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RESEARCH NOTE

Need-supportive leadership behaviors and sickness absence among employees: The mediating role of basic psychological need satisfaction

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Abstract

Research exploring relationships between leadership behaviors and sickness absence is scarce. Grounded in self-determination theory (SDT), the present study examined: (i) the relationship between need-supportive leadership and sickness absence; and (ii) whether satisfaction of the basic psychological needs mediates the relationship between need-supportive leadership and sickness absence. Municipal employees ($n = 347$, 78% women, age span = 19–66 years) provided baseline data on perceived need-supportive leadership and reported their need satisfaction at work 8 weeks later. Sickness absence data were obtained from municipality records. Two-part regression models showed that need-supportive leadership was negatively associated with sick days ($b = -0.28$, 95% CI $[-0.45, -0.11]$). Need-supportive leadership had an indirect effect on the number of sick days through a composite score of need satisfaction ($ab = -1.96$, 95% CI $[-5.11, -0.12]$). Mediation models with each need separately indicated that autonomy ($ab = -2.12$, 95% CI $[-5.33, -0.23]$) and relatedness ($ab = -1.33$, 95% CI $[-3.41, -0.11]$)

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mediated the relationship between need-supportive leadership and number of sick days. Need-supportive leadership and need satisfaction at work may function as protective factors that provide followers with opportunities to deal with symptoms of ill health and reduce the risk of prolonged sickness absence.

KEYWORDS

interpersonal behaviors, leadership, self-determination theory, sickness absence, Swedish municipal workers

INTRODUCTION

Sickness absence is increasing and estimates of the expenditure on sick leave benefits in the EU amounts to 138 billion euros annually (Eurostat, 2015). Moreover, sickness absence is costly not only for society but also for organizations and individuals. One key factor in organizations to manage sickness absence is the behavior of their closest leader (Harms et al., 2017; Inceoglu et al., 2018; Kelloway et al., 2023; Løkke, 2022). Although there is a large body of research linking leadership to follower health and well-being (e.g., Inceoglu et al., 2018), surprisingly little is known of the role leaders play in shaping followers' absenteeism-patterns (Løkke, 2022). This knowledge gap is problematic, given that an underlining reasoning in studies of leadership and health often is that ill health may turn into sickness absence and become costly (Nielsen & Daniels, 2016).

In addition, empirical studies on the subject show mixed results (Løkke, 2022). Some studies demonstrate an association between perceived leadership behaviors and follower sickness absence (e.g., Nielsen & Daniels, 2016; Nyberg et al., 2008), while others fail to find an association (e.g., Rugulies et al., 2010; Williams et al., 2014). The lack of consistency in previous studies may be a result of conceptual and methodological limitations (cf. Løkke, 2022), such as (a) relying on self-ratings of sickness absence, (b) not relying on theory and using general measures of supervisor support, (c) not assessing psychological mechanisms explaining the association between leader behavior and follower sickness absence, (d) not controlling for history of sickness absences, or (e) relying on public records of sickness absence, and not organizational records, which limits the ability to examine the role leadership may play for short-term sickness absence. The present study addresses these limitations to gain a better and more precise understanding of how leadership behaviors are related to follower sickness absence. The present study makes two significant contributions. First, we make a methodological contribution by including short- and long-term records of sickness absence based on organizational records, while also controlling for history of sickness absence. Second, we make a theoretical contribution by focusing on the basic psychological needs of autonomy, competence, and relatedness (Ryan & Deci, 2017) as mechanisms linking leadership behavior to sickness absence among followers. We also answer calls in the self-determination theory (SDT) literature and examine how concrete leader behaviors are related to work outcomes, using a longitudinal design and objective outcome measures (Chong et al., 2021; Deci et al., 2017; Slemp et al., 2018).

Basic psychological needs are described as "...specifiable psychological and social nutrients which, when satisfied within the interpersonal and cultural contexts of an individual's

development, facilitate growth, integrity, and well-being” (Ryan & Deci, 2017, p. 82). According to SDT (Ryan & Deci, 2017), the need for autonomy connotes an endorsement of one’s actions, flexibility, an absence of pressure, and a sense that one is engaging in the action voluntarily. The need for competence implies that a person wants to interact effectively with the environment and experience a sense of adequate ability. Finally, the need for relatedness represents a desire to feel connected to significant others, to be cared for, and to care for others in a safe environment. The needs are seen as a unifying principle within SDT, where satisfaction of these needs is theorized to contribute to physical and psychological wellness. Supporting these needs within the context of work is therefore central to enhance employees’ well-being and prevent ill-being (Deci et al., 2017; Gagné et al., 2022).

