



ORIGINAL ARTICLE

The Relationship between Empowering Leadership, Work Characteristics, and Work Engagement among Academics: A SEM Mediation Analysis

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Using theories of empowering leadership, empowerment and social exchange, this paper aims to add to the literature on leadership in higher education by exploring how and why empowering leadership is linked to academics' work engagement through mediation of work characteristics that are crucial to academics: job autonomy, social community at work, recognition, and unreasonable tasks. To investigate this, data from a cross-sectional survey of $N = 3759$ ($n = 3059$) academics and doctoral research fellows from three major Norwegian universities were analyzed using structural equation modeling. The results show that empowering leadership is related to academics' work engagement through the following work characteristics: job autonomy, social community at work, and unreasonable tasks. Empowering leadership was also related to academics' recognition, but recognition was not, in turn, associated with work engagement. Future researchers may consider prospective, experimental, and qualitative designs to extend the results of this study.

Keywords: Academia; higher education; empowering leadership; autonomy; motivation; work engagement

Introduction

Leaders in academia must navigate a situation in which academic autonomy is a fundamental value and therefore, has been argued, should be protected and encouraged by university management (Boyd et al., 2011), while academic activities are becoming increasingly diverse (Musselin, 2007). In the past, the core activities of research and teaching were emphasized more strongly, while academics nowadays engage more in diverse activities, such as proposal writing, maneuvering e-learning programs, and various bureaucratic obligations. Due to this diversification, academics may increasingly perceive many of their work tasks as unreasonable, which risks lowering both their job autonomy (Apostel et al., 2018) and motivation (Schmitt et al., 2015). Lower motivation among academics is, in turn, associated with lower academic productivity (Christensen et al., 2018). A potential remedy for alleviating these risks is effective academic leadership, characterized by the facilitation of participation in vital decisions, the encouragement of open dialogue, the generation of a collegial sense of community, and the provision of recognition (Bryman, 2007). Moreover, academics are professionals, which means they are likely to thrive better under subtler types of leadership behavior, comprised of protection and support, rather than direction and control (Mintzberg, 1998).

In these regards, empowering leadership, defined as leader behaviors that share power with employees and encourage their use of power (Amundsen & Martinsen, 2014; Conger & Kanungo, 1988; Vecchio et al., 2010) shows promise. Empirical research has shown that empowering leadership is positively associated with valued outcomes, such as job satisfaction (Dallner et al., 2000), affective commitment (Albrecht & Andretta, 2011), psychological empowerment (Amundsen & Martinsen, 2014), creativity (Zhang & Bartol, 2010), knowledge sharing, team efficacy, and performance (Srivastava et al., 2006). Empowering leadership has also been found to be positively related to motivation in the form of work engagement (Tuckey et al., 2012).

Relatively little empirical attention has been paid to how and why empowering leadership is associated with motivation (Gilbert & Kelloway, 2014), but researchers have suggested that empowering leadership is related to work engagement because it shapes work characteristics (Tuckey et al., 2012). Based on empowerment and empowering leadership theories (Amundsen & Martinsen, 2014; Bass & Riggio, 2006; Conger & Kanungo, 1988; Dallner et al., 2000; Srivastava et al., 2006; Thomas & Velthouse, 1990; Vecchio et al., 2010), we propose that empowering leadership modifies the perception of work characteristics that are important to academics (i.e., unreasonable tasks, job autonomy, social community at work, and recognition). We further propose that in response to empowering leadership creating favorable working conditions, academics reciprocate with motivation, as outlined by social exchange theory (Settoon et al., 1996;

Cropanzano & Mitchell, 2005). Thus, the aim of this paper is to empirically investigate how and why empowering leadership is associated with work engagement by changing work characteristics that are salient for academics.

Theoretical framework

This study suggests that social exchange theory (Blau, 1964; Settoon et al., 1996; Cropanzano & Mitchell, 2005) can explain how and why empowering leadership associates with academics' work engagement. At its core, social exchange theory proposes that benevolence is reciprocated (Blau, 1964). According to this theory, benevolence and reciprocation should be understood in social terms, above and beyond economic incentives and responses: Employees that are treated well by their leaders, for instance by facilitating important working conditions, are likely to feel obligated to reciprocate with commitment and motivation for their work (Settoon et al., 1996; Cropanzano & Mitchell, 2005). The logic of social exchange theory therefore predicts that facilitating academics' important work characteristics, by means of empowering leadership, will be reciprocated with work engagement.

Empowering leadership is a more participative than a directive form of leadership (Somech, 2005), and it is the constructive transfer from and encouragement of use of power by leaders to employees that separates empowering leadership from other forms of leadership (Amundsen & Martinsen, 2014; Conger & Kanungo, 1988; Vecchio et al., 2010). Transformational and charismatic leadership emphasize leading and inspiring employees (Bass & Riggio, 2006), whereas laissez-faire leadership is a destructive abandonment of obligations and responsibilities (Skogstad et al., 2007). Empowerment and empowering leadership theories propose that sharing and transferring power from leaders to employees lessens bureaucratic hindrances (Bass & Riggio, 2006) and feelings of powerlessness (Conger & Kanungo, 1988), delegates authority and responsibility (Amundsen & Martinsen, 2014), recognizes contributions (Srivastava et al., 2006), and creates motivation (Conger & Kanungo, 1988; Thomas & Velthouse, 1990). In this paper, motivation is conceptualized as work engagement.

