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The Forest and the Trees: Investigating the Globality and Specificity of Employees' Basic Need Satisfaction at Work

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ABSTRACT

This research assessed the underlying psychometric multidimensionality and nomological validity of 523 employees' responses to the Work-related Basic Need Satisfaction (W–BNS) scale using bifactor-exploratory structural equation modeling (bifactor-ESEM). Our results first showed the superiority of a bifactor-ESEM representation when compared to alternative representations of the data. Thus, employees' ratings of psychological need satisfaction simultaneously reflected a global need satisfaction construct, which coexisted with specific autonomy, competence, and relatedness needs satisfaction. Importantly, our findings also supported the nomological validity of employees' ratings of psychological need satisfaction in relation to measures of positive affect, negative affect, job satisfaction, perceived organizational support, organizational citizenship behaviors, work engagement, and burnout. In addition, our results also supported the presence of indirect (mediated) effects between perceived organizational support and some of the outcome variables as mediated by employees' levels of need satisfaction.

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Self-determination theory (SDT; Ryan & Deci, 2017) proposes that the satisfaction of the needs for autonomy (the need to experience a sense of volition and psychological freedom), competence (the need to feel effective when interacting with one's environment), and relatedness (the need to feel connected with others) is associated with positive outcomes across all life domains, including work (Gagné & Deci, 2005). Supporting this proposition, research has shown that the satisfaction of these three needs at work was conducive to motivation, positive functioning, and well-being among employees. Need satisfaction is thus a mechanism through which organizations can exert a positive impact on employees (for a recent review, see Ryan & Deci, 2017). Importantly, these three needs are generally assumed to be relatively independent from one another, and yet assumed to yield complementary desirable effects (Ryan & Deci, 2017). However, research shows that the degree of satisfaction of these three needs tends to be moderately intercorrelated (Knight, Patterson, Dawson, & Brown, 2017), thus calling into question their relative independence.

This realization led Sheldon and Niemiec (2006) to propose that the benefits of need satisfaction should be greater when the satisfaction of all three psychological needs is in alignment (i.e., when all three needs are similarly fulfilled) rather than in the presence of imbalance in the degree of satisfaction of all three needs (i.e., when the extent to which each specific need is met differs across all three needs). These authors found support for this proposition in the prediction of intrinsic motivation among undergraduate university students. Dysvik, Kuvaas, and Gagné (2013) reported similar results in the prediction of workers' intrinsic motivation. However, they noted that the measure of need (im)balance did not account for any additional variance in intrinsic motivation once the main effects of each of the three needs and of their interactions were taken into account. When considering these results, it is important to note that both studies relied on an indirect measurement of the degree of alignment in the satisfaction of all three needs via the calculation of difference scores, known to be particularly sensitive to measurement errors (Edwards, 2002). An additional flaw of the approach taken by Dysvik et al. (2013) comes from their addition of these difference scores to a complex regression equation already incorporating interaction effects among all three needs. Indeed, the alignment effects captured in these difference scores are mathematically redundant with the interaction effects already incorporated in the equation (e.g., Edwards, 2009). This statistical redundancy could explain Dysvik et al.'s (2013) observation of the limited added value of these difference scores.

Recent research on the structure of need satisfaction suggests that a more direct measure of the degree of alignment in the satisfaction of all three needs is possible. Indeed, recent psychometric research has revealed need satisfaction ratings could be represented in a way that made it possible to simultaneously consider two complementary components (Sánchez-Oliva et al., 2017; Tóth-Király, Morin, Bőthe,

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Orosz, & Rigó, 2018). The first of those components reflects respondents' global levels of need satisfaction across all three needs. In contrast, the second component reflects the more specific levels of satisfaction of respondents' needs for competence, relatedness, and autonomy left unexplained by this global level of need satisfaction. In this second component, participants' specific levels of need satisfaction are directly expressed as deviations from the global level of need satisfaction expressed in the first component. As such, this second component provides a direct representation of the extent to which the satisfaction of each specific need can be considered to be in a state of imbalance relative to the satisfaction of all other needs.

Importantly, research in which these two layers of measurement cannot be properly disentangled carries the risk of leading to an overly similar assessment of the relative contribution of each psychological need, reflecting mainly the effect of the first component (Morin, Boudrias, Marsh, Madore, & Desrumaux, 2016, 2017). In such cases, it is thus impossible to clearly identify the unique contribution of each need over and above that of global levels of need satisfaction (Sánchez-Oliva et al., 2017; Tóth-Király et al., 2018). Despite the interest of the improved psychometric representation proposed in these studies, the criterion-related validity of the resulting global and specific (i.e., imbalance) need satisfaction components remains insufficiently explored. This limitation is important, as criterion-related validity is critical to our ability to ascribe any specific meaning to latent constructs. This research seeks to address this limitation by investigating how these global and specific levels of need satisfaction relate to perceived organizational support and key work outcome variables.

Psychological need satisfaction at work: Psychometric considerations

The previous discussion suggests that need satisfaction ratings would be better represented by multidimensional measurement models providing a way to simultaneously reflect their global and specific nature. Psychometric multidimensionality refers to the observation that specific item ratings could sometimes come to reflect more than one latent construct (Morin, Arens, & Marsh, 2016; Morin, Boudrias, et al., 2016, Morin et al., 2017). Morin, Arens, and Marsh (2016) noted the importance of distinguishing among two different forms of psychometric multidimensionality. The first refers to the assessment of coexisting global (G-factor: global levels of need satisfaction) and specific (S-factors: unique levels of satisfaction of each need, need imbalance) latent constructs. The second refers to the presence of reliable associations between items and more than one factor (i.e., cross-loadings; Morin, Arens, & Marsh, 2016). For instance, levels of autonomy need satisfaction might influence responses to items designed to assess competence or relatedness needs satisfaction. In this example, these cross-loadings could occur in part because of the naturally imperfect nature of these ratings, but also because autonomy, competence, and relatedness needs satisfaction are conceptually interrelated (Trépanier, Fernet, & Austin, 2013). These two forms of psychometric multidimensionality are ignored in classical confirmatory factor analyses (CFAs), in which items are typically forced to reflect a single latent factor (e.g., Morin, Marsh, & Nagengast, 2013). Indeed, bifactor models are required to simultaneously assess global and specific factors, whereas exploratory factor analyses are required to estimate cross-loadings between items and conceptually related constructs. Importantly, ignoring psychometric multidimensionality, when present in item ratings, has been shown to lead to biased estimates of factor correlations (e.g., Asparouhov, Muthén, & Morin, 2015) and of associations with external criterion variables (Mai, Zhang, & Wen, 2018).

