation climate benefited more from LMX. In contrast, as in the concurrent analysis, goal orientation climate moderated the hypothesized relationship, but not in the expected direction. In the context where employees perceived less orientation toward goals, LMX was more strongly related to the different indicators of well-being.

All these results together show substantial support for the moderating role of innovation and goal orientation climate in the relationship between LMX and well-being. However, they also show that this role is complex and can be different depending on the specific facets of climate and well-being.

In summary, we found that, in high psychological innovation climates, the higher the quality of LMX, the higher the level of well-being in terms of Job satisfaction, Enthusiasm-depression, Comfort-anxiety, and Vigor-tiredness in the long term, whereas in the short term, these effects were only found for two dimensions of well-being: Enthusiasm-depression and Vigor-tiredness (Figures 2 and 3). Moreover, the results also show that, when there is a perception of low innovation climate, LMX seems

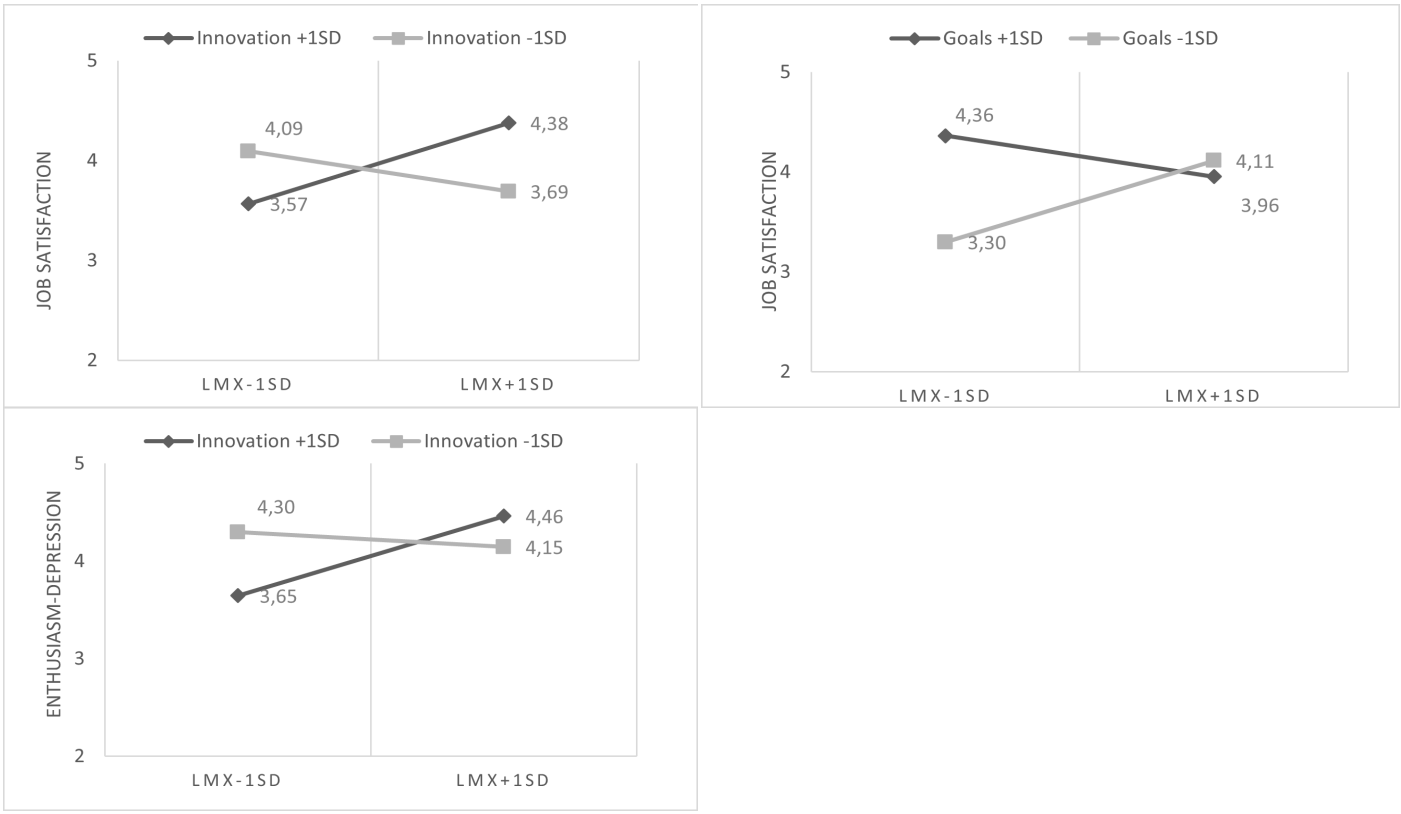

Figure 2. Moderated lagged effects between LMX (T1) and well-being (T2).

