



ORIGINAL ARTICLE

Each One Counts: Basic Needs Mediating the Association Between Social Support and Vitality at Work

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The aim of this study was to provide new detailed information concerning the role of basic psychological needs in the relations between social support and work-related vitality. Drawing on the self-determination theory, it was hypothesized that support from both co-workers and supervisors is associated with work-related vitality via the needs of autonomy, competence, and relatedness. The participants were 109 employees in a preventive vocationally oriented intervention program. Results of the regression and bootstrapping analyses were consistent with the hypotheses, suggesting that each need is essential in the indirect association of social support and vitality at work, regardless of the source of the support. Implications for research and practice are discussed.

Keywords: self-determination theory; job demands-resources theory; social support; autonomy; competence; relatedness

Social ties and social support affect mental and physical health (Thoits, 2011). This also applies in the context of work. Social support at work is related to both adverse and beneficial outcomes. Social support is consistently associated with lower levels of burnout (Day and Leiter, 2014; Lee and Ashforth, 1996) and especially when received from a supervisor, negatively associated with perceived workload (Bowling et al., 2015). In prospective studies, low social support has predicted stress-related symptoms, such as depression and anxiety, particularly among men (Nieuwenhuijsen, Bruinvels and Frings-Dresen, 2010). Lack of social support may incur billions of dollars of healthcare costs in the United States alone (Goh, Pfeffer and Zenios, 2016).

Social support also fosters well-being at work. It is associated with several job attitudes, such as job satisfaction, organizational commitment, and a low level of turnover intentions (Edmondson and Boyer, 2013). Support from a supervisor appears to be especially important with regard to job attitudes (Ng and Sorensen, 2008). Social support is also consistently associated with work engagement, an active and pleasurable state of work-related well-being (Halbesleben, 2010).

Thus, social support is an essential job resource, as job resources are defined as work-related characteristics facilitating goal achievement, reducing job demands and the associated strains, or stimulating growth, learning, and development (Bakker and Demerouti, 2017). However, the job demands-resources theory

does not explicate the underlying mechanisms from job characteristics to outcomes (Schaufeli and Taris, 2014). One suggested explanatory mechanism for outcomes related to motivational and energetic processes of optimal functioning is satisfaction of psychological basic needs of autonomy, competence, and relatedness (Van den Broeck et al., 2008). Through their aforementioned functions (e.g. facilitating goal achievement and promoting growth), job characteristics are expected to affect the satisfaction of one or more basic needs. For example, task identity could support autonomy, whereas feedback may facilitate competence (Deci, Olafsen and Ryan, 2017). As the self-determination theory (SDT; Ryan and Deci, 2017) posits need satisfaction as a necessary condition for thriving, the needs are expected to act as an explanatory mechanism in the association between job resources and several outcomes.

Psychological Basic Needs in the Self-Determination Theory

According to the SDT, the satisfaction of the psychological basic needs of autonomy, competence, and relatedness is essential for optimal development, integrity, and well-being (Ryan and Deci, 2017). Each need is expected to be independently important and to have its own criteria for fulfilment. The need for autonomy is the need to experience volition, self-endorsement and ownership of actions. The need for competence is satisfied when an actor is effective in his or her interactions with the social environment, for example, expressing and expanding their capacities and talents. The need for relatedness refers to the feelings of belonging and being significant to others. In addition to different degrees of satisfaction,

needs can also be frustrated. Need frustration is more than a low level of satisfaction, referring to perception of needs being actively blocked or obstructed by the environment (Bartholomew et al., 2014; Deci and Ryan, 2000).

