

EXAMINING THE EFFECTS OF NEGATIVE WORK OUTCOMES  
ON TELECOMMUTING

by

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## ABSTRACT

Despite telecommuting's tremendous growth in the last decade, it appears some employees are still hesitant to work from home. This study investigated whether the perceived consequences of telecommuting (social isolation, professional isolation, career harm, job insecurity, long work hours, and coworker resentment) influence employees' willingness to telecommute or telecommuting intensity. An online survey was distributed to contacts of the principal investigator through social and professional networking sites and email. Using regression analysis, the results showed that coworker resentment is a barrier to telecommuting as perceived coworker resentment was negatively related to both employees' willingness to telecommute and telecommuting intensity. The results also showed that perceived social isolation, perceived long work hours, and telecommuting normativeness are all positively related to telecommuting intensity.

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## **CHAPTER I: REVIEW OF THE LITERATURE**

### **Introduction**

#### **Prevalence of Telecommuting**

As telecommuting gains acceptance as a value-added work arrangement, more people are trading in their daily commute to work from home. According to a recent report of the United States (U.S.) workforce, telecommuting participation has increased 115% since 2005 (Global Workplace Analytics & FlexJobs, 2017). In addition to the growing population of telecommuters in the U.S., those utilizing work from home arrangements are doing so more often. Gallup (2017) found that the percentage of employees telecommuting four to five days a week increased significantly from 2012 to 2016, from 24% to 31%, while the percentage of employees spending a day or less of their work week telecommuting decreased from 34% to 25%.

Telecommuting has been named the commute option of choice in more than half of the top U.S. metropolitan areas in which more people telecommute than use public transportation (Global Workplace Analytics & FlexJobs, 2017). An increasing number of companies are also embracing the idea of remote work. According to the Society for Human Resource Management (2016), 60% of U.S. companies provide their employees the option to telecommute – a threefold increase since 1996. Despite the increased adoption and accessibility of telecommuting, the move toward telecommuting is not unanimous. Global Workplace Analytics and FlexJobs' (2017) research finds that only 7% of U.S. companies make telecommuting available to most or all of their employees. Additionally, more than 50% of Americans hold jobs that are suitable for telecommuting,

yet less than a quarter of the workforce telecommutes (Global Workplace Analytics, 2017).

The apparent underutilization of telecommuting is surprising given its many benefits to employees, employers, and society (Bailey & Kurland, 2002; Kurland & Bailey, 1999; Martin & MacDonnell, 2012; McCloskey & Igarria, 2003; Silva & Virick, 2010). Employees who telecommute benefit from greater schedule flexibility, less time spent commuting, and freedom from workplace distractions (Bailey & Kurland, 2002; Kurland & Bailey, 1999). Researchers have also found that telecommuters tend to be more satisfied with their jobs (Gajendran & Harrison, 2007; Golden, 2006b) and experience less work-family conflict (Bailey & Kurland, 2002; Golden, 2006b). These individual benefits translate into important benefits for the organization. According to a recent meta-analysis, giving employees the option to telecommute is an overall good business strategy. Employers that offer telecommuting benefit from increased employee productivity, retention, organizational commitment, and job performance (Martin & MacDonnell, 2012). Furthermore, researchers estimate that companies save an average of \$11,000 annually per part-time telecommuter in part due to reduced overhead and office expenses (Bailey & Kurland, 2002; Global Workplace Analytics & FlexJobs, 2017; McCloskey & Igarria, 2003). Society also benefits when employees telecommute. Fewer people travelling to and from work reduces highway congestion and air pollution from auto emissions (Kurland & Bailey, 1999; McCloskey & Igarria, 2003; Silva & Virick, 2010). Telecommuting has also made it feasible for individuals with disabilities to participate in the labor force as telecommuting is considered a reasonable

accommodation under the Americans with Disabilities Act (U.S. Equal Employment Opportunity Commission, 2005).

Despite these numerous benefits, several drawbacks influence the adoption and subsequent participation in telecommuting. Companies are often hesitant to offer telecommuting because it limits managers' ability to observe employee performance (Hill, Ferris, & Mårtinson, 2003). In addition, managers are sometimes reluctant to approve employees' requests to telecommute because they fear they will lose authority over their employees and/or their employees will slack off without direct supervision (Kurland & Cooper, 2002; Martin & MacDonnell, 2012; Noonan & Glass, 2012). Employees may be just as hesitant to participate in telecommuting. Many employees have raised the concern that telecommuting would limit their visibility in the office, and consequently, reduce their opportunities for career advancement (Bailey & Kurland, 2002; Maruyama & Tietze, 2012; McCloskey & Igarria, 2003). Employee reluctance to telecommute also stems from the fear of being isolated or disconnected from others in the workplace (Cooper & Kurland, 2002; Golden, Veiga, & Dino, 2008; Kurland & Cooper, 2002; Maruyama & Tietze, 2012). The purpose of this study is to understand the factors that lead employees to being unwilling to telecommute. Furthermore, this research will examine whether telecommuters limit the number of days they spend away from the office in order to alleviate the negative consequences of telecommuting. The results of this study will provide practitioners with a better understanding of how to design telecommuting programs that minimize the risks to the employee and maximize the benefits to the organization.

## **Literature Review**

### **Definition of Telecommuting**

Telecommuting is broadly defined as an alternative work arrangement in which the employee travels or commutes to work via technology (Narayanan, Menon, Plaisent, & Bernard, 2017). The existing literature labels and defines telecommuting in a variety of ways making it hard to discern telecommuting from other remote work arrangements. A comprehensive review of the literature conducted by Allen, Golden, and Shockley (2015) revealed that most definitions of telecommuting have two things in common: (1) telecommuting involves working from a location other than the traditional office and (2) telecommuters use technology to perform work-related tasks. They also identified three areas in which the definitions varied significantly including (1) the extent of telecommuting (e.g., once a month, once a week, full-time), (2) the type of employment relationship (e.g., organizational member, independent contractor, self-employed person), and (3) the location of remote work (e.g., home, satellite office, coffee shop) (Allen et al., 2015).

Telecommuting is often used synonymously with a variety of other terms, including telework and virtual work. While these terms overlap significantly with telecommuting, there are important points of distinction. Telework refers to a broader form of telecommuting in which the employee may work from a variety of alternative locations including home, a neighborhood work center, satellite or client office, or on-the-go (e.g., coffee shop, airport, hotel), whereas telecommuting is done primarily from home (Allen et al., 2015). Virtual work is considered a more intense form of telecommuting as virtual workers are geographically dispersed, and therefore, do not

have the same opportunities that telecommuters have to physically visit the office (Allen et al., 2015).

The lack of consensus regarding the definition of telecommuting has contributed to inconsistent findings in the outcomes of telecommuting and has made it difficult for researchers to compare results across studies or summarize the existing literature (Allen et al., 2015). To address this issue, Allen and colleagues proposed a more specific definition of telecommuting that captures the emerging consensus in the literature. They define telecommuting as “a work practice that involves members of an organization substituting a portion of their typical work hours (ranging from a few hours a week to nearly full-time) to work away from a central workplace – typically principally from home – using technology to interact with others as needed to conduct work tasks” (Allen et al., 2015, p. 44). This definition offers greater clarity by acknowledging that telecommuters are: (1) organizational members as opposed to freelancers, independent contractors, self-employed persons, or temporary workers; (2) substituting time spent in the traditional office with time spent working remotely, rather than working overtime in the evenings or on the weekends after a full day/week in the office; (3) spending a portion of their work schedule away from the traditional office setting, but not working remotely full-time; (4) working primarily from home, which is by far the most common remote work location among today’s telecommuters; and (5) using technology to perform work-related tasks and interact with members internal and external to the organization (Allen et al., 2015; Gajendran & Harrison, 2007). These five specifications further distinguish telecommuting from other forms of remote work (e.g. telework, virtual work). Given the

ambiguity in the literature, the current study will adopt Allen and colleagues' (2015) definition of telecommuting.

### **Employees' Willingness to Telecommute**

An employee is said to be willing to telecommute if they desire to work from home or would choose to telecommute if given the option. However, there are many reasons that prevent people from telecommuting despite their willingness to do so. One reason is that their organization does not allow it (Koh, Allen, & Zafar, 2013; Silva & Virick, 2010). Organizations may not be able to fairly and consistently implement a telecommuting policy, and therefore, do not make the option available to anyone. In other cases, the organization may provide employees the option to telecommute, but only on a case-by-case basis. This may result in some employees not having permission from their manager or supervisor to participate (Koh et al., 2013). An employee's request to telecommute may be denied for a number of reasons including poor performance (Silva & Virick, 2010). In addition, telecommuting may not be a viable option for employees whose jobs require them to be physically present in order to perform the essential duties (Koh et al., 2013; Silva & Virick, 2010). Finally, non-telecommuters often cite that their organizations do not have the necessary equipment or technical support staff for telecommuting to be a feasible work arrangement (Koh et al., 2013).

In other instances, the organization may provide the option to telecommute, but employees may choose not to participate (Koh et al., 2013). The reasons for this are largely unknown. Employees may prefer to work in a traditional office where they can interact with others as opposed to working from home in isolation, or perhaps they do not have the space within their home to dedicate to a home office. Finally, there are

employees who telecommute to some extent, but choose not to increase the amount of time they spend away from the office. The current study seeks to understand why people do not take full advantage of telecommuting when the option is made available to them. Vega, Anderson, and Kaplan (2015) found that when individuals perceived more disadvantages of telecommuting than advantages, they were more likely to have a negative attitude toward the work arrangement. This study will explore whether the fear of certain work-related consequences impact employees' willingness to telecommute.

### **Telecommuting Intensity**

Telecommuting intensity refers to the amount of scheduled time (typically measured in days) that a telecommuter spends working remotely (Gajendran & Harrison, 2007; Golden, Veiga, & Dino, 2008; Golden, Veiga, & Simsek, 2006). Telecommuters differ in how much time they spend away from the office. Gajendran and Harrison (2007) suggest that when telecommuters spend the majority of their time working remotely, they surpass a psychological threshold that inherently divides telecommuters into two groups: high intensity and low intensity. While researchers have not gone as far as to set a cut-off value between these two groups of telecommuters, it is assumed that high intensity telecommuters spend three or more days per week working remotely, while low intensity telecommuters work from home once or twice a week (Gajendran & Harrison, 2007).

It is evident from the literature that telecommuting has a differential impact on work and family outcomes, contingent upon the intensity with which telecommuters engage in the work arrangement (Allen et al., 2015; Cooper & Kurland, 2002; Gajendran & Harrison, 2007; Silva & Virick, 2010). Golden (2006b) found that people who telecommute a moderate amount (about 2.5 days per week) were more satisfied with their

job than those who telecommuted infrequently or extensively. Silva and Virick's (2010) research confirmed this curvilinear relationship. Telecommuting intensity was also found to be positively related to organizational commitment and turnover intentions, such that high intensity telecommuters were more committed, and therefore, more likely to stay with the organization than low intensity telecommuters (Golden, 2006a). High intensity telecommuting has also been found to be positively related to supervisor-subordinate relationships, and negatively related to coworker relationship quality and work-family conflict (Golden, 2006b; Golden et al., 2006). As demonstrated by these findings, telecommuting intensity is important for understanding the impact of telecommuting on work and family outcomes; however, much is still unknown about the extent to which people telecommute. For instance, how do telecommuters determine the number of days they spend away from the office? If they are able to work from home more than they do currently, what prevents them from doing so? Do the drawbacks of telecommuting limit intensity? In their qualitative study, Cooper and Kurland (2002) found that the fear of becoming professionally isolated was a common reason telecommuters limited the amount of time they spent working remotely. The current study expands upon this research by examining whether the fear of other work-related consequences limits telecommuting intensity. The variables of interest in this study include perceptions of social isolation, professional isolation, career harm, job insecurity, long work hours, and coworker resentment.

