Examining the Relationship Between Working from Home and Work Addiction

A thesis submitted in partial fulfillment of the requirements

for the degree of

Master of Science in Psychology

Melanie Jean Whipple

Purdue University Global

2021

Author Note

Melanie Jean Whipple, Department of Graduate Psychology, Purdue University Global.

The author wishes to express appreciation to Dr. Gabrielle Blackman.

Correspondence concerning this thesis should be addressed to Melanie Whipple, whipple.melanie@gmail.com.

Abstract

With the onset of the Coronavirus global pandemic, many organizations adapted by allowing their employees to work from home (WFH). Originally put into place to minimize the spread of infection, employees believed WFH would enable better work-life balance. However, in a 2020 survey of 1,000 remote employees, 45% reported increased workload, while 40% said they experienced higher stress levels and mental exhaustion than before the pandemic. These statistics suggest the potential for work addiction to occur. This study examines the relationship between flexible work arrangements and work addiction. SurveyMonkey Audience was used to recruit 86 participants who completed a 16-item questionnaire that included the Bergen Work Addiction Scale (BWAS) to determine if a statistically significant relationship exists. Statistical analysis including descriptive statistics, frequencies tables, one-way ANOVA, and correlation tables were performed on the data to provide statistical results like response frequencies, central tendency, standard deviation, skewness, range, p-value, confidence interval, and correlation tables. The study failed to detect evidence of a statistically significant relationship between work addiction and a work from home arrangement.

Keywords: work addiction, work from home (WFH), flexible work arrangement, pandemic.

Table of Contents

Examining the Relationship Between Working from Home and Work Addiction

Work-life balance (WLB) is an important topic that affects organizations. The individual pursuit of a state where career demands are prioritized equally against one's personal life remains a holy grail that requires organizational support to achieve. When organizations support WLB, it results in a workforce that experiences less stress, feels more valued, and is more likely to meet performance goals (Lichtenstein, 2019). When WLB is not present amongst employees, burnout and turnover are the consequences (Reiner, 2019). With the onset of the Coronavirus global pandemic, many organizations adapted by allowing their employees to work from home (WFH) (Gigauri, 2020). WFH describes work that is done remotely, through technology, and often from one's house, instead of a formal office (Popovici & Popovici, 2020). Originally put into place to minimize the spread of infection, employees believed WFH would enable better WLB. However, in a 2020 survey of 1,000 remote employees, 45% reported increased workload, while 40% said they experienced higher stress levels and mental exhaustion than before the pandemic (Robinson, 2020). These statistics suggest the potential for work addiction to occur because leading behavioral indicators like task-dense workloads, high-demand job roles, and fatigue were experienced by survey participants (Popovici & Popovici, 2020; Reiner et al., 2019; Yang et al., 2020).

Work addiction describes an employee who engages in compulsive work to the extent that it negatively impacts personal aspects of their life (Reiner et al., 2019). Putting in long hours and withdrawing from relationships are behavior-based, leading indicators of work addiction (Renier et al., 2019). Therefore, understanding the impact that WFH has on employee work addiction and to what extent these two variables impact one another is essential for organizations to understand. Determining the presence of a relationship is critical as many employers consider

extending remote work beyond the global pandemic's conclusion. Currently, there is no empirical research that examines a correlation between these two variables. This paper intends to help fill the research gap, determining if a statistically significant relationship exists between working from home and work addiction.

Literature Review

Work Addiction

The traditional definition of a workplace has changed, and employees can now work from any location, at any time. This flexibility has created a blurred boundary between one's work and personal life, leading to longer working hours and a disproportionate amount of time available to pursue personal priorities and interests (Yang et al., 2020). As a result, employees are at a higher risk of suffering from work addiction. Work addiction is a work-related behavior that refers to an individual in a state that is driven by an uncontrollable, intrinsic motivation to work so often that it impairs other areas of their life (Yang et al., 2020). Those who suffer from work addiction spend a significant amount of time working, are reluctant to disengage themselves from work, and work beyond what is expected by their employer and/or what is required to maintain their socioeconomic status (Yang et al., 2020). The Diagnostic and Statistical Manual of Mental Disorders (5th Edition) does not currently recognize work addiction as a disorder. However, its potential negative consequences on employee health and well-being make it an important topic of discussion. The effects of work addiction include depression, anxiety, attention-deficit hyperactivity disorder (ADHD), physical complaints, illness, emotional exhaustion, social dysfunction, insomnia, chronic fatigue, and poor overall health (Yang et al., 2020).

Yang et al. (2020) explored the relationships between work addiction, WLB stress, fatigue, and depression in male Chinese workers, age 18-60, and living in Hong Kong.

Researchers used Pearson correlation analysis to determine the outcome of their hypotheses. Data was collected via a questionnaire made up of 29 items from scales proven to meet standards for validity and reliability, including the Bergen Work Addiction Scale (BWAS), Chalder Fatigue Scale (CFS), and Center for Epidemiologic Studies Depression Scale (CESD-10). Participants used Likert-type scales to respond to the items. Demographic information like age, employment status, and education level was also collected.

As a result of the research, Yang et al. (2020) reported statistically significant positive correlations amongst nearly all the tested variables. Specifically, they found strong, positive correlations between work addiction and depression, WLB stress, as well as fatigue. They also found there to be significant correlations between depression and WLB stress and depression and fatigue. Yang et al. (2020) did not find a statistically significant relationship between WLB stress and fatigue, consistent with previous research. This suggests that WLB stress and fatigue can explain the relationship between work addiction and depression. Yang et al. (2020) believe interventions aimed at improving overall health and well-being are necessary to offset the pervasiveness of work addiction in this population.

The study by Yang et al. (2020) creates a foundation upon which this study can continue to examine work addiction phenomena by considering the impact of work flexibilities such as WFH on work addiction. Accepting the results of Yang et al. (2020) enables the belief that a relationship between aspects of WLB (e.g., stress) and work addiction exist. Additional information is needed to consider what impact a more flexible work schedule may have on an employee's WLB. Data is also necessary to better understand how the work environment and working style may ultimately impact susceptibility to work addiction.

Reiner et al. (2019) defined work addiction as overinvestment in work-related behavior that negatively impacts health, personal relationships, and reported happiness. In their 2019 study, 409 participants working in University Advancement completed a questionnaire that includes items from the Work Addiction Questionnaire (WAQ) and Juhnke-Balkin Life Balance Inventory (JBLI) to determine the aspects of work-life balance that have the strongest correlation to work addiction. Reiner et al. (2019) found that stress/anxiety, sleep disturbance, and career dissatisfaction have the strongest positive correlations with work addiction. Additionally, work addiction and personal relationships have a significant negative correlation, suggesting that those who suffer from work addiction will also experience issues with relationships in their personal life. In the study, those who reported the highest work addiction levels regularly worked more than 45 hours per week.

The study by Reiner et al. (2019) supports the presence of a relationship between work addiction and those behaviors associated with poor WLB. Echoing the findings of Yang et al. (2020), the work of Reiner et al. (2019) supports the notion that employees in high pressure and task-dense job roles are more likely to experience symptoms indicative of work addiction, such as stress and poor sleep habits. Based on the nature of University Advancement positions which require frequent travel, attendance at evening and weekend events, aggressive performance goals, and the need to respond promptly to a constant stream of electronic communication, these employees tend to have some flexibility in their work schedules (Reiner et al., 2019). Even with a flexible work schedule, which in some cases includes a WFH arrangement, this study demonstrates that they are still susceptible to work addiction. This evidence lends itself to the belief that WFH may not create an opportunity for improved WLB as previously thought but instead may create a lack of boundaries that makes work addiction more likely.

Examining the effect that long hours has on WLB and overall job satisfaction, Hsu et al. (2019) performed a study in which 369 participants working in the high-tech and banking industries in Taiwan completed a questionnaire to determine the relationship between occupational stress, WLB, working hours, and job satisfaction. The questionnaire included items to measure job stress, WLB, job satisfaction, and perceived control over time. Participants used a Likert scale to respond. Responses were analyzed using bivariate Pearson's correlations to explore the relationships between scales (Hsu et al., 2019).

Hsu et al. (2019) described significant positive correlations between the number of hours worked and reported stress levels, as well as hours worked and poor WLB. They also determined that significant negative correlations exist between perceived control over time and hours worked, organizational stress, and WLB (Hsu et al., 2019). These findings suggest that working longer hours causes higher levels of occupational stress and greater work-life imbalance. In contrast, the perception of control over time spent working appears to decrease these relationships' impact on the employee (Hsu et al., 2019).

