Leaders, teams and work engagement: a basic needs perspective

Wouter Robijn and Martin C. Euwema

KU Leuven, Leuven, Belgium, and

Wilmar B. Schaufeli and Jana Deprez

KU Leuven, Leuven, Belgium and
Universiteit Utrecht, Utrecht, The Netherlands

Abstract

Purpose – The purpose of this study is to investigate the relationship between engaging leadership and open conflict norms in teams, with work engagement. A mediating role of basic needs satisfaction between these relations is proposed based on self-determination theory.

Design/methodology/approach – Structural equation modeling was used with 133 employees who rated their leader, their team and their own basic need satisfaction and engagement to analyze the direct and indirect effects simultaneously.

Findings – The analysis confirmed that both engaging leadership and open conflict norms had an indirect effect on work engagement through basic needs satisfaction. Furthermore, engaging leadership was positively related with open conflict norms.

Research limitations/implications – The current study adds to the validation of engaging leadership as it confirms that engaging leaders strengthen work engagement through basic need satisfaction. Furthermore, it shows that not only the leader is important, but the team can impact their well-being through the creation of other social resources as open conflict norms.

Originality/value – This paper provides evidence that not only leaders are important to increase work engagement through basic needs satisfaction but also other social resources, such as conflict management. This offers a brand new perspective and opportunities on how to increase work engagement using social resources as conflict management.

Keywords Social resources, Engaging leadership, Open conflict norms, Basic needs satisfaction, Work engagement

Paper type Research paper

Introduction

Work engagement is seen as a highly valuable quality of employees in the workplace. It is related to employee well-being as well as individual, team and organizational performance (Schaufeli, 2015; Bakker and Demerouti, 2017). Furthermore, it is related to the advancement of the career of the employee as it is related to increased employability (Schaufeli, 2015). Investing in work engagement is, thus, in the interest of the current and future organization and employee. Leaders often play a vital role in both the increase and reduction of work engagement of their followers (Bakker and Albrecht, 2018). Schaufeli (2015, 2016), therefore, introduced a new theoretical foundation and measure for engaging leadership, rooted in the basic needs of self-determination theory (SDT) (Deci and Ryan, 2000). Engaging leadership was indeed positively related to work engagement, through the increase of followers' job resources (Schaufeli, 2015; Rahmadani *et al.*, 2019). Leaders, however, do more than allocate and foster job resources, they have an impact on different team processes as well. These team processes have, in turn, an impact on the well-being at team level (Costa *et al.*, 2014), as job resources impact the fulfillment of basic needs at individual level (Van den Broeck *et al.*, 2008; Van den Broeck *et al.*, 2016). But how do these social resources that the team shares, both the

leader and team processes, impact individual well-being? Furthermore, to what extent do leaders impact these team processes?

This paper investigates, therefore, the relationship between engaging leadership and work engagement through basic needs satisfaction and introduces a new social resource of open conflict norms (Jehn and Mannix, 2001). First, work engagement and basic needs satisfaction, as its proposed underlying mechanism, are introduced. Next, the impact of leaders on basic needs satisfaction is discussed, to finally introduce open conflict norms as a social resource, which will impact work engagement through the same mechanism (i.e. basic needs satisfaction).

Literature review
Work engagement and basic need satisfaction
In the last decades, the interest in well-being in the workplace has increased. Academia and organizations do not only look at performance but also whether employees feel well at work (Schaufeli, 2017). This has led to research on work-related negative states as burnout and workaholism, but also positive states as work engagement (Schaufeli *et al.*, 2008), in line with the evolution toward a more positive approach in psychology (Seligman and Csikszentmihalyi, 2000). The latter concept, work engagement, is important for organizations as employees who are engaged boost their well-being (Bakker and Demerouti, 2008), as well as their performance (Schaufeli, 2015). Work engagement is, for example, linked with outcomes as job performance (Bakker, 2017), business performance (Schnieder, Yost, Kropp, Kind and Lam, 2018), turnover intention (Schaufeli and Bakker, 2004), organizational commitment (Schaufeli, 2015), extra-role performance (Bakker and Demerouti, 2008), customer loyalty (Salanova *et al.*, 2005), but also employee health (Bakker and Demerouti, 2008). Furthermore, engaged employees boost their engagement through creating their job and personal resources (Bakker and Demerouti, 2008) and transfer their engagement to others (Bakker *et al.*, 2006; Van Mierlo and Bakker, 2018). Investing in engaged employees is, thus, a strategic decision that creates a win-win scenario for the individual and the organization.

Work engagement, sometimes referred to as employee engagement or simply engagement, is defined as a positive and fulfilling work-related state of mind that is characterized by vigor, dedication and absorption (Schaufeli and Bakker, 2004). Vigor is described as "high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence even in the face of difficulties"; dedication is characterized by "feelings of a sense of significance, enthusiasm, inspiration, pride, and challenge", and absorption is characterized by "being fully concentrated and deeply engrossed in one's work, whereby time passes quickly and one has difficulties with detaching oneself" (Schaufeli *et al.*, 2002, pp. 74–75).

As a framework to study work engagement, its antecedents and consequences, the job demands–resources model (JD-R model) is frequently used (Schaufeli and Bakker, 2004; Bakker and Demerouti, 2017; Bakker and Albrecht, 2018). The JD-R model proposes that job characteristics can be classified in one of two categories: *job demands*, which are physical, psychological, social or organizational aspects of the job that require sustained physical and/or psychological effort and are therefore associated with certain physiological and/or psychological costs; *job resources*, which are physical, psychological, social or organizational aspects of the job that are functional in achieving work goals, reduce job demands and the associated physiological and psychological costs and/or stimulate personal growth and development (Demerouti *et al.*, 2001). These job demands and resources instigate two different processes. First, a health impairment process, in which job demands predict burnout, which is related to poor performance and low employee health. The second process, a motivational process, postulates that job resources are positively related to performance

and employee health via work engagement (Schaufeli, 2015; Bakker and Demerouti, 2017). Additionally, job resources have a negative relationship with burnout (Schaufeli and Bakker, 2004; Bakker and Demerouti, 2017).

Although the JD-R model has proven its usefulness, it remains a descriptive model that specifies relations between variables without providing an underlying explanation of why this relationship would be so (Schaufeli and Taris, 2014). One of the possible explanatory theories is SDT (Deci and Ryan, 2000), which proposes, among other things, a set of basic psychological needs that are defined as "nutriments that must be procured by a living entity to maintain its growth, integrity and health" (Deci and Ryan, 2000, p. 326). The satisfaction of these needs is essential for humans to actualize their potential, to flourish, feel engaged and to be protected from ill health and maladaptive functioning. Three basic psychological needs are proposed: the need for autonomy (i.e. feeling the ability to act with a sense of choice and volition), belongingness (i.e. feeling loved and cared for) and competence (i.e. feeling effective) (Deci and Ryan, 2000). Indeed, basic needs were found to mediate the relationship between job resources and work engagement (Van den Broeck *et al.*, 2008) and, thus, offer a potential explanation for the motivational process, as conceived by the JD-R model.

