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The Effect of Telework Conditions and Family-Supportive Supervisor Behaviors on Work-Family Outcomes

by

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Undergraduate honors thesis under the directions of

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Abstract

With the recent shift from in-person work to telework due to the COVID-19 pandemic, it is essential that we analyze the effects of teleworking and family-supportive supervisor behaviors (FSSBs) on important work-family outcomes. The purpose of this study was to examine the causal implications that a hypothetical telework situation has on anticipated work-family conflict (AWFC) and workplace telepressure (WT) in a sample of undergraduates with prior work experience. 291 undergraduate students read two vignettes manipulating telework arrangements (formal/informal) and amount of FSSBs (high/low) before completing a brief, 30-minute survey. The informal teleworking arrangement was hypothesized to result in higher AWFC and WT than the formal teleworking arrangement. The high FSSBs condition was surmised to result in lower AWFC and WT than the low FSSBs condition. An interaction was expected in both dependent variables, such that they would be highest when teleworking is informal and FSSBs are low. In this group of college students, we found no effect of formality, some evidence for the hypothesized effect of FSSBs, and some evidence for the interaction between the two. These results have implications for manager training, such that when there are teleworking options, it would be beneficial to incorporate instructions on how to be family supportive.

*Keywords*: telework, family-supportive supervisor behaviors, anticipated work-family conflict, workplace telepressure
The Effect of Telework Conditions and Family-Supportive Supervisor Behaviors on Work-Family Outcomes

Telework is defined as a remote employment arrangement in which an employee works at an approved, alternative worksite location (e.g., home). Due to the COVID-19 pandemic, telework opportunities have begun to proliferate as a direct consequence of burgeoning unemployment and growing social distancing demands. According to a 2021 Pew Research study, the majority of Americans (e.g., 90% in the information and technology sector, 75% in professional, scientific, and technical services, 74% in banking, finance, accounting, and real estate and 61% in education) have reported that they are currently working from home all or most of the time (Minkin, 2021). In-person work, whether full-time or part-time, has become an exposed and vulnerable form of employment. Alternative working practices, such as telework, have become the primary option for most occupations and businesses due to the COVID-19 pandemic. The governmental institution of shutdowns and/or stay-at-home policies has popularized telework as one of the few avenues of revenue for still-functioning organizations. Pursuant to this trend, a Pew Research poll suggested that of the 71% of currently employed adults working from home that they surveyed, 54% claim they would want to work from home even after the coronavirus outbreak ends (Parker et al., 2020). Hence, it is crucial to explore the impact of telework on individuals and families, given the fact that more than half of employed Americans may support teleworking as an ongoing commitment.

A multitude of studies have attempted to analyze the relationship between telework and organizational outcomes (Hu et al., 2019; Martin & MacDonnell, 2012; Nakrošienè, et al., 2019), but few have sought to explore the impact of telework on familial outcomes. Previous research studies have primarily used non-experimental methodologies, which limit the type of conclusions
that can be drawn, as non-experimental designs cannot determine causation. In this study, an experimental vignette design was applied. This allows experimenters to attribute causality between manipulated variables and their corresponding outcomes. To specify, a 2x2 design was used to examine whether there is a causal link between formal and informal telework arrangements and high vs. low family-supportive supervisor behaviors (FSSBs) in the prediction of anticipated work-family conflict (AWFC) and workplace telepressure (WT). While the FSSB manipulations will be referred to as high vs. low throughout this study, they can also be thought of as supportive and non-supportive manipulations.

**The Effect of Telework Arrangements on AWFC and WT**

Telework arrangements can vary depending on the organization and profession. For the purposes of this study, formal telework arrangements were distinguished from informal telework arrangements. Formal telework arrangements entailed a written contract that enumerates the days and times an employee is allowed to work from home (Troup & Rose, 2012). Informal telework arrangements involved a work schedule in which the employee negotiated telework with their supervisor in a need-based way (Troup & Rose, 2012). There is a scarcity of research comparing formal against informal telework arrangements and how these arrangements affect the role demands of one’s work and family life. In this study, the impact of formal and informal telework arrangements was examined on two outcomes: AWFC and WT. AWFC arises from role interference when the demands from an individual’s professional role clashes with the demands of their familial role (or vice versa). There is also directionality in this type of conflict wherein work can hinder family life or family life can impede one’s work, (i.e., work-to-family or family-to-work conflict). Allowing work to interrupt nonwork behavior is related to higher levels of conflict (Kossek et al., 2012). According to one study, individual preferences for work-home
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segmentation or integration combine with situational influences (such as work and home environments) to create various dimensions of work-home boundary (Kreiner et al., 2009). Pursuant to this rationale, the same study discovered that boundary incongruence leads to boundary violations and work-home conflict (Kreiner et al., 2009). Thus, ineffective boundary segmentation in one’s life should indicate work-family conflict.

**Hypothesis 1:** The informal teleworking arrangement condition will be associated with higher AWFC than the formal teleworking arrangement condition.

WT can be defined as perceived tension from an individual’s telework responsibilities, such as the inclination to respond to work-related communications. Perceptions of workplace demands were found to be significantly predictive of increased WT (Barber et al., 2015). Perceived work demands can be categorized in the forms of work overload, response expectations, availability expectations, and control over work demands. Informal teleworking arrangements require variability in one’s work schedule. According to one study, informal telework practices were perceived as more unpredictable than formal practices due to the decision to work remotely on a more *ad hoc* basis (Fogarty & Williams, 2011). Therefore, there should be higher response and availability expectations involved with informal arrangements than formal arrangements, which are limited to the confines of certain days and hours. When the perceived norm is to respond quickly, WT should be high (Barber et al., 2015).