The research of Hsu et al. (2019) further demonstrates the impact that high-demand jobs have on one's working hours. It supports the notion that by empowering employees to create governance around the number of hours they spend working each week, employees will maintain a desirable WLB. The authors posit that when organizations place limitations on the number of hours an employee works, they can better detach from the job itself and allocate their attention to personal matters, including relationships and family responsibilities (Hsu et al., 2019). When these findings are compared to those of Reiner et al. (2019) and Yang et al. (2020), they strengthen the argument that employees are more likely to suffer from poor WLB when they consistently work beyond the standard expectation for full-time employees (e.g., 40 hours/week).

They further demonstrate that when limitations are not put in place by organizations, employees in high-demand roles will work longer hours and have greater difficulty detaching from the work, blurring the line between work and personal priorities. As noted by Reiner et al. (2019) and Yang et al. (2020), the inability to detach from work is a leading indicator of work addiction.

Andreassen et al. (2019) expanded the understanding of workaholism in a study that examines the impact certain psychosocial work variables have on work addiction. Exploring the potential influence that factors like leadership style, job demand, job control, role clarity, role conflict, and exposure to negative acts has on employee susceptibility to work addiction, Andreassen et al. (2019) provides valuable evidence that personality factors (i.e., perfectionism, narcissism, Type A personality) are not the only variables that influence this behavior. The study took place in Norway with 1,608 employees, age 21-60, and working more than 30 hours a week (Andreassen et al., 2019).

The participants completed a 48-item questionnaire that measured work addiction (The Bergen Work Addiction Scale), job demands and job control (Questionnaire on the Experience and Assessment of Work), role conflict and ambiguity (General Nordic Questionnaire for Psychological and Social Factors at Work), negative acts at work (Negative Acts Questionnaire), and leadership styles (Global Transformational Leadership Scale, Laissez-Faire subscale of the Multifactor Leadership Questionnaire, and the Abusive Supervision Scale) (Andreassen et al., 2019). Participants responded using Likert scales. Researchers collected demographic information for classification purposes.

Andreassen et al. (2019) used a linear regression and dominance analysis to determine the tested variables' strength and rank, controlling for age and gender. The study showed a strong correlation between work addiction and the psychosocial work variables of job demands, role

conflict, and exposure to negative acts (Andreassen et al., 2019). The variables of control, role ambiguity, and leadership style were significantly related to work addiction but had small effect sizes (Andreassen et al., 2019).

Andreassen et al. (2019) showed a significant positive relationship between work addiction and job control. This relationship is at odds with one of the research team's hypotheses which stated a belief that these two variables would have a negative relationship, explaining that the more control an employee has over their work scope and schedule, the less likely work addiction is to occur (Andreassen et al., 2019). Thus, when an employee is working in a high-demand role, with moderate to total control over their task, pace, and approach, they are likely to spend more of their time working (Andreassen et al., 2019). Andreassen et al. (2019) believe that an employee will do this to sustain the privilege of having control over their work, suggesting that those highly sought-after roles with high demand and high control are detrimental to the overall health of the worker, likely to result in behaviors associated with work addiction.

The Bergen Work Addiction Scale (BWAS) is a psychological questionnaire that provides a measurement of work addiction (Lichtenstein et al., 2019). The questionnaire contains seven items, answered with a 5-point Likert scale (1=never; 5=always) (Lichtenstein et al., 2019). This scale is based on behavioral addictions' theoretical approach, where each item addresses a different core symptom of work addiction. In a study by Lichtenstein et al. (2019) that sought to assess the correlation between work-related dysfunction and the risk of work addiction, as well as validate a Dutch translation of the BWAS, participants responded to an online questionnaire that included the BWAS, as well as the Perceived Stress Scale (emotional stress), and the EQ-5D-5L (health-related quality of life). Before the study, researchers translated the BWAS into Dutch and then back to English before having it reviewed by two independent

evaluators (Lichtenstein et al., 2019). The researchers conducted a pilot test to assess readability and comprehensiveness before returning the result to the original authors for approval (Lichtenstein et al., 2019).

Lichtenstein et al. (2019) conducted the study via a 22-item cross-sectional online questionnaire to 671 participants in The Netherlands. Demographic information such as age, gender, education, weekly hours of work, tenure, and leadership responsibility was collected and used for grouping purposes. To confirm the internal consistency of the BWAS, Lichtenstein et al. (2019) used factor analysis and Cronbach's alpha coefficient to determine the scale to be reliable (Lichtenstein et al., 2019). Researchers performed a multiple linear regression analysis on the questionnaire items, and determined that 6.6% of the sample met the BWAS cutoff for work addiction (Lichtenstein et al., 2019). The researchers used the cutoff to divide the participants into two groups: high risk (at or above the cutoff) and low risk (below the cutoff) (Lichtenstein et al., 2019). These two groups helped to describe the relationship between potential predictor variables and BWAS score. Lichtenstein et al. (2019) reported that those in the high-risk group indicated a higher than average number of hours worked each week, more stress, a willingness to work when feeling ill or fatigued, emotional stress, reduced quality of life, and self-perceived work addiction.

The research of Lichtenstein et al. (2019) suggests that work addiction is a construct related to excessive work and distress, reflective of the findings in previous studies on work addiction. An additional contribution that their research makes is adding to the scientific support for the use of the BWAS to measure work addiction. This tool has good internal validity, reliability, and sensitivity and is a reliable measure of work addiction in several different countries and languages (Andreassen et al., 2019; Lichtenstein et al., 2019).

A common theme in work addiction research is the presence of high job demands. Alessandri et al. (2020) performed a study to examine the relationship between work addiction, prosocial organizational citizenship behaviors (P-OCB), and job demands. The researchers used police officers as the sample population to test their multilevel mediation model (Alessandri et al., 2020). This population was selected because of the job's stressful nature, exposure to acute and chronic occupational stressors, frequent overtime work, and high risk for health issues like post-traumatic stress disorder, burnout, and suicide. A total of 85 officers participated in the three-month study (Alessandri et al., 2020).

Participants in this research completed a series of surveys that provided sociodemographic data, work addiction scale placement (DUWAS), personality profile (Big Five), job demands (Job Content Questionnaire), and P-COBs (Williams and Anderson Scale) at different times throughout the study. Alessandri et al. (2020) found that their results supported their hypothesized multilevel mediation model, confirming the presence of a strong negative relationship between job demands and P-OCBs, a negative relationship between P-OCBs and work addiction, and a positive relationship between work addiction and job demands. These results align with previous research that describes the consequences of work addiction while also supporting the notion that an employee who is a good performer and willing to work many hours does not necessarily result in a model employee because their high job demands are likely to lead to a reduction in P-OCBs (Alessandri et al., 2020).

Bjärntoft et al. (2020) published a study that explains how flexible work arrangements impact work-life balance. A total of 2,960 Swedish Transport Administration employees responded to a web-based questionnaire addressing work-life balance, organizational factors, flexible work, leadership behaviors, psychosocial conditions, and work-related individual

behaviors (Bjärntoft et al., 2020). Bjärntoft et al. (2020) performed descriptive statistics on each variable and used multiple linear regression analysis to examine the relationships between the independent variables and work-life balance. The study determined that over-commitment and high job demands negatively correlated with work-life balance (Bjärntoft et al., 2020).

This research suggests that flexible work arrangements may threaten WLB when high work commitment and job demands are present. This is because high job demands and high levels of work commitment require more hours to complete job tasks (Bjärntoft et al., 2020). When employees work beyond their company's mandated hours, they accomplish work tasks at the expense of their personal life. In addition to poor WLB, when overworking is sustained, it can lead to burnout and cause problems in relationships. Bjärntoft et al. (2020) identified behaviors like boundary governance, support from management and colleagues, and clear expectation setting as potential ways to offset the negative impact to WLB caused by high commitment and high demand job roles.

Work From Home

The onset of the Covid-19 pandemic resulted in changes to how people work and how that work is perceived. One consequence to organizations is the accelerated transition to digital operations (Gigauri, 2020). Gigauri (2020) used a qualitative research method to understand how companies and their employees responded to the onset of Covid-19. The study relied on an expert interview method in which 10 participants from the country of Georgia were interviewed over Zoom, using nine open questions to address six main themes about organizational challenges resulting from Covid-19 and the organization's response (Gigauri, 2020). Participants were considered human resource management experts (Gigauri, 2020). Gigauri (2020) organized the data into themes, issues, categories, and content.

Gigauri (2020) found that an organization's ability to adopt remote working as an alternative to employees performing their work in an office each day was a critical indicator of an organization's ability to maintain necessary productivity levels during the Covid-19 global pandemic. The participants in the study reported increases in fear, stress, and anxiety. When challenges related to adopting new technology and poor organizational support for change management occur, the severity of responses increases (Gigauri, 2020). Participants report that employees felt stress when it came to maintaining an 8-hour workday because when working from home, they found the line between work and home to be blurred (Gigauri, 2020). Many participants reported logging back into their work computers to address outstanding tasks in the evening after their family responsibilities were fulfilled (Gigauri, 2020). Because of the haste to implement a WFH structure, some organizations did so without considering how this abrupt change may impact their workforce. As a result, Gigauri (2020) recommends that human resource management teams support their workforce by developing employee guidance documents that reference space and schedules for employees who wish to continue to WFH and provide them with tools for maintaining a positive WLB.