The concept of needs is not new in psychology and motivation theory. Need theories are aplenty, ranging from traditional theories as Maslow's needs hierarchy and McClelland's work on needs for achievement, affiliation and power, to more recent work on the need for status and SDT (Van den Broeck *et al.*, 2016). As SDT is a general theory that has demonstrated its usefulness in many life domains such as sports, education and work, there might be more needs, relevant for the field of work and organizational psychology concerning work engagement, than the three proposed needs within SDT (i.e. autonomy, belongingness and relatedness). Therefore, based on the work of Baumeister (1991) and Frankl (1992), Schaufeli (2016) proposed an additional need; the need for meaningfulness. This need refers to perceiving one's work as particularly meaningful and significant. Research suggests that employees in jobs with more job resources (e.g. skill variety and task identity) experience more meaningfulness, which, in turn, contributes to their motivation, performance and satisfaction (Rosso *et al.*, 2010). Furthermore, meaningful work was found to be critical to a good job (Cartwright and Holmes, 2006). It can, thus, be argued that meaningfulness behaves similarly as the other basic needs of SDT.

Although the link between job resources and basic needs has been studied before, the focus was mainly on resources related to the content of the work (task autonomy, skill utilization and work-related feedback, developmental opportunities; Van den Broeck *et al.*, 2008; Breevaart *et al.*, 2014). However, other resources, as social resources, are important as well.

Engaging leadership
One of the most influential social resources in the workplace is the behavior of the leader. Although leadership is one of the most studied topics in organization sciences, its relationship with work engagement is not extensively studied. Carasco-Saul *et al.* (2014) found 16 studies addressing this question, and more current papers still keep addressing the importance of this link (Bakker and Albrecht, 2018). Transformational leadership was found to increase work engagement (e.g. Caniëls *et al.*, 2017), partially mediated by optimism (Tims *et al.*, 2011), responsibility, meaningfulness and innovative behavior (Zhu *et al.*, 2009). Other leadership styles as authentic, charismatic and ethical leadership also had a positive relationship with work engagement, mediated by role clarification, organizational culture and empowerment (Carasco-Saul *et al.*, 2014), and supervisor support is generally found to be linked with high levels of engagement (Schaufeli, 2015; Albrecht *et al.*, 2017).

Initially, leadership was incorporated as a mere job resource in the JD-R model. The impact of a leader, however, goes beyond that as leaders are supposed to allocate and balance both job demands and job resources (Schaufeli, 2015). Leadership is, indeed, positively related to various job characteristics as variety, identity, significance, autonomy and feedback (Piccolo and Colquitt, 2006; Breevaart *et al.*, 2014), which, in turn, lead to work engagement according to the JD-R model. To address the need for a more prominent and nuanced place of leadership in the JD-R model, the concept of engaging leadership was introduced (Schaufeli 2015, 2016). It states that leaders foster their employees' levels of work engagement by focusing on satisfying their basic needs. Through satisfying followers' needs, which were derived from SDT (i.e. autonomy, relatedness and competence) and the work of Baumeister (1991) and Frankl (1992; i.e. meaning), engaging leaders enhance the levels of engagement of their followers. More specifically, engaging leaders motivate their followers by increasing meaningfulness through inspiring (e.g. enthusing them for goals and plans, make them feel that they contribute to an important mission), increasing their competences through strengthening (e.g. delegating tasks, encouraging to use their strengths), increasing relatedness through connecting (e.g. encouraging collaboration, promoting a high team spirit) and finally increasing autonomy through empowering (e.g. granting freedom and responsibility, encouraging to voice one's own opinion) (Schaufeli, 2016).

Previous research on other positive leadership styles, as transformational, authentic leadership and Leader-Member Exchange (LMX), supports the notion that basic needs mediate the relationship between leadership and outcomes as well-being and performance. Hetland, Hetland *et al.* (2011) found that transformational leadership had a positive effect on basic needs satisfaction, whereas active management by exception had a negative effect. Transformational leadership also influenced work engagement through mediation of basic needs satisfaction (Kovjanic *et al.*, 2013; Breevaart *et al.*, 2014). A recent meta-analysis on basic needs (Van den Broeck *et al.*, 2016) showed that positive leadership behaviors as a leader's autonomy and relatedness support and leader–member exchange are positively related to basics need satisfaction. For the need for meaning, leaders can imbue work with meaningfulness by inspiring employees to transcend their personal needs or goals (Rosso *et al.*, 2010). This is found in transformational leadership (Bono and Judge, 2003), but also defined in authentic leaders (Avolio and Gardner, 2005). Based on this previous research and the conceptualization of engaging leadership in SDT (Deci and Ryan, 2000), it is expected that basic needs satisfaction mediates the relationship between engaging leadership and work engagement. This argumentation leads to the following hypotheses:

H1a. Engaging leadership is positively related to basic needs satisfaction.

H1b. Basic needs satisfaction is positively related to work engagement.

H1c. Basic needs satisfaction mediates the relationship between engaging leadership and follower's work engagement.

Conflict management as a social resource
While leadership is important, other social resources also play a crucial role for employees. This is particularly true for resources at interpersonal or team level, as most work in organizations is completed through teamwork (Marks *et al.*, 2001). Teams play a crucial role in both well-being and productivity (Torrente *et al.*, 2012), whereby several interpersonal processes are important. One of these processes is conflict and conflict management (Marks *et al.*, 2001; Costa *et al.*, 2014). Where conflicts have generally a substantial, mostly negative, impact on teams (de Wit *et al.*, 2012) and individuals (De Dreu, 2008), when constructive conflict management is possible, conflicts are not necessarily bad (Elgoibar *et al.*, 2017).

Leaders are, from their position, expected to engage in some form of conflict management known as third-party behavior, which will impact the well-being of employees (Römer *et al.*,

2012). But team members are not passive and will also engage in behavior to deal with conflicts in the team (Zhang *et al.*, 2018). Establishing open conflict norms (Jehn, 1995) or open-minded discussion (Tjosvold *et al.*, 2014) is one of the ways to manage conflict in teams. It encourages people to express their doubts, opinions and uncertainties, and it is the norm of the team on how group members perceive and handle conflict. This promotes, for example, learning, as team members begin to doubt their ideas and search to understand multiple perspectives (Tjosvold, 2008). This positive view on conflict promotes openness, cooperation and problem-solving (Tjosvold *et al.*, 2014) and gives us a new perspective to introduce conflict management in the team as another social resource.