Work engagement is defined as a positive and satisfying state of mind, characterized by absorption, dedication, and vigor at work (Schaufeli et al., 2002). It denotes a lasting, pervasive cognitive-affective work-related state that is not subject to any specific conduct, person, occurrence, or entity. Absorption is to be completely focused and immersed in the work, wherein time flies by and it is hard to disengage from the work tasks (Bakker et al., 2008). Dedication is about experiencing importance, challenge, pride, inspiration, and an intense involvement in one's work. Vigor is characterized by a will to devote effort to the work, by being energetic and mentally resilient while working, and by persevering in the face of problems (Bakker et al., 2008). Researchers have found that work engagement is linked to positive outcomes for both employees and employers. Reported benefits include fewer psychosomatic complaints (Schaufeli & Bakker, 2004), better psychological health (Xanthopoulou et al., 2009), improved work performance (Bakker & Bal, 2010;

Halbesleben, 2010), proactive behavior (Salanova & Schaufeli, 2008), increased organizational commitment (Hakanen et al., 2006; Halbesleben, 2010), lower turnover intention (Halbesleben, 2010), and increased academic productivity (Christensen et al., 2018). Thus, enhancing work engagement by way of empowering leadership may provide a range of positive outcomes for both academics and academia, not least in terms of work characteristics important to academics (i.e., job autonomy, social community at work, recognition, and unreasonable tasks).

Job autonomy

Job autonomy can be considered an essential work characteristic for academics and is defined as the perceived degree to which employees can organize and manage when and how they do their specific tasks (Hackman & Oldham, 1975). Autonomy is a core principle for most academics (Boyd et al., 2011; Fredman & Doughney, 2012) and is found to be positively related to academics' well-being, organizational commitment (Boyd et al., 2011), and research performance (Edgar & Geare, 2013). It is also central for reducing the strain attributed to conflicts between teaching and research goals (Esdar et al., 2016). Empowering leadership overlaps with job autonomy in that a crucial characteristic of empowering leadership is its socio-structural aspect, referring to a delegation of formal authority and responsibility from leaders to employees (Amundsen & Martinsen, 2014). Empowering leadership is therefore likely to increase job autonomy. Following social exchange theory, (Settoon et al., 1996; Cropanzano & Mitchell, 2005), facilitating job autonomy is, in turn, likely to be reciprocated with work engagement. Having job autonomy, a fundamental value for most academics, protected and enhanced by empowering leaders who constructively share with academics the power to exert influence over the parameters of their work tasks is probably appreciated and therefore reciprocated with commitment and motivation. This supposition is supported by researchers that have found a positive relationship between job autonomy and work engagement (Halbesleben, 2010). Thus, empowering leadership is likely to be associated with work engagement because it increases academics' job autonomy.

Social community at work

A good social community at work is arguably an important work characteristic for academics and is defined as the degree to which academics experience themselves as part of a work community, with cooperation between colleagues, and a good atmosphere (Francioli et al., 2018). One review of the literature writes that it is 'striking' how important a positive social community appears to be for academics (Bryman, 2007: 701). This review also found that effective academic management helps generate a collegial and positive sense of community among academics. Moreover, researchers have shown that social community is positively associated with academics' satisfaction and intention to remain (Ambrose et al., 2005). Scholars have found that positive leadership behaviors—such as empowering leadership—enable prosocial reciprocation

among employees and therefore generates a better social community at work (Francioli et al., 2018). It is furthermore consistent with social exchange theory (Settoon et al., 1996; Cropanzano & Mitchell, 2005) that facilitating a social community at work will, in turn, be reciprocated with work engagement. Empowering leaders, that by their positive example help create a social community at work through positive leadership behaviors, is likely to be reciprocated with motivation and commitment among academics. This argument finds support in empirical research showing that a concept similar to social community at work, social support, predicts work engagement (Halbesleben, 2010). Thus, we hypothesize that empowering leadership is associated with work engagement because it relates positively to academics' sense of social community at work.

Recognition

Recognition appears to be an essential work characteristic for academics and is in the present study defined as being recognized, respected, and treated fairly by management (Pejtersen et al., 2010). Academics who perceive themselves as being considered and recognized are more committed to their organization (Winter & Sarros, 2002; Winter et al., 2000) and are more satisfied with their jobs (Fernandez & Vecchio, 1997). One review of the literature shows that recognition is considered part of effective academic management (Bryman, 2007). Recognizing employees'—in this case, academics'—contributions is an important aspect of empowering leadership (Srivastava et al., 2006). Empowering leadership is therefore likely to impact academics' sense of recognition. In line with social exchange theory (Settoon et al., 1996; Cropanzano & Mitchell, 2005), it is likely that academics in turn will reciprocate the increase of recognition with work engagement. The respect, recognition, and fair treatment, of which empowering leaders create a sense of through their constructive transfer and sharing power, is probably acknowledged and reciprocated by academics with commitment and motivation. The related concept of appreciation has been found to predict work engagement (Bakker et al., 2007), while the absence of rewards predicts demotivation (Bakker et al., 2003). We hypothesize that empowering leadership is associated with work engagement because it increases academics' sense of recognition.

