

Self-Control and Self-Regulation as Mechanisms Linking Remote Communication to Employee Well-Being
during the Covid-19 Pandemic.

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Since the COVID-19 outbreak, organizations had to adapt overnight to lockdown measures introduced by governments. One fundamental change associated with this adaptation is the shift to virtual work and associated remote communication (Feitosa & Salas, 2020). Whereas before the pandemic this way of communicating was an alternative to face to face communication, during the pandemic it has become the preferred if not the only form of work-related communication with supervisors, colleagues, and individuals outside of the organization (i.e., customers, suppliers, etc.). Previous research on virtual work and associated remote communication has predominantly focused on how remote communication affects employees' productivity while the impact on employee well-being has not been explored yet (Dulebohn & Hoch, 2017; Gilson et al., 2015). To support organizations and society more generally in promoting employee well-being during and after the COVID-19 pandemic it is thus crucial to expand our understanding of the impact of different forms of remote communication on employee well-being. The present research thus examines the impact of remote communication on employee well-being. We develop our research model drawing on Kuhl's Theory of Volition (Kuhl & Fuhrmann, 1998), which proposes that a core function of volition is to facilitate goal achievement while maintaining the integrity of one's self. Accordingly, Kuhl and Fuhrmann (1998) distinguish between self-control, which is necessary for goal attainment, and self-regulation, which refers to actions that support self-integrity. For example, the act of learning for an exam may require self-control if it is to satisfy someone else's (i.e., parents, teachers) expectations or it may reflect a form of self-regulation if it is motivated by one's own volition (i.e., to experience mastery). The theory further proposes that while engaging in self-control is associated with psychological costs in the form of depletion or mental exhaustion (see also Muraven & Baumeister, 2000), volitional self-regulation can positively impact well-being by enhancing feelings of vitality and energy (see also Ryan & Deci, 2008).

Our research integrates this theoretical framework with media synchronicity theory (Dennis et al., 1998; Dennis, Fuller, & Valacich, 2008) to examine the impact of different types of remote communication on employee well-being. In line with Dennis et al.'s (1998) proposition that types of media for remote communication differ in their levels of synchronicity (i.e., the immediacy of feedback), we distinguish between asynchronous- (i.e., email, messaging services, social media) and synchronous (i.e., phone calls, video conferences) communication. We propose a dual-pathway model whereby these types of remote communication affect employee well-being through their impact on self-control and self-regulation throughout the workday. Self-control requires controlling impulses, overcoming inner resistances, and resisting distractions when working (Schmidt & Neubach, 2007) whereas self-regulation refers to experienced feelings of self-determination and self-motivation (Kuhl & Fuhrmann, 1998). As indicators of well-being, we examine the need for recovery, which reflects the requirement to recuperate from work tasks after work (van Veldhoven & Broersen, 2003) as well as subjective vitality, which encompasses feelings of vigor, activity, and productivity (Ryan & Deci, 2008).

Integrating Kuhl's theory of volition (Kuhl & Fuhrmann, 1998) and media synchronicity theory (Dennis et al., 2008), we argue that synchronous remote communication, which involves some form of direct interaction with others requires employees self-control, which is depleting and thus results in an increased need for recovery and reduced subjective vitality. For example, during synchronous interactions (i.e., a phone or skype call) employees have to monitor and adapt their expression as well as resist distractions from stimuli, which are not relevant for the interaction. Thus we propose the following hypothesis:

Hypothesis 1: The day-specific effects of synchronous communication on employees' a) increased need for recovery and b) reduced subjective vitality are mediated by increases in self-control demands.

Moreover, we propose that asynchronous remote communication is associated with reduced self-regulation as it reduces employees' self-determination by making them dependent on others' responses. For example, requesting crucial support or information via email makes work progress dependent on when they receive a response. In turn, decreases in self-regulation will impair well-being as individuals do not benefit from experienced feelings of energy through self-determination. Thus we propose the following hypothesis:

Hypothesis 2: The day-specific effects of asynchronous communication on employees' a) increased need for recovery and b) reduced subjective vitality are mediated by reduced self-regulation.