The outcome of the study by Gigauri (2020) gives further support to the notion that WLB may be more difficult for those employees who have remote working options. Employees reported difficulty in defining working hours from personal time. As a result, they dedicated more than a standard 8 hours working every day. The research of Lichtenstein et al. (2019) that suggests work addiction as a construct related to excessive work and distress helps to explain the relationship seen in the outcome of the study by Gigauri (2020). Employees, when a lack of boundary between work and personal life exists, are more likely to spend their time working and

as a result experience greater stress. This prolonged stress, according to Lichtenstein et al. (2019) may lead to work addiction.

Trougakos et al. (2020) examined the impact of anxiety stemming from Covid-19 on emotional suppression and psychological need fulfillment and its effect on employees' work, home, and health outcomes. Trougakos et al. (2020) surveyed 503 participants across four surveys to obtain data for this study. To qualify, participants had to be Canadian citizens working at least 20 hours per week. Participants replied to a social media advertisement for the study. They completed questionnaires designed to measure health anxiety related to Covid-19, emotion suppression, hand-washing habits, psychological need fulfillment, behaviors at work and home, psychosomatic complaints, and demographic information (Trougakos et al., 2020).

Health-related anxiety stemming from Covid-19 had a significant negative correlation with work, family, and health outcomes due to high levels of emotional suppression and a lack of psychological need fulfillment (Trougakos et al., 2020). Trougakos et al. (2020) demonstrate that individuals are more likely to withdraw from a situation by suppressing their emotions when a threat is uncontrollable. This behavior can be a starting point for work addiction, as individuals may use their work to control and suppress stressful emotions as it provides them with something else on which to focus. If focusing on work brings a sense of relief to the employee, positive feelings related to the work will occur, motivating them to work more frequently. If this cycle is sustained, additional symptoms of work addiction are likely to develop.

The outcome of the study by Trougakos et al. (2020) provides insight on how the Covid-19 global pandemic may create additional stress for those who WFH and from previous research it can be concluded that such stressors can lead to work addiction. Andreassen et al. (2019) demonstrated that when an employee is working in a high-demand role, with moderate to total

control over their task, pace, and approach, they are likely to spend more of their time working. Andreassen et al. (2019) believes that an employee may engage in work to sustain the privilege of having control over their work, but that the dedication to the role may make separating work time from personal time challenging, affecting the overall health of the worker and leading to work addiction. This is aligned with the results of Trougakos et al. (2020), as this research also suggests that in times of stress employees are likely to refocus their energy when faced with an uncontrollable threat on those aspects of life that are controllable, such as execution of work tasks. An employee who suppresses their stress by hyper-focusing on the controllable aspects of work is likely to spend more hours working and have a greater potential for work addiction (Andreassen et al., 2019; Trougakos et al., 2020).

Liu et al. (2021) examined the relationships between perceived Covid-19 crisis strength, work meaningfulness, work engagement, and taking charge at work. The research team sought to determine if organizations can boost engagement and the presence of taking charge behaviors by reducing the perceived strength of the Covid-19 virus and increasing work meaningfulness amongst employees (Liu et al., 2021). The authors used a time-lagged field survey of nurses working with Covid-19 patients in China (Liu et al., 2021). Participants completed three questionnaires over nine weeks and responded to items about Covid-19 crisis strength, work meaningfulness, work engagement, taking-charge behaviors, and demographic information such as age, education, tenure, and gender (Liu et al., 2021).

Liu et al. (2021) found that perceived crisis strength is negatively correlated with work engagement and that work meaningfulness mediates the strength of the correlation. In other words, where a high level of work meaningfulness exists, the significance of the correlation between perceived crisis strength and engagement decreases (Liu et al., 2021). These findings

are helpful as they suggest that to improve employee engagement following a stressful event, an organization should implement an intervention that focuses on mitigating the perception of the crisis strength by emphasizing the positive impact that employees have on the lives of their customers, as well as their direct impact on the crisis itself.

The work for Liu et al. (2021) lends support to the notion that employees experienced higher than normal stress levels as a result of the Covid-19 Global Pandemic and how feelings of helplessness may impact performance. Specifically, the research found that as crisis strength increases, engagement decreases (Liu et al., 2021). This supports the research of Andreassen et al. (2019) who determined that when an employee has moderate to total control over their task, pace, and approach, they are likely to spend more of their time working. Thus, when faced with a crisis, such as Covid-19, employees who feel they have control over their work will dedicate time and effort to those tasks, as opposed to personal matters which may appear to be too challenging to overcome. This, as suggested by Andreassen et al. (2019), will lead to the employee working longer hours. The greater the stress, and the longer the hours, the greater the likelihood of work addiction (Andreassen et al., 2019; Alessandri et al., 2020; Lichtenstein et al., 2019; Reiner et al., 2019; Yang et al., 2020).

Summary and Research Question

The literature review suggests a relationship between WLB and work addiction. Yang et al. (2020) found that WLB stress and fatigue can be used to explain the relationship between work addiction and depression. Reiner et al. (2019) found that employees who regularly work more than 45 hours a week experience higher work addiction levels. Hsu et al. (2019), Andreassen et al. (2019), Alessandri et al. (2020), and Bjärntoft et al. (2020) examined the impact that job demands have on one’s working hours, WLB, and work addiction. All these

studies support the notion that a positive correlation between work addiction and job demands exists, suggesting that when governance around working hours is absent, like when employees WFH, excessive work is likely to occur. When job demands are high, flexible work arrangements may threaten WLB and enable work addiction (Bjärntoft et al., 2020).

The influence of flexible work schedules on work addiction is of particular concern because, with the onset of the Covid-19 pandemic, many organizations had to pivot to a WFH schedule for non-essential employees. Gigauri et al. (2020) conducted a study and found employees who WFH following Covid-19 have trouble separating from work at the end of the day. Trougakos et al. (2020) demonstrated that individuals are more likely to withdraw from it in situations where a threat is uncontrollable by suppressing their emotions. This behavior can be a starting point for work addiction, as individuals may use their work to control and suppress stressful emotions resulting from the pandemic. Liu et al. (2021) found that the pandemic itself can influence individual beliefs of self-efficacy, which can explain the results obtained by Trougakos et al. (2020).

Although there is ample research available on work addiction, to the best of this author's knowledge, there is currently no research that examines the relationship between work addiction and flexible working conditions like WFH. Studies that examine WFH behaviors since the pandemic report challenges in employees being able to separate from their work tasks at the end of the day (Gigauri et al., 2020; Liu et al., 2021; Trougakos et al., 2020). Research that focuses on work addiction, WLB, and related variables consistently mention long hours and an inability to separate from work as a cause for poor WLB and leading behavior of work addiction (Alessandri et al., 2020; Andreassen et al., 2019; Bjärntoft et al., 2020; Hsu et al., 2019; Reiner et al., 2019; Yang et al., 2020). This research aims to improve understanding of how a flexible

work arrangement impacts work addiction. Therefore, the current study asks: What is the relationship between working from home and work addiction?

Method

Work addiction describes an employee who engages in compulsive work to the extent that it negatively impacts personal aspects of their life (Reiner et al., 2019). Understanding the impact that flexible work arrangements like WFH have on employee work addiction and to what extent these two variables impact one another is essential for organizations to understand in today's work environment. Determining the presence of a relationship between these two variables is critical as many employers adjusted their business models to include flexible work options following the Covid-19 global pandemic. Currently, there is no empirical research that examines a correlation between these two variables. Therefore, this study seeks to determine if flexible work arrangements have any impact on work addiction.

Participants

Participants were recruited online via SurveyMonkey Audience. This service provides anonymous responses from a population of more than 144 million people across the globe that is regularly refreshed to ensure accuracy (SurveyMonkey, 2021). SurveyMonkey uses bot and fraud detection when recruiting participants to ensure consistent response quality (SurveyMonkey, 2021). There is a cost to use SurveyMonkey Audience based on sample size, survey length, and targeting criteria. To obtain 100 responses on a 16-27 item questionnaire with targeting criteria expected to generate a 35-49% qualification rate, the cost is $4.00 USD per response. In return for completing a survey, SurveyMonkey makes a 50 cent donation to the charity of the participant's choice.

SurveyMonkey Audience recruits subjects through SurveyMonkey Contribute, SurveyMonkey Rewards app, and a global panel (SurveyMonkey, 2021). SurveyMonkey Audience is commonly used by students, researchers, and academics to collect research data (SurveyMonkey, 2021). SurveyMonkey Audience will run a customer survey as long as it meets compliance requirements; see https://help.surveymonkey.com/articles/en_US/kb/SurveyMonkey-Audience-Guidelines-and-Policies. Recruitment will be aligned with SurveyMonkey's terms of service; see https://www.surveymonkey.com/mp/legal/terms-of-use. SurveyMonkey will send the survey electronically to potential participants until 100 qualified participants complete the questionnaire. The service suggests it takes between three and four days to collect 100 qualified responses for this study.