Unreasonable tasks

Unreasonable tasks, a facet of illegitimate tasks, are a consequential work characteristic for academics. Unreasonable tasks are defined as those tasks inappropriate to ask of someone considering his or her occupational range, status, or both (Semmer et al., 2010). The activities of academics are increasingly diverse (Musselin, 2007), which may run the risk that academics perceive their work tasks as unreasonable. Researchers have found that the perceived degree of unreasonable tasks are associated with exhaustion (Aronsson et al., 2012), poorer mental health (Madsen et al., 2014), and lesser work engagement (Schmitt et al., 2015). Empowering leadership has been argued to lessen both bureaucratic hindrances (Bass & Riggio, 2006) and feelings of powerlessness among employees (Conger

& Kanungo, 1988). It is therefore likely that employees with empowering leaders may feel safer and more inclined to voice their concerns over unreasonable tasks, and therefore the empowering leader is less likely to distribute unreasonable tasks to the employees, thus decreasing the employees' perception of having unreasonable tasks.

Arguably, decreasing academics' sense of unreasonable tasks by way of empowering leadership is, in turn, likely to enhance their sense of job autonomy, social community at work, and recognition. It is likely to enhance academics' job autonomy because feeling safe to voice concerns over unreasonable working conditions may enhance their sense that they can impact their situation, and they will therefore experience increased job autonomy. This proposition is supported by research showing a negative association between unreasonable tasks and job autonomy (Apostel et al., 2018). Decreasing unreasonable tasks due to empowering leadership is likely to increase academics' sense of social community at work because the unburdening of unreasonable tasks sends a social signal that they are cared for (Semmer et al., 2015), which can enable prosocial reciprocations among employees that help create a social community at work (Francioli et al., 2018). Decreasing unreasonable tasks due to empowering leadership is likely to increase academics' recognition because the removal of unreasonable tasks may be perceived as a sign that the employees' contributions are appreciated and recognized (Semmer et al., 2015). In sum, we argue that empowering leadership, in addition to associating with job autonomy, social community at work, and recognition directly, also relates to these work characteristics indirectly via a reduction in the perception of having unreasonable tasks.

Contributions

The overarching contribution of the present paper is to empirically investigate how and why empowering leadership associates with work engagement for academics. Based on empowerment and empowering leadership theories (Amundsen & Martinsen, 2014; Bass & Riggio, 2006; Conger & Kanungo, 1988; Dallner et al., 2000; Srivastava et al., 2006; Thomas & Velthouse, 1990; Vecchio et al., 2010), we propose that empowering leadership relates to work engagement because it impacts critically important work characteristics for academics (i.e., job autonomy, social community at work, recognition, and unreasonable tasks), which, following social exchange theory (Settoon et al., 1996; Cropanzano & Mitchell, 2005), is reciprocated with work engagement. For a visual representation, see **Figure 1**. The following seven hypotheses can be formalized:

Hypothesis 1: Empowering leadership and work engagement is positively mediated by job autonomy.

Hypothesis 2: Empowering leadership and work engagement is positively and serially mediated by, first, unreasonable tasks and, then, job autonomy.

Hypothesis 3: Empowering leadership and work engagement is positively mediated by social community at work.

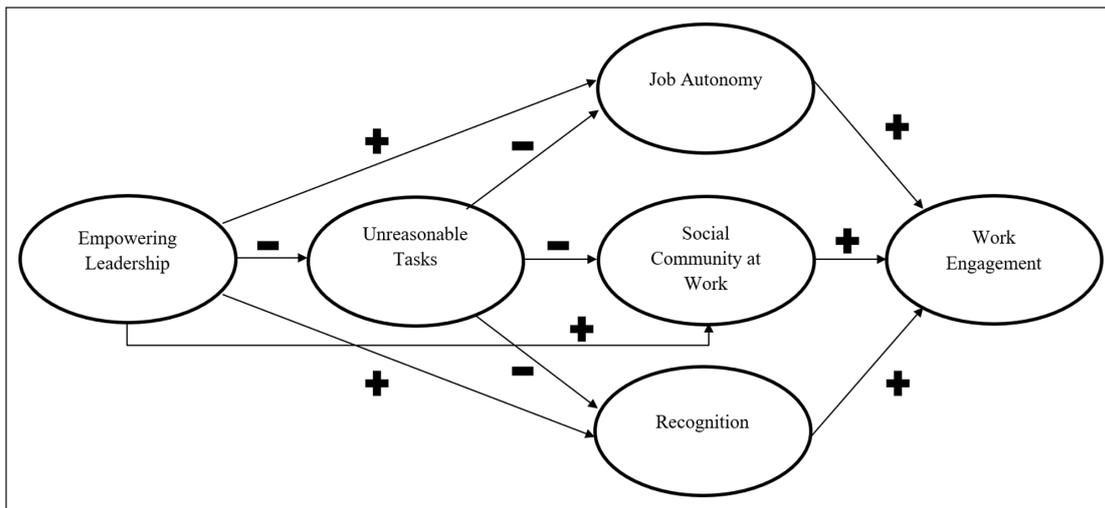


Figure 1: Visual representation of the model.

Hypothesis 4: Empowering leadership and work engagement is positively and serially mediated by, first, unreasonable tasks and, then, social community at work.

Hypothesis 5: Empowering leadership and work engagement is positively mediated by recognition.

Hypothesis 6: Empowering leadership and work engagement is positively and serially mediated by, first, unreasonable tasks and, then, recognition.

Hypothesis 7: As a whole, empowering leadership and work engagement is positively and serially mediated by, first, unreasonable tasks and, then, job autonomy, social community at work, and recognition.