Practical implications of psychometric multidimensionality for theory and research

In practical terms, failure to consider the possibility that need satisfaction ratings could simultaneously tap into two types of latent constructs (G- and S-factors) is likely to erroneously lead to the conclusion that the needs for autonomy, competence, and relatedness simply reflect relatively independent constructs with comparable effects. Indeed, these comparable effects would mainly reflect the underlying effects of participants' global levels of need satisfaction, and serve to hide the possible complementary effects of need imbalance. The practical implications of ignoring cross-loadings are not as easy to understand. On the one hand, it is relatively easy to grasp why some specific item ratings might present small cross-loadings on secondary factors. On the other hand, it might seem more logical, and parsimonious, to simply ignore these secondary associations. Yet, statistical research (for a review, see Asparouhov et al., 2015) has shown that excluding even negligible cross-loadings (i.e., as small as .100) tends to result in inflated estimates of the G-factor in a bifactor model (i.e., it will make it harder to identify need imbalance) or of factor correlations in CFA. In contrast, it has also been shown that including unnecessary cross-loadings will not result in estimation biases. These observations thus suggest that it is the exclusion of these cross-loadings that is likely to result in a biased picture of the way constructs related with one another (Asparouhov et al., 2015) and with other constructs (Mai et al., 2018).

In sum, ignoring these forms of multidimensionality is likely to lead to a biased view of the validity of the constructs under consideration and the reality under study. For applied researchers interested in need satisfaction, this means that the ability to obtain a clear and valid estimate of the way need satisfaction ratings related to other constructs of interest is likely to be biased, and more important, to lead to biased recommendations for practice. For example, as discussed earlier, research relying on a CFA representation is likely to lead to the conclusion of comparable effects associated with all three needs. In contrast, a more accurate representation might reveal deleterious effects associated with imbalance in the satisfaction of one specific need that would be impossible to detect using CFA.

A Bifactor-ESEM representation of psychological need satisfaction at work

The new bifactor exploratory structural equation modeling (ESEM) framework (Morin, Arens, & Marsh, 2016) provides a way to systematically account for the two types of multidimensionality in a single model. It thus appears to be particularly well suited to investigations of the dimensionality of psychological need satisfaction at work. ESEM and bifactor models have been recently used in organizational research to examine the structure of employees' personality (McAbee, Oswald, & Connelly, 2014), well-being (Morin, Boudrias, et al., 2016, Morin et al., 2017), need satisfaction (Sánchez-Oliva et al., 2017), motivation (Howard, Gagné, Morin, & Forest, 2018), and affective commitment (Perreira et al., 2018).

When considering need satisfaction, emerging research also supports the value of a bifactor-CFA approach in the educational (Gillet et al., 2019) and work (Bidee, Vantilborgh, Pepermans, Griep, & Hofmans, 2016) areas. Fewer studies have considered the bifactor-ESEM framework. Yet, Tóth-Király et al.'s (2018) results supported a bifactor-ESEM approach in a series of two studies focusing on global (rather than domain-specific) need fulfillment (combining need satisfaction and frustration). In the work context, a single study (Sánchez-Oliva et al., 2017) has tested, and supported, the superiority of a bifactor-ESEM representation of ratings on the Basic Psychological Needs at Work Scale (BPNWS; Brien et al., 2012). Despite their interest, these results have never been replicated. A first objective of this research is thus to replicate these results using the Work-related Basic Need Satisfaction scale (W–BNS; Van den Broeck, Vansteenkiste, De Witte, Soenens, & Lens, 2010). The W–BNS is, arguably, the most widely used questionnaire for the assessment of employees' need satisfaction at work (Knight et al., 2017).

Establishing the nomological network of global and specific need satisfaction at work

A more important limitation of Sánchez-Oliva et al.'s (2017) study lies in their restricted investigation of the nomological network of global and specific (imbalance) components of need satisfaction. Their findings revealed that global levels of need satisfaction were negatively related to all burnout components (emotional exhaustion, depersonalization, and professional efficacy). In addition, they showed that specific levels of imbalance in the satisfaction of the need for competence were negatively related to depersonalization, and positively related to professional efficacy. In contrast, imbalance in relatedness need satisfaction was negatively related to emotional exhaustion. No effects were found in relation to imbalance in autonomy need satisfaction.

To consider broader tests of criterion-related validity, our second objective was to assess the extent to which employees' global and specific levels of need satisfaction were related to a more diversified set of outcomes (i.e., positive and negative affect, job satisfaction, organizational citizenship behaviors, and work engagement). These outcomes were retained based on evidence of their associations with need satisfaction ratings (Huyghebaert et al., 2018; Trépanier, Fernet, & Austin, 2013, 2016). Prior research leads us to expect that global levels of need satisfaction will be negatively related to negative affect and burnout, and positively related to positive affect, job satisfaction, organizational citizenship behaviors, and work engagement (Gillet, Fouquereau, Forest, Brunault, & Colombat, 2012; Huyghebaert et al., 2018). These expectations are also aligned with SDT, according to which autonomy, competence, and relatedness needs satisfaction are defined as essential nutrients for human functioning and well-being (Gagné & Deci, 2005; Ryan & Deci, 2017). We also hypothesized that, over and above these global levels of need satisfaction at work, specific levels of imbalance in the satisfaction of the needs for autonomy, competence, and relatedness will also present direct relations with the outcomes (Sánchez-Oliva et al., 2017).

Identifying work-related determinants of global and specific need satisfaction

To understand need satisfaction, it is also important to consider the need supportive or thwarting impact of work characteristics (Gagné & Deci, 2005). For instance, Gillet et al. (2012) showed that perceptions of supervisors' autonomy-supportive behaviors were positively related to need satisfaction at work. In contrast, perceptions of their controlling behaviors were associated with lower levels of need satisfaction. In this study, our third objective is to extend this research by considering the role of employees' perceptions of organizational support (i.e., the extent to which their organization cares about their well-being and values their contributions; Eisenberger, Huntington, Hutchison, & Sowa, 1986) in the prediction of their global and specific need satisfaction.