The concept of open conflict norms and constructive conflict challenges the traditional and popular notion, which is also challenged in other research that leaders must make decisions by themselves and then enforce some form of compliance (Tjosvold *et al.*, 2014). Instead, effective leaders involve team members in open-minded discussions and value ideas (Tjosvold *et al.*, 2014). It was argued that leaders can have an enduring impact by structuring more discussion about conflict and conflict management and so develop the relationships and skills that are needed to make effective use of it (Tjosvold, 2008). Previous studies found that leadership was related to conflict resolution efficacy of the team (Babalola *et al.*, 2016) and that leaders can encourage team members to manage their conflict constructively (Zhang *et al.*, 2011). In SDT literature, it is reasoned that leaders support basic needs to the extent that they acknowledge the employees' perspective in discussions, offer choice about how to enact ideas and refrain from pressuring behaviors and language (Deci *et al.* 2017). This aligns with promoting open-minded discussions and norms as people should first express their opinion, understand the other team members' point of view, integrate the ideas and agree on a solution (Tjosvold *et al.*, 2014), rather than the leader to force a solution, which will lower levels of autonomy support. An engaging leader will, thus, promote open conflict norms, as it will increase the satisfaction of their basic needs as reasoned earlier.

H2a. Engaging leadership is positively related to open conflict norms.

Following SDT (Deci and Ryan, 2000), social context variables in the workplace that have an impact on employee well-being are largely mediated by basic needs satisfaction (Deci *et al.*, 2017). These variables all have in common that they support autonomy and other needs. When employees feel more support for autonomy, they also feel more connected to the organization and feel more effective (Deci *et al.*, 2017). Open conflict norms are employees' perceptions of their team and whether they feel they can choose to share their opinion or conflicting ideas or not. In line with SDT, the option of sharing opinions/conflicts will support their feeling of autonomy and, therefore, increase their basic needs as a whole and thus, indirectly affect work engagement, as basic needs satisfaction is proposed as the underlying mechanism for work engagement (Schaufeli and Taris, 2014).

H2b. Open conflict norms are positively related to basic needs satisfaction.

H2c. Basic needs satisfaction mediates the relationship between open conflict norms and work engagement.

As these conflict management behaviors as open conflict norms will impact basic needs satisfaction, as reasoned earlier, an engaging leader will enhance open conflict norms and encourage and give autonomy to team members to manage conflicts themselves and provide ample support to do so, as this will increase their levels of basic needs satisfaction and work engagement. This is, however, not the only way to develop basic needs as they will impact all sorts of resources to impact their followers (Schaufeli, 2015) and not only this resource. Leaders will, thus, impact basic needs through simultaneously developing basic needs through different resources, where open conflict norms are only one of these resources.

H2d. Open conflict norms partially mediate the relationship between engaging leadership and basic needs satisfaction.

This study contributes to the literature in different ways. First, we add to the validity of the concept of engaging leadership by investigating its premise and its effect on work engagement through basic needs satisfaction. Second, it is, to our knowledge, the first study to test a conflict management approach as open conflict norms in a design that is not related to conflict or conflict management, but to positive motivational concepts as basic needs satisfaction and work engagement and introduce it as a social resource. Finally, this study tests the notion that different resources impact each other (Bakker and Demerouti, 2017) and especially leadership (Schaufeli, 2015), as it is predicated that engaging leadership will be related to open conflict norms, where a leader uses this resource to influence basic needs satisfaction and work engagement.

Method
Procedure and participants
Participants of the study were followers whose leader participated in a leadership development program in a large public insurance company in Belgium. In total 41 leaders participated in the program. As part of that program, all of their followers ($n = 198$) were asked to fill in a survey about their leader, which included the measurement of engaging leadership. To reduce common method variance, the followers were asked to fill in another survey with the concepts about themselves and the team (i.e. basic needs satisfaction, open conflict norms and work engagement) a month after the initial survey about the leader (i.e. engaging leadership). The response rate of the second survey was 67% ($n = 133$). All measurements and their respective items can be found in the Appendix.

Measurements
Engaging leadership was measured by the engaging leadership scale (Schaufeli, 2016). This scale includes four dimensions with three items each: inspiring (sample item: My direct supervisor is able to enthuse team members with his/her plans), strengthening (sample item: My direct supervisor encourages team members to develop their talents as much as possible), connecting (sample item: My direct supervisor encourages collaboration among team members) and empowering (sample item: My direct supervisor gives team members enough freedom and responsibility to complete their tasks). Responses for all items were measured using a Likert scale ranging from 1 (= completely disagree) to 5 (= completely agree).

Open conflict norms are measured using three items proposed by Jehn and Mannix (2001), which were adapted from a longer version by the same author (Jehn, 1995; sample item: How much open discussion of issues was there in your group?). Responses for all items were measured using a Likert scale ranging from 1 (= not at all) to 5 (= a lot).

Basic need satisfaction was measured following the recommended scales by Schaufeli (2016) to align the measurement of basic needs satisfaction with the concept of engaging leadership (see also Rahmadani *et al.*, 2019). The work-related basic needs satisfaction scale (W-BNS) (Van den Broeck *et al.*, 2010) was used, which included the three basic needs proposed by SDT: competence (sample item: I feel competent at my job), autonomy (sample item: I feel like I can be myself at my job) and relatedness (sample item: At work, I feel part of a group). These items were supplemented by a scale to assess the satisfaction of the need for meaningfulness (sample item: My job is meaningful for me, personally; Rahmadani *et al.*, 2019). Both scales contain both positive and negative items, whereby the former refer to need satisfaction and the latter to need frustration (Van den Broeck *et al.*, 2010). Costa, Ntoumanis, and Bartholomew (2015) and Vansteenkiste and Ryan (2013) argue that one should not

measure need frustration or even need dissatisfaction when researching the link between need satisfaction and well-being, as need frustration and dissatisfaction are associated with ill-being rather than well-being. A clear distinction was found between the three different constructs (i.e. need satisfaction, need dissatisfaction and need frustration) as well as method effects of positive and negative items (Costa *et al.*, 2015). Need satisfaction was indeed found to be more strongly related to life satisfaction, vitality and positive forms of motivation, whereas need frustration was more related to depressed affect, burnout and somatic complaints (Bartholomew *et al.*, 2014; Nishimura and Suzuki, 2016; Van den Broeck *et al.*, 2016). However, most scales (i.e. W-BNS of Van den Broeck *et al.*, 2010; basic need satisfaction at work scale of Deci *et al.*, 2017) have no specific subscales for these forms (Van den Broeck *et al.*, 2016). Given our focus on well-being and need satisfaction, we followed the reasoning of Costa *et al.* (2015) and only included the need satisfaction (i.e. positive) items, as the negative items reflect need frustration. As suggested by Van den Broeck *et al.* (2008), we combined all items into a general need satisfaction latent construct. Participants were asked to indicate on a five-point scale ranging from 1 (totally disagree) to 5 (totally agree).

