

The Virtual Toll:
The Influence of Technology Use and a Virtual Work
Environment on Burnout Among Accountants

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This is to certify that the thesis/capstone project prepared by Lindsay Ott titled “The Virtual Toll: The Influence of Technology Use and Virtual Work on Burnout Among Accountants” has been completed in fulfillment of the requirements for the Smith Global Leadership Scholars program and meets the accepted standards.

As the faculty advisor for:

Lindsay Ott

I have read this paper and find it satisfactory:

A handwritten signature in black ink, which appears to read 'Robert Fuller'.

Dr. Robert Fuller

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Abstract

The accounting discipline has relatively high burnout and turnover rates compared to other professions. As this creates significant cost to firms to replace and train new talent, accounting firms are exploring how remote work arrangements can help to minimize burnout and turnover. Leveraging the Job Demands-Resources Model of Burnout, which examines the interaction between job demands and job resources with exhaustion and disengagement, we examine if the utilization of remote work lessens burnout in accounting. The moderating effect of virtuality between job characteristics and burnout is incorporated into this model and investigated in an accounting context. Data from 130 accounting professionals was collected and analyzed to examine the effect of virtual work on burnout. The findings suggest that the exhaustion dimension of burnout and nature of the work do not change based on the extent of virtual work, while the disengagement aspect and social aspects of the job are negatively influenced by the extent of virtual work. This study implies that managers and supervisors in accounting roles should be intentional and mindful of communication and connection to employees who work virtually to minimize the disengagement of an employee, ultimately decreasing the employee's level of burnout.

1. Introduction

Burnout, “a psychological syndrome in response to chronic interpersonal stressors on the job” (Maslach et al., 2001, p.399), is widely understood using three dimensions: emotional exhaustion, reduced personal accomplishment, and depersonalization. As these three dimensions increase, the degree of one’s burnout increases. Burnout was first explored in the 1970s as a phenomenon that affected human service industries (Maslach et al., 2001). As burnout was further studied and better understood by researchers, it was expanded to occupations beyond human services, including in fields where employees work primarily with information, such as the field of accounting (Demerouti et al., 2001). Burnout can lead to dissatisfaction and a lack of fulfillment in one’s career, ultimately leading to turnover. In the accounting field, turnover is a prevalent issue and comes at a significant cost to firms to replace and train new talent, so it is in firms’ best interest to minimize burnout to minimize turnover (Bullen & Flamholtz, 1985).

Past research on burnout has explored how various characteristics of the individual, the organization for which they are working, and the type of work being done can influence the degree to which someone becomes burnt out. One well-known burnout model, the Job Demands-Resources Model (JD-R), was created to explore how job demands, such as time pressure or physical workload, and job resources, such as feedback and job security, could contribute to exhaustion and disengagement, which ultimately influences burnout (Demerouti et al., 2001). The JD-R model will be utilized in this paper and applied to the accounting profession to examine factors contributing to burnout in accounting.

As an attempt to comply with work-from-home mandates during the COVID-19 pandemic and now provide employees more flexibility, companies are now offering their employees the option to work in a virtual environment. Studies have examined the relationship

between exhaustion and job satisfaction of employees depending on whether an employee is working remotely or out of the office (Morganson et al., 2010). Research has also been done to determine whether working from home is a benefit or consequence to the employee and examine the ages and demographics of people who are most likely to have an effective work-from-home experience (Leslie et al., 2012). During the COVID-19 pandemic, some research examined accountant burnout due to the sudden switch to remote work (Bakarich et al., 2022). However, there is still a need for more research on the impact of technology and virtuality on burnout, especially after the COVID-19 pandemic, and specifically in the fields that are prone to burnout tendencies. Considering accounting specifically, little research has examined which factors unique to the accounting profession have a stronger influence on burnout tendencies.

This research study will examine the impacts of technology and virtuality on burnout among accountants, leveraging the Job Demands-Resources Model of Burnout. There is a lack of recent research surrounding burnout in accounting that incorporates the effect of technology and the effect of virtuality on burnout in our current working environment. Information about accounting employees and their roles will be collected and analyzed to generate insights on the effective ways that accountants can work to minimize burnout and considerations for managers to minimize burnout among accounting professionals.

2. Literature Review

2.1 Burnout

One well-known burnout model, The Job Demands-Resources Model (JD-R) of Burnout, implies that there are job demands, which when increased could contribute to exhaustion, and job resources, which when decreased could lead to disengagement (Demerouti et al., 2001).

Disengagement and exhaustion ultimately lead to burnout in an employee (Demerouti et al.,

2001). Researchers have suggested that the JD-R can be used to examine burnout triggers in specific occupations, as every occupation may have unique demands and resources (Bakker & Demerouti, 2007). Exhaustion and disengagement are the two areas of burnout in this model, as shown in Figure 1, which will be measured in this study to examine burnout in the accounting profession.

