

Supervisors' need-related behaviors and employees' functioning: A person-centered investigation

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Abstract

Using a recent tripartite representation of supervisors' behaviors rooted in Self-Determination Theory (SDT), this person-centered study sought to identify the different configurations (profiles) of supervisors' need-supportive, need-thwarting, and need-indifferent behaviors as perceived by their subordinates. It also investigated how these supervisory profiles were related to subordinates' levels of need satisfaction, affective organizational commitment, performance, and burnout. Latent profile analyses were estimated in a sample of 807 employees ($M_{age} = 39.17$;

*Since the first two authors (V.P. & N.G.) contributed equally to the preparation of this article, their order was determined at random: Both should be considered first authors.

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42.7% women) recruited via the *Prolific Academic* crowdsourcing platform. Our results revealed five distinct profiles of supervisors' need-related behaviors: (1) globally unfavorable, (2) globally moderately unfavorable and specifically indifferent, (3) globally moderately favorable, (4) globally unfavorable and specifically thwarting, and (5) globally unfavorable and specifically inconsistent. In line with our expectations, these profiles shared distinct associations with all outcomes. Moreover, our results showed that subordinates' specific perceptions of their supervisor need-related behaviors mattered, beyond their global perception of their supervisor, when predicting employee functioning. These findings underline the importance of considering global and specific levels of need-related behaviors when seeking to understand supervisory profiles and their associations with employee functioning.

Keywords

Leadership, need-indifferent behaviors, need-supportive behaviors, need-thwarting behaviors, person-centered, profiles, Self-Determination Theory, supervisor behaviors, tripartite

"The growth and development of people is the highest calling of leadership." Harvey S. Firestone

This quote by American businessman Harvey S. Firestone highlights the importance of leaders' role in their employees' functioning. Indeed, anchored in Self-Determination Theory (SDT; Ryan and Deci, 2017), substantial research evidence (e.g. Chiniara and Bentein, 2016; Gillet et al., 2012; Huyghebaert-Zouaghi et al., 2023a, 2023b) has shown that leaders can help promote adaptive employee functioning by supporting the satisfaction of their psychological needs for autonomy (feeling at the origin of one's actions), competence (feeling efficient in important life domains), and relatedness (feeling connected to others; Ryan and Deci, 2017). However, what this quote fails to capture is the more negative role leaders can also play when they adopt problematic behaviors, or simply fail to adopt desirable ones. As such, several studies have shown that leaders may also hinder employee functioning by engaging in behaviors that thwart their subordinates' psychological needs (e.g. Gillet et al., 2012; Huyghebaert-Zouaghi et al., 2023a, 2023b). More recently, research has revealed that leaders can also negatively influence employee functioning by adopting behaviors that are indifferent to, or that neglect, subordinates' basic psychological needs (Huyghebaert-Zouaghi et al., 2023a, 2023b). This tripartite operationalization of supervisory behaviors (i.e. encompassing need-supportive, need-thwarting, and need-indifferent behaviors) is particularly promising in that it addresses multiple calls for the adoption of a more integrative conceptualization of leaders' behaviors (Dinh et al., 2014; Meuser et al., 2016) from the perspective of SDT, a well-established theory of human motivation, health, and functioning (Ryan and Deci, 2017). Despite findings showing that each of these types of behaviors has a distinct predictive value in different life settings (e.g. sports in Bhavsar et al., 2019), there has been limited research on the role played by these types of behaviors in the work context (Huyghebaert-Zouaghi et al., 2023a, 2023b).

Furthermore, although some studies have shown that supervisors adopt distinct configurations of behaviors (e.g. Arnold et al., 2017; Doucet et al., 2015), the bulk of

leadership research has ignored this possibility, preferring to focus on the unique effects of specific types of supervisory behaviors on employees' functioning (e.g. Gillet et al., 2012; Slemp et al., 2018). As a result, there is a dearth of research on the configurations of need-related behaviors used by supervisors which needs to be addressed to better understand the nature and implications of these behavioral combinations. Moreover, no study has yet considered the combined effects of the three types of need-related supervisory behaviors (supportive, thwarting, and indifferent) as they are experienced by employees. There is thus a need to clarify the role of these combinations, as they are likely to yield effects that are more than the sum of their parts (e.g. Arnold et al., 2017; Doucet et al., 2015).

To address these limitations, the present study relies on a person-centered approach, which allows the identification of perceived supervisory profiles displaying qualitatively and quantitatively distinct configurations of need-related behaviors. Specifically, this study aims to (1) identify supervisory profiles based on the tripartite operationalization of need-related behaviors, and (2) examine the differential associations between these supervisory profiles and a range of adaptive (need satisfaction, affective commitment to the organization, and performance) and maladaptive (burnout) outcomes. From a theoretical standpoint, this study seeks to contribute to the limited research and theory on the joint effects of supervisors' need-related behaviors, thereby enabling the identification of specific supervisory profiles and their impact on workers' adaptive and maladaptive functioning. Additionally, it aims to inform future theoretical developments in supervisor profile research. From a practical perspective, previous research focusing on associations between specific types of behaviors and outcomes has only led to recommendations for interventions targeting isolated types of behaviors, under the assumption that such interventions will equally benefit every employee. However in real-life settings, employees are exposed to combinations of behaviors, within which each behavior is likely to influence the impact of others. Since each profile may benefit from distinct types of interventions, the findings of this study will help select the appropriate ones for each profile and determine which profiles should be prioritized for such intervention (e.g. Morin et al., 2011; Morin and Marsh, 2015).

A tripartite conceptualization of supervisors' behaviors

In line with repeated calls highlighting the need for a more integrative conceptualization of supervisors' behaviors in a field of research dominated by a great variety of piecemeal conceptualizations (e.g. Anderson and Sun, 2017; Dinh et al., 2014; Meuser et al., 2016), a novel tripartite conceptualization of supervisors' behaviors based on SDT (Bhavsar et al., 2019; Ryan and Deci, 2017) has recently been proposed and validated by Huyghebaert-Zouaghi et al. (2023a, 2023b). This approach pertains to subordinates' perceptions of the behaviors used by their supervisor as a function of their need-supportive, need-thwarting, and need-indifferent nature. Need-supportive behaviors are those that are likely to help fulfill subordinates' psychological needs, for instance by encouraging their initiative (autonomy), recognizing their accomplishments (competence), and demonstrating care for their well-being (relatedness). Conversely, need-thwarting behaviors undermine the fulfillment of subordinates' psychological needs, for instance by exerting

an undue level of control (autonomy), belittling their achievements or abilities (competence), or explicitly rejecting them (relatedness). Finally, need-indifferent behaviors are those that simply disregard subordinates' psychological needs, for instance, by displaying a lack of direction and disinterest for subordinates' opinions (autonomy), failing to establish some kind of work structure or feedback procedures (competence), and by failing to be attentive to subordinates' well-being (relatedness).

In addition to being aligned with the three classical leadership styles (democratic, authoritarian, and laissez-faire) first introduced by Lewin et al. (1939), this tripartite conceptualization also shares similarities with the currently dominant Full-Range Theory of Leadership (Avolio and Bass, 1991). This theory identifies three core leadership styles (i.e. transformational, transactional, and laissez-faire). However, despite its current dominance, this theory focuses on behaviors aimed at achieving specific outcomes, such as organizational effectiveness. It is not oriented toward *subordinates' perspective* on how their supervisors' actions support, thwart, or ignore their psychological needs. This perspective is crucial, as supervisors' need-related behaviors not only influence subordinates' performance but also their motivation and psychological functioning (Inceoglu et al., 2018; Ryan and Deci, 2017). As a well-established theoretical framework positioning psychological need fulfillment as a core driver of motivation, well-being, and functioning across life domains, SDT (Ryan and Deci, 2017) provides a more integrative perspective on how supervisors' behaviors may come to influence subordinates' performance and broader psychological functioning at work (e.g. Huyghebaert-Zouaghi et al., 2023a, 2023b). Our goal in this research is not to introduce or promote this new conceptualization, or to highlight how it complements classical theories of leadership, which has been done quite eloquently by Huyghebaert-Zouaghi et al. (2023a, 2023b). Rather, we seek to extend this novel conceptualization to a more holistic person-centered perspective, centered on how these need-related behaviors combine to influence distinct types, or profiles, of employees.

A person-centered approach

Supervisors typically rely on a variety of behaviors as part of their interactions with their subordinates (e.g. Bass, 1985; Doucet et al., 2015; Poetz and Volmer, 2024). To fully grasp how these behaviors influence subordinates, it is critical to consider them in combination, rather than isolation. Although recognizing that each supervisor relies on a unique combination of behaviors lies at the core of leadership theory and research, past studies have often ignored the need to better understand these combinations by adopting a variable-centered approach. This approach focuses on the unique, additive, and sometimes interactive, roles of different types of supervisory behaviors, assuming that associations similarly apply to all members of the sample under study (Morin et al., 2018). It is only recently that some studies (e.g. Doucet et al., 2015; Hancock et al., 2023; Poetz and Volmer, 2024; Tian et al., 2023) have started to adopt a more comprehensive person-centered approach to identify distinct profiles (or subpopulations) of supervisors based on their specific configuration of supervisory behaviors (Meyer and Morin, 2016; Morin et al., 2011, 2018).

