WHEN SHOULD WE MEET? EXPLORING THE SCHEDULING CADENCES OF
WORKPLACE MEETINGS

by

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ABSTRACT

LIANA KREAMER. When should we meet? Exploring the Scheduling Cadences of Workplace Meetings. (Under the direction of DR. STEVEN G. ROGELBERG)

Meetings are a significant part of employees' workdays, with executives spending a majority of their time leading and attending the events. While literature has explored many facets of workplace meetings, current research has yet to consider their scheduling cadences (e.g., how meetings are dispersed through the day). Literature on workplace interruptions and the negative effects of task switching suggest that meeting schedules likely have an impact on employees work experience. Implementing a 2 x 2 x 2 factorial design using experimental vignette methodology (EVM), we presented eight hypothetical daily work schedules to a sample of full-time employees, capturing their anticipated levels of productivity and affective reactions with the day based on each meeting schedule. We considered the individual's level accomplishment striving as a potential between-person moderator. Results showed significant relationships between meeting cadences and anticipated end-of-day outcomes, with daily task load moderating the relationship between meeting spread and anticipated productivity such that the negative relationship between meeting spread and productivity was stronger on days with high task load and weaker on days with low task load. The accomplishment striving trait moderated the relationship between meeting quantity and anticipated positive affect. Those high in accomplishment striving reported lower positive affect when meeting quantity was high compared to their counterparts. Findings from this research extend literature on workplace interruptions and offer insight into how to best schedule workplace meetings to increase employee outcomes and experiences.

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CHAPTER 1: INTRODUCTION

Research indicates that U.S. employees partake in approximately 55 million

meetings per day (Keith, 2015), with the average employee spending roughly 6 hours of

time in meetings per week (Rogelberg, Scott & Kello, 2007). These meetings typically

last between 30 and 60 minutes and exist in increments spread throughout the workday

(Allen, Yoerger, Lehmann-Willenbrock, & Jones, 2015). Meetings can be scheduled in a

myriad of ways. Some workdays may consist of back-to-back morning meetings with

free afternoons devoted to work-related tasks, while other workdays may have dispersed

meetings - with one meeting scheduled for the early morning, one around lunch, and one

in the late afternoon. This sequence or pattern of meetings throughout a day can be

thought of as a meeting cadence. Meeting cadences may vary depending on the day, the

current project load, the nature of the job, or at the discretion of the employer or

employee. Although the dispersion of workplace meetings may seem innocuous, research

and theory exploring the implications of workplace interruptions suggest the scheduling

cadences of these meetings may result in meaningful outcomes for employees.

Leveraging research on meetings as a form of interruption, we seek to study how

workplace meetings can be optimally scheduled to invoke meaningful outcomes such as

anticipated feelings of daily productivity and positive affect.

1.1 Meetings as Interruptions

Survey and interview research conducted by Basex revealed that workplace

interruptions account for *28 billion* lost hours to companies in the United States - with the

direct costs estimated at 28% of daily time for knowledge workers and senior executives

(Spira & Feintuch, 2005). Not only is time lost during the interruption itself, workers may need extra time to regain full engagement and concentration following a break in workflow. Productivity may also decline due to negative emotions, such as stress from time pressure or frustration about failing to meet target goals (Mandler 1990). Unfortunately, employees list meetings as one of their primary interruptions from work (Abad, Noaeen, Zowghi, Far, & Barker, 2018), taking time away from tending to individual tasks and goals.

A task interruption is defined as any event that shifts the attention of the individual from the on-going task, towards some secondary external event (Abad et al., 2018; Altmann & Trafton, 2004; Czerwinski, Horvitz & Wilhite, 2004; Brixey et al., 2007; Matzelle, 2005). This interruption interferes with the cognitive attention of the subject, breaking concentration on the primary task to focus on a secondary task (Baethge & Rigotti, 2013; Trafton & Monk, 2007). Such interruptions break the continuity of task performance, reducing efficiency and productivity, and jeopardizing performance in the form of "switch costs," where individuals shift to an interrupting task and back again to the ongoing task (Brixey et al., 2007; Trafton & Monk, 2007). Each time an individual is interrupted, they require an additional immersion period to return to their previous work (Demarco & Lister, 2013 p. 62). Supporting the notion of switch costs, the concept of 'meeting recovery syndrome' suggests that it takes a significant amount of time to *decompress* following a frustrating meeting (Rogelberg, 2019). In fact, sixty-five percent of senior managers and executives, ranging across multiple industries, believe meetings keep them from completing their own work, and 64% say meetings come at the expense of deep thinking (Perlow, Hadley & Eun, 2017).

The disruptive effects of task interruptions can be thought of in terms of the time needed to continue the primary (interrupted) task after the secondary (interrupting) task is complete (Altmann & Trafton, 2004). This interval is considered a *resumption lag* - the time it takes to switch from the interruption (Task B), back to the primary task (Task A). This period reflects the time needed to "collect one's thoughts" and return to the initial task after the interruption is finished (Altmann & Trafton, 2004). Similarly, an *interruption lag* can be thought of as the interval between when the subject stops working on Task A, and when they begin Task B. Both the interruption lag and the resumption lag comprise the concept of 'task-switching,' defined as the process of changing between two separate tasks (Salvucci, Taatgen & Borst, 2009). Roughly 45% of the time, a disrupted task is not resumed immediately following the interruption (O'Conaill & Frohlich, 1995). Moreover, the longer the duration of the interruption, the greater the lagged response to return back to the primary task becomes. Thus, attentional time is lost returning to the primary task directly following an interruption – and this is heightened by increased duration of the interruption.

Interruptions negatively impact employees in both task performances and in emotional responses. The discovered negative effects of task interruptions at work are: increased irritation, energetic cost (recovery effort), decreased satisfaction with one's own performance, forgetting of intentions, increased error rate, emotional strain and time loss (Abad et al., 2018; Baethge & Rigottti, 2013; Bailey & Konstan, 2006; Brixey et al., 2007; Flynn, Barker, Gibson, Pearson, Berger, Smith & Flynn 1999; Grebner, Semmer, Lo Faso, Gut, Kälin, & Elfering, 2003; Jett & George, 2003; Zhang, Patel, Johnson, Shortliffe, 2004).

At the organizational level, what matters is not the amount of time employees are just physically present, but the amount of time they are working at their full potential. Demarco and Lister (2013) suggest that organizations should calculate an Environmental Factor (E-Factor), representing employee uninterrupted hours/body-present hours. Whenever the number of uninterrupted hours is reasonably high proportion of total hours (at least 40%), the environment is allowing people the time to work on individual tasks. Much lower E-factors imply reduced effectiveness and employee frustration (Demarco & Lister, 2013).

Overall, a day with a lot of meetings may hinder an employees' workflow or work rhythm by increasing task switching and reducing the preferred 'uninterrupted hours' portion of the E-factor equation. Furthermore, if these work meetings are spread throughout the day, there is little time in between meetings to complete a task or reach optimal productivity. Yet, workplace meetings are a necessary aspect of organizational life, important for collaboration, communication and decision-making (Rogelberg, 2019).

The present study investigates the effect of daily meeting cadences on employees anticipated end-of-day affect and productivity using experimental vignette methodology (EVM). We relied heavily on existing theorizing in the interruptions literature, extant meetings research, and verbal protocol analysis with subject matter experts (SMEs) to develop experimental workday calendar scenarios. The scenarios differed on two principal dimensions: (a) meeting quantity and (b) meeting spread, and one situational characteristic: (c) the task load expected for the day. Given that each of these factors has two levels, participants were asked to respond to a total of eight workday calendar scenarios. Participants were then asked to report on anticipated feelings of daily

productivity and anticipated affect in response to each schedule. Individual level of accomplishment striving was assessed and tested as a moderating variable.

1.2 Anticipatory Emotions and Reactions

As noted, we asked participants to predict or *anticipate* how they would feel if they received a set of meeting schedule/s. Literature on anticipated emotions and decision-making, combined with preliminary research we conducted on reactions to calendar viewing, suggest that individual's predictions of emotions are quite representative of how they would actually feel in the given situation/s.

People often anticipate emotions they might experience as a result of their decisions or in response to situational events (Bell, 1982; Fong & Wyer, 2003; Loomes & Sugden, 1986). These anticipations have a powerful influence on subsequent behaviors (Gilovich, Medvec, & Gilovich, 1995; Mellers, Schwartz & Ritov, 1999) with predicted feelings of guilt, dread, elation and regret influencing everyday choices (Mellers et al., 1999). In fact, anticipated affect is shown to be one of the most powerful motivating forces when it comes to decision-making. In their meta-analytic review, Sangberg and Conner (2008) show anticipated affect accounts for a substantive amount of the variance in decision-making intentions – above and beyond individual attitudes and subjective norms.

On a related note, Decision Affect Theory (Mellers, Schwartz, Ho & Ritov, 1997) considers the role of perceived pleasure and pain on the decision-making process. The theory suggests people anticipate the pleasure and/or pain of future outcomes, consider the chances that they will occur, and select the option they believe will result in greater pleasure. In the process, people simulate what life would be like with one

outcome or another and select the most appealing option. In their research, Mellers and McGraw (2011) examine both anticipated *and* actual pleasure of various outcomes and their relation to choices people make. The authors select participants who had already made a choice but did not yet know the outcome of their decision. Participants reported their anticipated feelings about all possible outcomes of their choice. Later, when they learned what the actual outcome was, they reported their actual feelings experienced based on the outcome. Results found anticipated feelings were quite accurate, being very similar to the actual feelings experienced by participants (Mellers & McGraw, 2011). Given this insight, there is reason to believe reported anticipated feelings evoked by the various calendar scenarios are representative of the actual feelings that participants would experience.

To extend the above anticipatory emotions literature to meetings, we conducted preliminary research targeting full-time employees based in the United States. Seventy-six participants responded to a 3-item survey, posted to LinkedIn and Facebook via an online link. The three items on the survey were as follows: (Q1) Do you usually view your work calendar in the morning, prior to beginning the day, to see what you have on tap? Participants responded either yes, sometimes, or no. For those who responded no, the survey was terminated. (Q2) When you view your work calendar prior to beginning the day, do you find it sparks an emotion or feeling about how your day will be (e.g., it should be a good day, or a productive day, or a boring day, or a frustrating day, etc.)? Participants responded on a scale indicating yes, sometimes, or no Again, the survey ended here for those who responded no to this question. (Q3) From your experience, how accurate are these initial feelings about how the day will go compared to the actual

feelings you experience at the end of the day? Participants responded either, 'My initial feelings are mostly accurate', 'My initial feelings are generally accurate (accurate 50% of the time)', or 'My initial feelings are rarely accurate.'

Over 90% of participants indicated that they view their work calendar in the morning prior to beginning the day (67% said yes, 24% selected sometimes). Of these individuals, over 97% reported experiencing some sort of emotion or feeling about how the day will go. Finally, roughly 98% reported their initial feelings (i.e. anticipated feelings) about how the day will go are generally (60%) or mostly (38%) accurate to the actual feelings they experience at the end of the day. Results from our preliminary research provide support that nearly all employees' (a) look at their work calendars before beginning their day (b) experience an initial emotional response when viewing their schedule and (c) their initial reactions are fairly accurate to end-of-day feelings.

In the current study, we specifically focused on anticipatory positive affect and productivity. Positive affect (PA) is defined as the "tendency to have an overall sense of well-being, to experience positive emotions...and to see oneself as pleasurably engaged in terms of both interpersonal relations and achievement" (Murphy, 1996, p. 340). Studies have found positive relationships between PA and organizational citizenship behaviors (OCBs), absorption in activities, and job performance (DeLuga & Mason, 2000, Ilies, Scott, & Judge, 2006; Kashdan, Rose & Finchum, 2004), and negative associations between PA and job withdrawal, intention to quit, and emotional exhaustion, (Crede´ et al., 2005, Van Katwyk, Fox, Spector & Kelloway, 2000; Wright & Cropanzano, 1998). Meetings serving as interruptions may decrease employees anticipated positive affective experiences by disrupting their engagement and absorption on work tasks. Furthermore,

many meetings dispersed throughout the workday may increase emotional exhaustion, in turn, decreasing expectations of daily positive affect.

Perceived productivity is an employee's subjective task performance, or an individual's evaluation of how successful he/she is or will be at fulfilling job duties and responsibilities (Jimmieson & Terry, 1997). Research finds that individuals' perceptions of task accomplishment are related to pride, productivity, engagement and job satisfaction (Gabriel, Diefendorff, Erickson, & Gabriel, 2011; Kim, Shin & Swanger, 2009; Ng, Sambasivan, & Zubaidah, 2011; Pines, Larkin, & Murray, 2016).

On a daily level, productivity captures subjective experiences of effectively making progress towards one's goals (Sonnentag, Reinecke, Mata & Peter; 2018). A majority of research exploring employee perceptions of daily productivity has been conducted with software developers (e.g., Meyer, Fritz, Murphy, & Zimmermann, 2014), engineers (Oliveira, Conte, Cristo, & Mendes, 2016), and nurses (Gabriel et al., 2011) – occupations that are primarily task-oriented. An interruption disrupts the process of accomplishing a work task (Trafton & Monk, 2007), potentially interfering with perceptions of goal progress; in turn, influencing employee perceptions of daily productivity. In fact, Sonnentag et al., (2018) find perceived interruptions are negatively associated with daily perceptions of task accomplishment. Considering meetings are often perceived as a workplace interruption (Abad et al. 2018), their scheduling cadences likely impact anticipated feelings of productivity by influencing perceptions of goal process.