**Hypothesis 2:** The informal teleworking arrangement condition will be associated with higher WT than the formal teleworking arrangement condition.

**The Effect of FSSBs on AWFC and WT**

Family-supportive supervisor behaviors (FSSBs) are theorized to have four facets: emotional support, role modeling, instrumental support, and creative work-family management
(Hammer et al., 2009). Emotional support entails sympathy, understanding, and respect for an employee’s family-related issues from a work supervisor. Role modeling involves supervisors directly demonstrating behaviors and strategies that are intended to prompt advantageous work-life outcomes. Instrumental support refers to a supervisor’s reactive provision of day-to-day services that aid the employee’s work/family needs. Creative work-family management consists of a supervisor’s proactive actions that redesign the work environment to enhance both organizational and familial outcomes (Hammer et al., 2009). For the purposes of this study, the instrumental support facet of FSSBs was engaged.

FSSBs are pivotal in a teleworking environment as management support, work assignment fairness, and teleworker supervision all positively affect the perceived organizational impact of telework (Park & Cho, 2020). Immediate supervisors have a direct influence on their employees’ work role because they can facilitate or inhibit the employee’s behavior and activities. As a source of social support, supervisor support is related to lower levels of employee WFC (Frye & Breau, 2004). The adoption of family-friendly policies is hypothesized to reduce AWFC with work schedules that accommodate familial responsibilities. At least one study has found family-supportive supervisors crucial for reducing employees’ work-related concerns, which ultimately impact the energy needed to fully participate in family activities (Lapierre & Allen, 2006).

**Hypothesis 3**: The high FSSBs condition will be associated with lower AWFC than the low FSSBs condition.

WT is influenced by FSSBs because supervisors have an effect on work-life balance satisfaction. A study utilizing an online survey found WT to be negatively related to satisfaction with work-life balance (Barber et al., 2019). Supervisors who are family-supportive customarily
empathize with an employee’s desire to seek balance between work and family responsibilities. Family-supportive supervisors can restructure work to facilitate employee effectiveness to balance employees’ work-family responsibilities with company, customer, and coworker needs (Hammer et al., 2009). The constant pressure to respond to work email and text messaging has been linked to how people evaluate the balance between their work and nonwork lives (Barber et al., 2019). In a high FSSBs environment, this pressure should be hindered by the supervisor’s balancing efforts.

**Hypothesis 4:** The high FSSBs condition will be associated with lower WT than the low FSSBs condition.

**The Joint Effect of Telework Arrangements and FSSBs on AWFC and WT**

Teleworking and FSSBs may interact when organizations recognize the utility of implementing family-friendly supervisor training for employees who telework. According to one study, family-friendly benefits alone are often not sufficient; an employee’s work environment must also support the use of these benefits (Frye & Breaugh, 2004). Another study discovered that family-supportive supervision was effective as a work-family conflict avoidance method (Lapierre & Allen, 2006). Immediate family-supportive supervision can diminish the extent to which an employees’ work role interferes with their family role. WT is a vital outcome of interest given the fact that past studies have shown negative effects of ICT (information and communication technologies) on WFC (Boswell & Olson-Buchanan, 2007; Park & Jex, 2011). FSSBs in a teleworking environment facilitates the segmentation of work and nonwork roles. According to one study, higher (i.e., more frequent) usage represents weaker technological boundaries, whereas lower usage indicates stronger technological boundaries (Park & Jex, 2011). Therefore, higher WT and AWFC is indicative of an environment with low FSSBs since a high
FSSBs environment acts as an AWFC deterrent. An informal teleworking environment is subject to more availability and response expectations, so an environment low in FSSBs should exacerbate these expectations. According to one study, idiosyncratic but extreme expectations about availability for work is one manifestation of a work-home boundary violation (Kreiner et al., 2009). Thus, weaker boundaries in an informal teleworking environment may interact with low FSSBs to produce higher AWFC and WT.

**Hypothesis 5:** FSSBs moderate the relationship between teleworking arrangements and AWFC such that informal teleworking arrangements are associated with higher AWFC in the low FSSBs condition.

**Hypothesis 6:** FSSBs moderate the relationship between teleworking arrangements and WT such that the informal teleworking arrangements are associated with higher WT in the low FSSBs condition.

**Method**

**Participants and Procedure**

The sample consisted of 291 undergraduate LSU students. A Qualtrics survey was administered via SONA and participants received SONA credits in lieu of renumeration. There was a disqualifying criterion put into the survey to ensure that all participants had some prior work experience.

Using drop down menus, participants were asked to report their gender, age, race, education, as well as current employment status. They were also asked about their teleworking history, such as any previous experience with telework. Refer to Appendix A for a complete list of demographics that were administered to the respondents.

**Experimental Manipulations**
The manipulations of telework arrangement and supervisor support resulted in a 2 (telework condition) by 2 (FSSBs condition) design for a total of 4 different experimental conditions. The manipulations also varied by the order of 2 disparate family scenarios and 2 different companies. In order to counterbalance, 16 different versions of the survey were randomly distributed to all participants.

Procedure

Following the demographics questionnaire, each participant was given two excerpts. Family scenario 1 or 2 was given and counterbalanced across the two orders. Then, a company vignette was given containing company 1 or 2. These were also counterbalanced across the two orders. Each participant received 2 of the 4 possible cells in the design: Formal/High, Formal/Low, Informal/High, or Informal/Low. Whichever cell they received first; they were given the corresponding opposite cell to read after. For example, if they were provided the “Formal/High” vignette first, they were provided the “Informal/Low” vignette after. After the entire survey, all participants were required to answer seven questions that served as attention checks. These seven questions were later on scored and used to screen responses.