Methods

Participants

The survey data set was comprised of $N = 3759$ academics employed at three major Norwegian universities. Of the sample size of 3759 respondents, 700 were excluded from all analysis, making $n = 3059$. These 700 respondents were excluded because 336 respondents had missing values and were deleted listwise, while 364 respondents were excluded because they reported that one or more of the empowering leadership items were not applicable to their situation. From autumn 2013 to spring 2015, during teaching time, academics from all faculties and departments (e.g., natural sciences, humanities, and social sciences) were invited to answer the survey. Due to concerns for anonymity, the universities did not provide data that identified to which faculties and departments the individual respondents belonged. Approximately 69% of the sample were tenured professors and associate professors, whereas about 31% were 'doctoral research fellows.' Examining official statistics from the Norwegian Centre for Research Data, we found that in the target population (counted in the same year and in full-time equivalents), 63% were professors and associate professors and 37% were doctoral research fellows. Approximately 43% of the sample were women and 57% were men; in the population, 38% full-time equivalents were women.

Roughly 17% of the sample were under 30 years, 28% were 30–39 years, 24% were 40–49 years, 17% were 50–59 years, and 14% were 60 years or more.

Procedure

The data were collected using e-mail and the survey data collection software SelectSurvey. The survey data were collected using the mapping tool Knowledge Intensive Working Environment Survey Target ('KIWEST'), which is part of the ARK (Norwegian acronym for 'Working environment and working climate surveys') Intervention Program (Innstrand et al., 2015).

The ARK Intervention Program sent e-mails to 5696 academics containing a link to the KIWEST survey and 3759 completed it. Thus, the response rate was 66%. The e-mail informed participants that their participation was voluntary and would be kept confidential. Participants were also informed that the project was reported to the Data Protection Official for Research, Norwegian Social Science Data Services A/S; that anonymized data could be used for research purposes; and that approval for this use of the data had been obtained from the Norwegian Data Protection Authority. On the first page of the survey, the participants were informed on how to give and withhold consent. Thus, ethical standards were satisfactorily met. Common method bias was partly counteracted by randomizing the order of some of the items (Meade et al., 2007).

Measures

Work engagement

Work engagement was measured using the validated Norwegian short version of the Utrecht Work Engagement Scale-9 (UWES-9; Nerstad et al., 2010; Schaufeli et al., 2006). The short version contains nine items, prefaced with 'how often do you have the following experiences?', that participants rate on a seven-point Likert scale, from 'never' (one) to 'every day' (seven). UWES-9 measures three sub-dimensions of work engagement—vigor, dedication, and absorption—with three items pertaining to each. An example item for vigor is 'at my work, I feel bursting

with energy'; for dedication, 'I am enthusiastic about my job'; and for absorption, 'I feel happy when I am working intensely.'

Empowering leadership

Empowering leadership was assessed with three items that were validated in the General Nordic Questionnaire (Dallner et al., 2000). The participants answered on a five-point Likert scale, ranging from '*strongly disagree*' (1) to '*strongly agree*' (5). They could also select '*not applicable*.' The items are 'my immediate superior encourages me to speak up when I have a different opinion', 'my immediate superior contributes to the development of my skills', and 'my immediate superior encourages me to participate in important decisions'. In the preface to these items, immediate superior was defined as the individual with which the participants had or will have employee appraisal interviews.

Job autonomy

Four previously validated items measured job autonomy (Näswall et al., 2010). The participants answered on a five-point Likert scale, ranging from '*strongly disagree*' (1) to '*strongly agree*' (5). An example item is 'I have a sufficient degree of influence in my work.'

Social community at work

Social community at work was assessed with three items that were validated in the second version of the Copenhagen Psychosocial Questionnaire (Pejtersen et al., 2010), with the exception of one item, which was replaced. The former item measured degree of cooperation ('Is there good cooperation between the colleagues at work?'), while the replacement item measured degree of fellowship ('There is a good sense of fellowship among the colleagues in my unit'). This switch was made because ARK had qualitatively investigated academics' conception of cooperation and revealed that a competitive climate was not generally seen as mutually exclusive of a strong sense of social community at work. Thus, the replacement item described a sense of social community in terms that applied to an academic context. The participants answered on a five-point Likert scale ranging from '*strongly disagree*' (1) to '*strongly agree*' (5).

Recognition

ARK measured recognition using three items that were validated in COPSOQ II by Pejtersen et al. (2010). The participants rated the items on a five-point Likert scale, from '*strongly disagree*' (1) to '*strongly agree*' (5). An example item for recognition is 'my work is recognized and appreciated by my unit management.'

Unreasonable tasks

We measured unreasonable tasks with four items from the Bern Illegitimate Task Scale (Semmer et al., 2010). Responses ranged from '*strongly disagree*' (1) to '*strongly agree*' (5). An example item is 'I must carry out work which I think should be done by someone else.'

Control variables

We controlled the mediator variables and the dependent variable by gender and age. We coded women as 1 and men as 2; age was reported into brackets of 'below 30 years' (1), '30–39 years' (2), '40–49 years' (3), '50–59 years' (4), and '60 years or more' (5). Age was reported this way due to concerns for anonymity on part of the ARK Intervention Program. In the analysis, age was treated as an interval scale.

Statistical analysis

We used Stata version 14 to screen data and to provide descriptive statistics and structural equation modeling (SEM). To test the hypotheses, we followed the SEM procedure of Mehmetoglu and Jakobsen (2016). Thus, a maximum likelihood (ML) full SEM analysis was conducted. A full SEM consists of two parts: a measurement part, in which the factor structure is examined, and a structural part, which allows for testing the hypothesized structural relationships between latent variables. The hypothesis testing was done according to the established procedures of Zhao, Lynch, and Chen (2010). Missing data were deleted list-wise.

