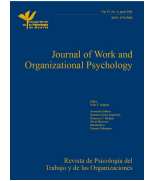




Journal of Work and Organizational Psychology

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Self-perceived Transformational Leadership Decreases Employee Sick Leave, but Context Matters

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ARTICLE INFO

Article history:

Received 25 May 2022
Accepted 1 March 2023

Keywords:

Transformation leadership
Training
Sickness absence
Health
Perceived organizational support

ABSTRACT

Purpose: Employee sickness absence increased steadily in recent years posing an important challenge for organizations and research. The present study addresses this need by analysing the causal link of transformational leadership and sickness absence, while also taking into consideration the context of leadership by studying the moderation effect of a leader's perceived organizational support (POS) in that association. **Design/Method:** 57 middle managers of two Spanish companies were randomly assigned to either the control ($n = 22$) or intervention ($n = 35$) condition. Multigroup linear regression in MPlus was carried out to compare the effect of transformational leadership on follower sick leave during a 6 months pre and post-test period for both groups, while also taking into account the moderation effect of a leader's POS. **Findings:** The analysis confirmed the association between transformational leadership and sick leave days due to short-term spells, moderated by the leader's levels of POS. Moreover, this relationship was stronger within the intervention as compared to the control group. **Conclusion:** The present research provides causal evidence for the link between transformational leadership and sickness absence, and offers an evidence-based and actionable leadership training method for organizations seeking to reduce employee sick leave.

El liderazgo transformacional autopercebido reduce el absentismo por enfermedad, pero el contexto importa

RESUMEN

Objetivo: El absentismo laboral por enfermedad ha aumentado de forma constante en los últimos años, planteando un importante reto para las organizaciones y la investigación. El presente estudio aborda esta necesidad analizando la relación causal entre el liderazgo transformacional y el absentismo por enfermedad, a la vez que toma en consideración el contexto del liderazgo estudiando el efecto moderador del apoyo organizativo percibido (AOP) del líder en dicha asociación. **Método:** Se asignó aleatoriamente a 57 mandos intermedios de dos empresas españolas a la condición de control ($n = 22$) o a la de intervención ($n = 35$). Se llevó a cabo una regresión lineal multigrupo en MPlus para comparar el efecto del liderazgo transformacional sobre la baja por enfermedad de los subordinados durante un periodo de 6 meses antes y después de la prueba para ambos grupos, teniendo también en cuenta el efecto moderador del AOP del líder. **Resultados:** El análisis confirmó la asociación entre el liderazgo transformacional y los días de baja por enfermedad debidos a periodos de corta duración, moderada por los niveles de AOP del líder. Además, la relación era más fuerte en el grupo de intervención que en el de control. **Conclusión:** La investigación aporta pruebas causales de la relación entre el liderazgo transformacional y la baja por enfermedad y ofrece un método empírico de formación en liderazgo aplicable a las organizaciones que pretendan reducir la baja por enfermedad de sus empleados.

Palabras clave:

Liderazgo transformacional
Formación
Absentismo laboral
Salud
Apoyo organizacional percibido

A long way from the harsh working and living conditions of the industrial revolution, employee mental and physical health have evolved into a central concern for practitioners and researchers over the recent decades. Nonetheless, far from decreasing, levels of employee sickness absence are on the rise in many developed countries. For example, in 2010 German employees had an average

15.9 days of sick leave per year, while in 2017 it was already 18.3 (increase of 12.1%; [World Health Organization, 2020](#)). In the case of Spain, average sick leave days per employee increased during the same period from 10.7 to 11.6 (increase of 8.4%; [World Health Organization, 2020](#)). Taking into consideration the human and economic cost that this evolution implies, it should be a central concern for our discipline

Cite this article as: Hauth, T., Peiró, J. M., Mesa, J. M., & Soriano, A. (2023). Self-perceived transformational leadership decreases employee sick leave, but context matters. *Journal of Work and Organizational Psychology*, 39(1), 37-45. <https://doi.org/10.5093/jwop2023a5>

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to improve understanding and to propose possible solutions for enhancing employee health and reducing sick leave.

In that pursuit, transformational leadership received attention by prior studies as an important antecedent and potentially promising object for the development of interventions (e.g., [Frooman et al., 2012](#); [Lee et al., 2011](#); [Nielsen & Daniels, 2016](#)). However, these observational studies have produced mixed, ambiguous results for the association between transformational leadership and sickness absence ranging from a negative ([Lee et al., 2011](#); [Zhu et al., 2005](#)), non-significant ([Frooman et al., 2012](#); [Labrague et al., 2020](#)) or even positive ([Nielsen & Daniels, 2016](#)) relation.