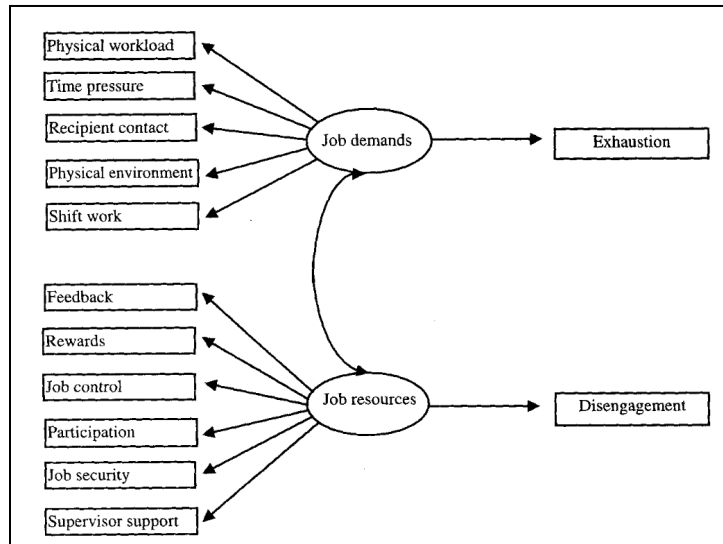


Figure 1: The Job Demands-Resources Model of Burnout (Demerouti et al., 2001)

2.1.1 Exhaustion

Based on the JD-R, exhaustion is one of the factors that creates burnout, through the presence of job demands (Demerouti et al., 2001). “Exhaustion is the central quality of burnout and the most obvious manifestation of this complex syndrome” (Maslach et al., 2001, p.402). Exhaustion occurs when someone feels stress, depletion of emotional resources, and physical fatigue due to the circumstances in which one is placed (Maslach et al., 2001). Exhaustion ultimately has an effect on an employee's performance in their role, through the presence of job demands (Bakker et al., 2004). One study, examining emotional exhaustion in accountants, found

that accountants experience higher exhaustion than many other professions, both outside of busy season and during busy season (Sweeney & Summers, 2002). This indicates that exhaustion is a prevalent issue within accounting roles. Exhaustion is a result of the workload and other demands placed on the employee, so this study will measure the degree of exhaustion, in addition to some of the prevalent demands that may lead to this elevated exhaustion level.

2.1.2 Disengagement

Disengagement is also one of the contributing factors to burnout through the presence of job resources, as represented by the JD-R (Demerouti et al., 2001). Disengagement aligns with the depersonalization dimension of burnout and occurs when someone distances themselves from their work and exhibits a negative attitude towards their job and the work they are completing (Demerouti et al., 2001). Disengagement explores the social aspects of a job, specifically an “intensive reaction in terms of an emotional, cognitive, and behavioral rejection of the job” (Bakker et al., 2004, p.84). Within the accounting field, the depersonalization and reduced personal accomplishment dimensions have been found to be higher among accountants when compared to other professions, both inside and outside of the accounting busy season (Sweeney & Summers, 2002). Disengagement can be alleviated through the presence of job resources, which will be examined in the current study.

2.2 Virtuality

Past studies have examined the impact of telework, telecommuting, and flexible work arrangements on job demands, job resources, burnout and other performance-related outcomes (Almer & Kaplan, 2002; Golden et al., 2008; Sardeshmukh et al., 2012). Flexible work arrangements, defined by working different hours on fewer days, was found to increase job satisfaction and decrease turnover intention among accountants (Almer & Kaplan, 2002).

However, the development, change, and more frequent use of technology warrants further investigation into the effects of this type of flexibility on burnout among accountants. More modern studies on this subject use the terms virtuality and virtual teams (Handke et al., 2024; Schweitzer & Duxbury, 2010; Zheng et al., 2024). Virtuality provides employees increased flexibility to work at different times, similar to flexible work arrangements, but also allows the ability to work from different locations and leverage technology to assist this working style. Virtuality encompasses multiple, different dimensions of this working style that make it different from face-to-face interactions, providing a comprehensive view of this form of work in the current day. Three of the prevalent characteristics that are present in virtual work today are working dispersed geographically, relying on information and communication technologies, and working asynchronously (Schweitzer & Duxbury, 2010).

2.2.1 Geographic Dispersion

Geographic dispersion implies that people within teams or the organization are not working in the same place, but rather in different locations or offices (Chudoba et al., 2005; Schweitzer & Duxbury, 2010). People can be in different locations to better align with their personal preferences, such as having the ability to care for children at home, or due to other outside forces, such as the COVID-19 pandemic (Zheng et al., 2024). Any degree of geographic dispersion leads to fewer face-to-face interactions, which indicates a higher degree of virtuality and likely a higher frequency of asynchronous activities (Zheng et al., 2024).