Family Scenarios

The two family scenarios are listed below:

**Family Scenario 1.** Imagine yourself 10 years in the future. You live in a town called Magnolia. You are currently married with one child, a 5-year-old son named Andrew. While at home, you are typically responsible for making Andrew’s after-school snack, checking his homework, and cooking dinner. You have been married for a little over 6 years. Your spouse’s name is Jessie. Both you and Jessie work for a living. Jessie works full-time as the manager of the local bakery in town while you are working in the job described below.
Family Scenario 2. Imagine yourself 10 years in the future. You live in a town called Hillwood. You are currently married with one child, a 5-year-old daughter named Isabella. While at home, you are typically responsible for making Isabella’s after-school snack, checking her homework, and making dinner. You have been married for around 7 years. Your spouse’s name is Alex. Both you and Alex work for a living. Alex works full-time as the manager of a local bank in town while you are working in the job described below.

Vignettes

Survey respondents were instructed “Please memorize the following excerpts that will be given to you. First, you will be asked to assess how you would feel in the following situations. Then, you will be asked factual questions about your given scenario later on. Take as long as you need to memorize the excerpts”. On the first page of the survey, the participants viewed their family scenario and vignette. Two example vignettes can be found below, with the two manipulations depicted by the text in parentheses:

Company 1. You are currently teleworking full-time as the executive assistant to the CEO of an import/export company called C&C. (Formal teleworking arrangement condition: As of this moment, you are presently employed via a written work contract that delineates the exact days and times you’re allowed to work from home. On average, you are in the office 1 day a week and work from home 4 days a week. / Informal teleworking arrangement condition: As of this moment, you negotiate with your supervisor in a need-based way on what days and times you want to telework.) You are assigned to an important work project that involves virtually communicating with international customers on a shipment of raw construction materials. You are expected to be prompt and cordial. However, you are anxious about your ability to mediate
with them, especially since you work from home part of the time which often means you are interrupted by your family. (High FSSBs condition: Your supervisor, who is typically supportive of your family responsibilities, discusses solutions with you to successfully balance work and family issues. / Low FSSBs condition: Your supervisor, who is typically not supportive of your family responsibilities, chastises your inability to balance work and family issues.)

**Company 2.** You are currently working full-time as secretary to the CFO of a car manufacturing company known as ANL. (Formal teleworking arrangement condition: As of this moment, you are presently employed via a written work contract that delineates the exact days and times you’re allowed to work from home. On average, you are in the office 1 day a week and work from home 4 days a week. / Informal teleworking arrangement condition: As of this moment, you negotiate with your supervisor in a need-based way on what days and times you want to telework.) Your boss designates that you are in charge of the virtual negotiations with overseas business associates about a shipment of automotive parts. You are expected to be prompt and cordial. However, you are concerned about the arbitration process because you often get interrupted by family members, especially while working from home part of the time. (High FSSBs condition: Your supervisor, who is typically supportive of your family responsibilities, discusses solutions with you to successfully balance work and family issues. / Low FSSBs condition: Your supervisor, who is typically not supportive of your family responsibilities, chastises your inability to balance work and family issues.)

**Measures**

The items used to measure the two outcomes for this study were drawn from preexisting scales. These items come from different sources and were developed at different points in time. The original 5-point response scales were maintained and used in the adapted measures. Both
measures were adapted to account for the hypothetical design of this study (See Appendices B and C).

**Anticipated Work-Family Conflict**

Anticipated work-family conflict will be measured using the Anticipated Work-Family Conflict scale (Westring & Ryan, 2011) (See Appendix B). An anticipated WFC scale was implemented since the study’s design involves a hypothetical scenario. The participants were asked to rate their agreement with each of the six items on a 5-point Likert scale (1= strongly disagree and 5= strongly agree). An example item is as follows: “I will have to miss work activities due to the amount of time I will have to spend on family responsibilities,” which is an example of a time-based anticipated work-interference-with family (AWIF). Higher scores signify higher conflict, whereas lower scores signify lower conflict. The subscales for each of the six dimensions had adequate reliability in both the primary and cross-validation samples; \( \alpha \) is greater than or equal to .73 for all (Westring & Ryan, 2011). Validity was supported by utilizing expert ratings of work demands and including a cross-validation sample (Westring & Ryan, 2011).

**Workplace Telepressure**

WT was measured using the Workplace Telepressure Measure (Barber & Santuzzi, 2015) (See Appendix C). The participants were asked to rate their agreement with each of the six items on a 5-point Likert scale (1= strongly disagree and 5= strongly agree). An example item is as follows: “It’s hard for me to focus on other things when I receive a message from someone,” which reflects the perceived work pressure to be efficient. Higher scores signify greater pressure, whereas lower scores signify lower pressure. The Cronbach’s alpha coefficient for the workplace telepressure item in one study was found to be .91 (Barber et al., 2019). A study was performed
to confirm the criterion-related validity for workplace telepressure and small to moderate correlations across all of the telepressure constructs support workplace telepressure as being distinct from constructs with conceptual overlap, such as a .17 correlation to ICT work-home boundary creation or a .32 correlation to e-mail work-home boundary crossing (Barber & Santuzzi, 2015).