Several studies have supported the notions of the universality of basic needs, their applicability in several contexts, and benefits of need satisfaction and harmful effects of need frustration (Longo et al., 2016; Chen et al., 2015; Sheldon et al., 2004; Reis et al., 2000). Although need satisfaction is associated with a wide variety of well-being indicators, SDT does not imply that need satisfaction is uniformly associated with all kinds of well-being. According to Ryan and Deci (2017), eudaimonic well-being characterizes need satisfaction and a fully functioning person best. Eudaimonia as a form of well-being encompasses themes such as meaningfulness, experiencing events on a deeper level, aliveness, and fulfilment (Huta, 2013). Ryan and Deci (2017) emphasize subjective vitality, a conscious experience of energy and aliveness (Ryan and Frederick, 1997), as an indicator of need satisfaction.

Basic Need Satisfaction at the Workplace

In the SDT model in the workplace described by Deci et al. (2017), basic psychological needs act as mediators and need supporting or need thwarting workplace contexts act as independent variables. Needs, which may be satisfied or frustrated to different extents, are expected to mediate the effects of job characteristics to factors such as motivations of different qualities, work behaviours and performance, or wellness and ill-being.

In a recent meta-analysis, needs were positively correlated with all examined job resources (Van den Broeck et al., 2016). The meta-analysis also showed that needs have not been equally associated with the resources. For example, of the three needs, autonomy had the strongest relation with job autonomy, and relatedness with social support.

Several studies have examined needs mediating the effects of work characteristics on different outcomes, such as job satisfaction, affective commitment, performance, and burnout (Gillet et al., 2013; Gillet et al., 2015; Leroy et al., 2015). Most studies have examined overall need satisfaction without differentiating the potential effects of the separately measured needs. The results have consistently demonstrated that overall need satisfaction mediates the association between job resources and positive outcomes (Boudrias et al., 2014; Gillet et al., 2012; Gillet et al., 2013; Mayer, Bardes and Piccolo, 2008; Olafsen, 2017; Olafsen, Deci and Halvari, 2018). As an exception, Boudrias et al. (2011) observed needs not mediating the association between job resources composite and well-being.

However, as SDT emphasizes the contribution of each need, measuring overall need satisfaction may not strictly be compatible with the premises of the theory (Dysvik, Kuvaas and Gagné, 2013). Although the need satisfactions tend to correlate (Ryan and Deci, 2017) and forming composite variables is defensible on statistical grounds, each need has its own criteria for satisfaction. According

to Dysvik et al. (2013), unidimensional measurement loses information on theoretically expected unique explanatory powers of the separate needs. Studies measuring the three needs separately and examining their mediating roles between job resources and positive outcomes are scarce. In a teacher sample, it has previously been shown that each need mediated the effect of perceived autonomy support on work engagement (Klassen, Perry and Frenzel, 2012). By contrast, among another teacher sample only competence and autonomy independently mediated the effect of positive job climate on a composite well-being indicator (Desrumaux et al., 2015). Employee-rated quality of leader-member exchange was mediated through autonomy and competence to commitment, vitality, and job satisfaction, whereas relatedness mediated only the effect of exchange quality on commitment (Graves and Luciano, 2013). The mediating roles of the needs between transformational leadership and outcomes varied relatively consistently depending on outcomes, with only competence mediating the effect of leadership on self-efficacy and only relatedness mediating the effect on commitment (Kovjanic et al., 2012). However, Kovjanic et al. (2012) reported that the roles of the needs between leadership and job satisfaction were different in their two samples, with either all the needs or only autonomy mediating the association.

Needs Mediating the Effects of Social Support

Social support has numerous beneficial functions in well-being. For example, emotional support provides validation and listening, whereas instrumental support provides more tangible resources and aid, although these functions may be difficult to distinguish in real-world interactions (Cohen and Wills, 1985; House, 1981). Additionally, any supportive function may facilitate satisfaction of several needs. Graves and Luciano (2013) argued that different forms of supervisor support can theoretically be linked to all the needs. For example, instrumental support in the form tangible resources and concrete aid may motivate the employee to take self-directed action (autonomy), increase the likelihood of success (competence), and communicate caring and connection (relatedness). Similarly, Knight, Patterson, Dawson, and Brown (2017) state that support from co-workers may affect each need. According to them, collaboratively establishing appropriate ways of working may promote job control (autonomy), supporting environment could facilitate sense of ability and motivate to take more responsibilities (competence), and social support as chances to learn from colleagues and to build working relationships possibly develops employees' sense of belonging with their teams (relatedness).