2.2.2 Information and Communication Technologies

Information and Communication technologies (ICTs) are modern technologies that enable us to communicate with one another, as an alternative to face-to-face interactions (Schweitzer & Duxbury, 2010). Papers on virtuality treat interactions through ICTs to be one of

the most defining characteristics of virtuality (Orhan, 2017). ICTs can take a variety of different forms, including email, video conferencing tools, and messaging platforms. Certain ICTs, such as video conferencing, provide a richer and more interactive experience, emulating face-to-face interaction more closely and make the degree of virtuality seem less when compared to an ICT such as email, which is highly virtual (Daft & Lengel, 1986).

2.2.3 Asynchronicity

Asynchronicity refers to the ability of someone to work during different working times than their coworkers and peers (Schweitzer & Duxbury, 2010). Virtual interactions can have high or low degree of asynchronicity, depending on if the technology is used to communicate in real-time or contains a time lag (Mesmer-Magnus et al., 2011). For example, video conferences would be synchronous, as they happen real-time, and indicate a lower degree of virtuality, while email or chat communication would be more asynchronous, as there is a time lag, and indicate a higher degree of virtuality (Dennis et al., 2008; Mesmer-Magnus et al., 2011). The asynchronicity aspect of virtuality distinguishes this type of work, making it different from interactions in the office with more frequent face-to-face, real-time interaction.

2.3 Job Demands

The JD-R implies that there are characteristics of the work itself, known as job demands, that put strain on the employee and influence one's level of exhaustion (Demerouti et al., 2001). Job demands that have been highly studied within accounting literature include Role Conflict, Role Ambiguity, and Time Pressure.

2.3.1 Role Conflict

The phenomenon of role conflict occurs when someone is faced with conflicting expectations from others, asked to complete tasks that conflict with their personal values, or have

roles that require them to exhibit conflicting behaviors (Rizzo et al., 1970). This factor is known as one of the role stressors (Schaubroeck et al., 1989). Role conflict has been extensively studied in the accounting profession, and found to be one of the factors that increases the stress and burnout levels of accountants (Smith et al., 2020). The pressure to exhibit conflicting behaviors places stress and strain on an employee, therefore increasing one's degree of emotional exhaustion (Hang-yue et al., 2005; Sardeshmukh et al., 2012). Past research on role conflict has examined the effect of flexible work and telework on role conflict. One study on the ties between role conflict and telework in other professions found that telework is negatively related to role conflict, similar to an older study done on accountants that found that flexible work arrangements made one's degree of role conflict decrease (Almer & Kaplan, 2002; Sardeshmukh et al., 2012). Role conflict occurs when someone is asked to do a task they might not necessarily perform in their own role, and face-to-face interactions in an office can increase the likelihood of being asked to complete tasks that do not align with one's role and require conflicting behaviors (Sardeshmukh et al., 2012). Within a virtual environment, the lack of these sudden, in-person interactions can decrease the opportunities for role conflict to occur, weakening the influence of role conflict on exhaustion. Therefore, we hypothesize the following:

H1a: Role conflict will be positively related to exhaustion.

H1b: Virtuality has a negative moderating effect on the relationship between role conflict and exhaustion.

2.3.2 Role Ambiguity

Role ambiguity is defined as a lack of expectations for someone in their role and a lack of behavioral requirements that outline expectations (Rizzo et al., 1970). This factor is also defined as one of the role stressors, similar to role conflict (Schaubroeck et al., 1989). Throughout the accounting literature, role ambiguity has been highly studied as a potential cause of turnover, and has been found to be one of the factors that increases both stress and burnout among accountants (Smith et al., 2020). Older research on the ties between telework and role ambiguity in other professions has found that role ambiguity is positively related to telework (Sardeshmukh et al., 2012). In the accounting profession, role ambiguity increased with the presence of remote work during COVID-19, with a higher increase seen in the staff and senior level positions (Bakarich et al., 2022). Continuing into the post-COVID working world, working within a virtual environment and having fewer face-to-face interactions should continue to decrease the presence of clear expectations and behavioral requirements, which could increase the level of role ambiguity and exhaustion that one faces. Therefore, we hypothesize the following:

H2a: Role ambiguity will be positively related to exhaustion.

H2b: Virtuality has a positive moderating effect on the relationship between role ambiguity and exhaustion.