Previous person-centered studies focusing on need-related behaviors have solely focused on teachers (focusing on the influence of these behaviors on students, e.g.

Amoura et al., 2015; Burgueño et al., 2024; Haerens et al., 2018; Leo et al., 2022) and sport coaches (focusing on the influence of these behaviors on athletes, e.g. Haerens et al., 2018; Matosic and Cox, 2014). Most of these studies have also been limited to an examination of autonomy supportive behaviors, sometimes in combination with autonomy thwarting behaviors. To the best of our knowledge, only two of these studies have considered all three psychological needs (i.e. autonomy, competence, and relatedness; Burgueño et al., 2024; Leo et al., 2022), and none of them has considered all three types of behaviors (i.e. need-supportive, need-thwarting, and need-indifferent) or have focused on work-related supervisor-subordinate interactions. Overall, these studies have uncovered four main profiles: Two dominated by need-supportive or need-thwarting behaviors, and two characterized by mixed levels of need-supportive and need-thwarting behaviors (e.g. low-low, high-high, or low support-moderate thwarting; Burgueño et al., 2024; Haerens et al., 2018; Leo et al., 2022). Despite their interest, these findings do not necessarily transpose to the work context, and currently little is known regarding need-indifferent behaviors and how they relate to need-supportive and need-thwarting behaviors in the prediction of employee functioning.

Although not focused on need-related behaviors, some person-centered studies have considered the combined role of different types of supervisory behaviors in the work area, focusing on employees' perceptions of positive (e.g. transformational; Chénard-Poirier et al., 2022; Tian et al., 2023; Wittmers et al., 2024; leader-member exchange; Gillet et al., 2022a; empowerment; Chénard-Poirier et al., 2017; benevolence and morality; Chou et al., 2015) and negative (e.g. authoritarianism; Chou et al., 2015; abusive behaviors; Chénard-Poirier et al., 2022; Wittmers et al., 2024) leadership styles, on their own or in combination. However, we are only aware of two person-centered studies that have also considered employees' perceptions of passive leadership behaviors, alongside their perception of more active positive and negative behaviors (Doucet et al., 2015; Hancock et al., 2023).

In the first of those studies, conducted among finance employees, Doucet et al. (2015) assessed employees' perceptions of their supervisor's transformational, transactional, and corrective avoidant leadership behaviors. Their results uncovered six profiles corresponding to: (1) super leaders (high transformational and transactional, and low corrective avoidant), (2) transactors (higher on transactional style than on the other styles), (3) moderate leaders (average on all three styles), (4) visionary-distant leaders (high transformational and corrective avoidant, and low transactional), (5) distant-rewarding leaders (high corrective avoidant, moderate transactional, and low transformational), and (6) distant-punitive leaders (high corrective avoidant, and low on the other two styles). In the second study, Hancock et al. (2023) investigated six leadership styles (i.e. transformational, contingent reward, abusive, passive and active management-by-exception, and laissez faire) among three samples of employees from a variety of industries. Their results revealed three distinct profiles: (1) optimal (higher on transformational and transactional than on the other leadership styles), (2) passive-abusive (higher on passive and abusive than on the other leadership styles), and (3) passive (higher on passive than on the other leadership styles). Although it is hard to integrate the results from these studies, as they relied on different types and numbers of leadership styles, it remains important to acknowledge that these studies

identified a possible range of three to six distinct supervisory profiles based on employees' perceptions of their supervisor's behaviors.

In any case, this variability in results outlines the need for additional research to better identify profiles of supervisors' behaviors, as these combinations may differently impact subordinates' mental health, performance, and need satisfaction, and indirectly motivation (Huyghebaert-Zouaghi et al., 2023a, 2023b). Given that past studies rely on a variety of fragmented conceptualizations, it is also critical to anchor our research in a single overarching theoretical framework such as SDT.

Global versus specific levels of supervisors' need-related behaviors

Recent studies on need-related behaviors conducted at work (Huyghebaert-Zouaghi et al., 2023a, 2023b) and outside of the work setting (Tóth-Király et al., 2022) have highlighted the importance of relying on a bifactor operationalization of these various behaviors. This operationalization makes it possible to disaggregate global and specific components of supervisors' need-related behaviors, making it easier to directly assess the unique value of each specific component beyond what it shares with the others. In relation to need-related behaviors, the global factor (G-factor) represents individuals' general perception of their supervisor's need-related behaviors. This factor captures what is shared among all need-related subscales and has been found to reflect a global level of need-hampering behaviors in previous research (i.e. the extent to which these behaviors are harmful to psychological needs; Huyghebaert-Zouaghi et al., 2023a, 2023b). In contrast, the specific factors (S-factors) reflect the unique contribution of each dimension (need-supportive, need-thwarting, and need-indifferent behaviors) beyond what they share (i.e. what is left unexplained by the G-factor). From a theoretical perspective, a bifactor operationalization can help uncover the combined role of all three dimensions as well as the truly unique role of each dimension. Moreover, statistical research has also shown that failure to account for this dual global/specific factor structure tends to result in the inaccurate identification of profiles differing quantitatively from one another (such as good, moderate, and bad leadership profiles) rather than qualitatively (i.e. profiles with distinct configurations; Morin et al., 2011, 2016a, 2017; Morin and Marsh, 2015).

The first goal of the present study was thus to identify profiles of supervisors based on subordinates' assessment of their need-related behaviors while relying on a tripartite operationalization of these behaviors (Huyghebaert-Zouaghi et al., 2021) and on a proper bifactor disaggregation of their global and specific nature. Since so few studies have previously relied on a person-centered approach to investigate supervisory behaviors, none of which relied on a proper bifactor operationalization of these behaviors, it would be premature to develop explicit expectations regarding the number and nature of the profiles. Moreover, explicit expectations are not required for person-centered analyses, which are methodologically inductive (Morin et al., 2018). Thus, we formulate the following research question:

RQ1. How many profiles of supervisors' need-related behaviors profiles will be identified, and what will be the nature of these profiles?

Supervisory profiles and employee functioning

In the present study, to achieve a comprehensive understanding of the implications of the need-related supervisory profiles that will be identified, we consider various indicators of adaptive (need satisfaction, affective commitment to organization, and performance) and maladaptive (burnout) functioning at work among employees. Our decision to focus on employees' need satisfaction is predicated on the fact that need satisfaction is theoretically positioned as a core component and driver of employees' psychological functioning at work according to SDT (Ryan and Deci, 2017), as well as the core mechanism underpinning the influence of contextual factors on employees' motivation, well-being, work engagement, and performance (Leroy et al., 2015; Rahmadani et al., 2019; Ryan and Deci, 2017). Supporting these assertions, previous studies have shown that supervisory behaviors tend to strongly influence the satisfaction of employees' psychological needs (Gillet et al., 2012; Huyghebaert-Zouaghi et al., 2023a, 2023b).

Employees' affective commitment to their organization (i.e. the extent to which employees feel a sense of emotional attachment to, and a desire to contribute to the positive functioning of, their organization; Meyer and Herscovitch, 2001) is another well-established indicator of adaptive functioning and a core driver of motivation (Meyer et al., 2004), retention (Meyer et al., 2002), performance (Lee et al., 2018; Meyer et al., 2002), and well-being (Meyer and Maltin, 2010). Previous studies have supported the presence of close associations between supervisory behaviors and employees' affective commitment to their organization (Casimir et al., 2014; Kim and Beehr, 2020).

In organizational research, performance has long been considered as the penultimate outcome of leadership studies (e.g. Inceoglu et al., 2018), and one that would be hard to ignore in a study seeking to document the implications of supervisors' profiles on employee functioning. Indeed, performance is one of the "basic building blocks" of organizational functioning (Campbell and Wiernik, 2015), and has often been found to share associations with supervisory behaviors (e.g. De Carlo et al., 2020; Talukder and Galang, 2021). In the present study, we more specifically focus on employees' task proficiency, a dimension of performance that reflects the extent to which employees are able to fulfill the established expectations and requirements associated with their role (Griffin et al., 2007).