SurveyMonkey Audience distributed questionnaires A or B to people in the United States until each questionnaire received 50 qualified responses (100 participants total). In both questionnaires, the subject first reviewed and agreed to the Informed Consent; see Appendix A for the text of Informed Consent. If subjects agreed to the Informed Consent, they were taken to a second pre-screening question. If participants did not agree to the Informed Consent, they proceeded to a thank you page, and participation was terminated. The second qualifying question asked the subject if they have a flexible work arrangement (e.g., work from home, remote worker, work from anywhere). Subjects who received questionnaire A and indicated they have a flexible work arrangement were taken to the remainder of the questionnaire. If the subject did not indicate a flexible work arrangement on questionnaire A, they proceeded to a thank you page, and participation was terminated. Subjects who received questionnaire B and indicated that they do not have a flexible work arrangement were taken to the questionnaire. If the subject indicated a flexible work arrangement on questionnaire B, they proceeded to a thank you page, and

participation was terminated. Although it is unlikely, should participants have experienced any emotional discomfort resulting from completing the survey, they were instructed to contact the Emotional Distress Hotline, a national mental health hotline, available 24/7 for free at 1-800-LIFENET. When SurveyMonkey indicated to the researcher that 100 qualifying responses had been received, the researcher downloaded and analyzed the data.

Participants are at least 18 years of age and are full-time employees in the United States of America (USA). Respondent age, gender, race, educational background, and marital status is consistent with US demographic statistics for full-time employees. SurveyMonkey Audience ensured that the gender distribution of the results reflects the gender distribution in USA census data. SurveyMonkey Audience also ensured that the age distribution in the results reflected the age distribution in USA census data across the following brackets: 18-44; 45 and older.

Measures

The researcher used this study to examine the relationship between employees with a flexible work arrangement (e.g., work from home, remote worker, work from anywhere) and the presence of work addiction. The electronic questionnaire contained 7 items from the Bergen Work Addiction Scale (BWAS). The BWAS is a psychometrically validated scale for the assessment of work addiction (Andreassen et al., 2012). Participants answered 4 additional items that pertained directly to their flexible work arrangement and 5 items to collect demographic information, for classification purposes.

Demographics Questionnaire

The demographics questionnaire contained 5 items to provide information about the participants. The data gained in this section of the questionnaire helped to explain factors that affect participant responses, outside of the relationship between the variables being examined.

Content included age, race/ethnicity, gender identity, education, and marital status. A copy of the full questionnaire can be found in Appendix B.

Bergen Work Addiction Scale (BWAS)

The BWAS is a psychometrically validated scale for the assessment of work addiction, and has been demonstrated to have good psychometric properties (Andreassen et al., 2012). This questionnaire contains 7 items, each reflecting the seven core elements of addiction: salience, mood modification, tolerance, withdrawal, conflict, relapse, and problems (Andreassen et al., 2012). Each item is rated on a 5-point Likert scale (‘‘never’’, ‘‘rarely’’, ‘‘sometimes’’, ‘‘often’’ and ‘‘always’’). A participant is considered work addicted if they score a 4 (often) or 5 (always) on 4 or more questionnaire items (cut-off score of 25). A copy of the full questionnaire can be found in Appendix B.

Based on existing data, the BWAS has a relatively high content, convergent, and discriminative validity. The content validity of the BWAS is calculated by comparing the content of the measure to the content empirically proven to define the construct of work addiction (Andreassen et al., 2012). There are seven core elements of addiction represented by the 7 items in the BWAS and as a result, is argued to have relatively high content validity in terms of the addiction field (Andreassen et al., 2012). To understand the convergent and discriminative validity of the BWAS, two other workaholism scales (i.e., the WorkBAT and the WART) are used to compare the latent score correlation (Andreassen et al., 2012). The correlation coefficients were 0.65 and 0.35, respectively, demonstrating a moderate to high correlation between the BWAS and similar work addiction questionnaires (Andreassen et al., 2012). In terms of reliability, the BWAS achieved Chronbach’s alpha scores of 0.80 or higher (Andreassen

et al., 2012). The scores derived from the BWAS support its use as a continuous or dichotomous variable for classifying individuals as work addicted or not (Andreassen et al., 2012).

Flexible Work Arrangements:

The questionnaire contains 4 items to describe the participant's flexible work arrangements to help the researcher to examine the relationship between the conditions and work addiction. The questions in this section require yes/no, short answer, and/or multiple choice. A copy of the full questionnaire can be found in Appendix B.

Procedures

Questionnaire

The questionnaire was designed in SurveyMonkey, using the Page Logic feature to create 2 pre-screening questions. The first pre-screening question was Informed Consent, and the second determined if the subject has a flexible work arrangement ("Do you have a flexible work arrangement with your employer (includes work from home, remote worker, and work from anywhere arrangements)?"). The remaining items regarding demographic information, work addiction, and time spent working were added to the questionnaire and all items were marked to require an answer.

Participants

Participants were recruited online via SurveyMonkey Audience. There was a cost to use SurveyMonkey Audience based on sample size, survey length, and targeting criteria. The researcher created two separate audience profiles for the questionnaire. The audience profile for questionnaire A was created using the Full-Time Employee audience profile. This profile created default target criteria that includes participant location (USA), all genders (the distribution in the results will reflect the distribution in census data), age: 18–44, and 45 or older (the distribution in

the results will reflect the distribution in census data), all incomes, and full-time employment status. Next, the sample size was set to 50 to account for a +/- 6% response rate and ensure that enough data was collected to meet sample size requirements. The final step of the participant selection design was to add custom pre-screening items to the questionnaire to ensure that only responses that could be used are counted as part of the 50 participants. As part of this option, the researcher selected an estimated response rate that reflects the percentage of people expected to qualify for the study based on the screening questions. The researcher selected 35-49% response rate for this questionnaire. The audience profile for questionnaire B was also created using the Full-Time Employee audience profile and the sample size was set to 50. This questionnaire also contained custom pre-screening items to ensure that only responses that could be used are counted as part of the 50 participants. The researcher set the estimated response rate to 35-49% for questionnaire B. Payment was required, and upon receipt, SurveyMonkey Audience sent out the questionnaire and collected the responses.

Data Analysis

SurveyMonkey notified the researcher by email that the data collection process was complete after 48 hours. The researcher logged into the SurveyMonkey account to review the data and then exported it into a text delimited file. This file was imported into SPSS where statistical analysis was performed.

Data Management

Participants were recruited online via SurveyMonkey Audience. This service provides anonymous responses from a population of more than 144 million people across the globe. As a result, the researcher had no access to IP addresses and participant responses are assured to remain anonymous. Once data was received by SurveyMonkey, the researcher was informed and

the participant response data was downloaded into an SPSS database for analysis. The researcher and thesis advisor were the only parties with access to the strong password that protects the SPSS dataset. The dataset contained no coded identifiers and, as such, remained completely anonymous.

The researcher stored all electronic data on an encrypted flash drive and not on any computer hard drive. The researcher retains the data set and related files for a minimum of five years after the study completion, in case questions arise about the analyses. After five years, the researcher will destroy the data using the current Department of Defense data destruction standards. The researcher will likely choose an affordable technique, such as encryption, pending technology at the time.

Statistical Analysis

IBM's SPSS statistical software, version 28 was used to conduct statistical analysis on the data for the within-subjects experimental design. Descriptive statistics were performed on the demographic data for classification purposes. A t-test was used to compare the mean responses between participants who work from home and those who do not work from home. An independent group t-test was applied to each questionnaire item to determine if a statistical difference exists between the two populations. Pearson correlation was used to summarize the relationship between working from home and the presence of work addiction.

Results

To determine if a statistically significant relationship exists between having a WFH arrangement and the presence of work addiction, multiple statistical tests were applied and analyzed. Descriptive statistics, frequencies tables, one-way ANOVA, and correlation tables were used to determine if a statistically significant relationship exists between the variables. As a

result, the data analysis determined response frequencies, central tendency, standard deviation, skewness, range, p-value, confidence interval, and correlation.

Participant and Demographic Characteristics

SurveyMonkey Audience sent the questionnaire to 100 potential participants, of which 8 declined informed consent, and 6 failed to complete required questionnaire items. These questionnaires were discarded. The remaining 86 participant questionnaires were used to provide data for this study. Participants identified as 55.8% female, 43% male, and 1.2% transgendered. Participants ranged in age from 18 to 68 years-old with a mean age of 38 years-old. The demographic data also showed that 53.5% of participants identified their race and ethnicity as white or caucasian, 19.8% as Asian/Pacific Islander, 10.5 % as Black or African American, and 9.3% Hispanic. A majority of participants (48.8%) were married, while 27.9% of participants identified as single, never married. More than 40% of participants reported a Bachelor degree as the highest level of education completed, 18.6% had completed some college courses but had not obtained a degree, 15% had a Masters degree, and 14% had earned their high school diploma or GED. Additional information regarding participant and demographic information can be found in Appendix C, Tables 1 and 2.