Several authors pointed out three fundamental methodological and theoretical shortcomings that could explain the inclusive past findings. First, most of the previous studies were cross-sectional and none applied field experimental designs with random participant allocation, the appropriate research design for inferring causal attributions ([Eden, 2017](#); [Gardner et al., 2020](#); [Martin et al., 2020](#)). Second, a recent literature review of [Arnold \(2017\)](#) remarked that the association between transformational leadership and indicators of well-being was not universal, but potentially dependent on a series of boundary conditions that were not taken into account by prior research. In that sense, [Nielsen and Taris \(2019\)](#) suggested that the context and conditions under which leaders operate influence their effectiveness and, thus, require further exploration. Third, [Nielsen and Daniels \(2016\)](#) proposed that transformational leadership might reduce sick leave not via actually enhancing employee health as would be desired, but rather by increasing employee motivation to attend work, thus leading to potentially harmful presenteeism. Thus, the underlying mechanism of the association between transformational leadership and sickness absence is not clear. In that line, [Nielsen and Taris \(2019\)](#) call for a better understanding of “how” transformational leadership might benefit employees.

Based on these three principal limitations of prior studies, the current research first aims to contribute towards establishing the causal relationship between transformational leadership and sickness absence via a randomized controlled trial. The second objective is to shed light on how contextual conditions, specifically a leader's perceived organizational support (POS), might influence the strength of the association between transformational leadership and sickness absence. The third aim is to advance the understanding of the underlying mechanism in the link between transformational leadership and sick leave. In particular, the present study investigates whether the causal relationship might be due to a real improvement of employee health or rather an increase in motivation to attend work. Finally, the present research aims at providing an evidence-based training format for practitioners seeking to enhance employee health and reduce levels of sick leave in their organizations.

Transformational Leadership and Sickness Absence

In order to establish how transformational leadership might influence health and sick leave, in the following we will in part draw on job demands-resources theory (JD-R) by [Demerouti et al. \(2001\)](#). This theory proposes a framework of how job characteristics are associated with employee outcomes via two distinct processes. The first (health-impairment) process describes how job demands (e.g., work pressure) affect job strain (e.g., health, well-being). The second (motivational) process postulates the influence of job resources (e.g., autonomy, opportunities for growth) on motivational outcomes (e.g., commitment). Furthermore, [Demerouti and Bakker \(2017\)](#) posited that the availability of job resources buffers the potential detrimental impact of high job demands on well-being.

Transformational leadership refers to a supervisor's ability to shape and transform follower perceptions ([Bass, 1985](#); [Bass & Riggio, 2006](#)). It consists of four dimensions, i.e., idealized influence, inspirational

motivation, individualized consideration, and intellectual stimulation.

Idealized influence refers to a leader's capacity to effectively transmit their values and beliefs as well as to provide a sense of purpose and a shared mission for their team. An influential leader might change their followers' perceptions and behaviours through two pathways ([Kraus et al., 2012](#)): first, through explicitly establishing and communicating norms and adequate behaviours and, second, through an implicit process of social learning, where followers observe and imitate their leader's behaviour ([Bandura, 1971](#)). Hence, a transformational leader's values and actions related to sickness absence could trigger similar patterns in their followers. In fact, [Løkke Nielsen \(2008\)](#) found an association between leader and follower absence patterns. In addition, through idealized influence a leader provides a sense of purpose and meaningfulness at work to their employees. In the frame of JD-R theory, this might constitute a job resource to draw on in demanding situations and rendering them, therefore, less harmful ([Bakker & Demerouti, 2017](#)).

Inspirational motivation stands for the capacity to draw an optimistic and appealing picture of the future, to create an attractive vision, to express confidence towards the team's abilities, and to shape their perceptions of organizational realities ([Bass, 1985](#); [Bass & Riggio, 2006](#)). A transformational leader fostering personal resources, such as an optimistic future outlook and perceptions of self-efficacy, among their followers, might enhance their ability to cope with challenging or difficult situations, thus rendering them less harmful, as proposed by JD-R theory ([Bakker & Demerouti, 2017](#)). On the other hand, the motivational aspect of transformational leadership could also incite vulnerable followers to attend work when sick (i.e., presenteeism), as suggested by [Nielsen and Daniels \(2016\)](#). Such presenteeism might lead to detrimental health outcomes in the long-run (e.g., through insufficient recuperation or infection of co-workers).

Intellectual stimulation refers to implicating employees in finding solutions and fostering their creative and innovative capacities. According to the demands-control model by [Karasek \(1979\)](#) high decision latitude would reduce detrimental health effects of demanding job situations. Based on this reasoning, the qualities of intellectual stimulations, such as employee participation, empowerment, and enhanced decision latitude would have positive effects on follower well-being. In fact, prior research confirmed this association for a leader's empowering behaviour ([Greco et al., 2006](#); [Kim & Beehr, 2018](#)) and employees' job involvement ([Wegge et al., 2007](#)).