Work engagement was measured with the Utrecht work engagement scale-3 (UWES-3; sample item: "At my work, I feel bursting with energy"; Schaufeli *et al.*, 2019). Participants indicated on a scale from 1 ("never") to 7 ("always, every day") how often they experienced these feelings.

Strategy of analysis
Structural equation modeling (SEM) was used to examine the adequacy of the overall model and thus allowed us to test the proposed hypotheses simultaneously. The analysis was done with *R*, version 3.3.3 with the lavaan package (Rosseel, 2012) version 0.6–1.1132 and lavaan.survey package (Oberski, 2014). The measurement model was first tested to ensure a clear distinction between the hypothesized concepts and statistically check for common method bias and was contrasted to a one-factor model via confirmatory factor analysis (CFA; Malhotra *et al.*, 2006). The latent constructs of engaging leadership and basic needs were represented by their four respective dimensions and needs. Work engagement and open conflict norms were modeled by their items. When the fit of the four-factor measurement model is superior to the one-factor model, the fit of the model can be optimized by using information from the modification indices, which suggests allowing particular errors to correlate. These pairs will also be allowed to correlate in the structural model. Furthermore, because some of the participants belonged to the same team and therefore rated the same leader and open conflict norms, the observations are not independent. Oberski (2014) suggests to use lavaan.survey to handle observations that are not independent and view the teams as clusters. The use of this package in *R* allows us to estimate our concepts over the clusters, with no explicit modeling of the effect of the clusters or teams themselves, as the main interest of the current study is the individual and not the team.

Results
Preliminary analyses
Table 1 shows the biodata of the final participants. In the final sample, 21.8% of participants were male and 78.2% were female. Participants' mean age was 42.3 (SD = 10.2). 51.9% of the sample completed primary or secondary education, 33.8% held a bachelor's degree and 14.3% obtained a master's degree. With respect to job tenure, most participants were employed for over 10 years in the organization (59.4%), 11.3% had tenure between 7 and 10 years, 8.3% between 4 and 6 years, 16.5% between 1 and 3 years and 4.5% of the participants only joined the organization recently with a tenure less than 1 year.

			133
N			133
Gender	Male (%)		21.8
	Female (%)		78.2
Age	Mean		42.3
	SD		10.2
Education	Primary or secondary education (%)		51.9
	Bachelor's degree (%)		33.8
	Masters' degree (%)		14.3
Tenure	Less than 1 year (%)		4.5
	Between 1 and 3 years (%)		16.5
	Between 4 and 6 years (%)		8.3
	Between 7 and 10 years (%)		11.3
	More than 10 years (%)		59.4

Table 1.
Biodata of final participants

Table 2 shows descriptive statistics and correlations. Age and gender did have no significant correlation with the other variables and were, therefore, not included in further analysis (Bakker, 2017). Cronbach's alpha values of all scales are displayed between brackets in Table 2 and ranged from 0.79 to 0.89, which suggests that the items and scales that were used are reliable as they reached the cutoff criteria of 0.70 (Tavakol and Dennick, 2011).

Table 3 shows the results of a series of CFAs to test the measurement model, which was used to statistically check for common method bias (Malhotra *et al.*, 2006). In the one-factor model, all items load into a single factor that represents a method effect, whereas the four-factor model represents the latent constructs as explained in the literature section. The four-factor model ($\chi^2(71) = 137.186$; CFI = 0.89; TLI = 0.86; RMSEA = 0.09; SRMR = 0.09) was superior to the one-factor model ($\chi^2(77) = 383.053$; CFI = 0.47; TLI = 0.38; RMSEA = 0.20; SRMR = 0.17), which suggests that the four concepts can be distinguished and most variance can be accounted to the different constructs instead of a method effect. Allowing two pairs of error to correlate within a concept, as suggested by the modification indices (empowering and strengthening within engaging leadership and competence and meaning within basic needs satisfaction) allowed us to optimize the model. These correlated errors share a common

				Correlations					
	Mean	SD	1	2	3	4	5	6
1. Age	41.91	10.33						
2. Gender[a]	0.22	0.42	0.05					
3. Engaging leadership	3.96	0.45	−0.02	−0.04	(0.85)			
4. Open conflict norms	3.26	0.74	0.14	0.04	0.18[*]	(0.79)		
5. Basic need satisfaction	4.19	0.51	0.06	0.02	0.25[**]	0.42[**]	(0.87)	
6. Engagement	4.64	1.32	0.16	−0.03	0.06	0.23[**]	0.44[**]	(0.89)

Note(s): [a]0 = female, 1 = male; *$p < 0.05$; **$p < 0.01$

Table 2.
Means, standard deviations and correlations

Model	χ^2	Df	CFI	TLI	RMSEA	SRMR
One factor	382.053	77	0.47	0.38	0.20	0.17
Four factor	137.186	71	0.89	0.86	0.09	0.09
Four factor (modified)	110.416	69	0.93	0.91	0.07	0.08

Table 3.
Confirmative factor analysis of the measurement model ($n = 133$)
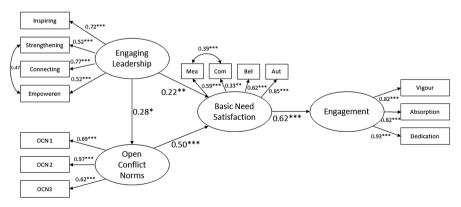
variance that is not **solely** related to the latent construct. The optimized model has excellent goodness-of-fit indices (χ^2(69) = 110.416; CFI = 0.93; TLI = 0.91; RMSEA = 0.07; SRMR = 0.08). This outcome makes, along with the two time points for our survey, the interpretation of the results more robust, as it is less likely that the results can be attributed to common method variance (Malhotra *et al.*, 2006). The analysis of the structural model was based on the modified version of the four-factor model.