The effects of perceived organizational support have been examined in relation to multiple outcomes such as organizational commitment, job satisfaction, and performance. Employees perceiving high levels of organizational support are likely to consider favorable actions from their organization as an indication that the organization is committed to them (Eisenberger & Stinglhamber, 2011). In turn, these perceptions should generate a felt obligation to reciprocate by helping the organization to attain its objectives through favorable work attitudes and behaviors (Eisenberger et al., 1986). Organizational support theory also suggests that perceived organizational support helps to fulfill employees' socioemotional needs. Gillet et al. (2012) showed that perceived organizational support positively predicted employee need satisfaction. Unfortunately, they did not consider the relative impact of perceived organizational support on the specific needs for autonomy, competence, and relatedness. To our knowledge, no research has examined the effects of perceived organizational support on global and specific (imbalance) levels of need satisfaction. However, prior studies (e.g., Gillet et al., 2012) have suggested that perceptions of

organizational support should be positively related to employees' global levels of need satisfaction.

As such, the relations considered in this study form a mediation chain according to which perceived organizational support predicts need satisfaction, which in turn predicts outcomes. Although past studies have shown that the effects of organizational factors (e.g., perceived organizational support, perceived autonomy support) on outcomes were mediated by need satisfaction, they disagreed regarding whether this mediation was partial or complete (Gillet et al., 2012; Huyghebaert et al., 2018). Thus, although we hypothesize mediation, we leave as an open question whether this mediation will be partial or complete.

Method

Participants and procedures

Paper questionnaires were distributed by research assistants to a convenience sample of 523 workers (241 men, 282 women) from various organizations (e.g., public hospitals, industries, sales, and services) located in France. Participants received a survey packet including the questionnaire, a cover letter explaining the objectives of the study, and a consent form stressing that participation was anonymous and voluntary. Questionnaires required approximately 20 min to complete, after which they were returned to the research assistants. All questionnaires were administered in French and instruments not already available in this language were adapted using a standardized back-translation procedure (van de Vijver & Hambleton, 1996). French and English versions of all items used in this research are provided in Appendix 1 of the online supplements. Respondents were between 18 and 64 years old ($M = 35.79$, $SD = 11.16$), had an average organizational tenure of 8.27 years ($SD = 8.66$), and had an average tenure in the current position of 5.40 years ($SD = 6.24$). In addition, 86.8% of the participants worked full-time and 81.5% were permanent workers; and 2.7% of the participants had no diploma, 21.2% completed vocational training, 21.4% completed high school, and 54.7% completed university.

Measures

Work-related need satisfaction

Need satisfaction at work was assessed with the W–BNS scale (Van den Broeck et al., 2010). Four items assessed competence need satisfaction ($\alpha = .71$; e.g., "I really master my tasks at my job"), six items measured autonomy need satisfaction ($\alpha = .78$; e.g., "I feel like I can be myself at my job"), and six items assessed relatedness need satisfaction ($\alpha = .74$; e.g., "At work, I feel part of a group"). Items were rated on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Item-level correlations and descriptive statistics for the need satisfaction items are reported in Table S.11 of Appendix 3 in the online supplements.

Positive and negative affect

Positive (five items; $\alpha = .65$; e.g., "determined") and negative (five items; $\alpha = .73$; e.g., "nervous") affects were assessed with the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). Participants rated how frequently they felt each listed affect using a 5-point scale ranging from 1 (*never*) to 5 (*always*).

Job satisfaction

Job satisfaction was assessed using five items ($\alpha = .88$; e.g., "I am satisfied with my work") from the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985), replacing the word *life* with *work* (Gillet, Fouquereau, Vallerand, Abraham, & Colombat, 2018). Items were rated on a 7-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

Perceived organizational support

Perceived organizational support was assessed using eight items ($\alpha = .91$; e.g., "My organization really cares about my well-being") from Eisenberger et al.'s (1986) Survey of Perceived Organizational Support. All items were rated on a 1 (*strongly disagree*) to 7 (*strongly agree*) response scale.

Organizational citizenship behaviors

Altruism (two items; $\alpha = .78$; e.g., "I willingly give of my time to help other agents who have work-related problems"), helping behaviors (four items; $\alpha = .75$; e.g., "I act as a 'peacemaker' when colleagues have disagreements"), sportsmanship (four items; $\alpha = .67$; e.g., "I consume a lot of time complaining about trivial matters," reversed item), and civic virtue (three items; $\alpha = .74$; e.g., "I attend and actively participate in organization meetings") were assessed using subscales from Podsakoff, MacKenzie, Moorman, and Fetter (1990). All items were rated on a 1 (*strongly disagree*) to 5 (*strongly agree*) response scale.

Work engagement

Work engagement was assessed using the nine-item Utrecht Work Engagement Scale (Schaufeli, Bakker, & Salanova, 2006) covering vigor (three items; $\alpha = .82$; e.g., "At my work, I feel bursting with energy"), dedication (three items; $\alpha = .90$; e.g., "I am enthusiastic about my job"), and absorption (three items; $\alpha = .87$; e.g., "I feel happy when I am working intensely"). Responses were provided on a 7-point scale ranging from 1 (*never*) to 7 (*always*).

Burnout

Shirom and Melamed's (2006) measure was used to assess physical fatigue (six items, $\alpha = .93$; e.g., "I feel tired"), cognitive weariness (five items, $\alpha = .94$; e.g., "I have difficulty concentrating"), and emotional exhaustion (three items; $\alpha = .86$; e.g., "I feel I am unable to be sensitive to the needs of coworkers"). Items were rated on a 7-point scale ranging from 1 (*never*) to 7 (*always*).

Analyses

Models were estimated using the *Mplus* 8 (Muthén & Muthén, 2017) robust weight least square estimator (WLSMV) to account for the ordinal nature of the Likert scales used in this study (Finney & DiStefano, 2013). When compared to maximum likelihood, WLSMV is slightly less efficient at handling missing data (Asparouhov & Muthén, 2010). However, this issue is minimized here given the low level of missing data at the item level (0–2.10%).