Flexible Work Arrangements

Of the 86 participants, 66.3% indicated that they had a flexible work arrangement (including work from home, remote worker, and work from anywhere arrangements) with their employer. A majority of participants (57%) identified as having a nonexempt employment status. When asked how many hours participants averaged working each week over the last year, 46.5% worked 40 hours or less and 40.7% worked between 41 and 50 hours. Responses ranged from 40 hours or less to more than 60 hours, with a mean value of 45. The 57 participants who indicated

that they had a flexible work arrangement spent an average of 44.3% of their working hours in a remote location. Detailed information about participant responses to the flexible work arrangement items on the questionnaire can be found in Appendix C, Tables 3 and 4.

Work Addiction

The BWAS was used to measure the presence of work addiction amongst the participants. The 7-item questionnaire requires participants to respond using a 5-point Likert-type scale, where “never” = 1, “rarely” = 2, “sometimes” = 3, “often” = 4, and “always” = 5. To be considered addicted to work a participant would need to select a 4 or 5 on 4 or more questionnaire items. Based on the 5-point scale, the cutoff score for work addiction on the BWAS is 25. The average score for participants was 18.9, well below the threshold score for work addiction. The distribution of scores is slightly positively skewed with a skewness value of .147. Since the skewness value is between -0.5 and 0.5, the distribution is considered to be approximately symmetric. The range of scores was 28, with a standard deviation of 5.9, indicating that a majority of participants responded close to the mean score for each of the 7 BWAS items more frequently than not.

The 7 items on the BWAS questionnaire all had a mode value of “sometimes” (3), although responses ranged between 1 and 5 for every item. The standard deviation value for each of the items ranged from 1.042 to 1.271 and all skewness values placed between -0.5 and 0.5, indicating a normal distribution. All of the items were positively skewed, except for Item 2 which had a negative skewness value of -0.113.

When analyzed via ANOVA, only Item 2 provided a p-value that is between -0.05 and 0.05. This suggests that a statistically significant difference exists between participants with remote working arrangements versus those who do not have such an arrangement when it comes

to spending more time working than initially intended. Based on the p-value associated with the total test score and 6 of the 7 BWAS questionnaire items, this researcher must fail to reject the null hypothesis, as the data demonstrates that the presence of a remote working arrangement had no statistically significant effect on whether or not an employee experiences work addiction in this sample. Failing to reject the null hypothesis is further supported by ANOVA effect size analysis, which showed that the independent variable of having a WFH arrangement had no impact on how participants responded to the BWAS questionnaire items, and therefore no impact on the individual presence of work addiction. Detailed information about participant responses to the flexible work arrangement items on the questionnaire can be found in Appendix C, Tables 6, 7, and 8.

Correlational Analyses

The relationship between the variables was examined using a Pearson Correlation. The BWAS questionnaire items were computed individually as well as analyzing the overall scores, computed by adding the scores from each of the 8 questionnaire items resulting in a minimum score of 8 and a maximum score of 40. The mean BWAS overall score was 18.9 (SD = 5.90). The relationship between WFH and the work addiction variables is negative, weak, and not statistically significant ($r(84) = -.14$, $p = 0.00$). No relationship existed between the individual BWAS items and WFH variables, except for questionnaire items 2 and 4. Item 2, “How often during the last year have you spent much more time working than initially intended?” has a negative, weak in strength, statistically significant relationship with WFH ($r(84) = -.28$, $p = 0.01$). This suggests that those who have a WFH arrangement are more likely to select a higher score from the Likert-type scale (e.g. “Sometimes”, “Often” or “Always”) for the second item on the BWAS. Item 4, “How often during the last year have you been told by others to cut down on

work without listening to them?" has a negative relationship that is weak in strength and is not statistically significant ($r(84) = -.14$, $p = 0.00$).

Discussion

Based on the data provided by the research participants, this study suggests that the physical environment where work is performed may not have as much of an influence as the limited past research suggests on an employee developing work addiction or work addiction symptoms. Thus, further research is still needed to fully understand and define exactly how an individual's work environment impacts the presence of work addiction.

Implications

The BWAS has demonstrated excellent validity and reliability when used in past research studies. The results from this research are believed to be credible and to have resulted from an experiment free from flaws that would have compromised internal validity. However, because human participants were used, individual bias, including personal bias and cognitive bias may have influenced participant response selection on the questionnaire. Furthermore, because a Likert-type scale was used, certain types of bias, such as central tendency bias, and social desirability bias may have also influenced the participant's response.

Survey data is an important part of research. Researchers rely on participants providing truthful and accurate responses to questionnaire items to make inferences about the general population. When participant responses are biased, it can lead to inaccurate conclusions. The type of tool that is used to collect participant responses can influence their selection and be a source of bias itself (Douven, 2018). Likert-type questionnaires are commonly associated with central tendency bias, which is believed to encourage participants

to avoid the endpoints of a response scale, creating a preference for the midpoint (Douven, 2018). Douven (2018) posits that central tendency is a result of people being influenced by a baseless, yet implicit belief that the truth tends to lie somewhere in the middle and by selecting a middle-value option they will appear less extreme. When participants change their answer to give a more favorable appearance or feel better about themselves, it is considered social desirability bias (Larson, 2019). Resulting from social norms, social desirability bias motivates subjects to provide certain responses based on whether a positive or negative answer would be preferred socially (Larson, 2019). Examples of social desirability bias include subjects underreporting experiences like illicit drug use, smoking, and racist attitudes while overreporting is common for areas like exercise, recycling, and voting (Larson, 2019). In this study, for 6 of the 7 BWAS items the most frequently selected response was 3 ("sometimes"). As this is the middle option on the Likert scale, participant response may have been influenced by central tendency bias. Additionally, participants may have selected the middle option, often interpreted as a neutral selection, to provide a more favorable appearance (e.g. They are not overly engaged in work, nor uninterested in their job). This type of influence, if severe enough, could have contributed false negatives in this study, forcing the researcher to fail to reject the null.

The external validity of this study is believed to have been well controlled to ensure that results could be generalized beyond the sample population. The demographic information collected from the participants suggests a diverse sample that includes a 40 year age range and a nearly equal number of male and female participants. The race and ethnicity responses indicate that half of the sample population was white/caucasion. This is a realistic representation of a typical US workplace that offers WFH arrangements to its employees.

Ideally, the sample population would have come from a single company to reduce the amount of influence that environmental (e.g. flex-time/PTO offered by employer, type of work being performed) and individual factors (e.g. job satisfaction levels, turnover intention) had on the participant responses.

Crowdsourcing marketplace services like SurveyMonkey Audience (used in this study) and Amazon's MTurk can be used to recruit participants for research purposes. Studies have shown that participant populations recruited through these services tend to have a broader range of ages, ethnic diversity, location, and more work/life experience than participants recruited through traditional methods (Engle et al., 2020). Researchers have also observed that participants from crowdsourcing marketplace services are less susceptible to certain types of bias, like socially desirable reporting, and demonstrated equal or greater levels of effort compared to participants recruited through other means (Engle et al., 2020). Furthermore, participants from these services have been found just as likely as participants recruited from other sources to answer all questions of a survey and showed a similar catch-trial failing rate (Engle et al., 2020). In a study by Engle et al. (2020), test–retest reliabilities ranged from good to excellent and were comparable to those observed in samples collected using traditional methods. When participant response samples from crowdsourcing marketplace services and those recruited from traditional methods are compared, researchers found that the responses between the two groups were not significantly different (Engle et al., 2020). Thus, external validity is believed to be unaffected, if not improved by using crowdsourcing marketplace services like SurveyMonkey Audience to recruit participants.

Similarities and Differences

This study failed to detect evidence of a statistically significant relationship between work addiction and a work from home arrangement, outside of a slight correlation between the number of hours worked and working from home. The dependent variable in this study, the presence of a WFH arrangement, had not previously been analyzed with work addiction data. The relationship between working more hours than required and the presence of work addiction has been demonstrated in other studies like Yang et al. (2020) and is consistent with the findings of this study. Yang et al. (2020) identified working long hours as a predictive symptom of work addiction in employees. Those who suffer from work addiction spend a significant amount of time working, are reluctant to disengage themselves from work, and work beyond what is expected by their employer and/or what is required to maintain their socioeconomic status (Yang et al., 2020). Although the ability to WFH has no direct correlation with work addiction, it may possibly have an indirect effect as it creates an opportunity for employees to work more hours than their colleagues who work from the office.

