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The Relationship Between Remote Work and Job Satisfaction: The Mediating Roles of Perceived Autonomy, Work-Family Conflict, and Telecommuting Intensity

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THE RELATIONSHIP BETWEEN REMOTE WORK AND JOB SATISFACTION:
THE MEDIATING ROLES OF PERCEIVED AUTONOMY, WORK-FAMILY
CONFLICT, AND TELECOMMUTING INTENSITY

A Thesis

Presented to

The Faculty of the Department of Psychology

San José State University

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

by

Marie Antoinette Schall

May 2019

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The Designated Thesis Committee Approves the Thesis Titled

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ABSTRACT

THE RELATIONSHIP BETWEEN REMOTE WORK AND JOB SATISFACTION: THE MEDIATING ROLES OF PERCEIVED AUTONOMY, WORK-FAMILY CONFLICT, AND TELECOMMUTING INTENSITY

by Marie Antoinette Schall

The purpose of the current study was to examine the relationship between remote work and job satisfaction levels of employees in the workplace. Additionally, the variables perceived autonomy, work-family conflict, and telecommuting intensity were investigated as mediators. A total of 185 employees participated in the study, which utilized an online survey. Results showed that remote work had a positive relationship with job satisfaction. Perceived autonomy, work-family conflict, and telecommuting intensity each mediated the relationship between remote work and job satisfaction. An inverted u-shaped curvilinear relationship between the extent of working remotely (telecommuting intensity) and job satisfaction was not found and instead support for a positive, linear relationship was found. The major implication of the findings is that increasing remote work in the workplace may be an efficient way to increase employees' job satisfaction levels. This is because remote work influences employees to have higher perceived autonomy, less work-family conflict, and more telecommuting intensity, which in turn influences their job satisfaction.

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Introduction

In the last decade, renewed interest has emerged in studying the effects of remote work due to the increase of technology and globalization (Caramela, 2017). Technology is now making it easier to work anywhere in the world, as long as one is connected to the Internet (Hendricks, 2014). According to a research-based consulting company, Global Workplace Analytics (GWA), 80% to 90% of the U.S. workforce said that they would like to work remotely on a part-time basis (Latest Telecommuting Statistics, 2017). Thus, the expectations of more flexible work arrangements are increasing, which may potentially impact employees' level of job satisfaction, overall job performance, work-family conflict levels, and/or turnover intention rates.

In recent years, disagreement around the performance of remote employees has received wide attention in the media as some argue that working from home allows employees to be more productive due to fewer office distractions, while others argue that working from home is not the best environment because it allows for more home distractions (Fonner & Roloff, 2010). For instance, Marissa Mayer, former CEO of Yahoo, ended the remote work policy for all employees in 2013 and stated, "to become the absolute best place to work, communication and collaboration will be important, so we need to be working side-by-side" (Pepitone, 2013, p. 1). However, according to a Gallup report on the State American Workplace, "people who work remotely are more engaged, enthusiastic, and committed to their work — only if they work outside the office 20% of the time or less" (Gallup, 2017, p. 29). Therefore, it is paramount that if organizations want to remain profitable and stay competitive in a growing technological

society, better understanding of the consequences of remote work is vital for the future of the workplace.

According to some researchers (e.g., Allen, Renn, & Griffeth, 2003; Bailey & Kurland, 2002), the body of literature on remote work is based on problematic assumptions regarding remote work's impact on the individual and organizational level. These assumptions are: employees work remotely full-time, employees work remotely on a permanent basis, and remote work impacts the organization positively (i.e., cost savings) (Bailey & Kurland, 2002). In the last 20 years, researchers have found inconsistent results with employee job satisfaction, job performance, and work-family conflict when analyzing the consequences of remote work (Gajendran & Harrison, 2007; Golden, 2006). Researchers have expressed their concern that current managers and researchers in the field may not be able to rely on literature for guidance on how remote work affects individual telecommuters. However, recently more researchers are studying the potential positive and negative consequences of remote work, due to changing work dynamics via mobile work (e.g., Ferguson et al., 2016).

Until now, few researchers have examined the potential mediators of remote work; therefore, with the current state of knowledge on remote work, this paper aims to contribute to the limited literature on this topic by examining the relationship between remote work and job satisfaction. More specifically, the current research examines the mediating role of work-family conflict, perceived autonomy, and telecommuting intensity on the relationship between remote work and job satisfaction. Figure 1 demonstrates the proposed theoretical framework of the hypotheses that are examined in the current study.

Figure 1. Theoretical framework of the relationship between remote work and job satisfaction with mediators

In the literature review, I begin by providing a brief history of remote work and its origin. Next, I review past literature on the direct relationship between remote work and job satisfaction and address different arguments made by researchers due to their conflicting findings on this relationship. The discussion continues by reviewing research findings on perceived autonomy as a potential mediator of the relationship between remote work and job satisfaction. Then, I investigate literature on work-family conflict as a potential mediator in relation to remote work and job satisfaction. Lastly, I review the literature on the topic of telecommuting intensity and its potential mediating effect on the relationship between remote work and job satisfaction.

History of Remote Work

According to Gajendran and Harrison (2007), the umbrella term *distributed work* is defined as the “arrangement that allows employees and their task to be shared across settings away from a central place of business or physical organizational location” (pp. 1524-1525). The authors state that the most well-known type of distributed work is telecommuting; however, this work arrangement is also recognized as telework or remote work. This work arrangement was originally defined as working from a remote location away from a standard office or work site and was first coined by Jack Nilles in the 1970s, while stuck in traffic in LA (Kurland & Bailey, 1999). Even though the terms teleworking and telecommuting are used interchangeably, some still argue there are differences between the two terms. For example, Garrett and Danziger (2007) argue that telework is a broader concept and has four dimensions (work location, information technology, time distribution, and diversity of employment). Telecommuting is more specific and means completing work at a remote location in order to decrease commuting time (Ellison, 2004).

Nilles (1994) defines telework as “working outside the conventional workplace and communicating with by way of telecommunications or computer-based technology” (Bailey & Kurland, 2002, p. 384). Similarly, Fitzer (1997) defines telework as a “work arrangement in which employees perform their regular work at a site other than the ordinary workplace, supported by technological connections” (Fonner & Roloff, 2010, p. 336). Most recently, the idea of mobile work or mWork (defined as “the frequency of using a smartphone or a tablet with Internet access to engage in work tasks during family

time”) has emerged as a common form of remote work because of the increase in opportunity to connect with anyone via internet on one’s mobile device, even outside working hours (Ferguson et al., 2016, p. 520). Overall, organizations now prefer to use the term “working remotely” or “working from home” instead of telecommuting/teleworking because it sounds more modern (Parris, 2017). Parris (2017) also added that there is no consistency in terminology “Since the idea of telecommuting has been around for decades, thus new words and phrases come to replace what is, in theory, a not-so-new workplace concept” (Parris, 2017, para. 7). This author concluded that all five terms (remote working, working remotely, working from home, teleworking, and telecommuting) are comparatively synonymous, therefore it is best not to use one term exclusively. For this reason, this study will use the term “remote work” and will be based on literature that uses teleworking, telecommuting, or remote working as their choice in terminology, consistent with the proposed definition of telework by Fitzer (1997) and Nilles (1994).