Participants' ratings of need satisfaction were represented according to CFA, bifactor-CFA, ESEM, and bifactor-ESEM models (Morin, Arens, & Marsh, 2016; Morin, Boudrias, et al., 2016; Morin et al., 2017). In CFA, each item was allowed to load on the factor it was assumed to measure and no cross-loadings were allowed. This model included three correlated factors representing autonomy, competence, and relatedness needs satisfaction. In ESEM, the same three factors were estimated using a confirmatory oblique target rotation (Asparouhov & Muthén, 2009). More precisely, all main loadings were specified a priori as being freely estimated, and the cross-loadings were constrained to be as close to zero as possible. In bifactor-CFA, all items were allowed to load on one G-factor and one of three S-factors (autonomy, competence, and relatedness). No cross-loadings were allowed and all factors were specified as orthogonal according to bifactor assumptions (Chen, West, & Sousa, 2006). In bifactor-ESEM, the same set of G- and S-factors were estimated using orthogonal bifactor target rotation (Reise, Moore, & Maydeu-Olivares, 2011). More precisely, all items were a priori specified as related to the G-factor. In addition, the three S-factors were a priori defined using the same pattern of target and nontarget factor loadings used in ESEM. In all models, an orthogonal method factor (defined by the negatively worded items) was incorporated to account for the methodological artifact related to the negative wording of six of the need satisfaction items (Marsh, Scalas, & Nagengast, 2010).

We assessed model fit (Marsh, Hau, & Grayson, 2005) using the comparative fit index (CFI), the Tucker–Lewis Index (TLI), and the root mean square error of approximation (RMSEA). Given the greater number of parameters estimated in ESEM relative to CFA, Marsh et al. (2009) reinforced the importance of the RMSEA and TLI, which include a correction for parsimony. According to typical interpretation guidelines (Yu, 2002), values greater than .90 and .95 for the CFI and TLI, respectively, indicate adequate and excellent fit to the data. Values smaller than .08 or .06 for the RMSEA, respectively, support acceptable and excellent model fit. When comparing nested models, typical guidelines suggest that models differing from one another by less than .01 on the CFI and TLI, or .015 on the RMSEA, can be considered to be equivalent (Chen, 2007).

As noted by Morin and colleagues (Morin, Arens, & Marsh, 2016; Morin, Boudrias, et al., 2016, Morin et al., 2017), fit indexes are not sufficient to guide the selection of the optimal model. Indeed, unmodeled cross-loadings result in inflated factor correlations in CFA, or inflated G-factor loadings in bifactor-CFA (e.g., Asparouhov et al., 2015). Likewise, an unmodeled G-factor produces inflated factor correlations in CFA, or inflated cross-loadings in ESEM. An examination of parameter estimates is thus required to select the best alternative. As suggested by Morin, Arens, and Marsh (2016), model comparison should start by contrasting CFA and ESEM. Here, statistical evidence shows that ESEM provides more exact estimates of factor correlations when cross-loadings are present while remaining unbiased otherwise (Asparouhov et al., 2015). For this reason, as long as the factors remain well-defined, the observation of a distinct pattern of factor correlations supports the ESEM solution. The second step involves contrasting the retained CFA or ESEM solutions with a bifactor alternative. Here, the key elements supporting a bifactor representation are the observation of (a) an improved level of fit to the data; (b) a well-defined G-factor; and (c) at least some reasonably well-defined S-factors. Observing multiple cross-loadings higher than .100 or .200 in ESEM that are reduced in bifactor-ESEM is an additional source of evidence in favor of the bifactor solution (Morin, Arens, & Marsh, 2016). For all models, we report standardized parameter estimates and composite reliability coefficients associated with each factor. These coefficients were calculated from the model standardized parameters using McDonald's (1970) omega: $\omega = (\sum \lambda_i)^2 / \left[(\sum \lambda_i)^2 + \sum \delta_i\right]$ where λ_i are the factor loadings in absolute values, and δi, the item uniquenesses.

Finally, outcomes were added to each model as CFA factors specified as regressed on the need satisfaction factors. The fit of a model of total mediation was contrasted with a model of partial mediation. Mediation was tested via the calculation of indirect effects of perceived organizational support on the outcomes as mediated by the mediators (Morin et al., 2013). We used bias-corrected bootstrap (5,000 bootstrap samples) confidence intervals (CI; Cheung & Lau, 2008) which should exclude zero to be considered statistically significant.

It should be noted that a pilot study was conducted on a smaller sample prior to the realization of the main study, mainly to provide further evidence of generalizability. The results from this pilot study, which essentially matched the main results reported in this article, are fully reported in Appendix 2 of the online supplements.

Results

The goodness of fit of the various measurement models is reported in Table 1. Parameter estimates (factor loadings, uniqueness, and composite reliability) are reported in Table 2. CFA and ESEM factor correlations are reported in Table S.12 of the online supplements (all complementary results from the main study can be found in Appendix 3 of the online supplements). Although the CFA was able to achieve an acceptable level of fit to the data, the alternative models were able to achieve an excellent level of fit across all indicators. In addition, both the ESEM and bifactor-ESEM solutions resulted in an equivalent and substantial increase in model fit when compared to bifactor-CFA (ESEM: ΔCFI = +.011, ΔTLI = +.011; bifactor-ESEM: ΔCFI = +.015, ΔTLI

Table 1. Goodness-of-fit statistics of the measurement and predictive models.

Description	$\chi^2(df)$	CFI	TLI	RMSEA	90% CI
Measurement models					
CFA	371.050 (95)*	.942	.927	.075	[.067, .083]
Bifactor-CFA	199.684 (82)*	.975	.964	.052	[.043, .062]
ESEM	137.382 (69)	.986	.975	.044	[.033, .054]
Bifactor-ESEM	94.130 (56)*	.990	.978	.041	[.029, .053]
Predictive models					
Bifactor-ESEM: Partial mediation	5111.689 (2,504)*	.946	.940	.045	[.043, .046]
Bifactor-ESEM: Total mediation	5117.515 (2,517)*	.946	.940	.044	[.043, .046]

Note. χ^2 = robust weight least square estimator (WLSMV) chi-square test of exact fit; *df* = degrees of freedom; CFI = comparative fit index; TLI = Tucker–Lewis Index; RMSEA = root mean square error of approximation; 90% CI = 90% confidence interval for the RMSEA; CFA = confirmatory factor analysis; ESEM = exploratory structural equation modeling.
*$p<.01$.

= +.013). Based on this statistical information, either the ESEM or bifactor-ESEM solution could be retained. However, as noted earlier, model selection should be based on a complete examination of parameter estimates and theoretical conformity.