### **Negative Consequences of Telecommuting**

*Isolation.* Isolation is the feeling of being disconnected from others in the workplace (Cooper & Kurland, 2002; Marshall, Michaels, & Mulki, 2007).

Telecommuters may be more susceptible to feelings of isolation due to the inherent nature of remote work. Their reduced presence in the traditional office limits their face-to-face interactions with organizational members, and in turn, hinders their ability to develop personal and professional relationships (Cooper & Kurland, 2002; Marshall et al., 2007).

Isolation can manifest both socially and professionally (Cooper & Kurland, 2002). Telecommuters experience social isolation when they perceive a lack of friendships or sense of belonging at work (Marshall et al., 2007). Qualitative findings suggest that telecommuters miss the social interactions that occur in the workplace including office gossip, informal chats, spontaneous discussions, the sharing of experiences, and meetings around the water cooler (Cooper & Kurland, 2002; Kurland & Bailey, 1999). Professional isolation is poorly defined in the literature. Golden and colleagues (2008) define professional isolation as the belief that one is socially disconnected from others in the workplace, while Cooper and Kurland (2002) define it as the “fear that of being off-site and out-of-sight will limit opportunities for promotions and other organizational rewards” (p. 512). While the first definition equates social isolation with professional isolation, the second is more representative of career harm than professional isolation. Thus, the current study will refer to professional isolation as the lack of critical connections to organizational members resulting in limited access to important resources and information (Cooper & Kurland, 2002). Individuals who are professionally isolated are likely to feel out of touch with the latest company news and as though they have no one to turn to if they need to brainstorm ideas or discuss workplace issues. As a result,

their opportunities for professional development and career advancement may suffer (Cooper & Kurland, 2002).

The degree to which telecommuters experience social and professional isolation depends on a variety of factors including the location of telecommuting, the frequency or intensity of telecommuting, and the telecommuters' need or desire to establish relationships with other organizational members (Cooper & Kurland, 2002; Golden et al., 2008; Morganson, Major, Oborn, Verive, & Heelan, 2010; Wiesenfeld, Raghuram, & Garud, 2001). Morganson and colleagues (2010) found that traditional office-based workers reported significantly higher workplace inclusion than home-, satellite-, and client-based workers. Their results further showed that satellite- and client-based workers reported lower inclusion than home-based workers, with client-based workers reporting the lowest levels of inclusion. Isolation has also been found to be more severe the longer the telecommuter spends working remotely (Golden et al., 2008). Low-intensity telecommuters have more opportunities for informal interaction and relationship building than high-intensity telecommuters. Feelings of isolation may also be contingent upon individual differences such as the telecommuter's desire to be connected to others in the workplace. According to Wiesenfeld and colleagues (2001), telecommuters with a high need for affiliation may be more severely affected by the reduced social interaction than telecommuters with a low need for affiliation.

**Career Harm.** Reduced visibility in the workplace may also limit opportunities for career advancement. Telecommuters are often concerned that participation in telecommuting will have a negative impact on their career because they will be *out of sight, out of mind* (Cooper & Kurland, 2002; McCloskey & Igarria, 2003). Being visible

or present in the traditional office has long been regarded as a measure of performance (Maruyama & Tietze, 2012), and job performance evaluations have been found to be the most powerful predictors of career advancement (Igarria & Wormley, 1995). While researchers claim that telecommuting enables workers to be more productive (Bailey & Kurland, 2002; McCloskey & Igarria, 2003), Gajendran and Harrison (2007) suggest that telecommuters will have fewer opportunities to showcase their performance in a highly salient, face-to-face context, which might influence their managers' evaluation of their performance, and in turn, their opportunities for advancement. In an examination of career advancement prospects among telecommuters, McCloskey and Igarria (2003) found that participation in telecommuting did not hinder career advancement directly or indirectly through job performance evaluations. However, their research was conducted in an organization that was highly supportive of the work arrangement. Thus, more research is needed to understand how telecommuting affects career advancement.

Individuals may also be hesitant to participate in telecommuting because they fear their manager will view them as less committed to the organization (Leslie, Manchester, Park, & Mehng, 2012; McCloskey & Igarria, 2003). Managers may attribute employees' participation in telecommuting as them prioritizing personal or family responsibilities over professional work obligations (Leslie et al., 2012). Managers' perceptions of commitment are important because managers play an important role in granting pay raises, promotions, and other types of rewards and recognition (Leslie et al., 2012). Although this implies that telecommuters could suffer career consequences if their manager perceives them as less committed, Leslie et al. (2012) found that this was not the case. When managers perceived participation in flexible work arrangements as a way for

employees to increase their productivity, they viewed them as more committed, and when they perceived it as a way for employees to accommodate their personal and family life, they viewed them as neither more nor less committed (Leslie et al., 2012).

Another potential concern for career harm is that telecommuters may have limited access to internal development opportunities that facilitate learning and skill growth (Cooper & Kurland, 2002). In their qualitative study, Cooper and Kurland (2002) found that when telecommuters worked offsite for some portion of their work schedule, they missed out on three types of developmental activities: (1) interpersonal networking, (2) informal learning, and (3) mentoring. Interpersonal networking allows individuals to establish relationships with organizational members who provide resources and information to help the employee navigate the political infrastructure of the organization. Informal learning opportunities allow the employee to build their expertise by working in close proximity to and observing coworkers. Finally, employees receive feedback, access to internal and external networks, and emotional support from mentors that is critical for the advancement of their professional careers (Cooper & Kurland, 2002). Cooper and Kurland (2002) noted that some respondents felt “telecommuters were in the office enough that they did not miss out on these opportunities” (p. 521). Thus, telecommuting intensity may play a role in the extent to which these development opportunities are missed, and in turn, telecommuters’ perceptions of career harm.

***Job Insecurity.*** Individuals who perceive telecommuting as harmful to their career may also perceive their job as insecure. Job insecurity is “the amount of uncertainty a person has about his or her job continuity or continuity of certain aspects of the job” (Lim & Teo, 2000, p. 564). Telecommuters may fear that they are at greater risk

of losing their job due to their reduced visibility in the office (Lim & Teo, 2000). They may also be concerned about the permanence of their work schedule and whether the organization will revoke their privilege to telecommute. Few studies have examined the relationship between telecommuting and job insecurity. Gallup (2017) found that 51% of employees rated job security as very important to them in their current position, while Lim and Teo (2000) found that individuals who perceived greater job insecurity had more negative attitudes towards telecommuting. However, more research needs to be conducted to further understand this relationship.

***Long Work Hours.*** Telecommuting has been instrumental in the general expansion of work hours enabling employees to spend more time on work-related tasks in the evenings and on the weekends (Noonan & Glass, 2012). While telecommuting was not intended to provide additional work time beyond the standard 40-hour work week, researchers suggest that the work arrangement has made it easier for employees to manage their heavy workloads (Noonan & Glass, 2012). As noted in Allen and colleagues' (2015) definition of telecommuting, telecommuting involves the substitution of time spent in the traditional office with time spent working from home (or other location) rather than working overtime in the evenings after a full day in the office. Hill and colleagues (2003) found that when telecommuting was used as a substitute for working onsite, telecommuters averaged slightly more hours per week than non-telecommuters (51 vs. 49 hours).

Why do telecommuters spend more time on work-related tasks than non-telecommuters? The current evidence is primarily anecdotal. For instance, telecommuters may feel they need to work longer hours to compensate for being physically absent from

the workplace (Gajendran, Harrison, & Delaney-Klinger, 2015; Maruyama & Tietze, 2012). Being present and working longer hours are often indicative of organizational commitment and productivity (McCloskey & Igbaria, 2003; McDonald, Bradley, & Brown, 2008). Choosing to work from home may also signal decreased commitment or the avoidance of work-related responsibilities (Leslie et al., 2012; McCloskey & Igbaria, 2003; Noonan & Glass, 2012). Thus, telecommuters may put in extra hours to demonstrate that they are committed to their work despite working from home. Alternatively, working from home may have less defined boundaries for when to stop working, and an increased focus on continuing to work until the tasks are completed.

Long work hours are negatively associated with work-life balance (Adkins & Premeaux, 2012) and physical and mental health (Kleiner & Pavalko, 2010). Hill et al. (2003) suggest that telecommuters have difficulty detaching from work due to the lack of separation between work and family domains, which increases the likelihood of experiencing work-family conflict. Using data from the 1979 National Longitudinal Survey of Youth, Kleiner and Pavalko (2010) found a curvilinear relationship between work hours and health. Specifically, employees who worked between 40 and 59 hours per week had worse mental and physical health than those who worked more than 59 hours per week. To the researchers' surprise, those working upwards of 60+ hours per week did not report significantly worse health outcomes than those working the average 40 hours per week (Kleiner & Pavalko, 2010). Despite this evidence, it is not reasonable to conclude that all employees are impacted the same by long work hours. Some people may prefer or be able to tolerate long work hours. Thus, the current study will measure

telecommuters' perceptions of their work hours in addition to asking how many hours they work per week on average.

***Coworker Resentment.*** Coworker resentment is an emotional reaction to the perception of unfair outcomes relative to those of another individual (Boren & Johnson, 2008). The telecommuting literature suggests that telecommuters may experience resentment from their coworkers who do not telecommute (Golden, 2007). A meta-analysis found that telecommuting did not hurt coworker relationships; however, telecommuting intensity was found to be a significant moderator of the relationship. Specifically, the negative effect of telecommuting on coworker relationship quality was amplified the more time telecommuters spent working remotely (Gajendran & Harrison, 2007). Golden (2006b) suggests that low intensity telecommuters are better able to foster and maintain relationships with coworkers, while high intensity telecommuters are more restricted.

Coworkers may resent telecommuters for a few reasons. An obvious reason is that telecommuters have the option to telecommute and they do not (Golden et al., 2008; Morganson et al., 2010). This may be the case if the coworkers' job is incompatible with telecommuting or if they have been denied the option to participate rather than if they chose not to telecommute. Another reason coworkers may be resentful is if they acquire additional job responsibilities that were previously performed by the telecommuter before the telecommuter started working remotely (Gajendran et al., 2015; Golden, 2009). This extra workload may be burdensome for the coworker, leading them to feel inconvenienced by and/or resentful of the telecommuter. Feelings of resentment may also stem from having to accommodate telecommuters, such as having to set up conference

calls to ensure telecommuters are able to participate in meetings (Cooper & Kurland, 2002; Golden, 2009).

Telecommuters who perceive their relationships with coworkers as being strained by their absence may seek to reduce or discontinue their participation in the telecommuting. Vega and colleagues (2015) found that lack of coworker support did not have an impact on telecommuters' attitudes towards telecommuting, while Kurland and Cooper (2002) found that telecommuters sought to reduce the amount of time they spent telecommuting when they perceived they had become targets of coworker gossip or resentment.

### **The Moderating Effect of Telecommuting Normativeness**

The extent to which telecommuting is viewed as a common and accepted practice may influence employees' perceptions of the negative work consequences previously discussed. Having the option to telecommute is likely to be perceived as a privilege when only a small percentage of people in the organization or immediate workgroup have the option to telecommute (Gajendran et al., 2015). Consequently, telecommuters' fears of isolation, career harm, job insecurity, long work hours, or coworker resentment may be exacerbated if they are among the few people who telecommute. As telecommuting becomes more common within the organization, these fears will likely diminish (Gajendran et al., 2015). This idea is referred to as telecommuting normativeness (Gajendran et al., 2015).