The nature of remote work allows an employee to have a flexible work location and in 2016, the amount of people working remotely in the U.S. (at least part-time) increased to 43% (Darley, 2017). For many working professionals, having a flexible work location provides certain cost savings, such as spending less time on the road commuting to work, spending less money on gas for transportation, and spending less time deciding what clothing to wear for that particular workday. For this reason, an employer who offers his/her employees the option to work remotely may demonstrate the importance of meeting the needs of the employees. Consequently, employees may perceive this as the

company's way of modifying the work setting in order to meet their needs, which in return may reflect "a greater fit between themselves and their jobs" (Gajendran & Harrison, 2007, p. 1528). For this reason, many authors in the past literature have focused on one particular consequence of remote work: job satisfaction.

Remote Work and Job Satisfaction

Locke (1976) defined job satisfaction as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (p. 1304). Overall, the relationship between remote work and job satisfaction derives from the assumption that remote work allows workers more flexibility and more autonomy in how their work is achieved, which allows the employee to meet the demands of their job and their own personal (life and family) demands (Virick, DaSilva, & Arrington, 2010).

Mixed conclusions have been reported regarding whether telecommuting has positive or negative effects on job satisfaction (Bailey & Kurland, 2002). For example, some researchers have found support for the linear relationship between telecommuting and job satisfaction, suggesting that employees who work remotely more are more satisfied with their jobs (Dubrin, 1991; Guimaraes & Dallow, 1999) or that employees who work remotely more are less satisfied with their jobs (Cooper & Kurland, 2002; Pinsonneault & Boisvert, 2001). In contrast to the argument about a linear relationship between remote work and job satisfaction, Golden (2006) found support for an inverted u-shaped (curvilinear) relationship between the extent of telecommuting (or the amount of time spent working remotely) and job satisfaction. The authors imply that as remote work increases, job satisfaction increases; however, it only increases up to a certain point

(Golden & Veiga, 2005). Further increases in remote work led to a decrease in job satisfaction (Golden, 2006). These findings imply that managers and telecommuters should be cautious when employees telecommute substantially, as it may decrease the quality of employee relations, which would subsequently affect job satisfaction. The researchers suggest that managers should limit telecommuting to only a couple of days per week, so that both needs (a flexible schedule and social interaction with colleagues) are met. In sum, Golden (2006) concluded that remote work is likely to promote job satisfaction, however only up to a point.

Golden and Veiga (2005) examined the relationship between remote work and job satisfaction among 321 professional-level employees. The researchers collected and measured remote work in the number of hours they spent working remotely per week (telecommuting intensity). The researchers were the first to posit a curvilinear relationship (inverted u-shaped), such that employees would experience higher levels of job satisfaction at lower levels of remote work and lower levels of job satisfaction at higher levels of remote work. Based on their findings, the researchers found support for a curvilinear relationship. The researchers found that the relationship between working remotely and job satisfaction subsided, and the employees' job satisfaction levels decreased at higher levels of remote work. In other words, this finding's main implication is that employees are able to socially connect in person with their coworkers and managers, while also having the flexibility of meeting their personal needs when they work remotely only several days out of the week. Alternatively, when employees work the majority of their work week remotely, they experience more isolation due to less

social interaction with their colleagues at work, which leads to a decline in their job satisfaction levels.

Allen, Golden, and Shockley (2015) found in a recent meta-analysis that remote work was positively associated with job satisfaction, however, the correlation was small ($r = .09$). In addition, the authors found that the extent of telecommuting did not relate equally to job satisfaction, which explains why the association between remote work and job satisfaction is curvilinear. In particular, the researchers found that as remote work increased, so did the employees' levels of job satisfaction, but only up to a point (15.1 hours per week). After that, as remote work continued to increase, employees' levels of job satisfaction started to decrease. In sum, Allen et al. (2015) posited that this curvilinear relationship may be due to the lack of social interaction with coworkers and the increased perception of isolation, which telecommuters may experience when teleworking too frequently during the week. These potential drawbacks may counterbalance the benefits of working remotely which may impact employees' overall job satisfaction. Thus, the following hypothesis was made:

Hypothesis 1: There will be a curvilinear relationship between the intensity of remote work and job satisfaction, such that as the intensity of remote work increases, job satisfaction will increase, but only to a point, beyond which further increases in the intensity of remote work will lead to a decrease in job satisfaction.

The Mediating Effect of Perceived Autonomy

With regards to the relationship between remote work and job satisfaction, another major belief that has been analyzed extensively is the perception of autonomy. According to Hackman and Oldham (1976), autonomy is defined as “the extent to which employees have control and discretion for how to conduct their tasks” (p. 250) and is in accordance with self-determination theory – a general theory based on human motivation and personality (Deci & Ryan, 1985). For example, Golden (2006) used Hackman and Oldham’s (1976) job characteristics model (JCM) in their study to explain the relationship between telecommuting and job satisfaction, which states that autonomy is an important job characteristic that leads to job satisfaction. In this case, since telecommuters experience high autonomy (by nature of the job) this too may positively affect their job satisfaction in accordance to the JCM model. More specifically, perceived autonomy is defined as “the degree to which an individual perceives his or her actions as a result of his or her own free will, without external interference in a certain situation” (Yoonhyuk, 2011, p. 497). Therefore, when employees feel as though their decisions or actions are made at their own discretion, the individual will then become intrinsically motivated.

In the meta-analysis of Gajendran and Harrison (2007), the authors examined the proximal (mediating) and distal consequences of telecommuting on the individual level. The authors’ theoretical framework was based on three themes that were found throughout the body of literature on remote work: 1) psychological control (or perceived autonomy), 2) the work-family interface, and 3) the concern of “relational

impoverishment” from telecommuting due to a decrease in social interactions with colleagues. The researchers based their model on a multi-dimensional framework supported by Allen et al. (2003) and Feldman and Gainey (1997) that focused on “how telecommuting design may affect the telecommuters’ work environment and outcomes through its effects on the social system of the telecommuter, autonomy and self-management opportunities and requirements, and role boundaries...” (Allen et al., 2003, p. 125).