2.3.3 Time Pressure

Time pressure occurs when people feel rushed and believe they do not have enough time to complete all of their work (Szollos, 2009). Within the accounting field, due to the nature of the work, time pressure has found to be a significant demand for many years. Studies in accounting

show that one of the main reasons for turnover is excessive overtime, which is a result of time pressure and deadlines that are necessary to meet regulatory requirements (Nouri & Parker, 2020). In public accounting, firms with an audit practice have strict deadlines for filings set by the Securities and Exchanges Commission, which could lead to elevated time pressure within the profession (Lambert et al., 2017). Similarly, public accounting firms with a tax practice are subject to the federal tax deadlines. It was found that time pressure in accounting influences one's mood, which ultimately has an impact on an accountant's degree of emotional exhaustion (Teuchmann et al., 1999). Past research on telework in other professions found that as an employee was teleworking more frequently, experienced time pressure decreased (Sardeshmukh et al., 2012). However, during the pandemic, research findings suggest that accounting professionals perceive virtual communication to take a longer time to answer questions compared to when interacting face-to-face, in addition to the boundaries between work life and home life becoming blurred due to virtual work (Bakarich et al., 2022). Although the strict deadlines for accounting work to be completed will not change depending on the degree of virtuality of an employee's environment, the perceived additional time required for virtual communications, in addition to the blurred work boundary, could increase the influence of time pressure on exhaustion for accounting professionals. Therefore, we hypothesize the following:

H3a: Time pressure will be positively related to exhaustion.

H3b: Virtuality has a positive moderating effect on the relationship between time pressure and exhaustion.

2.4 Job Resources

The JD-R Model implies that there are social characteristics of a job, known as job resources, that are meant to support the growth and development of an employee and assist with achieving work-related goals (Demerouti et al., 2001). One highly studied job resource within the accounting profession is feedback.

2.4.1 Feedback

Feedback is the interaction of employees, typically from those in a higher position, to provide developmental advice and help others to learn and grow (Linderbaum & Levy, 2010; Wang et al., 2024). Feedback can be critical to the success and retention of employees within a company (Linderbaum & Levy, 2010). Researchers have identified the importance of meaningful, intentional feedback as a way of developing an employee's skills and coaching them (Steelman et al., 2004). In an accounting context, the importance of feedback has been studied, including examining the nature of feedback, the source, and the frequency within one's role (Luckett & Eggleton, 1991). Feedback can be formal in the form of performance reviews, or informal in other communication forms. Feedback is considered to be a job resource, as it could influence one's level of engagement or disengagement in their role (Demerouti et al., 2001). One study in a different discipline found that the frequency of feedback decreased and the nature of feedback changed when employees were teleworking for an organization (Sardeshmukh et al., 2012). Even in today's virtual work, the nature and type of feedback given is different in a virtual setting compared to if an employee is working in an in-person setting. This feedback may not be as frequent or feel as personal through a virtual environment, making an employee feel even less engaged with their work and supervisors. Therefore, we hypothesize the following:

H4a: Feedback will be negatively related to disengagement.

H4b: Virtuality has a positive moderating effect on the relationship between feedback and disengagement.

2.5 Control Variables, Accountant Individual Characteristics

Research has examined how burnout can be influenced by someone's personality characteristics, namely neuroticism and extraversion.

2.5.1 Personality

The Big 5 personality traits are a set of five dimensions that are designed to represent a broad range of personality types and traits (John & Stravista, 1999). Within these five traits, the two traits within the big five inventory that have been found to influence one's degree of burnout are neuroticism and extraversion (Maslach et al., 2001). Past research on these traits has found that neuroticism was positively related to both emotional exhaustion and depersonalization, while extraversion was negatively related to emotional exhaustion and depersonalization (Deling et al., 2024). Within the accounting profession, research has shown that accountants typically exhibit more introverted behaviors (Wetmiller & Barkhi, 2021). This indicates that accountants are already subject to higher emotional exhaustion, on average, due to their introverted behaviors. Within this study, the two dimensions of neuroticism and extraversion were surveyed as controls to distinguish the effects of these characteristics on our dependent variables.

3. Methodology

3.1 Study Sample

This research utilized a survey to collect quantitative information regarding one's degree of virtuality, degree of burnout, and prevalence of job demands and resources in their accounting career. The survey instrument for this study was built on the Qualtrics platform and the subjects for this study were identified and invited to respond through the Prolific platform. Respondents for this survey were between the ages 18 to 65 and live in the United States. In order to complete this survey, participants must have had some relevant experience in an accounting setting, whether that is public accounting experience or experience in another accounting role. Any participant with any accounting experience for any length of time was invited to participate. No vulnerable populations were surveyed and no identifying information about the participants was collected. Information from 130 participants was collected in this study. The sample characteristics of the survey participants are shown in Table 1.