Finally, we considered burnout as an indicator of maladaptive functioning. According to Schaufeli et al. (2020), burnout can be seen as a work-related state of tiredness encompassing four critical dimensions: Exhaustion, cognitive and emotional impairment, and mental distancing. Exhaustion, cognitive impairment, and emotional impairment all reflect an inability to invest energy at work due, respectively, to extreme tiredness, to difficulties regulating one's cognitive processes, and to struggling with negative emotional processes (Schaufeli et al., 2020). In contrast, mental distancing refers to an unwillingness to invest effort and energy which is likely to result in disengagement. Research has often demonstrated associations between supervisors' behaviors and employees' experiences of burnout (e.g. Kelly and Hearld, 2020; M. Russell, 2014).

Matching core SDT assumptions (Ryan and Deci, 2017), previous studies have shown that supervisors' behaviors share relatively strong associations with employees' levels of need satisfaction and psychosocial functioning at work (e.g. Chiniara and Bentein, 2016;

Gillet et al., 2012; Rahmadani et al., 2019; Slemp et al., 2018). First, supervisors' need-supportive behaviors have typically been found to be positively associated with a variety of adaptive outcomes, including need satisfaction (e.g. Gillet et al., 2012; Huyghebaert-Zouaghi et al., 2023a, 2023b), engagement (e.g. Heyns et al., 2022; Huyghebaert-Zouaghi et al., 2023b), and performance (e.g. Chiniara and Bentein, 2016), while also reducing subordinates' likelihood of experiencing maladaptive outcomes, such as burn-out (e.g. Heyns et al., 2022). Although less frequently investigated, need-thwarting and need-indifferent behaviors have generally been found to be positively associated with undesirable outcomes, such as emotional exhaustion and lower levels of work engagement (Huyghebaert-Zouaghi et al., 2023b). More interesting is the report that need-thwarting and need-indifferent behaviors tend to be differentially associated with a variety of outcomes (Cheon et al., 2019; Huyghebaert-Zouaghi et al., 2023b), thus highlighting the importance of distinguishing between both types of behaviors. In fact, tentative evidence even suggests that need-indifferent behaviors may sometimes be more consistently harmful than need-thwarting behaviors (Huyghebaert-Zouaghi et al., 2023a, 2023b), thus reinforcing previous reports regarding the highly harmful nature of passive forms of leadership (e.g. Skogstad et al., 2007).

In light of the limited findings regarding the impact of supervisors' need-related behavior profiles, we consider the following research question:

RQ2. How will profiles of supervisors' need-related behaviors relate to employee outcomes?

Method

Procedure

Participants were recruited using the *Prolific Academic* crowdsourcing platform, which has been shown to support the collection of quality data for research purposes (Palan and Schitter, 2018; Peer et al., 2017). Recruitment was limited to participants who (1) were 18 years or older, (2) resided in Canada or the United States, (3) worked full-time (31 hours or more per week), (4) had a tenure of at least 5 months in their current position, and (5) had frequent interactions with their supervisor and colleagues at work. The online questionnaire also included three questions assessing attention (e.g. "For this question, please select "Agree" to demonstrate your attention"). Only those who successfully completed at least two out of the three verification questions were included (leading to the elimination of 48 potential participants). Potential participants first received information on the research goals, were assured that their participation was voluntary and confidential, and were informed that they could withdraw from the project at any point without constraint or penalty. Interested participants provided their written informed consent (i.e. clicking "agree") before completing the online questionnaires, and received \$5 US in compensation for completing the questionnaire (max. 25 minutes). All procedures employed in this study adhered to the ethical standards and principles outlined in the Declaration of Helsinki (World Medical Association, 2013), and were formally

approved by the research ethics committee of the fourth author's institution (information will be added after the evaluation process).

Sample

This study relied on a sample of 807 participants (42.7% women) with a mean age of 39.17 years ($SD=11.19$; 19–85) and an average tenure in their position of 7.40 years ($SD=6.79$; 0.42–55). Most participants had a permanent position (97.3%) and lived in the US (86%; the remaining 14% lived in Canada). Participants worked mainly in social sciences and health (20.7%), followed by sciences and technology (17.5%), industry and agriculture (14.2%), business and administration (13.4%), market services (10.4%), government and public administration (6.5%), construction (4%), or other sectors (13.3%).

Measures

Supervisors' need-related behaviors. Participants completed the 22 items (global $\alpha=0.96$) from the Tripartite Measure of Interpersonal Behaviors-Supervisor (TMIB-S; Huyghebaert-Zouaghi et al., 2023b) in relation to their current supervisor. This scale includes three subscales assessing employees' perceptions of their supervisor's: (a) need-supportive behaviors (eight items; $\alpha=0.93$; autonomy support e.g. *Encourages me to take my own initiative*; competence support e.g. *Ensures that tasks are suited to my skill level*; relatedness support e.g. *Shows care and concern*); (b) need-thwarting behaviors (eight items; $\alpha=0.93$; autonomy thwarting e.g. *Dismisses my opinion*; competence thwarting e.g. *Belittles my abilities*; relatedness thwarting e.g. *Makes it clear that he/she doesn't like me*), and need-indifferent behaviors (six items; $\alpha=0.83$; autonomy indifference e.g. *Is unresponsive to my opinions*; competence indifference e.g. *Sets tasks that aren't challenging enough*; relatedness indifference e.g. *Is indifferent to how I feel*). Participants rated each item using a seven-point Likert scale (1–Strongly disagree; 7–Strongly agree).

Need satisfaction. Psychological need satisfaction was measured with the 16 items (global $\alpha=0.91$) from the Work-related Basic Need Satisfaction Scale (Van Den Broeck et al., 2010). This scale includes three subscales assessing the satisfaction of the needs for autonomy (six items, $\alpha=0.84$, e.g. *I feel like I can be myself at my job*), competence (four items, $\alpha=0.87$, e.g. *I really master my tasks at my job*), and relatedness (six items, $\alpha=0.89$; e.g. *At work, I feel part of a group*). Each item was rated using a seven-point Likert scale (1–Very strongly disagree; 7–Very strongly agree).

Affective commitment to the organization. Participants reported their levels of affective commitment to their organization using the six-item scale ($\alpha=0.92$; e.g. *This organization has a great deal of personal meaning for me*) developed for this purpose by Meyer et al. (1993). Items were rated using a five-point Likert scale (1–Strongly disagree; 5–Strongly agree).

Work performance. Participants self-reported their work performance using a three-item measure ($\alpha=0.93$; e.g. *I carried out the core parts of my job well*) of individual task

proficiency developed by Griffin et al. (2007). These items were rated using a frequency scale (1– *Never*; 5– *Many times [almost always]*).

Burnout. The Burnout Assessment Tool–Core (BAT-C; Schaufeli et al., 2020) was used to assess participants' levels of burnout (global $\alpha=0.96$) across four different subscales assessing their levels of exhaustion (eight items, $\alpha=0.92$, e.g. *At work, I feel mentally exhausted*), mental distance (five items, $\alpha=0.86$, e.g. *I feel indifferent about my job*), cognitive impairment (five items, $\alpha=0.91$, e.g. *At work I struggle to think clearly*), and emotional impairment (five items, $\alpha=0.87$, e.g. *At work I may overreact unintentionally*). Participants rated each item using a frequency scale (1– *Never*; 5– *Always*).

Analyses

Preliminary analyses

The psychometric properties of all multi-item measures used in this study were verified through preliminary factor analyses. The results from these analyses (factor structure, factor correlations, and composite reliability) are detailed in the online supplements (see Supplemental Tables S1–S4). Factor scores saved from these measurement models (estimated in standardized units with $M=0$ and $SD=1$) were used in our main analyses (Meyer and Morin, 2016; Morin et al., 2016b). Factor scores retain the structure of the measurement model from which they are extracted (Morin et al., 2016a) and afford a partial control for unreliability (Skrondal and Laake, 2001). Correlations among all variables used in this study are reported in Supplemental Table S5.

Latent Profile Analyses (LPA)

Analyses were conducted using the maximum likelihood robust estimator implemented in Mplus 8.10 (Muthén and Muthén, 2023), and the limited quantity of missing responses at the item level (0.25%–2.60%) were handled using full information maximum likelihood procedures (Enders, 2010). LPA seek to summarize the multivariate distribution of scores obtained on a set of profile indicators by a set of latent profiles reflecting subpopulations of employees with distinct configurations of scores on these indicators (McLachlan and Peel, 2000; Morin et al., 2018). LPA are probabilistic in the sense that all participants have a probability of membership in all profiles (which can be considered to reflect prototypes) and are thus controlled for classification errors (Morin et al., 2018). LPA solutions including one to eight profiles were estimated while allowing the indicators' means, but not their variance, to be freely estimated across all profiles (Morin and Litalien, 2019). Although the free estimation of indicators' variance can sometimes help achieve a more accurate representation of the data (Peugh and Fan, 2013), these more complex models resulted in important convergence problems in this study (e.g. nonconvergence, improper parameter estimates), suggesting overparameterization. When this happens, recommendations are to fall back on simpler models in which these variance parameters are set to equality across profiles (Morin and Litalien, 2019). These solutions were estimated using 5000 random

starts, 1000 iterations, 500 second stage optimizations, and 100 final stage optimizations (Hipp and Bauer, 2006; Morin and Litalien, 2019).