Thus, social support should have some effect on important outcomes via the needs. This is based on the role of social support as a job resource reducing demands, enhancing goal achievement, and stimulating growth (Bakker and Demerouti, 2017; Graves and Luciano, 2013; Knight et al., 2017), and on the role of the needs as essential for well-being, motivation, and full functioning (Ryan and Deci, 2017).

There are few studies that have examined needs mediating the effects of social support. The association between job resources and vigour has been shown to be mediated through both needs and autonomous motivation (Trépanier et al., 2015). However, the study cited included social support only as a part of latent factor of job resources and did not measure needs separately.

Gillet et al. (2015) examined specifically the perceived support from a supervisor. Need satisfaction mediated its associations with both affective commitment and positive affect. As the authors only measured overall need satisfaction, it was not possible to examine the potential roles of the individual needs.

Fernet, Austin, Trépanier, and Dussault (2013) measured each need and observed that not all of them acted as mediators in the relationship between social support and components of burnout. For example, only autonomy satisfaction mediated the association between support and the energy component of burnout, emotional exhaustion. As exhaustion and vigour as measures of energy may not represent opposite ends of one continuum in variable-centred studies (Demerouti, Mostert and Bakker, 2010; Mäkikangas, Hyvönen and Feldt, 2017), it remains an open question whether the observed pattern of needs as mediators hold if a positive indicator of energy is set as the dependent variable.

Vitality at Work

Subjective vitality is a conscious experience of possessing energy and aliveness (Ryan and Frederick, 1997). In the self-determination theory, it reflects need satisfaction (Ryan and Deci, 2017). Work engagement, in turn, is a positive and fulfilling state of mind relating to work, consisting of vigour, dedication, and absorption (Schaufeli et al., 2002).

The energy aspect of well-being is essential in the definition of work engagement, as it is related to emotions characterized by high pleasure and high activation (Bakker and Oerlemans, 2012; Green et al., 2017). The vigour component is seen as an especially important marker of the energy continuum of well-being at work (Demerouti et al., 2010; Mäkikangas et al., 2017). As vigour is defined by high energy and mental resilience, persistence, and the willingness to invest effort at work (Schaufeli et al., 2002), it is close to the definition of subjective vitality in an occupational context. Furthermore, the abbreviated measure of vigour used in the present study (see *Measures*) omits the items not related to energy (Shirom, 2010). It thus corresponds well to the conceptualization of subjective vitality by Ryan and Frederick (1997), and consequently it is interpreted to indicate subjective vitality at work in the present study.

Study Hypotheses

The present study aims to examine if satisfaction of the psychological basic needs, as described in the self-determination theory, mediates the association between social support from a supervisor and co-workers, and work-related vitality. The study examines two hypotheses. As social support may facilitate the satisfaction of each

need (Graves and Luciano, 2013; Knight et al., 2017), as it is empirically associated with all the needs (Van den Broeck et al., 2016), and as all the needs are expected to contribute uniquely to vitality (Ryan and Deci, 2017) it is hypothesized that:

- (1) Support from co-workers is associated with vitality at work through autonomy, competence, and relatedness.
- (2) Support from a supervisor is associated with vitality at work through autonomy, competence, and relatedness.