1.3 Meeting Cadences

Meeting Quantity. Because meetings naturally create breaks in the workday, more meetings require greater task switching. Employees must switch gears when attending meetings, and then likely shift back to their primary task following each meeting. The known implications of task switching (e.g., increased irritation, emotional strain, time loss) suggest the number of meetings influence work-related outcomes. In fact, evidence suggests that when employees have a lot of workgroup meetings, their overall well-being declines (Rogelberg, Leach, Warr & Burnfield, 2006). For instance, the number of meetings is related to daily fatigue and employee subjective workload (Luong & Rogelberg, 2005). Employees likely perceive frequent meetings as more disruptive as they deplete resources needed for individual work tasks, leading to greater fatigue. Moreover, having to attend frequent meetings naturally causes employees to leave tasks unfinished. Additional energy and effort are required to return to the uncompleted tasks following each meeting, in turn, increasing the subjective daily workload of employees.

While meeting quantity/frequency has been shown to be related to employee well-being, interestingly, the actual time spent in meetings does not appear significant (Luong & Rogelberg, 2005). It is the frequency of interruptions, rather than the amount of time they consume, that leads to negative consequences (Zijlstra, Roe, Leonora and Krediet, 1999). In essence, a day with four dispersed meetings would create more potential concern than one long meeting or aggregated interruption that consumes the same amount of time.

Meeting Spread. The overall meeting spread is conceptualized as the total time in between meetings. When the meetings are highly dispersed, or spread throughout the day, they will likely be perceived as more interruptive compared to meetings grouped

together. In support of this, recent research on software developers finds that workplace meetings negatively impact developers' performance due to the high level of cognitive cost associated with switching between tasks (Abad, Karras, Schneider, Barker & Bauer 2018). Interestingly, a majority of developers perceive "morning meetings" less disruptive to their daily tasks, with a majority of respondents believing it may be best to finish all daily meetings before starting any work-related tasks. Scheduling the meetings for "right after noon" was next preferable, with some respondents favoring early afternoon meetings. These respondents stated they are already interrupted (via lunch) around noon. By scheduling meetings around lunch break, they have a continuous block of interruptions rather than having meetings spaced throughout the workday (Abad et al., 2018). Ideally, these software developers would choose to reduce the amount of task-switching required for the day by creating blocks of interrupted times - as opposed to constantly switching between tasks to attend meetings.

The findings above suggest that frequent meetings likely serve as repetitive interruptions, in turn, reducing employees' anticipations of daily productivity and positive affect. Further, when these meetings are dispersed throughout the day, they require greater task switching compared to meetings grouped together (e.g. back-to-back), again, reducing expected levels of productivity and positive affect. Taken together, we hypothesize that:

Hypothesis 1a. Meeting quantity will be negatively related to employees (a) anticipated productivity and (b) anticipated positive affective reactions.

Hypothesis 1b. Meeting spread will be negatively related to employees (a) anticipated productivity and (b) anticipated positive affective reactions.

1.4 Individual Responsibilities

Task Load. A third theoretically relevant variable we explored was the amount of individual work tasks expected or assigned for the day. Research suggests the difficulty or intensity of a primary task may influence the relationship between interruptions and employee perceptions/outcomes. The more complex the task, the longer the duration of the interruption, and the greater number of interruptions all increase the difficulty of switching back to a primary task following an interruption at work (Czerwinski et al., 2004). Additionally, interruptions occurring at points of high mental workload are found to be more disruptive and lead to greater resumption lags than those occurring at points of lower mental workload (Adamczyk & Bailey, 2004; Bailey & Iqbal, 2008).

Research on software developers found that when these employees are focused on high-complex tasks requiring an increased level of cognitive demand, for each switch they need at least 15 minutes of concentration to get back into the flow of their initial work task. When a day consists of multiple interruptions, involving several task-switches, this lag-time adds up to consume a substantial portion of the developers' day. Thus, taking time away from their completion of important individual work tasks (DeMarco & Lister, 2013). This may decrease productivity as additional time is lost in both interruption and resumption lags during high-complex work compared to low-complex work.

The timing of the interruption in respect to the primary task is another key aspect in the study of task interruptions. Time pressure mediates the relationship between task interruptions and both irritation with work and satisfaction with performance (Beathge & Rigotti, 2013). When employees are operating under intense time constraint, the negative

effects of interruptions are heightened. If the interruption occurs during a *low* workload moment, it mitigates the negative effects of the task switching: reducing perceptions of annoyance, decreasing employee frustration and lowering the level of time pressure (Adamczyk & Bailey, 2004). Thus, interruptions that occur during low workload moments are likely less disruptive to employees.

In line with the research presented above, we expect the amount of individual responsibilities expected for the day will heighten (high task load) or mitigate (low task load) the negative perceptions of meetings as interruptions. In turn, impacting employees' anticipated feelings of productivity and positive affective reactions at work. Thus, we hypothesize:

Hypothesis 2a: Task load will moderate the negative relationship between meeting quantity and (a) anticipated productivity and (b) anticipated positive affective reactions such that the relationship is stronger on days with high task load and weaker on days with low task load.

Hypothesis 2b. Task load will moderate the negative relationship between meeting spread and (a) anticipated productivity and (b) anticipated positive affective reactions such that the relationship is stronger on days with high task load and weaker on days with low task load.

1.5 Individual Characteristic

We explored the accomplishment striving trait as an additional variable of relevance when understanding meeting cadences. Accomplishment striving is defined as "an individual's intention to accomplish tasks and is characterized by a high task orientation" (Barrick, Piotrowski and Stewart, 2002 –p. 44). Task oriented employees strive to accomplish work-related tasks as "a means of expressing their individual attributes and preferences" (p. 44). Accomplishment striving is stable over time and differs by individual.

High accomplishment-strivers are likely to exert considerable effort and work hard consistently across varying situations and jobs (Barrick, et al., 2002). These individuals tend to have a higher task focus and are likely establish a greater number of goals. They may become more engaged in accomplishing their individual work tasks, placing great emphasis on goal attainment and completion. Accomplishment striving is significantly related to performance, where individuals high in accomplishment striving seek out challenges and possess the skills necessary to meet them (Barrick, et al., 2002).

For individuals high in accomplishment striving, meetings are more likely to function as an interruption as they take time away from individual task completion. However, for individuals low in accomplishment striving (i.e. those less likely to have set goals), meetings may not be perceived as an interruption, considering these individuals likely have fewer goals and less desire to accomplish them. This is consistent with research showing that individual level of accomplishment striving moderates the relationship between meeting time demands (meeting quantity) and job attitudes/well-being (Rogelberg et al., 2006). Meeting time demands were negatively related to job attitudes and well-being for employees high in accomplishment striving. Interestingly, for individuals low in accomplishment striving, there was a slightly *positive* relationship between the number of meetings and job attitudes/well-being (Rogelberg et al., 2006). Thus, those high in accomplishment striving suffered from having more meetings scheduled throughout the day, while their counterparts did not. Similar research by Kirmeyer (1988) find that Type A individuals are more negatively affected by interruptions compared to those without Type A personality characteristics.

Taken together, we expect individuals high in accomplishment striving will be more affected by a greater number of highly dispersed meetings, due to their goal-driven nature. Whereas, those low in accomplishment striving will suffer less so from high meeting quantity and spread as meetings will not be readily perceived as interruptions for this group. We hypothesize that:

Hypothesis 3a. Accomplishment striving will moderate the negative relationship between meeting quantity and (a) anticipated productivity and (b) anticipated positive affective reactions such that the relationship is stronger for those high in accomplishment striving and weaker for those low in accomplishment striving.

Hypothesis 3b. Accomplishment striving will moderate the negative relationship between meeting spread and (a) anticipated productivity and (b) anticipated positive affective reactions such that the relationship is stronger for those high in accomplishment striving and weaker for those low in accomplishment striving.

Given the literature supporting the previously hypothesized two-way interactions listed above (Hypotheses 2 and 3), we predict there will be a combined effect where individuals high in accomplishment striving are further impacted by (1) meeting cadences (e.g. quantity and spread) and (2) task load compared to those low in accomplishment striving. While research thus far has not explored the combined, three-way relationship, the respective literature on meetings as interruptions, task load/responsibilities, and achievement-oriented individuals (Abad et al., 2018; Beathge & Rigotti, 2013; Barrick et al., 2002) suggests high accomplishment strivers are likely to suffer more so from interruptions (i.e. meetings) because they impede their ability to achieve their individual tasks/goals. When *more* tasks or goals are assigned, the negative effect of interruptions is likely heightened for accomplishment strivers. Consequently, incorporating both the meeting cadences (e.g. quantity, spread) and the situational characteristic of daily task load, we further predict a combined effect, where:

Hypothesis 4a. There will be a three-way interaction among meeting quantity, task load, and accomplishment striving on (a) anticipated productivity and (b) anticipated positive affective reactions, such that the negative relationship between meeting quantity and employees' anticipated productivity and positive affective reactions is strongest on days with high task load for those high in accomplishment striving and weakest on days with low task load for those low in accomplishment striving.

Hypothesis 4b. There will be a three-way interaction among meeting spread, task load, and accomplishment striving on (a) anticipated productivity and (b) anticipated positive affective reactions, such that the negative relationship between meeting spread and employees' anticipated productivity and positive affective reactions is strongest on days with high task load for those high in accomplishment striving and weakest on days with low task load for those low in accomplishment striving.

See Figure 1 for the full hypothesized model.

CHAPTER 2: METHODS

2.1 Participants

Participants were recruited from two large Pharmaceutical companies based in the Northeast, United States. In order to qualify to partake in the study, participants must work full-time (>35 hours per week), be at least 18 years old and spend at least 6 hours of time in work meetings per week, on average. A *work meeting* was described to participants as "a gathering of two or more employees for a purpose related to the functioning of an organization or a group" (Rogelberg, 2019, p. 4).

A total of 114 participants completed the onetime questionnaire. We eliminated participants that indicated they spend less than 6 hours of time in work meetings per week (N = 3), as well as those that indicated they work less than 35 hours per week (N = 1) as they failed to meet inclusion criteria. We also eliminated those that failed the manipulation check, indicating they were 'not at all confident' that the feelings they just reported would be representative of what they would actually feel in the given situation/s (N = 1; discussed in greater detail below).

This resulted in a final sample of 109 participants (64% female, 36% male). The sample consisted of mid- to high-level managerial employees (20% executive level, 43% mid-management). Eighty percent of the sample indicated that their job involves work that is precise, scientific and intellectual to a great or very great extent. Roughly 85% of the sample was between the ages of 35 and 55, with a majority having been with the company between 1 and 10 years (40%). Participants had, on average, 15 meetings per week.

2.2 Procedure and Design

Participants were asked to complete a survey capturing anticipated feelings based on hypothetical workday schedules. A scenario-based design is most appropriate when the goal of the research is to assess explicit processes and potential outcomes—those about which participants are aware of and can provide information on (Aguinis & Bradley, 2014). The survey presented a general vignette describing a day at work, including a constant two hours of meetings as well as a set deliverable due by the end of the day. Participants were asked to imagine themselves in the given situation and respond to the various ways in which the day may pan out. Further instructions were provided before each of the eight schedules presented, indicting the amount of time the deliverable is expected to take (i.e. task load condition). Thus, all eight scenarios varied based on three factors: the number of meetings, the spread of the meetings, and the specific amount of individual work tasks assigned for the day. Adopting a within-persons approach, all participants viewed the same set of scenarios – each presented with eight schedules, in random order. After each schedule, respondents reported anticipated feelings (e.g. predicted productivity and affective reactions with the day). Section 2 of the survey included general questions that captured individual level of accomplishment striving, perceptions of general meeting effectiveness at work, the nature of their current job, and demographics. The entire survey took, on average, approximately 14 minutes to complete.

Manipulation of Factors. Factor A represented the manipulation of meeting quantity: A day with four, 30-minute meetings, and a day with two, 60-minute meetings[1]. Factor B consisted of meeting dispersion or spread: Low meeting spread (back-to-back meetings), and high spread (meetings with a total of four hours in between). Factor C was reflected in the written instructions presented before each schedule, representing task load: a scenario with low individual task load (15-minute task), and a scenario with high individual task load (3-hour task).

Despite differing spreads, all meetings were centered around midday to control for time-of-day effects. By centering the meeting spread around midday, we are able to rule out alternative explanations such as individual preferences for certain meeting times (e.g. favoring morning meetings).

Vignette. With the help of two subject matter experts (SME), both employees from where the sample was drawn from, we created the vignette to represent a realistic workday that would be typical for our sample. One recommendation to improve realism in EVM designs is to increase the level of immersion experienced by participants (Aguinis & Bradley, 2014). By creating a standard workday and realistic scenario, we increase the likelihood of participants being personally immersed in the situation described in the vignette. Vignettes become more lifelike when they provide ''natural noise,'' or familiar distractions (Aguinis & Bradley, 2014). When the ''noise'' created by the distractors (e.g., phone calls, emails, assignments) is controlled - as in the present case - more realistic scenarios can be created without compromising the internal validity

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[1] *Note:* The amount of actual time spent in meetings each day was held constant, at 2 hours. However, this time was broken up into two conditions: 4, 30-minute and 2, 60-minute.

of the experiment (Pierce & Aguinis, 1997). Moreover, improving the realism of the study by increasing the similarity between the experimental (vignette) and natural setting (the workplace) enhances the observed effects, similarly to how transfer of training is improved by increasing the similarity between the job training and job contexts (Aguinis & Kraiger, 2009).

By including "noise," via lunch plans and work obligations, participants' were likely able to immerse themselves in the scenario presented and feel familiar with the vignette. Plus, it helped to put all participants in identical mindsets prior to collecting reactions regarding the scenarios.

The general vignette presented at the beginning of the survey was as follows:

"*Please imagine yourself in the following scenario:*

You have a fairly independent job, where you are individually evaluated. You are currently on two, team-based projects. You anticipate brief phone calls from colleagues and peers throughout the day, per usual. You ate a large breakfast and plan to snack throughout the afternoon, so you are not planning to take a formal lunch break. You expect the average email load, typically receiving and responding to forty emails throughout the day. On your calendar, you have 2 hours of team meetings spread throughout the 9AM – 5PM workday. Additionally, you have a project report you must deliver to your supervisor by the end of the day that you must independently complete."