Limitations

Work addiction studies like those by Yang et al. (2020), Alessandri et al. (2020), and Reiner et al. (2019) examined the influence of personality factors on the presence of work addiction. Unlike many other studies analyzing work addiction, the current study did not consider personality influences on work addiction, as it sought to demonstrate the presence of an environmental influence on work addiction. In a study by Mazzetti et al. (2020), the researchers determined that work engagement fulfills a psychological state that results from the combination of three key components. The first component is high levels of energy and resilience experienced while working (i.e., vigor). The second is feelings of enthusiasm,

inspiration, and pride. The final component is a concentration so intense that the individual finds it difficult to stop working. The third component listed describes conduct that is shared by the work addicted and engaged employees since they are both fully immersed in their work (Mazzetti et al., 2020). Thus, to determine a presence or likelihood of work addiction, Mazzetti et al. (2020) suggests that the second factor (feelings of enthusiasm, inspiration, and pride) is most seriously considered. Feelings or emotion have a significant influence on how humans cognitively process information, including perception, attention, learning, memory, reasoning, and problem solving (Mazzetti et al., 2020). Therefore, it is more efficacious to examine work addiction and causes of work addiction within the context of personality, as it is at the very least a mediating factor. Future research should examine how personality factors may affect an individual's perception of work and remote working arrangements, and how those two factors can combine to increase an individual's experience with work addiction.

Another limitation of this study is the use of the BWAS as the sole measure of work addiction. This scale relies on a cut-off value to determine whether or not work addiction is present in the individual. However, the psychometric properties of this questionnaire have not been thoroughly tested, as a gold standard against which the BWAS cutoff value can be evaluated does not exist (Andreassen et al., 2012). It is unlikely that such a standard will ever exist until the APA adds work addiction to the DSM. Although many addiction diagnoses are made when an individual meets a given number of criteria, and the BWAS cutoff is aligned with this common approach, without a formal declaration of the symptoms of work addiction, the BWAS cutoff and criteria will remain uncertain (Andreassen et al., 2012).

Future studies should explore the usefulness and applicability of the BWAS cutoff value to determine the presence of work addiction.

Conclusions

Work addiction describes an employee who engages in compulsive work to the extent that it negatively impacts personal aspects of their life. Studies that examine work addiction find that employees who are most likely to experience work addiction symptoms are those who work long hours and withdraw from relationships. During the 2020-2021 Covid-19 pandemic, many organizations allowed employees to WFH to reduce infection. As a result, employees found themselves distanced from others and working longer days - two predicting behaviors of work addiction. Therefore, determining if a relationship exists between work addiction and an employee having a WFH arrangement was important because it has the potential to influence how organizations approach WFH arrangements in the future. Also, there was no empirical research that examined a correlation between these two variables in the field. The current study filled a research gap, by examining the relationship between where a full-time employee works and the presence of work addiction. Ultimately, this study was unable to detect a statistically significant relationship between working from home and work addiction.

Although this study did not demonstrate a relationship between a flexible work arrangement and the presence of work addiction, it is possible that the presence of a flexible work arrangement impacts the employee experience in other ways. For example, the presence of a flexible work arrangement may increase job satisfaction levels and reduce workplace attrition overtime. Therefore, as organizations continue to embrace flexible work arrangements for their employees, it is necessary to pay close attention to the effects on individual and organizational performance. Although a WFH arrangement does not influence

the presence of work addiction, it does create an environment where symptoms related to work addiction can thrive.

References

Alessandri, G., De Longis, E., Perinelli, E., Balducci, C., & Borgogni, L. (2020). The costs of working too hard: Relationships between workaholism, job demands, and prosocial organizational citizenship behavior. *Journal of Personnel Psychology, 19*(1), 24–32. https://doi.org/10.1027/1866-5888/a000240

Andreassen, C. S., Griffiths, M. D., Hetland, J. & Pallesen, S. (2012). Development of a work addiction scale. *Scandinavian Journal of Psychology 53*, 265–272. https://doi.org/10.1111/j.1467-9450.2012.00947.x

Andreassen, C. S., Nielsen, M. B., Pallesen, S., & Gjerstad, J. (2019). The relationship between psychosocial work variables and workaholism: Findings from a nationally representative survey. *International Journal of Stress Management, 26*(1), 1–10. https://doi.org/10.1037/str0000073

Bjärntoft, S., Hallman, D. M., Mathiassen, S. E., Larsson, J., & Jahncke, H. (2020). Occupational and individual determinants of work-life balance among office workers with flexible work arrangements. *International Journal of Environmental Research and Public Health, 17*(4). https://doi.org/10.3390/ijerph17041418

Douven, I. (2018). A Bayesian perspective on Likert scales and central tendency. *Psychonomic Bulletin & Review, 25*(3), 1203–1211. https://doi-org.libauth.purdueglobal.edu/10.3758/s13423-017-1344-2

Engle, K., Talbot, M., & Samuelson, K. W. (2020). Is Amazon's Mechanical Turk (MTurk) a comparable recruitment source for trauma studies? *Psychological Trauma: Theory, Research, Practice, and Policy, 12*(4), 381–388. https://doi-org.libauth.purdueglobal.edu/10.1037/tra0000502

Hsu, Y.-Y., Bai, C.-H., Yang, C.-M., Huang, Y.-C., Lin, T.-T., & Lin, C.-H. (2019). Long hours' effects on work-life balance and satisfaction. *BioMed Research International*, 1–8. https://doi.org/10.1155/2019/5046934

Gigauri, I. (2020). Effects of Covid-19 on human resource management from the perspective of digitalization and work-life-balance. *International Journal of Innovative Technologies in Economy, 4*(31). https://doi.org/10.31435/rsglobal_ijite/30092020/7148

Larson, R. B. (2019). Controlling social desirability bias. *International Journal of Market Research, 61*(5), 534–547. https://doi-org.libauth.purdueglobal.edu/10.1177/1470785318805305

Lichtenstein, M. B., Malkenes, M., Sibbersen, C., & Hinze, C. J. (2019). Work addiction is associated with increased stress and reduced quality of life: Validation of the Bergen Work Addiction Scale in Danish. *Scandinavian Journal of Psychology, 60*(2), 145–151. https://doi.org/10.1111/sjop.12506

Liu, D., Chen, Y., & Li, N. (2021). Tackling the negative impact of COVID-19 on work engagement and taking charge: A multi-study investigation of frontline health workers. *Journal of Applied Psychology*. https://doi.org/10.1037/apl0000866

Mazzetti, G., Guglielmi, D., & Schaufeli, W. B. (2020). Same involvement, different reasons: How personality factors and organizations contribute to heavy work investment. *International Journal of Environmental Research and Public Health, 17*(22). https://doi-org.libauth.purdueglobal.edu/10.3390/ijerph17228550

Popovici, V. & Popovici. A. L. (2020). Remote work revolution: Current opportunities and challenges for organizations. *Ovidius University Annals: Economic Sciences Series, XX*(1), 468–472.

Reiner, S. M., Balkin, R. S., Gotham, K. R., Hunter, Q., Juhnke, G. A., & Davis, R. J. (2019). Assessing life balance and work addiction in high-pressure, high-demand careers. *Journal of Counseling & Development, 97*(4), 409–416. https://doi.org/10.1002/jcad.12289

Robinson, B. (2020, June 20). *The addiction nobody talks about but everybody is doing and 10 solutions*. Forbes. https://www.forbes.com/sites/bryanrobinson/2020/06/20/the-addiction-nobody-talks-about-but-everybody-is-doing-and-10-solutions/?sh=2c139168467c

SurveyMonkey. (2021). *Help center*. https://help.surveymonkey.com/

Trougakos, J. P., Chawla, N., & McCarthy, J. M. (2020). Working in a pandemic: Exploring the impact of COVID-19 health anxiety on work, family, and health outcomes. *Journal of Applied Psychology, 105*(11), 1234–1245. https://doi.org/10.1037/apl0000739.supp

Yang, X., Qiu, D., Lau, M. C. M., & Lau, J. T. F. (2020). The mediation role of work-life balance stress and chronic fatigue in the relationship between workaholism and depression among Chinese male workers in Hong Kong. *Journal of Behavioral Addictions*, *9*(2), 483–490. https://doi.org/10.1556/2006.2020.00026

Appendix A

Purdue University Global

Consent for Participation in Research

"*The Relationship Between Work from Home and Work Addiction*"

CONCISE SUMMARY

You are being asked to be a participant in a research study about how flexible work arrangements impact work addiction. This research aims to improve understanding of how a flexible work arrangement (e.g., work from home, remote work, telecommuting, etc.) influences work addiction. The study will create scientific data to describe how these variables impact one another. The 16 item questionnaire will take approximately 10 minutes to complete. The questionnaire will collect non-identifying demographic information and participant response to questions about individual experience with flexible work arrangements. Participants who agree to Informed Consent, are at least 18 years of age and working full time in the United States are eligible to participate. Those who participate in the study will experience direct benefits nor encounter significant risks during or after their participation.