Lastly, individual consideration is the capacity to appreciate the individual difference in followers' abilities, desires, and needs. Based on this discernment, a transformational leader supports and develops each employee individually, thus acting as a coach and mentor ([Bass, 1985](#); [Bass & Riggio, 2006](#)). Applying JD-R theory ([Bakker & Demerouti, 2017](#)), an individually considerate leader might positively influence the health-impairment process through adjusting job demands in a specific situation, such as adapting working conditions for an employee returning from long-term sick leave, or accommodating temporary needs for work-life balance. On the other hand, individual consideration could also constitute a job resource in the motivational process by, for example, providing individual growth and development opportunities. Supporting these arguments, [Van Dierendonck et al. \(2002\)](#) found that consideration and coaching by supervisors were negatively associated with followers' levels of absenteeism.

Motivation- or Health-related Mechanism

As previously stated, understanding the underlying mechanism in the association of transformational leadership and sick leave remains a fundamental gap and source of debate with important practical and ethical implications ([Nielsen & Taris, 2019](#)). Applying the JD-R theory,

a transformational leader might influence sickness absence via two pathways or mechanisms: first, via the promotion of employee health by adjusting job demands according to individual necessities and capabilities (health-impairment process) or, second, through enhancing motivation to attend work by providing job resources (motivational process). Based on the notion that they represent two related but distinct phenomena, prior research differentiated “voluntary” or motivation-related absences on one hand and “involuntary” or health-related absences on the other (Bakker et al., 2003; Lambert et al., 2005; Mastekaasa, 2020; Schreuder et al., 2013; Steers & Rhodes, 1978). The former was associated with rather motivation- and commitment-related causes and conceptualized as absence frequency or short-term absence spells, and the latter with more severe health problems and pathologies, as indicated by absence duration or long-term sick leave (Marmot et al., 1995). Thus, the present study will apply short- and long-term absence days as proxy outcome variables for inferring an either motivation of health-related mechanism underlying the association between transformational leadership and sick leave:

Short-term absences (up to 7 days) were related to minor pathologies or non-health related withdrawal behaviours from an unsatisfactory work environment (Schreuder et al., 2013; Vahtera et al., 2004). Therefore, such a “voluntary” absenteeism implies a certain element of choice by the employee, where their levels of motivation and commitment play a crucial role (Nyberg et al., 2008). In the frame of the JD-R, a transformational leader might influence this motivational process by providing their followers with crucial job and personal resources, thereby decreasing motivation-related short-term absences:

Hypothesis 1a: Changes in transformational leadership will be negatively related to changes in short-term sick days in such a way that increases in transformational leadership between time 1 and 2 will be associated with decreases in short-term sick days.

Hypothesis 1b: This negative relationship between changes in transformational leadership and short-term sick days will be stronger for the intervention as compared to the control group.

Long-term absences (more than 7 days), on the other hand, are generally due to more severe health issues where taking sick leave might not be optional, but necessary (Schreuder et al., 2013; Vahtera et al., 2004) and to a certain extent independent of the employee's levels of motivation and commitment. Hence, they result rather from a health-impairment than from a motivational process. As argued earlier, a transformational leader might also facilitate an actual improvement of employee health and well-being (health-impairment process) through adapting job demands according to individual necessities and capabilities:

Hypothesis 2a: Changes in transformational leadership will be negatively related to changes in long-term sick days, in such a way that increases in transformational leadership between time 1 and 2 will be associated with decreases in long-term sick days.

Hypothesis 2b: This negative relationship between changes in transformational leadership and long-term sick days will be stronger for the intervention as compared to the control group.

Context: Leader's Perceived Organizational Support (POS)

Previous studies have pointed out the importance of further exploring the impact of context and conditions in transformational leadership effectiveness (e.g., Arnold, 2017; Nielsen & Taris, 2019). For that purpose, the present study analyses the effect of a leader's POS in the association between transformational leadership and sickness absence.

Based on organizational support theory, POS refers to an employee's or leader's general perception regarding the degree to which their organization appreciates their contribution, is concerned about

their well-being, and provides them support and help (Eisenberger et al., 1986). Applying the social exchange theory, POS evokes the norm of reciprocity, a perceived obligation by the leader to help their organization achieve its objectives and the conviction that such an effort will be recognized and rewarded accordingly (Kurtessis et al., 2017). As such, POS was associated with employee effort as well as in-role and extra-role performance (Kurtessis et al., 2017; Sun, 2019).