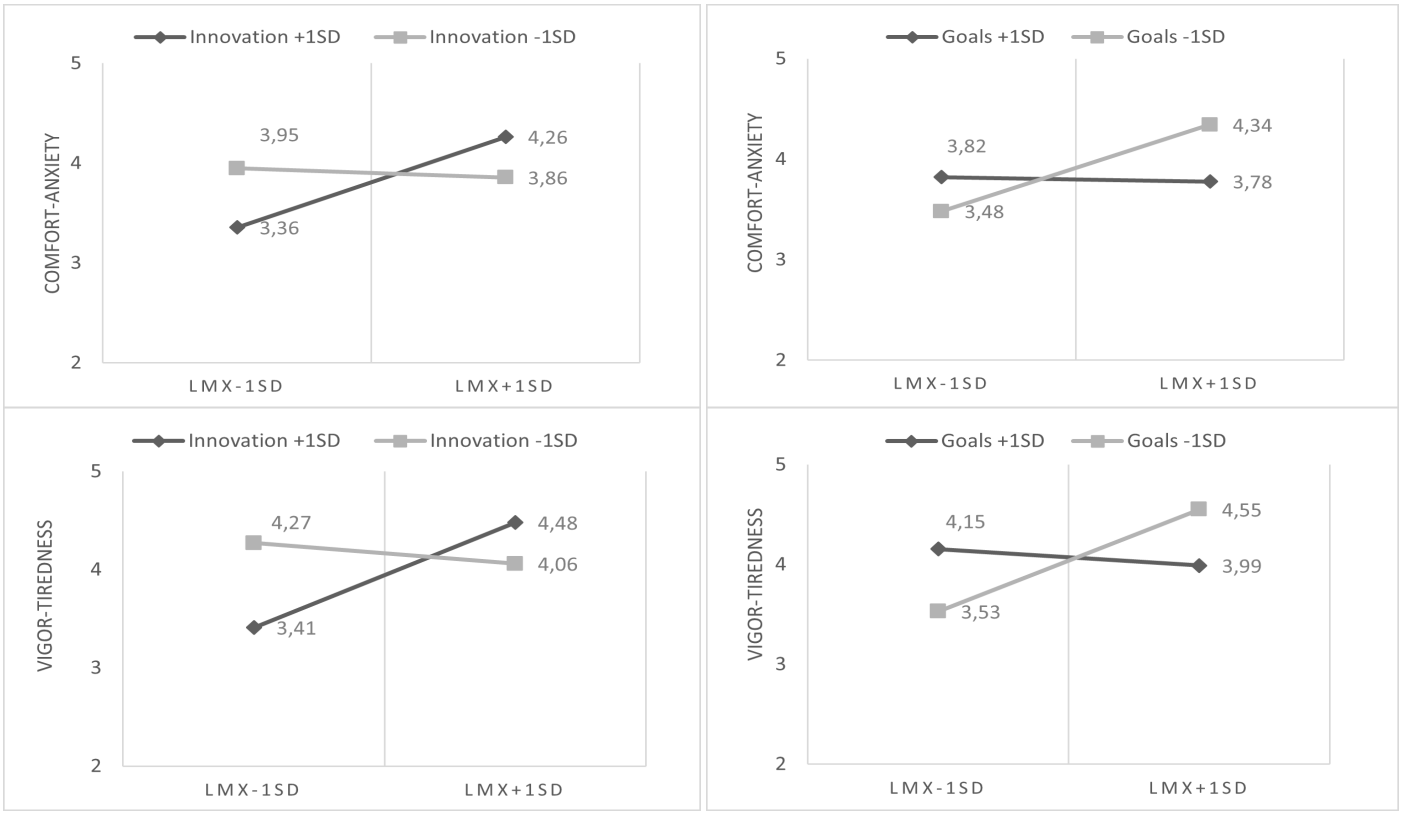

Figure 3. Moderated lagged effects between LMX (T1) and well-being (T2).