Why am I being asked?

You are being asked to be a participant in a research study about how flexible work arrangements, such as working from home, impact work addiction. This research study is being conducted by Melanie Whipple, a Master's of Science in Psychology student at Purdue University Global. You have been asked to participate in the research because you are a part of SurveyMonkey Audience and may be eligible to participate. We ask that you read this form and ask any questions you may have before agreeing to be in the research.

Your participation in this research is voluntary. Your decision whether or not to participate will not affect your current or future relations with Purdue University Global. If you decide to participate, you are free to withdraw at any time without affecting that relationship.

What is the purpose of this research?

This research aims to improve understanding of how a flexible work arrangement influences the presence of work addiction. The study will create scientific data to describe how these variables impact one another.

What procedures are involved?

If you agree to be in this research, we would ask you to do the following things:

1. Agree to Informed Consent.
2. Complete a 10-minute questionnaire about your experience with flexible work arrangements.

Approximately 100 participants may be involved in this research at Purdue University Global.

What are the potential risks and discomforts?

There are no risks, discomforts and/or inconveniences associated with this research.

Are there benefits to taking part in the research?

There are no direct benefits to participants for participating in this research.

What about privacy and confidentiality?

No one will know that you are a research subject because this research is totally anonymous. No information about you, or provided by you during the research, can ever be disclosed to others because no information that can possibly identify you as an individual will be collected. When the results of the research are published or discussed in conferences, no information will be included that could ever reveal your identity.

Will I be reimbursed for any of my expenses or paid for my participation in this research?

At this time, no reimbursement is available for participation in this research. Participants who complete the questionnaire may be eligible to receive benefits from SurveyMonkey Audience.

SurveyMonkey will donate 50 cents to the charity of the participant's choice every time a survey is completed.

Can I withdraw from the study?

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study.

Whom should I contact if I have questions?

The researcher conducting this study is Melanie Whipple. You may ask any questions you have now. If you have questions later, you may contact the researchers at: Email: whipple.melanie@gmail.com. You may also contact the researcher's thesis adviser, Dr. Gabrielle Blackman PhD, at gblackman@purdueglobal.edu.

What are my rights as a research subject?

If you feel you have not been treated according to the descriptions in this form, or you have any questions about your rights as a research subject, you may contact the Institutional Review Board (IRB) at Purdue University Global through the following representative:

Susan Pettine, IRB Chair

Email: spettine@purdueglobal.edu

Remember: Your participation in this research is voluntary. Your decision whether or not to participate will not affect your current or future relations with Purdue University Global [or insert the names of any other cooperating institutions as well]. If you decide to participate, you are free to withdraw at any time without affecting that relationship.

You may keep a copy of this form for your information and your records.

Signature of Subject

I have read (or someone has read to me) the above information. I have been given an opportunity to ask questions and my questions have been answered to my satisfaction. I agree to participate in this research. I have been given a copy of this form.

_____ _____

Signature Date

_____

Printed Name

_____ _____

Signature of Researcher Date (must be same as subject's)

Appendix B

Demographic Information:

1. Enter your age:
2. What is your gender identity?
    a. Woman
    b. Man
    c. Transgender
    d. Non-binary/non-conforming
3. What is your race/ethnicity?
    a. American Indian or Alaskan Native
    b. Asian/Pacific Islander
    c. Black or African American
    d. Hispanic
    e. White/Caucasian
    f. Multiple Ethnicity/Other
4. What is your marital status?
    a. Single, never married
    b. Committed partnership
    c. Married
    d. Separated/Divorced
    e. Other
5. What is the highest level of education you have attained?
    a. Less than a high school degree

b. High School degree or equivalent (GED)

c. Some college, but no degree

d. Associate degree

e. Bachelor degree

f. Masters degree

g. Doctoral degree

Flexible Work Arrangements:

1. Do you have a flexible work arrangement with your employer (includes work from home, remote worker, and work from anywhere arrangements)?

    a. Yes

    b. No

2. How are you paid by your employer?

    a. I receive an hourly wage and am eligible to earn overtime.

    b. I receive a salary.

3. During the last year, on average, how many hours do you work each week?

    a. 40 hours or less

    b. 41-50 hours

    c. 51-60 hours

    d. more than 60 hours

4. During the last year, what percentage of the hours you work are spent working from home or another remote location?

The Bergen Work Addiction Scale (BWAS):

Instructions: Below you find seven questions related to your work/job. Answer each of the seven questions by selecting the one response alternative for each question that best describes you. All items are scored along the following scale: ‘‘never’’ = 1, ‘‘rarely’’ = 2, ‘‘sometimes’’ = 3, ‘‘often’’ = 4, ‘‘always’’ = 5.

How often during the last year have you ...

1. Thought of how you could free up more time to work?
    a. Never
    b. Rarely
    c. Sometimes
    d. Often
    e. Always
2. Spent much more time working than initially intended?
    a. Never
    b. Rarely
    c. Sometimes
    d. Often
    e. Always
3. Worked in order to reduce feelings of guilt, anxiety, helplessness, and depression?
    a. Never
    b. Rarely
    c. Sometimes
    d. Often
    e. Always

4. Been told by others to cut down on work without listening to them?
    a. Never
    b. Rarely
    c. Sometimes
    d. Often
    e. Always
5. Become stressed if you have been prohibited from working?
    a. Never
    b. Rarely
    c. Sometimes
    d. Often
    e. Always
6. Deprioritized hobbies, leisure activities, and exercise because of your work?
    a. Never
    b. Rarely
    c. Sometimes
    d. Often
    e. Always
7. Worked so much that it has negatively influenced your health?
    a. Never
    b. Rarely
    c. Sometimes
    d. Often

e. Always

Appendix C

Table 1

Demographic Statistics (N=86)

Demographic Questionnaire Item	Mean	Median	Mode	Min	Max
Gender Identity	NA	NA	Female	NA	NA
Age	38	36	28[a]	18	68
Race/Ethnicity	NA	NA	White/Caucasian	NA	NA
Marital Status	NA	NA	Married	NA	NA
Highest Level of Education	NA	NA	Bachelor Degree	NA	NA

a. *Multiple modes exist. The smallest value is shown*

Table 2

Demographic Frequencies Table

Demographic Questionnaire Item	N	%
Gender Identity	86	
Male	37	43
Female	48	55.8
Transgender	1	1.2
Age	86	
18-29 years	23	26.7
30-44 years	34	39.5
45-60 years	22	25.6
>60 years	7	8.2

Race and Ethnicity	86	
American Indian or Alaskan Native	3	3.5
Asian/Pacific Islander	17	19.8
Black or African-American	9	10.5
Hispanic	8	9.3
White or Caucasian	46	53.5
Multiple Ethnicities/Other	3	3.5
Marital Status	86	
Single, Never Married	24	27.9
Committed Partnership	11	12.8
Married	42	48.8
Separated/Divorced	9	10.5
Education	86	
Less than a high school degree	2	2.3
High school degree or equivalent	12	14
Some college, but no degree	16	18.6
Associate degree	6	7
Bachelor degree	35	40.7
Masters degree	13	15.1
Doctoral degree	2	2.3

Table 3

WFH Statistics (N=86)

WFH Questionnaire Item	Mean	Median	Mode	Min	Max
WFH Arrangement	NA	NA	Yes	NA	NA
Employment Type	NA	NA	Nonexempt	NA	NA
Weekly Hours Worked	45	50	40	< = 40	> 60
Percentage of Hours Worked Remotely	44.3	40	0	0	100

Table 4

WFH Frequencies Table

WFH Questionnaire Item	N	%
WFH Arrangement	86	
Yes	57	66.3
No	29	33.7
Employment Type	86	
Nonexempt	49	57
Exempt	37	43
Weekly Hours Worked	86	46.5
< = 40 hours	40	40.7
41 - 50 hours	35	8.1
51 - 60 hours	7	4.7
> 60 hours	4	4.7
Percentage of Hours Worked Remotely	86	
0%	31	36

10%	2	2.3
20%	6	7
30%	3	6.6
40%	3	3.5
50%	7	8.1
60%	3	3.5
70%	4	4.7
80%	2	2.3
90%	4	4.7
100%	21	24.4

Table 5

BWAS Statistics

(N=86); Likert-type scale: ‘‘never’’=1, ‘‘rarely’’=2, ‘‘sometimes’’=3, ‘‘often’’=4, ‘‘always’’=5.