Main analysis
The main analysis was performed based on the recommendations of Hayes (2009) and Zhao *et al.* (2010) to determine whether or not there was an indirect effect. To test the indirect (or mediation) effect of the different hypotheses, all effects were analyzed in one model. This allows us to simultaneously analyze intervening pathways and, therefore, have a better estimate of how the different concepts relate to each other, instead of doing separate mediation analysis (Zhao *et al.*, 2010). Additionally, 95% confidence intervals were calculated for the Sobel tests. The hypothesized model (M1; Figure 1) was compared to a similar model (M2), but with an added direct effect from engaging leadership and open conflict norms to work engagement. The hypothesized model (M1; Figure 1) resulted in good fit indices (χ^2(71) = 111.660; CFI = 0.94; TLI = 0.92; RMSEA = 0.07; SRMR = 0.08). The second model (M2) suggests only partial mediation of basic needs satisfaction between engaging leadership/open conflict norms and work engagement. While M2 had acceptable goodness-of-fit indices (χ^2(69) = 110.416; CFI = 0.93; TLI = 0.91; RMSEA = 0.07; SRMR = 0.08), the fit indices of M1 were better and both added direct effects were not significant. The other relationships were similar to M1. The Satorra–Bentler scaled χ^2 difference test showed no significant difference between M1 and M2 (ΔSBS-χ^2 (2) = 134.580; n.s.), which means that M1 is the preferred model (Schermelleh-Engel *et al.*, 2008).

Engaging leadership ($\gamma = 0.22$; $p < 0.01$) had a positive effect on basic needs satisfaction, confirming hypothesis 1a. As expected in hypothesis 1b, the relationship between basic need satisfaction and engagement was positive ($\gamma = 0.62$; $p < 0.001$). A Sobel test revealed a significant indirect effect of basic needs satisfaction between engaging leadership and work engagement (estimate = 0.17, $p < 0.01$, CI = 0.065–0.282). Hypothesis 1c is confirmed as basic needs satisfaction mediates the relationship between engaging leadership and work engagement, also confirming the premise of engaging leadership. Next, there was a positive relationship between engaging leadership and open conflict norms ($\gamma = 0{,}28$; $p < 0.05$; Hypothesis 2a) and also between open conflict norms and basic needs satisfaction ($\gamma = 0{,}50$;

Note(s): * $p < 0.05$; ** $p < 0.01$; ***$p < 0.001$

Figure 1.
Structural model of the hypothesized model M1

$p < 0.001$; hypothesis 2b). As expected, there was an indirect effect and, thus, mediation of basic needs satisfaction between open conflict norms and work engagement (estimate = 0.37, $p < 0.001$, CI = 0.212–0.536), confirming hypothesis 2c. For hypothesis 2d, there was, as mentioned earlier, a positive relationship between engaging leadership and open conflict norms ($\gamma = 0.28$; $p < 0.05$) and between open conflict norms and basic needs satisfaction ($\gamma = 0.50$; $p < 0.001$). As the indirect effect was significant (estimate = 0.18, $p < 0.05$, CI = 0.001–0.349), hypothesis 2d was also confirmed.

Discussion
The results of the current study confirm our hypotheses; both social resources (i.e. engaging leadership and open conflict norms) impact work engagement through basic needs satisfaction. First, these results add validity to the emerging concept of engaging leadership (Schaufeli 2015; 2016) and provide us with insights on how leaders (and teams) can impact work engagement. As there was only an indirect effect through basic needs satisfaction, to increase work engagement, leaders should focus primarily on increasing these basic needs. This gives leaders a small set of concepts that they can work with to motivate their followers and increase their well-being.

Second, open conflict norms were introduced as a social resource. The concept of open conflict norms is normally used in research on conflict (Jehn and Mannix, 2001; Rispens, 2007), and it is, to our knowledge, the first time that it has been used to investigate a positive motivational state. This study shows it also has a clear and strong impact on basic needs satisfaction, which is a driver for well-being (Van den Broeck *et al.*, 2016). This means that the ability to speak up and confront conflict constructively in teams does not only have implications for the amount of conflict (Jehn and Mannix, 2001; Rispens, 2007) but addressing other team members improves well-being through basic needs satisfaction. Apart from the leader who influences these open conflict norms, employees can encourage themselves and each other to deal openly with conflicts, thereby actively increasing their well-being. This might be especially important in jobs where other resources, such as feedback and task variety, are not easily changed. Additionally, it might be an alternative bottom-up approach, complementary to individual techniques as job crafting (Bakker and Demerouti, 2017), to strengthen work engagement in teams, as a team may promote more open and better conflict norms, even, if necessary, without their leader. With these insights, this study also reconfirms the pivotal role of basic needs satisfaction as an underlying mechanism in the motivation process of the JD-R-model (Schaufeli and Taris, 2014; Bakker and Demerouti, 2017). So far this was only tested with job resources that referred to the work itself (Van den Broeck *et al.*, 2008) or leadership (Kovjanic *et al.*, 2013; Breevaart *et al.*, 2014) and not with other social resources.

Finally, the results show that resources, and more specifically social resources, do not only increase basic needs satisfaction and work engagement but also may influence one another. This follows evidence showing that job resources (and job demands) are not isolated from each other, but rather interact and give rise to more complex processes (Bakker and Demerouti, 2017). In our case, leaders also influence team processes by promoting open conflict norms, which will also influence basic needs satisfaction and work engagement.

Limitations of the study and future directions
Although engaging leadership was measured at a different time than the other concepts and is, therefore, better than a cross-sectional design, the study could be more robust with a separate measurement time for the mediators or a true longitudinal design and would have allowed concluding causality. Furthermore, the sample size was rather low and therefore the

statistical power as well. Nevertheless, despite this low sample size, our model satisfied the goodness-of-fit indices. To improve the model we allowed two pairs of error to correlate. First, empowering and strengthening of engaging leadership shared some variance. This might be due to that employees feel both strengthened and empowered when leaders, for example, delegate tasks or that when followers get developmental opportunities, they feel empowered as they probably will get a more challenging task in the future or more responsibilities. Furthermore, two basic needs, competence and meaning, also shared some variance. Employees who might feel competent in a certain skill possibly know more about the impact of this skill or attribute more meaning toward that skills, which implicates their level of meaningfulness. On the other hand, when an employee feels that their job is significantly meaningful, they might be more inclined to invest in skills to perform better.

While the proposed model has good fit indices, the initial correlation between engaging leadership and work engagement was rather low and not significant. While this is not necessary for an indirect effect (Hayes 2009; Zhao *et al.*, 2010; Rucker *et al.*, 2011), this was not expected. There seem to be hidden other mediators that act as suppressors for the direct relationship between engaging leadership and work engagement that have less impact when we enter basic needs satisfaction. Investigating what might suppress this relationship might prove valuable to help leaders further increase engagement in their followers.

