

The Impact of Organizational Factors on Psychological Needs and Their Relations with Well-Being

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Abstract

Purpose The purpose of the present research was to examine the relationships between perceived organizational support, perceptions of supervisor's interpersonal style, psychological need satisfaction and need thwarting, and hedonic and eudaemonic well-being.

Design/Methodology/Approach In Study 1 ($n = 468$), we tested a model in which workers' perceived organizational support and their perceptions of their supervisor autonomy support independently predicted satisfaction of the workers' needs for autonomy, competence, and relatedness, which in turn predicted aspects of hedonic and eudaemonic well-being. In Study 2 ($n = 650$), workers' perceptions of supervisor controlling behaviors and need thwarting were added to the hypothesized model tested in Study 1. Scales of work satisfaction and positive affect were used to assess hedonic well-being, and a scale of psychological well-being was used to assess eudaemonic well-being.

Findings Perceived organizational support and supervisors' interpersonal style related to basic need satisfaction (Studies 1 and 2) and need thwarting (Study 2). In turn, need satisfaction predicted higher levels of hedonic and eudaemonic well-being, while need thwarting was negatively associated with hedonic and eudaemonic well-being.

Implications The present results underscore the importance of understanding the mechanisms through which organizations and managers related to workers' hedonic and eudaemonic well-being.

Originality/Value This is the first research to provide evidence for the mediating role of need satisfaction and need thwarting in the relationships between perceived organizational support, perceptions of supervisor's interpersonal style, and hedonic and eudaemonic well-being. The present results were obtained in two samples of employees from various small to large companies.

Keywords Perceived organizational support · Interpersonal style · Need satisfaction · Need thwarting · Hedonic and eudaemonic well-being

Introduction

Mental health has become an increasingly important issue for researchers and practitioners alike because it has been related to important economic considerations (Schott 1999). For instance, the total costs of depression in the European Union have been estimated at 118 billion Euros per annum (Sobocki et al. 2006). Moreover, well-being can account for more than 25% of the explained variance in individual performance (Wright 2010). In recent years, workplace well-being has thus received increasing amounts of attention from researchers and practitioners. The dichotomization of well-being into hedonic and eudaemonic perspectives (Ryan and Deci 2001) has repeatedly proved meaningful and informative (see Delle Fave et al. 2011; Kashdan et al. 2008). Hedonic well-being pertains to the pursuit of pleasure, enjoyment, and comfort. Workers are said to have high hedonic well-being if they report that

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their work is satisfying and that they are experiencing frequent positive affect (Pavot and Diener 2008). In contrast, eudemonistic view is concerned with living well or actualizing one's human potentials (Deci and Ryan 2008) and suggests that people's reports of being positively affective and satisfied do not necessarily mean that they are functioning well both personally and socially (Ryff and Keyes 1995). Eudaemonic well-being can be assessed with several indicators including self-realization (Ryff 1989).

The purpose of the present research was to examine the relationships between perceived organizational support, perceptions of supervisor's interpersonal style, satisfaction and thwarting of the basic psychological needs for autonomy, competence, and relatedness, and hedonic and eudaemonic well-being. Recent research has shown that perceived organizational support and supervisors' interpersonal style predicted employee well-being (see Eisenberger and Stinglhamber 2011; Gagné and Deci 2005). In parallel, previous studies have found that the satisfaction of the three basic psychological needs (i.e., autonomy, competence, and relatedness) is related to worker well-being (e.g., Baard et al. 2004; Van den Broeck et al. 2010; Vansteenkiste et al. 2007). However, additional studies need to be carried out to examine the links between psychological need thwarting and well-being in the work context. We intend to extend that line of research by investigating the impact of two sources of support on basic psychological need satisfaction and thwarting, and well-being. Specifically, we examined the relationship of perceived organizational support (i.e., a distal source of support) and supervisor's interpersonal style (i.e., a proximal source of support) to hedonic and eudaemonic aspects of well-being (i.e., work satisfaction, happiness, and self-realization) as mediated by basic psychological need satisfaction and thwarting. The hypothesized model and relevant supportive literature are presented below.

Organizational Determinants of Well-Being

Two organizational factors were examined in the present research. The first is a proximal source of support, which is the interpersonal style from the direct supervisor (toward supporting subordinates' autonomy versus controlling their behavior; see Deci and Ryan 1987). In the work setting, the interpersonal context is said to be autonomy-supportive when managers provide a meaningful rationale for doing the tasks, emphasize on choice rather than control, and acknowledge one's feelings and perspectives. In contrast, managers exhibiting a controlling interpersonal style behave in a coercive and authoritarian way to pressure employees to behave in a specific and, typically, manager-directed way (Deci et al. 1989). Previous studies have shown that supervisors who exhibit autonomy-supportive

behaviors had a positive effect on subordinates' pro-environmental behaviors, persistence, and well-being, relative to supervisors who were oriented toward controlling their subordinates' behavior (e.g., Chirkov and Ryan 2001; Lavergne et al. 2010; Pelletier et al. 2001).

The second source of support, a more distal one, comes from one's general relationship to one's employer. Perceived organizational support is defined as workers' "global beliefs concerning the extent to which the organization values their contributions and cares about their well-being" (Eisenberger et al. 1986, p. 501). Previous research has shown that perceived organizational support lead to positive work outcomes including various facets of hedonic and eudaemonic well-being (for reviews, see Eisenberger and Stinglhamber 2011; Rhoades and Eisenberger 2002). For instance, results of a study by Eisenberger et al. (2001) in a sample of 413 employees revealed that perceived organizational support positively predicted hedonic well-being (i.e., positive affect).