Method

Participants. As forms of remote communication can be expected to fluctuate from day to day, we examined the proposed relations in a daily diary study across ten workdays during a time when there was a full lockdown in the UK. Our sample consists of full-time employees who work remotely. The data was collected via Prolific Academic, an online provider to recruit participants for research. After employees gave their consent for participation, they received a pre-survey, which measured demographics. Subsequently, participants received two surveys each day for a period of 10 consecutive workdays. The first survey was sent one hour before the end of work while the second survey was sent two hours after the end of work. All surveys were disabled if participants did not respond within 2 hours. The final sample consists of $N = 82$ out of 102 contacted employees (person-level response rate of 80%) including 551 out of 820 daily data points (day-level response rate of 67%).

Measures. All constructs were measured with Likert scales which correspond with their original publications and were adapted to daily measurement.

Remote communication (One hour before the end of work). Remote communication was assessed by asking participants how many minutes they spent with the following types of communication today: Text-based media (texting, emails, etc.), video conferences (i.e., Slack, Skype, Zoom, MStTeams, etc.), voice-based media (i.e., phone calls), social media (i.e., Twitter, Facebook, Snapchat, etc.), collaboration platforms (i.e., Slack, Workzone, Glip, etc.). Following (Dennis et al., 1998) we computed a score of asynchronous communication as a sum of text-based media, social media, and collaboration platforms. Synchronous communication was represented by a sum of video conferences, voice-based media.

Self-control demands (One hour before the end of work). Self-control demands were measured with three items from a scale developed by Schmidt and Neubach (2007). Following, Prem, et al., (2016) we used one item for each respective demand on self-control (i.e., Impulse control demands: 'Today, my work required me to weigh every word I say.'; Overcoming inner resistances: 'Today, dealing with unpleasant tasks often took a considerable amount of effort from me.', resisting distractions: 'In order to achieve my goals today, I did not allow myself to get distracted.').

Self-regulation (One hour before the end of work). We used a ten-item measure of self-regulation proposed by (Kuhl & Fuhrmann, 1998; i.e., 'Today at work I felt free to act the way I wanted.').

Need for recovery (Two hours after the end of work). For the present study, the need for recovery was measured with five items (Van Veldhoven & Broersen, 2003; i.e., 'I find it difficult to relax at the end of this workday.').

Subjective vitality (Two hours after the end of work). Subjective vitality was measured with seven items from a scale proposed by Ryan and Frederick (1997) (i.w., 'Right now, I feel alive and vital.')

Results

We examined our hypotheses through Multilevel Structure Equation Modelling in Mplus 8.2 (Muthén & Muthén, 2018). We specified a 1-1-1 mediation model (Preacher, Zyphur, & Zhang, 2010) using maximum likelihood estimation with robust standard errors. Following suggestions by (Hofmann & Gavin, 1998) all Level-1 variables were centered around the person mean. To test the proposed indirect effects we computed 95% Confidence Intervals (CI) by using the Monte Carlo Method with 20,000 repetitions as proposed by Selig and Preacher (2008). The presence of an indirect effect is supported if the 95% CI does not include zero.

Our data provide support for Hypothesis 1, which suggests that the day-specific impact of synchronous communication on employees' well-being is mediated through self-control demands. More specifically, our study supports Hypothesis 1a), which refers to the need for recovery as an indicator of impaired well-being (95% CI = 0.0003 - 0.0011). However, Hypothesis 1b), which focusses on subjective vitality was not supported as the corresponding 95% CI did include zero (95% CI = -0.0001 - 0.0001). Hypothesis 2 suggests self-regulation as a mediator of the negative relation between asynchronous communication and employee well-being. Our data supports Hypothesis 2a and b) as the 95% CIs for both the need for recovery and subjective vitality do not include zero (Need for recovery: 95% CI = 0.0001 - 0.0010; Subjective vitality: 95% CI = -0.0010 - -0.0001). Moreover, it is noteworthy that there was a direct positive effect of asynchronous communication on the need for recovery ($\gamma = .001$, $p = .022$) after synchronous communication, self-control demands, and self-regulation were accounted for, which suggests

additional mediating mechanisms that link asynchronous communication to employee well-being. Moreover, the small effect sizes result from both independent variables in the model (asynchronous and synchronous communication) being measured in minutes.

