

(Un)Blocking the Engagement Enhancing Effects of Challenge Demands in Telework: A Three-Way Interaction with Work Interruptions and Leader Member Exchange

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Due to the COVID-19 pandemic, where physical distancing is essential to flatten the epidemiological curve of infections, the numbers of individuals working in a home-based telework setting drastically increased (Gartner Inc., 2020). This study's data collection took place during the COVID-19 pandemic, in a lockdown period where not only employees and possibly their partners worked from home, but also childcare institutions and schools had closed down. Engaging in home-based telework given such exceptional circumstances likely results in additional situational constraints for employees (Cho, 2020; Rudolph et al., 2020). By targeting the intersection between job demands, job resources and home-based demands, this study aims at gaining insight into the work experience of home-based teleworkers during a lockdown period. Specifically, we address the question how employees can thrive on challenge demands despite unfavorable home-based boundary conditions.

Drawing on the challenge-hindrane framework, which operates on the assumption that there are two different types of job demands: challenges (e.g., time pressure) and hindrances (e.g., interruptions), we argue that challenge demands positively affect employee work engagement (Crawford et al., 2010). Specifically, by using activation theory (Gardner & Cummings, 1988), which states that optimal levels of activation occur at moderate levels of demands, we assume a curvilinear relationship in the shape of an inverted U between challenge demands and work engagement (Hypothesis 1, cf. Schmitt et al., 2015; Sheng et al., 2019).

Further, given that organizational (i.e., mandatory telework) and political (i.e., closing childcare facilities and schools) measures result in all household members being home most of the time, we argue that home-based work interruptions pose a hindrance stressor (Brixey et al., 2007) that is particularly pronounced during the lockdown period. Interruptions break the continuity of task performance and result in additional challenges for the interrupted individual (Puranik et al., 2020). These additional demands cost effort (Brixey et al., 2007) and are associated with a loss of energy (Hobfoll, 2011). Once energy is invested, overall energy levels deteriorate rendering the accomplishment of challenging demands increasingly difficult (Hobfoll, 1989). If individuals are not able to meet challenge demands, these demands do no longer entail the potential for achieving employees' valued goals. Thus, we argue that home-based work interruptions create an environment where challenge demands lose their engagement enhancing potential (Hypothesis 2).

Finally, we propose that a high relationship quality between employees and their leaders, that is leader-member exchange (LMX; Graen, 1976; Graen & Uhl-Bien, 1995) may pose a relevant resource given the exceptional conditions of working from home during a lockdown period. Research shows that employees who have high quality relationships with their leaders possess access to additional valued resource channels (Graen & Uhl-Bien, 1995; Liao et al., 2016). They have higher levels of influence and may negotiate with their leaders on issues such as the assignment of tasks or flexibility of working hours (Culbertson et al., 2009; Liao et al., 2016). Furthermore, in high LMX relationships leaders are aware of followers' needs and provide additional resources if necessary (e.g. social support; Schyns et al., 2008). Hence high LMX may facilitate dealing with home-based interruptions. Consequently, we propose that if home-based interruptions and LMX are high, the relationship between challenge demands and work engagement will resume its curvilinear form (Hypothesis 3).

Method

In March 2020 we invited 628 Germany based employees who took part in an earlier survey conducted between April 2018 and September 2019 to participate in our current study. After

employees consented to participate, they received an initial survey, followed by six weekly surveys which were answered at the end of each work week. Before collecting data, we obtained approval from the ethics committee of our institution. The initial survey was filled out by 199 employees, resulting in a response rate of 31.7%. We excluded 23 participants who failed to provide valid data for two weeks or more (cf. Nezlek, 2011) and further excluded 63 participants who worked from a location other than home. Our final sample consisted of 115 employees who filled out 4.81 weekly surveys on average. Mean age was 44.57 years ($SD = 10.59$), 70.8% of our participants were female and 83.5% were either married or in a relationship. Additionally, 49.6% of participants reported to have at least one child. Participants came from different occupational backgrounds, including the public service or banking sector. On average, participants worked for 33.87 hours per week ($SD = 8.94$). We measured LMX once via the first weekly questionnaire using a seven item-scale developed by Graen and Uhl-Bien (1995). All other constructs were measured on a weekly basis. We measured challenge demands via the 8-item scale developed by Rodell and Judge (2009), home-based interruptions via a single item (“While working this week, I got interrupted by household members”) and work engagement via the 9-item short version of the Utrecht Work Engagement Scale (Schaufeli et al., 2006). Multilevel reliabilities were $\geq .85$ both at the within- and between-level. Due to hierarchically structured data (i.e., weeks nested within individuals), we followed the recommendations of Preacher et al. (2010) and used multilevel structural equation modeling (MSEM; Preacher et al., 2010). We tested our hypotheses using Mplus Version 7.4 (Muthén & Muthén, 1998-2015).