Given that perceived organizational support and supervisors' interpersonal style relates to well-being, then what are the processes mediating such effects? Because the satisfaction of the basic psychological needs for autonomy, competence, and relatedness, as defined in self-determination theory (Deci and Ryan 1985, 2008; Ryan and Deci 2000), has been identified as an important predictor of individuals' optimal functioning in various life domains (see Deci and Vansteenkiste 2004), we propose that satisfaction of these basic psychological needs may be at play in this relationship.

Psychological Need Satisfaction as a Mediator

Self-determination theory posits that satisfaction of three basic psychological needs (i.e., autonomy, competence, and relatedness) is required for psychological well-being. More precisely, self-determination theory proposes that people function and develop most effectively when the social environmental supports their basic psychological needs. The need for autonomy reflects the need for individuals to feel volitional and responsible for their own behavior (deCharms 1968). The need for competence is defined as the extent to which individuals interact effectively with their environment (White 1959). Finally, the need for relatedness concerns the degree to which individuals feel connected and accepted by others (Baumeister and Leary 1995). Research conducted in various life domains has shown that satisfaction of these psychological needs was positively associated with hedonic and eudaemonic well-being (e.g., Boezeman and Ellemers 2009; Howell et al. 2011; Milyavskaya and Koestner 2011; Patrick et al. 2007). For instance, Van den Broeck et al. (2010) have shown that satisfaction of each of the three needs was

positively associated with job satisfaction in two samples of Belgian and Dutch employees.

Moreover, recent studies have examined the mediating role of basic need satisfaction in the relationship between supervisor autonomy support and well-being (e.g., Adie et al. 2008; Baard et al. 2004; Deci et al. 2001; Reinboth et al. 2004; Ryan et al. 2008). For instance, Baard et al. (2004) showed that workers' perceptions of the degree of autonomy supportiveness of their managers positively predicted their satisfaction of the needs for autonomy, competence, and relatedness, which in turn lead to higher levels of psychological adjustment. Although perceived organizational support has indirect effects on well-being (e.g., via organizational commitment; see Panaccio and Vandenberghe 2009), no previous research to the best of our knowledge has documented the links between perceived organizational support, basic psychological need satisfaction, and well-being. Yet, organizational support theory identifies eight key processes for the positive links between perceived organizational support and favorable outcomes, including socio-emotional need fulfillment (see Eisenberger and Stinglhamber 2011). Among these socio-emotional needs, Armeli et al. (1998) suggested that the need for relatedness should be considered. More specifically, these authors argued that perceived organizational support would help satisfy the need for relatedness. No study has looked at the relationships between perceived organizational support and the two other basic psychological needs in self-determination theory (i.e., autonomy and competence). More research is thus needed to examine the mediating role of need satisfaction in the relationship between perceived organizational and well-being. More generally, notwithstanding the importance of previous findings, research investigating the impact of organizational factors on psychological need satisfaction is warranted (Gagné and Deci 2005).

The Present Research

The impact of supervisors' interpersonal behaviors on psychological need satisfaction is well supported by research results in various domains such as sport and education (see Edmunds et al. 2007; Guay et al. 2008). However, the impact of social factors, and more particularly, the supervisors' interpersonal style on the satisfaction of the three needs measured simultaneously is still scarce in the work domain. Moreover, although the study of perceived organizational support has received considerable attention in the literature (see Eisenberger and Stinglhamber 2011), no investigation has empirically examined the role of perceived organizational support in predicting perceptions of autonomy, competence, and relatedness. Given that psychological need

satisfaction is related to hedonic and eudaemonic well-being (see Ryan and Deci 2001), it is anticipated to act as a mediating variable between organizational factors (i.e., perceived organizational support and supervisors' interpersonal style) and workers' well-being. Therefore, the determinants of well-being at work should be understood more thoroughly. In addition, few studies in the work domain have included both determinants (e.g., organizational support and supervisor autonomy support) and consequences (e.g., satisfaction, happiness and self-realization) of psychological need satisfaction and need thwarting.

Accordingly, the purpose of the present research was to propose and test in two studies an integrative model that examines the nature of mechanisms through which organizational factors (e.g., perceived organizational support and supervisor autonomy support) relate to hedonic and eudaemonic well-being. Such research is extremely useful as it advances understanding of the processes that may be at play in the relationship between organizational factors and well-being. A measure of work satisfaction and positive affect was chosen to assess workers' hedonic well-being. Based on the Ryff's psychological well-being framework (Ryff 1989), eudaemonic well-being was assessed with a measure of self-realization. Study 1 investigated the relationships between perceived organizational support, perceptions of supervisor autonomy support, basic need satisfaction (i.e., autonomy, competence, and relatedness), and well-being to determine if basic need satisfaction has a mediating role in the relationships between perceived organizational support and supervisor autonomy support to work satisfaction, happiness, and self-realization. Study 2 sought to replicate the findings of Study 1 and improve upon them by examining the role of two additional variables, namely perceptions of supervisor controlling behaviors and psychological need thwarting. Because very few studies, especially in the work domain, have included assessments of these two variables, the model tested in the present research is unique and adds to the literature on self-determination theory and workers' well-being.

Study 1

The purpose of Study 1 was to test a model in which workers' perceived organizational support and their perceptions of their supervisor's interpersonal style are associated with psychological need satisfaction, which in turn relate to different facets of well-being. It was hypothesized that perceived organizational support and supervisor autonomy support would positively predict basic need satisfaction, which in turn was hypothesized to lead to high levels of work satisfaction, happiness, and self-realization.

Method

Participants

A convenient sample of 468 workers (219 men and 249 women) from various large French companies (250 employees and more) participated in the present study. The age of the participants ranged from 19 to 64 years, with a mean age of 36.94 years ($SD = 11.50$). Average tenure in the company was 11.07 years ($SD = 10.06$). One hundred and seventy-six participants worked in a company that employed between 250 and 499 persons, and 292 were in company that had over 500 employees.