Table 1: Sample Characteristics

	Frequency	Percent
Gender		
Male	67	51.5
Female	63	48.5
Accounting Experience		
Public Accounting	28	21.5
Other Accounting Role	102	78.5
	Mean	Std. Dev.
Years of Experience	14.6	9.74
Age	38.7	9.87

3.2 Survey Instrument

The items from the survey instrument were derived from existing research measures. Most items were asked using a 7-point Likert scale, with responses ranging from strongly disagree to strongly agree. Variables were mean-centered to reduce multicollinearity effects.

3.2.1 Independent Variables

Role conflict was measured using an eight-item scale from Rizzo (1970). These items measure someone's degree of role conflict, with items such as "I receive incompatible requests from two or more people." These eight items have a Cronbach's alpha of $\alpha = 0.89$.

Role ambiguity was measured using a scale from Rizzo (1970). The degree of role ambiguity is measured using a six-item scale, with statements like "I know exactly what is expected of me." As the Role Ambiguity variable was created, each item was reverse-coded to associate higher levels of Role Ambiguity with a higher value. These six items have a Cronbach's alpha of $\alpha = 0.90$.

Time pressure was measured using the Chronic Time Pressure inventory from Denovan and Dagnall (2019). The eight items within this scale that measure the "cognitive awareness of time shortage" were selected, as this group of items was most applicable to this research. An example item from this inventory is "I feel rushed to do the things I have to do." Three of these items were reverse coded. These eight items have a Cronbach's alpha of $\alpha = 0.92$.

Feedback was measured using an inventory from Steelman (2004). Five items that specifically examined the "Feedback quality" were selected from Steelman's Feedback Environment Scale. Feedback quality is measured by asking an item such as "The performance feedback I receive from my supervisor is helpful." One of these items was reverse coded. These five items have a Cronbach's alpha of $\alpha = 0.84$.

3.2.2 Moderating Variables

Extent of virtuality was from Chudoba (2005). This measure includes 12 items that pertain to three different groups within virtuality: team distribution, workplace mobility, and variety of practices. Each of these three groups incorporates elements from geographic dispersion, utilizing information communication technologies, and working across time zones and organizations. Several adjustments were made to these items to make this measure more applicable to modern virtual work. This study is not concerned about the variety of practices, since all individuals worked in the US in accounting roles, suggesting limited differences to the practice of accounting. These three items were removed due to their irrelevance. Within team distribution, one item regarding languages and dialects was removed due to the content being irrelevant to examining virtuality, as varying languages does not necessarily correlate with virtual work for wholly US-based workers. Two items from workplace mobility regarding mobile devices and working at home during normal business days, as these two do not distinguish modern virtual work from any other types of work. They are commonplace items in any work today. Six items were kept in this survey, with three items regarding team distribution and three items regarding workplace mobility, with an example item being “Work with people via Internet-based conferencing applications.” Participants were asked these items on a 6-point scale, with responses ranging from “Daily” to “Yearly.” Each of these items were reverse coded so that a higher value on the scale would indicate a higher degree of virtual activity.

Time spent in a virtual environment was from Schweitzer (2010). This item was adapted for use in a general virtual environment rather than a specific virtual team. This item asks the participants to report the number of hours they spend working virtually on work activities related

to the organization, and the number of hours they work for an organization per week. Virtually was defined as work that is not face-to-face.

3.2.3 Dependent Variables

Burnout was measured using the Oldenburg Burnout Inventory, from Demerouti et al. (2010), which specifically looks at disengagement and exhaustion, two of the factors of burnout depicted in the Job Demands-Resources Model of Burnout. This inventory consists of 16 items to gauge one's level of burnout, with eight items examining exhaustion and eight items examining disengagement. Several of these items were reverse coded. An example of an item for disengagement is "Lately, I tend to think less at work and do my job almost mechanically." An example item for exhaustion is "There are days I feel tired before I arrive at work." The eight items for disengagement have a Cronbach's alpha of $\alpha = 0.88$, and eight items for exhaustion have a Cronbach's alpha of $\alpha = 0.89$.

3.2.4 Control Variables

Personality traits were measured using items measuring extraversion and neuroticism from the big 5 personality inventory (John & Stravista, 1999). Eight items were used for neuroticism and Eight items were used for extraversion. The extraversion items have a Cronbach's alpha of $\alpha = 0.89$, and the neuroticism items have a Cronbach's alpha of $\alpha = 0.89$.

Age was reported by the study participants. Participants also provided their *Work Experience*, measured as the number of years they have worked in a professional setting.