Based on this theory, the authors posited that telecommuting had five individual outcomes: job satisfaction, performance, turnover intention, role stress, and perceived career prospects and these outcomes are mediated by perceived autonomy, work-family conflict, and relationship quality with supervisor and coworkers. After analyzing 46 studies, which included 12,883 employees in natural settings, the authors found that telecommuting had small, however, beneficial effects on the employee’s proximal outcomes, such that employees perceive higher autonomy, less work-family conflict, and higher relationship quality with supervisors. Gajendran and Harrison (2007) also found that distal outcomes, such as performance, job satisfaction, turnover intent, and role stress were partially mediated by perception of autonomy.

A more recent study found that the more time employees spent working remotely (versus in the office) the higher their perception of autonomy (Gajendran, Harrison, & Delaney-Klinger, 2014). The researchers based their theory on the job demands resources (JD-R) model, in which “resources refer to those aspects of jobs that enable employees to meet work-related goals” (Gajendran et al., 2014, p. 355). In this case,

autonomy would be considered a valued job resource for remote employees. Based on this model, the researcher's finding makes sense due to the nature of the job of having more freedom to work outside the typical norm of working in one conventional location, such as an office, versus working from home or at a coffee shop. Having the flexibility to work outside a structured location may increase employees' perception of making more independent and self-directed decisions on how to handle their own jobs and responsibilities. Thus, the following hypothesis was made:

Hypothesis 2: Perceived autonomy will mediate the relationship between remote work and job satisfaction, such that remote work will lead to higher perceptions of autonomy, which in turn will be associated with higher job satisfaction.

The Mediating Effect of Work-Family Conflict

Another major theme that has been investigated is remote work's relationship to work-family conflict. According to Greenhaus and Beutell (1985), work-family conflict is produced by simultaneous "pressures from work and family roles that are mutually incompatible" (p. 77). These authors further explain that work-family conflict occurs when one role interferes with meeting the expectations of another role. There is much debate surrounding this topic and past empirical literature has found inconclusive results whether remote work is beneficial in relation to family roles or not (Raghuram & Wiesenfeld, 2004).

Golden, Veiga, and Simsek (2006) studied telecommuting and its differential impact on work-family conflict. The researchers surveyed 454 working professionals who divided their work time between a central work location (an office) and home. The

researchers' focus was to examine the mode of where work was being done (office or at home) and if it would impact work-to-family conflict (WFC) and family-to-work conflict (FWC). Work-to-family conflict is defined as work interfering with spouse/family responsibilities, while family-to-work conflict is defined as spouse/family interfering with work responsibilities (Golden et al., 2006). According to their results, the more an employee engaged in telecommuting, the less work interfered with family, which reduced work-to-family conflict. However, the more an employee engaged in telecommuting, the more family interfered with work, which increased family-to-work conflict. In other words, the researchers did not find support for a full integration between work and family roles or else the researchers would have found a decrease in both work-to-family conflict and family-to-work conflict (Golden et al., 2006). In this particular study, the participants' perception of job satisfaction was not examined as a potential outcome of telecommuting, therefore, it would be interesting to assess if a mediating effect of work-to-family conflict/family-to-work conflict would occur for the relationship between telecommuting and job satisfaction. This is a gap that the current study explores, while focusing only on work-to-family conflict as a potential mediator and not family-to-work conflict.

In recent years, many researchers have focused on examining work-family conflict as a potential mediator within different relationships, such as transformational leadership and job satisfaction, job autonomy and job satisfaction, and job characteristics and well-being at work, in which many have found that work-family conflict mediated or partially mediated these relationships (Chambel, Carvalho, Cesario, & Lopes, 2017; Gözükarar &

Çolakoğlu, 2016; Munir, Nielsen, Garde, Albertsen & Carneiro, 2012). Along with examining the direct effect of job autonomy with job satisfaction, Gözükar and Çolakoğlu (2016) assessed the relationship between job autonomy and job satisfaction with work-family conflict as the mediating factor. This research is based on role theory which states that “work-family conflict arises from an inter-role conflict” (Gözükar & Çolakoğlu, 2016, p. 255). After surveying 270 employees, they found that work-family conflict had a negative mediating impact on the job autonomy and job satisfaction relationship, such that higher amounts of autonomy led to lower work-family conflict, which in turn led to higher amounts of job satisfaction.

Similarly, Chambel et al. (2017) also studied the mediating role of work-to-life conflict for the relationship between job characteristics (i.e., job demands, job autonomy, and supervisor support) and well-being at work (i.e. burnout and engagement). In this study, the researchers specifically looked at part-time versus full-time employees from call center companies in Portugal. After the researchers surveyed 736 (full-time or part-time) employees, the researchers found that employees’ perceptions of job demand, job autonomy and supervisor support levels were related to their overall well-being, in which work-to-life conflict partially mediated the relationship between job characteristics and well-being at work. Even though the researchers did not include remote work as part of their study, it is still important to note what their findings were because they analyzed the relationship between job autonomy and well-being, and well-being has been shown to be connected to job satisfaction in past literature (Faragher, Cass, & Cooper, 2005).

Fonner and Roloff (2010) examined the relationship between remote work and job satisfaction in relation to work-life conflict. More specifically, the researchers examined the degree to which remote work affected job satisfaction by considering the following potential mediators: work-life conflict, stressful situations such as meetings or interruptions, organizational politics and information exchange. After studying 89 teleworkers and 103 office-based employees, the researchers found that telecommuters were more satisfied with their jobs than office-based employees and found work-life conflict to be a mediator of the relationship between remote work and job satisfaction. In this study, telecommuters were defined as employees who had an agreement with their employer to regularly work at least three days a week from a location other than the office (Fonner & Roloff, 2010). Overall, the researchers found that telecommuters achieved important benefits from their arrangement at work and found that having less work-life conflict was most instrumental to their overall satisfaction. The implications of their results are that working remotely may ease conflicting situations with work and life, which in turn may provide an overall more productive and satisfying work environment and stated, "... spending less than 50% of the week in the collocated office affords more flexibility and aids in the balance of work and personal roles, which teleworkers find satisfying" (Fonner & Roloff, 2010, pp. 352-353). Thus, the following hypothesis was made:

Hypothesis 3: Work-family conflict will mediate the relationship between remote work and job satisfaction, such that remote work will lead to lower work-family conflict, which in turn will be associated with higher job satisfaction.