**Data Collection**

Data collection started in the Fall of 2021 in early November and was halted a week later. At the end of the Fall semester, there were 264 responses collected. The aim of the initial data collection was to have at least 12 participants in each counterbalancing condition after enforcing the disqualifiers. There were a low number of responses in 6 of the 16 counterbalancing conditions. 15 more timeslots were needed to meet the minimum goal that was set. Two extra timeslots were added to each insufficient condition to account for additional invalid or partial data collection. Data collection was resumed the following Spring semester. 27 timeslots were posted to SONA in late February and the deadline for these timeslots was five days later. In total, there were 291 responses collected. Of the 291 responses, 60 reported that they were male, and 228 reported that they were female. The sample, as a whole, was relatively young and ranged between the ages of 18-31 (M= 19.65, SD=1.86). Only 181 (62.20%) of the participants were currently working when they took the survey. The rest had prior experience work experience. These ranged from tutors and desk assistants to medical scribes and lab technicians. Refer to Table 1 for additional demographics information.

**Scoring**

Recall that there was a post-survey questionnaire with seven attention check items. They were scored as follows to examine whether they were exactly or liberally correct. For the first
question about the first company, a 0 was considered incorrect whereas a 1 was considered correct. A score of 2 was considered correct, but including an incorrect letter, such as C&C being called “CNC”. A score of 3 was considered correct due to an adequate company description, such as import/export company or auto parts company. For the second question about child gender, a 0 was considered incorrect while a 1 was considered correct. A score of 2 was given if the answer was blank. For the third question about the duration of one’s marriage, a score of 0 was considered incorrect by a year while a score of 1 was correct. A score of 2 was given if an answer was incorrect by two years and a score of 3 was given if an answer was incorrect by three years. For the fourth question about the name of one’s spouse, the usual scoring of 0 and 1 was utilized. However, a score of 2 was given if the spouse’s name was incorrect but began with the correct letter, such as Alex being listed as “Andrew”. For the fifth question about one’s town, a 0 was considered incorrect and a 1 was considered correct. In addition to that, a score of 2 was considered incorrect, but beginning with the correct prefix or ending with the correct suffix. For instance, if the correct answer was Hillwood but referred to as “Hill-town” or if the correct answer was Magnolia but referred to as “Moigno-lia”. For this question, a score of 3 meant that the answer was incorrect but began with the correct letter such as Hilltown being called “Helania”. For the sixth question about one’s spouse’s occupation, a 0 was considered incorrect whereas a 1 was considered correct. For the seventh question about one’s responsibilities, a score of 0 was considered incorrect and a score of 1 was considered correct. A score of 1 was given if any of the three responsibilities were provided.

Criteria for Inclusion

Accuracy
Two types of scoring were examined: strict and liberal. Strict scoring consisted of the original scores that were assigned to all post-survey answers. Liberal scoring permitted concessions for the majority of the post-survey answers. The liberal scoring was enforced and treated all of the 0 scores as incorrect, and every other score as correct with the exceptions of questions two and three. For questions two and three, a score of 1 remained correct while all other scores were deemed incorrect. The scores ranged from 2-7 correct. 61 of the participants (21%) were removed because they did not get at least half right (4 or more). This likely indicates that they did not read the family scenarios and vignettes with care.

**Reading Time**

Unfortunately, a cursory examination of the reading times for the first vignette revealed that a large number of participants spent little time reading, e.g., 10.65% of the participants read it in less than 10 seconds. A timing disqualifier was established to preserve validity. The average reading speed is 300-350 words per minute for a college student (Terry, 2022). It should take approximately 39.60-46.40 seconds to read one family scenario and vignette, which consists of about 232 words. When piloted with two arbitrary college students, the average for the first scenario and vignette was 48.85 seconds. The average for the second scenario and vignette was 42.15 seconds. With this information in mind, the minimum timing disqualifier for each respective scenario and vignette was set at 40 seconds. This was done to eliminate those who did not read long enough. The maximum timing disqualifier was set at 300 seconds because five minutes is a reasonable cutoff point for reviewing a single scenario and vignette.

**Counterbalancing**

We counterbalanced the family scenarios and the companies along with the two vignettes. We had hoped for a minimum of at least 12 valid participants in each condition. However, the
counterbalancing did not result in equal numbers. For example, in the first vignette, one version only had 8 valid responses, but the rest of the conditions had either 10-14 valid responses.

Reliabilities

Cronbach’s alpha coefficients were calculated for all four total scores. For the first AWFC total, the coefficient was \( \alpha = .74 \). For the first WT total, the coefficient was \( \alpha = .80 \). For the second AWFC total, the coefficient was \( \alpha = .74 \). For the second WT total, the coefficient was \( \alpha = .87 \).

Results

First Vignette

Of the 291 participants who completed the survey, 103 participants were screened out. 40 participants were removed for not having 4 or more correct attention checks. Two participants were screened out for reading longer than 300 seconds and 61 participants were screened out for reading under 40 seconds. The remaining 188 subjects were utilized in the following ANOVA tests. A two-way ANOVA was performed to analyze the effect of formality and FSSBs on AWFC and WT. All measures did not violate Levene’s test of homogeneity of variances.

Anticipated Work-Family Conflict

For the first AWFC score, formality was not significant \( F(1, 184) = 0.002, p = .96 \) but FSSBs were significant \( F(1, 184) = 4.71, p = .03 \). When FSSBs are high, AWFC is significantly lower (M=18.71, SD=.38) than when FSSBs are low (M=19.89, SD=.39). There was a significant interaction effect for the AWFC variable \( F(1, 184) = 4.21, p = .04 \). As shown in Figure 1, the effect of FSSBs is more noticeable in the informal teleworking condition (See Figure 1).² Analyses were also conducted with a 30-second cutoff and are available in Appendix D.

Workplace Telepressure
For the first WT score, formality was not significant $F(1, 184) = 2.09, p = .14$. FSSBs was also not significant $F(1, 184) = 2.72, p = .10$. Note that although not significant, in the high FSSBs condition, WT was lower ($M=21.53; SD=.41$) than in the low FSSBs condition ($M=22.52; SD=.42$). There was not a significant interaction effect for this variable $F(1, 184) = 1.54, p = .21$.