Because of their key position as links between the organization and employees, a leader's POS does not only affect their own behaviour, but also that of their subordinates (Erdogan & Enders, 2007). In the following, we propose two potential pathways through which a leader's POS could enhance the effectiveness of transformational leadership in reducing sick leave. First, based on the norm of reciprocity (Gouldner, 1960), a transformational leader perceiving high levels of support from their organization might feel obliged to repay that support (Eisenberger et al., 1986). One such way of reciprocating could be extending the same support to their own employees, excelling in their supervisory role, for example through mentoring (Tepper & Taylor, 2003). Along these lines, Eisenberger et al. (2014) suggested that supervisors would attend their reciprocation obligation by assisting followers in the development of their job tasks and fostering their alignment with the organization's objectives. This increased willingness to support their team might constitute a job resource for them to draw on and decrease job demands, thus favouring employee motivation and health. On the other hand, low POS supervisors might reciprocate by reducing their support for subordinates and disregarding the organization's goals, producing the opposite outcomes. Second, high POS was associated with a functional access to information, help, and resources from the organization for fulfilling job responsibilities (Eisenberger et al., 2014; Rhoades & Eisenberger, 2002). A transformational leader could use these resources for the benefit of their team, for example when negotiating the assigned workload, the team's participation in decision-making processes, or measures for work-life conciliation of individual employees. Stepping up for the team's interest towards the organization in such a way could pose a risk for the leader (e.g., upset their own superior). However, Kurtessis et al. (2017) found that high POS was also associated with more trust towards the organization, enabling such risk-taking behaviours by a leader without fear of reprisal (Rousseau et al., 1998). On the other hand, low POS could, up to a certain point inhibit the effectiveness of transformational leadership. The corresponding transformational leadership behaviours of a supervisor that does not perceive the organization as supportive might lack authenticity and congruence. For example, implicating employees in decision-making processes (intellectual stimulation) without being able to follow through with their suggestions and lacking the conviction that the team's input will be valued by the organization could be detrimental for both employee motivation and health.

Through reciprocating via providing additional support and attention to their subordinates and having access to the required resources, a transformational leader with high POS might be more able to exert influence over their team's levels of motivation and health as compared to their low POS peers. Thus, we propose that depending on the levels of a leader's POS the strength of the association between transformational leadership and both short- and long-term sick leave will vary:

Hypothesis 3a: POS will moderate the negative relationship between changes in transformational leadership and short-term sick days, in such a way that higher levels of POS are associated with a stronger negative relationship.

Hypothesis 3b: POS will moderate the negative relationship between changes in transformational leadership and long-term sick days, in such a way that higher levels of POS are associated with a stronger negative relationship.

Figure 1 provides a summary of the proposed research model of the present study.

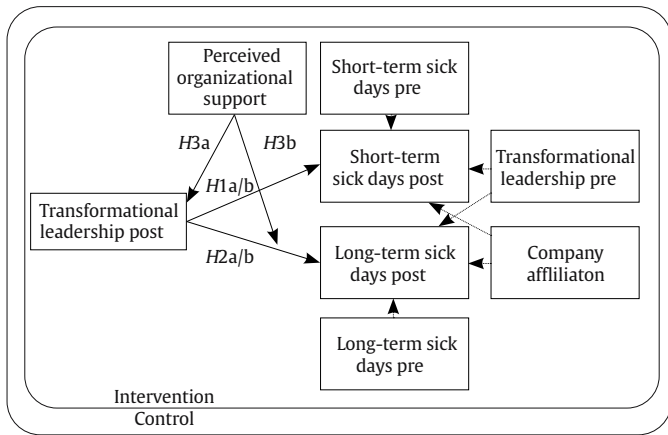


Figure 1. Proposed Multigroup Research Model.

Method

Participants

One hundred and twenty-seven middle managers from two Spanish client companies of UMIVALE, a mutual insurance society for accidents at work that collaborates with the Spanish National Institute for Social Security (INSS), participated in the study. One of the companies was operating in the service sector and based in Madrid and Barcelona, while the other, dedicated to manufacturing was located in Valencia. After excluding those leaders that did not respond to either the pre- or post-intervention survey, the final sample size remained 57.

These participating managers lead a total 912 employees, a mean of 16.0 employees per leader. The average age of the leaders was 41.9 and their mean tenure 12.0 years; 57.9% of participants were male and 54.4% worked in the service sector as compared to 45.6% from manufacturing industry. The Results section includes a series of tests analysing whether these variables differ significantly between the intervention and control groups.

Procedure and Intervention

Prior to conducting the field experiment, approval of the study design by the Ethics Committee of the University of Valencia was sought and approved on February 7th 2019 (process number: H1542204850487).

The participation in the training program was voluntary for middle manager, even though it was highly encouraged by HR management of the two collaborating companies. Once the inscription for the program was complete, the potential participants were randomly assigned to either the waitlist control (n = 22) or intervention condition (n = 35). The intervention consisted of three

modules that were delivered by two of the authors during June 2019. The sizes of the training groups ranged from 6 to 12 participants.

The first 6-hour module was focussed on enhancing the transformational leadership capacities of the intervention group based on the methodology proposed by Kelloway et al. (2000). The knowledge, skills, and attitudes of the leaders were developed by means of a theoretical introduction, group discussions, the analysis of a 30-minutes excerpt of the movie “12 angry men” where the participants had to identify and interpret specific leadership behaviours by the actors, and role plays. For adapting the role play to the necessities of the participants, each transmitted in advance two specific examples of situations in their role as leaders that they found difficult to manage. The role play situations were based on these examples in order to reflect the challenges that they face in interactions with subordinates (e. g., difficult performance appraisal, conflict resolution, communicating change). The activities were carried out in front of the group and included a round of the feedback on the participants’ performance in applying the principals of transformational leadership to the specific role play situation.