The Mediating Effect of Telecommuting Intensity

The concept of “frequency” or the amount of time spent working remotely has created an interesting debate on the topic of remote work in conjunction to employees’ job satisfaction levels. Many researchers believe that the frequency (measured in hours or days) of remote work makes a difference on employees’ satisfaction levels (Gajendran & Harrison, 2007; Golden & Viega, 2005). Telecommuting intensity is best defined by Gajendran and Harrison (2007) as “the extent or amount of scheduled time that employees spend doing tasks away from a central work location” (p. 1529). The concept of telecommuting intensity has been around, but known by other terms, such as *virtual status* (Wiesenfeld, Raghuram, & Garud, 1999), *home-centered versus office centered telework* (Konradt, Hertel, & Schmook, 2003), *virtuality* (Scott & Timmerman, 1999) and as *extent of telecommuting* (Golden & Veiga, 2005). According to Gajendran and Harrison (2007), high-intensity telecommuters are those who spend all or the majority of their work week away from a central location (telecommuting 2.5 days or more during the work week), while low-intensity telecommuters are those who spend the majority of their work week in a central location (telecommuting less than 2.5 days during the work week).

Most recently, Virick et al. (2010) replicated the findings of a curvilinear relationship between extent of telecommuting, job satisfaction, and life satisfaction. The sample consisted of 575 exempt employees (only 85 indicated as telecommuters) and measured the extent of telecommuting in days versus hours like Golden and Veiga (2005) did. The researchers found that performance-outcome orientation, defined as the “degree to which

objective criteria are used in employee evaluation,” moderated the curvilinear relation between extent of telecommuting and job satisfaction (Virick et al., 2010, p.137). In other words, the researchers found that when performance outcome orientation was high, job satisfaction stayed the same regardless of the frequency of telecommuting. However, when there was low performance outcome orientation, job satisfaction was highest when there were moderate levels of telecommuting, not at low levels as predicted.

The researchers also found that worker type, defined as the workers’ levels of work drive and work enjoyment (i.e. workaholic has high work drive and low levels of work enjoyment), moderated the curvilinear relation between extent of telecommuting and life satisfaction, such that workaholic employees experienced lower life satisfaction when they engaged in moderate levels of telecommuting, while other employees experienced the opposite. Particularly, other employees experienced higher life satisfaction when telecommuting was moderate. However, the main implications of the study are that remote workers are more satisfied with their lives when they work remotely at “moderate levels” such as several days a week, which supports past literature on this topic (Allen et al., 2015; Golden & Veiga, 2005; Golden, 2006). Virick et al. (2010) did not look at the extent of telecommuting (telecommuting intensity) as a potential mediator between the remote work and job satisfaction relationship. Therefore, the current study contributes to the limited research on remote work by examining this relationship more extensively.

In the meta-analysis of Gajendran and Harrison (2007), the researchers indicated that working remotely was mainly a good way to work because they found that working remotely had beneficial effects on distal outcomes; increase in job satisfaction, lower

turnover intentions and lower role stress, along with higher supervisor evaluations on job performance (Gajendran and Harrison, 2007). Similarly, Golden (2006) stated “when the extent of telecommuting is minimal, telecommuters are able to minimize reliance upon electronic communication mediums, and therefore minimize isolation and frustration while enjoying the benefit of increased feelings of autonomy and enhance overall job satisfaction” (p. 321). Therefore, the relationship between remote work and job satisfaction may be explained by the influence of telecommuting intensity as a mediator, suggesting that those who engage in remote work, do so more frequently, which enhances job satisfaction. Thus, the following hypothesis was made:

Hypothesis 4: Telecommuting intensity will mediate the relationship between remote work and job satisfaction, such that remote work will lead to higher telecommuting intensity, which in turn will be associated with higher job satisfaction.

Method

Participants

The sample included employees at a multinational professional services firm in Northern California (San Jose, Walnut Creek, Sacramento, and San Francisco) and Pacific North West (Seattle and Portland). Participation was optional, and all data were collected through an anonymous survey link via Qualtrics. The participants came from a variety of job positions (e.g., talent acquisition, human resources, operations, client service, business development, and marketing). The sample also consisted of other working professionals via LinkedIn. These LinkedIn participants came from a variety of different job positions and organizations.

Demographic information is presented in Table 1. Overall, there was a total of 185 participants. The participants' ages ranged from 22 – 65 years ($M = 33.44$, $SD = 10.87$) with a median age of 29 years. The sample consisted of 60.5% females, 33.5% males, and .5% identified as "other." Close to half of the sample (44.3%) identified themselves as being married and 45.4% identified as not being married. Among the participants, 30.3% had at least one child under the age of 18 years living at home, while the majority (64.3%) did not. About 23% of the respondents were newly employed with their organizations, with their tenure being less than a year, followed by 24.9% between 1-2 years, 21.1% between 3-4 years, 16.8% between 5-10 years, and 9.2% having been with their organizations for more than 10 years. In terms of job tenure, 27.0% reported being in their job role for less than a year, 32.4% between 1-2 years, 16.8% between 3-4 years, 10.8% between 5-10 years, and 7.6% had been in their job role for more than 10 years.

The participants varied in organizational position within their organizations, with 8.1% as administrative, 15.1% as entry-level, 22.7% as between entry level/mid management, 20.7%, as middle management, 8.1% as upper management, 3.2% as executive, and 17.3% as other. The majority of respondents were full-time employees (80.0%), followed by part-time (14.6%), contract (6.5%), intern (2.7%), and casual (1.1%). A total of 10 participants did not indicate their age, gender, marital status, if they had children under the age of 18, organizational tenure, job tenure, or position at their company.

Table 1
Demographic and Characteristics of Participants (N = 185)

	Variable	n	%
Gender	Male	62	33.5%
	Female	112	60.5%
	Other	1	.5%
Marital status	Married	82	44.3%
	Widowed	1	.5%
	Divorced	6	3.2%
	Separated	2	1.1%
	Never Married	84	45.4%
Children under 18 yrs	Yes	56	30.3%
	No	119	64.3%
Org tenure	Less than a year	42	22.7%
	1 – 2 years	46	24.9%
	3 – 4 years	39	21.1%
	5 – 10 years	31	16.8%
	> 10 years	17	9.2%
Job tenure	Less than a year	50	27.0%
	1 – 2 years	60	32.4%
	3 – 4 years	31	16.8%
	5 – 10 years	20	10.8%
	> 10 years	14	7.6%
Position	Admin	15	8.1%
	Entry	28	15.1%
	Entry/mid mgmt	42	22.7%
	Mid mgmt	37	20.0%
	Upper mgmt	15	8.1%
	Executive	6	3.2%
	Other	32	17.3%

Note. Mgmt is abbreviated for management; Org is abbreviated for organizational

Measures

Remote work. A single item was created to measure whether participants engaged in remote work or not. The item was, “Do you engage in remote work activities during the work week? Note: Remote work is defined as performing regular work at a site other than the main office, supported by technological connections (e.g., working remotely, working from home, working from a coffee shop.” The responses to this item were either “yes” or “no.”