Model fit

Acceptable fit for the measurement model was calculated. The tested measurement model included indicators that loaded on their theorized and previously validated latent variables (see measures). Work engagement was specified to be a second-order latent variable wherein the first-order latent variables of absorption, dedication, and vitality each were loaded on by their three hypothesized indicators. In turn, absorption, dedication, and vitality loaded on a second order latent variable: work engagement. The latent variables (i.e., empowering leadership, unreasonable tasks, job autonomy, social community at work, recognition, and work engagement) were configured to covary with each other. None of the indicators' error variances were specified to covary. A non-significant chi-squared (χ^2) test suggests acceptable model fit (Mehmetoglu & Jakobsen, 2016); however, it is extremely sensitive to large samples. Thus, the following indices are recommended, with associated values indicating acceptable fit: standardized root mean squared residual (SRMR) ≤ 0.10 , root mean squared error of approximation (RMSEA) ≤ 0.10 , comparative fit index (CFI) ≥ 0.90 , and Tucker-Lewis index (TLI) ≥ 0.90 (Mehmetoglu & Jakobsen, 2016).

Validity and reliability

Valid and reliable indicators and latent variables of the measurement model were tested. Standardized factor loadings (SFL) of 0.40 or greater suggest indicator reliability (Mehmetoglu & Jakobsen, 2016), meaning that a latent variable sufficiently explains an indicator's variance (Brown, 2015). With the command 'relicoeff' in Stata, Raykov's reliability coefficients (RRC) of the latent variables were tested. Compared to Cronbach's α , RRC does not have the tendency to underestimate reliability and is therefore more accurate (Raykov, 1997). RRC above

0.70 indicate factor reliability (Mehmetoglu & Jakobsen, 2016). The constructs' validities can be affirmed when both discriminant and convergent validity are established (Mehmetoglu & Jakobsen, 2016); to do so, the command 'condisc' in Stata was used. An average variance extracted (AVE) equal to or greater than 0.50 points to convergent validity, which means that the indicators of the factors are adequately correlated (Mehmetoglu & Jakobsen, 2016). An AVE greater than the squared correlations between the latent variables suggests discriminant validity (Fornell & Larcker, 1981) and demonstrates that the factors share a low enough amount of variance to be considered distinct from each other (Mehmetoglu & Jakobsen, 2016).

Hypotheses testing

The hypothesized structural model was created by extending the established measurement model. The covariances between the latent variables were replaced with the hypothesized relationships between the latent variables as seen in **Figure 1**. In addition, relationships were specified from empowering leadership on work engagement, from unreasonable tasks on work engagement, and from the control variables (i.e., gender and age) on all the mediators as well as onto work engagement. Acceptable fit for our hypothesized structural model was established by the same thresholds for acceptable fit as the measurement model (Mehmetoglu & Jakobsen, 2016). To strengthen the empirical support for the hypothesized theoretical model, comparisons to plausible rival models, as informed by Iacobucci, Saldanha, and Deng (2007), were conducted. Thus, we compared the fit of the hypothesized model (M0) to a model (M1) where the ordering of the mediators was reversed (i.e., empowering leadership → job autonomy/social community at work/recognition → unreasonable tasks → work engagement); a model (M2) where the causality of the hypothesized model was reversed (i.e., work engagement → job autonomy/social community at work/recognition → unreasonable tasks → empowering leadership); a model (M3) where the mediators were specified to be exogenous and the exogenous specified to be a mediator (i.e., job autonomy/social community at work/recognition → unreasonable tasks → empowering leadership → work engagement); and a model (M4) where

all mediators were specified to be parallel mediators (i.e., empowering leadership → unreasonable tasks/job autonomy/social community at work/recognition → work engagement).

We then tested our hypotheses according to the procedures, logic, and typology for mediation established by Zhao and colleagues (2010). Thus, we tested hypothesis 1, 3, and 5 by examining the indirect effects of the final structural model. Moreover, we tested hypothesis 2, 4, and 6 by investigating the individual indirect effects of empowering leadership on work engagement—first through unreasonable tasks, then through job autonomy, social community at work, and recognition. The indirect effects of hypotheses 2, 4, and 6 were calculated with the delta method for nonlinear combinations of parameters, which allows individual indirect effects to be investigated in cases of several simultaneous mediators. Hypothesis 7 was tested by calculating observing the structural model's total indirect effect of empowering leadership on work engagement through unreasonable tasks and through job autonomy, social community at work, and recognition. The effect sizes of the standardized coefficients were categorized according to the recommendations of Mehmetoglu and Jakobsen (2016). Thus, small effects were equal to or below 0.09, moderate effects were between 0.1 and 0.2, and large effects were equal to or above 0.2.

Results

Descriptive statistics

Table 1 shows correlations between latent variables and control variables, along with their average indicator means and standard deviations.

Measurement model

Model fit

The fit of the measurement model was acceptable ($n = 3086$, $\chi^2(257) = 2942.93$, $p < 0.001$; SRMR = 0.05; RMSEA = 0.06; CFI = 0.95; TLI = 0.94). The measurement model did not include age and gender. Therefore, 27 cases were included in the measurement model ($n = 3086$), which were deleted listwise in the final structural model ($n = 3059$) due to missing values on age and/or gender.

Table 1: Means (M), standard deviations (SD) and correlations (n = 3059).