Materials and Methods

Procedure and Participants

This cross-sectional study was conducted with subjects participating in a preventive vocationally oriented multidisciplinary group-based intervention program. The program known as ASLAK was an intervention funded by the Finnish Social Insurance Institution, targeted at middle-aged or younger employees considered to be at risk of future work disability due to mild symptoms, lifestyle, or sickness absences, and aimed to promote long-term working ability (Suoyrjö et al., 2009). According to a large registry-based study, ASLAK participants tended to be relatively healthy both mentally and physically, although they had more annual sick leave days and higher rates of absence spells over 21 days compared to matched controls (Suoyrjö et al., 2009). Additionally, the intervention was more often granted to employees with a permanent job, high occupational status, good job control, and few health-related risk factors such as smoking or sedentary lifestyle (Saltychev et al., 2011). Annually almost 6,000 workers participated in the ASLAK program in Finland (The Social Insurance Institution, 2017).

The participants of the current study are a convenience sample of 109 subjects in the beginning of their ASLAK program. ASLAK participants were requested for the study, because they are an easily approached group of employees who are probably motivated to assess their well-being. Additionally, the participants had already contemplated their working conditions and work-related goals with occupational healthcare professionals and supervisor during the application and selection process. Therefore, it was assumed that in the beginning of an occupational intervention they would experience participating in the study as relevant for themselves.

The participants began their ASLAK program in a rehabilitation centre in Eastern Finland during 2014 and 2015. At the first group session they received a letter explaining the purpose of the study and inviting them to complete a questionnaire specifically for the study (Work-related Basic Need Satisfaction) and to grant permission to use two measures utilized in the intervention for study purposes (General Nordic Questionnaire and Utrecht Work Engagement Scale). The study protocol was accepted by the Research Ethics Committee of the Northern Savo Hospital District.

The mean age of the sample was 50.5 years (SD = 6.4). Most of the participants were female (87%). Almost all

the subjects worked full-time (97%). The sample was well educated, 46% having a master's degree or equivalent, and 48% a bachelor's degree or equivalent. Only 4% had a vocational degree or courses as their highest qualification. The education level of 3% was unknown. Occupational status was relatively high, 62% working in occupations considered to be white-collar jobs (e.g. teaching, management, various professionals), with the remaining 38% working in blue-collar jobs (e.g. nurses and nurse aides, sales clerks).

Measures

The Finnish version of the Work-related Basic Need Satisfaction questionnaire (W-BNS; Karkkola, Kuittinen and Van den Broeck, 2017; Van den Broeck et al., 2010) was used to measure the satisfaction of needs for autonomy, competence, and relatedness at work. The Finnish questionnaire is a 15-item measure, five items tapping into the satisfaction of each need (e.g. 'The tasks I have to do at work are in line with what I really want to do' for autonomy; 'I really master my tasks at job' for competence; 'At work, I feel part of a group' for relatedness). Participants responded on a five-point scale from 1 (*totally disagree*) to 5 (*totally agree*). The score of each scale is the mean of its five items, higher scores indicating stronger need satisfaction. Internal consistency of the scales was moderate to good, with Cronbach's alpha coefficients of .77 for autonomy, .90 for competence, and .88 for relatedness.

Social support was measured with two scales of the General Nordic Questionnaire (QPSNordic; Dallner et al., 2000). They measure the perceived availability of support (Buunk and Peeters, 1994) from co-workers or supervisor in stressful situations (e.g. 'If needed, can you get support and help with your work from your co-workers?'). The scales include both instrumental and emotional aspects of support. One item measuring support from a supervisor concerning perceived appreciation was deemed to potentially artificially inflate the association between support and relatedness satisfaction and was dropped from the scale. Thus, both scales consisted of two items, instead of support from a supervisor consisting of three. The items have very generic wording allowing participants to decide what they view as social support.

Participants rated the items on a five-point scale from 1 (*very seldom or never*) to 5 (*very often or always*). The score of both scales is the mean of their respective items, higher scores indicating higher social support. Following recommendations of Eisinga, te Grotenhuis and Pelzer (2013), the internal consistency of the two-item scales was measured with Spearman-Brown reliability coefficient. The internal consistency of the scales was moderate to good, with reliability coefficient of .71 for support from co-workers and .84 for support from a supervisor.