Selecting the optimal number of profiles to retain requires an examination of each solution in terms of meaningfulness, interpretability, and statistical adequacy (Marsh et al., 2009; Morin, 2016). Statistical indices can support this decision (McLachlan and Peel, 2000). More precisely, lower scores on the Akaike and Bayesian Information Criteria (AIC and BIC) and on their Consistent (CAIC) and sample-size adjusted counterparts (ABIC) indicate a better fit to the data. A statistically significant Bootstrap Likelihood Ratio Test (BLRT) and adjusted Lo et al.'s (2001) Likelihood Ratio Test (aLMR) also indicate better fit relative to a solution including fewer profiles. Statistical research has shown that the CAIC, BIC, ABIC, and BLRT were useful indicators of the true number of profiles, but not the aLMR and AIC (e.g. Diallo et al., 2016, 2017). These two indicators are thus only reported to ensure full disclosure but will not be used in model comparisons. Moreover, all these indicators are sample size dependent (Marsh et al., 2009) and often fail to converge on a specific solution. In this situation, they can be displayed graphically (i.e. an elbow plot) to locate inflection points in the decrease of the information criteria (Morin et al., 2011). Finally, the entropy summarizes the classification accuracy (0–1) of the solution, although this purely descriptive indicator should not be used to select the optimal solution (Lubke and Muthén, 2007).

Predictors and outcomes of profile membership

After selecting the optimal number of profiles, we then examined associations between these profiles, demographic predictors, and outcomes. Demographic predictors (i.e. sex, permanent or temporary contract, and tenure in the current position) were first directly included into the final solution, allowing us to contrast two models (Morin and Litalien, 2019). First, a null model assumed no associations between the predictors and the profiles. Second, these associations were freely estimated. The relative adequacy of these two solutions was contrasted using the CAIC, BIC, and ABIC (Morin et al., 2016b). We then proceeded to compare outcome levels across profiles (i.e. global levels of need satisfaction, specific levels of autonomy need satisfaction, specific levels of competence need satisfaction, specific levels of relatedness need satisfaction, affective commitment to the organization, work performance, global levels of burnout, specific levels of exhaustion, specific levels of mental distance, specific levels of emotional impairment, and specific levels of cognitive impairment). The significance of between-profile differences in outcome levels was assessed through the auxiliary (DCON) function (Asparouhov and Muthén, 2014).

Results

Latent profile analyses (LPA)

The model fit results of the alternative LPA solutions are reported in Table 1. The model fit indicators failed to converge on a clearly dominant solution (they all kept on suggesting adding profiles). However, the elbow plot, reported in Supplemental Figure S1,

Table 1. Results from the latent profile analyses.

Model	LL	#fp	Scaling	AIC	CAIC	BIC	ABIC	Entropy	aLMR	BLRT
<i>Unconditional latent profile analyses</i>										
1 Profile	-3916.152	8	1.420	7848.304	7893.851	7885.851	7860.446	Na	Na	Na
2 Profiles	-3773.576	13	1.550	7573.152	7647.166	7634.166	7592.883	0.900	<0.001	<0.001
3 Profiles	-3663.345	18	1.702	7362.691	7465.171	7447.171	7390.010	0.908	0.008	<0.001
4 Profiles	-3603.140	23	1.744	7252.280	7383.227	7360.227	7287.189	0.915	0.086	<0.001
5 Profiles	-3561.990	28	1.732	7179.981	7339.394	7311.394	7222.477	0.897	0.199	<0.001
6 Profiles	-3507.057	33	1.538	7080.113	7267.993	7234.993	7130.199	0.902	0.015	<0.001
7 Profiles	-3464.799	38	1.522	7005.598	7221.944	7183.944	7063.272	0.916	0.031	<0.001
8 Profiles	-3438.131	43	1.545	6962.263	7207.076	7164.076	7027.526	0.910	0.151	<0.001
<i>Model with demographic variables</i>										
Null effects	-5028.972	13	2.464	10083.943	10158.069	10145.069	10103.786	0.892	Na	Na
Effects freely estimated	-5022.624	25	1.753	10095.249	10237.798	10212.798	10133.408	0.894	Na	Na

LL: Model loglikelihood; #fp: number of free parameters; Scaling: scaling correction factor associated with robust maximum likelihood estimates; AIC: Akaike information criteria; CAIC: constant AIC; BIC: Bayesian information criteria; ABIC: sample size adjusted BIC; aLMR: adjusted Lo-Mendel-Rubin likelihood ratio test; BLRT: bootstrap likelihood ratio test; Na: not applicable.

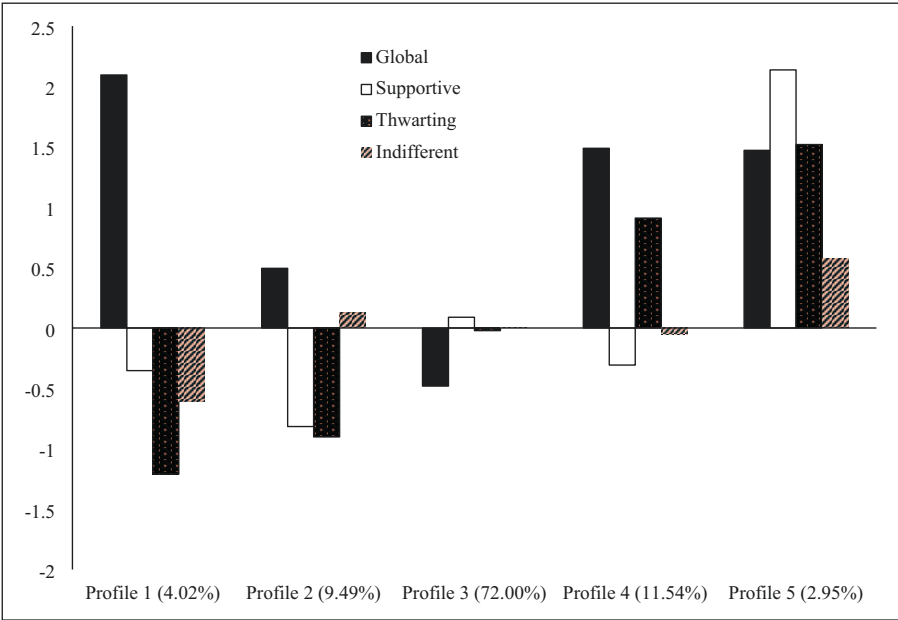


Figure 1. Final five-profile solution. Profile indicators are factor scores estimated in standardized units ($M=0$; $SD=1$); Profile 1: Globally Unfavorable; Profile 2: Globally Moderately Unfavorable and Specifically Indifferent; Profile 3: Globally Moderately Favorable; Profile 4: Globally Unfavorable and Specifically Thwarting; and Profile 5: Globally Unfavorable and Specifically Inconsistent.

revealed a plateau between four and five profiles. Based on this information, we carefully examined solutions including three to six profiles. This examination revealed that adding a fourth and a fifth profiles to the solution had a theoretically meaningful contribution to the solution. If we look at the profiles illustrated in Figure 1, Profiles 1, 3, and 4 were already present in the three-profile solution. The four-profile solution resulting in the addition of Profile 5 (uniquely characterized by moderate to high scores on all specific factors), while the five-profile solution resulted in the addition of Profile 2 (uniquely dominated by above average specific levels on the need-indifferent factor). In contrast, adding a sixth profile, or even a seventh, resulted in the arbitrary separation of an existing profile into smaller ones with a comparable shape. A five-profile solution was thus retained in response to RQ1. This solution is graphically presented in Figure 1, while detailed parameter estimates are reported in Supplemental Table S6. Consistent with the high entropy of this solution (0.897), classification accuracy was high for all profiles (see Supplemental Table S7), ranging from 81.3% to 96.4%.