Telecommuting normativeness can be examined at the organizational, departmental, or supervisor level. At the organizational level, telecommuting may be viewed as a common and accepted practice, such as if the employer has a formal

telecommuting program. At the department level, telecommuting may be perceived as a normative aspect of work if all or most of the employees in the immediate workgroup have the option to telecommute. Finally, telecommuting may be perceived as a legitimate work practice if the supervisor or manager telecommutes and encourages others in the department to participate (Gajendran et al., 2015). Although important insights can be obtained from examining the moderating role of telecommuting normativeness at each of these three levels, the current study will only address the findings at the department (immediate workgroup) level due to the complexity of the hypothesized relationships presented in the following section. Data will be collected at the organizational and supervisor levels for use in future research.

### **Hypotheses of this Study**

The current study will test two models. I propose that social isolation, professional isolation, career harm, job insecurity, long work hours, and coworker resentment will be negatively related to employees' willingness to telecommute (see Figure 1). These proposed relationships align with current research suggesting that the fear of negative consequences will lead employees to be less willing to participate in telecommuting. Thus,

*Hypothesis 1A, 1B, 1C, 1D, 1E, 1F:* Perceptions of social isolation, professional isolation, career harm, job insecurity, long work hours, and coworker resentment will be negatively related to employees' willingness to telecommute.

In the second model, I propose that social isolation, professional isolation, career harm, job insecurity, long work hours, and coworker resentment will predict

telecommuting intensity (see Figure 2), such that the fear of these negative consequences will limit how often telecommuters work from home. The proposed hypotheses are as follows:

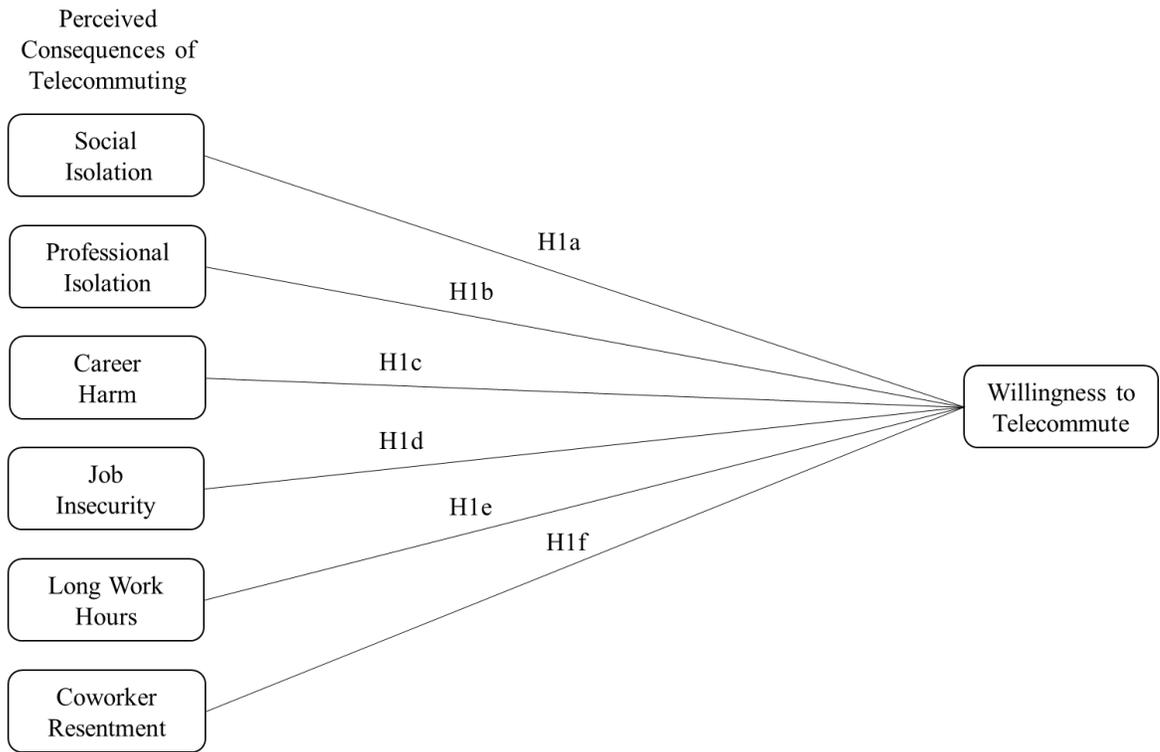
*Hypothesis 2A, 2B, 2C, 2D, 2E, 2F:* Perceptions of social isolation, professional isolation, career harm, job insecurity, long work hours, and coworker resentment will be negatively related to telecommuting intensity.

### **Research Questions**

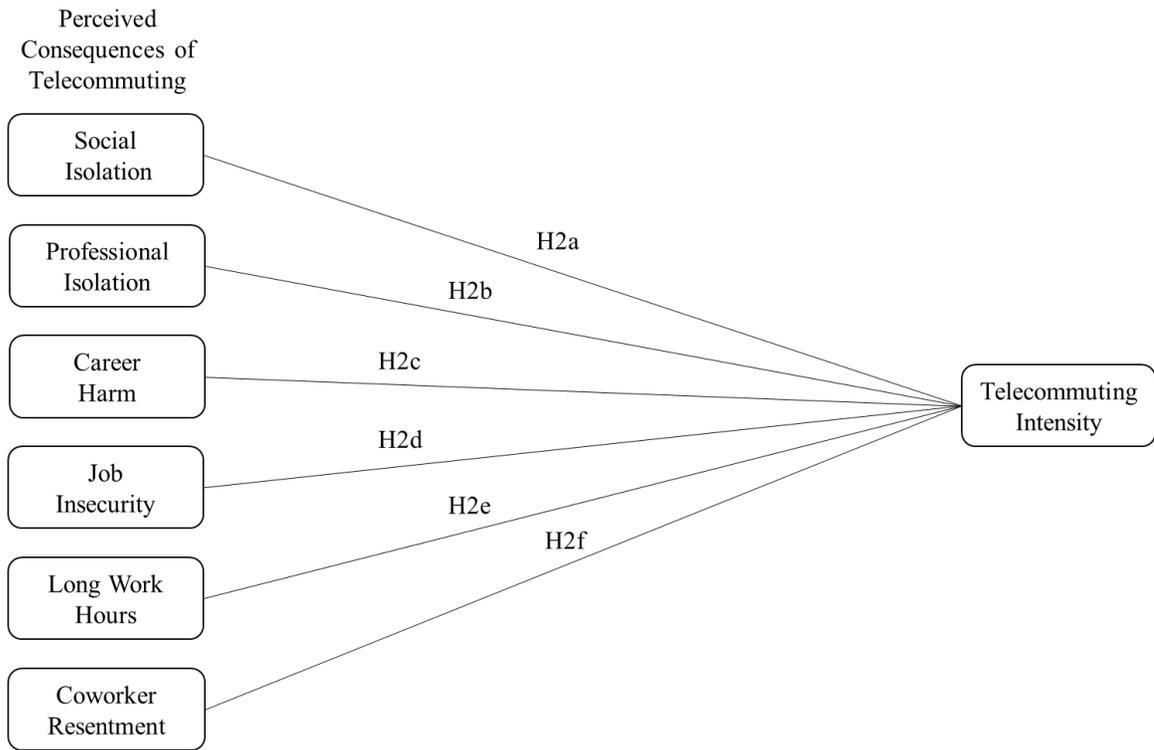
Additionally, the current study will examine the moderating role of telecommuting normativeness at the departmental level as two separate research questions. This variable is of interest because the extent to which telecommuting is practiced by members of the immediate workgroup is likely to influence telecommuters' perceptions of negative work outcomes, and in turn, their willingness to telecommute and extent to which they engage in telecommuting.

*Research Question 1:* Does telecommuting normativeness moderate the relationship between negative work outcomes and willingness to telecommute?

*Research Question 2:* Does telecommuting normativeness moderate the relationship between negative work outcomes and telecommuting intensity?



*Figure 1:* Proposed relationships between perceived consequences of telecommuting and employees' willingness to telecommute.



*Figure 2:* Proposed relationships between perceived consequences of telecommuting and telecommuting intensity.

## **CHAPTER II: METHODS**

### **Participants**

The population of interest for the current study is telecommuters in the United States. To be eligible to participate, participants had to meet the following requirements: at least 18 years of age, currently employed in the United States, work at least 30 hours per week, and telecommute to some extent in their current position. A total of 169 participants met these eligibility requirements. Two participants were removed for indicating that their data should not be used for analysis, citing reasons such they had difficulty answering the questions and they did not believe their work arrangement to be true telecommuting. Therefore, a total of 167 participants were retained in the final sample. Among these 167 participants, 65% were female and 35% were male, 41% were between the ages of 25 and 34, 50% were graduate degree holders, and 96% were employed by their organization rather than independent contractors. The most cited primary work location among participants was home (54%) followed by an office of their employer (39%). Complete demographic information can be found in Appendix A.

### **Procedures**

An online survey was distributed to contacts of the principal investigator via social (Facebook) and professional (LinkedIn) networking sites and email. From there, a snowball sampling method took effect in which participants helped recruit other participants by sharing a link with their friends, family, and professional colleagues. Whether solicited through Facebook, LinkedIn, or e-mail, participants were presented with a brief description of the study followed by a link to the survey. Once participants clicked the link, they were directed to the online survey in Qualtrics Survey Software©.

The first page of the survey outlined the informed consent including the purpose of the study, the eligibility requirements, the risks and benefits to the participant, and whom to contact to report any issues or concerns with the survey. The informed consent also stated that participation in the study was voluntary and that the participant could withdraw from the study at any time. Participants were also informed that their responses would be kept anonymous. Individuals who gave consent to participate were directed to the screening questions to confirm their eligibility for the study (see Appendix B). Those who did not meet the eligibility requirements were taken to the end of survey screen and informed that they were not eligible to participate. Furthermore, they were informed that they could not reattempt the screening questions. Those who met the requirements were presented with items corresponding to each of the variables discussed in the measures section below.

Quality assurance items were incorporated throughout the survey to verify that participants were paying attention and responding appropriately to the survey items. Such items included: “For quality assurance purposes, please select ‘somewhat agree for this item,’” and “True or False: Most Americans commute to work by horse.” No participants were removed for responding inappropriately to the quality assurance items. The survey culminated with an end of survey message which informed the participant that he or she had completed the survey and that their responses had been recorded. This screen also provided the e-mail address of the principal investigator if the participant wished to follow up on the results of the study or provide additional feedback. Participants were limited to one survey submission.

## Measures

To adequately measure the constructs as they are defined in the current study, several items were adapted from their original scales or developed by the principal investigator. Before running correlations or testing any hypotheses, an item analysis was performed for each measure. Items that had low inter-item correlations or significantly reduce the reliability of the scale were dropped and excluded from analysis. The final coefficient alphas are reported in Table 1 in the results section.