Further instructions were given before the presentation of each of the eight schedules. The instructions varied based on the manipulation of individual task assignment (Factor C):

Low Task Load Condition (*c1)*

*"Now, keeping the schedule above in mind, imagine you expect the deliverable for your supervisor to take you approximately **15 minutes** to complete today."*

High Task Load Condition (*c2)*

*"Now, keeping the schedule above in mind, imagine you expect the deliverable for your supervisor to take you approximately **3 hours** to complete today."*

To summarize, the survey began with the overall vignette. Then, each scenario included one (of the two) set of instructions followed by the presentation of one (of the eight) 9 AM – 5 PM workday schedules, which varied on the number of meetings (*a1, a2*) and the spread of those meetings (*b1, b2).* Conditions 2, 4, 6 and 8 (Table 2) followed the presentation of the first instruction (in random order), indicating a low-task load day. Schedules 1, 3, 5 and 7 followed the second instruction (in random order), depicting a high task-load workday.

To further ensure the vignette was realistic, we conducted a follow-up verbal protocol analysis with three SME's from where our sample was drawn from, prior to administering the survey. We presented the drafted vignette and survey items to the experts, and informally interviewed each SME to talk through the questionnaire. We took notes on what experts found realistic, and what to improve to increase transferability. We added in noise such as email load (e.g. what the typical email load for our sample is), as well as language that is familiar to our sample. Additionally, experts recommended that 'noise' be visually included in each calendar schedule, so it does not get forgotten during the course of the survey. Following this verbal protocol analysis, we added noise/distractions into the calendar visuals (see Appendix A to view the calendar schedule visuals).

2.3 Measures

Realism. Four items were included on the survey to ensure respondents viewed the vignette as realistic and could imagine themselves in the given work situation. The first

two items were presented immediately following the workday vignette (1) "How realistic does this scenario seem to you, given your experiences at work?" Roughly 87% of respondents selected very or somewhat realistic, and (2) "Could you imagine yourself in this work situation?" Over 90% of the sample selected yes.

The two items presented at the end of the survey, following the presentation of all eight calendar schedules, were: (1) "Was it particularly difficult to imagine yourself experiencing the given work situation throughout the duration of the survey?" Approximately 90% of participants responded no, indicating it was not difficult to imagine themselves in the work situation while completing the survey, and (2) "How confident are you that the feelings you just reported would be representative of what you would actually feel in the given situation/s?" Sixty percent of participants selected very confident, and 39% indicated they were somewhat confident. Results from the manipulation check provide support that participants perceived the vignette as realistic, suggesting their responses are representative of how they would feel in the given work situations.

One participant (N=1) stated they were not at all confident that their feelings would be representative of how they actual felt in the given work situations. This participant was eliminated from analyses.

Post-Scenario Assessment

Due to the repetitive nature of the research design, short scales were used in attempt to reduce participant fatigue. Both the scales, and items within the scales, were presented in random order after each schedule to allay order effects. In addition, following guidance from Huang, Curran, Keeney, Poposki and DeShon (2012), two

insufficient effort responding (IER) questions were scattered throughout the survey (e.g. "please select strongly agree for this item") to detect careless responses from participants.

Anticipated Productivity. Two items from Foulk et al., (2019) and three items from Grawitch, Granda, and Barber (2008) were used to measure predicted daily productivity. For these questions, participants reported the extent to which they believe they could adequately perform work-related tasks given the schedule presented. Items were adapted to represent imagined perceptions, changing "I have" to "I believe I would." The items are as follows: "Today at work, *I believe I would* fulfill my work responsibilities" ,"Today at work, *I believe I would* perform the tasks expected of me" , "Today at work, *I believe I would* feel like I was productive", "Today at work, *I believe I would* feel like my work was of high quality" and "Today at work, *I believe I would* feel like I was efficient." Participants were asked to respond to the items on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Coefficient alpha ranged from 0.79 - 0.93 across all eight scenarios (average $\alpha = .87$).

Anticipated Positive Affect. We assessed participants' anticipated end-of-day affect using four items taken from the Job-Related Affect and Well-Being Scale (JAWS) by Van Katwyk, Fox, Spector and Kelloway (2000). The JAWS contain two dimensions (pleasure and arousal) resulting in four categories: high pleasure/low arousal, high pleasure/high arousal, low pleasure/low arousal, and low pleasure/high arousal. We included one (of the top five) items from each category, selecting those most relevant to the nature of the study. Again, we modified the items from "I feel" to "I believe I would feel" to align with the context of the study's design. The four items are as follows: "At the end of this workday, I *believe I would* feel satisfied" (high pleasure, low arousal), "At

the end of this workday, I *believe I would* feel fatigued (R)" (low pleasure, low arousal), "At the end of this workday, I *believe I would* feel energetic" (high pleasure, high arousal), " and "At the end of this workday, I *believe I would* feel anxious (R)" (low pleasure, high arousal). Participants were asked to indicate the extent to which they agreed with the four statements based on the schedule presented, on a scale from 1 (strongly disagree) to 5 (strongly agree). Coefficient alpha ranged from 0.68 to 0.78 across all scenarios (average $\alpha = 0.74$).

General Survey Items

The survey concluded with general questions that assessed one of the principal independent variables (accomplishment striving), potential control variables, and demographics. See Appendix A for the full survey.

Accomplishment-striving. Three items used in Rogelberg et al. (2006), taken from the Accomplishment Striving subscale of the Motivational Orientation Inventory (Barrick et al., 2002), were used to assess individual level of accomplishment striving. Barrick et al.'s (2002)'s original measure was designed to assess three components of accomplishment striving: attention and direction, intensity and persistence, and arousal. Similar to Rogelberg et al., (2006), we include one item from each: "I set personal goals to get a lot of work accomplished" (attention and direction), "I put a lot of effort into completing my work tasks" (intensity and persistence), "It is very important to me that I complete a lot of work" (arousal). Respondents were asked to rate how much they agreed with each statement on a scale from 1 (strongly disagree) to 5 (strongly agree). (M = 4.48, SD = 0.46; $\alpha = .46$)

Perceived Meeting Effectiveness. It may be beneficial to control for participants overall perceptions of the effectiveness of their own workplace meetings to combat against differences in meeting perceptions between subjects. For example, if one participant has a positive outlook on meetings, while another negatively views his or her workplace meetings, this could potentially confound between-person results in regard to how the two individuals perceive their meetings as interruptive. With this in mind, we included participants' perceptions of meeting effectiveness as one potential control variable. Participants were instructed to rate the effectiveness of meetings attended in a typical workweek using a sliding percentage scale ranging from 0% to 100%. Participants responded to five items, following the instructions "In a typical workweek, what percentage of your meetings…" (1) "were a good use of time" (2) "were well-run" (3) "would you describe as engaging" (4) "resulted in clear outcomes" (5) "did you feel it was necessary that you were there", and (6) "did you feel it basically could have been covered via email or other type of communication." (M = 59%, SD = 16%, α = .84)

Job Interdependence. Additionally, the nature of the job may influence whether participants' view meetings as interruptive (task *in*dependent jobs) or beneficial via a means of communication and collaboration (task *inter*dependent jobs). The theory of activity regulation (Zijlstra et al., 1999) suggests that workplace meetings likely serve as interruptions for highly task *in*dependent jobs, because they interfere with employees' personal tasks or goals. However, in highly *inter*dependent jobs, meetings are less likely to interfere with employees' goals considering meetings are typically used for collaboration and coordination of team goals/objectives (Rogelberg et al., 2006). Thus, we considered nature of the job as a second potential control variable in our model. We

included four items taken from Pearce & Gregersen (1991) to capture the interdependence of participants' work tasks. Participants were instructed to indicate their agreement (1= strongly disagree, 5 = strongly agree) with the following statements regarding their experiences at work: "I work closely with others in doing my work" , "I frequently must coordinate my efforts with others", "My own performance is dependent on receiving accurate information from others" , and "The way I perform my job has a significant impact on others." (M = 4.49, SD = 0.67; α = .89)

Demographics. To better understand the sample in this study, we collected demographic information (e.g., age, gender, job level, tenure). Example items include, "What is your age in years?" "How long have you worked in your current job (in years)?" "What is your gender?" (Male, Female, Gender not listed)", and "How many hours per week do you work on average?" (Inclusion check).

CHAPTER 3: DATA ANALYSIS

Means, standard deviations and correlations are displayed in Table 3. The two focal dependent variables, anticipated productivity and anticipated positive affect, were moderately correlated. Coefficient alpha ranged from 0.37 - 0.50 across all eight scenarios; (average α = .44).

3.1 Model Building

We tested the hypotheses using a repeated-measures approach to multilevel modeling (MLM). MLM offers statistical tests of main effects and interactions between variables at the within-person and between-person levels (Kristjansson, Kircher & Webb, 2007). A multilevel framework allows for the examination of nested data—in the current study, participant responses to meeting schedules are nested within person (i.e. participants responded to all eight schedules). The repeated measures approach to MLM allowed us to account for within-person variance, testing whether the change in responses were dependent on the characteristics of the various meeting schedules or characteristics of the persons themselves.

The first step in the analyses was to estimate a null model, to understand the percent of variance in outcome variables that was due to between-person variance vs. within-person variance. This model is defined as:

Level 1

$$Y_{ij} = \beta_{0j} + r_{ij}$$

Level 2

$$\beta_{0j} = \gamma_{00} + u_{0j}$$

Results from this model were used to compute the intraclass correlation (ICC1),

which provided the percentage of variance in each outcome variable explained by

between-person variability (instead of solely within-person variability). It is important to

establish that between-person variability in outcome variables exists given that an

independent variable (accomplishment striving) and a control variable (perceptions of

meeting effectiveness) are at the between-person level. Therefore, there has to be some

between-person variability in the outcome variables so that we can use various meeting

schedules as a variable to potentially explain the between-person variability, in addition

to explaining changes in the outcome variables. We calculated ICC1 using the multilevel

package in R (Bliese, 2000). ICC1 was 0.31 for both dependent variables: anticipate

productivity and anticipated positive affect. This indicates roughly 30% of variance in

outcome variables is between-person. Thus, nearly 70% of variability in outcome

variables is within-person.

3.2 Hypothesis Testing

We then tested our hypotheses using the lmer function from the nlme package in

R. This function fits a linear mixed-effects model with nested or crossed grouping factors

for the random effects. Given the structure of our data, this code was most appropriate for

analyses. In adherence to the recommendations on the inclusion of control variables, we

tested the model with and without the theoretically relevant control variable - perceptions

of meeting effectiveness - to see observed differences (Becker, 2005; Spector &

Brannick, 2011). Results were the same with or without this variable. Job

interdependence, initially considered as a potential control variable[2], was not significantly

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[2] Estimating the hypothesized relationships by considering the influence of other variables is an established
way of ruling out alternative explanations (Bernerth & Aguinis, 2016; Spector & Brannick 2011). Keeping

related to the two dependent variables (anticipated productivity and positive affect).

Therefore, there was no reason to include this variable as a control in the model (Becker,

2005; Spector & Brannick, 2011). Adhering to recommendations listed in Spector and

Brannick (2011), we chose not to include demographics as control variables.

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in mind that an excessive number of control variables may also reduce statistical power and, in fact, generate a suppression effect, we chose control variables based on their theoretical relevance and significant correlations with the core variables in the model (Bernerth & Aguinis, 2016; Spector & Brannick 2011).

CHAPTER 4: RESULTS

4.1 Quantitative Findings

Results from hypotheses 1- 3 can be found in Table 4. Hypothesis 1a was partially supported. The results, displayed in Table 4, show a statistically significant relationship between meeting quantity and anticipated positive affect. As meeting quantity increased, anticipated end-of-day positive affect decreased (γ = -0.20, p < .05). This relationship was robust even after perceptions of meeting effectiveness was accounted for. Meeting quantity was not significantly related to anticipated productivity (p > .05).

Hypothesis 1b was fully supported. As shown in Table 4, there were significant relationships between meeting spread and (a) anticipated productivity (γ = -0.49, p < .01) and (b) anticipated positive affect (γ = -0.50, p < .01). Such that, as meetings increased in spread on the calendar, both anticipated productivity and end-of-day positive affect decreased. Again, these relationships held after controlling for perceptions of meeting effectiveness.

Hypothesis 2a, predicting an interaction between daily task load and meeting quantity, was not supported for either dependent variable (p > .05). However, Hypothesis 2b was partially supported. Daily task load moderated the relationship between meeting spread and anticipated productivity, after controlling for perceptions of meeting effectiveness (γ = -0.65, p < .01). Such that, the negative relationship between meeting spread and productivity was stronger on days with high task load and weaker on days with low task load. View Figure 2 for the interaction plot. There was no significant finding for the interaction between meeting quantity and anticipated positive affect (p > .05).

The interaction between meeting quantity and individual accomplishment striving (hypothesis 3a) was partially supported. Individual level of accomplishment striving moderated the relationship between meeting quantity and anticipated positive affect after controlling for meeting effectiveness ($\gamma = -0.32$, $p < .05$), such that the relationship was stronger for those high in accomplishment striving and weaker for those low in accomplishment striving (see Figure 3 for interaction plot). No significant moderation was found between accomplishment striving and meeting quantity, and anticipated productivity ($p > .05$).

Hypothesis 3b was not supported. No significant interactions were found between individual level of accomplishment striving and meeting spread on the two dependent variables ($p > .05$).

Hypothesis 4, predicting a three-way interaction between meeting cadences (quantity, spread), task load, and accomplishment striving, was not supported ($p > .05$). Results from the three-way interactions using MLM can be found in Table 5.

4.2 Exploratory Analyses

We explored the following five variables as additional potential moderators of the relationships between meeting quantity, meeting spread, and (a) anticipated productivity and (b) anticipated positive affect: Job interdependence, tenure, age, gender, and job level. There was a significant interaction between meeting spread and job interdependence on anticipated positive affect ($p < .05$). View Figure 4 for the interaction plot. Those that had highly interdependent jobs (e.g. jobs requiring a lot of collaboration) seemed to suffer more so from highly dispersed meetings. Gender was also a significant

moderator (see Figure 5), where men seemed to be more negatively affected by meeting

spread ($p < .05$).