Subjective vitality at work, reflecting full functioning as described in the self-determination theory, was measured using the vigour subscale of the short Finnish Utrecht Work Engagement Scale (UWES; Schaufeli, Bakker and Salanova, 2006; Seppälä et al., 2009). Vigour is a three-item scale measuring high levels of energy and activation at work (e.g. 'At my job, I feel that I am bursting with energy'), omitting the items of the full scale referring to motivation and resilience (Shirom, 2010). Participants evaluated the items on a seven-point scale from 0 (*never*) to 6 (*every day*). The score of the scale is the mean of the three items, higher scores indicating higher vitality at work. The internal consistency was good, with a Cronbach's alpha coefficient of .84.

Statistical Analysis

The hypotheses were examined with SPSS version 23.0. Following Vander Elst, Van den Broeck, De Witte, and De Cuyper (2012) and Desrumaux et al. (2015), the PROCESS macro (Hayes, 2013) was used for testing indirect effects in two multiple mediator models. Correlation coefficients for the continuous variables and associations in the regression models are presented for illustrative purposes. Two series of regression analyses were conducted (**Figure 1**). In the first series, support from co-workers was set as the independent variable, the three needs simultaneously as the parallel mediating variables, and vitality at work as the dependent variable. In the second series, support from a supervisor acted as the independent variable, other variables being the same as in the first series. In both analyses, the socio-demographic variables of age, gender, education (as dummy variables), and occupational sector were entered as covariates. The *a path* depicts associations of independent variables and mediators and the *b paths*

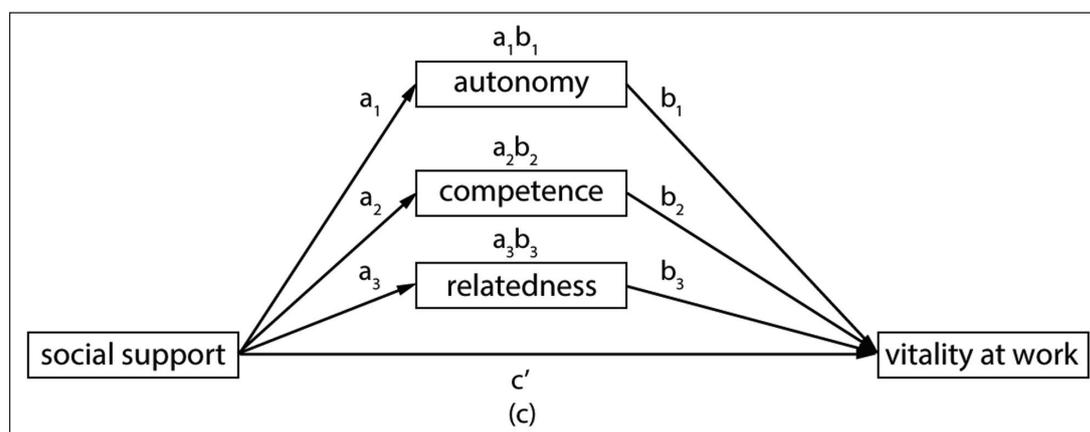


Figure 1: The conceptual model.

associations of mediators and the dependent variables. The *c path* depicts the total association between the independent variable and the dependent variable, and the *c' path* the association of the independent variable and the dependent variable when the mediating variables are controlled.

Regarding the hypotheses, the main focus is on the indirect associations (Hayes and Rockwood, 2017; Rucker et al., 2011). The indirect associations were tested using the bootstrapping method with 5000 resamples with replacement. The method is recommended for multiple mediator models and samples possibly violating the normality assumption of the sampling of the indirect effect (Preacher and Hayes, 2008). The indirect associations are depicted by the product of paths *a* and *b* (*ab paths*). The indirect association is supported when the 95% confidence interval does not include zero (Hayes, 2013). The ratio of specific indirect associations to total association is used to illustrate the magnitudes of the indirect associations (Wen and Fan, 2015). In a simulation study by Williams and McKinnon (2008), the power of bootstrapping methods in detecting non-zero indirect paths in models with multiple mediators fell within acceptable ranges with small samples.