In this study, four basic needs were used instead of the traditional three basic needs as proposed by SDT (Deci and Ryan, 2000). Because the opportunity to test the concept of engaging leadership empirically, the authors felt it was appropriate to operationalize basic needs satisfaction similarly as engaging leadership was conceptualized, as it was proposed by Schaufeli (2016). As mentioned earlier, previous research also showed that meaningfulness behaves as an underlying and important mechanism between resources, leadership and well-being at work (Bono and Judge, 2003; Rosso *et al.*, 2010). Exploratory multiple regression analyses revealed that, in this sample, R^2 changed significantly from 0.23 to 0.29 ($p < 0.001$) when we added the need for meaningfulness into the hierarchical regression on work engagement above the three other needs. It seems that, indeed, meaningfulness had an additional impact on work engagement. To determine whether this is a fourth basic need (in the workplace) or a different process, further examination is needed. It is also plausible that this need is partly an antecedent or consequence of the basic needs of SDT.

As mentioned earlier we used a SEM design with a survey approach (Oberski, 2014) as the data were clustered in teams and therefore not independent. Using this approach means that we can interpret our results confidently on an individual level, as the team variance was removed. This is, however, is only part of the story. As interesting as it is to investigate individuals, as was the aim of this study, these individuals are part of a team and influence each other. Future research should look at how leaders engage their team beyond the individual, how teams engage themselves and how engagement can occur at a group level. Work engagement on a team level was introduced as "Team Work Engagement" (Costa *et al.*, 2014). An integration of this concept with the individual level of engagement and basic needs as its underlying process might help us better understand both processes and will help leaders to motivate on the individual and team level. The results of this integration should also be crafted in validated development programs. On the individual level, concepts as job crafting have been made available through empirically tested interventions (e.g. Demerouti, 2014) to enhance work engagement. Similarly, team and leadership development programs should be developed and have a focus on both engaging leadership and conflict management to increase basic needs as a means to foster work engagement on the individual and team level.

Practical implications
First of all, this paper confirms the concept of engaging leadership and its foundation in basic needs satisfaction. Concerning well-being, and more specifically, work engagement, leaders

should focus on basic needs to motivate their followers. As basic needs satisfaction is a driver for motivation, work engagement will be fostered, but the impact is broader as other outcomes such as burnout, turnover intentions, task-, creative- and proactive performance are related to basic needs (Van den Broeck *et al.*, 2016). On the team level, leaders should invest in open conflict norms and more generally in the conflict management skills of their followers. This will not only lead to more individual outcomes but also on a team level, conflict management is seen as an important process for team outcomes as teamwork engagement and performance (Marks *et al.*, 2001; Torrente *et al.*, 2012). Second, employees themselves can invest in conflict management skills. This can be in addition to the investment of their leader or despite the efforts of the leader. Investments in these skills will not only increase the basic needs of their current job but must be seen as an investment, which can be transferred to future jobs.

Conclusion
The present study offers evidence for the important role of basic needs satisfaction that organizations can use to increase the well-being of their employees. More specifically, two social resources (i.e. engaging leadership and open conflict norms) are strongly related to these basic needs. These two resources have an indirect relation with work engagement, thereby contributing also to current and future team and organizational performance (Schnieder *et al.*, 2018; Salanova *et al.*, 2005). Actively increasing the engaging nature of leaders and open conflict norms in teams, through bottom-up or top-down approaches, will benefit both the employee and the organization. Further research is needed on the potential added value of the need for meaningfulness in the workplace and the search for validated tools and workshops to increase both engaging leadership and open conflict norms.

References

Albrecht, S., Breidahl, E. and Marty, A. (2017), "Organizational resources, organizational engagement climate, and employee engagement", *Career Development International*, Vol. 23 No. 1, pp. 67-85.

Avolio, B.J. and Gardner, W.L. (2005), "Authentic leadership development: getting to the root of positive forms of leadership", *The Leadership Quarterly*, Vol. 16, pp. 315-338.

Babalola, M.T., Stouten, J., Euwema, M.C. and Ovadje, F. (2016), "The relationship between ethical leadership and workplace conflicts: the mediating role of employee resolution efficacy", *Journal of Management*, Vol. 44 No. 5, pp. 2037-2063.

Bakker, A. and Albrecht, S. (2018), "Work Engagement: current trends", *Career Development International*, Vol. 23 No. 1, pp. 4-11.

Bakker, A.B. and Demerouti, E. (2008), "Towards a model of work engagement", *Career Development International*, Vol. 13 No. 3, pp. 209-223.

Bakker, A.B. and Demerouti, E. (2017), "Job demand-resources theory: taking stock and looking forward", *Journal of Occupational Health Psychology*, Vol. 22 No. 2, pp. 273-285.

Bakker, A.B., van Emmerik, H. and Euwema, M.C. (2006), "Crossover of burnout and engagement in work teams", *Work and Occupations*, Vol. 33 No. 4, pp. 464-489.

Bakker, A. (2017), "Strategic and proactive approaches to work engagement", *Organizational Dynamics*, Vol. 46, pp. 67-75.

Bartholomew, K.J., Ntoumanis, N., Cuevas, R. and Lonsdale, C. (2014), "Job pressure and ill-health in physical education teachers: the mediating role of psychological need thwarting", *Teaching and Teacher Education*, Vol. 37, pp. 101-107.

Baumeister, R. (1991), *Meanings of Life*, Guilford Press, New York.

Bono, J.E. and Judge, T.A. (2003), "Self-concordance at work: towards understanding the motivational effects of transformational leaders", *Academy of Management Journal*, Vol. 46 No. 5, pp. 554-571.

Breevaart, K., Bakker, A.B., Demerouti, E., Sleebos, D.M. and Maduro, V. (2014), "Uncovering the underlying relationship between transformational leaders and followers' task performance", *Journal of Personnel Psychology*, Vol. 13 No. 4, pp. 194-203.

Caniëls, M.C.J., Semeijn, J.H. and Renders, I.H.M. (2017), "Mind the mindset! the interaction of proactive personality, transformational leadership and growth mindset for engagement at work", *Career Development International*, Vol. 23 No. 1, pp. 48-66.

Carasco-Saul, M., Kim, W. and Kim, T. (2014), "Leadership and employee engagement: proposing research agendas through a review of literature", *Human Resource Development Review*, Vol. 1, pp. 1-26.

Cartwright, S. and Holmes, N. (2006), "The meaning of work: the challenge of regaining employee engagement and reducing cynicism", *Human Resource Management Review*, Vol. 16, pp. 199-208.