Procedure

Questionnaires were distributed and collected by 11 undergraduate students in several companies in the area of Tours, France. In each organization, participants received a questionnaire packet, a cover letter explaining the study and a consent form stressing the fact that their participation was confidential and voluntary. They were also assured that their managers would not see their responses. They completed the questionnaires and gave them directly back to the undergraduate student.

Measures

Perceived Supervisor Autonomy Support Workers' perceptions of supervisor autonomy support were assessed with the French version of the scale used by Moreau and Mageau (in press). This questionnaire is a nine-item self-report measure assessing the extent to which employees perceive their manager to be autonomy-supportive (e.g., "My supervisor consults with me to find out what modifications I would like to make to my work"). Answers are given on a Likert scale ranging from 1 (do not agree at all) to 7 (very strongly agree).

Perceived Organizational Support Perceived organizational support was measured with a translated eight-item version of the Perceived Organizational Support Scale developed by Eisenberger et al. (1986). The questionnaire was translated in French according to the guidelines of the International Test Commission (Hambleton 1993). The scale includes items that are reverse scored (e.g., "The organization shows very little concern for me."), and respondents are asked to indicate the extent to which they agree with the eight statements on a seven-point scale from 1 (not at all agree) to 7 (totally agree). Previous studies used exploratory and confirmatory factor analyses with employees from diverse occupations and organizations

provided evidence for the high internal reliability and unidimensionality of the scale (see Rhoades and Eisenberger 2002).

Need Satisfaction Perceptions of competence (e.g., "Often, I feel that I am very efficient at work"), autonomy (e.g., "Generally, I feel free to express my ideas and opinions at work"), and relatedness (e.g., "I have a lot of sympathy for the persons with whom I interact at work.") were assessed with the Basic Psychological Needs in Sport Scale (Gillet et al. 2008). The scale was modified in the present study to assess need satisfaction in the work domain. Specifically, we replaced "in my sport activity" by "in my work." This French-language questionnaire is composed of three subscales with a total of 15 items. All responses were indicated on a seven-point Likert scale ranging from 1 (totally disagree) to 7 (totally agree). Recently, Gillet et al. (2008) have provided strong evidence for the factorial structure, construct validity, and internal consistency of this scale (see also Gillet et al. 2009a, b). To reduce the number of variables in the tested models, an overall index of need fulfillment which aggregates across the three needs was created (see Smith et al. 2011).

Work Satisfaction Work satisfaction (e.g., "I am satisfied with my work") was assessed with five items derived from the French version of the Satisfaction with Life Scale (Blais et al. 1989; Diener et al. 1985). The words "life satisfaction" were replaced by "work satisfaction." Responses are made on a scale ranging from 1 (strongly disagree) to 7 (strongly agree). Previous research indicated adequate psychometric properties for the French version of the scale (e.g., Blais et al. 1989).

Happiness As in the studies of Miquelon and Vallerand (2006, 2008), happiness at work was assessed in terms of positive affect by five items taken from the Positive and Negative Affect Schedule (PANAS; Watson et al. 1988). Participants were asked to rate each item on the basis of how they generally felt in their work using a seven-point Likert scale, ranging from 1 (not at all) to 7 (very much).

Self-Realization Self-realization was assessed with the 10 items (e.g., "Some people wander aimlessly in their work, but I am not one of them"; reversed) used by Miquelon and Vallerand (2006, Study 2). These items derived from the Psychological Well-Being scale (Ryff 1989; Ryff and Keyes 1995). Participants were asked to rate their agreement with each item on the basis of how they generally felt in their work on a seven-point scale ranging from 1 (do not agree at all) to 7 (strongly agree).

Results and Discussion

Preliminary Analyses

Table 1 presents the means and standard deviations of the study variables, as well as correlations between the variables. An examination of the size and direction of the correlations reveal good preliminary support for the hypotheses. Perceived organizational support and perceptions of supervisor autonomy support were positively correlated with need satisfaction. Moreover, need satisfaction was positively correlated with work satisfaction, happiness, and self-realization. We have conducted a confirmatory factor analysis with the present data to examine the factor structure of all scales used in the present study. Items were uniquely loaded on appropriate factors and factors were allowed to correlate. Results yielded satisfactory fit indices, χ^2 (1198, $N = 462$) = 2845.51, $p < .05$, CFI = .98, IFI = .98, NNFI = .97, and RMSEA = .06.

Main Analyses

We tested a full structural model with LISREL 8 (Jöreskog and Sörbom 1996). The analyses were conducted on covariance matrices and the solutions were generated on the basis of maximum-likelihood estimation. The hypothesized model tested was composed of six latent variables and 52 indicators (9 for perceptions of supervisor autonomy support, 8 for perceived organizational support, 15 for basic need satisfaction, 5 for work satisfaction, 5 for happiness, and 10 for self-realization). Paths were specified according to the hypotheses. The model had an acceptable fit to the data, χ^2 (1207, $N = 462$) = 3221.75, $p < .05$, CFI = .97, IFI = .97, NNFI = .97, and RMSEA = .06. However, modification indexes suggested adding covariance paths among work satisfaction, happiness, and self-realization. Previous studies have shown that hedonic well-being was significantly correlated to eudaemonic well-being (e.g., Compton et al. 1996; Ryff and Singer 1998; see also Ryan and Deci 2001). Work satisfaction, happiness, and self-realization were thus free to covary

with each other. In addition, modification indexes suggested the addition of three paths between perceived organizational support, work satisfaction, happiness, and self-realization. These links could be justified because previous research has shown that perceived organizational support had direct effects on workers' well-being (e.g., Eisenberger et al. 1997). Three paths were thus specified between perceived organizational support, work satisfaction, happiness, and self-realization. All estimated paths were significant and the goodness of fit of the final model was adequate. The χ^2 value was not significant, χ^2 (1201, $N = 462$) = 2863.14, $p < .05$, and the other fit indices were satisfactory, CFI = .98, IFI = .98, NNFI = .97, and RMSEA = .06.