Results

The descriptive characteristics and correlations of the continuous study variables are presented in **Table 1**. **Tables 2** and **3** represent the regression models depicting the associations between support from co-workers and supervisor, respectively, and vitality at work associated via the needs. In both series of analyses, the independent variables were associated with the suggested mediators, and the mediators were associated with the dependent variable. Regarding both support from co-workers and support from supervisor, the total association between the independent variable and the dependent variable was statistically significant but the direct effect, controlling the three needs, was not.

In line with Hypothesis 1, the bootstrap regression analyses were consistent with the indirect association of support from co-workers and vitality at work via autonomy ($a_1b_1 = .085$, 95% CI = [.014; .227]), competence ($a_2b_2 = .086$, 95% CI = [.009; .225]), and relatedness ($a_3b_3 = .163$, 95% CI = [.015; .408]). Autonomy, competence,

and relatedness accounted for 21%, 21%, and 40%, respectively, of the association between support from co-workers and vitality at work.

Regarding Hypothesis 2, the bootstrap regression analyses were consistent with the indirect association of support from a supervisor and vitality at work via autonomy ($a_1b_1 = .073$, 95% CI = [.014; .194]), competence ($a_2b_2 = .066$, 95% CI = [.004; .169]), and relatedness ($a_3b_3 = .124$, 95% CI = [.018; .289]). Autonomy, competence, and relatedness accounted for 25%, 23%, and 43%, respectively, of the association between support from a supervisor and vitality at work.

Discussion

Based on SDT, two hypotheses were tested to provide understanding about psychological mechanisms between social support and subjective vitality at work. According to the hypotheses, social support from both co-workers and supervisor would be associated with vitality at work via autonomy, competence, and relatedness. The results were consistent with the hypotheses, as all the three needs had a role in the indirect relationships between support and vitality at work.

Theoretical Contributions

The results are in line with the tenets of SDT (Ryan and Deci, 2017) and its model applied in the workplace (Deci et al., 2017). The present findings are consistent with a meta-analysis (Van den Broeck et al., 2016) and conceptual formulations of social support facilitating the satisfaction of each of the three needs (Graves and Luciano, 2013; Knight et al., 2017). The study corroborates previous research on needs mediating the associations between job resources and positive outcomes (Boudrias et al., 2014; Gillet et al., 2013) and, more specifically, the association between social support and positive outcomes (Gillet et al., 2015; Trépanier et al., 2015).

However, the study is an important addition to the hitherto scarce body of literature on the independent mediating roles of the needs. The present study measures both social support and needs as distinct variables rather than composites. Thus, the independent contributions of support as a job resource and each need as an essential nutriment to positive functioning are emphasized. The study also considers perceived support from both supervisors and co-workers,

Table 1: Means, standard deviations, and correlations between continuous study variables.

	Mean	SD	1	2	3	4	5	6
1. Age	50.47	6.35						
2. Support from co-workers	4.10	.73	-.14					
3. Support from supervisor	3.78	.95	-.10	.58**				
4. Autonomy	3.50	.63	-.07	.25*	.26*			
5. Competence	3.79	.68	-.04	.25**	.25**	.43**		
6. Relatedness	4.04	.70	-.13	.44**	.41**	.46**	.58**	
7. Vitality at work	4.52	1.12	-.15	.28**	.26**	.43**	.48**	.51**

Notes: SD = standard deviation; * $p < .05$; ** $p < .01$.

Table 2: Regression analysis for support from co-workers.