useless to employees' well-being. Finally, in high psychological goal-oriented climates, the higher the LMX, the lower the level of job satisfaction, Comfort-anxiety, and Vigor-tiredness in the long term, whereas in the short term, these effects were found for Enthusiasm-depression and Vigor-tiredness. Thus, contrary to our hypothesis, a higher psychological goal orientation climate does not increase the relationship between LMX and enthusiasm; instead, it decreases it and changes the direction of the main effect.

Discussion

The present study analyzes the moderating role of psychological organizational climate in the concurrent and lagged relationships between LMX and four facets of employee wellbeing: job satisfaction and job-related affective well-being. The findings of this study contribute in different ways to understanding how and when leadership, and specifically LMX, contributes to employees' well-being. First, along with the more broadly explored relationship with job satisfaction, the present research considered affective facets of job-related well-being, such as Enthusiasm-depression, Comfort-anxiety, and Vigor-tiredness. Well-being is a polyhedric construct that encompasses different facets and approaches (Warr & Nielsen, 2018). Thus, the relationship between the different components of the construct and leadership has to be addressed as a whole (Inceoglu et al., 2018). In the present study, we considered a model for studying well-being that approaches job-related well-being in a comprehensive, holistic way (Warr, 1990; Mäkikangas et al., 2016). The relationship between LMX and job satisfaction is well supported, but not much research has addressed the relationship between LMX and other aspects of job-related affective well-being. In general terms, we found that LMX was positively related to the four dimensions of well-being considered. Our results are consistent with previous cross-sectional research showing the relationship between LMX and job-related affective well-being (González-Navarro et al., 2019; Gregory & Osmenbekov, 2019; Montano et al., 2017). Second, we examined the moderating role of the work context, measured by individual perceptions of the organizational climate, in the relationship between LMX and well-being, and we found that it can be crucial as a boundary condition for these relationships.

Our results showed support for psychological organizational climate as a moderator of the relationship between LMX and the four dimensions of well-being considered. In this regard, our research supports previous literature showing that generic and strategic climates indirectly moderate the relationship between LMX and well-being (Radulovic et al., 2019) and between LMX and stressors (Tordera et al., 2008) This effect has also been found in the relationship between LMX and other behavioral outcomes (Hsiung, 2012; Hofmann, et al., 2003; Sun et al., 2013).

However, we found that different facets of climate play different moderating roles. In the case of the goal orientation climate, the direction of the effects was different from the one we expected. Whereas climates high in innovation strengthened the positive relationship between LMX and well-being, climates high in goal orientation weakened it and even changed its direction. In contrast, perceptions of climates low in innovation and high in goals were related to negative relationships between LMX and well-being. Moreover, we also found that, when the interactions between LMX and the innovation and goal climates were taken into account, a concurrent, positive main effect of LMX on Vigor-tiredness became significant, whereas the effect on Enthusiasm-depression became non-significant. This result suggests that the relationship between LMX and Vigor-tiredness is generally positive and both strengthened and weakened by the organizational climate, whereas the relationship with Enthusiasm-depression is more dependent on the climate. These results highlight the complexity and nuances of the LMX-well-being links in relation to the social context.

Our results are consistent with some previous research showing that LMX does not always have a beneficial effect on employees' well-being (Harris & Kacmar, 2006). Specifically, Harris and Kacmar (2006) and Hochwater and Byrne (2005) found a curvilinear relationship between LMX and job tension. These authors proposed that both lower and higher levels of

LMX can increase job tension. In the former case, the reason would lie in the lack of resources and support received from the leader. In the latter case, it would be due to subordinates' need to reciprocate the contributions of their leaders, which in turn increases the feeling of demands and, thus, leads to increased tension. In our case, organizational environments where a high emphasis is already placed on the orientation toward goals, having high-quality relationships with the leader could increase employees' reciprocation behaviors and, thus, decrease their levels of subjective well-being due to the increased workload.