CHAPTER 5: DISCUSSION

Drawing upon the literature on workplace interruptions and task switching, we argued that meeting quantity and meeting spread both contribute to employees' anticipatory end-of-day affective reactions and perceptions of productivity.

5.1 Anticipated Positive Affect

Recall, positive affect involves having a sense of well-being, experiencing positive emotions, and being engaged both interpersonally and in goal achievement (Murphy, 1996, p. 340). We predicted days with greater meeting quantity and spread would be experienced as more interruptive, impacting employees expected levels of engagement and absorption in their work tasks, in turn, decreasing their anticipated positive affect. As expected, both the meeting quantity (even when controlling for total time in meetings) and spread were negatively related to anticipated positive affect. This finding is consistent with literature on task interruptions, which shows workplace interruptions are related to increased irritation, frustration, and negative mood (Zijlstra et al., 1999). Our finding also aligns with evidence from the meetings literature, which finds when employees have higher levels of work meetings, their overall well-being declines and daily fatigue increases (Luong & Rogelberg, 2005; Rogelberg et al., 2006).

We examined the influence of the individual trait, accomplishment striving, on meeting cadences and anticipatory positive affect. For those high in accomplishment striving, the negative effect of meeting quantity on anticipated positive affect was heightened. This relationship supports research by Rogelberg et al. (2006), who found meeting time demands to be negatively related to job attitudes and well-being for employees high in accomplishment striving. Those low in the accomplishment striving

trait may not be as affected by high meeting load because they are likely less motivated to complete daily tasks, thus meetings may not serve as interruptive or disruptive for these individuals.

Interestingly, the spread of meetings was negatively related to employees' anticipatory positive affect - regardless of the individual's level of accomplishment striving. There may be a third variable that could explain this lack of moderation. Recent research has found employees' time-management skill moderates the negative relationship between workflow interruptions and daily psychological distress, such that the relationship is weaker for employees with higher levels of time-management skill (Ma, 2020). Employees with superior time-management skill likely perceive the situation as more controllable and less hindering, as they are able to compensate for the time consumed by work interruptions. Thus, while meeting spread still appears to take a toll on these higher accomplishment striving individuals, the potential time-management skillset may help offset the expected extra negative affect that interruptions would have on these more goal-oriented individuals.

Surprisingly, the amount of task load expected for the day did not moderate the relationships between meeting schedule variables (spread, quantity) and anticipated positive affect. A possible explanation for this null finding may be due to the unanticipated benefits of time pressure that the high task load condition created. Interestingly, research has shown a high level of job demands does not necessarily lead to negative outcomes because some job demands (e.g., time pressure) provide motivating potential that results in positive consequences (Lepine, Podsakoff, & Lepine, 2005). Perhaps days with high task load (3-hour task) prompted feelings of positive pressure,

thus did not reduce anticipated positive affect any more than low task load (15-minute task), as we originally expected.

5.2 Anticipated Productivity

Our second dependent variable, anticipated productivity, was defined as an employee's subjective evaluation of how successful he or she is or will be at fulfilling job duties and responsibilities (Jimmieson & Terry, 1997). High meeting dispersion naturally creates more task-switching throughout the day, taking time away from employees focusing on their individual work tasks or assignments. As we predicted, meeting spread was negatively related to anticipated productivity. We found when meetings were highly dispersed throughout the calendar, employees predicted levels of productivity for that day declined. This finding aligns with research conducted by Sonnentag et al., (2018), who found perceptions of work interruptions were negatively related to daily perceptions of task accomplishment.

In our study, expected daily task load moderated this particular relationship. On days with a heavy task load, the negative effect of meeting spread were heightened. This moderation is consistent with research on interruptions, which shows time demands influence the relationship between task interruptions and performance outcomes (Beathge & Rigotti, 2013). When employees are faced with a high workload, the negative effects of task switching are stronger (Adamczyk & Bailey, 2004), as employees require more time to switch between tasks during times of high cognitive demand (DeMarco & Lister, 2013).

There were no significant interactions between meeting schedule variables (quantity, spread) and accomplishment striving on anticipated productivity. The

anticipated productivity levels were similar for those both high and low in accomplishment striving. Interestingly, recent research by Parke, Weinhardt, Brodsky, Tangirala, and DeVoe (2018) finds when employees have daily intentions to accomplish work tasks, they can overcome distractions and perform better that day at work. This may explain why those high in accomplishment striving did not report lower levels of anticipated productivity when meeting quantity and dispersion were high, as we expected. Perhaps these individuals had the confidence they could successfully accomplish their work tasks, regardless of the anticipated interruptions in their workday.

Unexpectedly, there were no significant relationships or interactions between meeting quantity and anticipated productivity. This may, in part, be due to the total time spent in meetings being held constant in this study. Namely, there were two hours of meetings dispersed throughout each calendar scenario used in this study. Therefore, participants were assigned two hours of time interrupted via meeting attendance throughout their day, regardless of their differing breakdowns (2, 60-minute meetings; 4, 30-minute meetings). The same two hours would be 'lost' to meetings in both conditions, equally impacting employee's anticipations of daily productivity. This aligns with past research, which finds it is the frequency of interruptions, rather than the amount of time they consume, that leads to negative outcomes for employees (Zijlstra et al., 1999).

Although there is overlap in findings across the two dependent variables, there were differences as well. These differences can be explained by considering the inherent nature of the dependent variables. It has been suggested that the link between employees' more short-lived feeling states (e.g., moods, affect, emotions) and performance measures (e.g. productivity levels) are inconsistent because of the time lag

problem: employees' moods and emotions may be fleeting and short-lived, while performance measures tend to reflect longer periods of evaluation (Wright & Staw, 1999; Miner & Glomb, 2010). This could explain the different findings for the two dependent variables in our study. The positive affect variable captured a mood-state, or initial emotional reactions to each workday calendar. Productivity, on the other hand, asked employees to anticipate their ability to accomplish work tasks over the course of the day. Perhaps, while initially experiencing negative emotional responses to a heavy meeting load, folks did not feel their overall productivity levels would necessarily be compromised by such meetings. This could explain why high meeting load was related to a reduction in anticipatory positive affect - but did not hinder individuals expected daily productivity. Moreover, task load heightened the negative effect of meeting spread on anticipated productivity; yet had no additional impact on anticipated positive affect. These findings suggest while heavy task load may reduce expectations of productivity, task load did not have an added influence on initial affective responses. Finally, those high in the accomplishment striving trait reported lower affect when meeting load was high compared to their counterparts. However, anticipated productivity levels remained the same regardless of this trait. This suggests while high achievers experience a more negative emotional reaction to meeting load, their anticipated productivity is not significantly hindered by meetings. Again, this could be because of their internal confidence in their ability to accomplish tasks, regardless of interruptions occurring throughout the workday.

5.3 Theoretical and Practical Implications

Our introduction of meeting cadences makes an important theoretical contribution to the meetings literature. A majority of the research on meetings has focused on specific tactics and behaviors occurring before, during and after the meeting event. Over the past 20 years, meeting science has learned a lot about the successful facilitation of meetings (e.g. agenda, time management, stewardship). However, the cadences or patterns of these meetings has often been overlooked. To our knowledge, little research has explored the implications of various meeting scheduling cadences throughout the day or week. The notion that the anticipation of daily meetings likely has an effect on employee work experiences is novel and unique. The suggestion that the scheduling of meetings may carry important outcomes for employees opens the door for future meeting scholars to consider the implications of various patterns or trends of meetings over time.

Our findings suggest several practical implications for employees, leaders and organizations on how to best schedule meetings. First, employees should be mindful of how their meeting calendar schedule influences their end-of-day perceptions. Our findings suggest that when within their control, employees should attempt to limit their meeting load and group necessary meetings together to reduce the amount of time lost to interruptions and task-switching. From a leader perspective, managers should strive to schedule fewer meetings in one workday to protect time devoted to individual work tasks and recovery. By scheduling meetings in succession as opposed to dispersed throughout the workday, leaders reduce employee task-switching and the associated recovery costs. In turn, increasing employee productivity as employees have more time to devote to individual work tasks. When project load is high, leaders should greatly consider

reducing the amount of meeting dispersion for employees. Reserving uninterrupted time for employees by grouping meetings together is even more important when task load is high. Third, leaders can cater to the unique needs of their employees. Consistent with Rogelberg et al. (2006), we found those high in accomplishment striving anticipated lower affect when they had more meetings. Leaders should consider how different employees respond to various meeting cadences and schedules. Finally, organizations should consider establishing meeting norms or company policies that protect employees' free time. Following recommendations often discussed in practice, organizations could adopt a meeting-less Monday policy, where no meetings are scheduled on Monday's (Nehdi, 2020). Or, organizations could reserve certain hours in the day where no meetings can be scheduled (Saunders, 2017). These policies would allow all employees to have designated time to work on individual tasks throughout the day or week. In sum, employees, leaders and organizations can incorporate our research findings into their meeting scheduling practices to optimize work experiences, increasing employee perceptions of productivity and positive affect.

5.4 Limitations and Future Directions

There are study limitations that must be kept in mind. First, the two dependent variables were measured anticipatorily. Participants reported how they anticipated they would feel in each scenario. However, given our preliminary survey findings on meeting calendar reactions, coupled with extant research on decision-making processes suggesting anticipated feelings are often quite accurate (Mellers & McGraw, 2011), we have reason to believe participants anticipatory responses are representative of how they would actually feel in the given situations. Still, future research would benefit from capturing

actual meeting experiences in real time. For example, a study may distribute end-of-day surveys to a sample of employees, having them report their daily meeting calendar and answer subsequent questions about the workday. Future research could utilize experience sampling methodology (ESM) to capture affective states and/or reactions after each meeting over a series of days. Research could also implement a diary methodology to explore beginning and end-of-day ratings of productivity, affect, accomplishment, etc., and see how ratings vary based on objective meeting calendar data. These methods would allow researchers explore the direct recovery costs associated with meetings (e.g., meeting recovery syndrome) and the impact of task-switching involved with meeting load and dispersion. A second concern with our study is the vignette-style design. A common concern with EVM is creating a realistic scenario that resonates with the selected sample. However, we followed guidelines offered by Aguinis & Bradley (2014) in our creation of our vignette. We consulted with subject matter experts from our sample, and conducted a verbal protocol analysis, to increase the realism of our scenarios. Future research could replicate or extend the current vignette design to provide evidence for and confidence in the realism of our vignette scenario. Third, we shortened and adapted our scales which raises concern about the validity of our measures. We chose to shorten our scales to reduce participant fatigue. With a repeated-measures design, it is important to keep measures short (Gabriel et al., 2018) to decrease attrition rates. Considering each participant responded to the same items eight times, we felt it was necessary to keep the measures brief. While our research focused on daily meeting schedules, future research could explore weekly meeting cadences. Future research should investigate the effects of meeting quantity and spread on a weekly level – perhaps

investigating the influence of having meeting-less days. This would allow us to see the implications of aggregated meeting load and dispersion over consecutive days. Our study centered all meetings around midday to control for time-of-day effects. Future research might investigate the implications of having morning vs. afternoon meetings. Future meeting scholars should also consider the implications of various meeting cadences in a virtual setting (e.g., daily Zoom meetings) to see if anticipated reactions hold when meetings are remote. The effects of task-switching and recovery costs may look different for virtual meetings, in remote work, and for hybrid teams. Finally, research should investigate other variables (both within and between persons) that may influence employee perceptions of or reactions to meeting cadences. Examples include individual levels of time-management skill, resiliency, conscientiousness, and ability to recover from work.

5.5 Conclusion

Organizations rely on work meetings for collaboration, teambuilding, and communication. Unfortunately, meetings may be experienced as an interruption – having a negative impact on employees' work experiences. The present study investigated various meeting schedules, seeking to find a schedule that reduced the disruptiveness of meetings and promoted positive employee work experiences. Overall, our findings suggest when there are fewer meetings scheduled for the day, and the meetings are grouped together (back-to-back), employees anticipate higher levels of daily productivity and positive affect compared to schedules where meetings are high in quantity and dispersion. This offers promise for both meetings research and practice. Future research

should continue to explore the effects of various meeting cadences on important

employee outcomes to make meetings a more enjoyable aspect of employee work life.