	Coefficients	SE
Support from co-workers to mediators (a paths)		
Autonomy (a ₁)	.20*	.08
Competence (a ₂)	.24**	.09
Relatedness (a ₃)	.41**	.08
Mediators to vitality at work (b paths)		
Autonomy (b ₁)	.42*	.17
Competence (b ₂)	.36*	.17
Relatedness (b ₃)	.39*	.18
Total association between support from co-workers and vitality at work (c path)	.41**	.15
Direct association between support from co-worker and vitality at work (c' path)	.07	.14

Notes: Full model: $F(10, 98) = 5.80^{**}$, $R^2 = .37^{**}$. Coefficients are unstandardized and adjusted for age, gender, education, and occupational sector. SE = standard error. * $p < .05$; ** $p < .01$.

Table 3: Regression analysis for support from supervisor.

	Coefficients	SE
Support from supervisor to mediators (a paths)		
Autonomy (a ₁)	.18**	.06
Competence (a ₂)	.19**	.07
Relatedness (a ₃)	.30**	.07
Mediators to vitality at work (b paths)		
Autonomy (b ₁)	.42*	.17
Competence (b ₂)	.36*	.17
Relatedness (b ₃)	.41*	.18
Total association between support from supervisor and vitality at work (c path)	.29**	.11
Direct association between support from supervisor and vitality at work (c' path)	.03	.11

Notes: Full model: $F(10, 98) = 5.76^{**}$, $R^2 = .37^{**}$. Coefficients are unstandardized and adjusted for age, gender, education, and occupational sector. SE = standard error. * $p < .05$; ** $p < .01$.

consequently suggesting that the indirect association is similar regardless of the source of social support.

The present study provides insight into the basic need satisfactions mediating the association between social support and vitality at work. Choosing subjective vitality as the independent variable was based on SDT, as each need is posited to be important for eudaimonic well-being. Unlike in the present study, Fernet et al. (2013) observed only autonomy satisfaction as mediating the association between support and the energy component of their measure. As they utilized components of burnout rather than of work engagement, it seems possible that need

satisfactions may mediate the associations between social support and positive indicators of energy better than the associations between support and the negative indicators. This would be expected, provided that need satisfaction and need frustration are separate but related phenomena (Bartholomew et al., 2014; Deci and Ryan, 2000).

The significance of a theoretically relevant independent variable could be hypothesized to explain why in some studies examining the separate satisfactions only some of the needs have independently mediated associations between job resources and positive outcomes (Desrumaux et al., 2015; Kovjanic et al., 2012). The independent variables have not been explicit measures of eudaimonic well-being or subjective vitality. However, the suggested explanation is not completely satisfactory. Although each need satisfaction mediated the association of supervisor autonomy support with work engagement (Klassen et al., 2012), only autonomy and competence acted as mediators between exchange quality and vitality in the study of Graves and Luciano (2013).

Practical Implications

Although the results should be validated with more representative samples, preferably in longitudinal designs, there are some practical implications. First, assuming the hypothetical causal relationships, social support appears to be very important in the sense that it facilitates satisfaction of each psychological basic need. Thus, social support promotes well-being and full functioning through a wide variety of fundamental positive experiences. The present study suggests that perceived social support, both from a supervisor and from co-workers, promotes experiences of volition and self-endorsement of actions (autonomy), effective interactions with the environment (competence), and sense of belonging and being significant to others (relatedness). Assuming that these needs are a part of human nature, their satisfaction is important regardless of time, place, or current trends in working life. Everyday low-cost interactions building the perceptions of social support availability do not act just as stress buffers but also induce growth and thriving. Therefore, organizational policies regarding receiving and giving social support have a substantial potential to affect subjective vitality.

Second, if the basic needs mediate the associations practically identically regardless of the source of the support, support from both co-workers and supervisors may be essential for full subjective vitality at work. Staff members at every level should be aware of the significance of social support, and interventions to reinforce social support practices should extend to both workers and supervisors.