According to SDT, interpersonal behaviors that directly support followers’ need satisfaction are referred to as need-supportive behaviors (Ryan & Deci, 2017). Three specific types of supportive behaviors from leaders—autonomy, competence, and relatedness support—have been acknowledged as particularly important for employees’ need satisfaction and well-being (Deci et al., 2017). Autonomy support involves understanding employees’ perspectives, acknowledging their feelings, encouraging exploration and curiosity, providing a meaningful rationale, and providing opportunities for choice (Slemp et al., 2018). Competence support involves providing clear and understandable guidelines and expectations, instilling a sense of competence, and providing relevant feedback to employees (Slemp et al., 2021). Relatedness support is displayed when managers show a genuine interest in their employees and their employees’ well-being by spending a considerable amount of time, energy, and resources on them (Tafvelin & Stenling, 2018). Although the link between need-supportive leadership behaviors, need satisfaction, and a variety of well-being outcomes have been shown in previous research (Deci et al., 2017; Gagné et al., 2022; Slemp et al., 2018; Van den Broeck et al., 2016), to the best of our knowledge, no study has examined how leaders’ need-supportive behaviors and follower need satisfaction are related to objective measures of sickness absence (e.g., organizational records, not self-report).

Grounded in SDT (Ryan & Deci, 2017), the aims of the present study are to examine: (i) the association between need-supportive leadership and sickness absence; and (ii) whether satisfaction of the basic psychological needs of autonomy, competence, and relatedness mediates the relationship between need-supportive leadership and sickness absence (see Figure 1). We expect that perceived need-supportive leadership behaviors will be related to less sickness absence among followers and that satisfaction of the basic psychological needs will mediate this relationship.

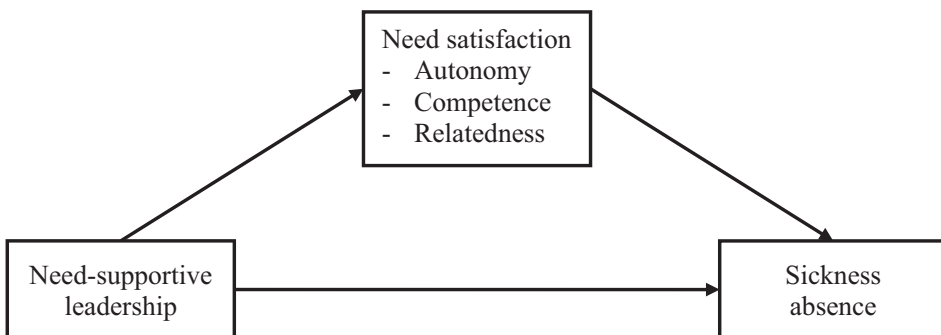


FIGURE 1 Conceptual model of the relationship between need-supportive leadership and sickness absence mediated by basic psychological need satisfaction.

METHOD

Participants and procedure

Data were collected in a sample of municipal employees ($N = 443$) in northern Sweden; however, due to missing data on one or several variables at baseline, we excluded 96 participants. Thus, 347 participants (78% women) were included in the analyses. The sample had a mean age of 44.3 years ($SD = 11.4$, age range = 19–66 years); 72% were full-time workers and 28% were part-time workers; average tenure was 8.3 years ($SD = 8.2$); and 65% had a university degree. At baseline ($n = 347$), the participants responded to questions about their perceptions of their leaders' need-supportive behaviors. Eight weeks later, the participants ($n = 263$) responded to questions about their basic psychological need satisfaction at work. Temporal separation of the web-based surveys was used to reduce the risk of common method bias (Podsakoff et al., 2012). Sickness absence data were obtained from the municipality registers. The Regional Ethics Committee at the first author's university approved the study.

Measures

Need support and need satisfaction at work

We used the *Need Support at Work scale* and *Need Satisfaction at Work scale* (Tafvelin & Stenling, 2018). The *Need Support at Work scale* measures followers' perceptions of their leaders' autonomy-, competence-, and relatedness-supportive behaviors at work. Due to the lack of discriminant validity between the three factors, we collapsed them into a single factor of need-supportive behaviors.¹ Omega reliability coefficient of the single factor was 0.95. The *Need Satisfaction at Work scale* measures followers' satisfaction of the three basic psychological needs of autonomy, competence, and relatedness at work. Omega reliability coefficients were 0.88 for the composite score of need satisfaction, 0.78 for autonomy, 0.80 for competence, and 0.93 for relatedness.