ESEM versus CFA

The CFA and ESEM solutions result in factors that are well-defined by strong factor loadings (CFA: λ = .358–.865; ESEM: λ = .405–.743) and satisfactory estimates of composite reliability (CFA: ω = .792–.806; ESEM: ω = .650–.717). In ESEM, many cross-loadings remain either not statistically significant (18 out of 32) or negligible (only three cross-loadings $\geq$ .200). Yet, the smaller factor correlations estimated in ESEM (r = .371–.475) relative to CFA (r = .425–.608) reinforces the need to incorporate cross-loadings.

ESEM versus bifactor-ESEM

The bifactor-ESEM solution reveals a G-factor well-defined by strong positive loadings from most items (λ = .259–.735, ω = .871), with the exception of the first relatedness need satisfaction item, which mainly contributed to the definition of its a priori S-factor (λ = .573) relative to the G-factor (λ = .193). Over and above this G-factor, the three S-factors retained a satisfactory level of specificity: autonomy (λ = .271–.640, ω = .700), competence (λ = .410–.645, ω = .695), and relatedness (λ = .260–.618, ω = .725). Finally, the superiority of the bifactor-ESEM solution is also apparent from the reduced cross-loadings (no significant cross-loadings $\geq$ .200). This solution was retained for further analyses. Yet, for comparative purposes, outcomes were still integrated to all solutions.

Predictive models

The goodness of fit associated with the alternative bifactor-ESEM models of partial and total mediation are reported in the bottom section of Table 1. Comparable CFA, bifactor-CFA, and ESEM results are reported in Table S.13 of the online supplements. Across all models, adding a direct path between perceptions of organizational support and the outcomes (i.e., partial mediation) results in a negligible or null increase in model fit. This observation supports a model of total mediation. The predictive results obtained for the bifactor-ESEM model of total mediation are reported in Table 3. The comparable CFA, ESEM, and bifactor-CFA are reported in Tables S.14 to S.16 of the online supplements. Latent correlations estimated between all constructs across model types are reported in Tables S.17 to S.20 of the online supplements. We only briefly summarize the differences between all four models, which essentially replicate the pattern of results from our pilot study summarized in Appendix 2 of the online supplements. These results show that (a) ESEM and bifactor-ESEM afford a slightly cleaner differentiation of effects uniquely associated with each factor relative to CFA and bifactor-CFA; and (b) bifactor-CFA and bifactor-ESEM provide more precision in the identification of the relations attributable to global levels of need satisfaction relative to their specific levels of need satisfaction relative to CFA and ESEM.

In the bifactor-ESEM solution, the results show consistent associations between global levels of need satisfaction and most outcomes, with the exceptions of negative affect and sportsmanship. Higher levels of global need satisfaction are associated with higher levels of positive affect, job satisfaction, altruism, helping behaviors, civic virtue, and work engagement (vigor, dedication, and absorption), and with lower levels of burnout (physical fatigue, cognitive weariness, and emotional exhaustion). Specific levels of imbalance in the satisfaction of the need for autonomy (i.e., when the satisfaction of this need is higher than that of the others) are related with lower levels of negative affect, physical fatigue, and cognitive weariness, as well as higher levels of job satisfaction, sportsmanship, civic virtue, vigor, and dedication. However, specific levels of imbalance in the satisfaction of the need for autonomy were not significantly related to positive affect, helping behaviors, absorption, and emotional exhaustion, and were even related to lower levels of altruism.

Relations involving specific levels of imbalance in the satisfaction of the needs for relatedness and competence were differentiated across outcomes. Higher levels of imbalance in relatedness need satisfaction were associated with higher levels of sportsmanship, but also with lower levels of negative affect and burnout (physical fatigue, cognitive weariness, and emotional exhaustion). Higher levels of imbalance in relatedness need satisfaction were also negatively associated with two dimensions of work engagement (dedication and absorption). Higher levels of imbalance in competence need satisfaction were related to lower levels of negative affect and cognitive weariness (but not emotional exhaustion or physical fatigue), as well as with higher levels of positive affect and sportsmanship. However, levels of imbalance in competence need satisfaction were negatively associated with helping behaviors. Finally, perceived organizational support was positively related with employees' specific levels of imbalance in autonomy need satisfaction as well as with their global levels of need satisfaction. However, these

Table 2. Standardized Factor Loadings (λ) and Uniquenesses (δ).

	CFA		Bifactor-CFA			ESEM	Bifactor-ESEM							
Items	λ	δ	G-λ	S-λ	δ	λ	λ	λ	δ	G-λ	S-λ	S-λ	S-λ	δ
Autonomy														
Item 1	.865	.252	.820	.193	.290	**.556**	.174	.235	.365	**.680**	**.346**	.132	.148	.378
Item 2	.358	.582	.262	.449	.584	**.511**	-.141	*.003*	.599	**.283**	**.390**	-.102	*.042*	.581
Item 3	.409	.664	.298	.544	.582	**.655**	-.217	*-.017*	.592	**.259**	**.640**	-.097	.086	.498
Item 4	.765	.415	.683	.328	.426	**.682**	.137	*.029*	.411	**.649**	**.384**	*.069*	*-.032*	.426
Item 5	.664	.559	.605	.253	.570	**.580**	.229	*-.062*	.535	**.620**	**.271**	*.082*	-.145	.514
Item 6	.469	.593	.353	.536	.405	**.619**	-.085	*-.046*	.367	**.334**	**.516**	*-.021*	*.051*	.378
ω	.803			.650		.819					.700			
Competence														
Item 1	.655	.571	.431	.524	.540	*-.062*	**.672**	.092	.532	**.420**	*-.034*	**.536**	*.068*	.531
Item 2	.812	.341	.575	.509	.411	.124	**.703**	*.018*	.402	**.575**	*.022*	**.508**	*-.034*	.409
Item 3	.605	.634	.328	.642	.481	*-.075*	**.734**	*-.044*	.523	**.328**	*-.007*	**.645**	*-.004*	.477
Item 4	.711	.494	.512	.443	.542	.138	**.615**	*-.011*	.466	**.550**	*-.017*	**.410**	-.088	.521
ω	.792			.694			.794					.695		
Relatedness														
Item 1	.466	.759	.169	.543	.583	-.185	*-.061*	**.647**	.589	**.193**	*-.026*	*-.004*	**.573**	.408
Item 2	.797	.364	.556	.579	.355	.162	*-.076*	**.743**	.355	**.551**	.100	*-.059*	**.525**	.354
Item 3	.665	.528	.404	.507	.485	-.082	*.055*	**.689**	.469	**.375**	*.049*	*.072*	**.599**	.797
Item 4	.742	.449	.591	.368	.515	.188	.102	**.518**	.537	**.735**	-.120	-.148	**.263**	.580
Item 5	.640	.526	.365	.527	.422	*-.057*	*-.002*	**.684**	.448	**.339**	.102	*.043*	**.618**	.467
Item 6	.454	.794	.324	.307	.801	*.084*	*-.011*	**.405**	.800	**.362**	*-.005*	*-.066*	**.260**	.448
ω	.806		.869	.717				.809		.871			.725	