Limitations of the Study and Suggestions for Further Research

Although the present study contributes to research on social support at work and the mediating role of all the basic need satisfactions, there are some limitations which should be acknowledged. First, limitations of the survey

method apply to this study as such. This is somewhat unavoidable, as key phenomena such as experiences of need satisfaction or subjective vitality are difficult to examine objectively. Second, the cross-sectional design prevents causal conclusions. Conceptually, it is possible that vitality at work affects the perceptions of available social support. However, there are some longitudinal studies lending credibility to the causal role of needs (Olafsen et al., 2018; Olafsen, 2017). As the existing longitudinal studies do not consider both social support and separate needs, further research is warranted.

Third, the properties of the convenience sample restrict generalizability to the national working population. Despite the sample size, the hypothesized indirect associations based on SDT were observed as well as the other expected relations between the study variables. As the bootstrapping method is viable for multiple mediator models with sample size as small as in the present study (Williams and McKinnon, 2008) and does not rely on the normal distribution of the indirect associations (Hayes, 2013; Preacher and Hayes, 2008), some concerns with the sample size are alleviated. Along with the indirect associations accounting for most of the relationships between support and vitality at work, this suggests that the mediational roles of the separate needs are substantial. However, the sample does not represent the whole working population, as it is a subset of voluntary participants of a group that is generally well educated with higher well-being and relatively high occupational status in a preventive intervention program aimed at employees considered to be at risk of future work disability (Saltychev et al., 2011; Suoyrjö et al., 2009). This combination is at least partly due to the selection process failing to identify the actual risk population (Saltychev et al., 2011), resulting in ASLAK participants interested in their own well-being and motivated to promote it, but with less severe risk for future disability. Healthy people with high occupational status may be overrepresented in the sample. Therefore, it is possible that the full range of some of the focal constructs were not measured. As the present study did not measure such factors as health or sick leaves, they cannot be used to examine representativeness. Although important demographic variables were controlled, the subgroups were small. Thus, a replication should be attempted with a larger and more representative sample.

Fourth, while the measures of social support are similar in regard to the item content, it should not be assumed that the means of receiving support or functions of support are identical regardless of its source. It is also not assumed that the support from co-workers or a supervisor impacts equally in various contexts. The phrasing of the items measuring social support in QPSNordic is quite generic and probably does not capture the potential differences in day-to-day social support from different sources. As the present study did not examine the relative importance of support from co-workers and support from a supervisor, it is suggested that future studies would address the subject, perhaps also utilizing more specific forms of social support.

Finally, energy is only one aspect of work engagement, others being dedication and absorption. In further studies, the theoretical relationships between them, key job characteristics, and each need should be explicated, and the hypothesized mediating roles should be tested, filling gaps in the literature. As subjective vitality is the essential indicator of need satisfaction according to SDT (Ryan and Deci, 2017), examining explanatory mechanisms associated with it is important for testing the basic tenets of the theory. However, research on needs mediating associations related to other outcomes may reveal new conceptual insights and facilitate further theoretical development.

Despite the limitations, the present study contributes to knowledge about needs in the indirect relationship between social support and subjective vitality at work in three ways. First, support from both co-workers and from a supervisor were measured. Second, satisfaction of each need was measured separately. Third, the dependent variable was selected based on the propositions of SDT.

Conclusion

The results of the present study offer insight into the indirect relationship between social support and well-being in the form of vitality at work. The results are consistent with the proposition of SDT concerning the essentiality of each basic need regarding subjective vitality. The results indicated that the satisfaction of basic needs of autonomy, competence, and relatedness explain a substantial amount of the association between social support from co-workers and supervisors and vitality at work. Work behaviour maintaining and enhancing the perceived availability of social support appears to be important. Further studies should attempt replications with more representative samples, more specific measures of social support, and the other two aspects of work engagement. This would contribute to generalizability and more fine-grained understanding of the association between social support, needs, and well-being.

Competing Interests

The authors have no competing interests to declare.

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