**Willingness to Telecommute.** Employees' willingness to telecommute was assessed using ten items developed for this study. An example item from this measure is "I willingly choose to telecommute." Item 13, "I would take a new job or promotion that no longer gave me the option to telecommute," and Item 14, "I'd prefer NOT to telecommute," was reverse scored for analysis. All ten items were assessed on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

**Telecommuting Intensity.** Telecommuting intensity was measured using two items from Golden (2006b). The first item asked participants to report the average number of hours per week they spend away from the office working as a telecommuter. The second item asked participants to report the percentage of time they spend telecommuting in an average work week. Analyses related to telecommuting intensity were ran twice. The first round of analyses were performed using only the first item (number of hours), while the second round of analyses were performed using only the second item (percentage of time).

**Telecommuting Normativeness (Organizational Level).** To measure the degree to which telecommuting is a common and accepted practice in the organization,

participants answered five questions regarding their perceptions of telecommuting in their organization, such as “telecommuting is common in my organization,” “most employees in my organization have the option to telecommute,” “telecommuting is rare in my organization,” “employees in my organization are encouraged to make use of flexible work arrangements like telecommuting,” and “my organization fully supports telecommuting.” These items were assessed using a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Item 27, “Telecommuting is rare in my organization,” was reverse scored for analysis. Telecommuting normativeness at the organizational level was further assessed by asking participants to estimate the percentage of their organization that telecommutes. This estimate was provided using a slider feature ranging from 0-100% in Qualtrics Survey Software®. This estimate was then converted to a 5-point scale (0-20% = 1, 21-40% = 2, 41-60% =3, 61-80% =4, and 81-100% =5) so that it could be combined with the five perception questions for analyses. Data collected on these items were not used in the current study.

**Telecommuting Normativeness (Department Level).** To measure the degree to which telecommuting is a common and accepted practice in the telecommuters’ department or immediate work group, participants answered two perception questions including “telecommuting is common in my department” and “telecommuting is an option for everyone in my department.” Items measuring individuals’ perceptions of telecommuting normativeness at the department level were assessed using a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Telecommuting normativeness at the department level was further assessed by asking participants to estimate the percentage of their department that telecommutes. This estimate was

provided using a slider feature ranging from 0-100% in Qualtrics Survey Software®. This estimate was then converted to a 5-point scale (0-20% = 1, 21-40% = 2, 41-60% =3, 61-80% =4, and 81-100% =5) so that it could be combined with the two perception questions for analyses. Participants also provided an estimate of the number of days per week their immediate coworkers spend telecommuting using a 5-point Likert scale ranging from 1 (*less than 1 day per week*) to 5 (*4 or more days per week*). These four items were combined to get an overall score.

**Telecommuting Normativeness (Supervisor Level).** To measure the extent to which telecommuting is practiced and supported by the supervisor, participants answered three perception questions related to their supervisors' participation in or support of telecommuting. These items include "even supervisors and managers have the option to work from home," "my direct supervisor/manager telecommutes," and "my supervisor supports my decision to telecommute." Items measuring individuals' perceptions of telecommuting normativeness at the supervisor level were assessed using a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Participants also provided an estimate of the number of days per week their supervisor spends telecommuting using a 5-point Likert scale ranging from 1 (*less than 1 day per week*) to 5 (*4 or more days per week*). Data collected on these items were not used in the current study.

**Social Isolation.** Perceptions of social isolation were measured using 11 items. Three items were taken directly from the original 65-item Workplace Isolation Scale developed by Marshall, Michaels, and Mulki (2007) including "I have friends available to me at work," "I am kept in the loop regarding company social events/functions," and "I am satisfied with the opportunities to interact with others in the office." Item 31 was

adapted from this scale and reads “I miss engaging in informal chats with my coworkers” instead of the original item “I engage in informal chats with coworkers at work” to capture the extent to which informal chats are missed when the telecommuter works remotely. The seven remaining items were written for this study to adequately cover the domain since the original Workplace Isolation Scale includes items related to social isolation, professional isolation, and career consequences. Eight items were reverse scored for analysis. An example item is: “I’d rather not get caught up in conversations with my coworkers.” All perceived social isolation items were assessed using a 5-point Likert scale ranging from 1 (*strongly disagree*) to (*strongly agree*). These 11 items were combined to get an overall score.

**Professional Isolation.** Similar to social isolation, perceived professional isolation was measured using 11 items, seven of which were adapted from the Workplace Isolation Scale (Marshall et al., 2007) and four of which were developed for this study. More specifically, items 42-48 were adapted from the Workplace Isolation Scale, while items 49-52 were written for this study. The adapted items involved very minor word changes. All perceived professional isolation items were assessed using a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). These 11 items were combined to get an overall score.

**Career Harm.** Perceptions of career harm were assessed using 11 items, ten of which were taken and/or adapted from other scales (Doerr, 2015; Golden et al., 2008; Marshall et al., 2007; Thompson, Beauvais, & Lyness, 1999). Items 53 and 54 were taken from Marshall et al.’s (2007) Workplace Isolation Scale, while items 55-57 were adapted from this scale; items 59 and 60 were taken from Golden et al. (2008); item 61 was

adapted from Doerr (2015); and items 62 and 63 were adapted from Thompson et al. (1999). Revisions were made to remove the term *home office*, which Marshall et al. (2007) used to refer to the traditional office setting, to avoid confusing the term with one's office at home. Revisions to the items from the other scales were made to include the language *telecommuting* or *work from home* in place of *flexible work arrangements*, *flextime*, and *work-family programs*. Item 58, "I feel I am perceived as less committed to the organization because I telecommute," was developed for this study. All responses were rated using a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Item 49, "The evaluation of my performance is fair and consistent with those who do not telecommute" was reverse scored for analysis. These 11 items were combined to get an overall score.

**Job Insecurity.** Perceived job insecurity was measured using seven items, two of which were developed by Oldham, Kulik, Stepina, and Ambrose (1986) and five of which were developed for the current study. Oldham et al.'s (1986) items include "I am secure in my job" and "my job is not a secure one." Sample items developed for this study include "telecommuters are at greater risk of being laid off" and "I fear that my reduced visibility in the office could put my job in jeopardy." All responses were rated using a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Item 64, "I am secure in my job," was reverse scored for analysis. These seven items were combined to get an overall score.

**Work Hours.** Participants' perceived work hours were measured using eight items, five of which were taken from the perceived working hours scale developed Kim (2014) and three of which were developed for this study. Items 71-76 were taken from

Kim (2014), while items 77 and 78 were written for this study. These items will be assessed using a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Item 78, “I work the same number of hours when I telecommute as I do when I work from the office,” was reverse scored for analysis. These eight items were combined to get an overall score.

**Coworker Resentment.** Perceptions of coworker resentment was assessed using 11 items either adapted from Doerr (2015) or developed for this study. Items 81 and 88 were adapted from Doerr (2015), while the remaining items were written for this study. Item 81 reads “I feel my coworkers make an effort to understand my desire to work from home” instead of the original item, “I feel my coworkers make an effort to understand my need to be flexible.” Item 88 was adapted from “the opinions of my coworkers do not influence my desire to change my schedule” to “the opinions of my coworkers do not influence my desire to telecommute.” Items 80, 81, and 87-89 were reverse scored for analysis. Resentment items were assessed using a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). These items were combined to get an overall score.

**Demographic Variables.** Participants were asked to indicate their gender, age, education level, marital status, whether they have children living at home, primary work location, salaried or hourly status, job level, type of employment relationship (organizational member vs. contract employee), number of employees in their department, number of hours worked per week on average, average daily commute time, tenure at current organization, and the number of years they have participated in a telecommuting arrangement.

## CHAPTER III: RESULTS

### Preliminary Analyses

Reliability analyses were conducted to determine if the scales were reliable as they were developed or whether items needed to be removed to improve the overall scale reliabilities. Reliability analyses were performed for the following variables: willingness to telecommute, perceived social isolation, perceived professional isolation, perceived career harm, perceived job insecurity, perceived long work hours, perceived coworker resentment, telecommuting normativeness at the organizational level, telecommuting normativeness at the department level, and telecommuting normativeness at the supervisor level.

Cronbach's alpha ranged from .72 to .91 across the 10 scales. For each scale, the "Corrected Item-Total Correlation" was reviewed to determine how well the items measured the same construct, while the "Cronbach's Alpha if Item Deleted" was reviewed to determine what would happen to overall scale reliability if an item was deleted. Any item that had a low item total correlation or significantly reduced the reliability of the scale was dropped. A total of five items were removed as a result of this analysis. Three items were removed from the perceived social isolation scale including, "I am not interested in being friends with my coworkers," "I find the social atmosphere in my organization distracting," and "I'd rather not get caught up in conversations with my coworkers." These items, developed specifically for this study, did not correlate well with the other items in the scale. By removing these three items from the perceived social isolation scale, the reliability increased from .68 to .80. On the perceived professional isolation scale the following item was removed, "I don't mind NOT knowing the latest

company news.” This item is structured as a double negative statement, which may have been confusing to respondents when answering the question. By removing this item, the reliability of the perceived professional isolation scale increased from .75 to .79. Finally, the item “my supervisor/manager supports my decision to telecommute” was removed from the telecommuting normativeness at the supervisor level scale. When this item was included in the scale, the reliability was under the generally accepted level of  $\alpha = .70$ . Dropping this item from the telecommuting normativeness at the supervisor level scale brought the reliability up from .68 to an adequate level of reliability of .72. The results of the reliability analyses can be found in Table 1. Once the reliability analyses were complete, the items remaining for each variable were averaged to create an overall scale. Once created, descriptive statistics and bivariate correlations were conducted for each scale, the results of which are presented in Table 2 and Table 3.

Table 1  
*Reliability Analyses for All Variables*

Variable	Number of Items	Cronbach's Alpha
Willingness to telecommute	10	.79
Social isolation	8	.80
Professional isolation	10	.79
Career harm	11	.91
Job insecurity	7	.83
Long work hours	8	.84
Coworker resentment	11	.84
Telecommuting normativeness at the organizational level	5	.83
Telecommuting normativeness at the department level	4	.73
Telecommuting normativeness at the supervisor level	3	.72

Table 2  
*Descriptive Statistics for All Variables*

Variable	<i>n</i>	<i>M</i>	<i>SD</i>
Willingness to telecommute	167	4.32	0.57
Social isolation	167	2.11	0.71
Professional isolation	167	1.86	0.55
Career harm	167	2.14	0.84
Job insecurity	167	1.85	0.72
Long work hours	167	3.19	0.87
Coworker resentment	167	1.69	0.64
Telecommuting normativeness (organizational level)	167	3.70	0.89
Telecommuting normativeness (department level)	167	3.96	1.02
Telecommuting normativeness (supervisor level)	167	3.79	1.06
Telecommuting intensity (in hours)	166	28.52	16.01
Telecommuting intensity (percentage)	167	63.54	35.71

As shown in Table 2, the sample is primarily made up of individuals who have a desire to work from home ( $M = 4.32$ ,  $SD = 0.57$ ). The skewness in willingness to telecommute is not surprising given that participants were asked whether they telecommute to some extent in their current position to determine their eligibility for the current study. Among the perceived consequences of telecommuting, participants perceived coworker resentment the least ( $M = 1.69$ ,  $SD = 0.64$ ) followed by job insecurity ( $M = 1.85$ ,  $SD = 0.72$ ) and professional isolation ( $M = 1.86$ ,  $SD = 0.55$ ). The descriptive statistics also show that telecommuting is common practice among participants' organizations ( $M = 3.70$ ,  $SD = 0.89$ ), coworkers ( $M = 3.96$ ,  $SD = 0.1.02$ ), and supervisors ( $M = 3.79$ ,  $SD = 1.06$ ).