**Second Vignette**

Of the 291 participants who completed the survey, 148 participants were screened out. 59 participants were removed for not having 4 or more correct attention checks. One participant was screened out for reading longer than 300 seconds and 88 participants were screened out for reading under 40 seconds. The remaining 143 subjects were utilized in the following ANOVA tests. A two-way ANOVA was performed to analyze the effect of formality and FSSBs on AWFC and WT. All measures did not violate Levene’s test of homogeneity of variances.

**Anticipated Work-Family Conflict**

For the second AWFC score, formality was not significant $F(1, 139) = 0.01, p = .90$. However, FSSBs were significant $F(1, 139) = 35.96, p <.001$. Once again, this reveals that there is a significant mean difference between high and low FSSBs when it comes to AWFC wherein you have a lower AWFC when FSSBs are high ($M=16.51; SD=.37$) and a higher AWFC when FSSBs are low ($M=19.84; SD=.40$). There was not a significant interaction effect for this variable $F(1, 139) = 2.19, p = .14$.

**Workplace Telepressure**

For the second WT score, formality was not significant $F(1, 139) = 0.04, p = .82$. but FSSBs were significant $F(1, 139) = 19.66, p <.001$. This illustrates that there is a negative relationship between FSSBs and workplace telepressure wherein high FSSBs result in lower WT.
(M=20.58; SD=.49) and low FSSBs result in higher WT (M=23.79; SD=.52). There was a significant interaction effect for this variable F (1, 139) = 4.28, p = .04. Similar to the findings on the first AWFC, the effect of FSSBs is more noticeable in the informal teleworking condition (See Figure 2). Analyses with a 30-second cutoff were examined and are available in Appendix D.

**Discussion**

Recall that with H1 and H2, formality was hypothesized to show a main effect for both dependent measures, such that they will both be high in the informal teleworking condition. However, formality was not significant in any of the four main analyses. This could be due to the demographics of the sample population, which consisted of younger adults. According to Rainsford & Popa (2019), young adults are more intent on extrinsic work values like income and security than intrinsic work values like autonomy and creative working conditions. Since younger people do not care about autonomy as much as older adults, this could have affected the results. In this case, autonomy is being referred to as an employee’s ability to work on their own without direct supervision. The reason why we did not find the effect of formality could be because we had so many young people in our sample. Furthermore, our results revealed that 52.60% of the sample had never teleworked. This could be another reason as to why formality of the telework arrangement did not matter because most participants only had experience working in-person.

With H3 and H4, FSSBs were surmised to have a main effect on both dependent measures, such that they will both be lower in the high FSSBs condition. H3 was supported because there was lower AWFC in both vignettes when FSSBs was high than when it was low. These results are consistent with the claim that a supportive environment is linked to less AWFC.
(Frye & Breaugh, 2004). However, H4 was only partially supported because the first WT analysis was not significantly lower in the high FSSBs condition. Nonetheless, the direction of WT remained consistent with the other results because it was lower in the high FSSBs condition, albeit not significantly lower. This finding needs to be further investigated to determine whether the result is replicable. While the effect of FSSBs was not in the first vignette, it was present in the second vignette. The present results are consistent with Hu et al.’s (2019) work that deals with technological demands, boundary crossing, and psychological detachment. Their study examined boundary crossing as an intervening variable for WT. The reason for this finding with partial support could be that the technological demands in the vignettes were not obvious or more easily discernable.

H5 and H6 inferred that there would be an interaction between formality and FSSBs, such that the informal teleworking condition and low FSSBs condition would result in higher AWFC and WT. The interaction effects were only established on the first AWFC and second WT analyses. The reason for this could be because AWFC is more tangible in the first vignette since it is the first scenario to be read. The subjects were able to envision possible conflict immediately after reading the first vignette, but not after reading the second one. Moreover, it could be that the participants did not begin to detect the work pressure or work urges until they had read the second vignette. It might have taken a second reading of a hypothetical telework situation to fully visualize the imagined scenarios. These findings need to be revisited and replicated to provide more compelling proof. This pattern of results is similar to previous literature because they imply that it might be arduous to grasp the subtle differences in the two vignettes. As a construct, AWFC can be characterized as a specific outcome expectation, which is focused on beliefs about the likely outcomes of engaging in work and family roles in the future (Westring &
Ryan, 2011). This outcome expectation can be hard to define if the differences in the vignettes were skinned through or not identified at all, which may be evident from the quick reading times. For WT, there is a distinguishable nuance that must be grasped for work pressure. Work pressure is the extent to which employees experience pressure from the work environment to act in a different way than they would from their private life. Perceived work pressure was found to have a positive relationship with work-to-home conflict but not with home-to-work conflict (Delanoeije & Verbruggen, 2019). Since the vignettes did not clarify that the teleworking workplace would be impacting the employee’s home, this could be an explanation for why H6 was only partially supported.