Table 2: Factor Loadings and Confirmatory Factor Analysis

	Time Pressure	Role Conflict	Feedback	Role Ambiguity
TP8	0.86	0.11	-0.05	0.09
TP7	0.85	-0.13	0.12	-0.12
TP4	0.84	0.11	-0.06	0.13
TP3	0.83	0.15	-0.01	0.07
TP1	0.83	0.11	-0.06	0.17
TP2	0.68	-0.15	0.01	-0.10
TP5	0.63	-0.17	-0.06	-0.17
TP6	0.57	0.05	0.15	-0.12
RC4	-0.06	0.85	0.07	-0.01
RC3	-0.07	0.85	0.01	0.02
RC2	-0.19	0.80	0.00	-0.01
RC1	0.08	0.65	0.02	0.07
RC7	0.17	0.64	0.07	-0.08
RC8	0.05	0.63	-0.06	-0.05
RC6	0.21	0.49	0.04	0.01
RC5	0.18	0.46	-0.13	-0.18
FB4	0.02	0.06	1.00	-0.06
FB2	0.03	0.00	0.93	-0.04
FB1	0.04	0.00	0.91	0.07
FB3	-0.02	0.04	0.90	0.02
RA5	0.14	-0.04	-0.13	0.95
RA4	0.00	0.03	-0.02	0.81
RA3	-0.10	-0.01	0.14	0.72
RA2	-0.33	0.22	-0.03	0.68
RA6	-0.02	-0.12	0.04	0.65
RA1	0.05	-0.22	0.19	0.56
RELIABILITY	0.92	0.89	0.96	0.90

As represented in Table 2, Confirmatory Factor Analysis was performed for the independent variables using an extraction of Principal Axis Factoring and Promax rotation with Kaiser Normalization. Four distinct variables were found. One item from the feedback variable was removed, as it did not align with the other four items in the construct. These results support

time pressure, role conflict, feedback, and role ambiguity as being separate constructs. Figure 2 represents the conceptual model for this research study.

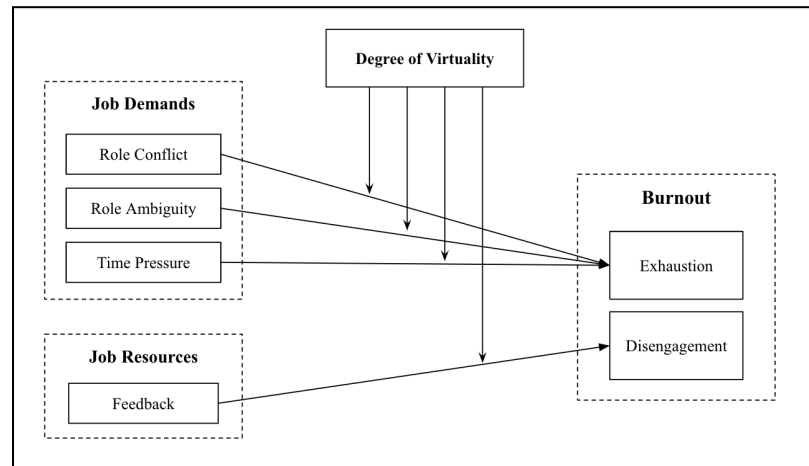


Figure 2: Conceptual Model, adapted from the Job Demands-Resources Model of Burnout (Demerouti et al., 2001)

4. Results and Discussion

4.1 Regression Results

We conducted multiple regression analysis with SPSS 29.0.0 to perform our hypothesis testing. We first examined the interaction of job demands on exhaustion (H1a, H2a, H3a) and the interaction of job resources on disengagement (H4a). Then, we examined the moderating effect of virtuality on the relationship between these relationships (H1b, H2b, H3b, H4b) by examining virtuality in terms of the hours worked virtually divided by the total hours worked per week, and also by using the variables created for work mobility and team distribution from Chudoba et al. (2005). The mean, standard deviation, reliability estimates, and correlations of each scale are presented in Table 3.

Table 3: Means, Standard Deviations, and Correlations Between the Study Variables

Variables	Mean	Std. Deviation	1	2	3	4	5	6	7	8
1. Role Conflict	3.58	1.26								
2. Role Ambiguity	2.18	0.88	.523**							
3. Time Pressure	3.73	1.45	.619**	.521**						
4. Feedback	5.44	1.27	-.304**	-.573**	-.450**					
5. Exhaustion	3.46	1.24	.476**	.617**	.720**	-.531**				
6. Disengagement	3.37	1.25	.487**	.623**	.641**	-.547**	.855**			
7. Virtual Hours	0.54	0.32	0.053	0.057	.254**	-.224*	0.158	.194*		
8. Team Distribution	5.58	0.96	-0.07	0.068	0.082	-0.075	0.023	0.001	0.07	
9. Workplace Mobility	4.22	1.04	-0.041	-0.008	-0.125	0.137	-0.096	-.183*	-.201*	.186*

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

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

Table 4: Regression Results for Main Effects and Moderating Effects on Exhaustion