Results

In line with Hypothesis 1, we found a curvilinear link between challenge demands and work engagement in the shape of an inverted U at within-person level. We further found a significant interaction between the curvilinear effect of challenge demands and home-based interruptions at the within-person level (Hypothesis 2). In accordance with our assumption, high levels of home-based interruptions blocked the engagement enhancing potential of challenge demands. Additionally, we found a significant curvilinear three-way interaction at the between-person level (i.e. challenge demands \times home-based interruptions \times LMX). In line with Hypothesis 3, we found an inverted U-shape relationship between challenge demands and work engagement when home-based interruptions and LMX were high. Given the special circumstances during data collection, we further explored whether the relationship between challenge demands and work engagement changed compared to the survey conducted in 2018/2019. We matched data from a weekly survey, with up to three measurement points of the earlier study to the current data set and obtained matches for 104 participants. Neither levels of experienced challenge demands nor levels of work engagement changed compared to the situation in 2018/19 without telework. In addition, we analyzed, if the time point of data collection moderated the relationship between challenge demands and work engagement. This was not the case.

Discussion

Our study contributes to the ongoing debate, under which conditions challenge demands unfold their engagement enhancing potential in multiple ways (e.g., Kronenwett & Rigotti, 2019; Schmitt et al., 2015). First, in line with the predictions of activation theory (Gardner & Cummings, 1988), we provide further support for a curvilinear relationship between challenge demands and work engagement on the within-person level. Going beyond previous research, that either used cross-sectional (Schmitt et al., 2015) or daily diary designs (Sheng et al., 2019) we showed that this finding also holds for telework settings under the special circumstances of a pandemic crisis over several weeks. Second, our study is among the first to suggest an interaction between the two types of demands where hindrance

demands block the motivational path associated with challenge demands. Our results provide an indication that challenge and hindrance demands do not only affect work engagement in different ways (cf. Crawford et al., 2010), but that their effect on work engagement depends on their interplay. Additionally, our results suggest that in certain work environments, such as the home-based telework setting, hindrance demands may originate from the family domain and spill over to the work domain. Thus, there appears to be a cross-domain interplay between challenge and hindrance demands. Third, we identified home-based interruptions to be a harmful contextual factor to the challenge demands-engagement relationship within the telework setting and at within-person level. Besides the loss of energy resources (Hobfoll, 2011) one can think of at least one more underlying mechanism that may render an upward deviation of home-based interruptions detrimental to the engaging effect of challenge demands. High levels of home-based interruptions require employees to multitask on work and family responsibilities (Cho, 2020; Rudolph et al., 2020). This situation likely enhances role blurring, that is, the “experience of confusion or difficulty in distinguishing one’s work from one’s family roles in a given setting” (Desrochers & Sargent, 2004, p. 41). Role blurring is likely to be higher during times where individuals experience more family demands (Cho, 2020). During such times, the cognitive as well as behavioral preoccupation with both the work and family role prevents employees to immerse themselves in challenging tasks. Fourth, including LMX into our research model revealed diverse relational patterns between challenge demands and work engagement in the presence of high interruption levels. The detrimental effect of interruptions on the challenge-engagement relationship became prevalent if LMX was low while high LMX counteracted interruptions and the relationship between challenge demands and work engagement resumed its inverted U-shape. Finally, including data from our previous assessment, where employees worked from their usual office space, allows us to conclude that the fundamental engagement enhancing mechanism of challenge demands persists in home-based telework and during the COVID-19 pandemic.

Limitations to our study include the single item measure of home-based interruptions, concerns about common-method variance (Podsakoff et al., 2003) and the inability to draw causal conclusions. For more detailed examination of causality, future studies could use (quasi-)experimental designs. Further, future research should include specific leadership concepts such as remote (Neufeld et al., 2010) and resilient leadership (Dartey-Baah, 2015) to improve understanding on the mechanisms related to high LMX.

Finally, our findings offer a number of practical implications. First, results show that employee work engagement remains stable across work settings. Hence, the occasionally expressed organizational worries (e.g., Offstein & Morwick, 2009) that employees work less engaged within a telework setting seem unsubstantiated. The reported stability of engagement levels should encourage employers to offer continued telework arrangements during and beyond the pandemic. Second, results point out the importance of boundary conditions with respect to the motivational effect of challenge demands within the home-based telework setting. In general, encouraging the formation of relationships characterized by mutual trust and respect between leaders and their followers, that is, high LMX relationships, will positively affect the engagement enhancing potential of challenge demands and buffer against additional home-based stressors. Third, home-based interruptions pose an additional demand given the current pandemic and possibly irrespective of crises (e.g. employees who work from home to take care of a sick child will likely encounter similar situations where they need to address challenge demands while facing interruptions within the home-based telework setting). For individuals who encounter high levels of home-based interruptions, adequate boundary work tactics such as adapting physical boundaries or communicating expectations to family members and employers may buffer the effect of situational constraints on employee well-being and engagement (Kreiner et al., 2009; Park et al., 2020).

Note: References available upon request.

If you have any questions please contact

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