For the two interaction effects, AWFC and WT were significantly higher in the informal teleworking condition with the low FSSBs than the high FSSBs condition. This suggests that FSSBs only make a significant difference in informal teleworking environments (See Figures 1 and 2). Since it is mandatory for employees to negotiate with their supervisor about their work schedule in the informal teleworking condition, the effect may have been highly apparent because of this need to actively interact with the supervisor on a regular basis. Another explanation for the interactions could be that the organizational structure of formal teleworking arrangements curtails the effect of FSSBs compared to informal teleworking environments, which are high in unpredictability. Family-supportive supervisors act as a source of organizational social support to help employees balance work and family (Michael et al., 2019). Thus, family-supportive supervisors can collaborate with individual employees to relieve AWFC. Similarly, employees can consult family-supportive supervisors to lessen WT. Prior research has proven that higher WT is linked to less work-life balance satisfaction (Barber & Santuzzi, 2019). By cooperating with a family-supportive supervisor, teleworking employees can achieve more
work-life balance and in turn, reduce WT. Whereas past researchers have found that technological demands contribute to WT (Barber & Santuzzi, 2015; Boswell & Olson-Buchanan, 2007; Park et al., 2011), the present study has shown that WT is only significantly lower in particular instances. Therefore, WT may be subject to an employee’s work efficiency or general ability to balance their role demands.

**Limitations and Future Directions**

There were multiple issues running this study online instead of in-person. Some subjects did not follow the instructions to read the material, so they were not able to recall the information needed to finish the latter half of the survey. Since the study was conducted through SONA, subjects were able to access their survey link more than once. Some subjects took the survey multiple times because they thought they did not get credit for their first attempt. This introduced the complication of needing to eliminate additional tries. For data analysis purposes, we only counted their first tries and screened out additional attempts. If this were an in-person study, the subjects could have been strongly encouraged to read both vignettes without haste. They may have been more careful when told to memorize the information in the hypothetical scenarios if the instructions were verbally recited. They may have also taken more time to imagine themselves in the situations if the experimenter verbally emphasized doing so in-person.

Further exploratory analyses could have examined if the number of hours that an employee worked in total per week made a difference in the AWFC and WT results. Future studies can analyze the data to see if there is a possible gender difference, provided that there is an equal amount of male to female participants. For the AWFC scale, the three anticipated work interference with family (AWIF) items could have been collapsed into one construct. Similarly, the other three anticipated family interference with work (AFIW) items could have also been
collapsed. Counterbalancing was applied to reduce order and practice effects from the administration of two vignettes. If necessary, the data from the second vignette could have been forsaken in favor of the data from the first vignette since the first vignette was provided initially.

Future studies should strive to include a wider range of adults in their population sample, such as those older than 31 years of age. This would make the sample more representative to the subset of working adults in the US. While the majority of the total sample was Caucasian (66.30%), future studies may want to examine cultural implications with other races. The working mentality of adults raised in alternative ethnicities may generate different results. If alternative ethnicities are inspected, the vignettes will need to be adapted with different names for the spouses and children. Half of the sample demographic should consist of adults with some form of teleworking experience or solely teleworking adults. Adults with prior teleworking experience will be able to relate more to the hypothetical scenarios than adults with just any working experience. If half of the population has some form of teleworking history, future studies can run comparison analyses to examine whether the teleworking half differs from the non-teleworking half.

The use of vignettes gave us some indication of what the results might look like in real life, but further replicability is necessary to determine whether these results would be applicable in the workplace. Future studies should test formality as an actual teleworking practice and investigate whether FSSBs affect AWFC/WT while an employee works over a specific duration. Organizations may require more empirical evidence that demonstrates whether or not teleworking is more effective than traditional work arrangements, like working in-person (Martin & MacDonnell, 2012). The decision to utilize vignettes allowed us to posit some causal relationships between FSSBs and AWFC/WT as well as some possible interaction effects.
However, the stimuli (vignettes) could have been tested to definitively conclude their content validity in making an impact on perceived conflict or pressure. For the experimental manipulations of high vs. low FSSBs, it is important to note that future studies should respectively refer to them as supportive and non-supportive manipulations. Furthermore, the low FSSBs condition should be specified as non-supportive with supervisor abuse. Despite these limitations, this research can be seen as the first step towards integrating FSSBs while teleworking to AWFC/WT that has not been directly linked before.

**Overall Conclusion**

The approach in this study differed from previous studies because it centered on perceived conflict and pressure instead of more concrete outcomes like employee productivity or employee turnover intentions. Although we believe that research on teleworking formality, family-supportive supervisors, AWFC, and WT has resulted in a better understanding of interplay among these variables, there is a need for future research and replicability. The purpose of this study was to examine how formal and informal teleworking arrangements or FSSBs were associated with different work/family balance outcomes. Our findings indicate that manager behaviors do impact the anticipated amount of work-family conflict that an employee may experience. Therefore, it is essential that employers or companies with teleworking options implement equitable management training that focus on how to be family-supportive. In doing so, this can decrease employees’ levels of work-family conflict and promote a more harmonious work environment.
Footnotes

1 Three outliers were removed from the total sample for reading longer than five minutes (300 seconds).

2 The two significant interactions in the analyses with the 40-second cutoff were no longer present with the 30-second cutoff. These result differences are displayed in Appendix D.
References


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https://doi-org.libezp.lib.lsu.edu/10.1177/002716219830378

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investigation. Journal of Vocational Behavior, 79(2), 596–610. https://doi-
org.libezp.lib.lsu.edu/10.1016/j.jvb.2011.02.004
Table 1