Dependent Variable	Exhaustion	
	<i>Beta</i>	<i>SE</i>
(Intercept)	3.81	0.33
Role Ambiguity	0.33	0.12**
Role Conflict	-0.09	0.08
Time Pressure	0.43	0.07***
Virtual Hours	-0.32	0.26
Work Mobility	0.05	0.07
Team Distribution	0.03	0.08
Role Ambiguity X Virtual Hours	-0.01	0.37
Role Ambiguity X Work Mobility	0.03	0.11
Role Ambiguity X Team Distribution	-0.02	0.10
Role Conflict X Virtual Hours	-0.06	0.30
Role Conflict X Work Mobility	0.04	0.08
Role Conflict X Team Distribution	0.07	0.09
Time Pressure X Virtual Hours	-0.11	0.25
Time Pressure X Work Mobility	0.00	0.07
Time Pressure X Team Distribution	-0.08	0.08
Age	-0.01	0.01
Work Experience	0.00	0.01
Extraversion	-0.14	0.07*
Neuroticism	0.25	0.08**
<i>N</i>	130	
<i>R</i> ²	0.63	

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 4 presents the regression results for the exhaustion element of burnout. The Adjusted R-Squared is 0.63, implying that the factors in this model explain 63% of the variance in exhaustion. Role ambiguity and time pressure are both significant predictors of exhaustion ($p < 0.001$), which confirms Hypothesis 1a and Hypothesis 2a. The coefficients for both of these

variables are positive, meaning that increased role ambiguity leads to increased exhaustion, and increased time pressure leads to increased exhaustion. Role conflict did not show a significant relationship to exhaustion, which does not provide support for Hypothesis 3a. The interaction of virtuality, whether in hours worked, work mobility, or team distribution, does not show any influence on role ambiguity, time pressure, or role conflict. Therefore, there is no evidence to support Hypothesis 1b, Hypothesis 2b, or Hypothesis 3b. Age and work experience were not significant controlling factors contributing to exhaustion. However, extraversion showed significance at $p < 0.05$, and neuroticism showed significance at $p < 0.01$.

Table 5: Regression Results for Main Effects and Moderating Effects on Disengagement

Dependent Variable	Disengagement	
	<i>Beta</i>	<i>SE</i>
(Intercept)	3.66	0.38
Feedback (FB)	-0.33	0.07***
Virtual Hours	-0.13	0.29
Work Mobility	0.19	0.08*
Team Distribution	0.00	0.09
FB X Virtual Hours	0.58	0.22**
FB X Work Mobility	-0.01	0.07
FB X Team Distribution	0.05	0.07
Age	-0.01	0.01
Work Experience	0.00	0.01
Extraversion	-0.08	0.07
Neuroticism	0.44	0.08***
<i>N</i>	130	
<i>R</i> ²	0.50	

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 5 presents the regression results for the disengagement element of burnout. This model contains an Adjusted R-Squared of 0.50, meaning these factors explain 50% of the variance in disengagement. Feedback is a significant predictor of disengagement ($p < 0.001$) with a negative coefficient, implying that increased feedback can lower disengagement levels. This confirms Hypothesis 4a. The interaction between the virtual hours worked and feedback was also significant ($p < 0.01$) with a positive coefficient, indicating an increased level of virtuality can strengthen the positive relationship between feedback and disengagement. This provides support for Hypothesis 4b. Workplace mobility was a significant predictor of disengagement at $p < 0.05$, as an increase in workplace mobility creates increased disengagement, but the interaction effect was not significant to the relationship between feedback and disengagement. Similar to the findings for exhaustion, age and work experience years were not significant factors contributing to disengagement. Extraversion also did not show significance, while neuroticism was significant at $p < 0.001$, implying that increased levels of neuroticism create increased disengagement.

All items in Table 4 and Table 5 were mean-centered to improve the explanation of the results and reduce the effect of multicollinearity (Hayes, 2013). The collinearity statistics were calculated for both Table 4 and Table 5. No variable exhibited a Variance Inflation Factor (VIF) greater than 2.5, which indicates multicollinearity does not influence findings in this study (Hair et al., 1998).

4.2 Discussion

This research seeks to identify the implications of virtual work on aspects of burnout in the accounting profession. Through our results, we found that virtuality has no moderating effect between job demands and exhaustion. The work that is done in accounting is relatively structured and accounting professionals often have clear-cut tasks and roles. The degree of

virtuality likely does not change the tasks required of accounting employees or what the roles entail, which creates no significant change in exhaustion based on the degree of virtual work. Unless the nature of the work and roles change, the exhaustion levels of accounting professionals likely would not change as a result of virtual work arrangements.

However, in a virtual setting, the relationship between the social aspects of the work and engagement are altered. Feedback alone is valuable to the engagement of an employee, and virtual hours worked alone does not have a significant influence on engagement, but feedback coupled with increased virtual work hours could increase the disengagement of an accounting employee. In addition, workplace mobility, which examines “the degree to which employees work in environments other than regular offices” (Chudoba et al., 2005, p.288), increases disengagement among employees, implying that working in the traditional office space can be a strategy to reduce disengagement in an accounting employee.