The second module of 4 hours was specifically focussed on how to transfer the concepts of transformational leadership to the context of health and sickness absence. The participants applied these concepts in three key situations via role plays. The first situation consisted in explaining health and sick leave related company policy and culture during the onboarding of a new employee. The second role play focussed on conducting phone calls to employees on sick leave, showing concern for their well-being and offering assistance without exerting pressure on the employee to return to work. Lastly, the third situation depicted return-to-work interviews where the participants had to facilitate a smooth reincorporation process.

At the end of both modules, the participants were asked to formulate 3 objectives related to their leadership style in general and 2 regarding its application to health and absenteeism specifically. Applying the principles of SMART goals, the middle managers were instructed to formulate specific, measureable, attainable, relevant, and time-based objectives. The last module was an individual 1-hour follow-up coaching session for each leader to address their specific situation (e.g., clarifying doubts, discussing difficult situations) and to review their objectives and accomplishment in order to facilitate the transfer of training content. The waitlist control group did not receive any intervention yet.

Table 1 offers an overview of the principal contents and duration of the three training modules.

Variables and Instruments

Sick Leave

Sick leave was measured at the team level by matching social security sick leave data with team composition data provided by

Table 1. Content summary and duration of the three training modules

Module	Content	Duration
1. Transformational leadership	Theoretical introduction to the construct of transformational leadership. Group discussions on advantages and disadvantages of different leadership styles. Analysis of movie excerpt “12 angry men” to identify and discuss specific leadership behaviors. Enacting transformational leadership behaviors via role playing.	6 hours
2. Employee health and sick leave	Application of transformational leadership behaviors to the context of employee health and sick leave via role play situations related to onboarding, maintain the contact with an employee on sick leave and conducting return-to-work interviews.	4 hours
3. Individual follow-up	Individual follow-up with each participant to clarify doubts, reflect on the training transfer and review objectives.	1 hour

the two participating organizations. The 6-month pre-intervention period included the registered sick leaves between December 1st 2018 and May 31st 2019 and the post intervention period those from July 1st 2019 till December 31st 2019. Because the intervention was carried out in June 2019, that month was excluded from the measurement. For differentiating short- and long-term sick spells, we applied a cut-off at 7 days, as suggested by prior studies (Nyberg et al., 2008; Schreuder et al., 2011). Thus, we counted sick leave days due to spells of up to 7 days as short-term and those superior to 7 days as long-term absence days. Considering that there were no organizational changes in the teams during the study period, the subsequent analyses compared sick leave days at the team level between pre- and post-intervention period.

Transformational Leadership

It was measured by administering Bass and Avolio's (1995) Multifactor Leadership Questionnaire (MLQ 5X) in its Spanish adaption by Vega and Zavala (2004), specifically the 20 items measuring transformational leadership. The participating middle managers were asked to auto-evaluate the frequency with which they demonstrate specific leadership behaviours on a 5-point Likert-scale ranging from 1 (*never*) to 5 (*always*). The survey was administered to both the intervention and control group one month before (April/May 2019) and once again three months after the intervention (August/September 2019). With Cronbach's alpha of .88 and .87 respectively, both pre- and post-test measurements demonstrated acceptable reliability.

Perceived Organizational Support (POS)

POS was measured by the 17-item abbreviated version of the Eisenberger et al.'s (1986) Survey of Perceived Organizational Support (SPOS) adapted into Spanish by Ortega (2003). Participants were asked to rate their degree of agreement on a series of statements about their organization on a 7-point Likert-scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The survey was administered to both the intervention and control group three months after the intervention (August/September 2019). The reliability of the measurement was satisfactory with a Cronbach's alpha of .94.

Analysis Procedure

In order to determine whether the pre-intervention values of various demographic variables were not distinct between control and intervention groups, a series of *t*-tests and chi-square tests of independence were carried out in SPSS. For the continuous variables leader's age, tenure, and team sizes *t*-tests were run. A significant result would indicate that there are differences in the corresponding variable between the intervention and control

groups. For testing the independence of the categorical variables gender and company affiliation chi-square tests were realized. In this case, a significant result would indicate that the analysed variable is dependent of group condition.

As manipulation check for transformational leadership, we carried out a one-way ANCOVA in SPSS with the dependent variable post-test transformational leadership and the independent variable group condition, while controlling for the corresponding pre-test scores of transformational leadership. A significant result in that case would indicate that post-test transformational leadership scores differ depending on group condition when controlling for the pre-intervention scores, thus suggesting a successful manipulation. For that purpose, we interpreted the one-tailed significance levels, because we expected a one-directional effect of the intervention on the transformational leadership (Fleiss et al, 2013; Ruxton & Neuhäuser, 2010).