A first profile of employees reported very high levels of global need-hampering behaviors, slightly under average levels of specific need-supportive behaviors, low levels of specific need-thwarting behaviors, and moderately low levels of specific need-indifferent behaviors. The very high level (roughly 2 standard deviations above the sample mean) of global need-hampering behaviors reported by these employees can

potentially explain the moderately low to low levels of specific leadership behaviors observed in this profile. In other words, these employees primarily see their supervisor as globally bad leaders, rather than focusing on their specific type of behaviors (i.e. they do not see them as thwarting or indifferent, or even very unsupportive). This *Globally Unfavorable* profile represented 4.02% of the sample. A second profile of employees reported moderately high levels of global need-hampering behaviors, moderately low levels of specific need-supportive and need-thwarting behaviors, and slightly above average levels of need-indifferent behaviors. This *Globally Moderately Unfavorable and Specifically Indifferent*¹ profile characterized 9.49% of the sample. A third profile of employees reported moderately low levels of global need-hampering behaviors accompanied by close to average specific levels of need-supportive, need-thwarting, and need-indifferent behaviors. This *Globally Moderately Favorable* profile was the largest, representing 72.0% of the sample. A fourth profile of employees reported high global levels of need-hampering, slightly under average levels of specific need-supportive behaviors, high specific levels of need-thwarting behaviors, and average specific levels of need-indifferent behaviors. This *Globally Unfavorable and Specifically Thwarting* profile characterized 11.54% of the sample. Finally, a fifth profile of employees reported high global levels of need-hampering behaviors, very high specific levels of need need-supportive behaviors, high specific levels of need-thwarting behaviors, and moderately high specific levels of need-indifferent behaviors. In this profile, the results thus reveal a globally unfavorable perception of the supervisor that seems to be anchored in a highly inconsistent reliance on all specific types of leadership behaviors. This *Globally Unfavorable and Specifically Inconsistent* profile was the smallest, corresponding to 2.95% of the sample. The defining characteristics of each of these profiles are summarized in Table 2.

Demographic predictors

As indicated in Table 1, no associations were found between the demographic variables and profile membership. Indeed, the BIC, CAIC, and ABIC were systematically lower for the null model than for the alternative model in which associations between predictors and outcomes were freely estimated.

Outcomes of profile membership

Our results revealed a rich pattern of associations between profiles and outcome levels, which supported the distinctiveness of the profiles and helped answer the second research question. These results are reported in Table 3. In relation to global and specific levels of need satisfaction, we first note that the highest global levels of need satisfaction were found in the *Globally Moderately Favorable* [3] profile, followed by the *Globally Unfavorable and Specifically Inconsistent* [5] profile, then by the *Globally Moderately Unfavorable and Specifically Indifferent* [2] profile, and finally and equally by the *Globally Unfavorable* [1] and *Globally Unfavorable and Specifically Thwarting* [4] profiles. The highest specific levels of autonomy satisfaction were found in the *Globally Moderately Favorable* [3] profile, followed equally by the *Globally Unfavorable* [1] and

Table 2. Summary of the profiles defining characteristics and meaning.

Profiles (% Prevalence)	Defining characteristics and meaning
Globally unfavorable (4.02%)	<u>Characteristics:</u> High levels of global need-hampering behaviors, slightly below-average levels of specific need-supportive behaviors, low and moderately low levels of specific need-thwarting and need-indifferent behaviors <u>Meaning:</u> Supervisors generally seen as poor leaders, without a focus on any specific type of unfavorable behavior
Globally moderately unfavorable and specifically indifferent (9.49%)	<u>Characteristics:</u> Moderately high levels of global need-hampering behaviors, slightly above-average levels of specific need-indifferent behaviors, and moderately low levels of specific supportive and thwarting need-related behaviors <u>Meaning:</u> Supervisors generally seen as moderately poor leaders, specifically because of their indifference to employees' basic psychological needs
Globally moderately favorable (72.0%)	<u>Characteristics:</u> Moderately low levels of global need-hampering and average levels of specific supportive, thwarting, and indifferent need-related behaviors <u>Meaning:</u> Supervisors generally seen as moderately good leaders, but using a combination of average levels of need-supportive, need-thwarting, and need-indifferent behaviors
Globally unfavorable and specifically thwarting (11.54%)	<u>Characteristics:</u> High levels of global need-hampering and specific need-thwarting behaviors, average levels of specific need-indifferent behaviors, and slightly below-average levels of specific need-supportive behaviors <u>Meaning:</u> Supervisors generally seen as poor leaders, specifically because of their reliance on behaviors that actively thwart the satisfaction of employees' basic psychological needs
Globally unfavorable and specifically inconsistent (2.95%)	<u>Characteristics:</u> High levels of global need-hampering and specific need-thwarting behaviors, very high levels of specific need-supportive behaviors, and moderately high levels of specific need-indifferent behaviors <u>Meaning:</u> Supervisors generally seen as poor leaders resulting from their inconsistent reliance on all types of need-related behaviors.

Globally Moderately Unfavorable and Specifically Indifferent [2] profiles, by the *Globally Unfavorable and Specifically Thwarting* [4] profile, and finally by the *Globally Unfavorable and Specifically Inconsistent* [5] profile. The highest specific levels of competence satisfaction were found in the *Globally Unfavorable* [1] profile, followed by the *Globally Moderately Unfavorable and Specifically Indifferent* [2] profile, then by the *Globally Moderately Favorable* [3] profile, and finally and equally by the *Globally Unfavorable and Specifically Thwarting* [4] and *Globally Unfavorable and Specifically Inconsistent* [5] profiles. The *Globally Moderately Favorable* [3] profile displayed higher specific levels of relatedness satisfaction than the *Globally Moderately Unfavorable and Specifically Indifferent* [2] and *Globally Unfavorable and Specifically*

Table 3. Associations between profile membership and the outcomes.

	Profile 1 M [CI]	Profile 2 M [CI]	Profile 3 M [CI]	Profile 4 M [CI]	Profile 5 M [CI]	Summary of statistically significant differences
G-need satisfaction	-1.296 [-1.541; -1.051]	-0.294 [-0.363; -0.225]	0.899 [0.846; 0.952]	-1.037 [-1.247; -0.825]	0.236 [0.067; 0.405]	3 > 5 > 2 > 1 = 4
S-autonomy need satisfaction	-0.163 [-0.422; 0.096]	-0.063 [-0.239; 0.113]	0.163 [0.102; 0.224]	-0.594 [-0.765; -0.423]	-1.088 [-1.441; -0.735]	3 > 1 = 2 > 4 > 5
S-competence need satisfaction	1.099 [0.842; 1.356]	0.238 [0.069; 0.407]	-0.001 [-0.070; 0.068]	-0.529 [-0.747; -0.311]	-0.445 [-0.876; -0.014]	1 > 2 > 3 > 4 = 5
S-relatedness need satisfaction	-0.080 [-0.354; 0.194]	-0.170 [-0.339; -0.001]	0.152 [0.091; 0.213]	-0.367 [-0.534; -0.200]	-1.240 [-1.597; -0.883]	1 = 3; 3 > 2 = 4 > 5; 1 = 2 = 4 > 5
Affective commitment	-1.331 [-1.484; -0.978]	-0.389 [-0.465; -0.313]	0.870 [0.821; 0.919]	-1.480 [-1.672; -1.288]	-0.128 [-0.283; 0.027]	3 > 5 > 2 > 1 = 4
Work performance	0.360 [0.160; 0.560]	-0.293 [-0.513; -0.073]	0.192 [0.127; 0.257]	-0.757 [-1.006; -0.508]	-1.077 [-1.602; -0.552]	1 = 3 > 2 > 4 = 5
G-burnout	0.339 [0.035; 0.643]	0.304 [0.118; 0.490]	-0.296 [-0.359; -0.233]	1.050 [0.848; 1.252]	1.080 [0.682; 1.478]	4 = 5 > 1 = 2 > 3
S-exhaustion	0.755 [0.402; 1.108]	0.381 [0.161; 0.601]	-0.072 [-0.141; -0.003]	0.038 [-0.142; 0.218]	-0.633 [-0.909; -0.357]	1 = 2 > 3 = 4 > 5
S-mental distance	1.118 [0.787; 1.449]	0.607 [0.480; 0.734]	-0.394 [-0.447; -0.341]	0.270 [0.105; 0.435]	-0.307 [-0.515; -0.099]	1 > 2 > 4 > 3 = 5
S-emotional impairment	-0.438 [-0.705; -0.171]	-0.350 [-0.515; -0.185]	-0.084 [-0.141; -0.027]	0.582 [0.427; 0.737]	1.190 [0.837; 1.543]	5 > 4 > 3 > 1 = 2
S-cognitive impairment	-0.681 [-0.926; -0.436]	0.090 [-0.100; 0.280]	0.076 [0.009; 0.143]	-0.194 [-0.347; -0.041]	-0.389 [-0.671; -0.107]	2 = 3 > 4 = 5; 4 > 1; 2 = 3 > 1 = 5

M: mean; CI: 95% confidence interval; G: global; S: specific; indicators of global and specific need satisfaction factors, affective commitment to the organization, work performance, and global and specific burnout factors are factor scores with a mean of 0 and a standard deviation of 1; Profile 1: *Globally Unfavorable*; Profile 2: *Globally Moderately Unfavorable and Specifically Indifferent*; Profile 3: *Globally Moderately Favorable*; Profile 4: *Globally Unfavorable and Specifically Thwarting*; and Profile 5: *Globally Unfavorable and Specifically Inconsistent*.