Note: CFA = confirmatory factor analysis; ESEM = exploratory structural equation modeling; B-CFA = bifactor-CFA; B-ESEM = bifactor-ESEM; G = global factor estimated as part of a bifactor model; S = specific factor estimated as part of a bifactor model; λ = factor loading; δ = item uniqueness; ω = omega coefficient of model-based composite reliability; target ESEM and B-ESEM factor loadings are indicated in bold; non-significant parameters ($p \geq .05$) are marked in italics.

perceptions were also associated with lower specific levels of imbalance in competence need satisfaction, and presented no statistically significant associations with specific levels of imbalance in relatedness need satisfaction.

The presence of statistically significant relations between the predictor and some mediators, and between some of the mediators and the outcomes, suggest multiple mediation paths. With few exceptions, the indirect effects related to these suggested mediation paths were statistically significant. First, and as expected, the relations between perceived organizational support and most outcomes were mediated by global need satisfaction: (a) positive affect (indirect effect = .477; CI [.283, .783]); (b) job satisfaction (1.005; CI [.585, 3.037]); (c) altruism (.295; CI [.148, .556]); (d) helping behaviors (.177; CI [.075, .301]); (e) civic virtue (.160; CI [.060, .307]); (f) vigor (.331; CI [.207, .473]); (g) dedication (.445; CI [.288, .660]); and (h) absorption (.339; CI [.207, .508]). However, the relations between perceived organizational support and physical fatigue (−.098; CI [−.200, .015]) and cognitive weariness (−.124; CI [−.239, .006]) were not mediated by global need satisfaction.

Second, the relations between perceived organizational support and some outcomes were mediated by employees' specific levels of imbalance in the satisfaction of the need for autonomy: (a) negative affect (indirect effect = −.634; CI [−2.443, −.327]); (b) job satisfaction (1.647; CI [.928, 5.784]); (c) sportsmanship (.533; CI [.309, .976]); (d) vigor (.236; CI [.081, .390]); (e) physical fatigue (−.574; CI [−.889, −.380]); and (f) cognitive weariness (−.523; CI [−1.169, −.300]). In contrast, the relations between perceived organizational support and employees' levels of altruism (−.163; CI [−.431, .004]), civic virtue (.142; CI [−.027, .309]), and dedication (.166; CI [−.004, .311]) were not significantly mediated by employees' specific levels of imbalance in the satisfaction of the need for autonomy. Finally, some of the relations involving perceived organizational support and the outcomes were significantly mediated by employees' specific levels of imbalance in the satisfaction of the need for competence: (a) positive affect (indirect effect = −.039; CI [−.125, −.004]); (b) negative affect (.121; CI [.011, .753]); (c) helping behaviors (.036; CI [.003, .105]; (d) sportsmanship (−.061; CI [−.183, −.014]); and (e) cognitive weariness (.129; CI [.020, .387]).

Discussion

The results supported the superiority of a bifactor-ESEM representation of employees' ratings of need satisfaction at work, when compared to alternative CFA, bifactor-CFA, and ESEM representations. This solution revealed well-defined factors representing employees' global levels of need satisfaction coexisting with factors reflecting imbalance in the specific levels of satisfaction of their needs for autonomy, competence, and relatedness relative to these global levels. These findings thus provided the first evidence of replication of the results obtained by Sánchez-Oliva et al. (2017) in the work setting, using a distinct measure of need satisfaction (the W–BNS). Arguably, the replication of this improved representation of need satisfaction at work is a key contribution of this study, and suggests that researchers should consider this framework as a starting point for their own research. More important, these results also extended Sánchez-Oliva et al.'s (2017) study by the consideration of a wider range of predictor and outcome measures, and the assessment of mediated relations.

The effects of global and specific need satisfaction on work outcomes

A key limitation of Sánchez-Oliva et al.'s (2017) study was their consideration of a restricted set of outcomes related to

Table 3. Results from the predictive analyses conducted with the final bifactor-ESEM solution of total mediation.

	Predictors											
	Autonomy			Relatedness			Competence			Global need satisfaction		
Outcomes	b	*SE*	*β*	b	*SE*	*β*	b	*SE*	*β*	b	*SE*	*β*
Positive affect	.011	.094	.010	−.119	.073	−.085	.229	.097*	.165	.846	.112**	.690
Negative affect	−.837	.282**	−.639	−.475	.172**	−.289	−.709	.258**	−.438	.003	.123	.002
Job satisfaction	2.173	.781**	.684	−.186	.156	−.047	.085	.207	.022	1.781	.497**	.513
Citizenship behaviors												
Altruism	−.215	.106*	−.229	.070	.082	.059	−.177	.105	−.152	.523	.099**	.510
Helping	−.041	.084	−.047	.111	.062	.102	−.211	.082**	−.196	.314	.076**	.330
Sportsmanship	.703	.170**	.639	.195	.099*	.141	.356	.141*	.261	.032	.092	.027
Civic Virtue	.187	.078*	.214	−.016	.072	−.015	.028	.078	.026	.284	.068**	.297
Work engagement												
Vigor	.311	.087**	.295	−.092	.062	−.069	.095	.078	.073	.586	.077**	.507
Dedication	.219	.099*	.190	−.198	.074**	−.138	.001	.091	.000	.788	.101**	.628
Absorption	.047	.094	.048	−.161	.069*	−.130	−.055	.083	−.045	.601	.092**	.556
Burnout												
Physical fatigue	−.757	.131**	−.658	−.180	.076*	−.125	−.171	.093	−.120	−.173	.077*	−.138
Cognitive weariness	−.690	.174**	−.551	−.310	.097**	−.198	−.757	.097**	−.489	−.219	.097**	−.160
Emotional exhaustion	−.119	.071	−.115	−.599	.069**	−.460	−.076	.067	−.060	−.447	.075**	−.394