Variables	M	SD	1.	2.	3.	4.	5.	6.	7.
1. Work engagement	5.65	1.24	–						
2. Empowering leadership	3.74	1.08	0.31***	–					
3. Job autonomy	3.93	0.80	0.39***	0.55***	–				
4. Social community at work	3.87	0.91	0.42***	0.60***	0.58***	–			
5. Recognition	3.76	0.94	0.37***	0.70***	0.63***	0.69***	–		
6. Unreasonable tasks	2.43	0.98	–0.28***	–0.40***	–0.63***	–0.49***	–0.53***	–	
7. Age	–	–	0.12***	–0.20***	–0.18***	–0.12***	–0.06**	0.13***	–
8. Gender	–	–	–0.01	0.02	0.05**	0.00	0.08***	–0.04*	0.08***

Note: * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

Validity and reliability

All SFLs were above 0.40 and statistically significant, suggesting indicator reliability. The AVE of unreasonable tasks (0.48) pointed towards problems with convergent validity; thus, we deleted the indicator with the lowest SFL (0.57): ‘I must carry out work that puts me in awkward positions.’ The new AVE of unreasonable tasks suggested no problems with convergent validity (0.53). After this modification, all constructs had convergent validity with AVEs above 0.50. Because all the AVEs were larger than the squared correlations (see **Table 2**), the constructs also showed discriminant validity, demonstrating that, for instance, recognition and empowering leadership are distinct constructs despite a 0.70 correlation (see **Table 1**). Because both discriminant and convergent validity were established, construct validity can be inferred. The RRCs of all latent variables indicated factor reliability. For details about AVEs, squared correlations, and RRCs, see **Table 2**.

Structural model

Model fit

The fit of the theorized structural model was acceptable ($n = 3059$, $\chi^2 (298) = 3590.21$, $p < 0.001$; SRMR = 0.05; RMSEA = 0.06; CFI = 0.94; TLI = 0.92) and had better fit than the rival models (see **Table 3**).

Hypotheses

Table 4 shows the standardized direct effects of the resulting structural model, **Table 5** shows the standardized indirect effects, and **Figure 2** shows a visualization of the structural model. The control variable age was associated with work engagement ($B = 0.21$, $p < 0.001$), job autonomy ($B = -0.04$, $p < 0.01$), recognition ($B = 0.10$, $p < 0.001$) and unreasonable tasks ($B = -0.06$, $p < 0.01$), but not with social community at work ($B = 0.02$, $p > 0.05$). The other control variable, gender (1 = woman and 2 = man), was associated with work engagement ($B = -0.04$, $p < 0.01$), recognition ($B = 0.04$, $p < 0.01$) and unreasonable tasks ($B = -0.04$, $p < 0.05$), but not with job autonomy ($B = 0.02$, $p > 0.05$) nor social community at work ($B = -0.03$, $p > 0.05$).

In hypothesis 1, we predicted that empowering leadership and work engagement would be positively mediated by job autonomy. The results supported the hypothesis: the indirect effect was positive, small, and significant ($B = 0.09$, $p < 0.001$), which according to the typology of

Table 3: Model comparisons (n = 3059).

Models	χ^2	df	SRMR	RMSEA	CFI	TLI
M0	3590.21	298	0.05	0.06	0.94	0.92
M1	4014.37	298	0.06	0.06	0.93	0.91
M2	4003.49	298	0.06	0.06	0.93	0.91
M3	4138.55	298	0.06	0.07	0.92	0.91
M4	4587.06	301	0.07	0.07	0.92	0.90

Table 4: Standardized direct effects of the structural model.

Exogenous variables	Endogenous variables	Direct effects
Empowering leadership	Work engagement	0.03
Unreasonable tasks		0.03
Job autonomy		0.25***
Social community at work		0.26***
Recognition		0.07
Age		0.21***
Gender		-0.04**
Empowering leadership	Job autonomy	0.35***
Unreasonable tasks		-0.53***
Age		-0.04**
Gender		0.02
Empowering leadership	Social community at work	0.49***
Unreasonable tasks		-0.35***
Age		0.02
Gender		-0.03
Empowering leadership	Recognition	0.60***
Unreasonable tasks		-0.35***
Age		0.10***
Gender		0.04**
Empowering leadership	Unreasonable task	-0.38***
Age		0.06**
Gender		-0.04*

Note: * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

Table 2: Squared correlations matrix, AVEs, and RRCs (n = 3059).

Variables	1.	2.	3.	4.	5.	6.	AVE	RRC
1. Work engagement	-						0.80	0.93
2. Empowering leadership	0.10	-					0.76	0.80
3. Job autonomy	0.16	0.31	-				0.50	0.84
4. Social community at work	0.18	0.36	0.34	-			0.64	0.89
5. Recognition	0.14	0.49	0.40	0.47	-		0.72	0.76
6. Unreasonable tasks	0.08	0.15	0.40	0.23	0.28	-	0.53	0.90

Table 5: Standardized indirect effects of the structural model.