Thwarting [4] profiles, which did not differ from one another, while the lowest levels were found in the *Globally Unfavorable and Specifically Inconsistent* [5] profile. The *Globally Unfavorable* [1] profile did not differ from Profiles 2, 3, and 4, but displayed higher specific levels of relatedness satisfaction than the *Globally Unfavorable and Specifically Inconsistent* [5] one.

Turning our attention to the other adaptive outcomes, profile differences in levels of affective commitment to the organization matched those observed for global levels of need satisfaction, revealing higher levels in the *Globally Moderately Favorable* [3] profile, followed by the *Globally Unfavorable and Specifically Inconsistent* [5] profile, by the *Globally Moderately Unfavorable and Specifically Indifferent* [2] profile, and finally and equally by the *Globally Unfavorable* [1] and *Globally Unfavorable and Specifically Thwarting* [4] profiles. Interestingly, profile differences in terms of work performance were very close to those found for specific levels of competence satisfaction. More precisely, the highest levels of work performance were equally found in the *Globally Unfavorable* [1] and *Globally Moderately Favorable* [3] profiles, followed by the *Globally Moderately Unfavorable and Specifically Indifferent* [2] profile, and finally equally by the *Globally Unfavorable and Specifically Thwarting* [4] and *Globally Unfavorable and Specifically Inconsistent* [5] profiles.

Finally, turning our attention to global and specific levels of burnout, the results revealed that the highest global levels of burnout were equally found in the *Globally Unfavorable and Specifically Thwarting* [4] and *Globally Unfavorable and Specifically Inconsistent* [5] profiles, followed equally by the *Globally Unfavorable* [1] and *Globally Moderately Unfavorable and Specifically Indifferent* [2] profiles, and finally by the *Globally Moderately Favorable* [3] profile which displayed the lowest levels. The highest specific levels of exhaustion were equally found in the *Globally Unfavorable* [1] and *Globally Moderately Unfavorable and Specifically Indifferent* [2] profiles, followed equally by the *Globally Moderately Favorable* [3] and *Globally Unfavorable and Specifically Thwarting* [4] profiles, and finally by the *Globally Unfavorable and Specifically Inconsistent* [5] profile. The highest specific levels of mental distance were found in the *Globally Unfavorable* [1] profile, followed by the *Globally Moderately Unfavorable and Specifically Indifferent* [2] profile, then by the *Globally Unfavorable and Specifically Thwarting* [4] profile, and finally equally by the *Globally Moderately Favorable* [3] and *Globally Unfavorable and Specifically Inconsistent* [5] profiles. The highest specific levels of emotional impairment were found in the *Globally Unfavorable and Specifically Inconsistent* [5] profile, followed by the *Globally Unfavorable and Specifically Thwarting* [4] profile, then by the *Globally Moderately Favorable* [3] profile, and finally and equally by the *Globally Unfavorable* [1] and *Globally Moderately Unfavorable and Specifically Indifferent* [2] profiles. The *Globally Moderately Unfavorable and Specifically Indifferent* [2] and *Globally Moderately Favorable* [3] profiles displayed higher specific levels of cognitive impairment than the *Globally Unfavorable* [1], *Globally Unfavorable and Specifically Thwarting* [4] and *Globally Unfavorable and Specifically Inconsistent* [5] profiles. These levels were also higher in the *Globally Unfavorable and Specifically Thwarting* [4] profile than in the *Globally Unfavorable* [1] one.

Discussion

This study sought to identify the different profiles of supervisors based on employees' perception of their need-related behaviors. More precisely, to account for the multidimensional structure of need-related behaviors, these profiles were estimated while considering both supervisors' global levels of global need-hampering behaviors, as well as their specific levels of need-supportive, need-thwarting, and need-indifferent behaviors. Beyond confirming that supervisors tend to rely on a mixture of need-related behaviors when interacting with their subordinates (Chénard-Poirier et al., 2022; Doucet et al., 2015), our results also provided insights into the implications of these supervisory profiles for positive (need satisfaction, affective commitment to the organization, and work performance) and negative (burnout) indicators of employees' functioning. More generally, the person-centered approach adopted in this study makes it possible to jointly consider the full range of negative, passive, and positive supervisory behaviors to which subordinates feel exposed at work (Avolio and Bass, 1991; Huyghebaert-Zouaghi et al., 2023a, 2023b; Lewin et al., 1939), and highlights the importance of this joint consideration to fully grasp the implications of these behaviors for employees' functioning.

Need-related supervisory behavior profiles

Five distinct need-related supervisor behavior profiles were identified in this study: (1) *Globally Unfavorable*, (2) *Globally Moderately Unfavorable and Specifically Indifferent*, (3) *Globally Moderately Favorable*, (4) *Globally Unfavorable and Specifically Thwarting*, and (5) *Globally Unfavorable and Specifically Inconsistent*. These results are consistent with those found in previous studies relying on other conceptualizations of supervisory behaviors (Doucet et al., 2015; Hancock et al., 2023) and in prior SDT-based research conducted in the sport and education domains (Amoura et al., 2015; Haerens et al., 2018; Leo et al., 2022; Matosic and Cox, 2014). Indeed, as expected, we identified a globally moderately favorable need-supportive profile (Profile 3). Although this *Globally Moderately Favorable* profile displayed specific levels of need-supportive, need-thwarting, and need-indifferent behaviors that were close to the sample average, it remained primarily characterized by moderately low global levels of need-hampering behaviors, which is why we could consider it to be globally moderately favorable (Huyghebaert-Zouaghi et al., 2023a, 2023b). This conclusion is also aligned with the generally desirable outcomes associated with this profile, which will be discussed in a later section. Importantly, although a single “favorable” profile was identified in this study, this profile was found to represent almost three-quarters of the sample (72.00%), suggesting that most participants perceive that their supervisor displays primarily positive behaviors toward them. In fact, it is when these perceptions cease to be globally favorable that meaningful divergences seem to emerge.

As expected, we identified a globally unfavorable need-thwarting profile and a globally unfavorable need-indifferent profile, thus confirming the value of differentiating between specific levels of need-thwarting and need-indifferent behaviors rather than relying on a single type of undesirable supervisory behavior (e.g. Burgueño et al., 2024; Gillet et al., 2012). More specifically, the *Globally Moderately Unfavorable and*

Specifically Indifferent profile was dominated by moderately high global levels of need-hampering behaviors and slightly above average specific levels of need-indifferent behaviors. In contrast, the *Globally Unfavorable and Specifically Thwarting* profile was dominated by high levels of global need-hampering and specific need-thwarting behaviors. Interestingly, we also identified two other problematic profiles. The *Globally Unfavorable* profile was primarily dominated by very high global levels of need-hampering behaviors, and thus seemed to reflect the consistent reliance on generically problematic types of supervisory behaviors (Hancock et al., 2023). In contrast, the *Globally Unfavorable and Specifically Inconsistent* profile displayed a highly diverse configuration, involving high global levels of need-hampering behaviors, coupled with very high specific levels of need-supportive behaviors, high specific levels of need-thwarting behaviors, and moderately high specific levels of need-indifferent behaviors. This profile thus seems to reflect behavioral inconsistency far more than the reliance on any specific type of supervisory behaviors (Doucet et al., 2015; Hancock et al., 2023).

Overall, supervisors with a leadership style globally perceived as highly interfering with the satisfaction of their employees' basic psychological needs (i.e. high global levels of need-hampering behaviors) seem to rely on different types of behaviors. Of them, roughly 4% are simply seen as bad leaders (*Globally Unfavorable*), without relying on any form of behaviors deviating from this global perception. Slightly more numerous (roughly 12%) are those seen as being actively acting to thwart their employees' basic psychological needs (*Globally Unfavorable and Specifically Thwarting*). A third group, corresponding to roughly 3% of the sample, is rather primarily seen as inconsistent leaders (*Globally Unfavorable and Specifically Inconsistent*). Lastly, a final group of supervisors, corresponding to roughly 10% of the sample, are described as indifferent leaders (*Globally Moderately Unfavorable and Specifically Indifferent*). This profile is seen by employees as interfering less with the satisfaction of their needs (moderate, rather than high, global levels of need-hampering behaviors) than the other unfavorable profiles, potentially to reflect the fact that an indifferent approach to supervision leaves more room to employees to find alternative ways to fulfill their needs at work (Trépanier et al., 2019).

It is interesting to note that Chénard-Poirier et al. (2022) had already identified a profile displaying a primarily inconsistent style of supervision (based on measures of transformational leadership and petty tyranny), but without relying on the current tripartite conceptualization of supervisors' behaviors (Bhavsar et al., 2019; Huyghebaert-Zouaghi et al., 2023a, 2023b). Nevertheless, this profile was found to be particularly problematic in this earlier study, which the authors interpreted by highlighting how behavioral inconsistency and ambiguity were harder to anticipate by employees, and were thus likely to lead to uncertainty, stress, and concerns (Chénard-Poirier et al., 2022). Further studies will be needed to uncover the specific work conditions or individual characteristics that contribute to the emergence of such a *Globally Unfavorable and Specifically Inconsistent* profile.