Job satisfaction. The Brayfield-Rothe Job Satisfaction Index (Brayfield & Rothe, 1955) is a five-item scale that was selected to measure the overall job satisfaction levels of all employees. Items were rated on a 7-point Likert scale (1 = *Strongly disagree*, 2 = *Disagree*, 3 = *Somewhat disagree*, 4 = *Neither agree nor disagree*, 5 = *Somewhat agree*, 6 = *Agree*, 7 = *Strongly agree*). Items included “I feel fairly satisfied with my present job” and “I find real enjoyment in my work.” The participants’ responses were averaged to create an overall job satisfaction score in which higher scores indicated higher job satisfaction. Cronbach’s alpha (internal consistency) demonstrated high reliability of the scale ($\alpha = .84$).

Perceived autonomy. The Work Design Questionnaire (Morgeson & Humphrey, 2006) is a nine-item scale that was chosen to measure the employees’ perceptions of autonomy in three different areas (work-scheduling autonomy, decision-making autonomy, and work methods autonomy). Items were rated on a 5-point Likert scale (1 = *Strongly disagree*, 2 = *Disagree*, 3 = *Neither agree nor disagree*, 4 = *Agree*, 5 = *Strongly agree*). Items included “The job allows me to make my own decisions about how to

schedule my work” and “The job gives me considerable opportunity for independence and freedom in how I do the work.” The participants’ responses were averaged to create an overall perceived autonomy score in which higher scores indicated higher perceived autonomy. Cronbach’s alpha demonstrated high reliability of the scale ($\alpha = .93$).

Work-family conflict. The Work-Family Conflict Scale (Netemeyer, McMurrian, & Boles, 1996) is a five-item scale that was used for this study to measure how work interferes with family. Items were rated on a 7-point Likert scale (1 = Strongly disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither agree nor disagree, 5 = Somewhat agree, 6 = Agree, 7 = Strongly agree). Items included “The demands of my work interfere with my home and family life” and “My job produces strain that makes it difficult to fulfill family duties.” The participants’ responses were averaged to create an overall work-family conflict score in which higher scores indicated higher work-family conflict. Cronbach’s alpha demonstrated high reliability of the scale ($\alpha = .95$).

Telecommuting intensity. Two different scales were combined together to measure telecommuting intensity. First, the three-item Extent of Telecommuting scale (Golden et al., 2006) was modified and selected to measure the number of hours per week employees spent working remotely. Items included “In a typical week, how many hours do you spend working remotely?” In addition, the scale by researcher Spilker (2014) was modified and used to measure telecommuting intensity in more detail, which measured the number of hours per day employees spent working remotely in different locations (e.g., office, home office, coffee shop) and the total amount in the form of a percentage

for the week. The item was, “What percentage of an average week do you spend working remotely? (0-100%)”.

Demographic information. Participants were also asked their background information, which included questions regarding age, gender (male, female, or other), marital status (married, widowed, divorced, separated, or never married), a number of children (who are under the age of 18) living at home, organizational tenure, job tenure, organizational position, and work arrangement (i.e., part-time, full-time, casual, contract or intern). Both organizational tenure and job tenure were classified into five groups (i.e., less than a year, 1-2 years, 3-4 years, 5-10 years, and more than 10 years). Organizational position was classified into seven groups (i.e., administrative, entry level, between entry level/mid-management, middle management, upper management, executive, and other) and the participant was able to select more than one, if applicable.

Procedures

Participants were randomly selected from the organization through pre-existing email distribution groups: Group Region NorCal, Group Region PNW. All employees received an email inviting them to take part in the optional online survey. The email contained a brief explanation of the purpose of the study ensuring anonymity via an embedded anonymous link that directed them to an online survey (created on Qualtrics). Upon clicking on the link, the first page presented was the informed consent notice, highlighting the purpose of the study, the procedures of the study, contact information, and rights of the participants. The consent notice also informed the participants that information gathered in the study would be kept anonymous, accessible only to the

researchers, and aggregate data would be shared with the company upon request. All submissions were collected once the participant selected the yellow right arrow button, which signified the end of the survey. The survey was open for one month and surveys were completed online during various times in the day and in various locations (i.e., at home, at work). On average, the survey took a participant 10-15 minutes to complete.

In order to gather additional participants for the study, the survey was also posted on my LinkedIn page. The online post contained a brief message inviting those directly connected to me to participate, along with the anonymous link that directed them to the online survey. The LinkedIn participants followed the same online process as the participants from the professional services firm. The collected data was analyzed using SPSS (Version 24).

Results

Descriptive Statistics

Means and standard deviations for all the variables are presented in Table 2. The purpose of conducting this analysis was to check central tendency and variability for each variable. Among the participants, 77% indicated that they engaged in remote work activities during the average work week, while 23% of the participants did not. According to the sample's telecommuting intensity results, the participants spent on average 13.7 hours of their week working remotely, which classifies the average participant as a low-intensity telecommuter ($M = 13.70$, $SD = 15.0$). The respondents' ratings of their overall job satisfaction were moderately high ($M = 5.49$, $SD = 1.05$). Ratings of participants' perceived autonomy were moderately high as well ($M = 4.04$, $SD = .77$). Ratings of the respondents' overall work-family conflict were moderately low, meaning participants perceived their jobs to have low interference with their spouse/family commitments ($M = 3.10$, $SD = 1.61$). More in-depth calculations were conducted for telecommuting intensity and can be found in Table 3. According to the results, Friday was the day of the week that participants (on average) worked remotely the most frequently ($M = 3.51$, $SD = 3.71$). On average, participants spent more hours working remotely from their home offices versus satellite offices, coffee shops, or in other remote locations ($M = 10.90$, $SD = 13.39$).

Pearson Correlations

In Table 2, correlations are displayed that test the relationships among the study variables. Remote work and telecommuting intensity had a moderately positive,

significant relationship, $r(168) = .50, p < .01$, such that those who were engaged in remote work did so more intensely on a weekly basis. Remote work and job satisfaction had a moderately positive, significant relationship, $r(168) = .16, p < .05$, indicating that those who were engaged in remote work experienced higher job satisfaction. Remote work and perceived autonomy had a moderately, positive significant relationship, $r(168) = .32, p < .01$, such that those who were engaged in remote work experienced higher job autonomy. Remote work and work-family conflict had a moderately, negative significant relationship, $r(168) = -.24, p < .01$, suggesting that those who were engaged in remote work experienced lower work-family conflict.