Discussion

The Covid-19 pandemic and associated shift to remote work has required considerable adaptation from organizations and their employees. One of the most prevalent changes associated with this adaptation is the change in employee communication. To support organizations in promoting employee well-being during and after the Covid-19 pandemic, our study explored the underlying mechanisms through which daily remote communication affects employees' well-being. Our research integrates Kuhl's theory of volition (Kuhl & Fuhrmann, 1998) and media synchronicity theory (Dennis et al., 2008) to propose that synchronous communication has adverse effects on employees' well-being through associated self-control whereas asynchronous communication impairs employee well-being through reduced self-regulation. Our data supports the hypothesized key relations except for the link between synchronous communication and subjective vitality via self-control. More specifically, our research demonstrates that the adverse impact of synchronous communication on the need for recovery is mediated by self-control. Moreover, as suggested reduced self-regulation mediates the negative relation between asynchronous communication and employees' day-specific need for recovery and subjective vitality.

Our study offers several contributions to the literature on remote work and well-being. First, whereas most research on remote communication focused on employees' productivity (Gilson et al., 2015) our research is the first to demonstrate that remote communication can impair employee well-being. More specifically, our study suggests that both synchronous and asynchronous forms of remote communication adversely affect employees' day-specific well-being in the form of increased need for recovery as well as reduced subjective vitality. Our study also expands previous research on virtual work and remote communication, which foremost focused on between-person differences in remote communication (Gilson et al., 2015) by demonstrating that forms of remote communication can considerably fluctuate across days and that these fluctuations affect employee well-being.

Second, our study integrates Kuhl's theory of volition (Kuhl & Fuhrmann, 1998) and media synchronicity theory (Dennis et al., 2008) to develop a dual pathway model of how synchronous and asynchronous remote communication affects employee well-being. Accordingly, our research identifies self-control as a crucial mechanism, which links synchronous communication to impaired employee well-being and reduced self-regulation as a mediator of the relation between asynchronous communication and employee well-being. We therefore extend theoretical notions in the field of remote communication by linking it to different forms of volition.

Beyond these theoretical contributions, our study also offers some practical recommendations by highlighting the crucial role of self-control and self-regulation as mediators between synchronous and asynchronous remote communication and employee well-being. Regarding the proposed mediating effects of self-control in the relation between synchronous communication and employee well-being previous research has identified a variety of moderators, which can protect employees from its adverse effects such as good sleep (Diestel, Rivkin, & Schmidt, 2015), affective commitment (Rivkin, Diestel, & Schmidt, 2015), psychological detachment (Gombert, Rivkin, & Schmidt, 2018). Accordingly, organizations and employees alike can focus on these protective moderators to prevent the adverse consequences of synchronous communication on well-being. Regarding self-determination previous research has strongly suggested that satisfaction of basic psychological needs for autonomy, competence, and relatedness can facilitate self-regulation (Ryan & Deci, 2008). Thus, leaders may satisfy employees' basic psychological needs (Chiniara & Bentein, 2016) to protect their well-being from the adverse effects of asynchronous communication.

Despite these theoretical and practical contributions our study is also not without limitations. One such limitation, which should be addressed in future research is that all study variables were operationalized through self-reports. Thus, common method variance or a self-report bias might have contaminated the relationships under examination (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). However, this limitation is somewhat alleviated because our data demonstrate differential mediating effects of self-control and self-regulation, which cannot be accounted for by high common method variance. Nevertheless, future research could gain additional insights by examining well-being as rated by other sources (i.e., one's partner).

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