As shown in Fig. 1, perceived organizational support and supervisor autonomy support were positively related to basic need satisfaction, which was positively related to work satisfaction, happiness, and self-realization. In addition, perceived organizational support was positively linked to work satisfaction, happiness, and self-realization. Indirect effects were investigated to further test the mediating role of need satisfaction between organizational factors and well-being. Consequently, bootstrapped confidence interval estimates of the indirect effect (see Preacher and Hayes 2008) were calculated to confirm the significance of mediations. Results confirmed the mediating role of need satisfaction between perceptions of supervisor autonomy support and work satisfaction ($\beta = .52$; CI = .43–.61), between perceptions of supervisor autonomy support and happiness ($\beta = .53$; CI = .45–.61), between perceptions of supervisor autonomy support and self-realization ($\beta = .54$; CI = .45–.62), between perceived organizational support and work satisfaction ($\beta = .14$; CI = .08–.21), between perceived organizational support and happiness ($\beta = .14$; CI = .08–.22), and between perceived organizational support and self-realization ($\beta = .14$; CI = .08–.21). In sum, perceived organizational support has both direct and indirect (via basic need satisfaction) effects on work satisfaction, happiness, and self-realization. Therefore, basic need satisfaction partially mediates the effects of perceived organizational support on work

Table 1 Means, standard deviations, and correlations among the study variables (Study 1)

Variables	M	SD	1	2	3	4	5
1. Perceived supervisor autonomy support	4.49	1.17					
2. Perceived organizational support	4.02	1.11	.53*				
3. Basic need satisfaction	5.01	.92	.65*	.51*			
4. Work satisfaction	3.86	1.35	.52*	.56*	.67*		
5. Happiness	4.99	1.18	.48*	.50*	.66*	.66*	
6. Self-realization	5.02	.88	.49*	.49*	.57*	.60*	.71*

* $p < .001$

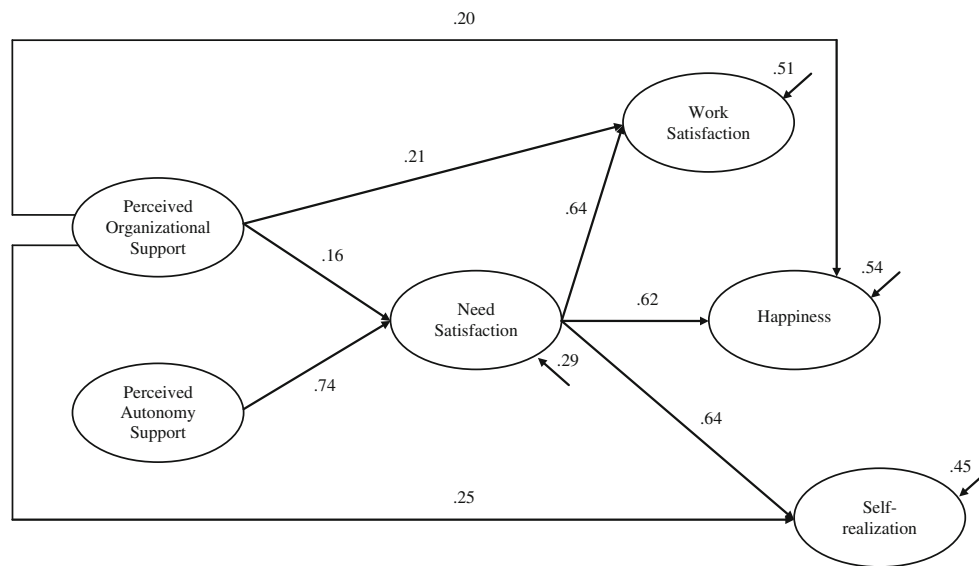


Fig. 1 Results from the Structural Equation Analysis (Study 1). *Note.* All coefficients are standardized. All relationships are significant. For the sake of clarity, the measurement model is not presented and covariances among error terms are not shown

Table 2 Goodness-of-fit indices of the seven alternative models for Study 1

Model	χ^2	df	Normed χ^2	CFI	IFI	NNFI	RMSEA	AIC
Hypothesized model	3221.75	1207	2.67	.97	.97	.97	.06	3563.75
Final model	2863.14	1201	2.38	.98	.98	.97	.06	3217.14
Alternative model 1	2862.24	1200	2.39	.98	.98	.97	.06	3218.24
Alternative model 2	2988.79	1202	2.49	.98	.98	.97	.06	3340.79
Alternative model 3	2894.56	1205	2.40	.98	.98	.97	.06	3240.56
Alternative model 4	2889.70	1201	2.41	.98	.98	.97	.06	3243.70
Alternative model 5	2997.32	1202	2.49	.98	.98	.97	.06	3349.32
Alternative model 6	2984.84	1201	2.49	.98	.98	.97	.06	3338.84
Alternative model 7	3076.45	1205	2.55	.97	.97	.97	.06	3422.45

satisfaction, happiness, and self-realization. In addition, basic need satisfaction fully mediates the effects of perceptions of supervisor autonomy support on work outcomes.