Table 3  
*Correlation Matrix of All Scales*

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Willingness to telecommute	—											
2. Social isolation	-.28*	—										
3. Professional isolation	-.26*	.70*	—									
4. Career harm	-.24*	.48*	.57*	—								
5. Job insecurity	-.12	.38*	.46*	.55*	—							
6. Long work hours	-.12	.20*	.23*	.17*	.16*	—						
7. Coworker resentment	-.27*	.27*	.36*	.53*	.53*	.15	—					
8. Telecommuting normativeness (organizational level)	.11	-.10	-.07	-.31*	-.32*	.06	-.50*	—				
9. Telecommuting normativeness (department level)	.10	-.08	-.07	-.24*	-.18*	.17*	-.48*	.52*	—			
10. Telecommuting normativeness (supervisor level)	.09	.03	.02	-.25*	-.18*	.04	-.41*	.52*	.66*	—		
11. Telecommuting intensity (in hours)	.16*	.18*	.06	.06	.00	.20*	-.09	.02	.26*	.18*	—	
12. Telecommuting intensity (percentage)	.15*	.13	-.04	.02	-.06	-.01	-.16*	.08	.26*	.22*	.84*	—

\* $p < .05$

As shown in Table 3, perceptions of social isolation, professional isolation, career harm and coworker resentment are negatively related to employees' willingness to telecommute. This indicates that as individuals' perceptions of isolation, career harm, and/or coworker resentment increase, they will be less willing to participate in telecommuting arrangements. Fewer perceived consequences were correlated with telecommuting intensity. Telecommuting intensity was measured as both the number of hours spent telecommuting per week (*intensity hours*) and the percentage of time spent telecommuting per week (*intensity percentage*). Though significantly correlated with each other at  $r = .84$ , these items were not combined into a composite score because we were interested in seeing whether the different operationalizations would yield different results. Perceived social isolation and perceived long work hours were positively correlated with intensity hours. This means that as individuals' perceptions of social isolation and long work hours increase, so do the number of hours they spend away from the office working as a telecommuter. In regard to intensity percentage, only perceived coworker resentment was related. The negative relationship between perceived coworker resentment and intensity hours indicates that as perceptions of coworker resentment increase, the percentage of time an employee spends telecommuting per week decreases. Table 3 also shows that willingness to telecommute is only slightly related to telecommuting intensity; however, the lack of variance in willingness to telecommute may explain why a stronger relationship was not observed.

Telecommuting normativeness at the organizational level, the department level, and the supervisor level were all negatively related to coworker resentment. Thus, as telecommuting becomes a more common practice, perceptions of coworker resentment

tend to decrease. Telecommuting normativeness at the organizational level was also negatively related to career harm and job insecurity. In other words, when telecommuting arrangements are adopted and supported by the organization, employees perceive fewer career consequences.

The perceived consequences of telecommuting were also highly correlated with one another; perhaps most notably is perceived social isolation and perceived professional isolation ( $r = .70$ ). While isolation is believed to manifest either socially or professionally, it appears that they are very similar constructs. Social and professional isolation were also highly correlated with career harm,  $r = .48$  and  $r = .57$  respectively. Therefore, telecommuters who feel isolated also tend to perceive danger to their career.

### **Primary Analyses**

#### **Willingness to Telecommute**

The first set of hypotheses examined whether the perceived consequences of telecommuting are negatively related to employees' willingness to telecommute. Specifically, Hypothesis 1A examined whether *perceived social isolation* is negatively related to willingness to telecommute; Hypothesis 1B examined whether *perceived professional isolation* is negatively related to willingness to telecommute; Hypothesis 1C examined whether *perceived career harm* is negatively related to willingness to telecommute; Hypothesis 1D examined whether *perceived job insecurity* is negatively related to willingness to telecommute; Hypothesis 1E examined whether *perceived long work hours* is negatively related to willingness to telecommute; and Hypothesis 1F examined whether *perceived coworker resentment* is negatively related to willingness to

telecommute. A series of multiple regression analyses ( $\alpha = .05$ ) were performed to examine these relationships.

Using the forced entry method, perceived social isolation, professional isolation, career harm, job insecurity, long work hours, and coworker resentment were used to predict willingness to telecommute. The overall model explained a significant amount of variance in willingness to telecommute,  $R^2 = .14$ ,  $F(6, 160) = 4.17$ ,  $p < .01$ . Examination of each of the predictors revealed a significant unique effect of coworker resentment,  $\beta = -0.24$ ,  $t(160) = -2.61$ ,  $p < .05$ . However, none of the other predictors emerged as significant unique predictors of willingness to telecommute. Upon closer examination of the zero-order and partial correlations, it appears that there is redundancy among some of the predictors. Partial correlation is a measure of the linear relationship between the independent and dependent variable when controlling for the effects of the other variables (IBM Support, 2016). Unlike the other predictors, coworker resentment maintained a significant relationship with willingness to telecommute when controlling for the variance in the other predictors,  $pr = -.20$ . This evidence indicates that as employees' perceptions of coworker resentment increase, they are less willing to participate in the telecommuting work arrangement. To summarize the results of Hypothesis 1, Hypothesis 1F was supported, while Hypothesis 1A, 1B, 1C, 1D, and 1E were not supported.

Next, moderation analyses were performed to examine the research question, "does telecommuting normativeness at the department level moderate the relationships between the perceived consequences of telecommuting and willingness to telecommute?" To examine this research question, each predictor and the moderator variable were mean centered. Next, the interaction terms were created by multiplying each mean centered

predictor by the mean centered moderator variable. Once created, the centered main effects (social isolation, professional isolation, career harm, job insecurity, long work hours, and coworker resentment) were entered into the first step of the regression analysis as predictors of willingness to telecommute. In the second step of the regression equation, the centered moderator variable (telecommuting normativeness at the department level) was entered into the regression analysis, followed by the interaction terms in step three (social isolation by normativeness, professional isolation by normativeness, career harm by normativeness, job insecurity by normativeness, long work hours by normativeness, and coworker resentment by normativeness).

While the overall model remained significant ( $R^2 = .14$ ,  $F(7,159) = 3.56$ ,  $p < .01$ ), the addition of the main effect of the moderator variable did not significantly improve the model,  $\Delta R^2 < .01$ ,  $\Delta F(1, 159) = 0.06$ ,  $p = .81$ . Thus, telecommuting normativeness at the department level was not a significant unique predictor of willingness to telecommute. Similar results were observed with the interaction terms. While the overall model remained significant ( $R^2 = .17$ ,  $F(13,153) = 2.35$ ,  $p < .01$ ), the addition of the interaction terms did not explain a significant increase of variance in the model,  $\Delta R^2 = .03$ ,  $\Delta F(6, 153) = 0.93$ ,  $p = .47$ . Further, none of the interaction terms were significant, which indicates that the extent to which employees perceive consequences of telecommuting is not dependent on how common telecommuting is in their department or immediate workgroup. See Tables 4 and 5.

Table 4  
*Coefficients Table for Predicting Willingness to Telecommute*

Model		$\beta$	$t$	$p$	$r$	$pr$
1	(Constant)		104.26	< .001		
	Social Isolation	-0.19	-1.79	.08	-.28	-.14
	Professional Isolation	-0.06	-0.56	.56	-.26	-.04
	Career Harm	-0.06	-0.57	.55	-.24	-.05
	Job Insecurity	0.15	1.54	.13	-.12	.12
	Long Work Hours	-0.04	-0.54	.59	-.12	-.04
	Coworker Resentment	-0.24	-2.61	.01	-.27	-.20
2	(Constant)		103.95	< .001		
	Social Isolation	-0.19	-1.80	.07	-.28	-.14
	Professional Isolation	-0.06	-0.53	.60	-.26	-.04
	Career Harm	-0.06	-0.61	.54	-.24	-.05
	Job Insecurity	0.15	1.55	.12	-.12	.12
	Long Work Hours	-0.04	-0.45	.65	-.12	-.04
	Coworker Resentment	-0.25	-2.42	.02	-.27	-.20
	Normativeness (Department)	-0.02	-0.25	.81	.10	-.02
3	(Constant)		92.30	< .001		
	Social Isolation	-0.17	-1.56	.12	-.28	-.12
	Professional Isolation	-0.07	-0.63	.53	-.26	-.05
	Career Harm	-0.08	-0.77	.44	-.24	-.06
	Job Insecurity	0.15	1.58	.12	-.12	.13
	Long Work Hours	-0.03	-0.33	.74	-.12	-.03
	Coworker Resentment	-0.24	-2.13	.03	-.27	-.17
	Normativeness (Department)	0.03	0.27	.79	.10	.02
	SocialxDeptNorm	-0.05	-0.49	.62	-.06	-.04
	ProfessionalxDeptNorm	0.15	1.31	.19	-.01	.11
	CareerxDeptNorm	-0.22	-1.86	.07	-.09	-.15
	InsecurityxDeptNorm	-0.05	-0.44	.66	-.01	-.04
	HoursxDeptNorm	0.04	0.54	.59	.04	.04
	ResentmentxDeptNorm	0.09	0.78	.43	.08	.06

Table 5

*Model Summary for Predicting Willingness to Telecommute*

Model	<i>R</i>	<i>R</i> <sup>2</sup>	Adj. <i>R</i> <sup>2</sup>	Std. Error of Est.	Change Statistics				
					<i>R</i> <sup>2</sup> Δ	<i>F</i> Δ	<i>df</i> <sub>1</sub>	<i>df</i> <sub>2</sub>	Sig. <i>F</i> Δ
1	.37	.14	.10	.54	.14	4.17	6	160	<.01
2	.37	.14	.10	.54	.00	0.06	1	159	.81
3	.41	.17	.10	.54	.03	0.93	6	153	.47

Model 1 Predictors: (Constant), Social Isolation, Professional Isolation, Career Harm, Job Insecurity, Long Work Hours, Coworker Resentment

Model 2 Predictors: (Constant), Social Isolation, Professional Isolation, Career Harm, Job Insecurity, Long Work Hours, Coworker Resentment, Normativeness (Department)

Model 3 Predictors: (Constant), Social Isolation, Professional Isolation, Career Harm, Job Insecurity, Long Work Hours, Coworker Resentment, Normativeness (Department), SocialxDeptNorm, ProfessionalxDeptNorm, CareerxDeptNorm, InsecurityxDeptNorm, HoursxDeptNorm, ResentmentxDeptNorm

### Telecommuting Intensity

The second set of hypotheses examined whether the perceived consequences of telecommuting are negatively related to telecommuting intensity. Hypothesis 2A examined whether *perceived social isolation* is negatively related to telecommuting intensity; Hypothesis 2B examined whether *perceived professional isolation* is negatively related to telecommuting intensity; Hypothesis 2C examined whether *perceived career harm* is negatively related to telecommuting intensity; Hypothesis 2D examined whether *perceived job insecurity* is negatively related to telecommuting intensity; Hypothesis 2E examined whether *perceived long work hours* is negatively related to telecommuting intensity; and Hypothesis 2F examined whether *perceived coworker resentment* is negatively related to telecommuting intensity. Multiple regression ( $\alpha = .05$ ) was used to examine the relationship between perceived consequences of telecommuting and telecommuting intensity. Because telecommuting intensity was operationalized in two different ways (intensity hours and intensity percentage), the analyses were conducted

twice, once for each operationalization. The results will first be interpreted as they relate to intensity hours (i.e., the number of hours spent telecommuting per week) followed by intensity percentage (i.e., percentage of time spent telecommuting per week).