In order to test the relationships between the different variables of interest in the two groups, we carried out structural equation modelling (SEM) using MPlus 8 software as main analysis (Muthén & Muthén, 2015). SEM is an appropriate and recommended method for investigating moderating effects (Preacher et al., 2010) as it assesses whether a sample covariance matrix is consistent with a hypothetical covariance matrix as specified by a theoretical model (Rigdon, 1998).

To assess the model fit, we examined the root mean square error of approximation (RMSEA), comparative fit index (CFI), and Tucker-Lewis index (TLI) goodness of fit statistics. For the maximum likelihood (ML) method, a cutoff value of .06 for RMSEA, and .95 for CFI and TLI are needed to conclude that there is an excellent fit between the hypothesized model and the observed data (Hair et al., 1998; Vandenberg & Lance, 2000).

The independent variables were post-test transformational leadership and, for testing the moderation effect, the interaction of the aforementioned with perceived organizational support. The two dependent variables were post-test short- and long-term sick leave days, while controlling for their corresponding pre-test values, the pre-test transformational leadership scores, as well as company affiliation.

Results

Table 2 provides an overview of the means, standard deviations and correlations among the study variables for the intervention condition. Table 3 offers the means, standard deviations and correlations of the study variables for the control group.

Preliminary Analyses

A series of *t*-tests showed no significant differences in the composition of the intervention and control group regarding leaders' age, $t(51) = -0.64$, $p = .526$, tenure, $t(51) = -0.96$, $p = .34$,

Table 2. Means, Standard Deviations and Correlations for Study Variables of Intervention Group

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. TL pre	4.39	0.34	-						
2. TL post	4.32	0.33	.66*	-					
3. Sick days short-term pre	11.03	16.54	.20	.19	-				
4. Sick days short-term post	9.00	9.08	.18	.08	.78*	-			
5. Sick days long-term pre	126.74	161.42	.11	-.06	.23	.27	-		
6. Sick days long-term post	122.94	176.36	.17	-.09	.37*	.42*	.86*	-	
7. POS	4.67	0.90	-.21	.03	.06	-.09	-.09	-.14	-

Note. Descriptive statistics for the intervention group ($n = 35$), TL = transformational leadership.

* $p < .05$.

Table 3. Means, Standard Deviations and Correlations for Study Variables for Control Group

Variable	M	SD	1	2	3	4	5	6	7
1. TL pre	4.31	0.38	-						
2. TL post	4.12	0.47	.52	-					
3. Sick days short-term pre	11.05	17.41	.32	-.27	-				
4. Sick days short-term post	8.73	11.42	.31	-.37	.87*	-			
5. Sick days long-term pre	55.82	100.34	.27	-.25	.58*	.68*	-		
6. Sick days long-term post	72.68	93.09	.22	-.09	.32	.37	.74*	-	
7. POS	4.72	1.15	-.06	.21	-.11	-.39	-.60*	-.39	-

Note. Descriptive statistics for the control group (N = 22), TL = transformational leadership. *p < .05.

and team sizes, $t(55) = -0.14, p = .179$. Moreover, chi-square tests of independence suggested that the group composition was independent of gender, $\chi^2(1, N = 57) = 0.92, p = .339$, but not independent of company affiliation, $\chi^2(1, N = 57) = 7.57, p = .006$. Therefore, we included the latter variable as a covariate in the analysis.

Moreover, the ANCOVA results suggested a successful manipulation of transformational leadership with $F(1, 57) = 3.42, p = .035$ and an effect size of partial $\eta^2 = .057$.

Main Analysis

Figure 2 provides an overview of the results differentiating control and intervention group:

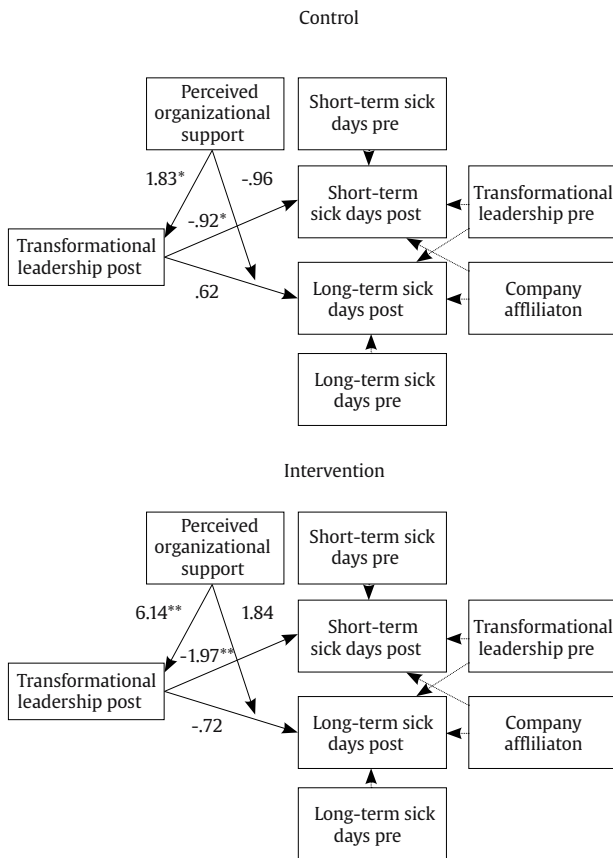


Figure 2. Results Multigroup Analysis. *p < .10, *p < .05, **p < .01.