In sum, our results make a significant contribution to the leadership literature by highlighting the value of using a person-centered approach integrating global need-hampering behaviors and specific need-supportive, need-thwarting, and need-indifferent supervisory behaviors. Importantly, although this last set of behaviors seemed to play a lesser role than need-supportive and need-thwarting behaviors, specific levels of

need-indifferent behaviors still played a significant role in the definition of four out of the five profiles identified. Moreover, although we relied on a new conceptualization and operationalization of supervisory behaviors, our findings were in line with our expectations. This generalization of results across a limited body of emerging studies suggests that similar profiles could be identified in various contexts, regardless of the theoretical approaches used in any given studies (Doucet et al., 2015; Hancock et al., 2023). However, studies are still needed to confirm that the profiles identified in this study may generalize to other conceptualizations of leadership behaviors, and to multiple occupations, cultures, and countries. Importantly, and although we relied on a sample including employees from a wide variety of backgrounds, it should be acknowledged that the relative size of these profiles is likely to vary across contexts, organizations, and even occupation. Thus, beyond the relative size of our profiles, the key conclusion from this study is that the reality of employees who feel exposed to globally satisfactory supervisory behaviors tend to be quite homogenous, whereas that of employees who feel exposed to globally unsatisfactory supervisory behaviors tend to be quite heterogeneous. Importantly, as shown in our results, this heterogeneity does translate into clear outcome differences and thus is far from negligible.

Outcomes of need-related supervisory behavior profiles

Our results showed numerous associations between profile membership and various indicators of employee functioning. In the following paragraphs, we detail the benefits and disadvantages of each of the five profiles identified. First, our results revealed that the highest levels of global need satisfaction and affective commitment, and the lowest specific levels of mental distance were associated with the *Globally Moderately Favorable* profile, followed by the *Globally Unfavorable and Specifically Inconsistent* profile. Not surprisingly, the most favorable profile for employees' functioning is the one with the lowest global levels of need-hampering behaviors (Huyghebaert-Zouaghi et al., 2023a, 2023b). This suggests that employees seem to experience the most optimal functioning when they feel supported by their supervisor without being simultaneously exposed to problematic behaviors. These results are consistent with the documented person-centered benefits of profiles dominated by need-supportive behaviors or similarly positive leadership behaviors (Amoura et al., 2015; Doucet et al., 2015; Haerens et al., 2018; Hancock et al., 2023; Leo et al., 2022; Matosic and Cox, 2014).

These positive outcomes associated with the *Globally Unfavorable and Specifically Inconsistent* profile contradict results previously reported by Chénard-Poirier et al. (2022) regarding the harmful nature of behavioral inconsistency. Moreover, this profile was also characterized by high global levels of need-hampering, high specific levels of need-thwarting behaviors, and moderately high specific levels of need-indifferent behaviors, which are all generally associated with adverse outcomes (Huyghebaert-Zouaghi et al., 2023a, 2023b). These unexpected results may reflect a unique characteristic of this profile, as identified in our study. More precisely, this profile is the one displaying the highest specific levels of need-supportive behaviors, a specific level that was much higher than that observed in the *Globally Moderately Favorable* profile. Moreover, even in this *Globally Unfavorable and Specifically Inconsistent* profile, specific levels of need-supportive

behaviors were higher than those of all other global and specific dimensions. These results suggest that high specific levels of need-supportive behaviors may help limit some of the harmful effects of problematic supervisory behaviors, when they remain dominant. These benefits even seem to extend to additional outcomes beyond those already mentioned (i.e. specific levels of exhaustion and cognitive impairment, which were also low in this profile). Thus, although the outcomes associated with the *Globally Moderately Favorable* profile were generally more favorable than those associated with the *Globally Unfavorable and Specifically Inconsistent* profile, these unexpected results have important practical implications. Indeed, and pending replication, they suggest that employees can benefit equally, at least for some outcomes, from exposure to favorable and inconsistent combinations of supervisory behaviors, as long as the need-supportive behaviors remain dominant. In other words, supervisors should set reasonable and attainable expectations for themselves, keeping in mind that it seems more important to rely on predominantly need-supportive behaviors than to try to completely avoid the occasional reliance on need-thwarting and need-indifferent behaviors. In this context, employees could possibly come to be more lenient toward their supervisors, for example by understanding that when under pressure they may come to rely on less fortunate behaviors while remaining supportive whenever possible (Haslam and Platow, 2001).

This does not mean that inconsistent behaviors, even dominated by need-supportive behaviors, should be encouraged. Indeed, the *Globally Unfavorable and Specifically Inconsistent* profile displayed the highest global levels of burnout and specific emotional impairment, the lowest specific levels of autonomy, competence, and relatedness need satisfaction, and the lowest levels of work performance. Similar negative outcomes were associated with the *Globally Unfavorable and Specifically Thwarting* profile, which was characterized by similarly high specific levels of need-thwarting behaviors. The *Globally Unfavorable and Specifically Thwarting* profile was also associated with the lowest levels of global need satisfaction and affective commitment. In other words, and consistent with previous studies (e.g. Burgueño et al., 2024; Gillet et al., 2012), these results revealed that specific need-thwarting behaviors, regardless of the levels of specific need-supportive behaviors, are associated with adverse outcomes.

However, this does not mean that adverse outcomes are only attributable to specific need-thwarting behaviors. Indeed, some of these effects also seem to be related to the highest levels of specific need-indifferent behaviors observed in the *Globally Unfavorable and Specifically Inconsistent* profile. Indeed, the *Globally Moderately Unfavorable and Specifically Indifferent* profile, which also displays slightly above-average specific levels of need-indifferent behaviors, was also associated with adverse outcomes (e.g. low levels of specific relatedness need satisfaction, and high levels of specific exhaustion, specific mental distance, and specific cognitive impairment), despite its much lower (yet still above average) global level of need-hampering and specific levels of need-thwarting behaviors. Consistent with past findings (Huyghebaert-Zouaghi et al., 2023a, 2023b; Skogstad et al., 2007), this observation highlights the undesirable nature of need-indifferent behaviors (Avolio and Bass, 1991; Trépanier et al., 2019), whether they occur in combination with high (*Globally Unfavorable and Specifically Inconsistent* profile) or low-to-moderate (*Globally Moderately Unfavorable and Specifically Indifferent* profile) global levels of need-hampering behaviors and specific levels of need-thwarting

behaviors. Indeed, need-indifference may lead employees to feel hopeless and powerless to influence a supervisor that simply does not care about them (Huyghebaert-Zouaghi et al., 2023b). The resulting sense of resignation might explain why these two profiles (*Globally Unfavorable and Specifically Inconsistent* and *Globally Moderately Unfavorable and Specifically Indifferent* profiles), displaying the highest specific levels of need-indifferent behaviors, were associated with negative outcomes. To prevent employees from displaying high global levels of burnout, as in the *Globally Unfavorable and Specifically Inconsistent* profile, supervisors should refrain from giving to employees an impression of indifference, as this indifference may lead these employees to exhaust their personal resources in order to gain some recognition before reaching a stage of resignation in the face of problems for which they get no response from their supervisors (Hobfoll, 2011). Limiting such need-indifferent behaviors could also allow employees within the *Globally Moderately Unfavorable and Specifically Indifferent* profile to reduce their specific levels of cognitive impairment, as they would no longer face cognitive overload resulting from a lack of information and support from supervisors.

More generally, the outcomes associated with the *Globally Unfavorable and Specifically Inconsistent* profile show that inconsistent supervisory behaviors seem to act as a double-edged sword, depending on the outcomes that are considered. Indeed, employees corresponding to this profile reported low specific levels of mental distance and high levels of global need satisfaction and affective commitment. On the one hand, these employees may decide to become more involved in their work to reduce uncertainty and find ways to have more control over their work. They may also seek social support from other sources (e.g. colleagues) to develop effective and sincere social relationships with people other than their inconsistent supervisor (Aquino and Thau, 2009). Moreover, as aforementioned, in the present study, these employees do perceive these inconsistent supervisors as being highly supportive of their needs, and this high level of support may lead them to be more accepting of their less desirable behaviors. This perspective is consistent with previous studies showing that social support from different sources was associated with employees' optimal functioning and could limit the detrimental effects of adverse leadership behaviors (Caesens et al., 2020; Duffy et al., 2002). On the other hand, inconsistent supervisory behaviors could also lead employees to feel uncertain, insecure, and even anxious because they do not have the means to properly anticipate the type of interactions they will have with their supervisor at different points in time (Chénard-Poirier et al., 2022; Lind and van Den Bos, 2002). This uncertainty can also lead to difficulties in implementing effective coping strategies (Itzhakov et al., 2020), in turn generating undesirable outcomes. Despite these potential explanations, further research is needed to address this double-edged nature of inconsistent supervisory behaviors and to identify mechanisms that may explain the relations observed in this study.