In regard to the relationship between telecommuting intensity and job satisfaction, a positive, significant relationship was found, $r(168) = .27, p < .01$, such that a higher amount of telecommuting was related to a higher perception of satisfaction with one's job. Telecommuting intensity was positively related to perceived autonomy, $r(168) = .36, p < .01$, indicating that a higher amount of telecommuting was related to higher perception of independence. Telecommuting intensity was negatively related to work-family conflict, $r(168) = -.25, p < .01$, suggesting that a higher amount of telecommuting was related to lower perceptions of conflict between work obligations and spouse/family obligations.

The relationship between perceived autonomy and job satisfaction was found to be strong, positive and significant, $r(168) = .55, p < .01$, indicating that higher perception of independence was related to higher satisfaction of one's job. A moderately strong negative relationship was found between work-family conflict and job satisfaction, $r(168)$

= -.33, $p < .01$, such that higher conflict between work and home was related to lower satisfaction of one's job. A significant strong, negative relationship between perceived autonomy and work-family conflict was found, $r(168) = -.41$, $p < .01$, indicating that higher perception of independence was associated with a lower perception of conflict between work obligations and spouse/family obligations.

Overall, these results indicated that employees who engaged in remote work perceived their jobs to be more autonomous, reported less work-family conflict, and experienced higher job satisfaction levels.

Table 2

Descriptive Statistics, Pearson Correlations Among Variables

Item	M	SD	1	2	3	4	5
1. Remote Work	.77	.42	--				
2. Telecommuting Intensity	13.70	15.0	.50 **	--			
3. Job Satisfaction	5.49	1.05	.16 *	.27 **	--		
4. Perceived Autonomy	4.04	.77	.32 **	.36 **	.55 **	--	
5. Work-Family Conflict	3.10	1.61	-.24 **	-.25 **	-.33 **	-.41 **	--

Note. N = 170. *p < .05, ** p < .01, *** p < .001

Table 3
*Descriptive Statistics of
 Telecommuting Intensity*

		N	Min	Max	Mean	SD
Telecommuter						
	Hours per week	179	0	60	13.70	15.30
	Percent of week	157	0	100	35.40	34.90
Total remote hours per day of the week						
	Monday	184	0	12	2.71	3.60
	Tuesday	183	0	12	2.31	3.46
	Wednesday	185	0	12	2.56	3.48
	Thursday	184	0	12	2.59	3.52
	Friday	183	0	12	3.51	3.71
Total remote hours per week in different locations						
	Not working remotely (Office)	181	0	58	24.70	16.17
	Home office	181	0	50	10.90	13.39
	Satellite office	184	0	40	.67	3.61
	Coffee shop	183	0	35	.78	3.43
	Other	185	0	60	1.37	6.15

Test of Hypotheses

Remote work's curvilinear relationship. Hypothesis 1 stated the relationship between remote work and job satisfaction would be curvilinear, such that as remote work increased (telecommuting intensity), job satisfaction would improve; but only to a point, beyond further remote work would lead to a decrease in job satisfaction. A hierarchical regression analysis was conducted using the quadratic model in order to test this hypothesis. A scatterplot bivariate graph was created in order to better visualize the strength and direction between the predictor and outcome variables. Before the variables were entered into the simple regression model, the predictor variable was squared.

In the first step of the regression analysis, the linear term of telecommuting intensity was entered into the analysis and was found to be significantly related to job satisfaction, with telecommuting intensity accounting for 9% of the variance for job satisfaction ($R^2 = .09$, $R^2 \text{ adj} = .08$, $F(1,179) = 16.56$, $p < .01$). This demonstrated that higher levels of remote work were related to higher levels of job satisfaction.

In the second step, the quadratic form of telecommuting intensity was entered in order to establish whether an inverted u-shaped curvilinear relationship existed between telecommuting intensity and job satisfaction. This did not generate a significant increase in variance accounted for with telecommuting intensity squared ($\Delta R^2 = .00$, $F(1,178) = 9.03$, $p > .05$). Thus, no evidence was found in support of a curvilinear relationship between telecommuting intensity and job satisfaction. Overall, the results from these analyses provided support for a significant, positive and linear relationship between

telecommuting intensity and job satisfaction. Evidence of an inverted u-shaped curvilinear relationship was not found; therefore Hypothesis 1 was not supported.

Mediating effect of perceived autonomy. Hypothesis 2 stated that perceived autonomy would mediate the relationship between remote work and job satisfaction. To test this mediation effect, multiple regression analyses were conducted using the four-step approach proposed by Baron and Kenny (1986) who ran three regression analyses were run to observe the significance of the unstandardized regression coefficients (b 's) in each step. According to Baron and Kenny (1986), "this model assumes a three-variable system such that there are causal paths feeding into the outcome variable: the direct impact of the independent variable (Path c) and the impact of the mediator (Path b) ...independent variable to the mediator (Path a)" (p. 1176). In addition, a Sobel test was conducted in order to test the indirect effect of perceived autonomy on the relationship between remote and job satisfaction (path ab).

In step one of the analysis, the regression of remote work on job satisfaction, without perceived autonomy as the mediator, was significant, $R^2 = .03$, $F(1,180) = 6.06$, $p < .05$ – path c was confirmed. In step two, the regression of remote work on the mediator perceived autonomy was significant as well, $R^2 = .10$, $F(1,170) = 18.91$, $p < .001$ – path a was confirmed. In step three, perceived autonomy (the mediator), was also significant and uniquely related to job satisfaction, $\beta = .56$, $t = 8.20$, $p < .001$ – path b was confirmed. Additionally, remote work was no longer found as significant when accounting for perceived autonomy in step two, $\beta = -.02$, $t = -2.23$, $p = .82$ – path c' was confirmed. After conducting the Sobel test, full mediation was found ($z = 3.95$, $p <$

.001). Overall, these analyses suggested that the relationship between remote work and job satisfaction was fully mediated by perceived autonomy. In other words, the ability to work remotely gave increased perceptions of autonomy with their work schedule, decision-making, and how their work was conducted, which in turn increased their overall job satisfaction levels. Evidence of perceived autonomy as a mediator between the remote work and job satisfaction relationship was found; therefore Hypothesis 2 was supported (see Figure 2).

Figure 2. Mediation model for job satisfaction using perceived autonomy as the mediator and remote work as a predictor. Note: * $p < .05$, ** $p < .01$, *** $p < .001$

Mediating effect of work-family conflict. Hypothesis 3 stated that work-family conflict would mediate the relationship between remote work and job satisfaction. The four-step approach proposed by Baron and Kenny (1986) was again used to test this mediation effect. The Sobel test was again conducted in order to test the indirect effect of work-family conflict on the relationship between remote and job satisfaction (path *ab*).