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Table 1

Proposed Factorial Design

LOW INDIVIDUAL TASK LOAD (C1)

	LOW MEETING SPREAD (B1)	HIGH MEETING SPREAD (B2)
LOW MEETING QUANTITY (A1)	(A1)(B1)(C1)	(A1)(B2)(C1)
HIGH MEETING QUANTITY (A2)	(A2)(B1)(C1)	(A2)(B2)(C1)

HIGH INDIVIDUAL TASK LOAD (C2)

	LOW MEETING SPREAD (B1)	HIGH MEETING SPREAD (B2)
LOW MEETING QUANTITY (A1)	(A1)(B1)(C2)	(A1)(B2)(C2)
HIGH MEETING QUANTITY (A2)	(A2)(B1)(C2)	(A1)(B2)(C2)

Table 2

Treatment conditions (2 x 2 x 2): 8 Schedules

Condition	1	2	3	4	5	6	7	8
Task	High 3hr.	Low 15m.	High 3 hr..	Low 15m.	High 3 hr..	Low 15m.	High 3 hr..	Low 15m.
9:00 - 9:30AM								
9:30 - 10:00AM								
10:00 - 10:30AM			X	X			X	X
10:30- 11:00AM			X	X				
11:00- 11:30AM								
11:30 - 12:00PM							X	X
12:00 - 12:30PM	X	X			X	X		
12:30 - 1:00PM	X	X			X	X		
1:00- 1:30PM	X	X			X	X		
1:30- 2:00PM	X	X			X	X		
2:00- 2:30PM							X	X
2:30 - 3:00PM								
3:00 - 3:30PM			X	X				
3:30 - 4:00PM			X	X			X	X
4:00- 4:30PM								
4:30- 5:00PM								

Table 3

Means, standard deviations, and correlations with confidence intervals

Variable	M	SD	1	2	3	4	5	6	7	8	9
1. Productivity	4.14	0.93									
2. Affect	3.34	0.87	.44** [.37, .50]								
3. Job interdependence	4.49	0.67	-.01 [-.11, .08]	.15** [.06, .24]							
4. Meeting effectiveness	54.43	14.83	.15** [.06, .24]	.15** [.06, .24]	.28** [.20, .37]						
5. Accomplishment striving	4.48	0.46	.11* [.02, .20]	.17** [.08, .26]	.12* [.03, .21]	.11* [.02, .20]					
6. Perceived interruption	2.90	1.38	-.34** [-.41, -.26]	-.46** [-.53, -.39]	-.19** [-.28, -.10]	-.25** [-.33, -.16]	-.11* [-.20, -.02]				
7. Age	3.75	0.78	-.06 [-.15, .04]	.04 [-.05, .13]	-.12** [-.21, -.03]	-.03 [-.12, .06]	.02 [-.07, .11]	-.03 [-.12, .06]			
8. Gender	1.63	0.48	.17** [.08, .26]	.05 [-.04, .14]	-.14** [-.23, -.05]	.04 [-.05, .13]	.16** [.07, .25]	-.00 [-.10, .09]	.04 [-.05, .13]		
9. Tenure	2.50	0.95	-.13** [-.22, -.04]	-.03 [-.13, .06]	-.26** [-.34, -.17]	-.03 [-.12, .07]	.18** [.09, .27]	.04 [-.06, .13]	.38** [.29, .45]	-.20** [-.28, -.11]	
10. Job level	2.25	0.87	.08 [-.01, .17]	-.08 [-.17, .01]	-.19** [-.27, -.10]	.12* [.03, .21]	.28** [.19, .36]	-.04 [-.13, .05]	-.30** [-.38, -.22]	.01 [-.09, .10]	-.07 [-.16, .03]

Note. M and SD are used to represent mean and standard deviation, respectively. Values in square brackets indicate the 95% confidence interval for each correlation. The confidence interval is a plausible range of population correlations that could have caused the sample correlation (Cumming, 2014). * indicates $p < .05$. ** indicates $p < .01$.

Table 4

MLM results using anticipated positive affect as the criterion

Parameter	Estimate	Std. Error	df	t-value	p>|t|
(Intercept)	3.19	0.30	58.40	10.67	0.00***
Meeting Effectiveness	.01	.01	55.84	1.90	0.06
Quantity	**-0.20**	**0.06**	**402.06**	**-3.23**	**0.00*****
Spread	**-0.50**	**0.06**	**402.05**	**-8.01**	**0.00*****
(Intercept)	3.21	0.30	62.27	10.67	0.00***
Meeting Effectiveness	.01	.01	55.84	1.90	0.06
Quantity	-0.19	0.09	398.95	-2.11	0.04*
Spread	-0.58	0.09	398.95	-6.48	0.00***
Task	-0.03	0.11	399.13	-0.27	0.79
Quantity x Task	**-0.03**	**0.13**	**399.06**	**-0.25**	**0.80**
Spread x Task	**0.14**	**0.13**	**399.06**	**1.15**	**0.25**
(Intercept)	1.07	0.81	104.15	1.32	0.19
Meeting Effectiveness	.01	.01	53.94	1.69	0.10
Quantity	1.22	0.62	394.00	1.98	0.05*
Spread	-0.10	0.62	394.00	-0.17	0.87
Accomplishment striving	0.49	0.17	108.98	2.83	0.01**
A.S. x Quantity	**-0.32**	**0.14**	**394.00**	**-2.33**	**0.02***
A.S. x Spread	**-0.09**	**0.14**	**394.00**	**-0.65**	**0.52**

Note. * indicates p < .05. ** indicates p < .01. *** indicates p < .001. Estimates are unstandardized.

MLM results using anticipated productivity as the criterion

Parameter	Estimate	Std. Error	df	t-value	p>|t|
(Intercept)	3.86	0.32	58.53	12.08	0.00***
Meeting Effectiveness	0.01	0.01	55.95	1.88	.07
Quantity	**-0.02**	**0.07**	**395.88**	**-0.26**	**0.80**
Spread	**-0.49**	**0.07**	**395.87**	**-7.24**	**0.00*****
(Intercept)	3.94	0.32	61.01	12.24	0.00***
Meeting Effectiveness	0.01	0.01	55.96	1.88	.07
Quantity	0.03	0.08	392.36	0.33	0.74
Spread	-0.16	0.08	392.36	-1.91	0.06
Task	-0.19	0.10	392.25	-1.81	0.07
Quantity x Task	**-0.08**	**0.12**	**392.49**	**-0.69**	**0.49**
Spread x Task	**-0.65**	**0.12**	**392.48**	**-5.53**	**0.00*****
(Intercept)	2.80	0.88	102.02	3.19	0.01**
Meeting Effectiveness	0.01	0.01	54.27	1.72	.09
Quantity	0.47	0.66	388.83	0.70	0.48
Spread	-0.33	0.66	388.89	-0.49	0.62
Accomplishment striving	0.25	0.19	106.87	1.32	0.19
A.S. x Quantity	**-0.11**	**0.15**	**388.80**	**-0.73**	**0.47**
A.S. x Spread	**-0.04**	**0.15**	**388,85**	**-0.25**	**0.81**

Table 5

MLM results using anticipated productivity as the criterion

Parameter	Estimate	Std. Error	df	t-value	p>|t|
(Intercept)	3.11	0.99	153.52	3.17	0.00**
Meeting Effectiveness	0.01	0.01	54.22	1.72	0.09
Quantity	0.41	0.82	382.36	0.50	0.62
Accomplishment-striving	0.20	0.21	162.74	0.94	0.35
Task	-0.70	1.00	382.37	-0.70	0.49
Spread	-0.37	0.82	382.36	-0.45	0.65
Quantity x A.S.	-0.09	0.18	382.34	-0.48	0.63
Quantity x Task	0.14	1.17	382.76	0.13	0.90
Task x A.S.	0.11	0.22	382.36	0.50	0.62
Spread x A.S.	0.05	0.18	382.34	0.25	0.80
Spread. x Task	0.13	1.17	382.70	0.11	0.91
Quantity x A.S. x Task	**-0.05**	**0.26**	**382.72**	**-0.18**	**0.86**
Spread x A.S. x Task	**-0.18**	**0.26**	**382.67**	**-0.68**	**0.50**

MLM results using anticipated positive affect as the criterion

Parameter	Estimate	Std. Error	df	t-value	p>|t|
(Intercept)	1.31	0.97	192.22	1.35	0.18
Meeting Effectiveness	0.01	0.01	53.94	1.69	0.10
Quantity	0.90	0.87	387.99	1.04	0.30
Accomplishment-striving	0.44	0.21	204.70	2.10	0.04*
Task	-0.49	1.07	387.99	-0.46	0.65
Spread	0.29	0.87	387.99	0.33	0.74
Quantity x A.S.	-0.25	0.19	387.99	-1.27	0.21
Quantity x Task	0.63	1.23	388.00	0.51	0.61
Task x A.S.	0.10	0.24	387.99	0.42	0.67
Spread x Task	-0.19	0.19	387.99	-1.00	0.32
Spread. x Task	-0.78	1.23	388.00	-0.63	0.53
Quantity x A.S. x Task	**-0.15**	**0.27**	**388.00**	**-0.53**	**0.60**
Spread x A.S. x Task	**0.21**	**0.27**	**388.00**	**0.76**	**0.45**