<table>
<thead>
<tr>
<th></th>
<th>Total Sample</th>
<th>Vignette 1 Sample</th>
<th>Vignette 2 Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td>n=291</td>
<td>n=188</td>
<td>n=143</td>
</tr>
<tr>
<td></td>
<td>19.65 (1.86) [18-31]</td>
<td>19.73 (1.73) [18-31]</td>
<td>19.77 (1.80) [18-31]</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>14.80%</td>
<td>14.40%</td>
<td>14.70%</td>
</tr>
<tr>
<td>African American, Hispanic/Latino</td>
<td>0.30%</td>
<td>0.50%</td>
<td>0.70%</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>7.20%</td>
<td>8.00%</td>
<td>7.70%</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>4.80%</td>
<td>4.80%</td>
<td>5.60%</td>
</tr>
<tr>
<td>Hispanic/Latino, Other</td>
<td>0.30%</td>
<td>0.50%</td>
<td>0.70%</td>
</tr>
<tr>
<td>Native American or American Indian Other</td>
<td>0.70%</td>
<td>1.10%</td>
<td>1.40%</td>
</tr>
<tr>
<td>White (Non-Hispanic)</td>
<td>66.30%</td>
<td>64.90%</td>
<td>62.90%</td>
</tr>
<tr>
<td>White (Non-Hispanic), Asian/Pacific Islander</td>
<td>1.40%</td>
<td>0.50%</td>
<td>2.80%</td>
</tr>
<tr>
<td>White (Non-Hispanic), Hispanic/Latino</td>
<td>1.00%</td>
<td>2.10%</td>
<td>0.70%</td>
</tr>
<tr>
<td>White (Non-Hispanic), Native American or American Indian White (Non-Hispanic), Other</td>
<td>0.30%</td>
<td>0.50%</td>
<td>0.70%</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>20.60%</td>
<td>19.70%</td>
<td>14.70%</td>
</tr>
<tr>
<td>Female</td>
<td>78.40%</td>
<td>79.30%</td>
<td>83.90%</td>
</tr>
<tr>
<td>Other</td>
<td>1.00%</td>
<td>1.10%</td>
<td>1.40%</td>
</tr>
<tr>
<td><strong>Hours currently work in total per week</strong></td>
<td>17.54 (9.00) [4-60]</td>
<td>17.87 (9.05) [5-45]</td>
<td>18.88 (8.725) [5-40]</td>
</tr>
</tbody>
</table>
### EFFECT OF TELEWORK & FSSBS ON WORK-FAMILY OUTCOMES

<table>
<thead>
<tr>
<th></th>
<th>Total Sample</th>
<th>Vignette 1 Sample</th>
<th>Vignette 2 Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hours worked in total per week this past summer</strong></td>
<td>34.98 (54.542) [2-80]</td>
<td>32.65 (45.56) [2-80]</td>
<td>34.50 (51.31) [2-80]</td>
</tr>
<tr>
<td><strong>Teleworking Experience</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Currently only work in-person</td>
<td>33.33%</td>
<td>30.30%</td>
<td>29.40%</td>
</tr>
<tr>
<td>Currently telework full-time (30 hours or more)</td>
<td>0.70%</td>
<td>0.00%</td>
<td>0.70%</td>
</tr>
<tr>
<td>Currently telework part-time (29 hours or less)</td>
<td>2.40%</td>
<td>3.20%</td>
<td>0.70%</td>
</tr>
<tr>
<td>Currently work in-person sometime and telework sometime</td>
<td>5.20%</td>
<td>3.70%</td>
<td>3.50%</td>
</tr>
<tr>
<td>Never teleworked</td>
<td>52.60%</td>
<td>56.40%</td>
<td>60.10%</td>
</tr>
<tr>
<td>Used to telework part-time (29 hours or less)</td>
<td>5.50%</td>
<td>6.40%</td>
<td>5.60%</td>
</tr>
</tbody>
</table>

*Note.* The mean, standard deviation, and range for some demographics are listed respectively above. 133 participants from the total sample were not currently working. Seven responses were removed from the total sample for the average hours worked by subjects in the past summer because they were greater than 80 hours. 93 participants in vignette 1 were not currently working. Four responses were removed in vignette 1 for the average hours worked by subjects in the past summer because they were greater than 80 hours. 66 participants in vignette 2 were not currently working. Three responses were removed in vignette 2 for the average hours worked by subjects in the past summer because they were greater than 80 hours.
Figures

Figure 1: AWFC Score by Formality and FSSBs

Note: This figure demonstrates the mean AWFC scores as a function of high vs. low FSSBs and formality. In the formal condition, there is no effect. However, in the informal condition, there is significantly more AWFC in the low FSSBs condition than there is in the high FSSBs condition. Furthermore, the mean AWFC score associated with high FSSBs is lower in the informal condition than its corresponding score in the formal condition.
Figure 2: WT Score by Formality and FSSBs

![Average WT Score](image)

Note: This figure demonstrates the mean WT scores as a function of high vs. low FSSBs and formality. In the formal condition, there is no effect. However, in the informal condition, there is significantly more WT in the low FSSBs condition than there is in the high FSSBs condition. Furthermore, the mean WT score associated with high FSSBs is lower in the informal condition than its corresponding score in the formal condition.
Appendix A: Demographics

Demographic Items:

1. What is your gender?
   a. Male
   b. Female
   c. Other

2. What is your current age in years?
   a. (Drop down multiple choice, responses between 1-50)

3. Please indicate your race, choose all that apply
   a. White (non-Hispanic)
   b. African American
   c. Asian/Pacific Islander
   d. Hispanic/Latino
   e. Native American or American Indian
   f. Other (Fill in the blank)

4. What is your current student classification?
   a. Freshman
   b. Sophomore
   c. Junior
   d. Senior

5. What is your relationship status?
   a. Single
   b. Cohabitting
c. Married/Living with Partner

6. Do you live with any of the following family members? Please select all that apply.
   a. Spouse/Partner
   b. Children
   c. Parents
   d. Roommates
   e. Other (Write-in)

7. Have you ever had a virtual class?
   a. Yes
   b. No

8. Choose all that apply. Have you ever had to…?
   a. Take an exam online
   b. Give a virtual presentation
   c. Work in groups online
   d. Submit an essay online
   e. None of the above (If selected, they cannot choose any of the other options)