***Intensity Hours.*** Using the forced entry method, perceived social isolation, professional isolation, career harm, job insecurity, long work hours, and coworker resentment were used to predict telecommuting intensity hours. The overall model explained a significant amount of variance in intensity hours,  $R^2 = .10$ ,  $F(6, 159) = 2.78$ ,  $p < .05$ . Examination of each of the predictors revealed the significant unique effects of social isolation,  $\beta = 0.24$ ,  $t(159) = 2.30$ ,  $p < .05$ , and long work hours,  $\beta = 0.20$ ,  $t(159) = 2.54$ ,  $p < .05$ . This evidence indicates that as employees' perceptions of social isolation and long work hours increase, so do the number of hours they spend telecommuting. Despite these significant findings, none of the hypotheses were supported. While social isolation (Hypothesis 2A) and long work hours (Hypothesis 2E) were identified as significant unique predictors of telecommuting intensity hours, these hypotheses were not supported because the positive betas are in the opposite direction of what was predicted. The hypotheses concerning perceived professional isolation, career harm, job insecurity, and coworker resentment were not supported because they were not significant unique predictors of telecommuting intensity hours. In summary, Hypotheses 2A, 2B, 2C, 2D, 2E, and 2F are not supported when telecommuting intensity is operationalized as the number of hours spent telecommuting per week.

Next, moderation analyses were performed to examine the research question, "does telecommuting normativeness at the department level moderate the relationships between the perceived consequences of telecommuting and telecommuting intensity

hours?” To examine this research question, the mean centered main effects (social isolation, professional isolation, career harm, job insecurity, long work hours, and coworker resentment) were entered into the first step of the regression analysis as predictors of intensity hours. In the second step of the regression equation, the mean centered moderator variable (telecommuting normativeness at the department level) was entered into the regression analysis, followed by the interaction terms in step three (social isolation by normativeness, professional isolation by normativeness, career harm by normativeness, job insecurity by normativeness, long work hours by normativeness, and coworker resentment by normativeness).

Not only did the overall model remain significant ( $R^2 = .14$ ,  $F(7,158) = 3.63$ ,  $p < .01$ ), but the addition of the main effect of the moderator variable significantly improved the model,  $\Delta R^2 = .04$ ,  $\Delta F(1, 158) = 8.00$ ,  $p < .01$ . Thus, telecommuting normativeness at the department level is a significant unique predictor of telecommuting intensity hours. As telecommuting becomes more common practice within one’s department, employees tend to spend more hours telecommuting.

In regard to the interaction terms, the overall model remained significant ( $R^2 = .19$ ,  $F(13,152) = 2.70$ ,  $p < .01$ ) but the addition of the main effects of the interaction terms did not explain a significant increase of variance in the model,  $\Delta R^2 = .05$ ,  $\Delta F(6, 152) = 1.53$ ,  $p = .17$ . There was, however, one significant interaction between perceived long work hours and telecommuting normativeness at the department level,  $\beta = 0.20$ ,  $t(13, 152) = 2.46$ ,  $p < .05$ . As a result of the significant interaction, a simple slopes analysis was conducted to uncover more about the interaction. The simple slopes analysis revealed that there is a positive, significant relationship between perceived long work

hours and telecommuting intensity hours when telecommuting normativeness at the department level is high,  $\beta = 0.36$ ,  $t(162) = 3.58$ ,  $p < .001$ . However, when telecommuting normativeness at the department level is low, there was a negative but nonsignificant relationship between perceived long work hours and telecommuting intensity hours,  $\beta = -0.07$ ,  $t(162) = -0.67$ ,  $p = .51$ . Figure 1 displays the simple effects of this interaction. See Tables 6 and 7.

Table 6  
*Coefficients Table for Predicting Telecommuting Intensity Hours*

Model		$\beta$	$t$	$p$	$r$	$pr$
1	(Constant)		23.64	< .001		
	Social Isolation	0.25	2.30	.02	.18	.18
	Professional Isolation	-0.13	-1.14	.25	.06	-.09
	Career Harm	0.08	0.73	.47	.06	.06
	Job Insecurity	-0.02	-0.17	.86	.00	-.01
	Long Work Hours	0.20	2.54	.01	.20	.20
	Coworker Resentment	-0.17	-1.75	.08	-.09	-.14
2	(Constant)		24.17	< .001		
	Social Isolation	0.26	2.50	.01	.18	.20
	Professional Isolation	-0.16	-1.44	.15	.06	-.11
	Career Harm	0.10	0.93	.35	.06	.07
	Job Insecurity	-0.04	-0.40	.69	.00	-.03
	Long Work Hours	0.14	1.76	.08	.20	.14
	Coworker Resentment	-0.03	-0.27	.79	-.09	-.02
	Normativeness (Department)	0.25	2.83	< .01	.26	.22
3	(Constant)		21.71	< .001		
	Social Isolation	0.28	2.56	.01	.18	.20
	Professional Isolation	-0.15	-1.33	.18	.06	-.11
	Career Harm	0.05	0.45	.66	.06	.04
	Job Insecurity	-0.03	-0.35	.73	.00	-.03
	Long Work Hours	0.12	1.53	.13	.20	.12
	Coworker Resentment	0.01	0.12	.90	-.09	.01
	Normativeness (Department)	0.27	2.82	< .01	.26	.22
	SocialxDeptNorm	0.05	0.55	.58	.12	.04
	ProfessionalxDeptNorm	-0.08	-0.68	.50	.07	-.06
	CareerxDeptNorm	-0.07	-0.62	.54	.11	-.05
	InsecurityxDeptNorm	0.09	0.86	.39	.11	.07
	HoursxDeptNorm	0.20	2.46	.02	.18	.20
	ResentmentxDeptNorm	0.07	0.59	.56	.18	.05

Table 7  
*Model Summary for Predicting Telecommuting Intensity Hours*

Mode	R	R <sup>2</sup>	Adj. R <sup>2</sup>	Std. Error of Est.	Change Statistics				
					R <sup>2</sup> Δ	FΔ	df <sub>1</sub>	df <sub>2</sub>	Sig. FΔ
1	.31	.09	.06	15.52	.09	2.78	6	159	.01
2	.37	.14	.10	15.19	.04	8.00	1	158	< .01
3	.43	.19	.12	15.04	.05	1.53	6	152	.17

Model 1 Predictors: (Constant), Social Isolation, Professional Isolation, Career Harm, Job Insecurity, Long Work Hours, Coworker Resentment

Model 2 Predictors: (Constant), Social Isolation, Professional Isolation, Career Harm, Job Insecurity, Long Work Hours, Coworker Resentment, Normativeness (Department)

Model 3 Predictors: (Constant), Social Isolation, Professional Isolation, Career Harm, Job Insecurity, Long Work Hours, Coworker Resentment, Normativeness (Department), SocialxDeptNorm, ProfessionalxDeptNorm, CareerxDeptNorm, InsecurityxDeptNorm, HoursxDeptNorm, ResentmentxDeptNorm

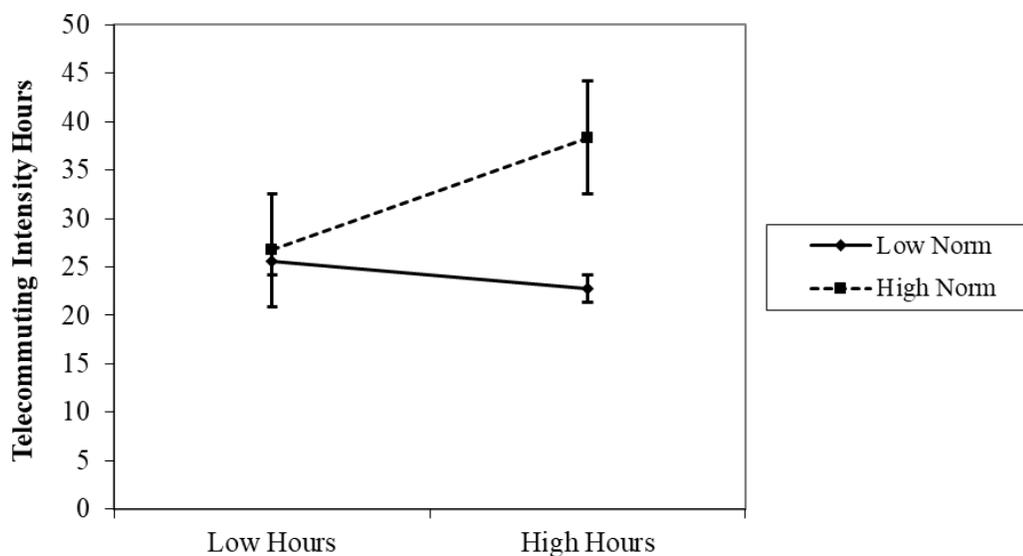


Figure 3: Simple slopes interaction between perceived long work hours and telecommuting normativeness at the department level for telecommuting intensity hours.

*Intensity Percentage.* Using the forced entry method, perceived social isolation, professional isolation, career harm, job insecurity, long work hours, and coworker resentment were used to predict telecommuting intensity percentage. The overall model explained a significant amount of variance in intensity percentage,  $R^2 = .09$ ,  $F(6, 160) = 2.53$ ,  $p < .05$ . Examination of each of the predictors revealed the significant unique effects of social isolation,  $\beta = 0.29$ ,  $t(160) = 2.74$ ,  $p < .01$ , and coworker resentment,  $\beta = -0.22$ ,  $t(160) = -2.33$ ,  $p < .05$ . The significant positive relationship between social isolation and intensity percentage indicates that as perceptions of social isolation increase, so does the percentage of time employees spend telecommuting. In contrast, the significant negative relationship between coworker resentment and intensity percentage indicates that as perceptions of coworker resentment increases, the percentage of time employees spend telecommuting decreases. Perceived professional isolation, career harm, job insecurity, and long work hours were not significant unique predictors of intensity percentage. Thus, when telecommuting intensity is operationalized as the percentage of time employees spend telecommuting per week, hypotheses 2B, 2C, 2D, and 2E are not supported. Hypothesis 2A (social isolation) is also not supported because the effect is in the opposite direction of what was predicted. Hypothesis 2F (coworker resentment) is supported.

The same moderation analyses were performed to examine the research question, “does telecommuting normativeness at the department level moderate the relationships between the perceived consequences of telecommuting and telecommuting intensity percentage?” as were performed above for intensity hours. The overall model remained significant ( $R^2 = .14$ ,  $F(6,160) = 3.64$ ,  $p < .01$ ) with the addition of the main effect of the

moderator variable and explained a significant increase of variance in the model,  $\Delta R^2 = .05$ ,  $\Delta F(1, 159) = 9.47$ ,  $p < .01$ . Thus, telecommuting normativeness at the department level is a significant unique predictor of telecommuting intensity percentage. As telecommuting becomes more common practice within one's department, employees tend to spend a greater portion of their time telecommuting.

The model also remained significant ( $R^2 = .18$ ,  $F(13,153) = 2.58$ ,  $p < .01$ ) with the inclusion of the interaction terms; however, the interaction terms did not significantly improve the model,  $\Delta R^2 = .04$ ,  $\Delta F(6, 153) = 1.30$ ,  $p = .26$ . There was, however, one significant interaction between perceived long work hours and telecommuting normativeness at the department level,  $\beta = 0.18$ ,  $t(13, 153) = 2.24$ ,  $p < .05$ . As a result of the significant interaction, a simple slopes analysis was conducted to uncover more about the interaction. The simple slopes analysis revealed that there is a significant negative relationship between perceived long work hours and telecommuting intensity percentage when telecommuting normativeness at the department level is low,  $\beta = -0.24$ ,  $t(163) = -2.15$ ,  $p < .05$ . However, when telecommuting normativeness at the department level is high, there is a positive but nonsignificant relationship between perceived long work hours and telecommuting intensity percentage,  $\beta = 0.10$ ,  $t(163) = -1.01$ ,  $p = .31$ . Figure 2 displays the simple effects of this interaction. See Tables 8 and 9.