Note. A.S. = Accomplishment striving. * indicates p < .05. ** indicates p < .01. *** indicates p < .001. Estimates are unstandardized.
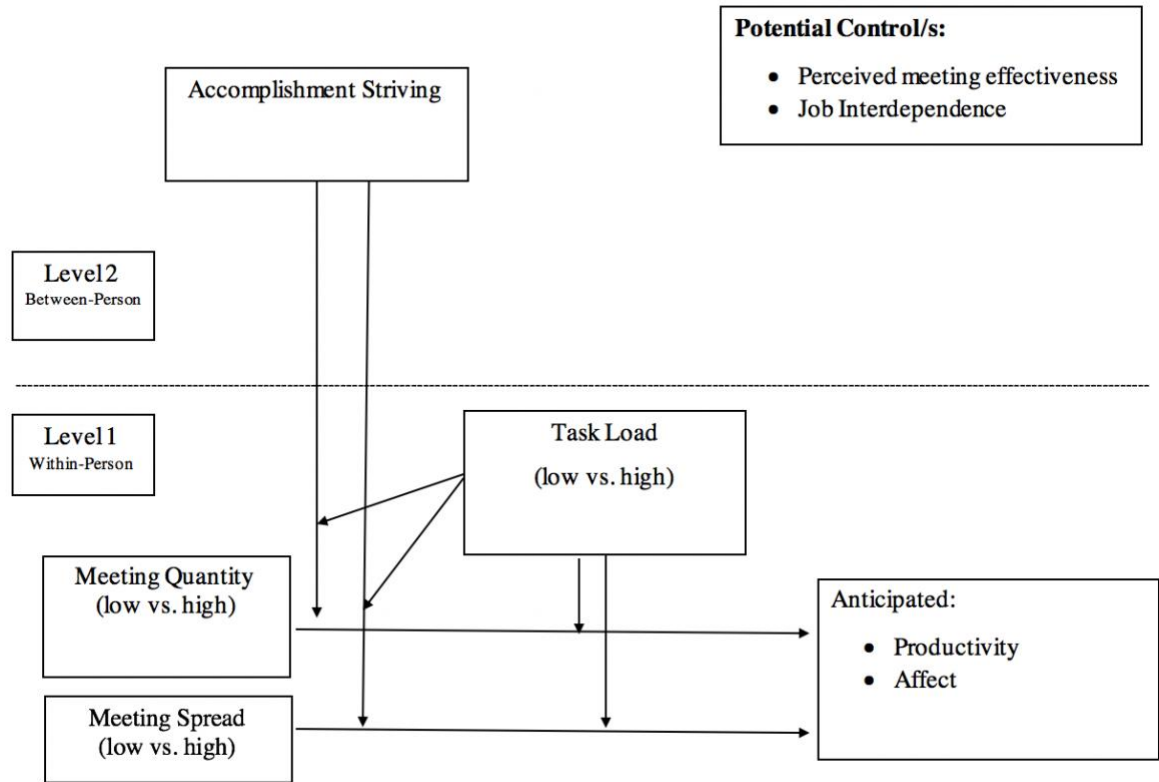
Figure 1. Hypothesized model
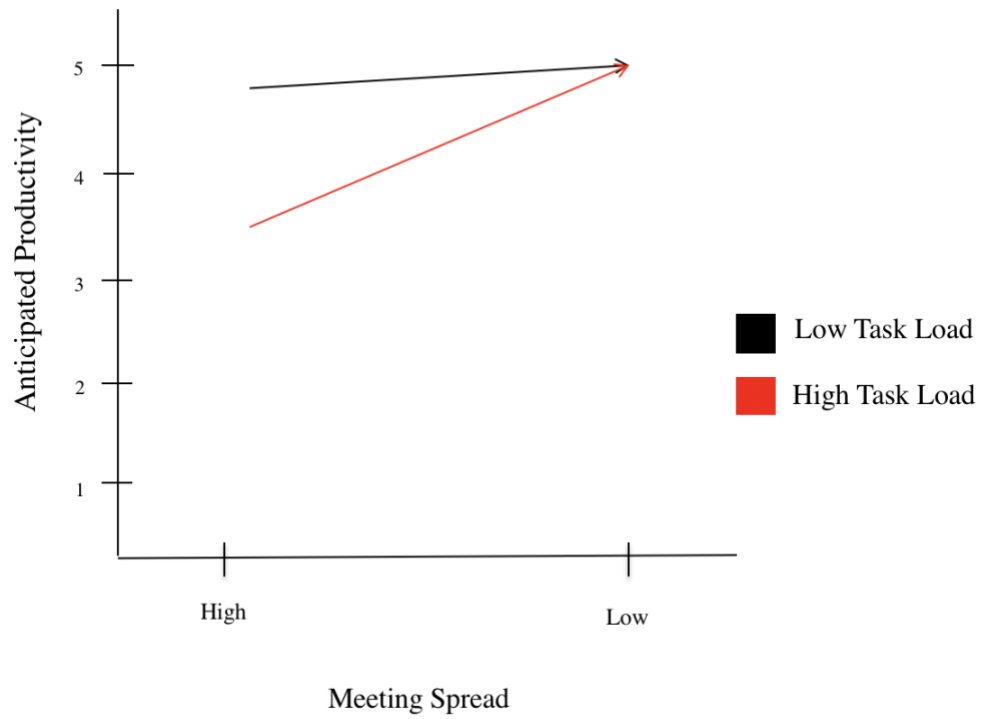
Figure 2. Interaction of anticipated productivity by task load over meeting spread
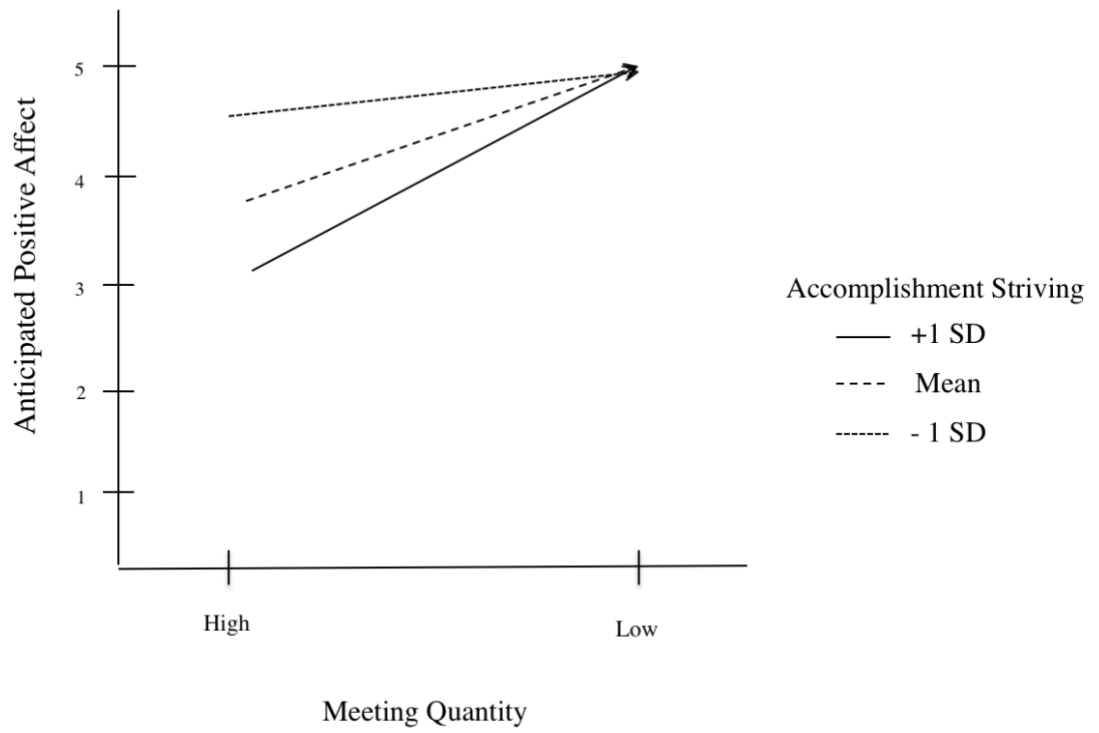
Figure 3. Interaction of anticipated positive affect by accomplishment striving over meeting quantity
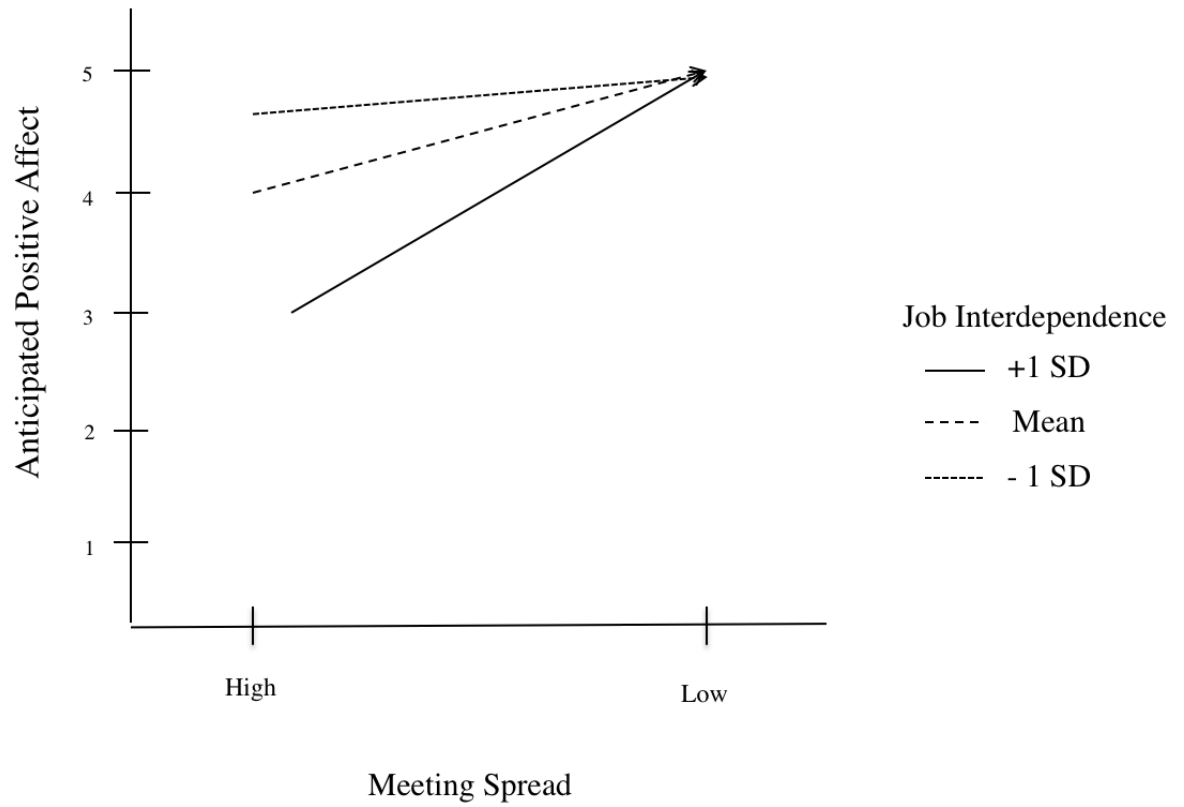
Figure 4. Interaction of anticipated positive affect by job interdependence over meeting spread
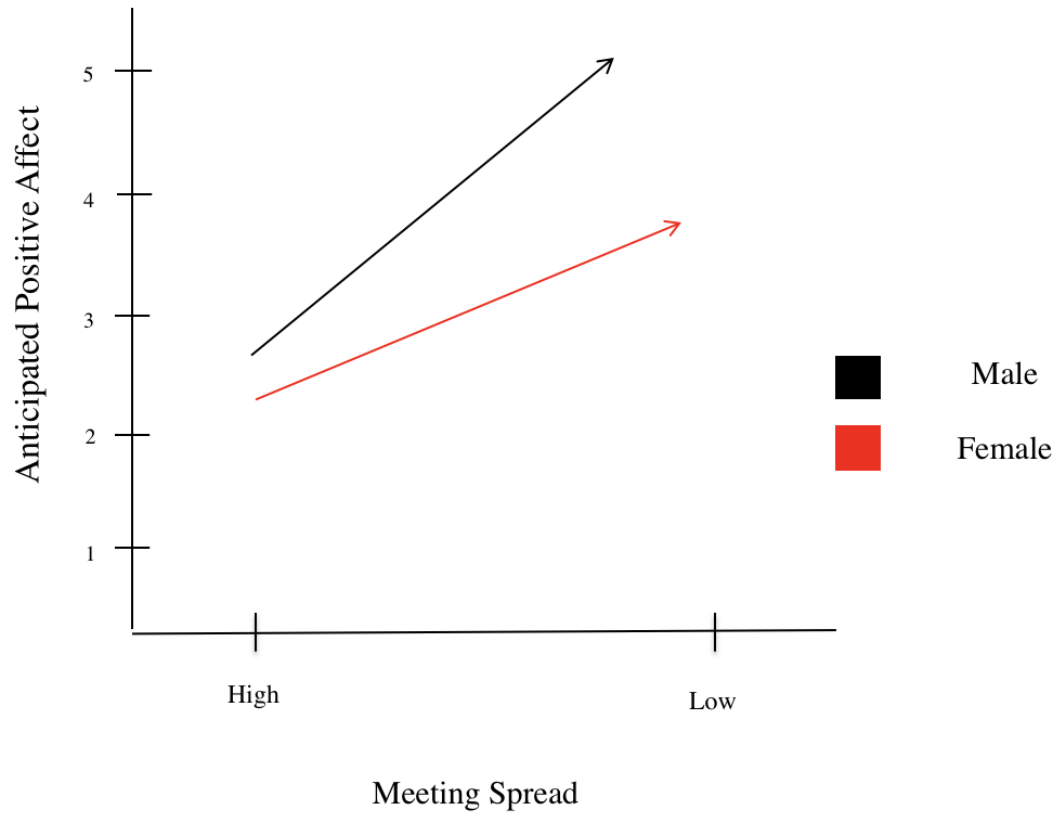
Figure 5. Interaction of anticipated positive affect by gender over meeting spread

APPENDIX: FULL SURVEY

Final Survey – Meeting Cadences

Informed Consent

Project Title and Purpose: Investigating the Scheduling of Daily Workplace Meeting
You are invited to participate in a research study examining daily meeting cadences. Please read the following information before consenting to participate.
Investigator(s): Dr. Steven G. Rogelberg
Eligibility: You may participate in this study if a) you are over the age of 18, b) work full time (35+ hours per week), and c) spend, on average, at least **six hours** of time in work meetings **per week**. A work meeting is defined as "a gathering of two or more employees for a purpose related to the functioning of an organization or a group."
Overall Description of Participation: You will be presented with a hypothetical work scenario followed by various 9AM – 5PM calendar schedules, and asked to answer a series of questions following each schedule.
Length of Participation: The survey should take you approximately 10 minutes to complete.
Benefits and Risks: This study will provide insight into the scheduling cadences of work meetings, namely, how they influence employees perceptions of end-of-day outcomes - such as daily accomplishment and satisfaction with the workday. You will not benefit personally by participating in this study other than having awareness of how the scheduling of your daily meetings influence your end-of-day perceptions. We do not believe that you will experience any risk from participating in this study. The questions asked are not sensitive or overly personal.
Volunteer Statement: Participation in this study is voluntary. You may choose not to take part in the study. You may start participating and change your mind and stop participation at any time by closing your internet browser.
Confidentiality and Privacy Protections: Your privacy will be protected. Your responses will be treated as confidential and will not be linked to your identity. You will not enter any personally identifiable information into the survey. Only researchers in this study will have access to the information you provide in this survey. We might use the anonymous survey data for future research studies, and we might share the anonymous survey data with other researchers for future research studies without additional consent from you.
Questions: If you have questions concerning the study, contact the principal investigator, Steven Rogelberg at sgrogelb@uncc.edu. If you have further questions or concerns about your rights as a participant in this study, contact the Office of Research Compliance at (704) 687-1871 or uncc-irb@uncc.edu.
You may print a copy of this form. If you are 18 years of age or older, have read and

understand the information provided and freely consent to participate in the study, you may proceed to the survey [Click the arrow below]

(scenario) Please imagine yourself in the following work situation throughout the duration of this survey:
 "You have a fairly independent job, where you are individually evaluated. You are currently on two, team-based projects. You anticipate brief phone calls from colleagues and peers throughout the day, per usual. You ate a large breakfast and plan to snack throughout the afternoon, so you are not planning to take a formal lunch break. You expect the average email load, typically receiving and responding to forty emails throughout the day. On your calendar, you have 2 hours of team meetings spread throughout the 9AM – 5PM workday. Additionally, you have a project report you must deliver to your supervisor by the end of the day that you must independently complete."

(realism) How realistic does this scenario seem to you, given your experiences at work?

○ Very realistic 1

○ Somewhat realistic 2

○ Not very realistic 3

X→

(imagine) Could you imagine yourself in this work situation?

○ Yes 1

○ No 2

(gen_instruct) Throughout this survey, you will be presented with a variety of 9AM – 5PM calendar schedules showing different ways that the hypothetical workday could be arranged. The end-of-day deliverable for your supervisor will also vary based on the amount of time you expect the deliverable to require.   Please view each daily calendar of how this day could potentially pan out. Then, imagining yourself in each given work situation, thoughtfully answer the subsequent questions.

End of Block: Instructions

Start of Block: Schedules 1 & 5

sch_1

X→
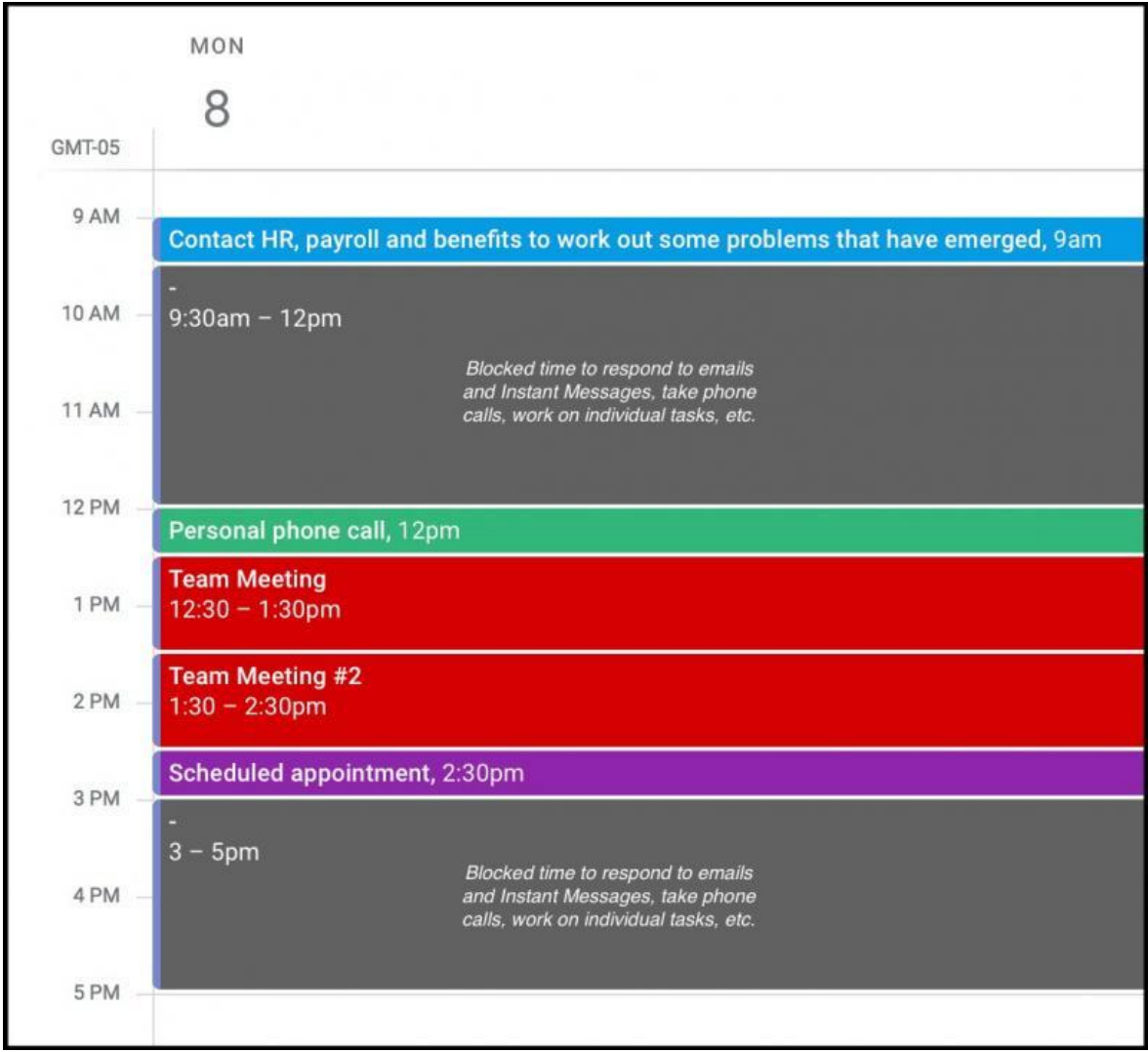
(emo_1) If you opened your work calendar in the morning and saw this as your schedule, what do you think your initial emotional reaction would be?