In order to test whether the final model provided the best fit indices, seven meaningful alternative models were tested. These models were chosen because they were theoretically or statistically more plausible than other possible models. In the first one, perceived organizational support and supervisor autonomy support predicted well-being that, in turn, predicted basic need satisfaction. In the second one, well-being predicted perceived organizational support and supervisor autonomy support that, in turn, predicted need satisfaction. In the third one, well-being predicted need satisfaction that, in turn, predicted perceived organizational support and supervisor autonomy support. In the fourth one, need satisfaction predicted well-being that, in turn, predicted perceived organizational support and supervisor autonomy support. In the fifth one, need satisfaction predicted

perceived organizational support and supervisor autonomy support that, in turn, predicted well-being. In the sixth one, perceived organizational support and supervisor autonomy support simultaneously predicted need satisfaction and well-being. Finally, in the seventh one, perceived supervisor autonomy support predicted perceived organizational support. Then, perceived organizational support predicted need satisfaction that, in turn, predicted well-being. As seen in Table 2, these models resulted in increased χ^2 and AIC values, except for the first alternative model. The first alternative model was rejected given that this model was less theoretically plausible than the final model even though fit to the data was similar. In line with previous research (e.g., Howell et al. 2011; Milyavskaya and Koestner 2011), there is compelling evidence for the positive influence of need satisfaction on well-being and not the opposite. Therefore, the final model was judged the most plausible model on the basis of both theoretical and empirical grounds.

Study 2

Results from Study 1 supported the positive role of perceived organizational support and supervisor autonomy support, in hedonic and eudaemonic well-being. Furthermore, the satisfaction of the needs for autonomy, competence, and relatedness mediated these positive effects. These results were obtained in a sample of employees from various large companies (250 employees and more). To enhance the validity and generalization of the hypothesized model tested in Study 1, workers' perceptions of supervisors' controlling interpersonal behaviors and need thwarting were added to the model. A first goal of Study 2 was to replicate the model obtained in Study 1 using a sample of workers from various small to medium companies (<250 employees). The second goal was to test the role of another organizational variable, namely perceptions of supervisor controlling behaviors, as a determinant of psychological need satisfaction. Contrary to autonomy-supportive behaviors, supervisors' controlling interpersonal behaviors have been found to negatively predict basic need satisfaction (e.g., Blanchard et al. 2009). Thus, in line with previous research, it was hypothesized that supervisors' controlling interpersonal behaviors would hinder basic need satisfaction, evidenced by a negative link between perceptions of a supervisor controlling style and psychological need satisfaction. Finally, we looked at the mediating role of need thwarting in the relationships between organizational factors and well-being. Contrary to need satisfaction, need thwarting has significant negative consequences for health and well-being (Deci and Ryan 2000). These authors posit that psychological need thwarting should provide a conceptual framework for explaining the mechanisms through which the social environment relates to worker well-being. However, psychological need thwarting represents an under-studied area of conceptual and practical importance (Vallerand et al. 2008), primarily because of the absence of scales assessing this construct. Bartholomew et al. (2011) have recently developed a multidimensional measure designed to assess psychological need thwarting in the sport context. In their third study, these authors have shown that need satisfaction positively predicted vitality, while need thwarting was negatively associated with vitality.

The purpose of the present study was to examine whether need satisfaction and need thwarting could mediate the relationships between organizational factors (i.e., perceived organizational support, perceptions of supervisor autonomy support, and perceptions of supervisor controlling behaviors) and well-being. In line with previous research, we hypothesized that supervisor controlling behaviors would be positively and negatively associated with psychological need thwarting and need satisfaction, respectively. In

addition, perceived organizational support and supervisor autonomy support would relate positively to need satisfaction and negatively to need thwarting. Finally, we hypothesized that need satisfaction should positively link to work satisfaction, happiness, and self-realization, while the relationships between need thwarting and these facets of hedonic and eudaemonic well-being should be negative.

Method

Participants

A convenient sample of 650 workers (289 men and 361 women) from various small to medium French companies (<250 employees) participated in the present study. The age of the participants ranged from 18 to 64 years, with a mean age of 36.92 years ($SD = 11.21$). Average tenure in the company was 9.05 years ($SD = 9.32$). One hundred and fifty-five participants worked in a company that comprised less than 10 employees, 178 were in a company that employed between 11 and 49 persons, and 317 were in a company that had between 50 and 249 employees.

Procedure and Measures

The procedures and measures were exactly the same as those of Study 1 with the only exception being that workers also completed scales to assess perceptions of supervisor controlling behaviors (Moreau and Mageau, under review) and need thwarting (Bartholomew et al. 2011).

Perceptions of Supervisor Controlling Behaviors Employees' perceptions of controlling behaviors from their supervisor were evaluated with 12 items (e.g., "My supervisor tries to motivate me by making me feel guilty for not doing enough") from the French version of the scale used by Moreau and Mageau (under review). All items are measured on a seven-point Likert scale ranging from 1 (do not agree at all) to 7 (very strongly agree).

Need Thwarting Psychological need thwarting was measured using the Psychological Need Thwarting Scale (PNTS; Bartholomew et al. 2011). The items were initially developed in English and were translated into French according to the guidelines of the International Test Commission (Hambleton 1993). An example item is, "In my work, I feel I am rejected by those around me." Responses to the 12 items were provided on a seven-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). The scale has demonstrated good content, factorial, and predictive validity, as well as internal consistency in previous research (Bartholomew et al. 2011). As in Study 1

for need satisfaction, an overall index of need thwarting was created.

Results and Discussion

Preliminary Analyses

Table 3 presents the means, standard deviations, and internal reliability coefficients of the study variables, which were all above the minimum criterion of .70 (Nunnally 1978), as well as correlations between the variables. Perceived organizational support and perceptions of supervisor autonomy support were positively correlated with need satisfaction and negatively correlated with need thwarting. In contrast, perceptions of supervisor controlling behaviors were positively correlated with need thwarting and negatively correlated with need satisfaction. Finally, need satisfaction was positively correlated with work satisfaction, happiness, and self-realization, while need thwarting was negatively correlated with these work outcomes. A confirmatory factor analysis using the robust maximum likelihood estimation method was performed to examine the factorial structure of all scales used in the present research. Items were uniquely loaded on appropriate factors and factors were allowed to correlate. Results yielded satisfactory fit indices, χ^2 (2746, $N = 641$) = 12487.86, $p < .05$, CFI = .96, IFI = .96, NNFI = .96, and RMSEA = .07.