Sickness absence

One-year follow-up of sickness absence² records were obtained from the municipality, and sickness absence from the year before the baseline measure was included as a control variable. Sickness absence was measured in two different ways: (1) the total number of sick days (i.e., time lost) and (2) the number of distinct periods (i.e., frequency) of sickness absence. Frequency and time lost are two of the most common indicators used to measure sickness absence in the literature (cf. Løkke, 2022).

Control variables

Informed by previous studies (e.g., Gohar et al., 2021; Lu et al., 2010; Stengård et al., 2021), we controlled for the participants age, education, sex, tenure, type of employment (full- or part-time), and history of sickness absence (1 year before the baseline) in the analyses.

Statistical analyses

Mplus version 8.7 (Muthén & Muthén, 1998–2017) and the full information maximum likelihood (FIML) estimator was used to estimate two-part regression models (Muthén et al., 2016). Two-part regression models were used to account for the censored dependent variables (i.e., 28% had zero sick days and periods). The two-part regression model separates the censored outcome variable in two parts: (i) a binary part describing the probability of having non-zero sick days and periods; and (ii) a continuous part for the rest of the distribution (i.e., those with non-zero sick days and periods). A logit link function was used for the binary part. Odds ratios (*OR*) are reported for the binary part, and unstandardized regression coefficients (*b*) are reported for the continuous part. In the first set of analyses, we estimated the direct relationships between need-supportive leadership and sickness absence. In the second step, we examined mediated relationships between need-supportive leadership and sickness absence through the basic psychological needs. To account for the nested data structure (followers nested in leaders), we used the aggregated analysis method outlined by Muthén and Satorra (1995), and FIML was used to account for missing data.³ We relied on non-symmetric bootstrap confidence intervals (CIs) to assess mediation. If the 95% bootstrap CI did not contain zero (for the regression coefficients) or one (for the odds ratios), the effect was considered statistically significant (Muthén et al., 2016).

RESULTS

Descriptive statistics and bivariate correlations are displayed in Table 1. First, we examined the direct link between need-supportive leadership at baseline and sickness absence during the 1-year follow-up. Higher levels of need-supportive leadership were associated with fewer sick days ($b = -0.28$, 95% CI $[-0.45, -0.11]$), but the association between need-supportive leadership and the probability of non-zero sick days was not statistically significant ($OR = 0.91$, 95% CI $[0.61, 1.35]$). The relationships between need-supportive leadership and distinct periods (continuous part, $b = -0.02$, 95% CI $[-0.12, 0.08]$; binary part, $OR = 1.07$, 95% CI $[0.69, 1.65]$) were not statistically significant.

Second, we examined a composite score of need satisfaction, as well as autonomy, competence, and relatedness need satisfaction separately, as mediators between need-supportive leadership and sickness absence. Need-supportive leadership at baseline was positively associated with need satisfaction 8 weeks later (range of $bs = 0.20$ – 0.34). Higher scores on the composite of need satisfaction ($b = -0.55$, 95% CI $[-1.00, -0.17]$), autonomy ($b = -0.50$, 95% CI $[-0.88, -0.16]$), and relatedness ($b = -0.35$, 95% CI $[-0.64, -0.11]$) were related to fewer sick days during the 1-year follow-up. Higher autonomy need satisfaction was also related to fewer distinct periods of sickness absence during the 1-year follow-up ($b = -0.14$, 95% CI $[-0.27, -0.02]$). Competence need satisfaction did not have statistically significant relationships with sick days or periods (see Figure S3 in the Supporting Information). There was a statistically significant mediated relationship between need-supportive leadership and number of sick days through a composite score of need satisfaction ($ab = -1.96$, 95% CI $[-5.11, -0.12]$). Mediation models with each need separately showed mediated relationships between need-supportive leadership and number of sick days through autonomy ($ab = -2.12$, 95% CI $[-5.33, -0.23]$) and relatedness need satisfaction ($ab = -1.33$, 95% CI $[-3.41, -0.11]$). None of the other mediated relationships were statistically significant (see Table 2). Parameter estimates (direct effects) from the mediation models are presented in Figures S1 to S4 in the Supporting Information.

TABLE 1 Descriptive statistics and bivariate correlations.