○ I would have a positive initial reaction (e.g. this day will be easy) 1

○ I would have a negative initial reaction (e.g. this day will be a tough one) 2

○ I would not have any initial reaction 3

(product_1) Now, keeping the schedule above in mind, imagine you expect the deliverable for your supervisor to take you approximately **3 hours** to complete today.
 Please answer the following questions indicating how much you agree or disagree with each statement.
Given the above calendar schedule and expected **3-hour** deliverable, today at work, I believe I would...

	Strongly disagree 1	Somewhat disagree 2	Neither agree nor disagree 3	Somewhat agree 4	Strongly agree 5
Fulfill my work responsibilities	○	○	○	○	○
Perform the tasks expected of me	○	○	○	○	○
Feel like I was productive	○	○	○	○	○
Feel like my work was of high quality	○	○	○	○	○
Feel like I was efficient	○	○	○	○	○
Feel like I was interrupted often throughout the day	○	○	○	○	○

(affect_1) At the end of this workday, I believe I would feel…

	Strongly disagree 1	Somewhat disagree 2	Neither agree nor disagree 3	Somewhat agree 4	Strongly agree 5
Satisfied	○	○	○	○	○
Fatigued	○	○	○	○	○
Energetic	○	○	○	○	○
Anxious	○	○	○	○	○

(product_5) Now, keeping the schedule above in mind, imagine you expect the deliverable for your supervisor to take you approximately **15 minutes** to complete today.

Please answer the following questions indicating how much you agree or disagree with each statement.
Given the above calendar schedule and expected **15-minute** deliverable, today at work, I believe I would…

	Strongly disagree 1	Somewhat disagree 2	Neither agree nor disagree 3	Somewhat agree 4	Strongly agree 5
Fulfill my work responsibilities	○	○	○	○	○
Perform the tasks expected of me	○	○	○	○	○
Feel like I was productive	○	○	○	○	○
Feel like my work was of high quality	○	○	○	○	○
Feel like I was efficient	○	○	○	○	○
Feel like I was interrupted often throughout the day	○	○	○	○	○

(affect_5) At the end of this workday, I believe I would feel…

	Strongly disagree 1	Somewhat disagree 2	Neither agree nor disagree 3	Somewhat agree 4	Strongly agree 5
Satisfied	○	○	○	○	○
Fatigued	○	○	○	○	○
Energetic	○	○	○	○	○
Anxious	○	○	○	○	○

End of Block: Schedules 1 & 5

Start of Block: Schedules 2 & 6

sch_2

MON

8

GMT-05

9 AM	Contact HR, payroll and benefits to work out some problems that have emerged, 9am
10 AM	- 9:30 – 10:30am — Blocked time to respond to emails and Instant Messages, take phone calls, work on individual tasks, etc.
11 AM	Team Meeting 10:30 – 11:30am
12 PM	-, 11:30am Personal phone call, 12pm
1 PM	- 12:30 – 2:30pm
2 PM	Blocked time to respond to emails and Instant Messages, take phone calls, work on individual tasks, etc.
3 PM	Scheduled appointment, 2:30pm -, 3pm
4 PM	Team Meeting #2 3:30 – 4:30pm
5 PM	-, 4:30pm

X→

(emo_2) If you opened your work calendar in the morning and saw this as your schedule, what do you think your initial emotional reaction would be?

○ I would have a positive initial reaction (e.g. this day will be easy) 1

○ I would have a negative initial reaction (e.g. this day will be a tough one) 2

○ I would not have any initial reaction 3

(product_2) Now, keeping the schedule above in mind, imagine you expect the deliverable for your supervisor to take you approximately **3 hours** to complete today.

Please answer the following questions indicating how much you agree or disagree with each statement.

Given the above calendar schedule and expected **3-hour** deliverable, today at work, I believe I would …

	Strongly disagree 1	Somewhat disagree 2	Neither agree nor disagree 3	Somewhat agree 4	Strongly agree 5
Fulfill my work responsibilities	○	○	○	○	○
Perform the tasks expected of me	○	○	○	○	○
Feel like I was productive	○	○	○	○	○
Feel like my work was of high quality	○	○	○	○	○
Please select strongly agree for this item	○	○	○	○	○
Feel like I was efficient	○	○	○	○	○
Feel like I was interrupted often throughout the day	○	○	○	○	○

(affect_2) At the end of this workday, I believe I would feel…

	Strongly disagree 1	Somewhat disagree 2	Neither agree nor disagree 3	Somewhat agree 4	Strongly agree 5
Satisfied	○	○	○	○	○
Fatigued	○	○	○	○	○
Energetic	○	○	○	○	○
Anxious	○	○	○	○	○

(product_6) Now, keeping the schedule above in mind, imagine you expect the deliverable for your supervisor to take you approximately **15 minutes** to complete today.

 Please answer the following questions indicating how much you agree or disagree with each statement.

Given the above calendar schedule and expected **15-minute** deliverable, today at work, I believe I would…

	Strongly disagree 1	Somewhat disagree 2	Neither agree nor disagree 3	Somewhat agree 4	Strongly agree 5
Fulfill my work responsibilities	○	○	○	○	○
Perform the tasks expected of me	○	○	○	○	○
Feel like I was productive	○	○	○	○	○
Feel like my work was of high quality	○	○	○	○	○
Feel like I was efficient	○	○	○	○	○
Feel like I was interrupted often throughout the day	○	○	○	○	○

(affect_6) At the end of this workday, I believe I would feel…

	Strongly disagree 1	Somewhat disagree 2	Neither agree nor disagree 3	Somewhat agree 4	Strongly agree 5
Satisfied	○	○	○	○	○
Fatigued	○	○	○	○	○
Energetic	○	○	○	○	○
Anxious	○	○	○	○	○

End of Block: Schedules 2 & 6

Start of Block: Schedules 3 & 7

sch_3

X→
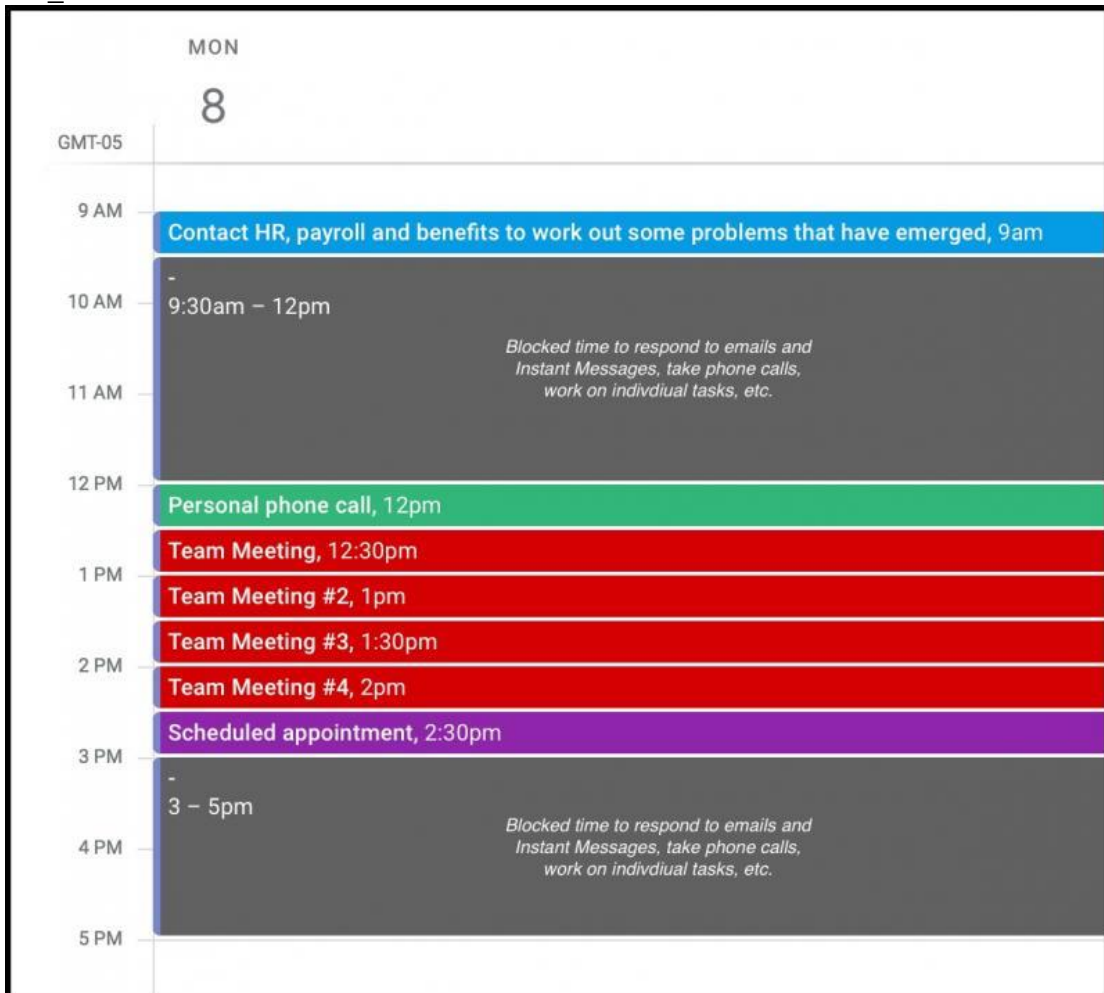
(emo_3) If you opened your work calendar in the morning and saw this as your schedule, what do you think your initial emotional reaction would be?

○ I would have a positive initial reaction (e.g. this day will be easy) 1

○ I would have a negative initial reaction (e.g. this day will be a tough one) 2

○ I would not have any initial reaction 3

(product_3) Now, keeping the schedule above in mind, imagine you expect the deliverable for your supervisor to take you approximately **3 hours** to complete today.

Please answer the following questions indicating how much you agree or disagree with

each statement.

Given the above calendar schedule and expected **3-hour** deliverable, today at work, I believe I would…

	Strongly disagree 1	Somewhat disagree 2	Neither agree nor disagree 3	Somewhat agree 4	Strongly agree 5
Fulfill my work responsibilities	○	○	○	○	○
Perform the tasks expected of me	○	○	○	○	○
Feel like I was productive	○	○	○	○	○
Feel like my work was of high quality	○	○	○	○	○
Feel like I was efficient	○	○	○	○	○
Feel like I was interrupted often throughout the day	○	○	○	○	○

(affect_3) At the end of this workday, I believe I would feel…

	Strongly disagree 1	Somewhat disagree 2	Neither agree nor disagree 3	Somewhat agree 4	Strongly agree 5
Satisfied	○	○	○	○	○
Fatigued	○	○	○	○	○
Energetic	○	○	○	○	○
Anxious	○	○	○	○	○

(product_7) Now, keeping the schedule above in mind, imagine you expect the deliverable for your supervisor to take you approximately **15 minutes** to complete today.

Please answer the following questions indicating how much you agree or disagree with each statement.