The proposed model demonstrated a good fit with RMSEA = .032, CFI = .999 and TLI = .995. Furthermore, the results showed a significant association of changes in transformational leadership

with changes in short-term sick leave days for both the control (standardized estimate [SdEst.] = -.92, $p = .020$) and intervention group (SdEst. = -1.97, $p < .001$), thus confirming hypothesis 1a. Additionally, the effect was stronger for the intervention as compared to the control group, thus providing support for hypothesis 1b.

Regarding changes in long-term sick days, there was no significant relation with transformational leadership for either the control (SdEst. = .62, $p = .376$) or intervention group (SdEst. = -.72 $p = .144$). Therefore, we cannot support hypotheses 2a and 2b.

The moderation effect of POS in the association between changes in transformational leadership and short-term sick leave days was significant for the intervention group (SdEst. = 6.14, $p < .001$), while it was only marginally significant within the control group (SdEst. = 1.83, $p = .057$), thus leading us to accept the hypothesis 3a only for the former. With regard to the same moderation effect for long-term sick leave days, we found no support for either the control (SdEst. = -.096, $p = .540$) or the intervention group (SdEst. = 1.84, $p = .277$). Hence, we rejected hypothesis 3b. The control variable company affiliation was not significant for any of the two dependent variables in either group.

Discussion

The main objectives of the present research were to contribute towards establishing a causal association between transformational leadership and employee sick leave as well as to shed light on the influence of leaders' POS on that association. Moreover, it aimed to provide evidence for the underlying mechanisms in that relationship, specifically whether connection between transformational leadership might be due to a real, direct improvement of employee health or rather an increase in motivation to attend work.

Motivation- or Health-related Mechanism

The results showed that transformational leadership was a significant predictor of short-term sick leave while the same association was not significant for long-term sick leave. Taking into consideration the rather motivational nature of short-term and the rather health-related nature of long-term sick leave (Schreuder et al., 2013; Vahtera et al., 2004), these findings indicate that transformational leadership had influence only over the former. As suggested by Nielsen and Daniels (2016), the motivational capacities of a transformational leader could induce employees to perform higher in the short-run, accompanied by presenteeism and a lack of recovery from sickness, which might be detrimental for employee health and well-being in the long-run. Based on this interpretation, transformational leadership would lead to a reduction of short-term sickness absences due to increased motivation and presenteeism, but show a detrimental effect on the more serious long-term absences. However, contrary to the view that a person is either entirely healthy or sick, Antonovsky (1979) advocates in the salutogenic model of health for an ease/dis-ease continuum.

According to this model, an individual is constantly moving on that continuum based on their subjective perception and interpretation of pain, suffering and functional limitation, which are to a certain extent always present as part of the human condition. Applying this concept to the results of the present study, a transformational leader might have influenced the positioning of their employees on the ease/disease continuum related to minor pathologies associated with short-term sickness absence, i.e., through creating positive psychosocial conditions at work and preventing psychosocial risks. In that case, a transformational leader would not favour or induce presenteeism, but rather influence employee perception of their own degree of health in such a way that they tend towards the “ease” end of the continuum and label themselves less as “ill”, i.e., through creating a salutogenic work environment. Future research should explore this alternative path of transformational leadership's impact on short-term sick leave via perceived health.

Moderation Effect of POS

The moderation effect of POS in the association between transformational leadership and sick leave was significant for absence days due to short-term spells (in the control group only marginally significant) and not significant for those due to long-term spells. Specifically, the results indicated that the capacity of a transformational leader to influence in the short-term absences varies as a function of how supportive they perceive their organization to be. This finding underlines the relevance of organizational context for effective transformational leadership. A leader does not act in a vacuum, but their performance seems to depend on the levels of support they perceive in their environment.

In the case of absence days due to long-term sick leave spells, the present findings did not provide support for a moderation of POS. Hence, even under conditions of high POS, transformational leadership had no significant impact on long-term absences. As this type of absences was associated with more severe health impediments (Schreuder et al., 2013; Vahtera et al., 2004), this result indicates as well that transformational leadership might not so much influence real employee health, but rather motivation to attend work. An alternative explanation of this finding might be related to a reduced frequency and intensity of interactions between leader and member especially during extended sickness absence spells of several months. Due to such a lack of interaction, the theorized amplifying effects of POS for transformational leadership effectiveness might not unfold.