These results might be due to the fact that the context where this relationship evolves makes the role of LMX more salient as a resource or a demand for the subordinate. Perceptions of high innovation climate and low goal orientation climate could make the role of LMX quality more salient as a resource, whereas perceptions of a high goal-oriented climate might increase the salience of LMX as an additional demand.

Third, our research uses a lagged design to simultaneously analyze concurrent and lagged relationships. Thus, it contributes to the call to incorporate time in organizational studies to better understand the relationships between the constructs (Brunelle, 2017). In recent decades, some LMX researchers have incorporated longitudinal designs to study the relationships between LMX and well-being. For instance, Gregersen and colleagues (2016) found a lagged relationship between LMX quality and lower levels of emotional exhaustion in a sample of healthcare workers. In line with this research, our study also shows lagged relationships between LMX and well-being, providing support for the direction of the causality between the two constructs (Inceoglu et al., 2018). Moreover, we found differences in the way LMX is associated with the different facets of well-being over time, in both the short and long term. This finding supports previous research pointing out that the structural difference between facets of well-being could account for the way the social context impacts them (Diener et al., 2018; Luhmann et al., 2012). With regard to the main effects between LMX and well-being, when the moderator role of climate was considered, main effects of LMX were only detected on the affective components of well-being (Enthusiasm-depression) in the short term, but on the three emotional components of well-being (Enthusiasm-depression, Comfort-anxiety, Vigor-tiredness) in the long term. In the concurrent analysis, the moderating effect of climate was only significant on Enthusiasm-depression and Vigor-tiredness. However, lagged effects were more widely found for the moderating role of climate in the relationships between LMX and the cognitive and affective facets: with the four dimensions of well-being for innovation and with three dimensions of well-being for goals climate.

Thus, the results reveal differences in the way different aspects of well-being can evolve and be influenced by different aspects of the social context, emphasizing the need to attend to differential aspects of well-being in order to understand its complexity.

Limitations

As in every study, our study has some limitations that must be recognized. In spite of the longitudinal design used, LMX, organizational climate, and employee well-being are self-rated in our study, which could still introduce some common-method variance, especially in concurrent relationships. Nonetheless, the fact that we found significant lagged relationships to some extent limits this problem. Moreover, we have analyzed the relationships between LMX and job satisfaction and three indicators of affective well-being, but well-being is a polyhedral construct, and its relationship with leadership and LMX quality needs to be broadly and systematically studied. However, considering a holistic model of job-related affective well-being allowed us to achieve a comprehensive view of these relationships. Thus, future studies could take advantage of longitudinal designs, in combination with different sources of information (e.g. supervisors, peers), and focus on other indicators of the well-being spectrum (e.g. eudaimonic well-being, physical-health indicators). Moreover, environmental configurations considering other climate facets could also moderate the effects of LMX on employees' well-being. Thus, research needs to develop a systematic approach to identifying which features of the work environment could be more relevant in the relationships between LMX and well-being. In addition, an interesting area for future research would be to focus on the enabling mechanisms in both concurrent and lagged LMX-well-being relationships, as well as the potential role of contextual factors such as organizational climate or other environmental facets as boundary conditions for these mediating mechanisms. Research should also take into account the relative importance of different climate dimensions for different types of organizations or sectors. Thus, innovation or goals climate can have a different impact on the relationship between LMX and well-being in other organizational contexts. Finally, reciprocal relationships between LMX and employee well-being are also possible and should be considered and studied to further understand the LMX-well-being relationship.

Conclusions

The present study contributes to better understanding how and when LMX quality contributes to the enhancement of employees' well-being. Subjects who perceive work environments as highly oriented toward innovation benefit more from the resources provided by a high-quality relationship with their leaders than subjects who perceive lower levels of orientation towards innovation. By contrast, when orientation toward goals increases, LMX quality might hinder employees' well-being. This research also contributes to better understanding the relationship between leadership and well-being over time. These interaction effects were found in the long term for all the dimensions of well-being, whereas in the short term, only the enthusiasm and full of energy dimensions of well-being were affected by these interactions. Overall, our results point to the advantages of attending to both the leader-member relationship and the different facets of the social context in order to protect and promote employee well-being in organizations.

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