Main Analyses

The model tested in the present study was composed of 76 observed and eight latent variables. Perceived organizational support, perceptions of supervisor autonomy support, perceptions of supervisor controlling behaviors, need satisfaction, need thwarting, work satisfaction, happiness, and self-realization were defined by their corresponding items. Paths were specified according to the hypotheses. As in Study 1, covariance paths among work satisfaction,

happiness, and self-realization were estimated. Because Bartholomew et al. (2011) have shown that need satisfaction was significantly and negatively correlated to need thwarting, need satisfaction and need thwarting were free to covary with each other. The model had an acceptable fit to the data, χ^2 (2755, $N = 641$) = 12688.65, $p < .05$, CFI = .96, IFI = .96, NNFI = .96, and RMSEA = .08. Modification indexes suggested the addition of two paths between perceived organizational support, work satisfaction, and self-realization. As in Study 1, these two paths were specified. The model had a better fit, χ^2 (2753, $N = 641$) = 12505.83, $p < .05$, CFI = .96, IFI = .96, NNFI = .96, and RMSEA = .07.

As shown in Fig. 2, all estimated paths were significant. Need satisfaction was positively predicted by both perceived organizational support and supervisor autonomy support, and negatively by supervisor controlling behaviors. In contrast, need thwarting was negatively predicted by both perceived organizational support and supervisor autonomy support, and positively by supervisor controlling behaviors. Work satisfaction, happiness, and self-realization were positively predicted by need satisfaction and negatively by need thwarting. Finally, perceived organizational support was positively associated with work satisfaction and self-realization.

Indirect effects were investigated to further test the mediating role of need satisfaction and need thwarting between perceived organizational support/perceptions of supervisor autonomy support/perceptions of supervisor controlling behaviors and work satisfaction/happiness/self-realization, using bootstrapped confidence interval estimates of the indirect effect (Preacher and Hayes 2008). Results confirmed the mediating role of need satisfaction and need thwarting between perceptions of supervisor autonomy support and work satisfaction ($\beta = .31$; CI = .23–.41), between perceptions of supervisor autonomy support and happiness ($\beta = .33$; CI = .25–.41), between perceptions of supervisor autonomy support and

Table 3 Means, standard deviations, and correlations among the study variables (Study 2)

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Perceived organizational support	4.58	1.11	.85							
2. Perceptions of supervisor autonomy support	4.75	1.10	.58*	.84						
3. Perceptions of supervisor controlling behaviors	2.52	1.21	-.57*	-.52*	.92					
4. Need satisfaction	5.24	.87	.54*	.59*	-.46*	.91				
5. Need thwarting	2.80	1.16	-.56*	-.51*	.64*	-.57*	.91			
6. Work satisfaction	4.18	1.31	.60*	.55*	-.45*	.62*	-.52*	.87		
7. Happiness	5.23	1.03	.40*	.48*	-.32*	.55*	-.40*	.57*	.86	
8. Self-realization	5.21	.82	.50*	.53*	-.53*	.57*	-.61*	.56*	.62*	.75

Alpha coefficients are reported on the diagonal

* $p < .001$

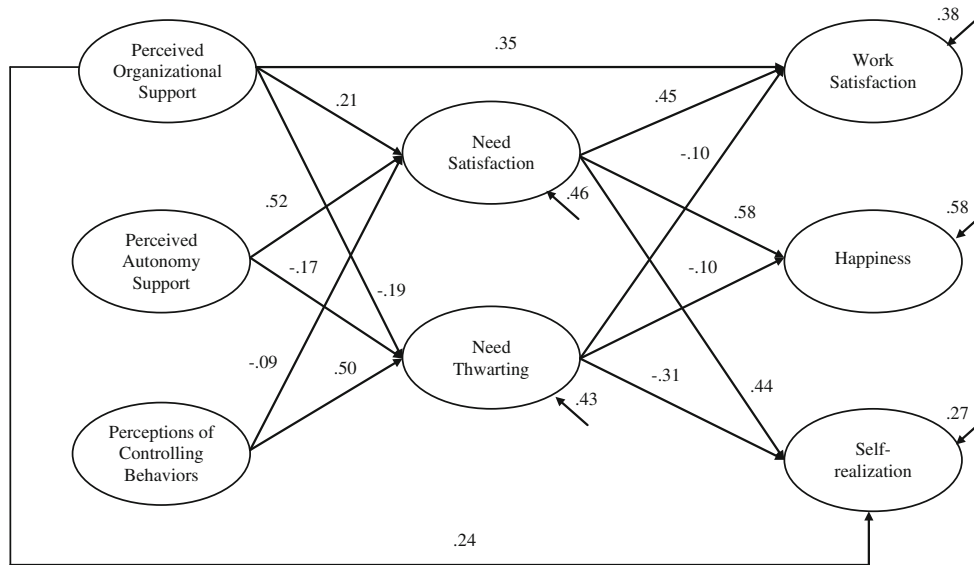


Fig. 2 Results from the Structural Equation Analysis (Study 2). *Note.* All coefficients are standardized. All relationships are significant. For the sake of clarity, the measurement model is not presented and covariances among error terms are not shown

self-realization ($\beta = .39$; $CI = .29-.49$), between perceived organizational support and work satisfaction ($\beta = .17$; $CI = .11-.23$), between perceived organizational support and happiness ($\beta = .18$; $CI = .12-.24$), between perceived organizational support and self-realization ($\beta = .23$; $CI = .16-.31$), between perceptions of supervisor controlling behaviors and work satisfaction ($\beta = -.15$; $CI = -.22$ to $-.08$), between perceptions of supervisor controlling behaviors and happiness ($\beta = -.15$; $CI = -.24$ to $-.08$), and between perceptions of supervisor controlling behaviors and self-realization ($\beta = -.28$; $CI = -.37$ to $-.18$).