	<i>N</i>	<i>M</i> / <i>%</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Age	347	44.30	11.38													
2. Tenure	347	8.29	8.16	0.48												
3. Employment (full-time)	347	72%		0.10	0.04											
4. Sex (female)	347	78%		0.03	0.02	0.11										
5. Education (university)	347	65%		0.03	−0.03	0.27	0.05									
6. History of sick days	347	18.55	49.56	−0.03	0.05	0.03	−0.04	−0.15								
7. History of periods	347	1.88	1.93	−0.07	−0.02	−0.10	0.02	−0.12	0.21							
8. Need support	347	3.86	0.79	−0.04	−0.09	0.02	−0.04	−0.09	0.01	−0.14						
9. Need satisfaction	263	3.97	0.53	0.11	0.04	−0.07	0.00	−0.13	−0.10	−0.12	0.41					
10. Autonomy	263	4.10	0.60	0.11	0.02	0.03	0.02	−0.07	−0.08	−0.12	0.42	0.86				
11. Competence	263	4.02	0.74	0.12	0.08	−0.14	0.05	−0.26	−0.03	−0.03	0.26	0.76	0.58			
12. Relatedness	263	3.78	0.64	0.05	0.01	−0.06	−0.06	−0.01	−0.12	−0.13	0.31	0.79	0.51	0.33		
13. Sick days	347	23.50	61.19	−0.05	−0.08	0.02	−0.09	−0.02	0.29	0.23	−0.07	−0.16	−0.14	−0.06	−0.17	
14. Periods	347	1.99	2.24	−0.12	−0.15	−0.09	0.00	−0.11	0.16	0.53	−0.05	−0.10	−0.18	0.02	−0.06	0.19

Note: Bold correlations coefficients were statistically significant ($p < .05$).

TABLE 2 Indirect effects of need-supportive leadership on sickness absence through need satisfaction. Odds ratios (OR) are reported for the binary part and unstandardized regression coefficients are reported for the continuous part.

	<i>ab</i>	95% CI
Need support → need satisfaction → sick days		
Binary part	1.02	[0.87, 1.19]
Continuous part	−1.96	[−5.11, −0.12]
Need support → autonomy → sick days		
Binary part	1.00	[0.85, 1.17]
Continuous part	−2.12	[−5.33, −0.23]
Need support → competence → sick days		
Binary part	1.02	[0.91, 1.12]
Continuous part	−0.25	[−2.02, 0.68]
Need support → relatedness → sick days		
Binary part	1.00	[0.90, 1.10]
Continuous part	−1.33	[−3.41, −0.11]
Need support → need satisfaction → distinct periods		
Binary part	1.03	[0.86, 1.24]
Continuous part	0.00	[−0.11, 0.13]
Need support → autonomy → distinct periods		
Binary part	1.01	[0.85, 1.20]
Continuous part	−0.04	[−0.15, 0.09]
Need support → competence → distinct periods		
Binary part	1.03	[0.91, 1.15]
Continuous part	0.03	[−0.05, 0.09]
Need support → relatedness → distinct periods		
Binary part	1.02	[0.91, 1.17]
Continuous part	0.00	[−0.07, 0.09]

Note: *ab* = indirect effect; 95% CI = 95% non-symmetric bootstrap confidence interval. All models included age, education, sex, tenure, type of employment (full-time or part-time), and history of sickness absence (1 year before the baseline measure) as control variables.

DISCUSSION

Based on SDT and using organizational records of sickness absence, the aim of the present study was to examine: (i) the association between need-supportive leadership and sickness absence; and (ii) whether satisfaction of the basic psychological needs mediates the relationship between need-supportive leadership and sickness absence. The findings suggest that leaders' need support and followers' autonomy and relatedness need satisfaction at work are related to sickness absence.

The current study is the first to link leaders' need support and followers' need satisfaction to organizational records of sickness absence. Whereas previous SDT-based research supports a

link between need-supportive leadership, need satisfaction, and various indicators of well-being (Deci et al., 2017; Gagné et al., 2022; Slemp et al., 2018; Van den Broeck et al., 2016), our results show that SDT can also aid our understanding of the mediated process linking need-supportive leadership behaviors to sickness absence. Our study suggests that need-supportive leadership is linked to sickness absence and that satisfaction of the basic psychological needs partly explains why leaders' behaviors are related to sickness absence among followers.

The significant relationships between need-supportive leadership, autonomy and relatedness need satisfaction, and sick days and periods were found with the continuous part of sickness absence, that is, relationships with the number of days and periods for those who had non-zero days and periods. No statistically significant relationships were found with the probability of non-zero sick days and periods. This indicates that leaders' need support and followers' need satisfaction at work might be even more important for followers experiencing days or periods of sickness absence and might help reduce the length or severity of the sickness absence.