In step one of the analysis, the regression of remote work on job satisfaction, without work-family conflict as the mediator, was significant, $R^2 = .03$, $F(1,180) = 6.06$, $p < .05$ – path *c* was confirmed. In step two, the regression of remote work on the mediator work-family conflict was significant as well, $R^2 = .06$, $F(1,178) = 11.32$, $p < .01$ – path *a* was confirmed. In step three, the mediator (work-family conflict) was also significant and uniquely related to job satisfaction, $\beta = -.35$, $t = -4.84$, $p < .001$ – path *b* was confirmed. Moreover, remote work was no longer found as significant when accounting for work-family conflict in step two, $\beta = -.10$, $t = 1.37$, $p = .17$ – path *c'* was confirmed. After calculating the Sobel test, a full mediation was found ($z = 2.96$, $p < .01$). In summary, these analyses suggested that the relationship between remote work and job satisfaction was fully mediated by work-family conflict. In other words, remote work reduced work-family stressors in their personal lives, which in turn increased their overall job satisfaction levels. Evidence of work-family conflict as a mediator between the remote work and job satisfaction relationship was found; therefore Hypothesis 3 was supported (see Figure 3).

Figure 3. Mediation model for job satisfaction using work-family conflict as the mediator and remote work as a predictor. Note: * $p < .05$, ** $p < .01$, *** $p < .001$

Mediating effect of telecommuting intensity. Hypothesis 4 stated that telecommuting intensity would mediate the relationship between remote work and job satisfaction. The four-step approach by Baron and Kenny (1986) was conducted, along with the Sobel test, in order to test the indirect effect.

In step one, the total (direct) effect of remote work on job satisfaction, without telecommuting intensity as the mediator, was significant, $R^2 = .03$, $F(1,180) = 6.06$, $p < .05$ – path c was confirmed. In step two of the analysis, the indirect effect of remote work on the mediator telecommuting intensity was significant as well, $R^2 = .24$, $F(1,181) = 56.17$, $p < .001$ – path a was confirmed. In step three of the analysis, the mediator (telecommuting intensity) was significant and uniquely related to job satisfaction as well, $\beta = .02$, $t = 3.25$, $p < .01$ – path b was confirmed. In addition, remote work was no longer

found as significant when telecommuting intensity was considered in step two, $\beta = .13$, $t = .58$, $p = .56$ – path c' was confirmed. In order to test the indirect effect (path ab), a Sobel test was conducted, and a full mediation was found ($z = 3.04$, $p < .01$). Overall, these analyses suggested that the relationship between remote work and job satisfaction was mediated by telecommuting intensity. Support for telecommuting intensity as a mediator between the remote work and job satisfaction relationship was found; therefore Hypothesis 4 was supported (see Figure 4).

Figure 4. Mediation model for job satisfaction using telecommuting intensity as the mediator and remote work as a predictor. Note: * $p < .05$, ** $p < .01$, *** $p < .001$

Discussion

Remote work is progressively becoming more common due to the increase of technology in the workplace (Caramela, 2017). Thus, the purpose of the current study was to examine the relationship between remote work and job satisfaction among working professionals. More specifically, the purpose was to address the mediating effects of perceived autonomy, work-family conflict, and telecommuting intensity on the relationship between remote work and job satisfaction. As a result, this study shines light on current insight into employees' attitudes of remote work along with its outcomes.

Summary of Results

Hypothesis 1 stated that a curvilinear relationship would exist between remote work and satisfaction, meaning as remote work increased, job satisfaction would increase, but only to a point, beyond which further increase in remote work would lead to a decrease in job satisfaction. The extent of working remotely (or telecommuting intensity) was not found to have an inverted u-shaped curvilinear relationship with job satisfaction. Instead, the results of the analyses provided support for a positive, linear relationship between telecommuting intensity and job satisfaction. These results challenge previous findings that have found either a curvilinear relationship (Golden, 2006) or a negative relationship between remote work and job satisfaction (Cooper & Kurland, 2002; Pinsonneault & Boisvert, 2001). One possible reason of not finding a curvilinear relationship might be due to the sample. In previous literature, curvilinear relationships were found in samples that had "high-intensity" telecommuters, whereas the current sample had mostly "low-intensity" telecommuters. If this study had a wide variety of telecommuters (in terms of

their frequency of remote work) results may have differed. The results of this analysis did not support Hypothesis 1.

Hypothesis 2 stated that an employee's perception of autonomy would mediate the relationship between remote work and job satisfaction, such that remote work would lead to higher perception of autonomy, which in turn would be associated with higher job satisfaction. Consistent with past research, the results of this study showed that perceived autonomy fully mediated the relationship between remote work and job satisfaction (Gajendran & Harrison, 2007). These results suggested that employees who engaged in remote work had a perception of having more perceived autonomy, which led them to become more satisfied with their jobs. The results of this analysis supported Hypothesis 2.

Hypothesis 3 stated that work-family conflict would mediate the relationship between remote work and job satisfaction, such that remote work would lead to lower work-family conflict, which in turn would be associated with higher job satisfaction. The results of this study showed that work-family conflict fully mediated the relationship between remote work and job satisfaction, which is consistent to what was found by Fonner and Roloff (2010). These results indicate that employees who engaged in remote work had fewer work interruptions with spouse/family time, which led the employee to become more satisfied with their job. The results of this analysis supported Hypothesis 3.

Hypothesis 4 stated that telecommuting intensity would mediate the relationship between remote work and job satisfaction. The results of this study showed that telecommuting intensity mediated the relationship between remote work and job

satisfaction. Limited research has looked at telecommuting intensity as a mediator and instead have examined telecommuting intensity as a potential moderator (Gajendran & Harrison, 2007). These results showed that those employees who engaged in remote work, worked remotely more frequently, which led the employees to become more satisfied with their jobs. The results of this analysis supported Hypothesis 4.

Theoretical Implications

The current study makes several theoretical contributions. Results of the current study help to explain why remote work leads positively to job satisfaction. In line with the literature by Golden (2006), the current study adds to the literature on remote work and job satisfaction in accordance with the JCM model (1976). The JCM model helps explain why working remotely may benefit the employee and increase their job satisfaction. The findings from the current study indicated that employees who worked remotely, had higher perceptions of autonomy, which in turn experienced greater satisfaction with one's job. In addition, the current study added to the literature on remote work and work-family conflict, through the explanation of role theory (Gözükara & Çolakoğlu, 2016, p. 255). Role theory helps explain why working remotely may decrease work-family conflict by reducing "inter-role conflict" (Gözükara & Çolakoğlu, 2016, p. 255). Our findings suggest that there is a linear, positive relationship between remote work and job satisfaction, suggesting that employees who work remotely more frequently are more satisfied with their jobs (Dubrin, 1991; Guimaraes & Dallow, 1999). This is due to the idea that working remotely provides greater flexibility for working

professionals, such as the scheduling of one's own hours and the ability to take care of personal/family obligations, which may transcend to greater job satisfaction.