	Perceived organizational support		
	b	*SE*	*β*
Autonomy	.758	.083**	.604
Relatedness	.017	.077	.017
Competence	−.170	.073*	−.168
Global satisfaction	.565	.075**	.492

Note. ESEM = exploratory structural equation modeling; *b* = unstandardized regression coefficient; *SE* = standard error of the coefficient; *β* = standardized regression coefficient. All variables are latent factors with a mean of 0 and a standard deviation of 1.
*$p \leq .05$.
**$p \leq .01$.

burnout. This study sought to more precisely assess relations between global and specific (i.e., imbalance) levels of psychological need satisfaction and a more diversified set of outcomes. The results supported our expectations based on prior theoretical developments (Sheldon & Niemiec, 2006) and results (Sánchez-Oliva et al., 2017; Tóth-Király et al., 2018) in demonstrating the key role of employees' global levels of need satisfaction in the prediction of a variety of outcomes. More precisely, higher levels of global need satisfaction were associated with higher levels of positive affect, job satisfaction, altruism, helping behaviors, civic virtue, and work engagement. In addition, these global levels of need satisfaction were also associated with lower levels of burnout. Our results also supported the idea that specific levels of imbalance in the satisfaction of each need relative to all others also explained unique variability in outcomes' levels over and above that already explained by global levels of need satisfaction. Considering these findings, it is important to keep in mind that these specific factors cannot be interpreted as one would interpret a first-order factor reflecting, for example, the entirety of employees' satisfaction of their need for autonomy at work. Rather, our bifactor representation allowed us to obtain a direct estimate of the specificities, discrepancies, or degree of imbalance remaining in each of the specific needs over and above employees' global levels of need satisfaction.

Specific imbalance in the satisfaction of the need for autonomy

Specific levels of imbalance in the satisfaction of the need for autonomy reflect a need for autonomy that is satisfied to a greater extent than the other needs. These specific levels were found to be associated with lower levels of negative affect, physical fatigue, and cognitive weariness, as well as higher levels of job satisfaction, sportsmanship, civic virtue, vigor, and dedication. However, specific levels of imbalance in autonomy need satisfaction were not significantly related to positive affect, helping behaviors, absorption, and emotional exhaustion. These results partially support those from Sánchez-Oliva et al. (2017), who found no relation between specific levels of imbalance in autonomy need satisfaction and levels of emotional exhaustion, depersonalization, and professional efficacy. Our findings also extended those results in showing that considering a wider range of outcomes, and an alternative conceptualization of burnout encompassing physical fatigue and cognitive weariness (Shirom & Melamed, 2006), could reveal more differentiated associations.

Our results also unexpectedly revealed a negative association between specific levels of imbalance in the satisfaction of the need for autonomy and altruism. More precisely, this result showed that having one's need for autonomy satisfied to a greater extent than one's needs for competence and relatedness could lead to a decrease in altruism. Autonomy is a need related to the experience of a sense of personal volition and freedom. This need is not fully compatible with altruism, in which one has to let go of this personal freedom to devote time and efforts to unselfishly help others. The observation of nonsignificant associations between specific levels of imbalance in autonomy need satisfaction and helping behaviors is consistent with this interpretation. In contrast, and in line with prior studies (Chiniara & Bentein,

2016), higher specific levels of imbalance in autonomy need satisfaction were related to higher levels of sportsmanship and civic virtue. Thus, experiences of autonomy, volition, and freedom going beyond one's global levels of need satisfaction might lead to citizenship behaviors seeking to preserve and strengthen the growth of other members of the work context that has generated these feelings (Gagné & Deci, 2005).

Specific imbalance in the satisfaction of the need for relatedness

Our results revealed that specific levels of imbalance in the satisfaction of the need for relatedness were associated with higher levels of sportsmanship, but also with lower levels of negative affect and burnout components. These results are in line with those from prior research (Trépanier et al., 2013, 2016). They also support the idea that relatedness need satisfaction facilitates the internalization of work-related rules and regulations, in turn leading to positive work-related attitudes and behaviors (Gagné & Deci, 2005). However, imbalance in employees' specific levels of relatedness need satisfaction was also negatively related to two dimensions of work engagement (dedication and absorption). Thus, employees who enjoy socializing far more than being autonomous or competent appear less likely to experience their work as meaningful (dedication) and engrossing (absorption). Similarly, Morin, Morizot, Boudrias, and Madore (2011) identified a subpopulation of employees characterized by a high level of affective commitment to their organization, colleagues, and customers, and thus globally enjoying positive social relationships at work. Yet, these employees did not appear to be overly motivated by achievement-related factors (e.g., their job or their career), by the simple pleasure of working, or by a desire to improve organizational or team effectiveness in an autonomous manner. Additional studies are needed to replicate these results, and to identify the mechanisms underlying this negative relation.

Specific imbalance in the satisfaction of the need for competence

Specific levels of imbalance in the satisfaction of the need for competence relative to the other needs were not related to emotional exhaustion and physical fatigue, but presented negative associations with cognitive weariness. Prior research showed that employees who believe in their capabilities displayed lower levels of burnout (Albrecht, 2015). Thus, stronger feelings of competence might help to persevere beyond the benefits provided by autonomy and relatedness when faced with difficulties, and to interpret these difficulties as challenges to be met with optimism (e.g., Ventura, Salanova, & Llorens, 2015). Furthermore, competent employees might tend to be less frequently exposed to cognitive load and weariness because of their ability to obtain, protect, and retain valued resources (Hobfoll, 1989).

Imbalance in employees' levels of satisfaction of their need for competence was also negatively associated with helping behaviors. To understand this unexpected result, it is important to keep in mind that the satisfaction of this specific need already appears to be less contingent on external circumstances than that of the needs for relatedness and autonomy (Chiniara & Bentein, 2016). Furthermore, employees reporting higher levels of competence need satisfaction relative to all other needs (i.e., imbalance) should feel confident in their ability to be effective in a way that is relatively independent from external considerations (Chiniara & Bentein, 2016). This freedom from external and social contingencies might, in turn, make them less likely to reciprocate through helping behaviors.