Costa, P.L., Passos, A.M. and Bakker, A.B. (2014), "Teamwork engagement: a model of emergence", *Journal of Occupational and Organizational Psychology*, Vol. 87, pp. 414-436.

Costa, S., Ntoumanis, N. and Bartholomew, K.J., (2015), "Predicting the brighter and darker sides of interpersonal relationships: does psychological need thwarting matter?", *Motivation and Emotion*, Vol. 31, pp. 11-24.

De Dreu, C.K.W. (2008), "The virtue and vice of workplace conflict: food for (pessimistic) thought", *Journal of Organizational Behavior*, Vol. 29, pp. 5-18.

de Wit, F.R.C., Greer, L.L. and Jehn, K.A. (2012), "The paradox of intragroup conflict: a meta-analysis", *Journal of Applied Psychology*, Vol. 97 No. 2, pp. 360-390.

Deci, E.L. and Ryan, R.M. (2000), "The 'what' and 'why' of goal pursuits: human needs and the self-determination of behavior", *Psychological Inquiry*, Vol. 11 No. 4, pp. 227-268.

Deci, E.L., Olafsen, A.H. and Ryan, R.M. (2017), "Self-determination theory in work organizations: the state of a science", *Annual Review of Organizational Psychology and Organizational Behavior*, Vol. 4, pp. 19-43.

Demerouti, E., Bakker, A.B., Nachreiner, F. and Schaufeli, W.B. (2001), "The job-demand-resources model of burnout", *Journal of Applied Psychology*, Vol. 85 No. 3, pp. 499-512.

Demerouti, E. (2014), "Design your own job through job crafting", *European Psychologist*, Vol. 19 No. 4, pp. 237-247.

Elgoibar, P., Euwema, M. and Munduate, L. (2017), "Conflict Management", in *Oxford Research Encyclopedia of Psychology*, Oxford University Press, Oxford, pp. 1-28.

Frankl, V. (1992), *Man's Search for Meaning*, Beacon Press, Boston, MA.

Hayes, A.F. (2009), "Beyond baron and kenny: statistical mediation analysis in the new millennium", *Communication Monographs*, Vol. 76 No. 4, pp. 408-420.

Hetland, H., Hetland, J., Andreassen, C.S., Pallesen, S. and Notelaers, G. (2011), "Leadership and fulfillment of the three basic psychological needs at work", *Career Development International*, Vol. 16 No. 5, pp. 507-523.

Jehn, K.A. and Mannix, E.A. (2001), "The dynamic nature of conflict: a longitudinal study of intragroup conflict and group performance", *Academy of Management Journal*, Vol. 44 No. 2, pp. 238-251.

Jehn, K.A. (1995), "A multimethod examination of the benefits and detriments of intragroup conflict", *Administrative Science Quarterly*, Vol. 40 No. 2, pp. 256-282.

Kovjanic, S., Schuh, S.C. and Jonas, K. (2013), "Transformational leadership and performance: an experimental investigation of the mediating effects of basic needs satisfaction and work engagement", *Journal of Occupational and Organizational Psychology*, Vol. 86, pp. 543-555.

Marks, M.A., Mathieu, J.E. and Zaccaro, S.J. (2001), "A temporally based framework and taxonomy of team processes", *Academy of Management Review*, Vol. 25 No. 3, pp. 356-376.

Matlhotra, N.K., Kim, S.S. and Patil, A. (2006), "Common method variance in IS research: a comparison of alternative approaches and a reanalysis of past research", *Management Science*, Vol. 52 No. 12, pp. 1865-1883.

Nishimura, T. and Susuki, T. (2016), "Basic psychological need satisfaction and frustration in Japan: controlling for the big five personality traits", *Japanese Psychological Research*, Vol. 58 No. 4, pp. 320-331.

Oberski, D. (2014), "lavaan.survey: an R package for complex survey analysis of structural equation models", *Journal of Statistical Software*, Vol. 57 No. 1, pp. 1-27.

Piccolo, R.F. and Colquitt, J.A. (2006), "Transformational leadership and job behaviors: the mediating role of care job characteristics", *Academy of Management Journal*, Vol. 49 No. 2, pp. 327-340.

Rahmadani, V.G., Schaufeli, W.B., Ivanova, T.Y. and Osin, E.N. (2019), "Basic psychological need satisfaction mediates the relationship between engaging leadership and work engagement: a cross-national study", *Human Resources Development*, pp. 1-19.

Rispens, S. (2007), "Does fight prohibit helping? The influence of task interdependence and conflict norms on helping behavior during task conflict", *International Journal of Conflict Management*, Vol. 20 No. 2, pp. 158-172.

Römer, M., Rispens, S., Giebels, E. and Euwema, M.C. (2012), "A helping hand? The moderating role of leaders' conflict management behavior on the conflict-stress relationship of employees", *Negotiation Journal*, Vol. 28 No. 3, pp. 253-277.

Rosseel, Y. (2012), "Lavaan: an R package for structural equation modeling", *Journal of Statistical Software*, Vol. 48, pp. 1-36.

Rosso, B.D., Dekas, K.H. and Wrzesniewski, A. (2010), "On the meaning of work: a theoretical integration and review", *Research in Organizational Behavior*, Vol. 30, pp. 91-127.

Rucker, D.D., Preacher, K.J., Tormala, Z.L. and Petty, R.E. (2011), "Mediation analysis in social psychology: current practices and new recommendations", *Social and Personality Psychology Compass*, Vol. 5, pp. 359-371.

Salanova, M., Agut, S. and Peiró, J.M. (2005), "Linking organizational resources and work engagement to employee performance and customer loyalty: the mediation of service climate", *Journal of Applied Psychology*, Vol. 90, pp. 1217-1227.

Schaufeli, W.B. and Bakker, A.B. (2004), "Job demands, job resources, and their relationship with burnout and engagement: a multi-sample study", *Journal of Organizational Behavior*, Vol. 25, pp. 293-315.

Schaufeli, W.B. and Taris, T.W. (2014), "A critical review of the Job Demands-Resources Model: implications for improving work and health", in Bauer, G. and Hammig, O. (Eds), *Bridging Occupational, Organizational and Public Health*, Springer, Dordrecht, pp. 43-68.

Schaufeli, W.B., Salavova, M., Gonzalez-Roma, V. and Bakker, A.B. (2002), "The measurement of engagement and burnout: a two-sample confirmatory factor Analytic approach", *Journal of Happiness Studies*, Vol. 3, pp. 71-92.