As in Study 1, seven alternative models were then tested. In the first one, perceived organizational support, supervisor autonomy support, and supervisor controlling behaviors predicted well-being that, in turn, predicted basic need satisfaction and need thwarting. In the second one, well-being predicted perceived organizational support,

supervisor autonomy support, and supervisor controlling behaviors that, in turn, predicted need satisfaction and need thwarting. In the third one, well-being predicted need satisfaction and need thwarting that, in turn, predicted perceived organizational support, supervisor autonomy support, and supervisor controlling behaviors. In the fourth one, need satisfaction and need thwarting predicted well-being that, in turn, predicted perceived organizational support, supervisor autonomy support, and supervisor controlling behaviors. In the fifth one, need satisfaction and need thwarting predicted perceived organizational support, supervisor autonomy support, and supervisor controlling behaviors that, in turn, predicted well-being. In the sixth one, perceived organizational support, supervisor autonomy support, and supervisor controlling behaviors simultaneously predicted need satisfaction, need thwarting, and well-being. Finally, in the seventh one, perceived supervisor autonomy support and supervisor controlling

Table 4 Goodness-of-fit indices of the seven alternative models for Study 2

Model	χ^2	df	Normed χ^2	CFI	IFI	NNFI	RMSEA	AIC
Hypothesized model	12688.65	2,755	4.61	.96	.96	.96	.07	13030.65
Final model	12505.83	2,753	4.54	.96	.96	.96	.07	12851.83
Alternative model 1	12493.35	2,752	4.54	.96	.96	.96	.07	12841.35
Alternative model 2	12767.22	2,755	4.63	.96	.96	.96	.08	13109.22
Alternative model 3	12860.43	2,758	4.66	.96	.96	.96	.08	13196.43
Alternative model 4	12523.45	2,755	4.55	.96	.96	.96	.07	12865.45
Alternative model 5	12931.57	2,755	4.69	.96	.96	.96	.08	13273.57
Alternative model 6	12718.99	2,752	4.62	.96	.96	.96	.08	13066.99
Alternative model 7	12959.21	2,759	4.70	.96	.96	.96	.08	13293.21

behaviors predicted perceived organizational support. Then, perceived organizational support predicted need satisfaction and need thwarting that, in turn, predicted well-being. As seen in Table 4, these models resulted in increased χ^2 and AIC values, except for the first alternative model. In addition, RMSEA values were higher in the alternative models 2, 3, 5, 6, and 7. As in Study 1, the first alternative model was rejected given that this model was less theoretically plausible than the final model. Therefore, the final model was judged the most plausible model on the basis of both theoretical and empirical grounds.

In sum, perceived organizational support has both direct and indirect (via basic need satisfaction and need thwarting) effects on work satisfaction and self-realization. Therefore, basic need satisfaction and need thwarting partially mediate the effects of perceived organizational support on work satisfaction and self-realization. In addition, basic need satisfaction and need thwarting fully mediate the effects of perceived organizational support on happiness. Finally, basic need satisfaction and need thwarting fully mediate the effects of perceptions of supervisor autonomy support and supervisor controlling behaviors on the three work outcomes assessed in the present research (i.e., work satisfaction, happiness, and self-realization). As in Study 1, results from Study 2 replicated the mediating role of need satisfaction in the relationships between organizational factors (i.e., perceived organizational support, supervisor autonomy support, and supervisor controlling behaviors) and hedonic (i.e., work satisfaction and happiness) and eudaemonic well-being (i.e., self-realization). Consistent with the predictions of self-determination theory (Deci and Ryan 2000), the present findings also showed that need thwarting mediated the effects of organizational factors on well-being.

General Discussion

The main purpose of the present research was to test a model that posited that perceived organizational support (i.e., a distal source of support) and supervisors' interpersonal style (i.e., a proximal source of support) related to basic need satisfaction (Studies 1 and 2) and need thwarting (Study 2). In turn, need satisfaction was hypothesized to predict higher levels of hedonic (i.e., work satisfaction and happiness) and eudaemonic (i.e., self-realization) well-being, while need thwarting should be negatively associated with hedonic and eudaemonic well-being. Results from structural equation modeling analyses supported the hypothesized model and revealed that all hypothesized paths were significant. These findings lead to a number of implications.

First, the results from the present research revealed that perceptions of supervisor autonomy support were

positively associated with basic need satisfaction. In other words, the more the employees perceived their supervisor to be autonomy-supportive, the more their needs for autonomy, competence, and relatedness were satisfied. These results are consistent with previous research in work (e.g., Baard et al. 2004; Deci et al. 2001) and sport (e.g., Adie et al. 2008; Quested and Duda 2010, 2011) settings which have shown that perceived supervisor autonomy support was positively linked to basic need satisfaction. The present findings also showed that supervisor controlling interpersonal behaviors negatively predicted basic need satisfaction. Therefore, when supervisors behave in a coercive, pressuring, and authoritarian way to impose a specific and preconceived way of thinking and behaving upon their employees, workers did not satisfy their needs for autonomy, competence, and relatedness. These results are in line with previous motivational research (e.g., Blanchard et al. 2009).

Second, results from Study 2 revealed that perceptions of supervisor autonomy support were negatively related to basic need thwarting. This means that when supervisors increase the extent to which they take the employees perspective, encourage choice and self-regulation, and temper extrinsic demands and pressures (Deci et al. 1989), the employees' need thwarting will decrease. The present results also showed that when supervisors are controlling (e.g., by ushering commands and deadlines), then employees' basic needs are thwarted. The observed associations between perceived supervisor autonomy support and perceptions of supervisor controlling behaviors and thwarting of the need for autonomy, competence, and relatedness are consistent with previous research (see Bartholomew et al. 2011; Bartholomew et al. 2010; Deci and Ryan 2000).