9. How often have you had interruptions that interfered with your ability to focus on your virtual class?
   a. Never
   b. Rarely
   c. Sometimes
   d. Often
   e. Always
10. Prior to the Spring 2020 semester, how experienced were you with computers?
   a. Very Poor
   b. Poor
   c. Fair
   d. Good
   e. Excellent

11. What is your experience with computers now (i.e., today)?
   a. Very Poor
   b. Poor
   c. Fair
   d. Good
   e. Excellent

12. On average, how many hours do you currently work in total per week? Round to the nearest whole number.
   a. (Fill in)

13. On average, how many hours do you currently work in total per week this past summer? Round to the nearest whole number.
   a. (Fill in)

14. Do you currently work part-time or full-time?
   a. Part-time (29 hours or less)
   b. Full-time (30 hours or more)
   c. I am not presently employed
15. How long have you held your current job (in years)? If less than 1 year, use the appropriate fraction out of 12, e.g., 1/12, which indicates that you have worked for 1 month. Keep the denominator at 12. The numerator will indicate how many months you have worked.
   a. (Fill in)

16. List all the job types you’ve had with commas in between (e.g., waitress, sales associate, etc.)?
   a. (Fill in)

17. Have you ever had a managerial position?
   a. Yes
   b. No

18. Consider all of your working experiences. Do you normally have a direct supervisor?
   a. Yes
   b. No

19. Pick the choice that best describes your telework experience (A remote employment arrangement in which an employee works at an approved, alternative worksite location)?
   a. Currently telework full-time (30 hours or more)
   b. Currently only work in-person
   c. Currently work in-person sometime and telework sometime
   d. Currently telework part-time (29 hours or less)
   e. Used to telework full-time (30 hours or more)
   f. Used to telework part-time (29 hours or less)
g. Never teleworked
Appendix B: Anticipated Work-Family Conflict Scale

Original Measure:

Time-Based AWIF

1. I will have to miss family activities due to the amount of time I will have to spend on work responsibilities.

Time-Based AFIW

2. I will have to miss work activities due to the amount of time I will have to spend on family responsibilities.

Strain-Based AWIF

3. I will often be so emotionally drained when I get home from work that it will prevent me from contributing to my family.

Strain-Based AFIW

4. Because I will often be stressed from my family responsibilities, I will have a hard time concentrating on my work.

Behavior-Based AWIF

5. Behavior that is effective and necessary for me at work will be counterproductive at home.

Behavior-Based AFIW

6. Behavior that is effective and necessary for me at home will be counterproductive at work.

Adapted Scale for Data Collection:
The following statements are about your anticipated level of conflict involving work and family. When responding to these items, please answer while imagining you were in the situation we described:

(1= Strongly Disagree, 2= Disagree, 3= Neither Agree nor Disagree, 4= Agree, 5= Strongly Agree)

Time-Based AWIF

1. I will have to miss family activities due to the amount of time I will have to spend on work responsibilities.

Time-Based AFIW

2. I will have to miss work activities due to the amount of time I will have to spend on family responsibilities.

Strain-Based AWIF

3. I will often be so emotionally drained when I finish work that it will prevent me from contributing to my family.

Strain-Based AFIW

4. Because I will often be stressed from my family responsibilities, I will have a hard time concentrating on my work.

Behavior-Based AWIF

5. Behavior that is effective and necessary for me at work will be counterproductive at home.

Behavior-Based AFIW

6. Behavior that is effective and necessary for me at home will be counterproductive at work.
Appendix C: Workplace Telepressure Measure

Original Measure:

Preoccupation

1. It’s hard for me to focus on other things when I receive a message from someone. (It would be hard for me to focus on things when…)
2. I can concentrate better on other tasks once I’ve responded to my messages.
3. I can’t stop thinking about a message until I’ve responded.

Urge

4. I feel a strong need to respond to others immediately.
5. I have an overwhelming feeling to respond right at that moment when I receive a request from someone.
6. It’s difficult for me to resist responding to a message right away.

Adapted Scale for Data Collection:

The following items are about your workplace telepressure. Imagine you were in the situation described and think about how you would use technology to communicate with people in your workplace. Specifically, think about message-based technologies that would allow you to control when you respond (email, text messages, voicemail, etc.). Please rate how much you would agree or disagree with the following statements. When using message-based technology for work purposes in the situation previously described . . . (1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Strongly Agree)

Preoccupation

1. It would be hard for me to focus on other things when I receive a work message from someone.
2. I could concentrate better on other tasks once I’ve responded to my work messages.

3. I wouldn’t stop thinking about a work message until I’ve responded.

Urge

4. I would feel a strong need to respond to others immediately.

5. I would have an overwhelming feeling to respond right at that moment when I receive a work request from someone.

6. It would be difficult for me to resist responding to a work message right away.
### Appendix D: 30-Second Cutoff Results

<table>
<thead>
<tr>
<th>Factors</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
</table>
| **First Vignette**  
(n=201) |     |     |
| AWFC Formality   | 0.22 | .64 |
| FSSBs           | 4.69 | .03* |
| Form*FSSBs      | 3.72 | .06 |
| WT Formality    | 1.62 | .20 |
| FSSBs           | 2.97 | .09 |
| Form*FSSBs      | 0.35 | .55 |
| **Second Vignette**  
(n=198) |     |     |
| AWFC Formality   | 0.04 | .83 |
| FSSBs           | 38.34 | .00* |
| Form*FSSBs      | 0.76 | .38 |
| WT Formality    | 0.03 | .85 |
| FSSBs           | 29.30 | .00* |
| Form*FSSBs      | 0.64 | .43 |

*Note.* *p < .05*