Our results revealed additional unexpected associations. For instance, the *Globally Moderately Favorable* profile was associated with the highest specific levels of cognitive impairment. Such a result is difficult to explain and could be related to the fact that this specific factor is weakly defined in the preliminary measurement model. Further research with the BAT-C (Schaufeli et al., 2020) or other instruments measuring this specific burnout component are needed to confirm this finding. A tentative explanation

can be offered in relation to the high levels of affective commitment to the organization and work performance reported by employees within this profile. Thus, these employees may be fully and perhaps even over-invested in their professional duties, which could interfere with their work recovery and personal life (Gillet et al., 2021; Huyghebaert-Zouaghi et al., 2022; Morin et al., 2025). Over time, this can lead to a depletion of their cognitive resources because they are permanently in a state of stimulation and activation (Braukmann et al., 2018; Gillet et al., 2022b, 2023; Hobfoll, 2011).

Also unexpected, the *Globally Unfavorable* profile displayed the highest specific levels of competence need satisfaction and work performance. It may be that employees who simply perceive their supervisor as a “bad” leader, may come to feel more competent in their work through downward social comparisons (Vogel and Mitchell, 2017). These employees may also feel the need to rely on various coping strategies (e.g. avoidance, social support, or resistance) to protect themselves, to achieve their goals, to fulfill their psychological needs at work, and to limit their stress (Harvey et al., 2007; Tepper et al., 2017). Despite these unexpected results, it is important to keep in mind that this *Globally Unfavorable* profile, as expected (Amoura et al., 2015; Doucet et al., 2015; Haerens et al., 2018; Hancock et al., 2023; Leo et al., 2022; Matosic and Cox, 2014), was primarily associated with undesirable outcomes. Indeed, these employees displayed the lowest global levels of need satisfaction and affective commitment, and the highest specific levels of exhaustion and mental distance.

Overall, and despite some unexpected findings that may reflect both the novelty of this field of research, and the specific limitations of this study, our findings underscore the importance of considering employees’ perceptions of global need-hampering alongside their specific perceptions of need-supportive, need-thwarting, and need-indifferent behaviors when trying to understand the role of supervisor need-related behaviors. They are also in agreement with SDT (Ryan and Deci, 2017), which highlights the positive effects of specific need-supportive behaviors and the harmful effects of need-thwarting behaviors. Finally, they show that specific need-indifferent behaviors should be taken into account, since they also seem to play an important role in explaining employees’ functioning.

Limitations and suggestions for future research

Limitations of the current research must be highlighted. First, we solely relied on self-report questionnaires, which means that social desirability biases may play a role in our results. To reduce this concern, future research should include informant ratings (e.g. supervisor, customers, colleagues) and objective measures (e.g. official data about turnover, absenteeism, or performance). Second, this study only relied on a sample of employees who lived and worked in Canada and the US. Additional studies are needed to test the replicability of the current findings to a variety of work settings, cultures, languages, and countries. Third, we relied on a cross-sectional research protocol that precludes the assessment of the temporal stability of the need-related supervisor behavior profiles or the establishment of directionality or causality. Even if prior investigations provide support for some of the proposed associations (e.g. Gillet et al., 2012; Huyghebaert-Zouaghi et al., 2023a, 2023b), reciprocal or inverse associations may also exist (Cole and Maxwell,

2003). Future studies should examine the nature of these relations using longitudinal methodologies better suited to substantiate the temporal ordering of the observed associations. Finally, we only considered the possible predictive role of demographic characteristics and found them to be unrelated to profile membership. Although this lack of association is consistent with the idea that supervisory behaviors are a more potent driver of employees' ratings of these behaviors than their own individual characteristics, future research is needed to investigate the role of more meaningful individual (e.g. workaholism, proactive personality, dark triad) and job-related (e.g. challenge and hindrance demands, organizational dehumanization) predictors (e.g. Gillet et al., 2024; Lagios et al., 2023). Likewise, additional positive (e.g. creativity, organizational citizenship behaviors) and negative (e.g. absenteeism, counterproductive behaviors) outcomes, coupled with intervening psychological mechanisms (e.g. work engagement, recovery experiences) could be included to better understand the implications of the supervisory behavior profiles identified in this study (e.g. Drouin-Rousseau et al., 2024; Heyns et al., 2022).

Conclusions and implications for practice

According to the present findings, managers and organizations should be particularly attentive to workers who report being exposed to low specific levels of need-supportive behaviors as the three profiles with the lowest levels on this dimension (*Globally Unfavorable*, *Globally Moderately Unfavorable* and *Specifically Indifferent*, and *Globally Unfavorable* and *Specifically Thwarting* profiles) were those associated with the worst outcomes. Interestingly, need-supportive interventions have been successfully implemented and can be useful in reinforcing supervisors' training and development (for a review, see Slemp et al., 2021). For instance, Yong et al. (2023) found that autonomy-supportive training increased supervisors' autonomy-supportive behaviors. In this training, autonomy-supportive behaviors are first presented, and supervisors are asked to reflect on the implementation of these behaviors in their future work practices. Then, supervisors are invited to set objectives in relation to these autonomy-supportive behaviors. Although this intervention showed benefits in terms of need-supportive behaviors, the effects were only visible in the short term (at the end of training) but did not persist over time (see Reeve et al., 2004, for similar results in education).

This finding points to the need to account for organizational factors that may facilitate or hinder the sustainable implementation of need-supportive behaviors (Slemp et al., 2021). For instance, if supervisors face too many hindrances in their daily work and are placed under a great deal of pressure from their organization high-level management, they will find it difficult to behave as a need-supportive leader and will rather tend to rely on need-thwarting behaviors to regain control (Amoura et al., 2015), or on need-indifferent behaviors to escape their demanding responsibilities. In this case, it might be useful to encourage them to proactively identify the occupational situations in which such need-thwarting or need-indifferent behaviors might occur (Sarrazin et al., 2006). More generally, our results suggest that supervisors should give priority to their overall mode of functioning toward their subordinates (Huyghebaert-Zouaghi et al., 2023b), since it appears that global levels of need-hampering behaviors play a critically important role for employees' functioning, regardless of specific types of supervisory behaviors. Such

an approach does not mean, however, that specific need-thwarting and need-indifferent behaviors should be totally banished, as the present findings revealed that certain combinations of specific need-related supervisor behaviors may have positive effects on certain outcomes, even more so when supportive behaviors remain dominant.

Author contributions

Virginie Paquette: Conceptualization, Methodology, Formal analysis, Data curation, Writing—original draft, Writing—review & editing, Visualization. Nicolas Gillet: Conceptualization, Writing—original draft, Writing—review & editing. Tiphaine Huyghebaert-Zouaghi: Conceptualization, Writing—review & editing. Sarah-Geneviève Trépanier: Conceptualization, Resources, Writing—review & editing, Funding acquisition. Alexandre J.S. Morin: Conceptualization, Formal analysis, Resources, Writing—review & editing, Supervision, Project administration, Funding acquisition.

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Ethical considerations

Approval was obtained from the ethics committee of Université du Québec à Trois-Rivières (no. CER-23-300-07.14). The procedures used in this study adhere to the tenets of the Declaration of Helsinki.

Consent to participate

Written informed consent was obtained from all individual participants included in the study.

Consent for publication

Not applicable.

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Data availability

Data is available upon request to the corresponding author.

Supplemental material

Supplemental material for this article is available online.

Note

1. As noted in the online supplements, the need-indifferent specific factor was weakly defined, indicating that the items used to define this factor only retained a minimal level of specificity once their contribution to the global need-hampering factor was taken into account. However, the only likely effect of including a weakly defined specific factor in the estimation of LPA would be to estimate profiles in which this indicator remains close to the average, thus failing to help differentiate the profiles (Drouin-Rousseau et al., 2024; Fernet et al., 2023). As noted and documented by others before us (Drouin-Rousseau et al., 2024; Fernet et al., 2023), it remains possible for a weak specific factor to retain a little specificity limited to a subset of participants (corresponding to one or two profiles), in which case it would emerge as a defining characteristic of these profiles. Indeed, our results revealed the specific role of need-indifferent behaviors in the definition of two profiles (*Globally Moderately Unfavorable and Specifically Indifferent*; *Globally Unfavorable and Specifically Inconsistent*). However, we also replicated all of our analyses while excluding the specific need-indifferent factors. Interestingly, all results (including the nature of all profiles) were replicated in this second set of analyses, thus supporting the robustness of our main findings.

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