Table 8  
*Coefficients Table for Predicting Telecommuting Intensity Percentage*

Model		$\beta$	$t$	$p$	$r$	$pr$
1	(Constant)		23.58	< .001		
	Social Isolation	0.29	2.74	.01	.13	.21
	Professional Isolation	-0.23	-2.02	.05	-.04	-.16
	Career Harm	0.14	1.29	.20	.02	.10
	Job Insecurity	-0.02	-0.19	.85	-.06	-.01
	Long Work Hours	0.00	0.00	1.00	-.01	.00
	Coworker Resentment	-0.22	-2.33	.02	-.16	-.18
2	(Constant)		24.21	< .001		
	Social Isolation	0.31	2.97	< .01	.13	.23
	Professional Isolation	-0.27	-2.36	.02	-.04	-.18
	Career Harm	0.16	1.53	.13	.02	.12
	Job Insecurity	-0.04	-0.43	.67	-.06	-.03
	Long Work Hours	-0.06	-0.81	.42	-.01	-.06
	Coworker Resentment	-0.07	-0.68	.50	-.16	-.05
	Normativeness (Department)	0.27	3.08	< .01	.26	.24
3	(Constant)		21.45	< .001		
	Social Isolation	0.33	3.11	< .01	.13	.24
	Professional Isolation	-0.25	-2.15	.03	-.04	-.17
	Career Harm	0.11	1.08	.28	.02	.09
	Job Insecurity	-0.04	-0.42	.68	-.06	-.03
	Long Work Hours	-0.08	-1.05	.30	-.01	-.08
	Coworker Resentment	-0.06	-0.54	.59	-.16	-.04
	Normativeness (Department)	0.28	2.98	< .01	.26	.23
	SocialxDeptNorm	0.05	0.56	.57	.08	.05
	ProfessionalxDeptNorm	-0.19	-1.68	.10	-.01	-.13
	CareerxDeptNorm	-0.02	-0.14	.89	.08	-.01
	InsecurityxDeptNorm	0.13	1.32	.19	.10	.11
	HoursxDeptNorm	0.18	2.24	.03	.12	.18
	ResentmentxDeptNorm	-0.01	-0.10	.92	.15	-.01

Table 9

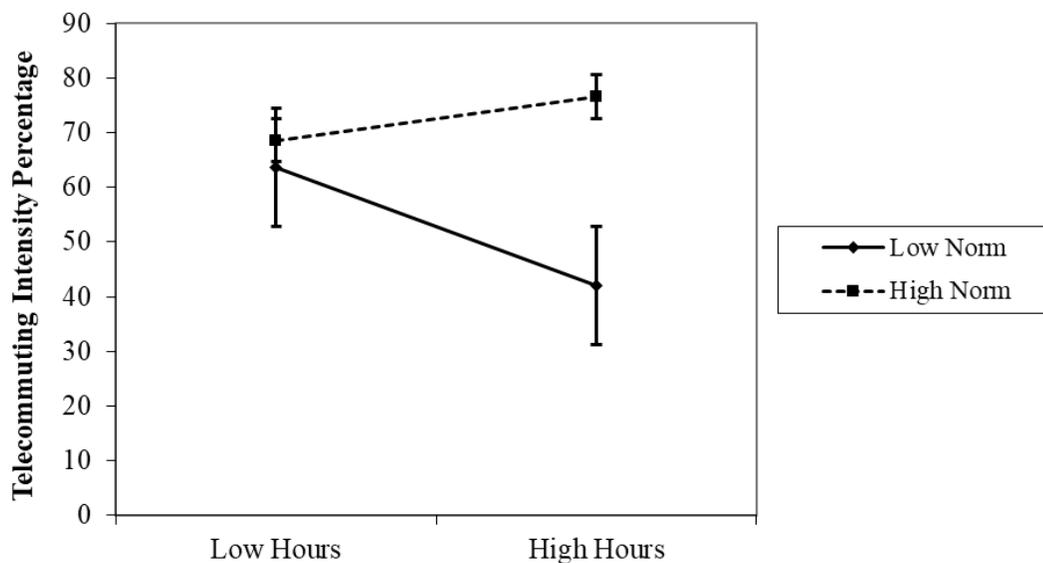
*Model Summary for Predicting Telecommuting Intensity Percentage*

Model	<i>R</i>	<i>R</i> <sup>2</sup>	Adj. <i>R</i> <sup>2</sup>	Std. Error of Est.	Change Statistics				
					<i>R</i> <sup>2</sup> Δ	<i>F</i> Δ	<i>df</i> <sub>1</sub>	<i>df</i> <sub>2</sub>	Sig. <i>F</i> Δ
1	.29	.09	.05	34.77	.09	2.53	6	160	.02
2	.37	.14	.10	33.88	.05	9.47	1	159	< .01
3	.42	.18	.11	33.69	.04	1.30	6	153	.26

Model 1 Predictors: (Constant), Social Isolation, Professional Isolation, Career Harm, Job Insecurity, Long Work Hours, Coworker Resentment

Model 2 Predictors: (Constant), Social Isolation, Professional Isolation, Career Harm, Job Insecurity, Long Work Hours, Coworker Resentment, Normativeness (Department)

Model 3 Predictors: (Constant), Social Isolation, Professional Isolation, Career Harm, Job Insecurity, Long Work Hours, Coworker Resentment, Normativeness (Department), SocialxDeptNorm, ProfessionalxDeptNorm, CareerxDeptNorm, InsecurityxDeptNorm, HoursxDeptNorm, ResentmentxDeptNorm



*Figure 4:* Simple slopes interaction between perceived long work hours and telecommuting normativeness at the department level for telecommuting intensity percentage.

## CHAPTER IV: DISCUSSION

The purpose of this study was threefold: 1) to examine the relationships between the perceived consequences of telecommuting and willingness to telecommute, 2) to examine the relationships between the perceived consequences of telecommuting and telecommuting intensity, and 3) to determine whether the extent to which telecommuting is common in one's department has an impact on these relationships. In doing so, this study aimed to uncover the perceived barriers to telecommuting. The results show that perceived coworker resentment is a barrier to telecommuting. As employees' perceptions of coworker resentment increase, their willingness to telecommute as well as the percentage of time they spend telecommuting, decrease. The results also showed that perceived social isolation and long work hours are significantly related to telecommuting intensity. As perceived social isolation and long work hours increase, so do the number of hours employees spend telecommuting. Telecommuting normativeness at the department level was also identified as a significant predictor of telecommuting intensity meaning that as telecommuting becomes more common within the department, employees tend to utilize telecommuting to a greater extent.

In regard to coworker resentment, it appears that telecommuters care about the opinions of their coworkers as perceived coworker resentment was a significant negative predictor of both willingness to telecommute and telecommuting intensity percentage. Individuals typically desire to be liked and accepted by others. Thus, the perception that one's coworkers dislike them because they work outside of the traditional office may foster negative working relationships or tension between coworkers, which can be debilitating. Telecommuters may attempt to alleviate this tension and appease their

coworkers by limiting the amount of time they spend away from the office working as a telecommuter or by discontinuing their participation in the flexible work arrangement altogether. A practical implication resulting from this finding is that telecommuting can create tensions between coworkers, telecommuters, and non-telecommuters, which can influence the extent to which telecommuting is utilized. Given the numerous benefits of telecommuting, organizations should work to create a climate that promotes this type of flexibility as well as the collaboration between telecommuters and their office-based counterparts. To do this, organizations might implement telecommuting policies and procedures and ensure they are applied fairly and consistently to all employees. If telecommuters perceive support rather than resentment from their coworkers, they may be more likely to take full advantage of telecommuting thereby creating benefits for themselves and the organization, such as freedom from workplace distractions and increased productivity.

Perceived long work hours was a significant unique predictor of telecommuting intensity hours. Perhaps individuals perceive that they work more hours when they telecommute extensively due to the lack of separation between work and home. For instance, high intensity telecommuters may begin their work day at an earlier time (e.g., before the traditional eight o'clock start time) because they do not have to spend the time leading up to the start of the work day commuting. Similarly, telecommuters may continue working into the evening, beyond normal business hours, since they also forgo the commute home. This is a clear example of how telecommuting has aided in the general expansion of work hours. The lack of separation between the work and home domains not only make it easier for telecommuters to transition between work and home,

but it has also made it more difficult for individuals to detach from their work. Long-term, this could lead telecommuters to experience work-family conflict. In contrast, more hours spent on work-related tasks may translate into greater productivity and perhaps mitigate career harm. If employees are able to accomplish more by working from home, they signal to their employer that they are working hard and are deserving of organizational rewards. Given these considerations, organizations that offer telecommuting should clearly communicate their expectations regarding telecommuters' work hours. If telecommuters perceive that they must be constantly available to appear dedicated despite working from home, then they may be more susceptible to longer work hours and increased work-family conflict; however, if the organization promotes work-life balance and offers support to help telecommuters segment their work and home domains, then telecommuters may be less likely to perceive that they are working all the time, which may in turn, reduce the likelihood of work interfering with their family or personal life. However, this study did not explicitly test any of these mechanisms. Therefore, future research should investigate these relationships to further understand how telecommuting intensity impacts work-family conflict.

Perceived social isolation was a significant positive predictor of both telecommuting intensity hours and telecommuting intensity percentage. In other words, as perceived social isolation increases, so does the frequency of telecommuting. Perhaps individuals perceive that they are more socially isolated when they telecommute extensively because they have fewer opportunities to interact with their coworkers compared to those who telecommute infrequently. For instance, those who telecommute only once per week have more opportunities to interact with their coworkers face-to-face

in the hallways, at lunch, and before and after meetings, whereas those who telecommute four or five days a week have little opportunity for informal face-to-face interactions with others. This can lead them to feeling disconnected from the workplace and people in general. For example, telecommuters who work from home as opposed to a neighborhood work center, satellite or client office, or coffee shop, may feel disconnected from people in general because working from home is inherently isolating, especially when there is no one else present in the home. Organizations need to be aware that perceptions of isolation increase with increased intensity, and they should seek to implement creative strategies that facilitate social interactions among telecommuters and their telecommuting and non-telecommuting counterparts. This may include frequent meetings, either face-to-face or via videoconferencing where telecommuters have the opportunity to connect and interact informally with their coworkers. In addition, the organization may plan quarterly social outings that bring coworkers together and allow for more meaningful interactions.

Finally, the extent to which telecommuting is common in one's department has implications for telecommuting intensity. Specifically, the results showed that as telecommuting becomes more common within the department, employees tend to spend more time telecommuting. Perhaps this finding provides an explanation as to why perceptions of professional isolation, career harm, and job insecurity were not significantly related to willingness to telecommute or telecommuting intensity. For instance, if telecommuting is a common and accepted work arrangement within the department, then employees may not perceive that they lack connections to organizational members or have limited access to resources and information as processes may be in place to support remote work. Furthermore, if a greater portion of employees

are working from home, including supervisors and managers, then individuals may not perceive that telecommuting poses a threat to their career.