Third, consistent with our hypotheses, perceived organizational support positively and negatively predicted need satisfaction and need thwarting, respectively. Although researchers have begun to examine the link between perceived organizational support and work motivation according to self-determination theory (e.g., Gagné et al. 2010), no previous research to the best of our knowledge has investigated the influence of perceived organizational support on psychological need satisfaction and need thwarting. The present research is thus the first to demonstrate that the more the employees perceive high levels of organizational support, the more they will satisfy their basic psychological needs, and the less their needs will be thwarted. This is consistent with Eisenberger and Stinglhamber's (2011) suggestion that perceived organizational support may help fulfill socio-emotional needs in the workplace (e.g., affiliation, esteem, emotional support, and social approval).

Fourth, prior investigations have indicated that employees report higher levels of well-being when they

perceive their organization to be high in support (e.g., Eisenberger et al. 1997, 2001). Findings from Studies 1 and 2 are coherent with these previous studies. Indeed, the present research highlights that perceived organizational support positively predicts employee hedonic and eudaemonic well-being. Aligned with our hypotheses and in accordance with the predictions of self-determination theory (Deci and Ryan 2000), the present results also showed that satisfaction (Studies 1 and 2) and thwarting (Study 2) of the three needs mediated the relationships between employees' perceived organizational support and well-being. These findings support the view that fulfillment and frustration of basic psychological needs represent basic mechanisms contributing to the effects of perceived organizational support on hedonic and eudaemonic well-being. Therefore, feelings of autonomy, competence, and relatedness play a central role in the development or reduction of well-being at work.

Fifth, employee well-being is higher when supervisors foster and sustain an autonomy-supportive working environment because this climate facilitates basic need satisfaction (Studies 1 and 2) and prevent need thwarting (Study 2). In contrast, results from Study 2 showed that supervisor controlling behaviors are detrimental for employee well-being because they are positively associated with need thwarting and negatively relate to need satisfaction. These results are in agreement with much field research over the last two decades which showed that autonomy-supportive climate is associated with a host of positive consequences (e.g., Hardré and Reeve 2009; Roca and Gagné 2008), while supervisor controlling behaviors lead to negative outcomes (see Bartholomew et al. 2009; Reeve 2009). In the present research, we distinguish between two views of well-being (i.e., hedonic and eudaemonic). Recently, Huta and Ryan (2010) have shown that eudaemonic and hedonic pursuits related to some distinct and some overlapping sets of well-being outcomes. Results also revealed that people who pursued both eudaimonia and hedonia reported higher levels of most well-being variables than people with neither pursuit. Moreover, hedonia and eudaimonia each made unique contributions to well-being. The distinction between hedonia and eudaimonia is thus useful and our results suggest that the needs for autonomy, competence, and relatedness must be satisfied (and not thwarted) to experience hedonic and eudaemonic well-being.

Certain limitations should be taken into consideration when interpreting the results of the present research. First, the data are correlational in nature and conclusions about causality are unwarranted. Future research using longitudinal designs should attempt to replicate the present results. Second, we relied on self-report measures. However, Conway and Lance (2010) underlined that other methods are not necessarily superior to self-reports. These authors

notably argue that self-reports are appropriate for work satisfaction and that is important for the authors to demonstrate construct validity of the measures used (e.g., appropriate reliability evidence and factor structure). We have done so in the present research but we believe that multiple method of assessment could be included in future research. Third, we only considered three positive indicators of well-being (i.e., work satisfaction, happiness, and self-realization) in the present research. According to Keyes (2007, p. 100), “the absence of mental illness does not imply the presence of mental health, and the absence of mental health does not imply the presence of mental illness.” He thus suggested that the combined assessments of mental health with mental illnesses will be useful. Future research should examine the role of organizational factors and psychological need satisfaction and thwarting in predicting employees' adjustment using both indicators of well-being (e.g., self-actualization, self-esteem, and vitality) and ill-being (e.g., negative affect, anxiety, depression, and physical symptoms). Fourth, we assessed happiness at work by asking participants to rate how they generally felt in their work. It would be interesting in future studies to measure a more temporary state by using other instructions (e.g., “How do you feel right now,” “How did you feel in the past week,” “How did you feel in the past month”). Finally, it is not possible, from the present findings, to delineate which aspects of supervisor autonomy support are most pertinent to facilitate satisfaction or prevent thwarting of the needs for autonomy, competence, and relatedness. Future research is warranted to identify which specific dimensions of autonomy-supportive behaviors (e.g., providing choice within specific rules and limits, providing a rationale for tasks and limits, acknowledging the employee's feelings and perspectives, and providing employees with opportunities for initiative taking and independent work; see Mageau and Vallerand 2003) are most likely to lead employees to feel a sense of autonomy, competence, and belongingness at work.

The present research seeks to investigate the relations between organizational factors (i.e., perceived organizational support, perceptions of supervisor autonomy support, and perceptions of supervisor controlling behaviors) and hedonic (i.e., work satisfaction and happiness) and eudaemonic (e.g., self-realization) well-being. More specifically, we examined the mechanisms that underlie the relations between organizational factors and well-being. Using self-determination theory (Deci and Ryan 1985, 2000; Ryan and Deci 2000), we showed that the satisfaction (Studies 1 and 2) and the thwarting (Study 2) of the basic psychological needs for autonomy, competence, and relatedness largely explained the relations of organizational factors to employee well-being. The considerable amount of variance accounted for by psychological needs and organizational

factors in well-being (between .46 and .55 in Study 1, and between .42 and .73 in Study 2) leaves the organization with several opportunities and strategies to reinforce employee well-being. For instance, supervisors should behave in an autonomy-supportive manner (e.g., provide subordinates with options) rather than a controlling manner (e.g., use threats and deadlines) to satisfy (and not to thwart) employees' basic psychological needs and increase their well-being.

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