Exogenous variables	Mediator(s)	Endogenous variables	Indirect effects
Empowering leadership	Unreasonable tasks (Med1) and Job autonomy (Med2)	Work engagement	0.05***
	Unreasonable tasks (Med1) and Social community at work (Med2)		0.03***
	Unreasonable tasks (Med1) and Recognition (Med2)		0.01
	Job autonomy/Social community at work/Recognition/Unreasonable tasks		0.31***
	Job autonomy		0.09***
	Social community at work		0.13***
	Recognition		0.04
	Unreasonable tasks		0.04
Unreasonable tasks	Job autonomy		-0.13***
	Social community at work		-0.09***
	Recognition		-0.02
	Job autonomy/Social community at work/Recognition		-0.29***
Empowering leadership	Unreasonable tasks	Job autonomy	0.14***
		Social community at work	0.10***
		Recognition	0.12***

Notes: M1 = First mediator and M2 = Second mediator, * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

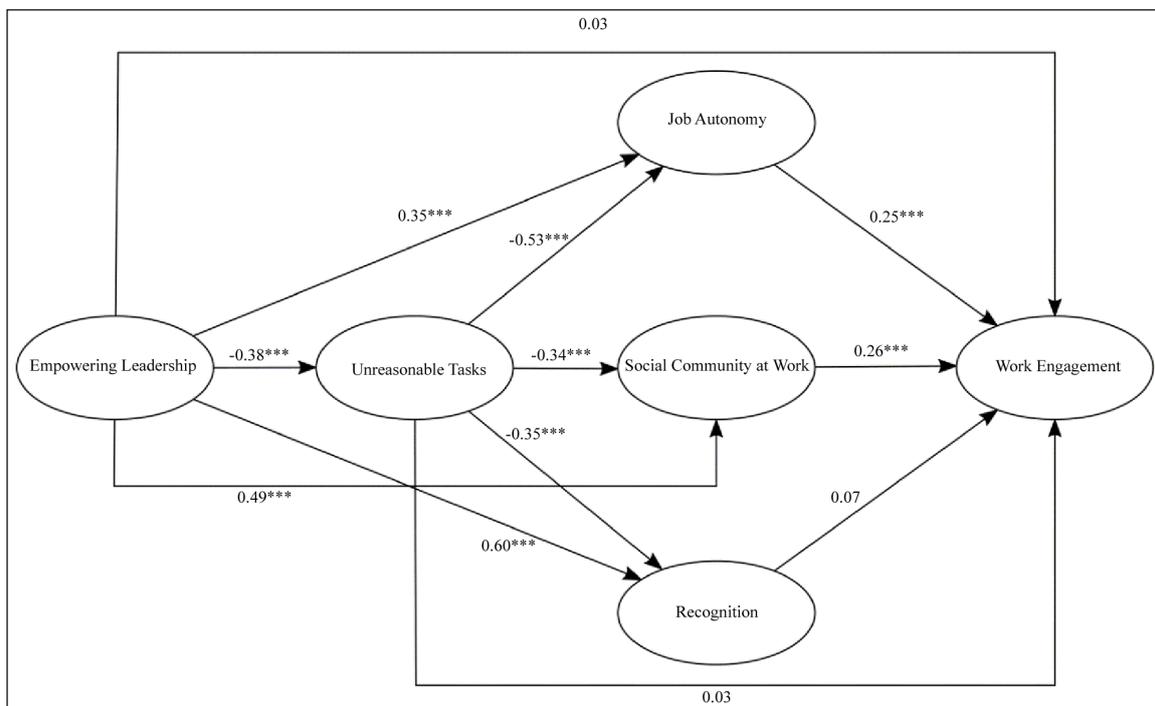


Figure 2: Visualization of structural model with standardized direct effects.

Note: * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

Zhao and colleagues (2010) points to a complementary mediation as the multiplication of all paths resulted in a positive product. In hypothesis 2, we predicted that empowering leadership and work engagement would be positively mediated, first by unreasonable tasks, then

by job autonomy. The results supported the hypothesis: the indirect effect was positive, small, and significant ($B = 0.05, p < 0.001$), which, following the typology of Zhao and colleagues (2010), shows complementary mediation as the product of the paths were positive.

In hypothesis 3, we predicted that empowering leadership and work engagement would be positively mediated by social community at work. The results supported hypothesis 3: the indirect effect was positive, moderate, and significant ($B = 0.13, p < 0.001$), which according to the typology of Zhao and colleagues (2010) demonstrates a complementary mediation as the multiplication of all paths resulted in a positive product. In hypothesis 4, we predicted that empowering leadership and work engagement would be mediated first by unreasonable tasks, then by social community at work. The results supported hypothesis 4: the indirect effect was positive, small, and significant ($B = 0.03, p < 0.001$), which, following the typology of Zhao and colleagues (2010), shows complementary mediation as the product of the paths were positive.

In hypothesis 5, we predicted that empowering leadership and work engagement would be positively mediated by recognition. The results did not support hypothesis 5 as the indirect effect was statistically insignificant ($B = 0.04, p > 0.05$), which demonstrates non-mediation. In hypothesis 6 we predicted that empowering leadership and work engagement would be mediated first by unreasonable tasks, then by recognition. The results did not support this hypothesis as the indirect effect was not significant ($B = 0.01, p > 0.05$), which shows non-mediation.

Hypothesis 7 predicted that, as a whole, empowering leadership and work engagement is mediated by unreasonable tasks and by job autonomy, social community at work, and recognition. The results supported the hypothesis: the indirect effect of empowering leadership on work engagement through all the mediators was positive, large, and significant ($B = 0.31, p < 0.001$). The non-significant indirect effects of empowering leadership and work engagement through recognition (see hypothesis 5 and 6) indicate that recognition does not contribute to this mediation (Zhao et al., 2010), only unreasonable tasks, job autonomy, and social community at work. Nevertheless, the direct effect between empowering leadership and work engagement was not significant ($B = 0.03, p > 0.05$), which, according to the typology of Zhao and colleagues (2010), demonstrates an indirect-only mediation (i.e., full mediation). The structural model explained 25% of the variance in work engagement.