Item	Mean	Median	Mode	Std. Dev	Skew-ness	Std. Error of Skewness	Range	Min	Max
Item 1	2.74	3.00	3	1.042	.025	.26	4	1	5
Item 2	2.97	3.00	3	1.057	-.113	.26	4	1	5
Item 3	2.66	3.00	3	1.154	.273	.26	4	1	5
Item 4	2.53	3.00	3	1.195	.127	.26	4	1	5
Item 5	2.34	2.00	1	1.271	.534	.26	4	1	5

Item 6	2.84	3.00	3	1.197	.027	.26	4	1	5
Item 7	2.77	3.00	3	1.134	.176	.26`	4	1	5
Total Score	18.9	18	18	5.9	.147	.26	28	7	35

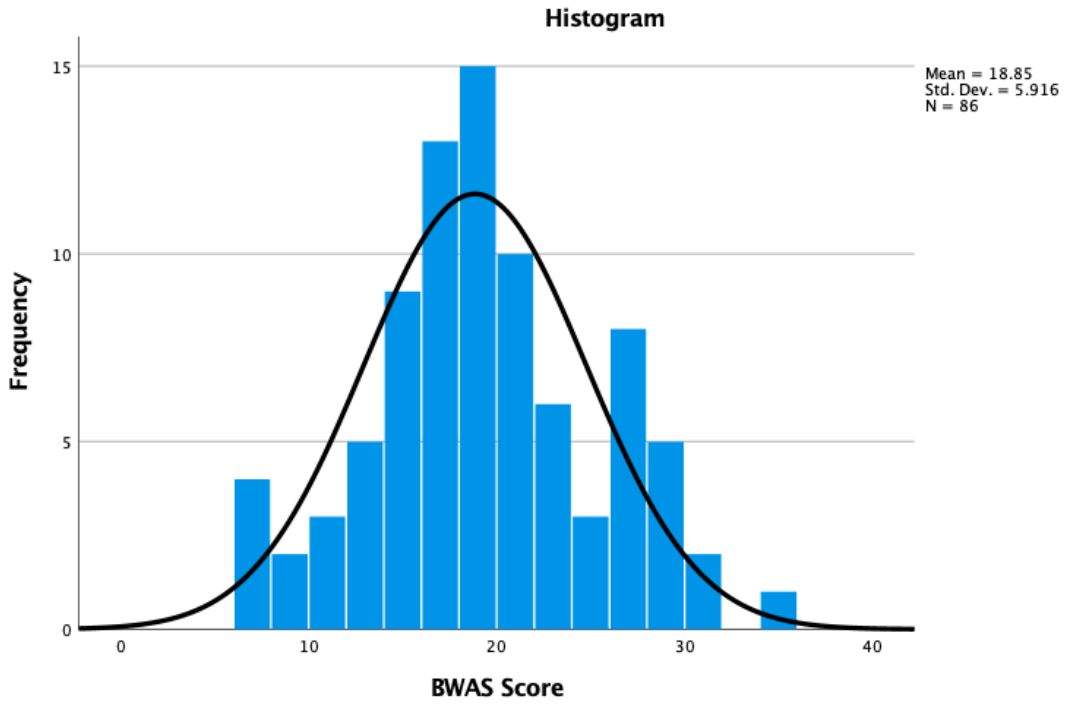

Table 6

BWAS Frequencies Table

(N=86); Likert-type scale: ‘‘never’’=1, ‘‘rarely’’=2, ‘‘sometimes’’=3, ‘‘often’’=4, ‘‘always’’=5.

How often during the last year have you ...

Questionnaire Item	N	%
Thought of how you could free up more time to work?	86	
Never	13	15.1
Rarely	16	18.6
Sometimes	42	48.8
Often	10	11.6
Always	5	5.8
Spent much more time working than initially intended?	86	
Never	9	10.5
Rarely	16	18.6
Sometimes	36	41.9
Often	19	22.1
Always	6	7.0
Worked in order to reduce feelings of guilt, anxiety, helplessness, and depression?	86	
Never	15	17.4
Rarely	25	29.1
Sometimes	26	30.2

Often	14	16.3
Always	6	7.0
Been told by others to cut down on work without listening to them?	86	
Never	24	27.9
Rarely	14	16.3
Sometimes	30	34.9
Often	14	16.3
Always	4	4.7
Become stressed if you have been prohibited from working?	86	
Never	31	36
Rarely	17	19.8
Sometimes	22	25.6
Often	10	11.6
Always	6	7.0
Deprioritized hobbies, leisure activities, and exercise because of your work?	86	
Never	15	17.4
Rarely	16	18.6
Sometimes	31	36.0
Often	16	18.6
Always	8	9.3
Worked so much that it has negatively influenced your health?	86	
Never	13	15.1

Rarely	21	24.4
Sometimes	32	37.2
Often	13	15.1
Always	7	8.1

Table 7

BWAS Analysis of Variance Table (One Way ANOVA)

BWAS Questionnaire Item	Sum of Squares	df	Mean Square	F	Sig.
Item 1					
Between Groups	.009	1	.009	.008	.928
Within Groups	92.363	84	1.100		
Total	92.372	85			
Item 2					
Between Groups	7.477	1	7.477	7.185	.009
Within Groups	87.418	84	1.041		
Total	94.895	85			
Item 3					
Between Groups	.927	1	.92	.693	.407
Within Groups	112.294	84	1.337		
Total	113.221	85			
Item 4					
Between Groups	2.206	1	2.206	1.555	.216
Within Groups	119.489	84	1.419		

Total	121.395	85			
Item 5					
Between Groups	.165	1	.165	.101	.752
Within Groups	137.056	84	1.632		
Total	137.221	85			
Item 6					
Between Groups	.953	1	.953	.663	.418
Within Groups	120.768	84	1.438		
Total	121.721	85			
Item 7					
Between Groups	.942	1	.942	.730	.395
Within Groups	108.407	84	1.291		
Total	109.349	85			
Total Score					
Between Groups	55.347	1	55.347	1.592	.210
Within Groups	2919.688	84	34.758		
Total	2975.035	85			

Table 8

BWAS ANOVA Effect Sizes

BWAS Questionnaire Item	Point Estimate	95% Confidence Interval	
		Upper	Lower
Item 1			
Eta Squared	0	0	.024
Epsilon Squared	-.012	-.012	.013
Omega-Squared Fixed -Effect	-.012	-.012	.012
Omega-Squared Random-Effect	-.012	-.012	.012
Item 2			
Eta Squared	.079	.005	.203
Epsilon Squared	.068	-.007	.193
Omega-Squared Fixed -Effect	.067	-.007	.191
Omega-Squared Random-Effect	.067	-.007	.191
Item 3			
Eta Squared	.008	0	.083
Epsilon Squared	-.004	-.012	.072
Omega-Squared Fixed -Effect	-.004	-.012	.071
Omega-Squared Random-Effect	-.004	-.012	.071
Item 4			
Eta Squared	.018	0	.107
Epsilon Squared	.006	-.012	.096
Omega-Squared Fixed -Effect	.006	-.012	.095

Omega-Squared Random-Effect	.006	-.012	.095
Item 5			
Eta Squared	.001	0	.052
Epsilon Squared	-.011	-.012	.041
Omega-Squared Fixed -Effect	-.011	-.012	.041
Omega-Squared Random-Effect	-.011	-.012	.041
Item 6			
Eta Squared	.008	0	.082
Epsilon Squared	-.004	-.012	.071
Omega-Squared Fixed -Effect	-.004	-.012	.070
Omega-Squared Random-Effect	-.004	-.012	.070
Item 7			
Eta Squared	.009	0	.084
Epsilon Squared	-.003	-.012	.073
Omega-Squared Fixed -Effect	-.003	-.012	.073
Omega-Squared Random-Effect	-.003	-.012	.073
Total Score			
Eta Squared	.019	0	.108
Epsilon Squared	.007	-.012	.097
Omega-Squared Fixed -Effect	.007	-.012	.096
Omega-Squared Random-Effect	.007	-.012	.096

a. ETA-squared and Epsilon-squared are estimated based on the fixed-effect model.

b. Negative but less biased estimates are retained, not rounded to zero.

Table 9

Correlation Table (N=86)

Variable	1	2	3	4	5	6	7	8	
1. BWAS Item 1	-								
2. BWAS Item 2	.40**	-							
3. BWAS Item 3	.38**	.42**	-						
4. BWAS Item 4	.33**	.57**	.49**	-					
5. BWAS Item 5	.20	.31**	.70**	.51**	-				
6. BWAS Item 6	.36**	.59**	.50**	.47**	.40**	-			
7. BWAS Item 7	.27*	.60**	.60**	.53**	.51**	.55**	-		
8. BWAS Total Score	.55**	.75**	.80**	.76**	.72**	.75**	.79**	-	
9. WFH Arrangement	.01	-.28**	-.09	-.14	-.04	-.09	-.09	-.14	-

***Correlation is significant at the 0.01 level (2-tailed).*

**Correlation is significant at the 0.05 level (2-tailed).*