4.2.1 Theoretical Implications

This research fills a gap in the accounting literature, as there is a need for research on the effects of virtuality on burnout even after the COVID-19 pandemic. During the pandemic, research conducted in accounting showed that the sudden shift in work arrangements had significant effects on the role stressors, creating an increase in burnout (Bakarich et al., 2022). These prior studies did not consider the social aspects of work compared to the characteristics of the work itself, nor did they examine burnout in terms of disengagement and exhaustion. They examined virtuality in a time where there was a sudden, unplanned shift of the working model, whereas virtual work today has become more planned and even voluntary. This study has found relevant results to the virtual work that occurs in today’s working world, and has identified the

specific relationships between job characteristics and burnout that are more heavily influenced by virtual work in accounting.

A similar study from several years ago examined telework in the supply chain management industry, and found that both job demands and job resources were altered by telework, influencing both exhaustion and disengagement (Sardeshmukh et al., 2012). Based on the results of the current study, the accounting discipline yields different results compared to research done in other fields. The nature of the work in accounting is very specific, technical, and the tasks are often clearly defined. Therefore, working virtually did not have any effect on the relationship between demands and exhaustion, likely because accounting work is clearly defined and the tasks expected of the employees do not change as virtuality changes. This implies that other research done on burnout and virtual work in other fields may not be generalizable to accounting, as employees in this field do a very specific job and specific type of work. More research on burnout, specifically in the accounting profession, should be conducted to better understand burnout in this unique profession.

This study aligns with past research done on the Job Demands-Resources Model of Burnout (Demerouti et al., 2001). Time pressure, role ambiguity, and feedback all interacted as expected with exhaustion and disengagement. Based on our results, role conflict, however, did not have a significant interaction with exhaustion. This is likely due to the nature of the roles in accounting and the clear expectations and tasks required for each different level in accounting. The clearly defined role expectations and tasks of accounting were not found to contribute to exhaustion. This conflicts with past research done in the accounting field on role stressors, so role conflict and its effects should continue to be explored in the profession (Smith et al., 2020).

4.2.2 Practical Implications

For accounting firms and other businesses with an accounting function, this research implies that supervisors and managers in this field need to ensure they are being intentional about the feedback that is provided to virtual employees. Feedback can be helpful to keep an employee engaged in their work, but increased feedback for employees who work more virtual hours can have the opposite effect and harm the engagement of an employee. Managers should make an effort to ensure the feedback that is given in a virtual environment resembles in-person interactions and provides thoughtful evaluations. If proper feedback is given, it can maximize the engagement of an employee, which in turn minimizes burnout.

In addition, in order to increase engagement of employees, accounting managers should look for opportunities to have employees work fewer hours virtually and additional hours in traditional office spaces. Work mobility is harmful to engagement, which increases the level of burnout experienced. Employees who are able to work more in an office space and have face-to-face interactions can have more collaborative, engaging experiences, which can help to decrease the level of disengagement and burnout.

4.2.3 Limitations and Future Research

There are several limitations to this study that could be explored in further research studies. The first limitation is that this study only examined the effects of virtuality on burnout in the accounting profession. The results of this study can be applied to other financial related fields where technical skills are required, but the results of this study are not generalizable to all professions. Similar studies, examining the interactive effect of virtuality in the Job Demands-Resources Model, could be conducted in other specific professions to examine the moderating effect of virtual work, and factors that contribute to exhaustion or disengagement.

A second limitation of this study was the mechanism used to collect data. Participants self-selected to participate in this survey, which could introduce some selection bias to the study. However, the demographic information collected resembled the types of people expected to take this survey and each indicated that they were involved in an accounting role, so we do not anticipate that this has influenced the results of the study. Future research could employ different methods of data collection, such as interviews or observations, to provide a means to triangulate results with this and similar research, strengthening findings regarding the implications of virtuality.

Another limitation of this study was the timing of the survey collection. The data for this study was collected in November, so this was not during the peak season within public accounting. Virtuality could amplify effects on demands and resources during the peak season, so we acknowledge that the results might yield a different result at different points during the year. Later research could examine virtuality in the peak busy season of accounting to determine if this yields different results.

5. Conclusion

This study adapted the Job Demands-Resources Model of Burnout and applied it to the accounting profession to examine the impact of virtuality on accounting professionals. The results of the study imply that in order to minimize burnout for employees, accounting firms and other organizations with an accounting function should ensure that an employee has the proper resources and support if they are working virtually to minimize disengagement. The virtual work does not change the stressors of the work and does not influence exhaustion, but virtual work was found to amplify the relationship between the social aspects of the work and disengagement.

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