Schaufeli, W.B., Taris, T.W. and van Rhenen, W. (2008), "Workaholism, burnout, and work engagement: three of a Kind or three different kinds of employee well-being?", *Applied Psychology: An International Review*, Vol. 57 No. 2, pp. 173-203.

Schaufeli, W.B., Shimazu, A., Hakanen, J., Salanova, M. and De Witte, H. (2019), "An ultra-short me&asure for work engagement: the UWES-3 validation across five countries", *European Journal of Psychological Assessment*, Vol. 35, pp. 577-591.

Schaufeli, W.B. (2015), "Engaging leadership in the job demands-resources model", *Career Development International*, Vol. 20 No. 5, pp. 446-463.

Schaufeli, W.B. (2016), *Engaging Leadership and Need Satisfaction: Concepts and Measurement*, Conceptual Document from the Author, Utrecht.

Schaufeli, W.B. (2017), "Applying the Job Demands-Resources model: a 'how to' guide to measuring and tackling work engagement and burnout", *Organizational Dynamics*, Vol. 46, pp. 120-132.

Schermelleh-Engel, K., Moosbrugger, H. and Müller, H. (2008), "Evaluating the fit of structural equation models: tests of significance and descriptive goodness-of-fit measures", *Methods of Psychological Research Online*. Vol. 8 No. 2, pp. 23-74.

Schneider, B., Yost, A.B., Kropp, A., Kind, C. and Lam, H. (2018), "Workforce engagement: what it is, what drives it, and why it matters for organizational performance", *Journal of Organizational Behavior*, Vol. 39 No. 4, pp. 462-480.

Seligman, M.E.P. and Csikszentmihalyi, M. (2000), "Positive psychology: an introduction", *American Psychologist*. Vol. 55 No. 1, pp. 5-14.

Tavakol, M. and Dennick, R. (2011), "Making sense of cronbach's alpha", *International Journal of Medical Education*, Vol. 2, pp. 53-55.

Tims, M., Bakker, A.B. and Xanthopoulou, D. (2011), "Do transformational leaders enhance their followers' daily work engagement?", *The Leadership Quarterly*, Vol. 22, pp. 121-131.

Tjosvold, D., Wong, A.S.H. and Chen, N.Y.F. (2014), "Constructively managing conflicts in organizations", *Annual Review of Organizational Psychology and Organizational Behavior*, Vol. 1, pp. 545-568.

Tjosvold, D. (2008), "The conflict-positive organization: it depends upon us", *Journal of Organizational Behavior*, Vol. 29, pp. 19-28.

Torrente, P., Salanova, M., Llorens, S. and Schaufeli, W.B. (2012), "Teams make it work: how teamwork engagement mediates between social resources and performance in teams", *Psicothema*, Vol. 24 No. 1, pp. 106-112.

Van den Broeck, A., Vansteenkiste, M., De Witte, H. and Lens, W. (2008), "Explaining the relationships between job characteristics, burnout, and engagement: the role of basic psychological need satisfaction", *Work and Stress*, Vol. 22 No. 3, pp. 277-294.

Van den Broeck, A., Vansteenkiste, M., De Witte, H., Lens, W. and Bart Soetens, B. (2010), "Capturing autonomy, relatedness and competence at work: construction and validation of a work-related basic need satisfaction scale", *Journal of Occupational and Organizational Psychology*, Vol. 83, pp. 981-1002.

Van den Broeck, A., Ferris, D.L., Chang, C. and Rosen, C.C. (2016), "A review of self-determination theory's basic psychological needs at work", *Journal of Management*, Vol. 42 No. 5, pp. 1195-1229.

Van Mierlo, H. and Bakker, A.B. (2018), "Crossover of engagement in groups", *Career Development International*, Vol. 23 No. 1, pp. 106-118.

Vansteenkiste, M. and Ryan, R.M. (2013), "On psychological growth and vulnerability: basic psychological need satisfaction and need frustration as a unifying principle", *Journal of Psychotherapy Integration*, Vol. 23 No. 3, pp. 263-280.

Zhang, X., Cao, Q. and Tjosvold, D. (2011), "Linking transformational leadership and team performance: a conflict mangement approach", *Journal of Management Studies*, Vol. 48 No. 7, pp. 1586-1611.

Zhang, X., Bollen, K., Pei, R. and Euwema, M.C. (2018), "Peacemaking at the workplace: a systematic review", *Negotiation and Conflict Management Research*, Vol. 11 No. 3, pp. 204-224.

Zhao, X., Lynch, J.G. and Chen, Q. (2010), "Reconsidering baron and kenny: myths and truths about mediation analysis", *Journal of Consumer Research*, Vol. 37 No. 2, pp. 197-206.

Zhu, W., Avolio, B.J. and Walumbwa, F.O. (2009), "Moderating role of follower characteristics with transformational leadership and follower work engagement", *Group and Organization Management*, Vol. 34, pp. 590-619.

Further reading

Jehn, K.A., Greer, L.L., Levine, S. and Szulanski, G. (2008), "The effects of conflict types, dimensions, and emergent states on group outcomes", *Group Decision and Negotiation*, Vol. 17, pp. 465-495.

Appendix

Concept	Item	Source
Engaging leadership	My supervisor encourages team members to develop their talents as much as possible My supervisor delegates tasks and responsibilities to team members My supervisor encourages team members to use their own strengths My supervisor encourages collaboration among team members My supervisor actively encourages team members to aim for the same goals My supervisor promotes team spirit My supervisor gives team members enough freedom and responsibility to complete their tasks My supervisor encourages team members to give their own opinion My supervisor recognizes ownership of team member's contributions My supervisor is able to enthuse team members with his/her plans My supervisor makes team members feel that they contribute to something important My supervisor is inspiring	Schaufeli (2016)
Open conflict norms	How much open discussion of issues was there in your group? To what degree was communication in your group open? To what degree was conflict dealt with openly in your workgroup?	Jehn and Mannix (2001)
Basic needs satisfaction	I feel like I can be myself at my job The tasks I have to do at work are in line with what I really want to do I feel free to do my job the way I think it could best be done At work, I feel part of a group At work, I can talk with people about things that really matter to me Some people I work with are close friends of mine I really master my tasks at my job I feel competent at my job I am good at the things I do in my job I have the feeling that I can even accomplish the most difficult tasks at work My job is meaningful for me, personally The work that I do is useful for other people With my work, I contribute to something that goes beyond myself	Van den Broeck *et al.* (2010), Schaufeli (2016)
Work engagement	At my job, I feel strong and vigorous I am enthusiastic about my job I am immersed in my work	Schaufeli *et al.* (2019)

Corresponding author
Wouter Robijn can be contacted at: wouter.robijn@kuleuven.be