Perceived organizational support and need satisfaction

In line with prior studies (Gillet et al., 2012) and with our expectations, perceived organizational support was found to be positively related to employees' global levels of need satisfaction, as well as to specific levels of imbalance in the satisfaction of their need for autonomy. In addition, no associations were found between perceived organizational support and employees' specific levels of imbalance in the satisfaction of their need for relatedness. In contrast, perceived organizational support was found to be negatively related to specific levels of imbalance in the satisfaction of the need for competence. This result suggests that perceiving high levels of organizational support might lead employees to believe that their organization doubts their competence. In this case, organizational support is not perceived as an organizational resource but might hinder the satisfaction of the need for competence (Gillet et al., 2012). Caution is thus needed in the provision of organizational support. However, future research needs to more extensively look at the effects of perceived organizational support on global and specific (imbalance) levels of need satisfaction, and try to unpack the mechanisms underlying this negative relation.

The mediating role of global and specific need satisfaction

As expected, the relations between perceived organizational support and most outcomes (positive affect, job satisfaction, altruism, helping behaviors, civic virtue, and work engagement) were mediated by global levels of need satisfaction. The relations between perceived organizational support and some outcomes (negative affect, job satisfaction, sportsmanship, vigor, physical fatigue, and cognitive weariness) were also mediated by specific levels of autonomy need satisfaction imbalance. Finally, the relations between perceived organizational support and five outcomes (positive affect, negative affect, helping behaviors, sportsmanship, and cognitive weariness) were significantly mediated by employees' specific levels of competence need satisfaction imbalance. These findings are important and confirm that perceived organizational support's relation with work outcomes flows through need satisfaction (Eisenberger & Stinglhamber, 2011). Moreover, our research extends recent work (Gillet et al., 2012) by (a) helping to identify which components of

psychological need satisfaction are more strongly associated with perceived organizational support than others; and (b) investigating the distinct mediating role of each need satisfaction component in the prediction of work outcomes. However, other mechanisms might also play a role in these relations (e.g., organizational dehumanization and identification), mechanisms that could become subjects of future investigation. Moreover, although our treatment of some variables as determinants (perceived organizational support), mediators (need satisfaction), or outcomes (e.g., positive and negative affect, work engagement) was based on theoretical considerations (Eisenberger & Stinglhamber, 2011; Ryan & Deci, 2017), our design did not allow us to rule out the possibility of reverse causality, reciprocal influence, or spuriousness. Future longitudinal research is needed to identify the true directionality of these associations and confirm the mediating role of need satisfaction in the relationship between perceived organizational support and work outcomes.

Limitations and directions for future research

This research has some limitations. First, we relied on self-report measures that can be affected by social desirability and self-report biases. We thus encourage researchers to conduct additional research using objective and informant-reported measures of turnover and performance. Second, we only considered perceived organizational support as a possible predictor. It would be interesting for future research to consider a more diversified set of predictors (e.g., ethical leadership, job design, emotional labor). Third, future studies are needed to assess the extent to which these results, particularly the predictive results that are more unique to our study, would generalize to new and independent samples of employees. Finally, we relied on a convenience sample of French workers, making these results hard to generalize to broader populations. It would be important for future research to rely on more diversified (e.g., cultures, languages, professions) and representative samples.

Scoring issues

Our results add to mounting research evidence supporting the value of adopting a bifactor-ESEM representation of need satisfaction ratings (Bidee et al., 2016; Gillet et al., 2019; Sánchez-Oliva et al., 2017; Tóth-Király et al., 2018). This representation provides a way to obtain a direct estimate of the global level of satisfaction of the needs for autonomy, competence, and relatedness coupled with an explicit estimate of the extent to which the satisfaction of each specific need can be considered to be in a state of imbalance relative to this global level (e.g., Sheldon & Niemiec, 2006). Researchers and practionners relying on more classical operationalizations of need satisfaction (e.g., scale scores, CFA) ignoring either form of multidimensionality (i.e., globability/specificity and cross-loadings) accounted for in a bifactor-ESEM model are likely to obtained biased estimates and relations involving need satisfaction ratings.

To avoid need satisfaction estimates reflecting a confusing mixture of global and specific variance likely to be tainted by multicollinearity, researchers and practicioners are thus invited to consider adopting a bifactor-ESEM representation of need satisfaction ratings in their own work. This recommandation strongly advocates in favor of a latent variable approach to research. Fortunately, evidence that models such as those used in this study work well even with relatively small sample sizes (Mai et al., 2018; also see our pilot study in the online supplements) suggest that the applicability of this approach might be more widespread than previously thought. Yet, this recommendation is not as easy to transpose to the professional context where practitioners and organizations might still need to be able to manually score need satisfaction questionnaires. In these contexts, these results suggest the need to develop automated scoring procedures relying on calculations similar to those involved in the generation of the factor scores used in this study. As noted by Perreira et al. (2018), the M*plus* statistical package could be used in such a manner on the basis of the parameter estimates obtained in this study. A key advantage of this approach is that the resulting scores will be directly estimated in standardized units, and thus interpretable as a function of the sample mean and standard deviation, just like normed scores. Yet, as it is the case for the development of any norms, this consideration reinforces the importance for future research to rely on more representative samples prior to the development of any practically useful scoring procedure. In addition, in doing so, it is also important to take to heart Fisher, Medaglia, and Jeronimus's (2018) warning that group-level results do not necessarily translate well to the study of intraindividual variations.

Practical implications and conclusions

From a practical perspective, our results suggest that managers should be particularly attentive to employees displaying low global levels of need satisfaction, as these workers appeared to be at risk for a variety of work difficulties, including negative affect and burnout. Results from this study and from prior investigations (Gillet et al., 2012) revealed that higher levels of organizational support were associated with higher global levels of need satisfaction across dimensions. Thus, managers and practitioners should show concern for the extent to which their employees feel supported by their organizations and foster these perceptions. Gonzalez-Morales, Kernan, Becker, and Eisenberger (2018) provided evidence for the effectiveness of a brief support training program including four strategies (i.e., benevolence, sincerity, fairness, and experiential processing). Among other ways to achieve this objective, organizations might promote a supportive culture by providing to employees the resources they need to perform their jobs effectively, assurance of security during stressful times, and justice in the way policies are implemented and rewards distributed (Eisenberger & Stinglhamber, 2011). Still, managers must

keep in mind the need to exercise restraint, and particularly to provide support that is not perceived as a doubt of employees' ability to avoid undesired effects on employees' specific levels of competence need satisfaction.

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