Practical Implications

According to previous literature on remote work, telecommuters who engage in “moderate” levels of remote work (spend less than 20% of the work week remote) are more satisfied than employees who do not (Gallup, 2017, p. 29). The results of the current study indicated that the average employee engaged in 13.7 hours of remote work per week and the relationship between remote work and job satisfaction was positive, not curvilinear. Therefore, one practical implication of the study is that employers should give their personnel the option to work remotely more often, especially if they want their employees' job satisfaction levels to increase. Also, having more satisfied employees may affect retention rates, such as less turnover. This may help replacement costs, which may ultimately improve the bottom line of the business. According to a 2017 Retention Report, conducted by Work Institute, 75% of the causes of employee turnover are preventable (Bolden-Barrett, 2017). Therefore, companies may want to create formal/unformal telecommuting programs in order to retain employees, meet their needs, and in return, have happier, more dedicated employees.

Strengths and Limitations

Strengths. One of the strengths of the study was the large sample size. With 185 participants total, the individuals varied in age, gender, job position, organizational tenure and work arrangement. This allowed the findings of the study to increase external validity; that is, the present findings are likely to generalize a population of working

professionals. Another strength was the ability to gather data from working professionals in different job roles/industries versus gathering data from students who may or may not have relevant work experience. Lastly, the study builds upon the previous findings on remote work and its relationship to job satisfaction and provides a better understanding as to why remote work leads to higher job satisfaction. More specifically, this study delivers a current perspective on who is engaging in remote work, when are they engaging in remote work, and for how long during the work week.

Limitations. One of the major limitations of the study was the use of self-report measures such as the job satisfaction, work-family conflict, and perceived autonomy scales. The issue of a self-report study is that individuals may exaggerate or minimize how they feel when answering questions on a survey, which may compromise the validity of the study. Another limitation of the study was the survey itself. Certain questions on the survey were bypassed by many participants, such as the demographic question asking for the participant's age. Consequently, many survey submissions contained missing data. One major limitation of the study was that industry was not considered and was not asked for as part of the demographics. A major portion of the study was recruited via LinkedIn; therefore, it is unknown what sector each participant belonged to in the data set. Learning how the employee engaged in remote work within their job/field would have been valuable information to collect for this study. Lastly, one factor that should have been considered was the location of the participant, specifically what state in the U.S the participant resided in (i.e., certain employees in New Hampshire work remotely more during the winter season than the summer season due weather conditions).

Future Research

Future research on remote work should consider examining productivity as a possible outcome of remote work or examining other potential mediating workplace variables, such as employee engagement in the relationship between remote work and job satisfaction. It would be interesting to examine productivity as an outcome of remote work because of the on-going debate, as some argue that working remotely allows employees to focus more on work due to fewer office distractions (more productive) (Mann, Varey, & Button, 2000), while others argue that working remotely creates more home distractions (less productive) (Fonner & Roloff, 2010). Also, future research on remote work should consider examining employee engagement as a potential mediator in the relationship between remote work and job satisfaction since there is limited research in this area. Remote work may motivate employees which may generate higher levels of engagement, which in turn may generate higher levels of job satisfaction. Lastly, future research may want to examine different types of personalities in relation to remote work and job satisfaction, such as neuroticism, extraversion, and openness. Certain personalities may prefer to work remotely and may be greatly satisfied with the flexibility it offers, while other personalities may not feel comfortable with integrating work with their homes and may not feel as satisfied. Nonetheless, more research on remote work is needed.

Conclusion

The main goal of the study was to investigate the manner in which remote work impacts employees' job satisfaction levels. The findings suggest that engaging in remote

work increases employees' job satisfaction levels. More specifically, as the intensity of remote work increases, job satisfaction also increases, and there is no point of decline as previously hypothesized. In addition, perceived autonomy, work-family conflict, and telecommuting intensity were investigated as potential mediators. The results suggest that employees who engage in remote work have greater perceptions of autonomy, which leads them to become more content with their occupations. Also, the results imply that employees who engage in remote work have fewer work disruptions with family time, which also leads them to become more content with their occupations. Lastly, the results suggest that employees who engage in remote work, do so more frequently, which leads to greater satisfaction with their jobs. In summary, engaging in remote work may benefit employees with providing a more autonomous work environment and, in parallel, mitigate work-family stressors. In return, this may also benefit the employer by having a more satisfied workforce. Overall, the results of the study may help future organizations decide whether to invest in telecommuting programs within their businesses.

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Appendix

Survey Items

Remote Work (Schall, 2018)

1. Do you engage in remote work activities during the work week? Note: Remote work is defined as performing regular work at a site other than the main office, supported by technological connections (e.g., working remotely, working from home, working from a coffee shop).

Job Satisfaction (Brayfield & Rothe, 1955)

1. I feel fairly satisfied with my present job.
2. Most days I am enthusiastic about my work.
3. Each day of work seems like it will never end.
4. I find real enjoyment in my work.
5. I consider my job rather unpleasant.

Work-Family Conflict (Netemeyer, McMurrian, & Boles, 1996)

1. The demands of my work interfere with my home and family life.
2. The amount of time my job takes up makes it difficult to fulfill family responsibilities.
3. Things I want to do at home do not get done because of the demands my job puts on me.
4. My job produces strain that makes it difficult to fulfill family duties.
5. Due to work-related duties, I have to make changes to my plans for family activities.

Autonomy (Morgeson & Humphrey, 2006)

1. The job allows me to make my own decisions about how to schedule my work.
2. The job allows me to decide on the order in which things are done on the job.
3. The job allows me to plan how I do my work.
4. The job gives me a chance to use my own personal initiative or judgement in carrying out the work.
5. The job allows me to make a lot of decisions on my own.
6. The job provides me with significant autonomy in making decisions.
7. The job allows me to make decisions about what methods I use to complete my work.
8. The job gives me considerable opportunity for independence and freedom in how I do the work.

9. The job allows me to decide on my own how to go about doing my work.

Telecommuting Intensity (Golden, Veiga & Simsek, 2006; Spilker, 2014)

1. Please describe a typical week using the table below. In each box, please input the number of hours worked at the location on a particular day. The number of hours in the box should equal the number of hours worked during the week. For example, if I worked an 8-hour day on Monday, 3 of which were at home and 5 of which were at the office, I would record the hours as illustrated below.
2. In a typical week, how many hours do you spend working remotely?
3. What percentage of an average week do you spend working remotely? (0-100%)