Autonomy and relatedness need satisfaction showed a more homogenous pattern of relationships with sickness absence than competence need satisfaction. These findings mirror previous meta-analytic estimates indicating that relationships involving competence need satisfaction and certain outcomes (e.g., absenteeism, turnover intentions) often deviate from the pattern observed for autonomy and relatedness (Van den Broeck et al., 2016). The magnitude of relationships between the basic psychological needs and sickness absence in the current study are also similar to meta-analytic estimates of the relationship between need satisfaction and absenteeism (cf. Van den Broeck et al., 2016). Autonomy need satisfaction had the strongest relation with sickness absence, followed by relatedness need satisfaction, whereas the relationship between competence need satisfaction and sickness absence was weaker and not statistically significant. These findings indicate that competence need satisfaction may be less important for sickness absence than autonomy and relatedness need satisfaction. Another potential explanation is that competence need satisfaction play a more indirect role in the development of sickness absence compared to autonomy and relatedness need satisfaction, which could suggest that the influence of the needs on sickness absence operate through different mechanisms.

Autonomy and relatedness need satisfaction significantly mediated the relationship between leaders' need support and the number of sick days. Thus, our findings suggest that autonomy and relatedness need satisfaction are important mechanisms explaining why need-supportive leadership reduce the severity of sickness absence in the short-term. When leaders support the autonomy and relatedness of their followers, they may promote a sense of control, choice, belonging, and that their leader listens and supports them, which in turn may prevent and/or reduce symptoms of followers' ill health.

Limitations of the current study involve the lack of repeated assessments of need-supportive leadership and need satisfaction, which would allow for examining the impact of changes over time in these variables on sickness absence. The sample consisted mainly of women, and we did not assess the cause of sickness absence, which may have influenced the results. Future research should explore the role of need frustration on sickness absence and examine why competence need satisfaction show a deviant pattern of associations with certain outcomes in work settings compared to autonomy and relatedness need satisfaction. Future research could also examine the role of other interpersonal behaviors, such as the tripartite conceptualization of leaders need-supportive, need-thwarting, and need-indifferent behaviors (Huyghebaert-Zouaghi et al., 2023), and how these leader behaviors are related to sickness absence among employees.

It would also be interesting to examine how leader-rated need-supportive behaviors are linked to need satisfaction and sickness absence as well as the role of congruence or discrepancies between employee- and leader-rated need-supportive behaviors. Researchers could also use SDT to explore the proposed attitudinal/motivational path linking work and personal characteristics to both functional and dysfunctional presenteeism (cf. Karanika-Murray & Biron, 2020; Miraglia & Johns, 2016).

Our findings contribute to leadership practice by providing a theoretically informed approach to leadership that can protect follower well-being. With SDT as a guiding framework for leadership training, leaders can practice and increase their need-supportive behaviors at work (Slemp et al., 2021). Key aspects in such interventions are: (a) to understand and proactively consider the broader context to avoid factors that might undermine the intervention; (b) that the implementation and pedagogical approach of the intervention supports the basic psychological needs; (c) to align the intervention with stakeholder needs; and (d) to resist the urge to focus on short-term effects and allocate sufficient time to evaluate the results of the intervention (Roodbari et al., 2022; Slemp et al., 2021). This latter point is particularly important for interventions targeting outcomes that takes time to unfold, such as sickness absence. To conclude, the findings from the current study suggest that targeting leadership behaviors that promote followers' psychological need satisfaction in leadership training would be a worthwhile pursuit as it may reduce the negative consequences of sickness absence among followers.

CONFLICT OF INTEREST STATEMENT

The authors have no known conflict of interest to disclose.

DATA AVAILABILITY STATEMENT

Data are available from the first author upon reasonable request.

ETHICS STATEMENT

The Regional Ethics Committee at the first author's university approved the study.

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ENDNOTES

¹ We used the $CI_{CFA}(sys)$ method proposed by Rönkkö and Cho (2022) to examine problems with discriminant validity among the three need support factors. The upper limit of the 95% CIs for the latent factor correlations were all above the proposed cut-off of 0.80 (range from 0.916 to 0.999), which indicates moderate to severe problems with discriminant validity. Model fit of the final one-factor model was $\chi^2 = 194.065$, $df = 54$, $p < .001$, RMSEA = 0.086, 95% CI [0.074, 0.100], CFI = 0.943, TLI = 0.931, and SRMR = 0.039.

² The sickness absence policy in the sample of the current study is that the first 2 weeks an employee is sick, their employer pays them sick pay instead of their regular salary. If the employee is still sick after the 2 weeks, they can apply for sickness benefit from the Social Insurance Agency (Försäkringskassan), which is a government agency that administers the social insurance system in Sweden.

³ No statistically significant differences were observed at baseline regarding need support, age, tenure, education, sex, employment, or history of sickness absence between those responding at both T1 and T2 and those responding only at T1. Thus, we included all available data in the analyses using FIML.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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