Discussion

The aim of this study was to empirically investigate how empowering leadership may be associated with academics' work engagement by mediation through work characteristics (Tuckey et al., 2012). Based on theories about empowerment and empowering leadership (Amundsen & Martinsen, 2014; Bass & Riggio, 2006; Conger & Kanungo, 1988; Dallner et al., 2000; Srivastava et al., 2006; Thomas & Velthouse, 1990; Vecchio et al., 2010), as well as social exchange theory (Settoon et al., 1996; Cropanzano & Mitchell, 2005), we intended to add to literature by ascertaining how and why empowering leadership is associated with motivation. A contribution that fills a gap pointed out by Gilbert and Kelloway (2014).

Tuckey and colleagues (2012) found a positive relationship between empowering leadership and work engagement and suggested that it is the shaping of work characteristics that mediates this relationship. The results of this study confirmed this general suggestion but add upon it by providing knowledge on which concrete work characteristics mediate between empowering leadership and work engagement for academics. Empowering leadership and work engagement were found to be fully mediated through the following work characteristics that are important to academics: job autonomy, social community at work, and unreasonable tasks. It therefore appears that increasing these work characteristics for academics through empowering leadership is reciprocated with work engagement, as outlined by social exchange theory (Settoon et al., 1996; Cropanzano & Mitchell, 2005). Contrary to expectations, however, increased recognition was not related to an increase in work engagement, and the direct relationship between recognition and work engagement was not significant. Thus, recognition does not appear to be reciprocated with work engagement among academics. A potential explanation for this surprising result can be that academics do not experience that recognition from leaders is something for which to reciprocate with work engagement, feeling that acknowledgement from peers and from publicizing their work are acknowledgement enough. Nevertheless, the results suggest that empowering leadership enhances academics' work engagement by reducing their unreasonable tasks and by elevating their job autonomy and their social community at work. To validate the findings of this cross-sectional study, future researchers may want to employ a longitudinal design.

The results further add to the literature by providing empirical support for empowerment and empowering leadership theories that postulate what consequences sharing and transferring power from leaders to employees have. The positive full mediation between empowering leadership and work engagement reinforces that motivation is an important consequence of empowerment by leaders, as argued by Conger and Kanungo (1988) and Thomas and Velthouse (1990). That empowering leadership was found to be negatively associated with unreasonable tasks suggests that it reduces bureaucratic hindrances, as argued by Bass and Riggio (2006). The negative relationship between empowering leadership and job autonomy indicates that empowering leadership is a form of leadership that delegates authority and responsibility, as outlined by Amundsen and Martinsen (2014). The positive relation between empowering leadership and recognition suggests that empowering leadership behaviors are perceived as a recognition of contributions, as proposed by Srivastava and colleagues (2006). Finally, the positive relationship between empowering leadership and social community at work indicates that empowering leadership enables prosocial reciprocity among employees, which make for an improved social community at work, as argued by Francioli and colleagues (2018). However, to conclude with more confidence given this study's cross-sectional design, there is need for more research that goes more in depth on the specific relationships.

The results further suggest that empowering leadership may be a type of leadership that can be considered effective academic management as it enables participation in vital decisions, encourages open dialogue, generates a collegial sense of community (Bryman, 2007), provides recognition and protects academics' autonomy (Boyd et al., 2011), addresses the increasing task diversification that academics face (Musselin, 2007), and increases motivation that heightens academic productivity (Christensen et al., 2018). Thus, empowering leadership can be one way to handle many of the risks that face today's academia.

Limitations

The strengths of the current study are a large sample size, advanced statistical analysis that fits the hypotheses, a measurement model with both valid and reliable constructs, acceptable approximate fit of both the measurement and structural models, and a high response rate considering the population of interest, indicating external validity.

Due to the cross-sectional design, it is possible that the direction of the relationships between variables are opposite of what was proposed in this study. Namely, that employees with higher work engagement perceive their job autonomy, social community at work, and recognition to be higher and their unreasonable tasks to be lower, which in turn prompts them to think of their leaders as more empowering. Second and relatedly, the study's design is cross-sectional; therefore, the interpretations of the results should be regarded as supportive, not conclusive. Triangulation through prospective, experimental, and qualitative studies may be considered to extend, object to, or provide nuance to the interpretations of this study, including the direction of the relationships. Moreover, several participants shared environments at the departmental level, the faculty level, and the university level. These shared environments violate the independent-participants assumption of ordinary regression models (Mehmetoglu & Jakobsen, 2016). Therefore, it is possible that the effects are at the group level instead of at the individual level, something for which multilevel analysis controls. However, multilevel analysis was not available for this study, because data were not collected for who shared environments with whom. Future researchers may consider examining whether different departments, faculties, and universities are distinct from each other, to the point of biasing analysis, and then consider implementing multi-level analysis.

Conclusion

In this paper we used empowerment and empowering leadership theories, as well as social exchange theory, to empirically investigate how and why empowering leadership is associated with work engagement among academics. We argued that empowering leadership is related to work engagement because empowering leadership facilitates the perception of the following work characteristics that are crucial for academics: job autonomy, social community at work, recognition, and unreasonable tasks. The results showed that empowering

leadership is positively related to work engagement because academics' job autonomy, social community at work, and unreasonable tasks mediate this relationship. To confirm or nuance the results and interpretations of this study, future researchers may want to employ longitudinal, experimental or qualitative designs.

Competing Interests

The authors have no competing interests to declare.

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