Given the above calendar schedule and expected **15-minute** deliverable, today at work, I believe I would…

	Strongly disagree 1	Somewhat disagree 2	Neither agree nor disagree 3	Somewhat agree 4	Strongly agree 5
Fulfill my work responsibilities	○	○	○	○	○
Perform the tasks expected of me	○	○	○	○	○
Feel like I was productive	○	○	○	○	○
Feel like my work was of high quality	○	○	○	○	○
Feel like I was efficient	○	○	○	○	○
Feel like I was interrupted often throughout the day	○	○	○	○	○

(affect_7) At the end of this workday, I believe I would feel…

	Strongly disagree 1	Somewhat disagree 2	Neither agree nor disagree 3	Somewhat agree 4	Strongly agree 5
Satisfied	○	○	○	○	○
Fatigued	○	○	○	○	○
Energetic	○	○	○	○	○
Anxious	○	○	○	○	○

End of Block: Schedules 3 & 7

Start of Block: Schedules 4 & 8

sch_4
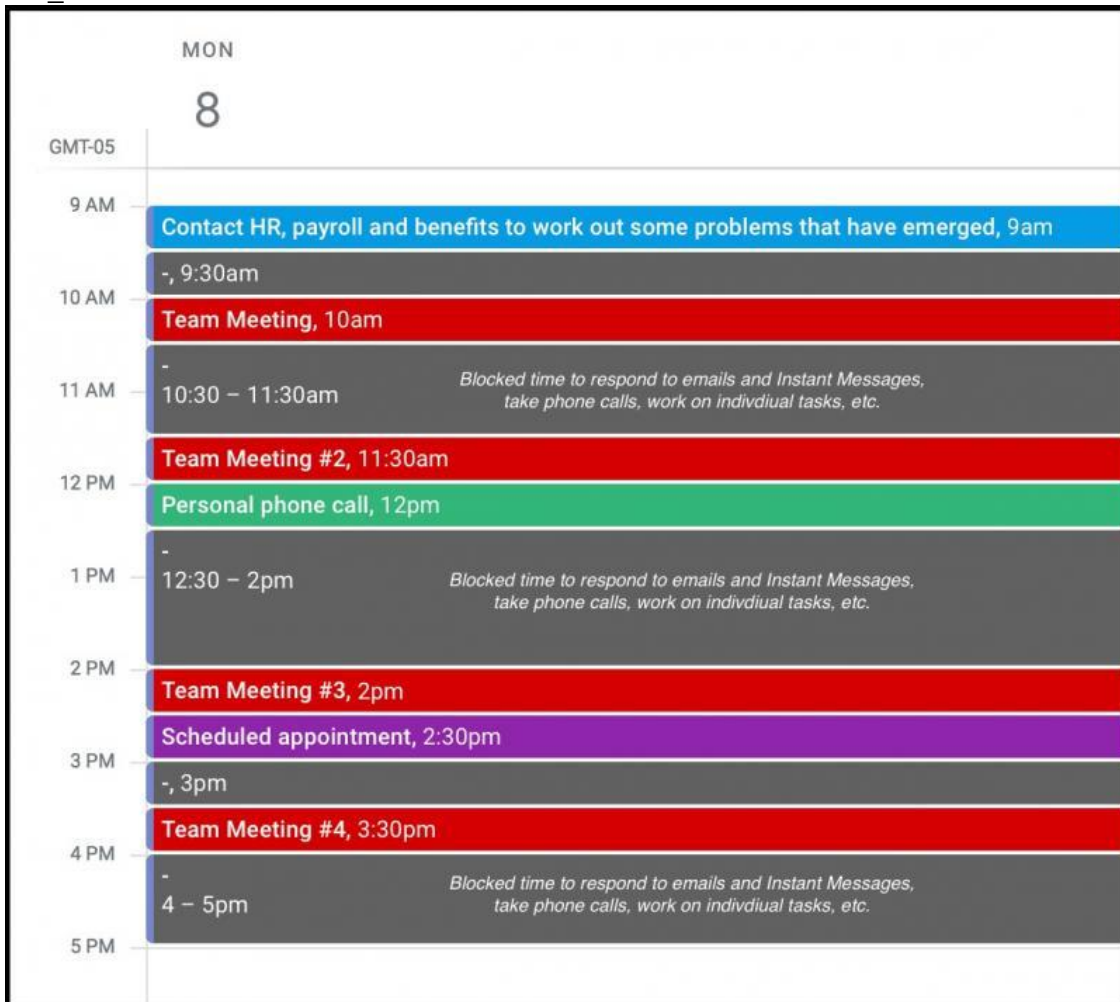
(emo_4) If you opened your work calendar in the morning and saw this as your schedule, what do you think your initial emotional reaction would be?

○ I would have a positive initial reaction (e.g. this day will be easy) 1

○ I would have a negative initial reaction (e.g. this day will be a tough one) 2

○ I would not have any initial reaction 3

(product_4) Now, keeping the schedule above in mind, imagine you expect the deliverable for your supervisor to take you approximately **3 hours** to complete today.

Please answer the following questions indicating how much you agree or disagree with each statement.

Given the above calendar schedule and expected **3-hour** deliverable, today at work, I believe I would…

	Strongly disagree 1	Somewhat disagree 2	Neither agree nor disagree 3	Somewhat agree 4	Strongly agree 5
Fulfill my work responsibilities	○	○	○	○	○
Perform the tasks expected of me	○	○	○	○	○
Please select strongly agree for this item	○	○	○	○	○
Feel like I was productive	○	○	○	○	○
Feel like my work was of high quality	○	○	○	○	○
Feel like I was efficient	○	○	○	○	○
Feel like I was interrupted often throughout the day	○	○	○	○	○

(affect_4) At the end of this workday, I believe I would feel…

	Strongly disagree 1	Somewhat disagree 2	Neither agree nor disagree 3	Somewhat agree 4	Strongly agree 5
Satisfied	○	○	○	○	○
Fatigued	○	○	○	○	○
Energetic	○	○	○	○	○
Anxious	○	○	○	○	○

(product_8) Now, keeping the schedule above in mind, imagine you expect the deliverable for your supervisor to take you approximately **15 minutes** to complete today.

Please answer the following questions indicating how much you agree or disagree with each statement.
Given the above calendar schedule and expected **15-minute** deliverable, today at work, I believe I would…

	Strongly disagree 1	Somewhat disagree 2	Neither agree nor disagree 3	Somewhat agree 4	Strongly agree 5
Fulfill my work responsibilities	○	○	○	○	○
Perform the tasks expected of me	○	○	○	○	○
Feel like I was productive	○	○	○	○	○
Feel like my work was of high quality	○	○	○	○	○
Feel like I was efficient	○	○	○	○	○
Feel like I was interrupted often throughout the day	○	○	○	○	○

(affect_8) At the end of this workday, I believe I would feel…

	Strongly disagree 1	Somewhat disagree 2	Neither agree nor disagree 3	Somewhat agree 4	Strongly agree 5
Satisfied	○	○	○	○	○
Fatigued	○	○	○	○	○
Energetic	○	○	○	○	○
Anxious	○	○	○	○	○

End of Block: Schedules 4 & 8

Start of Block: Debrief/Manipulation Check

(difficult_imagine) Was it particularly difficult to imagine yourself experiencing the given work situation throughout the duration of the survey?

○ Yes 1

○ No 2

(remote_inperson) When you were responding to the calendars throughout the course of the survey, did you imagine the scheduled meetings were in person at the office, or remote at home?

○ In person at the office 1

○ Remote at home 2

○ A combination of in person at the office and remote at home 3

○ Other _____ 4

(represent) How confident are you that the feelings you just reported would be representative of what you would actually feel in the given situation/s?

○ Very confident 1

○ Somewhat confident 2

○ Not at all confident 3

(explore_1) If you were asked to schedule four, 30-minute meetings throughout the 9AM - 5PM workday (in any arrangement), when would you schedule them for? (Ex: 9-9:30AM, 10-10:30AM, 2-2:30PM, 3-3:30PM)

_____

_____

_____

_____

_____

(explore_2) Why would you schedule your meetings this way?

_____

_____

_____

_____

_____

(explore_3) If you were asked to schedule two, 60-minute meetings throughout the 9AM - 5PM workday (in any arrangement), when would you schedule them for? (Ex: 9:00-10:00 AM, 10:00-11:00AM)

_____

_____

_____

_____

_____

(explore_4) Why would you schedule your meetings this way?

_____

_____

_____

_____

_____

End of Block: Debrief/Manipulation Check

Start of Block: Meetings & Work Questions

(meetings_instruct) Below are general questions regarding your workplace meetings and work experiences.

(time_in_meetings) On average, approximately how long do you spend in meetings in a typical week? (Indicate in hours to the nearest hour)
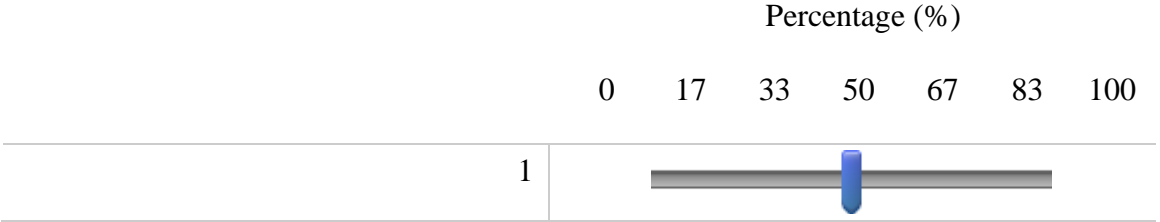
_____

(numb_meetings) On average, how many meetings do you attend in a typical week? (Indicate the number)

_____

(meet_effectiveness)
In a typical week, what percentage of your meetings...

Percentage (%)

	0	25	50	75	100
Were a good use of time					
Were well-run					
Would you describe as engaging					
Resulted in clear outcomes					
Did you feel it was necessary that you were there					
Did you feel it basically could have been covered via email or other type of communication					
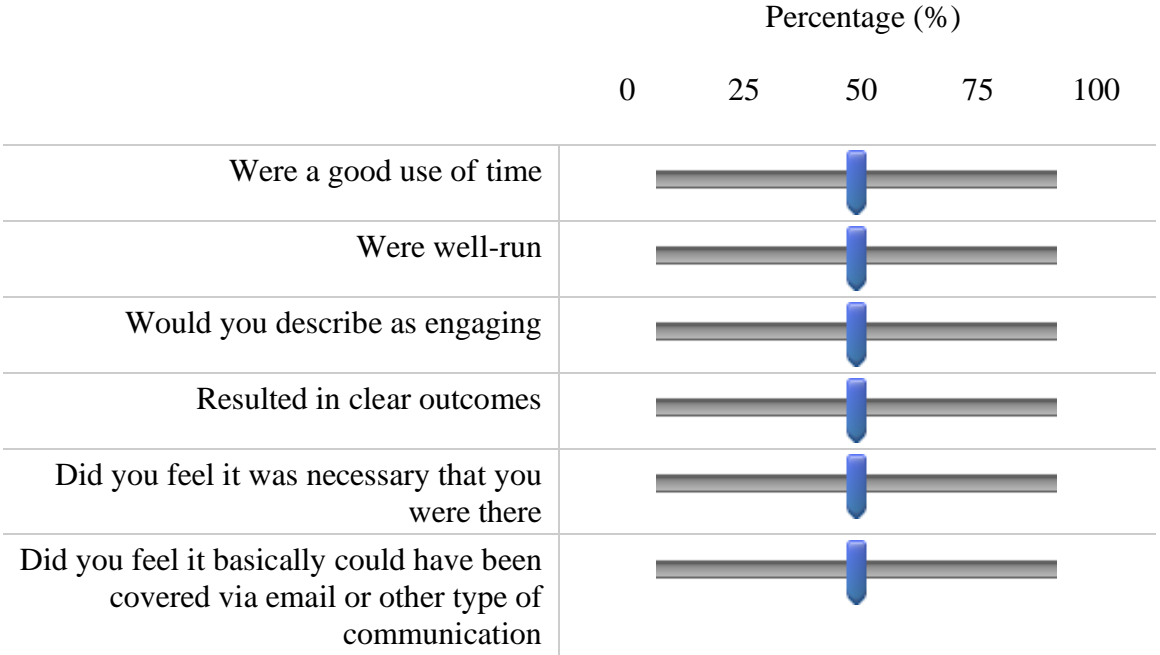
(virtual_meet)
In the past week, what percentage of your meetings were remote/virtual?

Percentage (%)

	0	17	33	50	67	83	100
1							

(work_home)
In the past week, what percentage of your time was spent working from home?

Percentage (%)

| | 0 | 17 | 33 | 50 | 67 | 83 | 100 |

1

(childcare) When working from home right now, what percent of your time is spent on childcare types of responsibilities/activities during "traditional" work hours (e.g. taking care of children)?

Percentage (%)

| | 0 | 17 | 33 | 50 | 67 | 83 | 100 |

1

(remote_challenge) I find it challenging to virtually attend a meeting while working from home.

○ Strongly disagree 1

○ Somewhat disagree 2

○ Neither agree nor disagree 3

○ Somewhat agree 4

○ Strongly agree 5

X→

(job_interdepend)
 Please indicate your agreement with each of the following statements regarding your experiences at work:

	Strongly disagree 1	Somewhat disagree 2	Neither agree nor disagree 3	Somewhat agree 4	Strongly agree 5
I work closely with others in doing my work	○	○	○	○	○
I frequently must coordinate my efforts with others	○	○	○	○	○
My own performance is dependent on receiving accurate information from others	○	○	○	○	○
The way I perform my job has a significant impact on others	○	○	○	○	○

(nature_of_job)
To what extent does your job and/or occupation involve each of the following elements:

	(1) To a small extent	(2) To some extent	(3) To a moderate extent	(4) To a great extent	(5) To a very great extent
Hands-on type of work; works with tools and machines	○	○	○	○	○
Work that is precise, scientific and intellectual	○	○	○	○	○
Work that involves creative, expressive and/or artistic type of activities	○	○	○	○	○

End of Block: Meetings & Work Questions

Start of Block: Personal/Demographics

(demo_instruct) Please answer the following questions about yourself.

(accomplish_striving) Select the response that best describes how much you agree or disagree with each statement.

	Strongly disagree 1	Somewhat disagree 2	Neither agree nor disagree 3	Somewhat agree 4	Strongly agree 5
I set personal goals to get a lot of work accomplished	○	○	○	○	○
I put a lot of effort into completing my work tasks	○	○	○	○	○
It is very important to me that I complete a lot of work	○	○	○	○	○

X→

(extraversion) Please indicate how well each statement describes you, using the 5-point scale:

	Strongly disagree 1	Somewhat disagree 2	Neither agree nor disagree 3	Somewhat agree 4	Strongly agree 5
I am the life of the party	○	○	○	○	○
I keep in the background	○	○	○	○	○
I talk to a lot of different people at parties	○	○	○	○	○
I don't talk a lot	○	○	○	○	○

(tenure) How long have you worked in your current job (in years)?

○ Less than one year 1

○ 1-10 years 2

○ 11-20 years 3

○ More than 20 years 4

(job_level) Which of the following most accurately reflects your current job level?

○ Senior, executive or top-level management 1

○ Middle-level management 2

○ Intermediate-level individual contributor 3

○ Entry-level professional 4

○ Administrative support 5

(incl_check) How many hours per week do you work, on average?

○ Less than 35 hours 1

○ 35 - 40 hours 2

○ 41 - 50 hours 3

○ 51 - 60 hours 4

○ More than 60 hours 5

(age) What is your age (in years)?

○ 18-24 years old 1

○ 25- 34 years old 2

○ 35-44 years old 3

○ 45-55 years old 4

○ Over 55 years old 5

X→

(gender) What is your gender?

○ Male 1

○ Female 2

○ Gender not listed 3

End of Block: Personal/Demographics