### **Limitations and Future Directions**

A major limitation of the current study is that the sample was comprised of individuals who telecommute in their current position. As previously mentioned, the skewness in the willingness to telecommute scale is largely attributed to the eligibility requirement stating that individuals must telecommute to some extent in their current position to be eligible to participate in the study. In hindsight, this eligibility requirement may have limited our ability to measure willingness to telecommute as defined for this study. Thus, future research should examine non-telecommuters' willingness to telecommute. Perhaps their perceptions of the consequences of telecommuting differ from those who telecommute.

Another limitation is that a large portion of the sample telecommuted full-time (43%). This is a limitation as some of the questions regarding willingness to telecommute may not have pertained to these individuals as they are already engaging in telecommuting to the fullest extent. For instance, "I would telecommute more if I had the option" and "I would be satisfied if my position were made fully remote" are examples of questions not applicable to these participants. Alternatively, individuals that telecommute less than one day a week were barely represented in the current sample (4%) despite research suggesting that telecommuting on an ad hoc basis is the most common form of flexibility provided by today's organizations (World at Work, 2015). Future research might examine whether there are differences in the perceived consequences of telecommuting based on the extent to which participants telecommute. In addition, future

research may also consider whether telecommuting is optional or required by the job as this may play a factor in employees' perceptions of negative work outcomes.

A final limitation is the use of a snowball method. As a result of this data collection method, the representativeness of the sample is somewhat unclear given that participants could be concentrated to a small number of organizations rather than scattered among several organizations.

### **Conclusion**

In conclusion, this research study emphasizes that the perceived consequences of telecommuting have important implications for employees' attitudes toward, and subsequent practice of, telecommuting. This study found that perceptions of coworker resentment are negatively related to employees' willingness to telecommute and the extent to which they participate in telecommuting. In addition, the results showed that perceptions of social isolation and long work hours increase as the number of hours spent telecommuting increases. Finally, as telecommuting gains popularity among employees in the department, employees tend to spend more time telecommuting. The contributions of this study add to the growing body of literature on telecommuting and provides practical implications for organizations seeking to implement or improve telecommuting practices.

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## **APPENDICES**

### Appendix A: Descriptive Statistics for Demographic Variables

Variable	Frequency ( <i>n</i> )	Percent (%)
Gender		
Male	59	35.3
Female	108	64.7
Age		
18-24 years old	11	6.6
25-34 years old	68	40.7
35-44 years old	38	22.8
45-54 years old	34	20.4
55-64 years old	15	9.0
65 or older	1	.6
Highest completed level of education		
High school degree or equivalent (e.g., GED)	4	2.4
Some college but no degree	9	5.4
Associate's degree	1	.6
Bachelor's degree	69	41.3
Graduate degree	84	50.3
Marital status		
Single, never married	44	26.3
Married	113	67.7
Widowed	2	1.2
Divorced	8	4.8
Children under 18 living at home		
Yes	57	34.1
No	110	65.9
Tenure with organization		
Less than 1 year	30	18.0
1-3 years	58	34.7
3-5 years	25	15.0
5+ years	54	32.3
Primary work location		
Office of my employer	65	38.9
Satellite office	2	1.2
Client office	1	.6
Home	90	53.9
Mobile or on-the-go	9	5.4
Job status		
Salaried	155	92.8
Hourly	12	7.2
Job level		
Entry-level	12	7.2
Intermediate	90	53.9

Middle management	56	33.5
Owner/executive/c-suite	9	5.4
Employment relationship		
Contract employee	6	3.6
Employee of my organization	161	96.4
Tenure with telecommuting		
Less than 1 year	42	25.1
1-3 years	63	37.7
3-5 years	21	12.6
5+ years	41	24.6

## Appendix B: Telecommuting Survey

### Screening Questions:

1. What is your age?

\_\_\_\_\_

2. Do you currently work in the United States?

- Yes
- No

3. How many hours do you work in a typical week?

\_\_\_\_\_

Telecommuting is defined as a work arrangement in which the employee substitutes a portion of their typical work hours to work at an offsite location (e.g., home) using technology to interact with others as needed to conduct work tasks.

4. Based on this definition, do you consider yourself a telecommuter?

- Yes
- No

## Willingness to Telecommute

Items	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
5. I willingly choose to telecommute.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. I enjoy working from home.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Telecommuting grants me the flexibility to meet work and family demands.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. The benefits of telecommuting outweigh the drawbacks.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. I would telecommute more if I had the option.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. I would be reluctant to change jobs if it meant I had to give up telecommuting.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. I would be satisfied if my position were made fully remote.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. I will make use of telecommuting for as long as my company makes the option available.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. I would take a new job or promotion that no longer gave me the option to telecommute. (R)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. I'd prefer <u>NOT</u> to telecommute. (R)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Telecommuting Intensity

15. On average, how many hours per week do you spend away from the office working as a telecommuter?	
16. What percentage of the average work week do you spend telecommuting?	

## Telecommuting Normativeness

17. What percentage of your organization telecommutes?	
18. What percentage of your department telecommutes?	

Items	Less than 1 day per week	1 day per week	2 days per week	3 days per week	4 or more days per week
19. On average, how many days per week do your immediate coworkers spend telecommuting?					
20. On average, how many days per week does your manager spend telecommuting?					

Items	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
21. Telecommuting is common in my organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. Telecommuting is common in my department.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. Most employees in my organization have the option to telecommute.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. Telecommuting is an option for everyone in my department.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

25. Even supervisors and managers have the option to work from home.	<input type="radio"/>				
26. My direct supervisor/ manager telecommutes.	<input type="radio"/>				
27. Telecommuting is rare in my organization. (R)	<input type="radio"/>				
28. My supervisor supports my decision to telecommute.	<input type="radio"/>				
29. Employees in my organization are encouraged to make use of flexible work arrangements like telecommuting.	<input type="radio"/>				
30. My organization fully supports telecommuting.	<input type="radio"/>				

#### Perceived Social Isolation

Items	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
31. I miss engaging in informal chats with my coworkers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
32. I have friends available to me at work. (R)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
33. I am kept in the loop regarding company social events/functions. (R)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34. I am satisfied with the opportunities to interact with others in the office. (R)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
35. I feel like I know the people I work with. (R)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
36. I feel accepted by my coworkers. (R)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

37. I feel lonely when working from home.	<input type="radio"/>				
38. I feel like an outsider when I am around my coworkers.	<input type="radio"/>				
39. I am not interested in being friends with my coworkers. (R)	<input type="radio"/>				
40. I find the social atmosphere in my organization distracting. (R)	<input type="radio"/>				
41. I'd rather not get caught up in conversations with my coworkers. (R)	<input type="radio"/>				

#### Perceived Professional Isolation

Items	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
42. I have coworkers I can depend on when I have a problem. (R)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
43. I discuss work-related issues with my coworkers. (R)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
44. I am well-integrated with the department where I work. (R)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
45. I am part of the informal information network in my office. (R)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
46. I feel I miss a lot of information when I am not seeing people I work with.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
47. I often miss the opportunity to meet key people who I work with.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
48. I could resolve problems more quickly and	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

effectively if I had more chances to interact face-to-face with others.					
49. I have people in my organization I can go to if I need help brainstorming ideas. (R)	<input type="radio"/>				
50. I feel comfortable asking my coworkers for help. (R)	<input type="radio"/>				
51. I don't mind not knowing the latest company news. (R)	<input type="radio"/>				
52. My coworkers don't help me solve problems.	<input type="radio"/>				

#### Perceived Career Harm

Items	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
53. The evaluation of my performance is fair and consistent with those who do not telecommute. (R)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
54. I miss opportunities and leads for good projects.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
55. I miss opportunities to interact with senior leaders in my organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
56. Being away from the office limits my opportunities for advancement.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
57. Visibility in the office is important to career progression.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
58. I feel I am perceived as less committed to the	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

organization because I telecommute.					
59. I feel left out of activities and meetings that could enhance my career.	<input type="radio"/>				
60. I miss out on opportunities to be mentored.	<input type="radio"/>				
61. I am afraid that working from home may hurt my future career opportunities.	<input type="radio"/>				
62. In my organization, employees who telecommute are viewed as less serious about their careers than those who do not telecommute.	<input type="radio"/>				
63. In my organizations, employees who telecommute are less likely to advance their careers than those who do not telecommute.	<input type="radio"/>				

#### Perceived Job Insecurity

Items	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
64. I am secure in my job. (R)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
65. My job is <u>not</u> a secure one.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
66. I am afraid I could lose my job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
67. I am afraid I could lose the option to telecommute.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
68. Telecommuters are at greater risk of being laid off.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

69. I fear that my reduced visibility in the office could put my job in jeopardy.	<input type="radio"/>				
70. If this organization had a reduction-in-force, telecommuting positions would be easy to cut.	<input type="radio"/>				

### Perceived Work Hours

Items	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
71. I take working beyond regular work hours for granted.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
72. Working longer than regular work hours is necessary to get my job done.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
73. I am required to work more than I expected.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
74. I find myself continuing to work after the regular work day ends.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
75. I feel guilty when I leave the office at the end of the work day.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
76. Overall, I work longer than the regular work hours.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
77. I spend more time on work-related tasks when I work from home than I do when I work from the office.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
78. I work the same number of hours when I telecommute as I do when I work from the office. (R)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Coworker Resentment

Items	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
79. I feel my coworkers disapprove of my use of telecommuting.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
80. My coworkers support my desire to work from home. (R)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
81. I feel my coworkers make an effort to understand my desire to work from home. (R)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
82. My coworkers feel inconvenienced by my working from home.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
83. My coworkers are annoyed that they have to do additional work when I work from home.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
84. My coworkers find it difficult to coordinate meetings and tasks when I telecommute.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
85. My coworkers treat me negatively because I telecommute.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
86. My coworkers resent those of us who telecommute.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
87. My coworkers encourage me to telecommute. (R)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
88. The opinions of my coworkers do not influence my desire to telecommute. (R)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
89. The majority of my coworkers telecommute so it's not an issue. (R)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Demographic Questions

86. What is your gender?
- Male
  - Female
  - Prefer not to specify
87. Please indicate the range that includes your age:
- 18-24 years old
  - 25-34 years old
  - 35-44 years old
  - 45-54 years old
  - 55-64 years old
  - 65 or older
88. What is the highest degree or level of education you have completed?
- Less than high school
  - High school degree or equivalent (e.g., GED)
  - Some college but no degree
  - Associates degree
  - Bachelor's degree
  - Graduate degree
89. What is your marital status?
- Single, never married
  - Married
  - Widowed
  - Divorced
  - Separated
  - Prefer not to specify
90. Do you currently have children under the age of 18 living in your home?
- Yes
  - No
91. How long have you worked for your current organization?
- Less than 1 year
  - 1-3 years
  - 3-5 years
  - 5+ years
92. Which do you consider your primary place of work?
- Traditional office
  - Neighborhood work center or coworking location
  - Satellite office

- Client office
- Home office
- Mobile “on-the-go” (e.g., hotel, airport, coffee shop)

93. Are you a salaried or hourly employee?

- Salaried
- Hourly

94. Which of the following best describes your current job level?

- Entry-level
- Intermediate
- Middle management
- Owner/Executive/C-suite

95. Are you considered a contract employee or an employee of your organization?

- Contract employee
- Employee of my organization

96. How many employee work in your department (or immediate work group)?

\_\_\_\_\_

97. On average, how many hours do you work per week? \_\_\_\_\_

98. What is your average daily commute time when you go to the office? \_\_\_\_\_

99. How long have you been telecommuting in your current position?

- Less than 1 year
- 1-3 years
- 3-5 years
- 5+ years