Intervention Effectiveness

As suggested by the manipulation check, the intervention was successful in enhancing self-rated transformational leadership among the participating middle managers as compared to the control group. Moreover, the association between transformational leadership and short-term sick leave days as well as the moderation effect of POS were stronger in the intervention as compared to the control group. Thus, apart from developing their self-perceived transformational leadership capacity, the training intervention also seems to have enabled the participants to more effectively translate these capacities into a reduction of short-term sick leave days in their respective teams. However, the intervention did not significantly contribute towards reducing the long-term sick leave days.

Theoretical Contribution

The present research addresses the limitations of prior studies and permits establishing a causal relation between transformational leadership and objectively recorded sick leave.

Randomized controlled trials are the appropriate research design for establishing causality (Eden, 2017), often called for but still rare in the field of leadership training (Martin et al., 2020). Moreover, by analysing the underlying mechanism of the link between transformational leadership and sick leave, the present study contributes to the theoretically and ethically relevant questions whether leaders might actually improve employee health or rather increase their motivation to attend work, with the subsequent detrimental implications, such as presenteeism or long-term health impairment.

Practical Contribution

Eden (2020) stressed the importance of carrying out field experiments in leadership research as a means of providing actionable empirical evidence for practitioners. The present study offers an evidence-based intervention for professionals on the search of potential responses to the increasing levels of sickness absence. Practitioners are highly encouraged to implement the present intervention. Moreover, the creation of a favourable organizational context by fostering leaders' POS might further boost the effectiveness of the training. To that end, Kurtessis et al. (2017) identified a series of antecedents of POS, such as human resource practices, organizational justice, or working conditions. These authors additionally highlighted the importance of leadership (e.g., supervisor support, transformational leadership) for POS. Hence, a potential avenue for rendering future interventions aimed at enabling middle managers more effective could be to train their corresponding superiors as well, i.e., the upper management in supporting the middle management and creating favourable organizational conditions.

Limitations

The present research has several limitations. First, due to practical reasons, the survey of transformational leadership did not include employee perceptions, but rather relied on leaders' self-reported data. This could pose a threat to the internal validity of our findings (Holzbach, 1978; Mabe & West, 1982). Nonetheless, the fact that a potential self-rating bias would be present in both the intervention and control group and that the present analysis did not focus on absolute scores, but rather on change over time, suggests an acceptable validity of the findings. Martin et al. (2020) pointed out that, due to their complex nature, “demanding that all leadership training studies reach the highest standards of experimental design is likely to prove counterproductive” (p. 2). Moreover, the outcome measures of sickness absence applied promise a high validity, as they were based on objectively recorded data. Second, two of the authors were involved in the design and implementation of the training format and therefore potentially had a vested interest bias in achieving a certain research outcome. However, Martin et al. (2020) found in their review on leadership interventions that such an author involvement was also associated with more rigorous research methods and proper condition randomization. Finally, as the present study was carried out in a Spanish work context, findings might not be generalizable to other settings. However, some characteristics of the sample also suggest a good generalizability. First, training was carried out in three different regions within Spain (Valencia, Madrid, and Barcelona) which present distinct local cultural nuances and languages. Second, participating managers and their employees stemmed from a diverse cultural background, including many non-Spanish nationals. Finally, the sample included participants from two quite different sectors (manufacturing and service).

Conclusion

The increases in levels of sickness absence pose an important challenge for organizations and burden public health systems. Even though the recent COVID-19 pandemic further aggravated this situation, this tendency could already be observed prior to 2020. Contributing to the quest for identifying potential solutions, the present study proposed an instrument for better managing employee health and sickness absence. Specifically, it tested the effectiveness of an intervention on transformational leadership for reducing objectively recorded employee sick leave through a randomized controlled trial. The results showed that transformational leadership reduced short-term sick leave, most likely through a motivational or salutogenic rather than a direct health-related mechanism. Moreover, POS moderated the strength of that link, highlighting the importance of leaders' perception of organizational support for effective leadership. Thus, the present research provides experimental evidence to contrast the ambiguous results produced by prior observational studies. Additionally, it offers an evidence-based and actionable training method for organizations seeking to reduce short-term absences.

Finally, the study contributes towards establishing causality in the association between transformational leadership and health-related outcomes, an often lamented and yet generally unheeded research gap (Eden, 2017). Martin et al. (2020) based this shortcoming in our field on the complexity and difficulty that field experiments, the "gold standard" (p. 1) for inferring causality, present, such as reconciling methodological rigour with the practical necessities of participating organizations. The current study aims at advancing leadership research in that sense, demonstrating its practical relevance and creating value for practitioners, organizations, and employees.

Conflict of Interest

The authors of this article declare no conflict of interest.

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